

# Horsham Local Cycling And Walking Infrastructure Plan (LCWIP)

June 2020



Question today  
*Imagine tomorrow*  
*Create for the future*



On behalf of **Horsham District Council**



## Horsham Local Cycling and Walking Infrastructure Plan (LCWIP)

---

WSP UK Limited  
70 Chancery Lane  
London  
WC2A 1AF

Tel: +44 20 7314 5000  
Fax: +44 20 7314 5111

[wsp.com](http://wsp.com)

Prepared by: JM, HC, JP, AW, DL  
Review by: JP  
Approved by: AW

---

# 1. Introduction and Background

## Introduction

Welcome to Horsham's first Local Cycling and Walking Infrastructure Plan (LCWIP). It is a new, strategic approach to identifying cycling and walking improvements required at a local level. LCWIPs take a long-term approach to developing cycling and walking networks. They will contribute to achieving the government's ambition to make cycling and walking (sometimes referred to as *active travel modes*) the natural choice for shorter journeys.

Increasing the numbers of cycling and walking journeys is central to tackling many of the country's pressing challenges. These include carbon emissions and the climate emergency, poor air quality, inactivity, poor public health and levels of traffic congestion, for example. Better active travel infrastructure can also improve access to jobs, education and facilities, enhance economic vitality, improve mental wellbeing, reduce social isolation and improve the environmental quality of our towns and villages.

The focus of the LCWIP is to create walking and cycling networks which will enable people to get more easily from A to B when making *utility trips*. These are everyday journeys made for a purpose, such as commuting to work, trips to the shops or the doctor, or to school, college or university. Directness and journey times are usually important considerations when making utility journeys. Cycling and walking trips for leisure (i.e. without a destination) are not within the scope of the LCWIP, although these journeys may also be enhanced from the improvements identified.

In accordance with DfT technical guidance the Horsham LCWIP is focused on cycling and walking routes within Horsham town and routes into the town from surrounding settlements. This is because urban areas are considered to have the greatest potential to grow cycling and walking trips.

*'The world has three major problems: the climate, congestion and the obesity epidemic. The bicycle is the answer to all three of them.'*

**Jan E. Jørgensen**  
Member of the Danish Parliament

## Vision Statement for the LCWIP

The following statement is intended to guide the ongoing development, delivery and evolution of Horsham's LCWIP:

*'For Horsham residents, workers and visitors, cycling and walking will be the natural choice for most short journeys, and to access public transport for longer journeys. People will be able to easily access the places they need by cycle and on foot, including to and from the new areas of development. The cycling and walking networks will be direct, safe and comfortable to use, continuous, well-connected, inclusive and wherever possible attractive.'*

## LCWIP objectives

The District Council, working in partnership with a range of organisations, will:

- a) Increase levels of cycling and walking for utility journeys; and
- b) Design quality cycling and walking networks based on standards and good practice guidance.

## How this LCWIP will be used

The LCWIP is intended to be used in the following ways:

1. Contributing to achieving the Council's corporate priorities, including tackling the Climate Emergency;
2. Supporting the West Sussex Walking & Cycling Strategy;
3. Funding bids: the LCWIP will form the basis for future funding bids to secure money to improve cycling and walking infrastructure;
4. Transport Policy: The LCWIP provides evidence for future versions of the County Council's Local Transport Plan and Rights of Way Improvement Plan;
5. Planning Policy: The LCWIP forms part of the evidence base for the Local Plan Review, identifying the required strategic cycling and walking networks. The initial programme of improvements will be included in the Infrastructure Delivery Plan; and
6. Development Management: The LCWIP forms the basis for securing high-quality improvements to the strategic cycling and walking networks as part of planning permissions for new development.

# 1. Introduction and Background

---

## How this LCWIP was prepared

A Stakeholder Group was convened to shape the development of the Horsham LCWIP. Attendees represented the District Council, North Horsham and Warnham Parish Councils, Denne and Forest Neighbourhood Councils, Horsham District Cycling Forum, Horsham Town Community Partnership and The Horsham Society.

Consultancy WSP has been commissioned by Horsham District Council (HDC) to prepare the LCWIP and advise the District Council. The LCWIP has been prepared in accordance with the *Technical Guidance for Local Authorities* (2017) and has used the tools made available online by the Department for Transport (DfT). The three key outputs recommended by the technical guidance are:

- Cycling and walking network plans, which identify preferred routes and core zones for further development;
- A prioritised schedule of infrastructure improvements; and
- A report setting out the underlying analysis and narrative to support the identified networks and prioritised improvements.

This report includes all three of these key outputs.

## West Sussex Cycle Summits

Horsham District Council was pleased to host West Sussex Cycle Summit events in 2016, 2017 and 2019, welcoming attendees from a wide range of different backgrounds and organisations. These summits helped to shape the West Sussex Walking and Cycling Strategy (2016-2026) and are now informing the development of LCWIPs across the county, including for Horsham District. These events will continue to inform future cycling and walking network planning and scheme development.

## Report Structure

The rest of this report is structured as follows:

2. **Scope of the Horsham LCWIP** - setting out the geographical scope of the LCWIP, partnership working and timescales for implementation;
3. **Integration with Policy and Strategy** - identifies how the LCWIP supports local and national policy and strategy themes;
4. **Active Travel Context** - summarises the journeys currently made by active travel modes, the available cycling and walking networks and strategic barriers which limit movement by these modes. It also identifies key origins and destinations for planning cycling and walking networks;
5. **Network Planning for Cycling** - describes the process to connect journey origins to destinations, the initial corridors identified for further development and the route section and route audit methodology;
6. **Network Planning for Walking** - outlines the process of identifying a core walking zone and key walking routes for further development and the route audit methodology;
7. **Route Audits - Infrastructure Improvements** - summarises some of the key types of infrastructure improvements recommended from the route audits;
8. **Provisional Cost Estimates for Route Improvements** - indicates the potential cost ranges for the identified improvements
9. **Integration, Delivery and Next Steps** - identifies potential funding sources, how the LCWIP is aligned to the local plan and how and when the document will be reviewed.

**Appendix A** contains a suite of plans showing the context of each shortlisted corridor, the findings of route audits and a summary of proposed infrastructure improvements.

---

## 2. Scope of Horsham LCWIP

### Geographical Coverage

Figure 1 to the right shows the geographical coverage of the Horsham LCWIP.

In accordance with DfT technical guidance it is focused on cycling and walking routes within Horsham town, as urban areas are considered to have the greatest potential to grow cycling and walking trips. However the LCWIP also covers connections to, from and between nearby existing settlements and future development sites. The figure identifies that most of the plan coverage is within 5km of Horsham town centre, distances which can easily be cycled by many people.

Other parts of the district may be covered by future iterations of the plan.

### Partnership Working

The District Council is a member of the West Sussex LCWIP Partners Group (comprising officers from West Sussex County Council, Horsham District Council, Adur & Worthing Councils, Chichester District Council, Crawley Borough Council and the South Downs National Park Authority). Whilst each constituent partner is preparing an LCWIP for their respective area, they are working collaboratively to ensure that they are each prepared with the same objectives and methods.

The first phase of the County Council-led LCWIP focuses on longer-distance, inter-community routes that connect the County's principal settlements. The **Crawley-Horsham** corridor is one of the six initial routes to be covered by the County Council LCWIP.

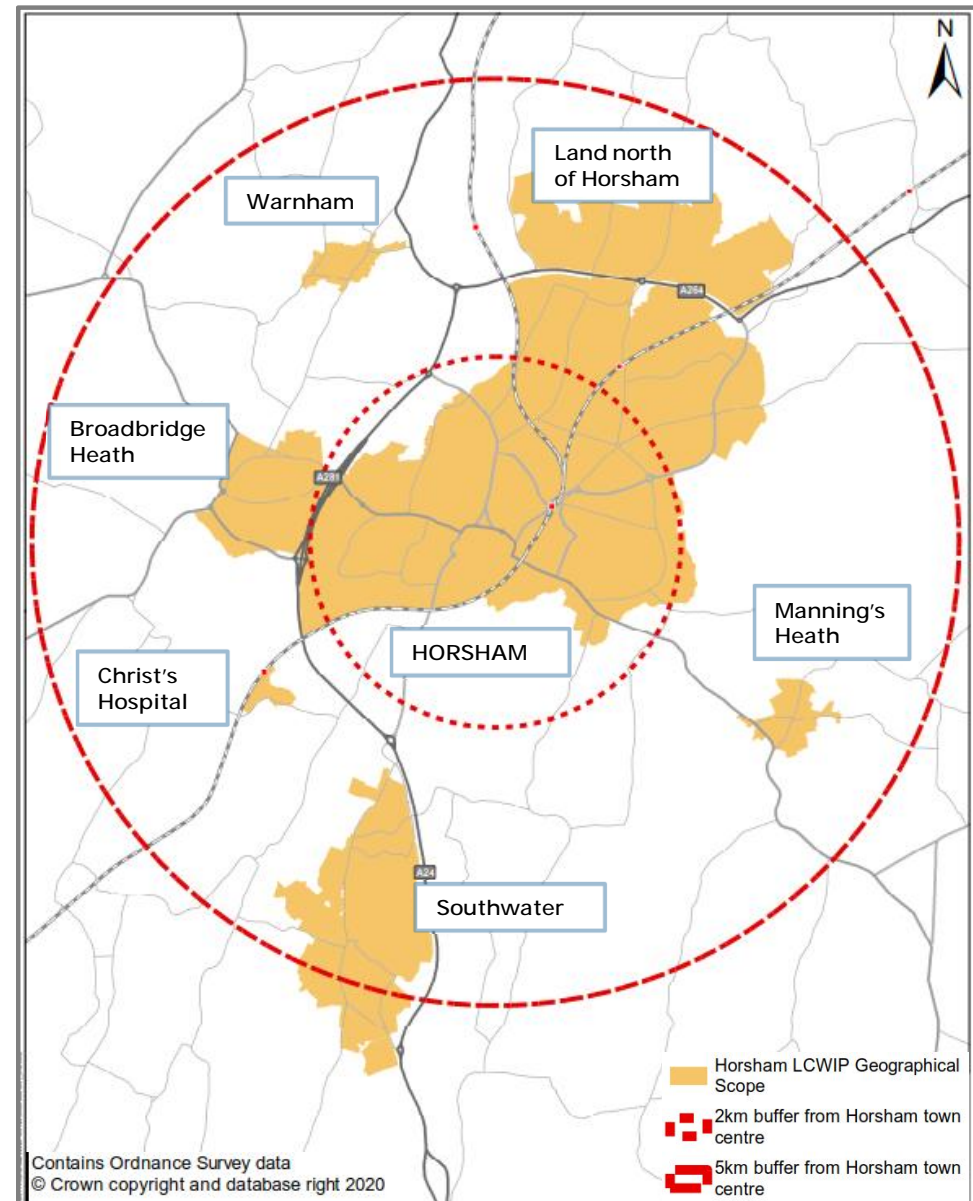
### Timescales and Implementation

As recommended by the technical guidance, the LCWIP covers a ten-year period from 2020 to 2030.

The LCWIP identifies a strategic network of cycling corridors and key walking routes to cover the whole plan area. Each is considered to provide important connections and it is the District Council's intention that each of them is developed and improved, as opportunities arise and funding is available. This will however take many years to complete.

A selection of corridors have been prioritised for initial development and earlier implementation. The District Council will look to fund and deliver improvements in partnership with a range of other organisations, including West Sussex County Council, other district councils, parish councils, the South Downs National Park Authority, the Local Enterprise Partnership, landowners and planning applicants.

Figure 1: Horsham LCWIP Geographical Scope



# 3. Integration with Policy and Strategy

## Horsham District Policy Context

### Horsham District Council Corporate Plan 2019-2023

The most recent Corporate Plan was adopted in September 2019. The LCWIP is a specific action identified by the Corporate Plan and will contribute to several others.

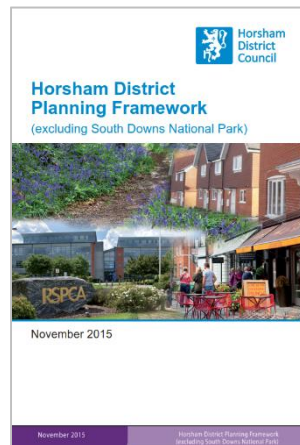
The Corporate Plan sets five goals, against which the Council's performance will be measured: (1) A great place to live; (2) A thriving economy; (3) A strong, safe and healthy community; (4) A cared-for environment; and (5) A modern and flexible council.

Activities identified to meet goal (1) include:

- *Prepare a revised Local Plan which engages with the public and brings forward the proposals and policies ... [which] aim to...deliver facilities and identify the infrastructure necessary to support growth in a way that protects the overall character of the District;*
- *Work with central government and key partners to identify the strategic infrastructure necessary to support sustainable development; and*
- *Prepare a Local Cycling and Walking Infrastructure Plan that identifies improvements for future investment in the short, medium and long term.*

Activities identified to meet goal (4) include:

- *Produce an action plan to move towards a carbon neutral organisation;*
- *Work with partners towards becoming a carbon neutral District; and*
- *Work with our communities and partners to monitor air quality and target improvement of our air quality management areas.*



The District Council wishes to ensure that land use planning is closely aligned with the LCWIP and is at the early stages of the Local Plan Review.

### Horsham District Planning Framework (2015)

The Horsham District Planning Framework is the current overarching planning document for the area outside the National Park, and covers the period to 2031. Within the LCWIP plan area it identified strategic allocations for development at Land North of Horsham and Land West of Southwater.

Specific reference is made to cycling and walking measures or connections in Plan Policy 5 (Horsham Town), Policy 6 (Broadbridge Heath Quadrant), Policy 8 (University Quarter Mixed Use Development), Policies SD1 and SD9 (relating to Land North of Horsham), Policy 35 (Climate Change), Policy 37 (Sustainable Construction), Policy 40 (Sustainable Transport) and Policy 41 (Parking).

Some areas have prepared, or are preparing, Neighbourhood Plans. The adopted Warnham Neighbourhood Plan outlines proposals for a new shared-use path as part of a cycle route from the village to Horsham, along with traffic calming and new crossings of the A24. The adopted Nuthurst Neighbourhood Plan states that a cycle track from Monk's Gate to Horsham is proposed as of the infrastructure schemes in the parish to be funded by the Community Infrastructure Fund. The draft Southwater Neighbourhood Plan includes a policy on enhancing the parish non-motorised transport network.

### Horsham District Local Plan Review

Horsham District Council is currently reviewing and updating its Local Plan and intends to have the new plan formally adopted by the end of 2021.

Throughout the plan there will be policies that seek to reduce carbon emissions from new development and encourage healthy communities and lifestyles. For example, new larger development sites will have walkable neighbourhoods and cycle routes, as well as a mix of uses in close proximity to help reduce the reliance on cars.

# 3. Integration with Policy and Strategy

## Alignment with national policy

The LCWIP contributes to achieving a number of important national policies and strategies including those relating to transport, public health, planning, air quality and carbon. Key relevant documents are summarised below:

### Cycling and Walking Investment Strategy (2017)

Set out government's ambition to make walking and cycling the natural choice for shorter journeys or a part of a longer journey, for example in combination with a train journey. The government considers that LCWIPs are a vital part of this strategy.

It set four objectives: (1) increasing cycling activity, with a target to double cycling trip stages between 2013 and 2025; (2) increasing walking activity; (3) reducing the rate of cyclists killed or seriously injured; and (4) increasing the percentage of children aged 5-10 usually walking to school.

### Future of Mobility: Urban Strategy (2019)

This outlined nine principles to address the challenge of transforming towns and cities to meet current and future transport demands. Includes the principle that *'walking, cycling and active travel must remain the best option for short urban journeys.'* An accompanying rural strategy is expected shortly.

### Inclusive Transport Strategy (2019)

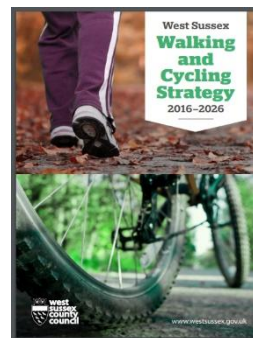
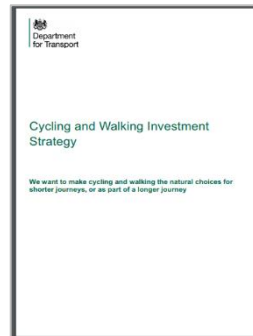
This states that the transport system must provide inclusive infrastructure, with streetscapes designed to accommodate the needs of all people.

### National Planning Policy Framework (2019)

This sets out England's planning policies and must be taken into account when preparing local plans. It states that planning policies should provide for high quality walking and cycling networks and supporting facilities such as cycle parking, drawing on Local Cycling and Walking Infrastructure Plans.

### Clean Air Strategy (2019)

Outlines how the government intends to tackle all sources of air pollution. Increasing cycling and walking is one of the identified actions to reduce congestion and emissions from road transport.



### Clean Growth Strategy (2018)

This strategy aims to reduce greenhouse gas emissions to meet the targets outlined in the Climate Change Act 2008 whilst growing national income. The government's pledge to invest £1.2 billion to make cycling and walking the natural choice for shorter journeys is one of the 50 actions identified in the strategy.

### Everybody Active, Every Day (2014)

Highlights how the built and natural environment shapes the travel choices people make. Underscores the importance of effective urban design and transport systems which create 'active environments' to promote walking, cycling and create more liveable communities.

## Alignment with County Council Policy

### West Sussex Local Transport Plan LTP3 (2011-2026)

The West Sussex Transport Plan focuses on improving the quality of life of people in West Sussex by promoting economic growth; tackling climate change; providing access to services, employment and housing; and improving safety, security and health. Increasing the use of sustainable modes of transport is integral to this plan. The West Sussex LCWIP aligns with these aims by developing cycling and walking networks of safe routes, to connect people and places in a sustainable way.

### West Sussex Walking and Cycling Strategy (2016-2026)

The strategy aligns with the LTP3 objectives of improving quality of life by promoting economic growth, tackling climate change, providing access to services, employment and housing, and improving safety, security and health. It sets out a prioritised list of potential cycling schemes, which have informed the development of corridors in the County LCWIP, including Horsham-Crawley.

### Other West Sussex policies

The LCWIP proposals align with the West Sussex Plan (2017-2022), which encourages sustainable economic growth, the West Sussex Rights of Way Management Plan (2018-2028), the West Sussex Road Safety Framework (2016-2026), which aims to eliminate all deaths due to road accidents, and the West Sussex Joint Health and Wellbeing Strategy, which aims to improve the health and wellbeing of residents at all stages of life.

# 4. Active Travel Context

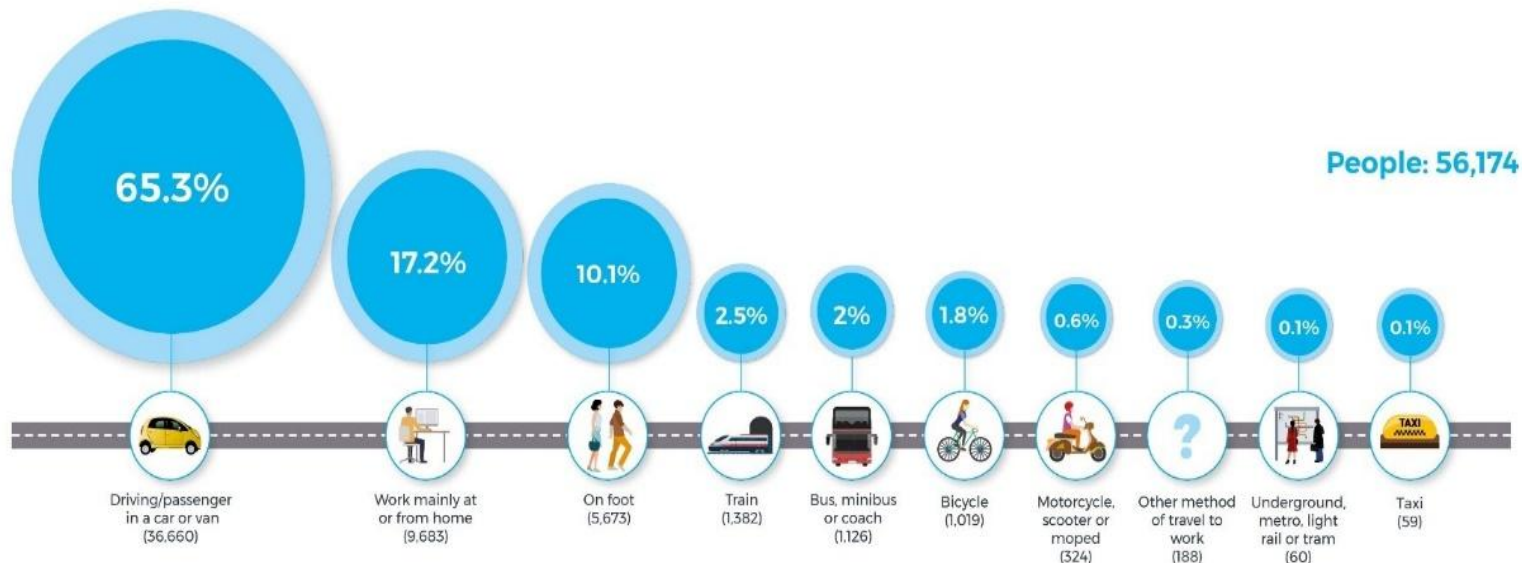
## Existing Travel Patterns in Horsham

Available data indicates there is substantial scope to increase walking and cycling levels in Horsham.

The 2011 census provided a comprehensive overview of travel patterns, albeit for journeys to work only. The data in **Figure 2** below relates to residents of Horsham town only (56,174 people). The figure indicates that:

- **Walking and cycling to work, in combination, accounted for less than 12% of all commutes by Horsham residents.** Nearly two-thirds of journeys to work by (36,660 residents) were by car or van, either as a driver or as a passenger. 10% (5,673 people) usually walked to work and less than 2% (1,019 people) cycled to work. A range of factors influence this, including journey distance.
- **A large percentage of short-distance commuting journeys by Horsham residents were made by car.** Census data for Horsham identifies that 40% of travel to work journeys for distances of less than 2 kilometres were made by car or van. Encouragingly, walking was the most popular mode for short-distance commutes, accounting for 48% of journeys under 2 kilometres. Just 6% were made by bike.

Figure 2: Main Method of Travel to Work In Horsham (2011 Census)



## Forecasting potential scope for growth in active travel

Case studies from elsewhere in the UK show that there is great potential for achieving much higher levels of cycling and walking.

For example, one in three commuting journeys in Cambridge are already made by bike. In the Netherlands, women make slightly more cycle trips than men, and cycling remains common into older age, unlike in the UK where it is skewed towards younger, male cyclists.

The Department for Transport have funded research to specifically understand the potential levels of cycling growth. The [Propensity to Cycle Tool](#) is an interactive website map which forecasts which travel to work and school trips could most easily switch to cycling, based on trip distance and topography, and where these are located geographically. The scenarios are based on journey to work data from the 2011 census and 2011 school census data respectively.

Taking account of current trip distances and topography in Horsham, attaining Dutch levels of cycling would mean that 20-25% of commuting trips and between 30-50% of school trips would be cycled.



# 4. Active Travel Context

## Existing cycling and walking networks

### Cycle network - Horsham town

In terms of cycling, Horsham is mostly reliant on routes using the carriageways of roads and streets, with a limited number of traffic-free, off-road connections of varying quality.

### Walking network - Horsham town

Horsham town has a relatively dense network of walking routes. In broad terms these comprise footways adjacent to roads, pedestrianised areas including in the town centre, and traffic-free connections such as between residential streets, through parks or in the open spaces surrounding the town. In the recent decades there has been significant investment to improve the quality of provision for pedestrians in the town centre. A 20km Riverside Walk has been developed encircling the town, many sections of which have surfaces which are suitable for cycles and wheelchairs.

### Cycling and walking networks outside Horsham town

Dedicated cycling infrastructure is more limited and footway networks tend to extend across the town and villages only. A notable exception to this is the Downs Link, which provides a traffic-free cycling and walking route on a former railway alignment.

### Key issues

A range of factors determine the suitability of a route for cycling and the Department for Transport's [Route Selection Tool](#) has been used to assess them (see section 5). In many places, high traffic flows and speeds make many sections of road unsuitable for cycling, along with busy junctions where cyclists mix with motor vehicles.

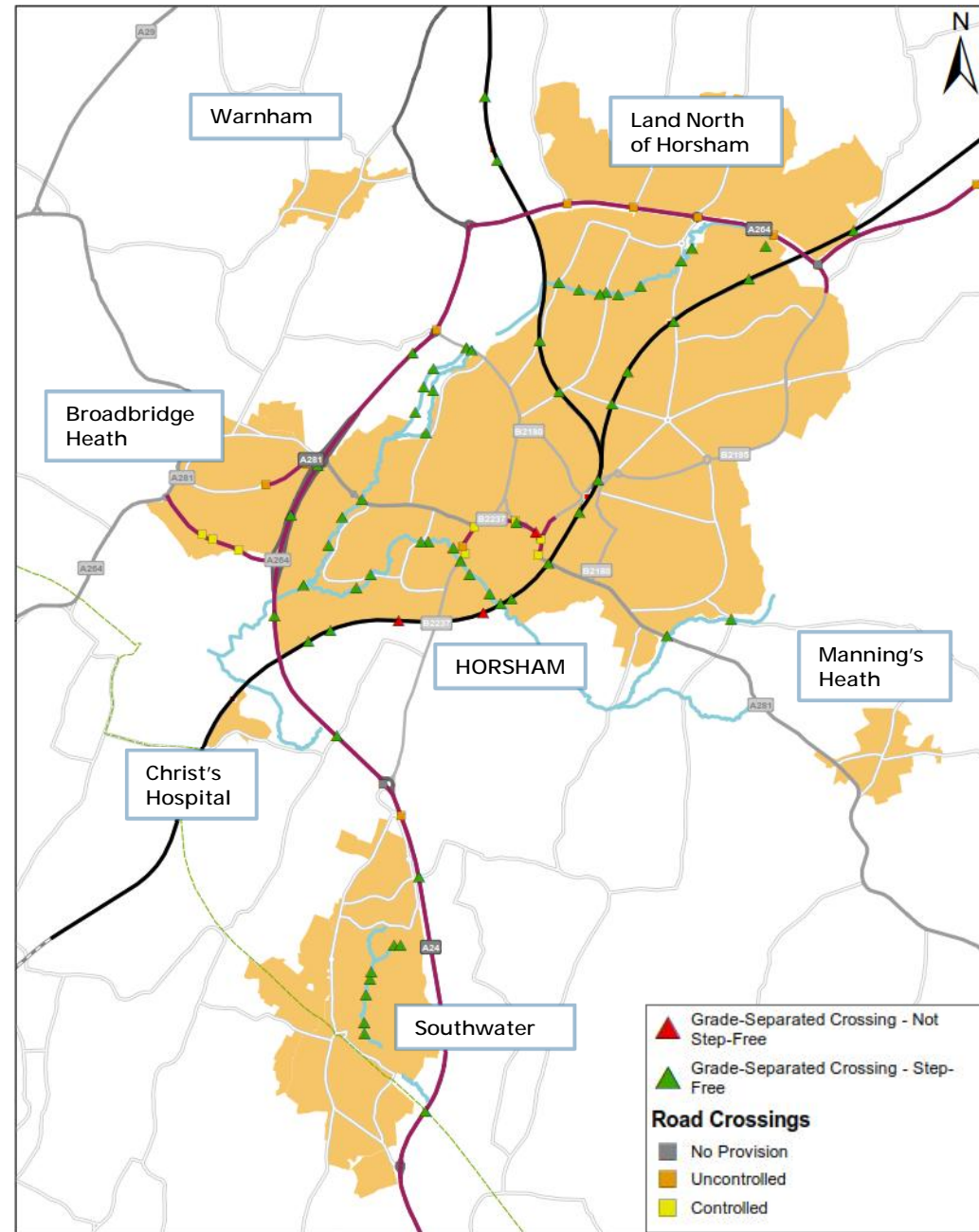
The quality and suitability of the walking network varies by location; the Department for Transport's [Walking Route Audit Tool](#) was used to collect data relating to the shortlisted corridors.

The Local Transport Plan 2011-2026 states that much of the cycling and walking network is disjointed and suffers from inadequate signing, safe crossing points and poor surfacing.

### Strategic Barriers to movement

**Figure 3** highlights the key barriers to cycling and walking movement in the Horsham area. These are particularly due to the railway line, the A24 and A264 dual carriageways and the town centre ring road (Albion Way).

**Figure 3: Strategic Barriers to Cycling & Walking in and around Horsham**



# 4. Active Travel Context

## Origins and destinations

The LCWIP focuses on providing cycling and walking routes which connect important journey origins and destinations.

As part of the LCWIP methodology important origins and destinations in and around Horsham were mapped. These are shown in **Figure 4** to the right and summarised below.

### Origins

Journey origins were based on existing and planned future residential areas. To help with the network planning, the area was divided into a series of larger residential neighbourhoods, referred to as *origin clusters*, shown in blue on the plan. Horsham was divided into five origin clusters, with one origin cluster each for North Horsham, Broadbridge Heath, Christ's Hospital and Southwater.

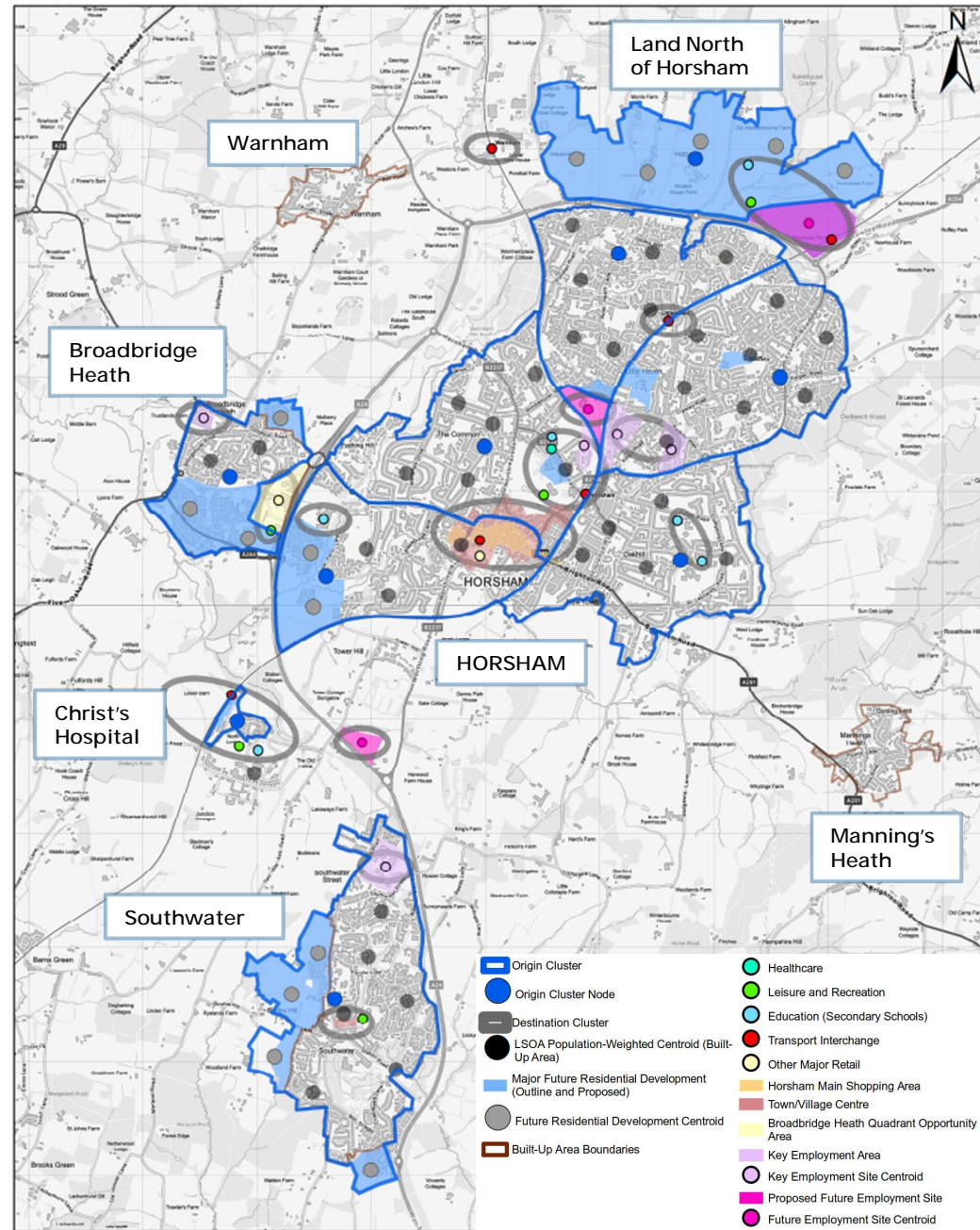
- **Existing residential areas:** these were represented by statistical areas with populations between 1,000 and 5,000 at the time of the 2011 census (known as *lower-layer super output areas*). Each output area has its own node (created by the Office for National Statistics), called a *population-weighted centroid*. This represents where the majority of people live in an output area.
- **Origin clusters:** Existing and future residential areas were grouped together to simplify the analysis, creating *clusters*. Each cluster had a single node to represent journeys to and from its constituent neighbourhoods.

### Destinations

The LCWIP aims to enable cycle journeys to be made to a wide range of destinations. The following destinations were used:

- the bus and railway stations;
- established and future employment sites;
- the hospital;
- leisure sites;
- out-of-centre retail / food stores;
- the secondary schools and the college; and
- town / village centres.

Figure 4: Origins and destinations for cycling and walking network planning



# 5. Route Network Planning for Cycling

## Connecting Origins to Destinations

Three methods were used to identify a network of strategic cycle corridors which would connect key origins with destinations. These methods are shown below in Figure 5.

Figure 5: Methods used to identify network of cycle corridors

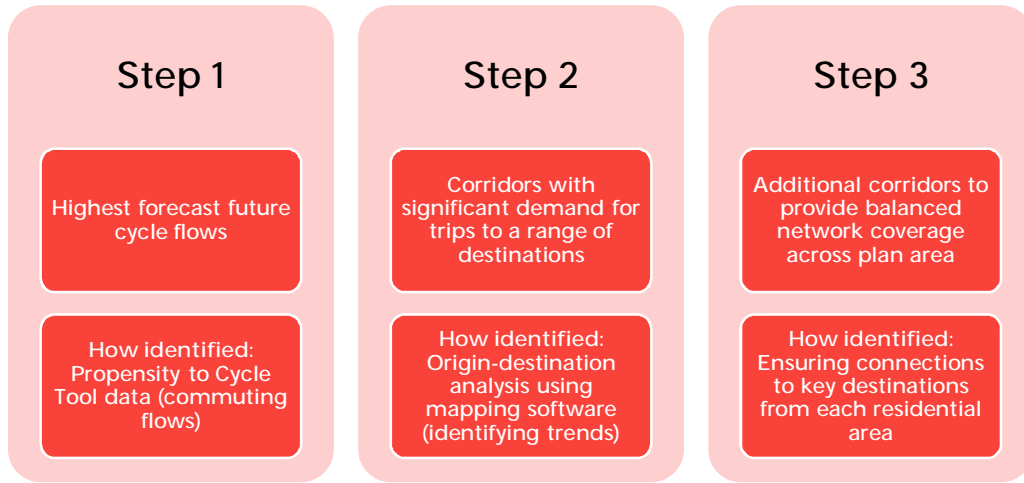
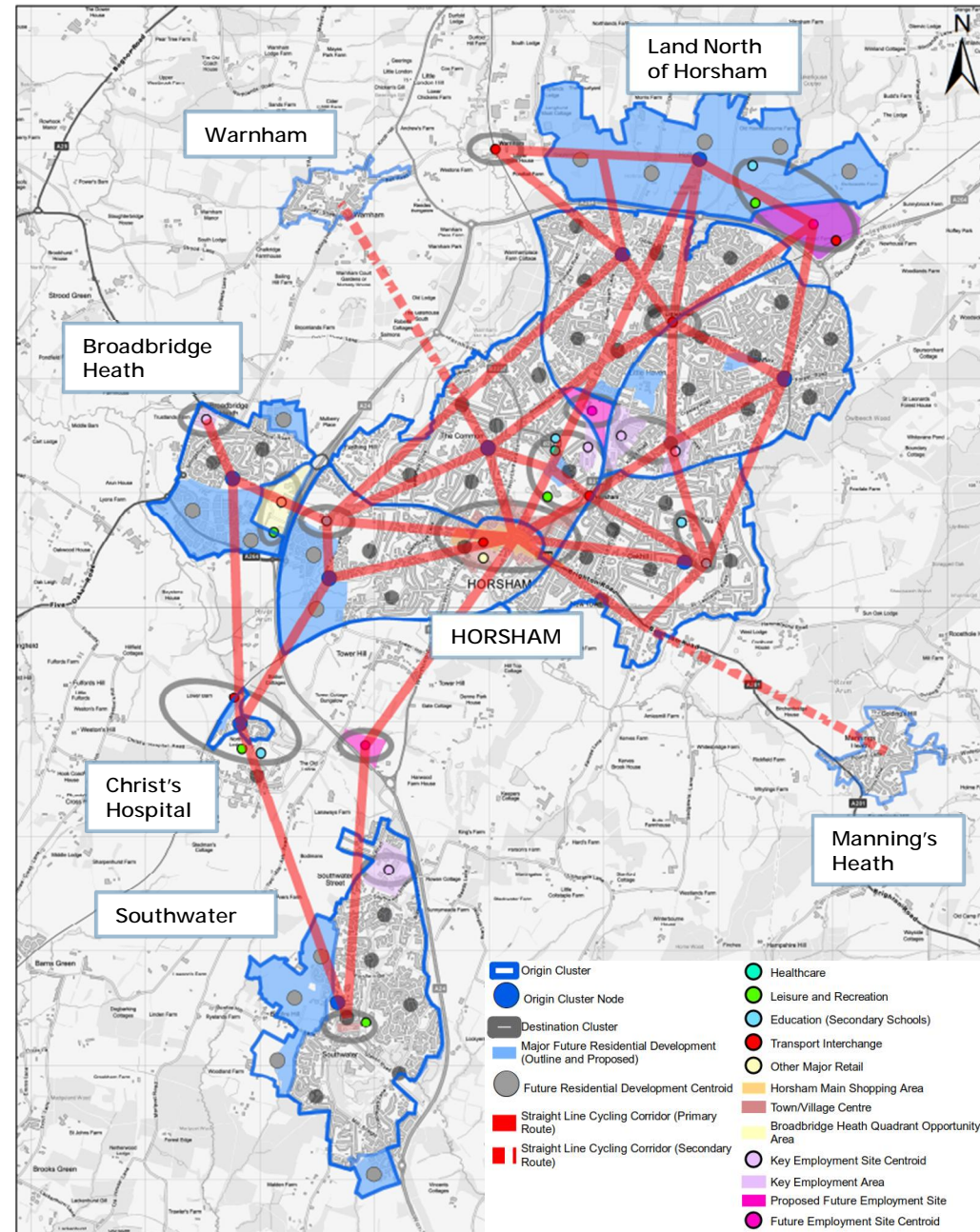


Figure 6 to the right illustrates the proposed cycling network. Directness is an important factor in the suitability of cycle routes, and therefore, in line with the technical guidance, the cycle corridors connecting origins and destinations are shown as straight-line routes.

The District Council intends for all of the corridors identified at this stage to be progressed as and when funding allows, as part of future iterations of the Horsham LCWIP.

Figure 6: Proposed cycling network (straight-line corridors)



# 5. Route Network Planning for Cycling

## Initial Cycle Corridors for Development

Five corridors were identified for initial development in consultation with the LCWIP stakeholder workshop group, as follows:

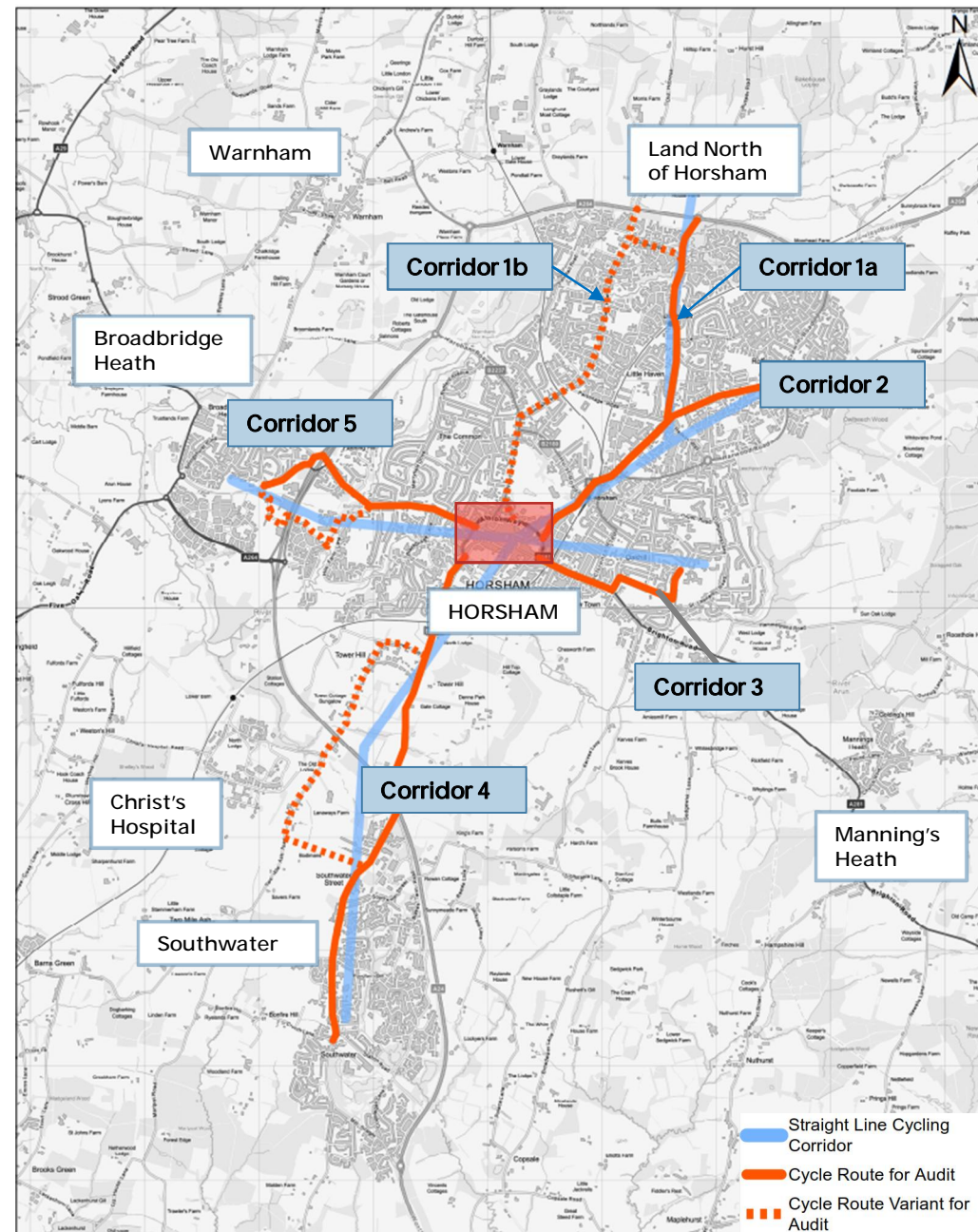
1. North Horsham to Horsham town centre (two route variants); 1a and 1b);
2. Roffey - Horsham town centre;
3. Forest School - Horsham town centre;
4. Southwater - Horsham town centre; and
5. Broadbridge Heath - Horsham town centre.

These are illustrated in **Figure 7**.

These corridors connect most key residential and employment areas to Horsham town centre, including areas of major planned development, which will need to be supported by high-quality active travel infrastructure. The LCWIP will form a sound basis for securing appropriate contributions from developers towards the delivery of the proposals contained within this plan.

As highlighted previously, the shortlisted corridors do not constitute a full cycle network for the plan area. Other routes will be progressed as and when funding allows.

Figure 7: Cycling corridors for initial development



# 5. Route Network Planning for Cycling

## Route Selection Process

The shortlisted corridors were mapped to existing routes available for cycling. The quality and suitability of these routes was then assessed against the criteria in the DfT's [Route Selection Tool](#) (RST). Each route was assessed against five core design criteria (directness, gradient, safety, connectivity, comfort). In addition, junctions were identified which were considered to have characteristics hazardous to cycling (referred to as *critical junctions*).

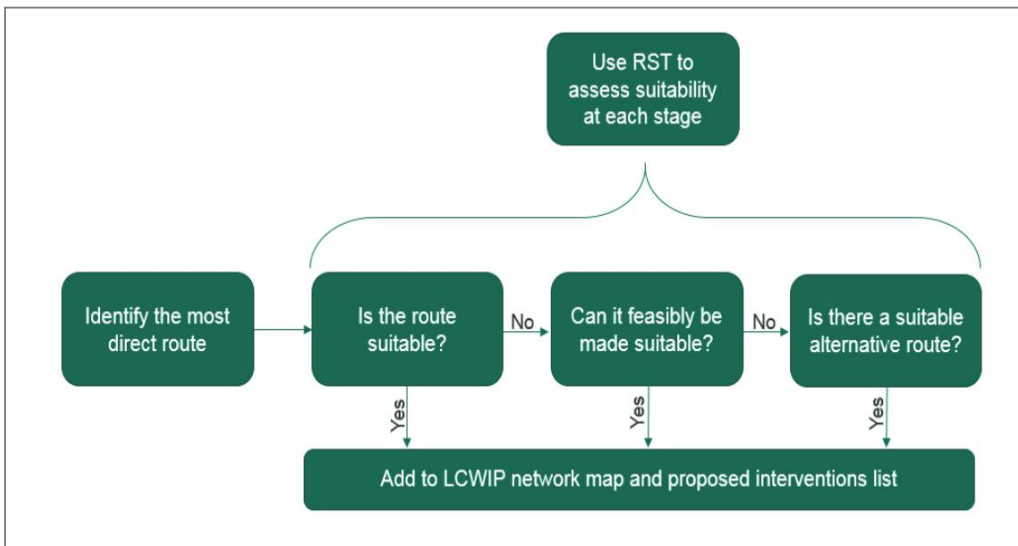
The process followed the steps set out in **Figure 8**.

The RST was used to compare the existing situation with future scenarios in which cycle infrastructure is constructed. It was also used to compare the suitability of route variants.

Site visits were carried out in autumn 2019 to collect the required information on (i) the quality and suitability of existing infrastructure and (ii) the potential for, and feasibility of, route improvements, based on any apparent constraints.

**Appendix A** contains a suite of plans showing the context of each shortlisted corridor, the findings of route audits and a summary of proposed infrastructure improvements. All potential improvements are subject to further study, feasibility and consultation.

**Figure 8: Route Audit Process outlined in technical guidance**



# 6. Route Network Planning for Walking

## Gathering Information

In similarity to the cycle network planning, the Department for Transport's technical guidance suggests a planned walking network should start by considering origin and destination points across the area. The origins and destinations used for this purpose are shown in **Figure 4**.

## Core Walking Zones and Key Walking Routes

The technical guidance states that in planning for walking, local authorities should identify Core Walking Zones and Key Walking Routes. A Core Walking Zone is defined as an area where all of the pedestrian infrastructure is deemed to be particularly important. For the first iteration of the LCWIP this is defined as the town centre (see **Figure 9**). This has a cluster of important destinations and is likely to be the area with the highest pedestrian footfall.

**Figure 9** also identifies a network of Key Walking Routes. These are intended to provide a balanced coverage across Horsham, with routes also connecting to Broadbridge Heath and Southwater. The plan also shows some missing links where enhanced connections are required.

## Key Walking Routes for Initial Development

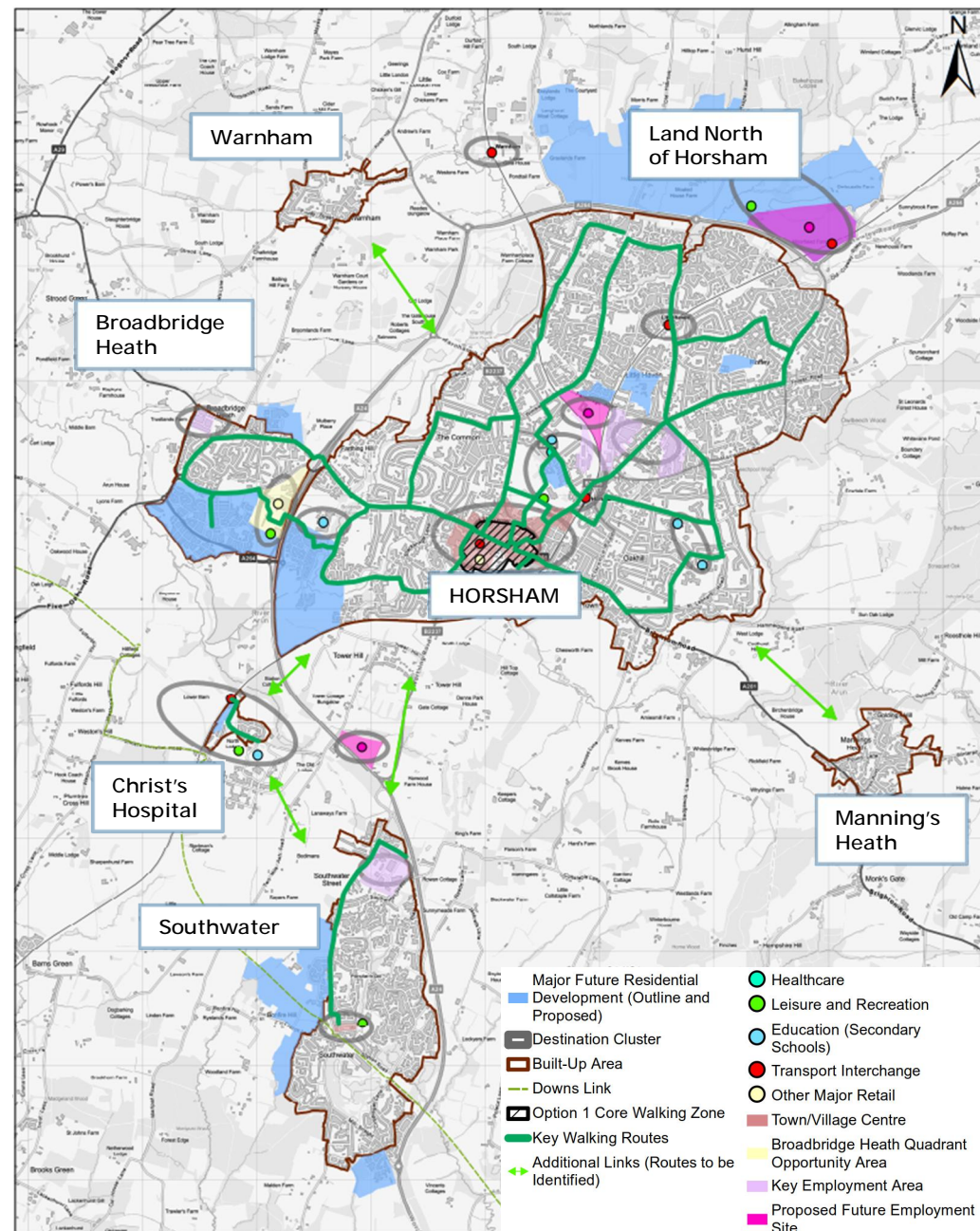
A number of walking routes were shortlisted for initial development as part of this LCWIP, to ensure a manageable audit workload. The intention is for the remaining corridors to be progressed as funding allows. Many of the shortlisted cycle corridors were also taken forward for walking audits - corridors 1a, 3, 4 and 5 - along with an additional route - Warnham Mill to town centre (referred to as corridor 6).

## Walking Route Audit Tool (WRAT)

Walking route audits were undertaken to assess the broad suitability of the corridors taken forward at this stage. The audits established whether these routes are suitable in their current form and what needs to be improved. This process followed DfT technical guidance and used the Walking Route Audit Tool (WRAT). Routes were divided into sections with similar characteristics and scored against twenty criteria grouped into five themes (attractiveness, comfort, directness, safety and coherence). Improvements were identified which would tackle the identified issues.

**Appendix A** contains a suite of plans showing the context of each shortlisted corridor, the findings of route audits and tables summarising proposed infrastructure improvements. All potential improvements are subject to further study, feasibility and consultation.

**Figure 9: Key Walking Routes and Core Walking Zone**



# 7. Route Audits - Infrastructure Improvements

A key aspect of LCWIPs is to identify a programme of infrastructure improvements to bring routes up to a suitable standard. This will involve a range of techniques and infrastructure, some of which are not yet widely used in West Sussex.

Some of the concepts are described below.

## Cycle Tracks

Spaces separate from the main carriageway and separate from footways, for sole use by cyclists, usually surfaced in tarmac. Depending on the location they can be for two-way or one-way cycling. In some circumstances shared-use paths (used by cyclists and pedestrians without segregation) can be appropriate. This includes locations where current and future pedestrian flows are, or will be, low.



## Formal Road Crossings

There are a range of new designs to give formal crossing priority cater to cyclists and pedestrians. These include:

- Parallel crossings (sometimes called Tiger crossings), which are zebra crossings with separate, parallel space for cyclists and pedestrians to cross;
- Priority crossings, where road markings require motor vehicle drivers to give way to cyclists and pedestrians;
- Signal crossings which provide separate crossing areas for cyclists and pedestrians.

Appendix A refers to *controlled crossings*, which is term used to describe any type of signal or zebra crossings.

These can be accompanied by other measures to enable safer crossing and slow motor vehicle speeds, such as placing the crossing on a flat-topped road hump (known as a raised table).

In 2019 West Sussex County Council has published its [Cycling Design Guide](#) to support decision makers and set out more clearly what is expected of developers. It is intended to be read alongside other detailed national and local documents.

## Low-Traffic Neighbourhoods

Measures which prevent through traffic from cutting through residential areas. The aim is to make streets safer and more pleasant for cycling and walking. Vehicle access is maintained to properties.

Designs can include:

- Closing specific points on some streets to through traffic movements by motor vehicles, whilst enabling cycle movements (by using bollards, gates and/or planters). Vehicle access would still be maintained to all properties either side of the closure points;
- on bus routes, allowing through movements by buses (and cycles) but no other vehicles (known as bus gates); and
- introducing one-way streets in the neighbourhood which prevent through traffic movements for motor vehicles (note that one-way streets can lead to higher vehicle speeds than previous two-way arrangements)



These types of schemes are common in European countries and now have been widely introduced across the London Borough of Waltham Forest and other parts of the UK. Other benefits include providing places for children to play and enhancing the streetscape.

## Low-Speed Neighbourhoods

There are a range of measures which can be used to reduce vehicle speeds in residential areas and, in turn, reduce the incidence and severity of road collisions. These include area-wide 20mph speed limits, physical traffic calming, redesigning side roads with tighter geometry and natural traffic calming (planting).

## 8. Provisional Cost Estimates for Route Improvements

Indicative high-level construction cost estimates were calculated for each element of infrastructure to understand the broad scale of funding which might be required to deliver the shortlisted cycling and walking routes.

Each infrastructure element was categorised and a construction cost estimate derived for each category of infrastructure. Costs are quoted in bands. This reflects the varying costs in delivering similar types of infrastructure in different locations, due to site-specific conditions.

The estimates are reported on a corridor basis. As well as an approximate basic construction cost, they also cover the following elements:

- Preliminaries, traffic management and overheads;
- Statutory undertakers' utilities;
- Surveys, investigations, design, procurement, supervision, management and liaison; and
- Risk.

They do not include an allowance for inflation. Costs have not been estimated at this stage for any new grade-separated crossings of the A264 or A24. All potential improvements are subject to further study, feasibility and consultation. Each stage has the potential to change cost estimates and therefore these should be considered provisional cost estimates only.

**Table 1: Shortlisted cycling and walking routes - indicative high-level cost estimate overview**

	Cost range (£m)
Corridor 1a (North Horsham to Town Centre via Ruser Road) and Corridor 2 (Roffey to Town Centre)	£6.5m - £12.5m
Corridor 1b (North Horsham to Town Centre via North Heath Lane) and Corridor 6 (Warnham Mill to Town Centre)	£5.0m - £10.0m
Corridor 3 (Forest School to Town Centre)	£2.0m - £4.0m
Corridor 4 (Southwater to Town Centre)	£2.5m - £5.5m
Corridor 5 (Broadbridge Heath to Town Centre)	£4.0m - £8.0m
<b>Totals</b>	<b>£20m - £40m</b>



# 9. Integration, Delivery and Next Steps

## Integration with the Local Plan Review

As mentioned in the introduction, the LCWIP identifies key cycling and walking connections to and from the major development areas in the adopted Local Plan. It will provide evidence for the Local Plan Review. It will be integrated into the Council's Infrastructure Delivery Plan.

## External Funding Sources

The District Council will work in partnership with other organisations to secure funding to deliver the LCWIP. Funding will be derived from a range of sources but new developments will be particularly central to this, both in terms of:

- constructing good-quality cycling and walking infrastructure on-site; and
- making financial contributions to enhance off-site routes.

The District Council will work closely with the planning applicants, the County Council and other stakeholders to achieve the LCWIP strategic proposals and other necessary local active travel infrastructure.

Proposals with strong business cases will be considered for inclusion in bids for capital investment, which may draw on a range of national or local funding streams.

The inclusion of proposals in this LCWIP indicates that they are supported by a strong evidence base.

## Future County-Wide Funding Opportunities

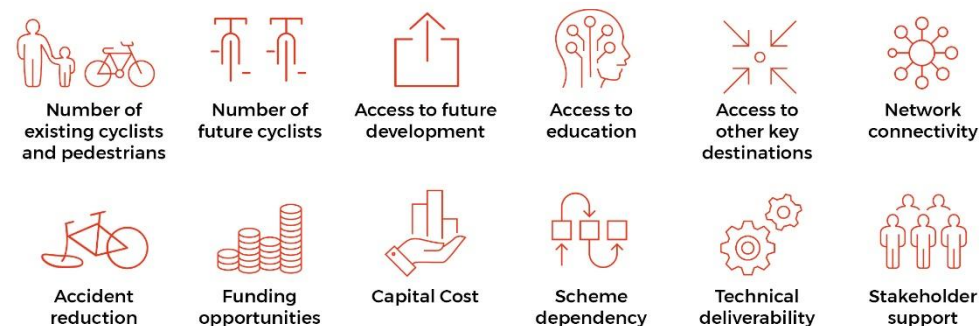
The Horsham LCWIP will form part of a county-wide pipeline of active travel infrastructure schemes devised by West Sussex County Council, the County's other district and borough councils and the National Park Authority.

West Sussex County Council is developing an LCWIP scheme appraisal framework. This will allow all LCWIP proposals to be appraised and prioritised against a set of consistent criteria (summarised in **Figure 10**).

The County Council intends to use this appraisal framework to inform which proposals will be included in future County-wide capital funding bids and which schemes best align with future funding rounds and external grants.

The prioritisation process adopted in future iterations of the Horsham LCWIP may change to reflect different funding opportunities as they arise. However, as noted, the District Council intends that many of the LCWIP proposals will be funded through other funding streams.

Figure 10: Potential West Sussex Multi-Criteria Appraisal Framework



## Reviewing and Updating the LCWIP

This is the first iteration of the Horsham's LCWIP, identifying a shortlist of cycling and walking routes for prioritised investment. The District Council will periodically review and update its LCWIP to take account of new information and reflect changing circumstances. This will ensure that the programme of infrastructure remains focused and ambitious. This review process could for example take place every five years.

# Appendix A:

## Shortlisted Routes for Development Key Findings and Proposed Improvements

# Corridor 1a: North Horsham and Roffey to Town Centre

Figure A1: Cycle route audit (northern section) - key findings

## Context and key issues

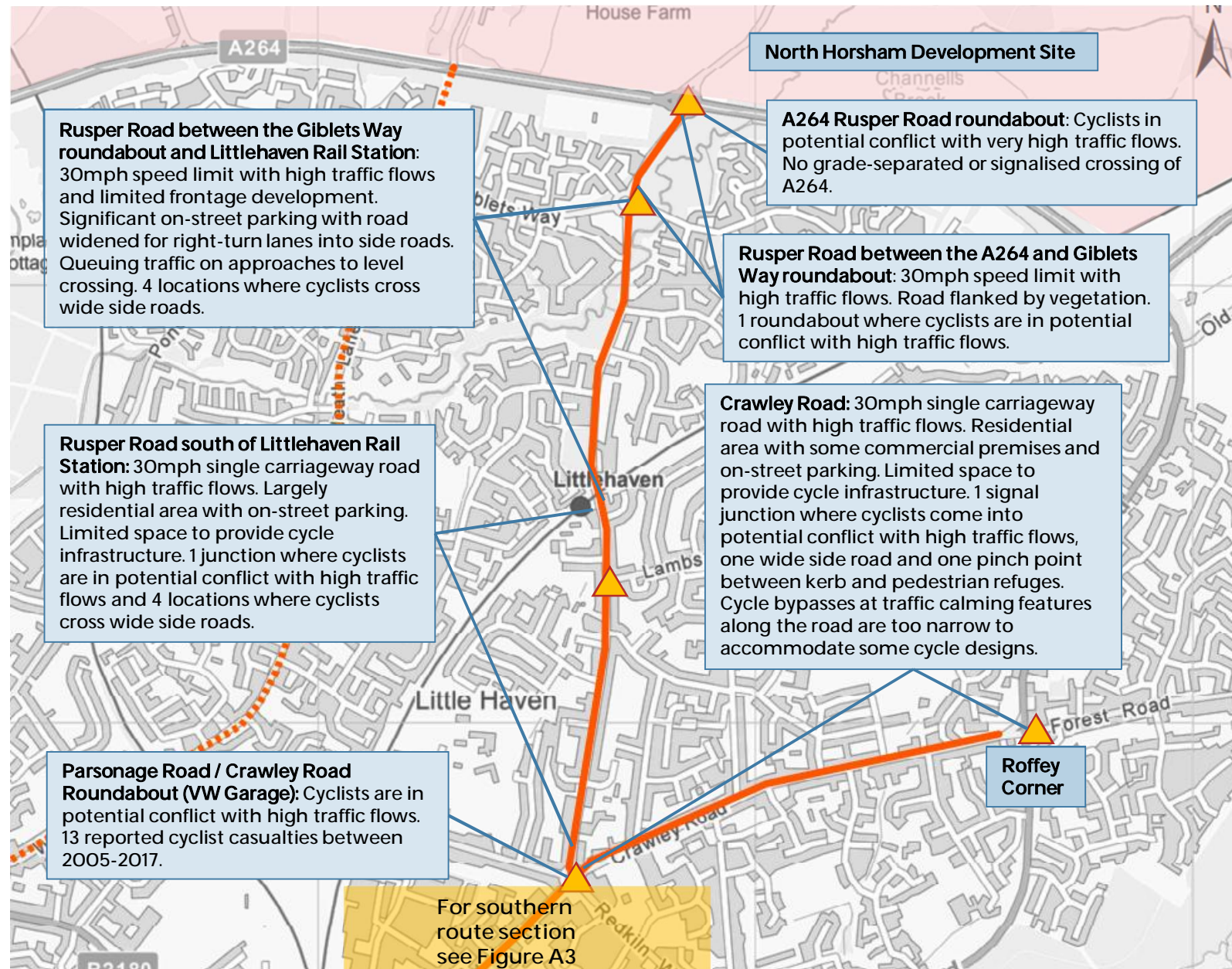
- Limited options for direct north-south connections into the town centre
- Few railway crossings
- High traffic flows on all identified road sections
- Several junctions where cyclists in potential conflict with high traffic flows



Existing narrow cycle bypass on Crawley Road, Roffey

## Key

- ▲ Junction where cyclists potentially in conflict with high traffic flows



# Corridor 1a: North Horsham and Roffey to Town Centre (northern section)

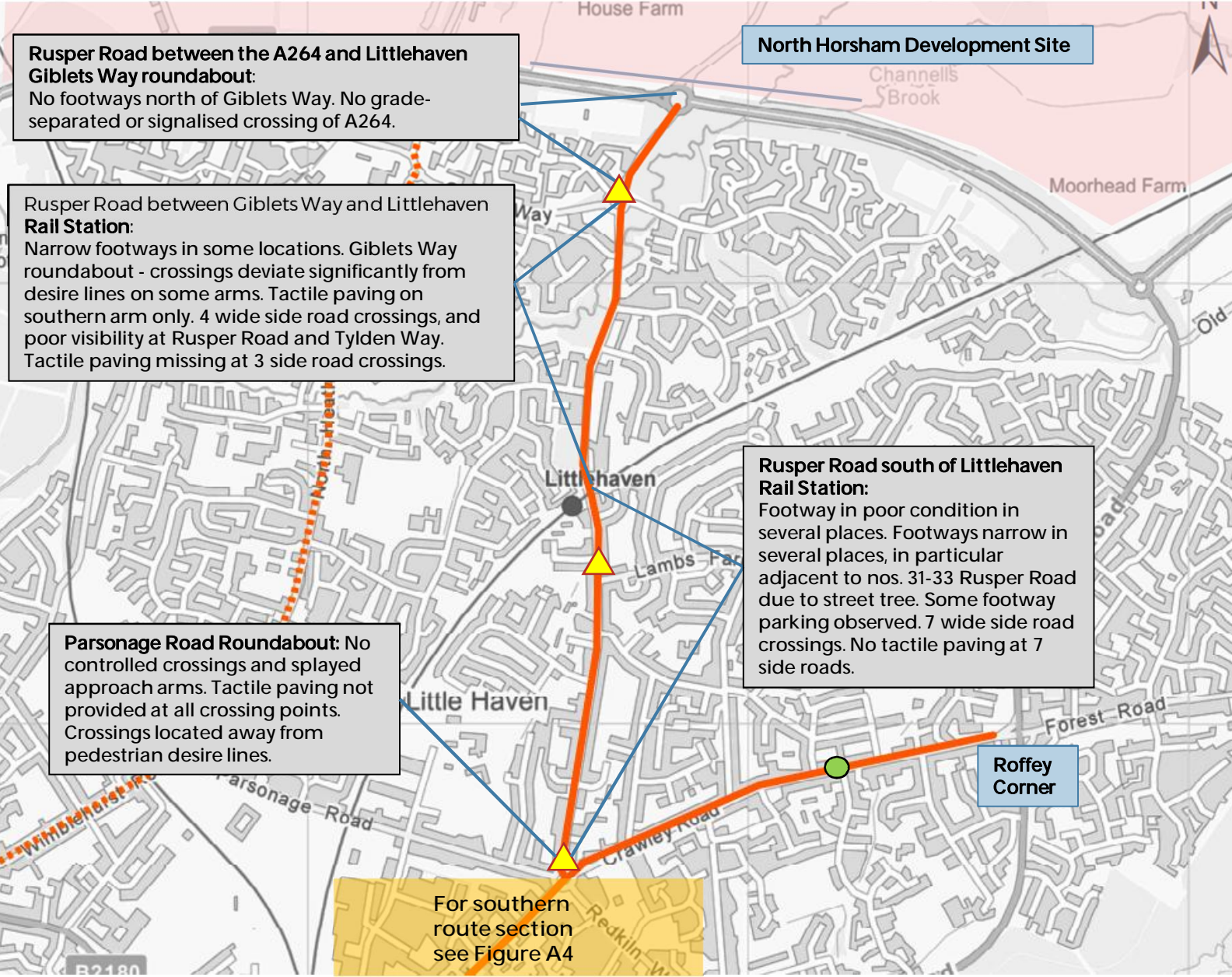
## Figure A2: Walking route audit (northern section) - key findings

**Context and key issues**

- No footways to the north of Giblets Way and no grade-separated or controlled crossings of the A264.
- Narrow footway widths in some locations, with limited highway space to widen, especially south of the railway line.
- Several wide side road crossings, resulting in longer crossing distances, and crossings without tactile paving.



Parsonage Road roundabout - long pedestrian crossing distances



**Key**

- Signal or zebra crossing
- ▲ Junction or crossing with high traffic flows and no signal or zebra crossing

# Corridors 1a and 2: North Horsham and Roffey to Town Centre

**Table A1: Proposed improvements - northern section**

Location	Proposed Infrastructure Improvements (subject to subject to further study, feasibility and consultation)
<p><b>Corridor 1a:</b> Rusper Road (A264 Roundabout to Littlehaven Station)</p>	<ul style="list-style-type: none"> <li>• Construct segregated cycle tracks and widen footways where widths are below standard. This would require the loss of right-turn lanes, the removal of on-street parking in some locations and some vegetation clearance.</li> <li>• North of Giblets Way Roundabout construct new footways, alongside the construction of cycle tracks.</li> <li>• Redesign wide side roads to reduce the speeds of turning vehicles and minimise crossing distances. Introduce priority for cyclists and pedestrians where cycle tracks and footways cross side roads, with raised tables for level crossing. Comprehensively install tactile paving to current standards.</li> <li>• Redesign the Rusper Road / Giblets Way roundabout to enable safer cycle and pedestrian crossing movements, such as with parallel crossings.</li> <li>• Construct grade-separated crossing of A264 to provide safe and direct connections from North Horsham development to existing Horsham urban area. It should be suitably wide to accommodate the expected significant pedestrian and cyclist flows to and from the new development and should have segregated space for both groups, to minimise conflict.</li> <li>• If monitoring of traffic speeds indicates non-adherence to speed limits, then consider measures to reduce traffic vehicle speeds with physical or natural traffic calming features (such as carriageway narrowing, gateway features or planting).</li> </ul>
<p><b>Corridor 1a:</b> Rusper Road (Littlehaven Station to Crawley Road / Parsonage Road Roundabout)</p>	<ul style="list-style-type: none"> <li>• Highway width constraints mean that it is unlikely to be feasible to construct cycle tracks and/or widen footways to an appropriate standard if two traffic lanes are retained. Reallocating carriageway space to improve cycle and/or pedestrian infrastructure (potentially requiring one-way operation for motor vehicles) has the potential to make the Rusper Road corridor more suitable for walking and cycling, but would be very challenging to deliver. Alternative measures to substantially reduce motor traffic flows, such as a bus-only section, could also make this section suitable in terms of safety and comfort for cycling but would also be very challenging to deliver.</li> <li>• It is therefore recommended that a scheme to reduce traffic speeds is introduced. Further study is required to consider concepts, but this could potentially include an area-wide 20mph speed limit, physical traffic calming measures and formalising on-street parking bays. Sections of narrow footway may remain if this option is progressed.</li> <li>• Redesign wide side roads to reduce the speeds of turning vehicles and minimise crossing distances. Introduce priority for pedestrians where footways cross side roads, with raised tables for level crossing. Comprehensively install tactile paving to current standards.</li> <li>• Consider introducing zebra crossings to facilitate easier and safer pedestrian crossings at Rusper Road / Lambs Farm Road junction.</li> </ul>

# Corridors 1a and 2: North Horsham and Roffey to Town Centre

**Table A1: Proposed improvements - northern section**

Location	Proposed Infrastructure Improvements <small>(subject to further study, feasibility and consultation)</small>
<p><b>Corridor 2:</b> Crawley Road (Roffey Corner to Parsonage Road roundabout)</p>	<ul style="list-style-type: none"> <li>• There is insufficient width to accommodate continuous cycle tracks along this section of Crawley Road as well as two traffic lanes and footways. It is therefore recommended that measures are introduced to reduce through traffic flows. This could comprise:                             <ul style="list-style-type: none"> <li>• (i) a bus- and cycle- only section, with other motor vehicles being prohibited, and diverting motor traffic to other routes, such as Harwood Road; or</li> <li>• (ii) one-way operation for motor vehicles for all or part of the section, with two-way cycling permitted, or with a cycle track constructed alongside the one-way carriageway.</li> </ul> </li> <li>• Either option would have implications for access, traffic routing and bus operations. Each option could be accompanied by physical traffic calming measures, streetscape enhancements, such as by Roffey Millennium Hall, and / or a 20mph speed limit to reduce motor vehicle speeds.</li> </ul>
<p><b>Corridors 1a and 2:</b> Parsonage Road Roundabout</p>	<ul style="list-style-type: none"> <li>• Redesign the roundabout to enable safer cyclist and pedestrian movements. Further study required to identify options to separate cyclists from motor traffic, such as off-road cycle tracks around the perimeter linked to parallel crossings for cyclists and pedestrians. Install tactile paving on all arms as part of junction upgrade.</li> </ul>

# Corridors 1a and 2: North Horsham and Roffey to Town Centre

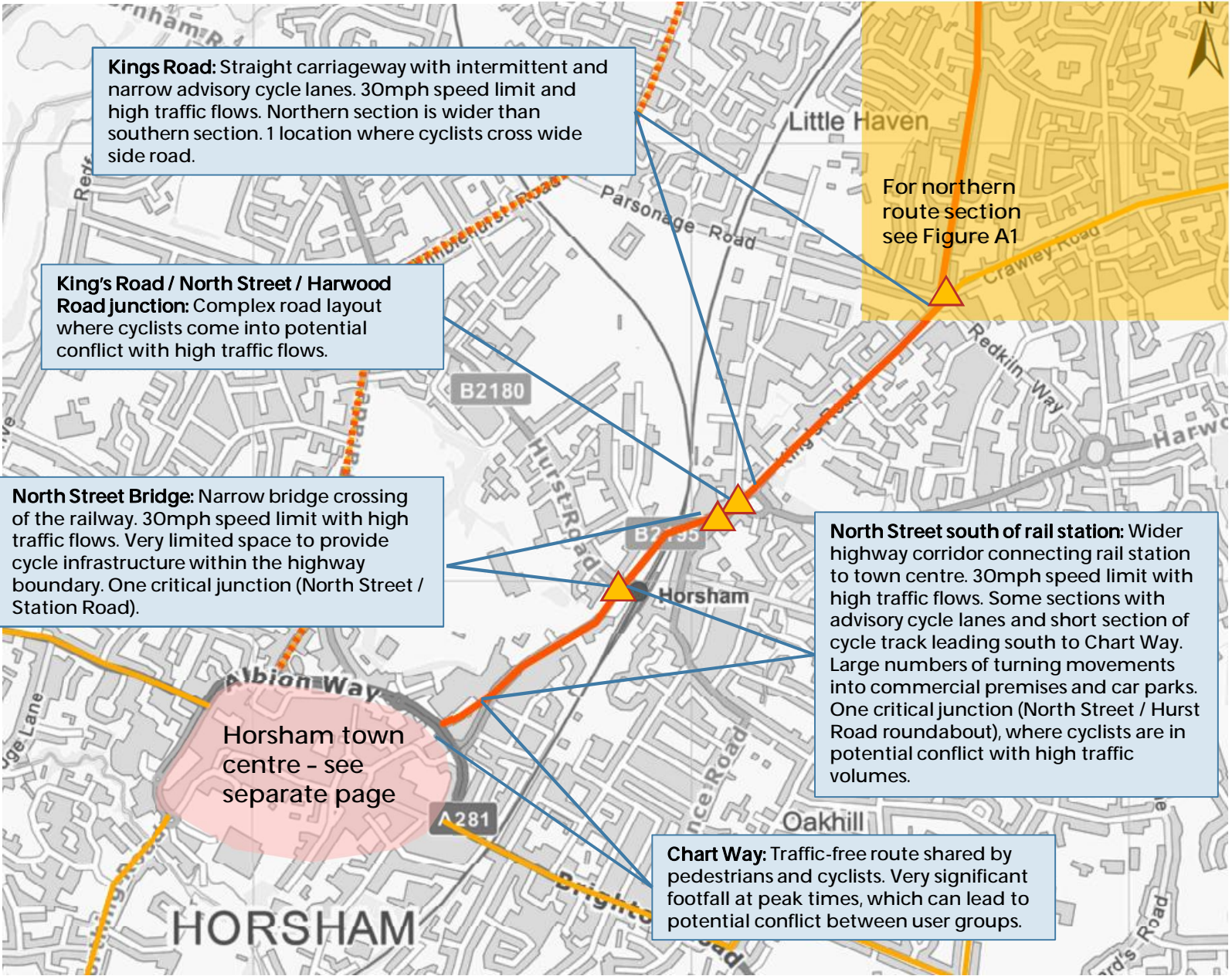
## Figure A3: Cycle route audit - (southern section) - key findings

### Context and key issues

- Connects key destinations including Horsham railway station, Lidl, key employment areas and theatre
- Limited railway crossings
- High traffic flows
- Limited highway space, particularly on North Street railway bridge



North Street railway overbridge



### Key

- ▲ Junction where cyclists potentially in conflict with high traffic flows

# Corridors 1a and 2: North Horsham and Roffey to Town Centre

## Figure A4: Walking route audit (southern section) - key findings

**Context and key issues**

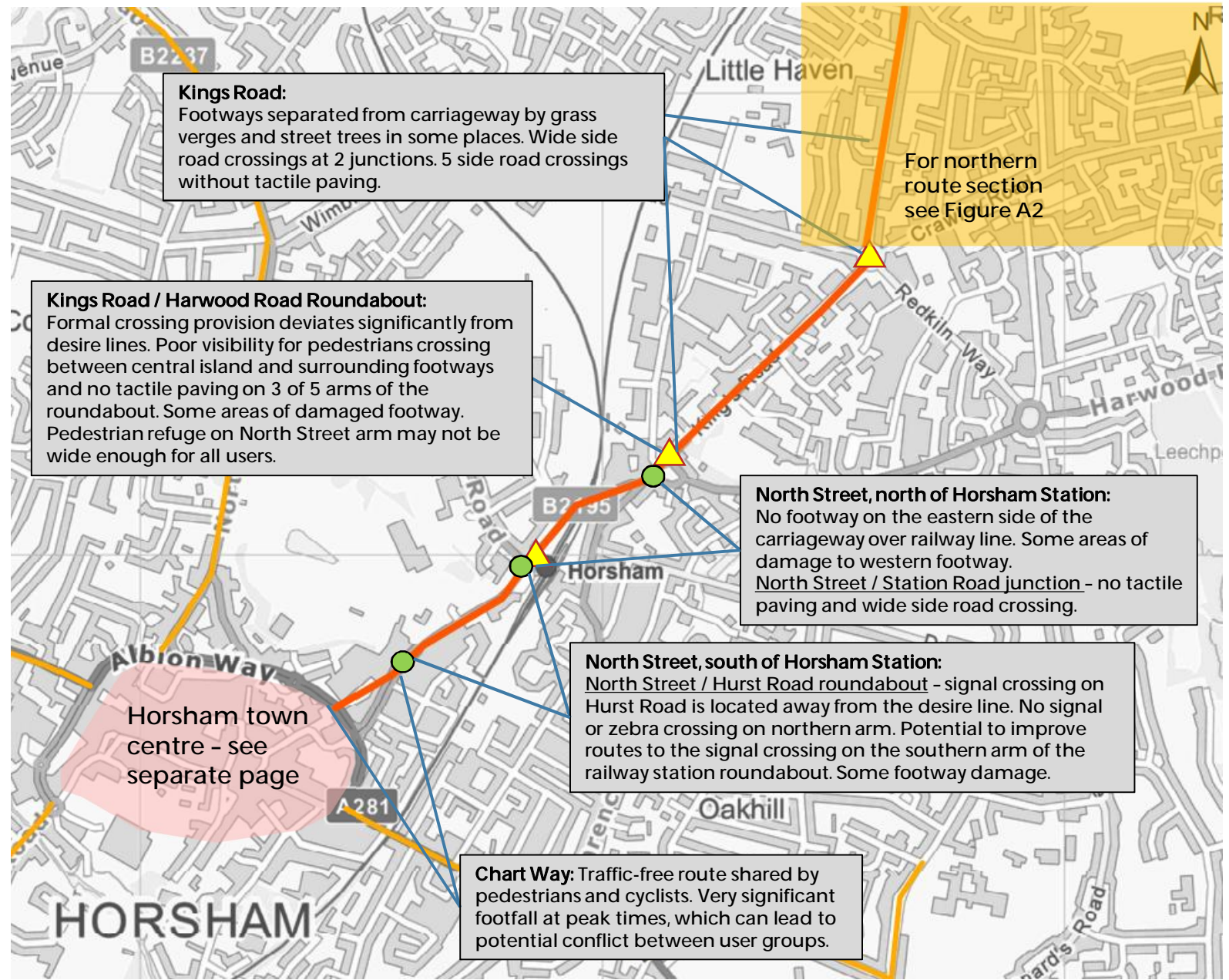
- Limited railway crossings.
- Narrow footway widths, in particular where North Street crosses the railway, with pedestrians in close proximity to high traffic volumes.
- Limited highway space, particularly on North Street railway bridge.
- Several wide side road crossings, resulting in longer crossing distances, and numerous crossings without tactile paving.



Horsham rail station roundabout

**Key**

- Signal or zebra crossing
- ▲ Junction or crossing with high traffic flows and no signal or zebra crossing





# Corridors 1a and 2: North Horsham and Roffey to Town Centre

**Table A2: Proposed improvements - southern section**

Location	Proposed Infrastructure Improvements (subject to further study, feasibility and consultation)
Kings Road (Crawley Road / Parsonage Road Roundabout to Station Road)	<ul style="list-style-type: none"> <li>• There is insufficient highway width to accommodate cycle tracks, as well as two traffic lanes and footways, along the full length of Kings Road. On that basis, to make the route more suitable for cycling, measures will be required to reduce or limit traffic using Kings Road as a through route. Options include: (i) A bus- and cycle-only section, with vehicular access to all properties retained from the northern or southern end; or (ii) One-way operation, which would give space to accommodate cycle tracks.</li> <li>• These options would need careful consideration, in terms of re-routing traffic and other factors. Complementary measures could potentially include an area-wide 20mph speed limit and physical traffic calming measures.</li> <li>• Redesign wide side roads to reduce the speeds of turning vehicles and minimise crossing distances. Introduce priority for cyclists and pedestrians where cycle tracks and footways cross side roads, with raised tables for level crossing. Consistently install tactile paving to current standards.</li> </ul>
Kings Road / Harwood Road Roundabout	<ul style="list-style-type: none"> <li>• Redesign the gyratory to enable safer cyclist and pedestrian movements. Further study required to identify options to provide space for cyclists segregated from motor traffic, such as off-road cycle tracks around the perimeter linked to parallel crossings.</li> <li>• In terms of infrastructure for pedestrians:               <ul style="list-style-type: none"> <li>- Consistently provide dropped kerbs and tactile paving to current standards; and</li> <li>- If required as part of the junction's future design, amend pedestrian refuge on North Street arm to ensure there is suitable width for all users.</li> </ul> </li> </ul>
North Street Bridge (Station Road to Rail Station)	<ul style="list-style-type: none"> <li>• There is insufficient highway width to accommodate cycle tracks or improved footway provision, as well as two traffic lanes over the railway bridge. Measures to substantially reduce motor traffic flows and/or make space for cycle tracks or improved pedestrian infrastructure (one-way arrangements or a bus and cycle-only section) have the potential to make the section more suitable but would be very challenging to deliver.</li> <li>• A replacement wider bridge structure across the railway is required to provide space for a wider footway and cycle track. This would require liaison and agreement with adjacent landowners, including Network Rail, and may require land purchase. Until this occurs then an alternative route will be required (see overleaf).</li> <li>• Redesign Station Road side road junction to reduce vehicle turning speeds and to provide greater priority for crossing pedestrian movements, and with tactile paving to current standards.</li> <li>• Redesign North Street / Hurst Road junction to accommodate pedestrian crossings better aligned with desire lines, particularly for east-west movements.</li> </ul>

# Corridors 1a and 2: North Horsham and Roffey to Town Centre

Table A2: Proposed improvements - southern section

Location	Proposed Infrastructure Improvements <small>(subject to further study, feasibility and consultation)</small>
Streets east of railway station	<p>In the shorter-term it is considered more feasible to create a suitable cycle route crossing under the railway line at Queen Street, rather than the North Street bridge or subway (see further details for Queen Street in corridor 3 on page 31-32). On that basis there is a requirement to create a cycle route avoiding North Street and connecting the Kings Road / North Street roundabout (Lidl junction) to Queen Street. The following infrastructure is recommended:</p> <ul style="list-style-type: none"> <li>• Identify options to create a low-traffic, low-vehicle speed neighbourhood to enable safer on-carriageway cycling, with through traffic using more strategic roads. This could make use of bollards, gates and/or planters to prevent through traffic in one or more locations</li> <li>• Work in partnership with landowner to identify whether the shared-use footway / cycleway between Booth Way and Depot Road can be widened. Redesign the path's southern access point (where barriers currently exist) to enable all categories of cycle to use the route;</li> <li>• If feasible, permit two-way cycling in one-way Barrington Road; and</li> <li>• Convert southern end of New Street to one-way operation to provide space for cycle movements at New Street / Queen Street junction. A signal crossing will also be required at or near this location if the cycle track is constructed on the southern side of Queen Street.</li> </ul>
North Street and Chart Way (Railway Station to town centre)	<p>In terms of pedestrian route improvements to the west of Horsham Railway Station:</p> <ul style="list-style-type: none"> <li>• Further study, including a review of pedestrian desire lines, is required to identify new or revised locations for controlled crossings on North Street.</li> <li>• If monitoring of traffic speeds on the B2195 corridor suggests non-adherence to speed limits, then, consider measures to reduce traffic vehicle speeds, such as physical traffic calming features.</li> </ul>

# Corridor 1b: North Horsham to Town Centre via North Parade

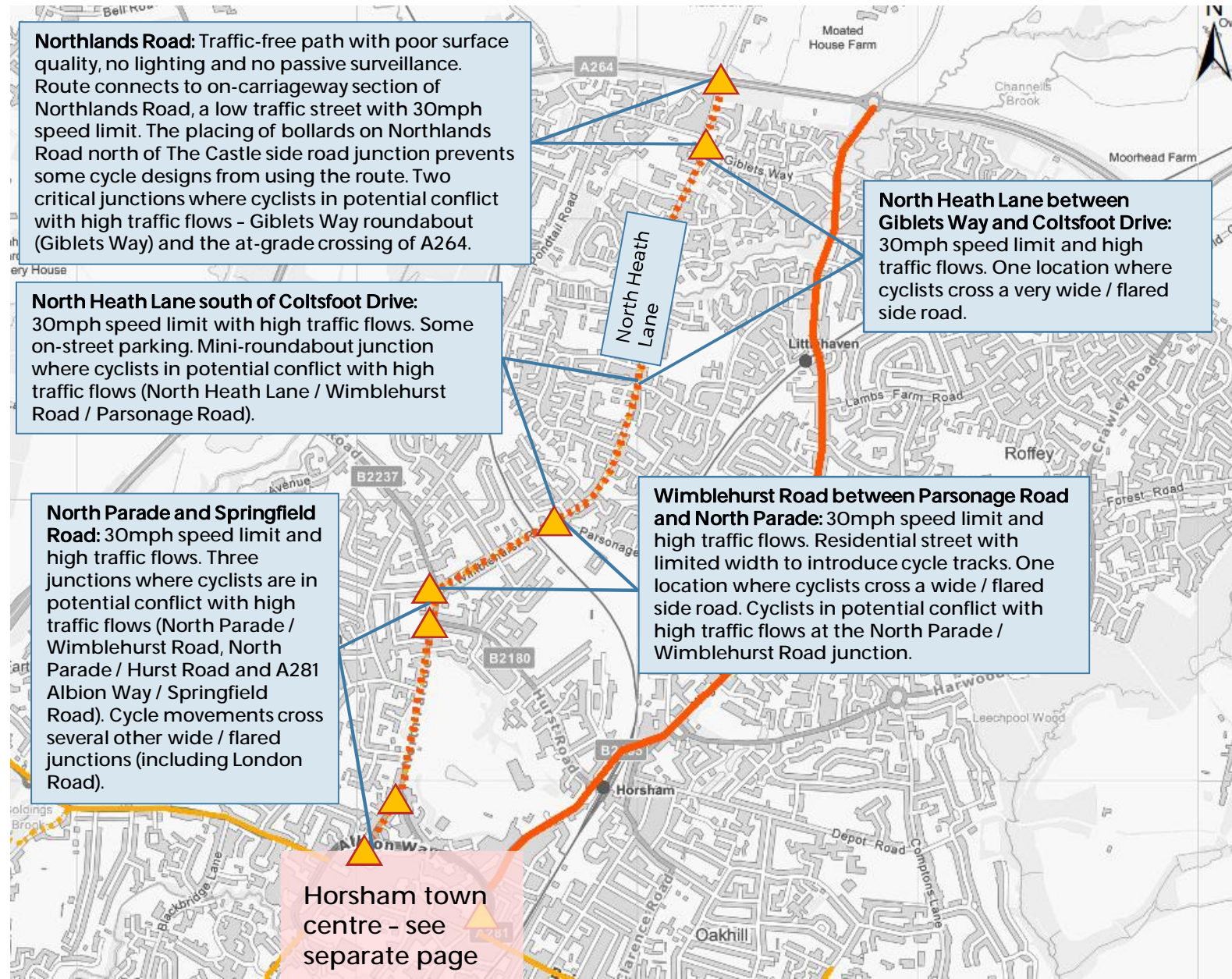
Figure A5: Cycle route audit - key findings

## Context and key issues

- Alternative corridor from North Horsham into town centre following North Heath Lane, Wimblehurst Road and North Parade
- High traffic flows on all identified road sections
- Several junctions where cyclists in potential conflict with high traffic flows



Wimblehurst Road rail overbridge



# Corridor 1b: North Horsham to Town Centre via North Parade

**Table A3: Proposed improvements**

Location	Proposed Infrastructure Improvements <small>(subject to further study, feasibility and consultation)</small>
North Heath Lane (Giblets Way to Parsonage Road)	<ul style="list-style-type: none"> <li>Construct cycle tracks segregated from pedestrians, with priority across redesigned side roads. This would require the loss of right-turn lanes, the loss of on-street parking in some locations and some vegetation clearance. Accommodating this is likely to require priority working for motor vehicles at pinch point locations and potentially some short sections of cycle track which are narrower than desirable widths. Redesign wide side roads to reduce turning vehicle speeds and introduce priority for crossing cyclists.</li> </ul>
Wimblehurst Road / Parsonage Road mini- roundabout	<ul style="list-style-type: none"> <li>Redesign junction to enable safer cycle movements, potentially with parallel crossings or introducing signal control.</li> </ul>
Wimblehurst Road (Parsonage Road to Richmond Road)	<ul style="list-style-type: none"> <li>Further study required to confirm whether there is sufficient highway width to accommodate two traffic lanes, footways and a cycle track of suitable width across the railway bridge. If this is not feasible, then a parallel cantilevered bridge for cycle traffic will be required.</li> </ul>
Richmond Road (Wimblehurst Road to Hurst Road)	<ul style="list-style-type: none"> <li>Wimblehurst Road between the railway bridge and North Parade is too narrow to accommodate cycle tracks alongside two traffic lanes and footways. Introducing one-way operation for motor vehicles is an option to provide space for cycle tracks, but would be very challenging to deliver.</li> <li>It is considered more feasible to use an alternative route, via Richmond Road. Additional measures may be required to ensure this is a low-traffic, low-speed residential area, potentially including additional one-way arrangements or a road closure for motor vehicles.</li> </ul>
Hurst Road (Richmond Road to North Parade)	<ul style="list-style-type: none"> <li>Construct cycle track segregated from pedestrians. This would require the carriageway to be narrowed to enable remaining highway space to be reallocated to cycle infrastructure, for example narrowing to one traffic lane on the approach to the traffic signals.</li> <li>If the cycle track is provided on the southern side of Hurst Road then a controlled crossing will be required at the Richmond Road / Hurst Road junction to enable safer cycle crossings.</li> </ul>
B2237 North Parade and Springfield Road (Wimblehurst Road to B2237 Albion Way)	<ul style="list-style-type: none"> <li>Construct cycle tracks segregated from pedestrians. This would require the loss of some grassed verges, the redesign or relocation of on-street parking bays and carriageway and kerb realignment in certain locations.</li> <li>Redesign wide side roads to reduce the speeds of turning vehicles and minimise crossing distances. Introduce priority for cyclists and pedestrians where cycle tracks and footways cross side roads, with raised tables for level crossing.</li> <li>Redesign Hurst Road / North Parade junction to provide space for a cycle track. This will require kerb realignment and potentially a reduction in the number of approach lanes.</li> <li>Redesign Springfield Road / Albion Way junction to enable safer north-south cycle movements, such as with simplified signal crossing arrangements for cyclists.</li> <li>If the loss of parking along Springfield Road is undeliverable then an alternative option is to route via London Road. If this is taken forward then the following will be required: (a) measures to reduce traffic levels on London Road, such as with a cul-de-sac arrangement for motor vehicles and (b) simplified signal crossing arrangements of Albion Way, providing sufficient space for cyclists and pedestrians and ideally as a single-phase, 'straight-across' arrangement.</li> </ul>

# Corridor 3: Forest School to Town Centre

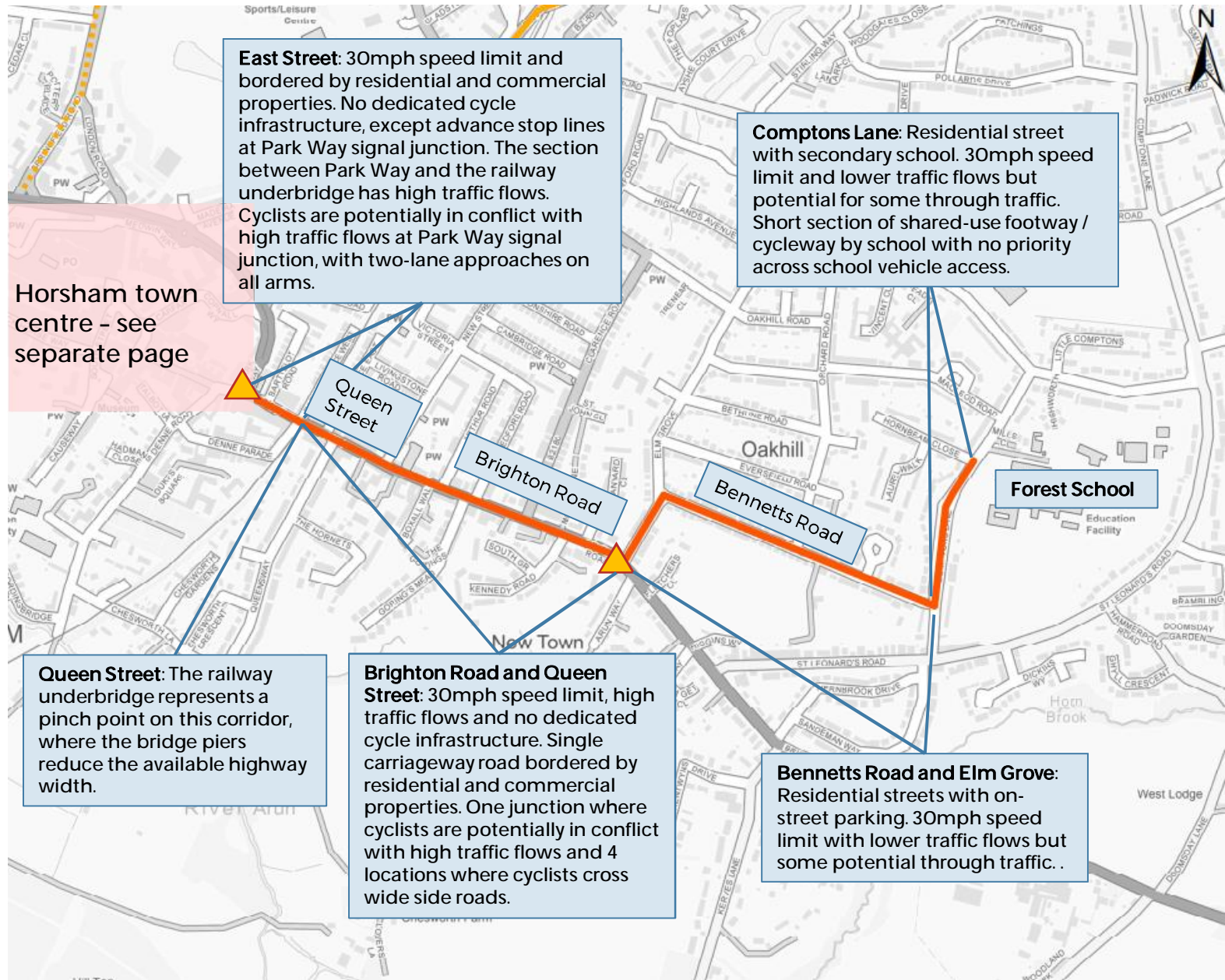
Figure A6: Cycle route audit - key findings

## Context and key issues


- Connects to key destinations, including Forest School and town centre
- High traffic flows on Brighton Road, Queen Street and East Street with no protection for cyclists from motor traffic
- Two junctions where cyclists in potential conflict with high traffic flows



Queen Street railway underbridge (The Iron Bridge)



## Key

-  Junction where cyclists potentially in conflict with high traffic flows

# Corridor 3: Forest School to Town Centre

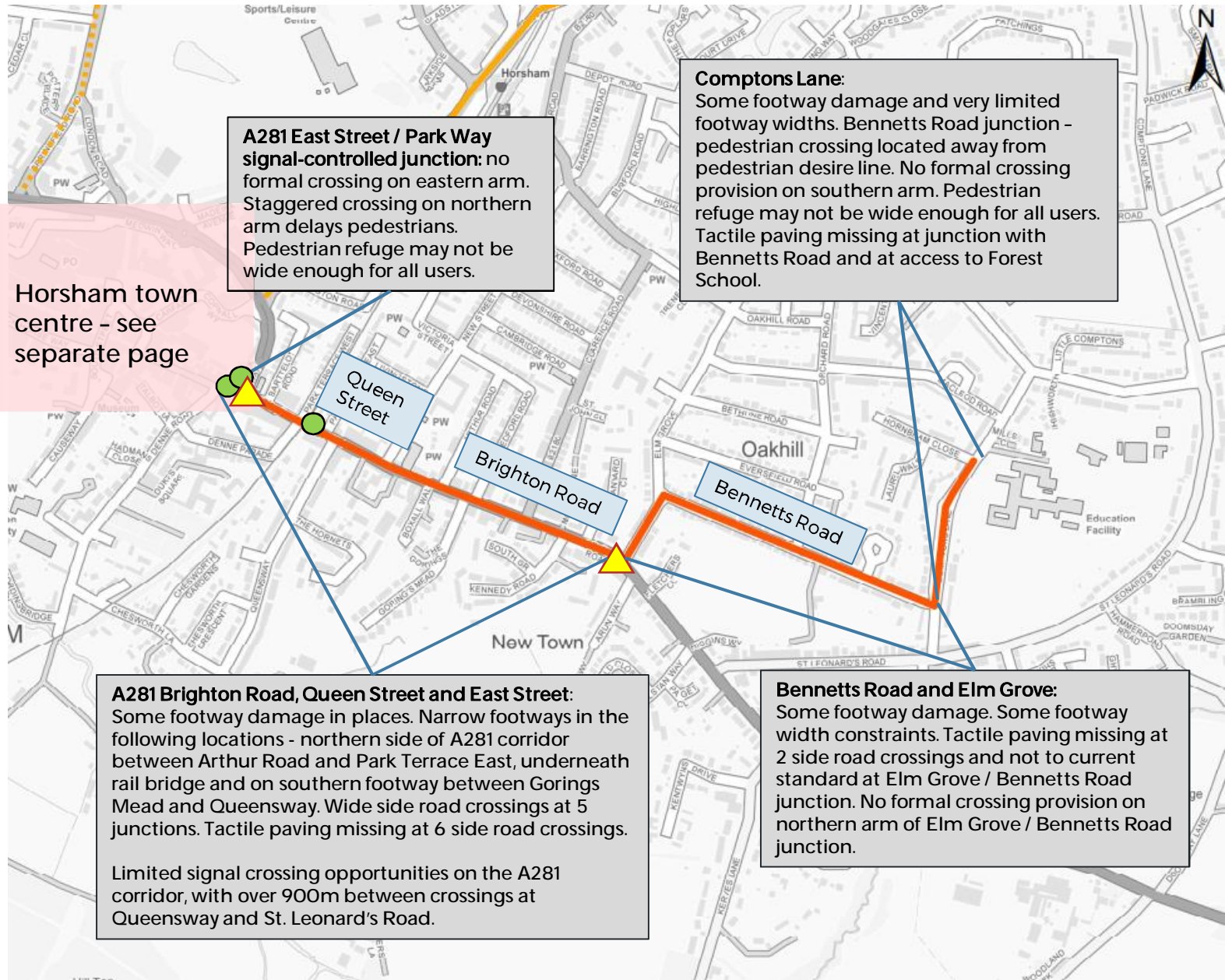
Figure A7: Walking route audit - key findings

## Context and key issues

- Limited footway widths / footway width constraints at various points, with pedestrians in close proximity to high traffic flows on the A281 corridor.
- Several wide side road crossings, resulting in longer pedestrian crossing distances.
- Limited controlled crossing opportunities on the A281 corridor.



Wide side road crossing at Barttelot Road



## Key

- Signal or zebra crossing
- ▲ Junction or crossing with high traffic flows and no signal or zebra crossing

# Corridor 3: Forest School to Town Centre

**Table A4: Proposed improvements**

Location	Proposed Infrastructure Improvements (subject to subject to further study, feasibility and consultation)
Comptons Lane area	<ul style="list-style-type: none"> <li>• There are two broad options for this area in terms of cycling:               <ol style="list-style-type: none"> <li>(1) Explore options to create a low-traffic neighbourhood covering the area from Forest School to Elm Grove to enable safer on-carriageway cycling, with through traffic using more strategic roads.; or</li> <li>(2) Widen and upgrade existing cycle track.</li> </ol> </li> <li>• Opportunities to widen the eastern footway on Comptons Lane to a suitable standard for all types of user are likely to be limited if two traffic lanes are retained. Sections of narrow footway are therefore likely to remain unless some carriageway space can be reallocated to provide improved footways (potentially requiring priority working for vehicles).</li> <li>• Redesign Forest School vehicular access, with raised table, tactile paving and priority for crossing cyclists and pedestrians.</li> <li>• Construct priority or parallel crossing as appropriate where cycle track crosses Comptons Lane, to enable cyclists to reach the more lightly trafficked service road.</li> <li>• Redesign Comptons Lane / Bennetts Road junction to enable safer right-turn cycle movements (from service road to Bennetts Road) and reduce speeds of turning motor vehicles. This could potentially include a refuge island to enable two-stage cycle movements. Improve north-south and east-west pedestrian crossing provision to accommodate all types of user, with tactile paving to current standards and with crossings better aligned with desire lines.</li> <li>• Consider introducing 20mph speed limit and / or other traffic calming measures to enhance conditions for cycling and walking.</li> </ul>
Bennetts Road and Elm Grove	<ul style="list-style-type: none"> <li>• Explore options to create a low-traffic neighbourhood covering the area from Forest School to Elm Grove, to enable safer on-carriageway cycling, with through traffic using more strategic roads.</li> <li>• Highway width constraints mean that sections of narrow footway are likely to remain unless some carriageway space can be reallocated to improved footways (potentially requiring the loss of on-street parking on one or both sides).</li> <li>• Redesign junction of Elm Grove and Bennetts Road to reduce speeds of turning motor vehicles and improve pedestrian crossings.</li> <li>• Install tactile paving at two side road crossings (Orchard Road and Bennetts Road cul-de-sac). Upgrade tactile paving at Brighton Road / Elm Grove side road crossing to current standards.</li> <li>• Consider introducing 20mph speed limit and / or other traffic calming measures to enhance conditions for cycling and walking.</li> </ul>
Brighton Road and Queen Street	<ul style="list-style-type: none"> <li>• Construct two-way cycle track, or with-flow one-way cycle tracks, segregated from pedestrians. It is suggested that a two-way cycle track on the southern side of the carriageway may be the preferred design due to fewer side road crossings. Accommodating cycle tracks will require the loss of on-street parking and the narrowing of the carriageway. Further study required to identify whether the varying width of the highway corridor will require there to be pinch points on the carriageway and / or cycle track.</li> <li>• Redesign wide side roads to reduce turning vehicle speeds and minimise crossing distances. Introduce priority for cyclists and pedestrians where cycle tracks and footways cross side roads, with raised tables for level crossing. Consistently install tactile paving.</li> <li>• Widen narrow sections of footway, finding a balance between accommodating cycle infrastructure and enhancing conditions for pedestrians.</li> <li>• If monitoring suggests non-adherence to speed limits, consider a range of measures to reduce speeds of motor vehicles.</li> <li>• Consider additional signalised crossings on the A281 corridor, to reduce distance between crossing points and provide more direct access to bus stops.</li> </ul>

# Corridor 3: Forest School to Town Centre

Table A4: Proposed improvements

Location	Proposed Infrastructure Improvements <small>(subject to further study, feasibility and consultation)</small>
Queen Street / East Street	<ul style="list-style-type: none"> <li>Initial study indicates that there may be sufficient width for a 2.5m wide two-way cycle track beneath the railway bridge. This would require limited narrowing of the carriageway to achieve this. If it is not feasible to accommodate a cycle track and two traffic lanes, then further carriageway narrowing, with shuttle traffic signals, may be required.</li> <li>If Network Rail is considering bridge replacement, then a wider span with set-back retaining walls should be sought to provide more space for pedestrians and cyclists.</li> <li>Widen narrow sections of footway, finding a balance between accommodating cycle infrastructure and enhancing conditions for pedestrians.</li> </ul>
East Street (Railway Underbridge to Denne Road)	<ul style="list-style-type: none"> <li>Construct two-way cycle track, fully segregated from pedestrians, on southern side of carriageway. Accommodating the cycle track will require the narrowing of the carriageway to one traffic lane in each direction at the traffic Park Way signals.</li> <li>At East Street / Denne Road junction, consider changing the existing priority, by introducing give-way markings on Denne Road arm, as a measure to enable safer east-west cycle movements.</li> <li>Redesign junction of East Street and Barttelot Road, to reduce vehicle turning speeds and improve pedestrian crossings.</li> <li>Review whether existing two-stage crossing layout at the A281 East Street / Park Way signal-controlled junction can be replaced with a single-stage pedestrian crossing (northern arm), to reduce pedestrian delay, and if pedestrian crossing infrastructure can be provided on the eastern arm of the junction, to accommodate desire lines.</li> </ul>



# Corridor 4: Southwater to Town Centre

## Figure A8: Cycle route audit (southern section) - key findings

**Context and key issues**

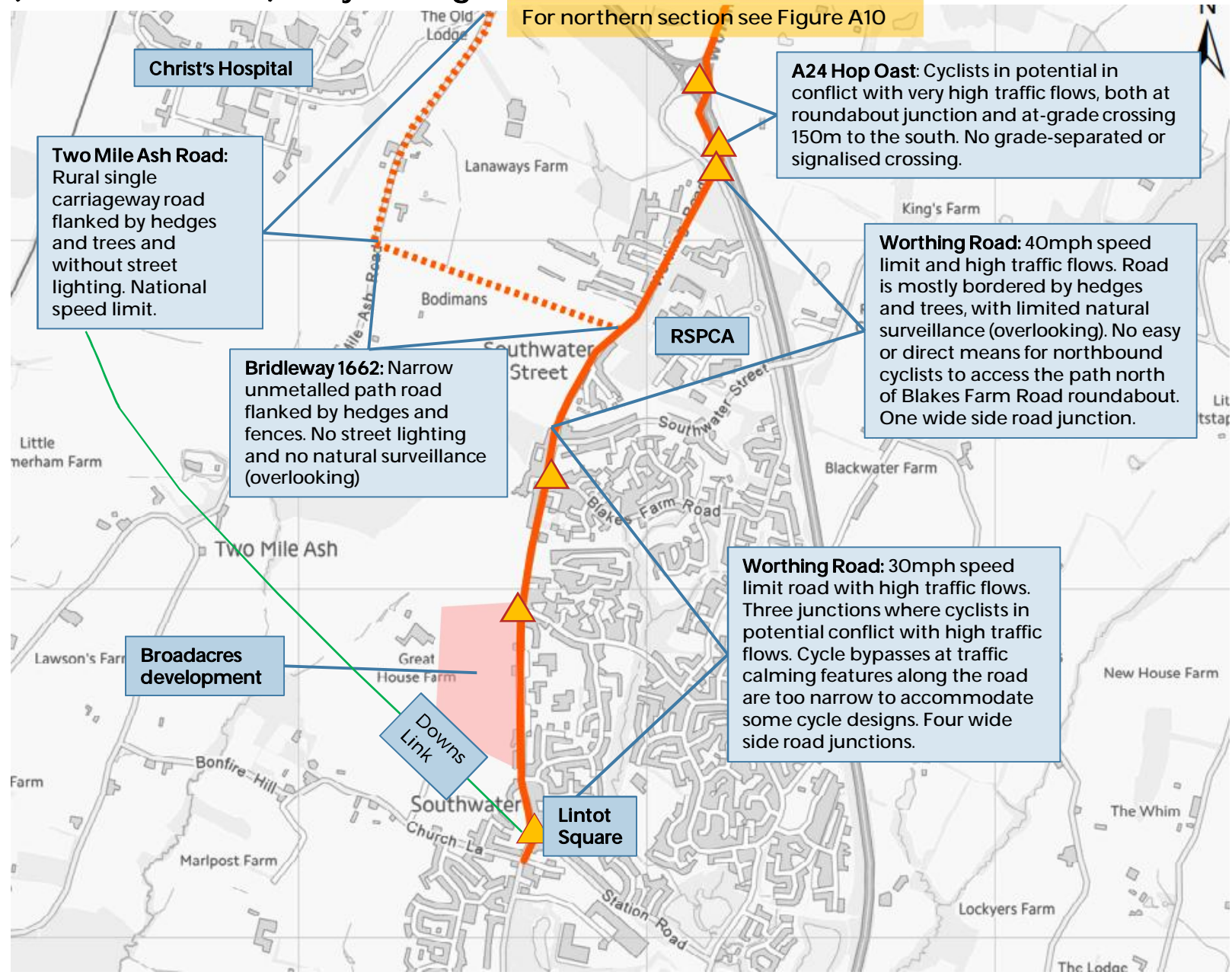
- Residential development to the west of Southwater is underway. A further extension to this site has been proposed which, if allocated through the Local Plan Review, could create significant additional residential development, although no decision has been made regarding this proposal at the time of writing.
- Much of Worthing Road has high traffic flows and north of Southwater Street has a 40mph speed limit.



A24 Hop Oast at-grade crossing

**Key**

Junction where cyclists potentially in conflict with high traffic flows



# Corridor 4: Southwater to Town Centre

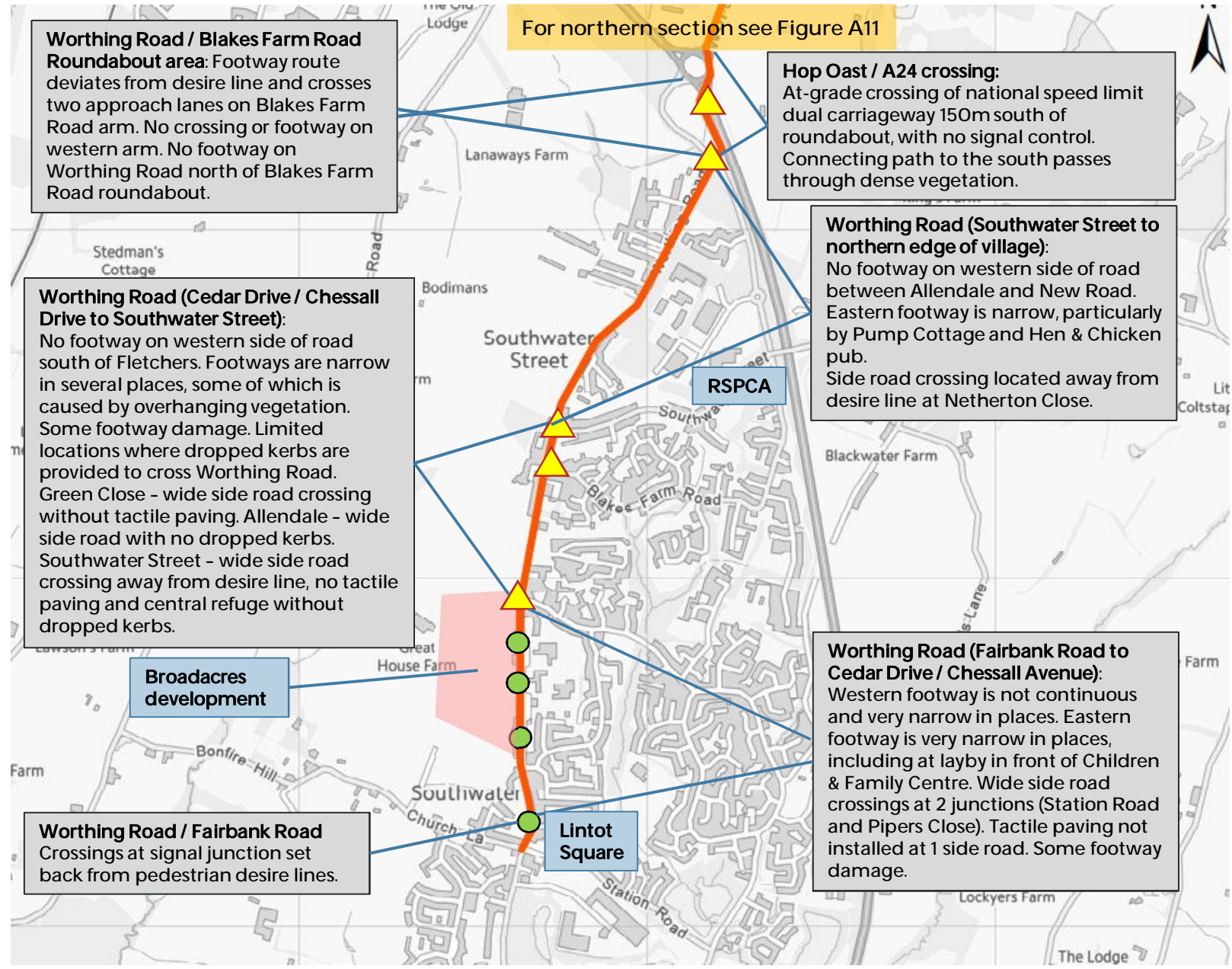
## Figure A9: Walking route audit (southern section) - key findings

- Context and key issues**
- Several locations with narrow footways, with pedestrians in close proximity to high traffic flows;
  - Some sections with footway provision on one side only;
  - Opportunities to improve strategic north-south footway provision may arise from future residential developments;
  - Several wide side road crossings, resulting in longer pedestrian crossing distances; and
  - No grade-separated or controlled crossing provision on A24.



**Key**

- Signal or zebra crossing
- Junction or crossing with high traffic flows and no signal or zebra crossing



# Corridor 4: Southwater to Town Centre

## Figure A10: Cycle route audit (northern section) - key findings

**Context and key issues**

- High traffic flows and 40mph speed limit
- Narrow and rural road corridor enclosed by vegetation



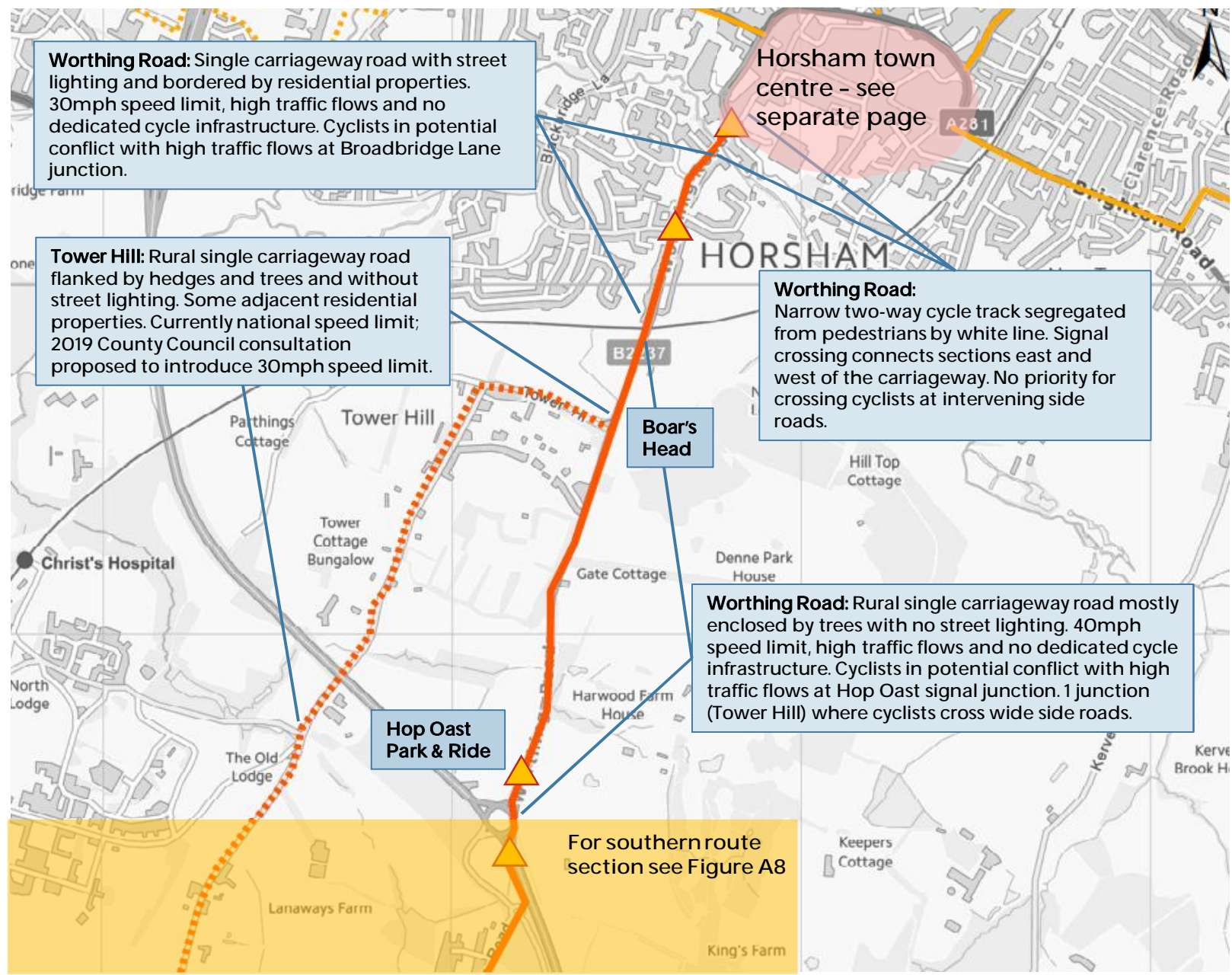
Worthing Road at Boar's Head



Tan Bridge looking towards town centre

**Key**

▲ Junction where cyclists potentially in conflict with high traffic flows



# Corridor 4: Southwater to Town Centre

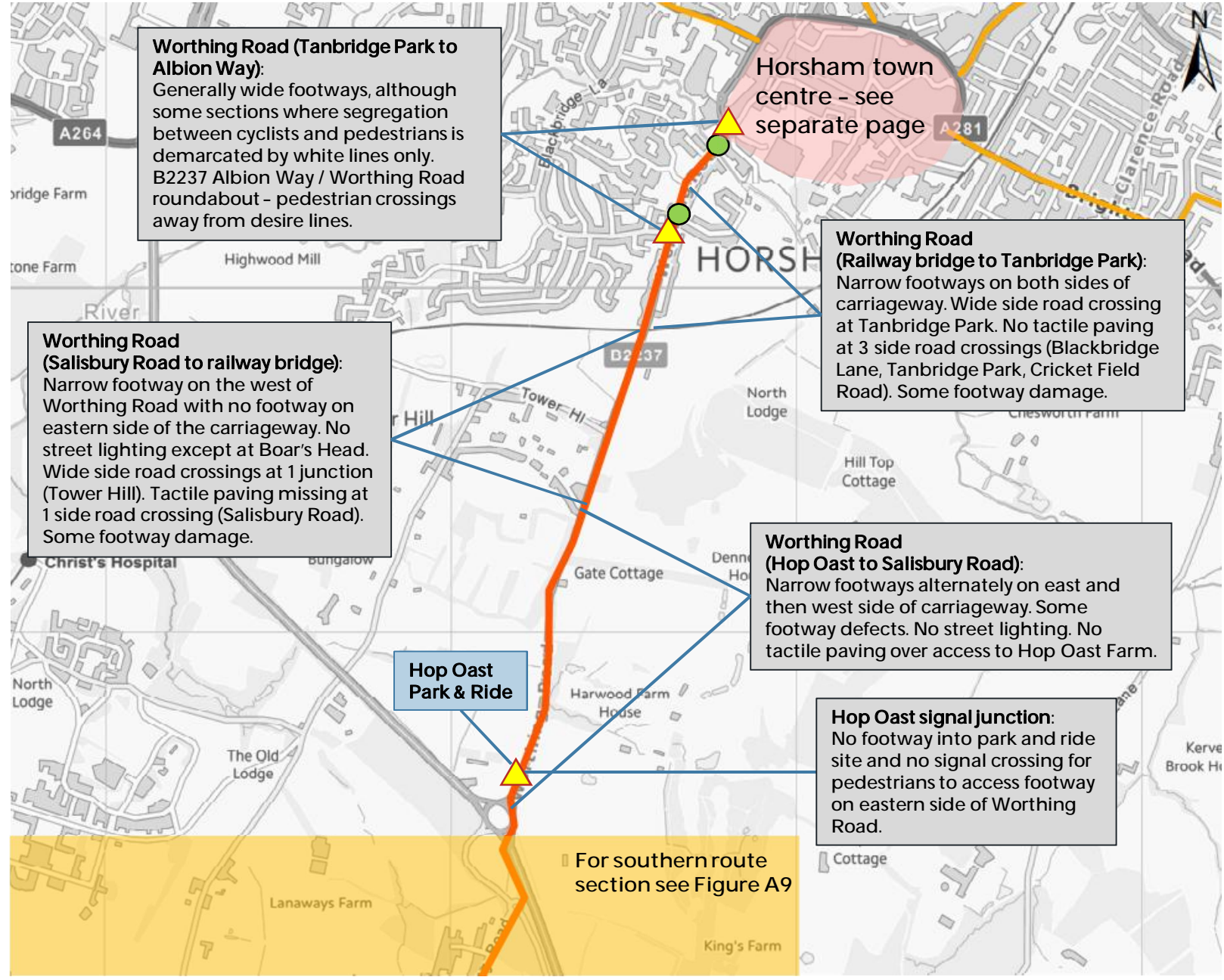
## Figure A11: Walking route audit (northern section) - key findings

### Context and key issues

- Narrow footway widths, with pedestrians in close proximity to high traffic flows and speeds.
- 40mph speed limit, reducing to 30mph on approach to Horsham.
- No lighting between Southwater and Horsham.
- Several wide side road crossings.



Worthing Road looking north towards railway bridge



### Key

- Signal or zebra crossing
- ▲ Junction or crossing with high traffic flows and no signal or zebra crossing

# Corridor 4: Southwater to Town Centre

---

## Route proposals – general overview

### Cycle route considerations

There is insufficient highway width to construct a continuous cycle track (or shared-use path) along all parts of Worthing Road in addition to two traffic lanes. The two key pinch points are the sections south of Southwater Primary School and between Horham Golf and Fitness / Football Club access and the railway bridge. Unless parts of Worthing Road were made one-way to make space for a cycle track, or through traffic diverted onto other roads, it is considered that an alternative alignment will be required for the cycle route between Southwater and Horsham. Each alternative route is dependent on successful agreements with private landowners.

Some factors to consider for alternative alignments include:

- directness and overall route distance;
- ability to serve existing and future developments;
- feasibility of step-free railway crossing arrangements; and
- Feasibility of a grade-separated crossing of A24.

Options may include:

- (i) An eastern route via Southwater Street, Coltstaple Lane and public bridleways (Pedlar's Way and Lovers' Lane; rights of way references 1670 and 1672) east of the Denne Park estate; or
- (ii) Routes running broadly parallel and adjacent to Worthing Road; or
- (iii) Routes to the west of Worthing Road, crossing the railway to enter Horsham via the Needles estate or Highwood Mill, potentially using part of Tower Hill.

There will also be a need to consider appropriate all-weather surfaces and forms of lighting to enable use during the hours of darkness, potentially solar studs. There may also be benefit in developing two routes which connect to different parts of Horsham and Southwater.

At this stage it is considered that **option (i)** may have greatest potential, as the entire corridor currently has rights of way for cyclists. Recommended improvements for this route are outlined overleaf. However, factors such as the local plan review (currently in the early stages of preparation) will have a bearing on the most appropriate and viable route choice.

# Corridor 4: Southwater to Town Centre

---

## Route proposals – general overview

### Walking route considerations

The section of Worthing Road between the A24 and Horsham is narrow, heavily vegetated and has sections in cutting. This makes it very challenging to create a continuous pedestrian route of suitable standard within highway land, with appropriate separation of pedestrians and motor vehicles, unless parts of the road were made one-way to provide space. Further study to assess potential alternative routes will therefore be required. Due to the distances involved, pedestrian demand between Southwater and Horsham is likely to be lower than the potential cycling demand. Several sections of parallel route do not currently have continuous off-carriageway provision.

Key factors to consider for a continuous, high-quality walking route between Southwater and Horsham include:

- Directness and overall route distance;
- Ability to serve existing and future developments;
- Feasibility of step-free railway crossing arrangements;
- Feasibility of grade-separated crossing of A24;
- Provision of lighting to enable use during hours of darkness; and
- The ability to provide footways to separate pedestrians from motor traffic.

In line with the cycle route considerations, options may include :

- (i) Parts of Southwater Street, Coltstable Lane and the public bridleway alignments (Pedlar's Way and Lovers' Lane, rights of way references 1670 and 1672) east of the Denne Park estate; or
- (ii) Routes running broadly parallel and adjacent to Worthing Road; or
- (iii) Routes to the west of Worthing Road, crossing the railway to enter Horsham via the Needles estate or Highwood Mill, potentially using part of Tower Hill.

At this stage, it is considered that **option (i)** may have the greatest potential to be delivered. However, highway width constraints on all potential corridors and the absence of existing continuous footways mean that all alternative options are likely to be challenging. Each alternative route option is dependant on successful agreement with third-party land owners to overcome width constraints and provide footway infrastructure of an appropriate standard.

The sections of Worthing Road within Southwater and within Horsham both provide important pedestrian connections and improvements for these sections are described in Table A5.

# Corridor 4: Southwater to Town Centre

**Table A5: Proposed improvements - Worthing Road**

Location	Proposed Infrastructure Improvements (subject to subject to further study, feasibility and consultation)
<p>Worthing Road, Southwater (Lintot Square to Blakes Farm Road Roundabout)</p>	<p><i>In terms of potential walking route improvements on Worthing Road within Southwater:</i></p> <ul style="list-style-type: none"> <li>• Redesign wide side road crossings to reduce vehicle turning speeds and minimise crossing distances. Introduce priority for pedestrians where footways cross lightly trafficked side roads, with raised tables for level crossing. Consistently install tactile paving to current standards.</li> <li>• Redesign the Worthing Road / Fairbanks Road signal-controlled junction to provide the pedestrian crossings on the desire line.</li> <li>• Redesign the Worthing Road / Southwater Street junction, to accommodate north-south crossings on the pedestrian desire line.</li> <li>• Review, and if required, amend pedestrian refuges on all arms of the Worthing Road / Blakes Farm Road / Fletchers roundabout, to ensure there is suitable usable width for all users.</li> <li>• Cut back overhanging vegetation to widen usable footway width.</li> <li>• Widen narrow footway sections, potentially with sections of priority working and using highway grass verges to achieve this. Highway width constraints mean that some sections of narrow footway, or sections without footway on both sides, may remain unless one-way arrangements were introduced for motor vehicles.</li> <li>• Identify opportunities to provide additional controlled crossings on Worthing Road, potentially in association with any future residential developments.</li> <li>• Identify opportunities to complete any missing sections of footway along Worthing Road, potentially in association with any future residential developments.</li> </ul>
<p>Worthing Road, Horsham</p>	<p><i>In terms of potential walking route improvements on Worthing Road within Horsham:</i></p> <ul style="list-style-type: none"> <li>• Redesign wide side road crossings to reduce vehicle turning speeds and minimise crossing distances. Introduce priority for pedestrians where footways cross lightly trafficked side roads, with raised tables for level crossing. Consistently install tactile paving to current standards.</li> </ul>

# Corridor 4: Southwater to Town Centre

**Table A6: Proposed improvements - cycle route to Horsham**

Location	Proposed Infrastructure Improvements (subject to subject to further study, feasibility and consultation)
Lintot Square to Southwater Street (via Cedar Drive and connecting residential streets)	<p><i>Context: North-south connections to the east of Worthing Road currently comprising a combination of some low traffic flow roads, some higher traffic flow roads and traffic-free paths.</i></p> <ul style="list-style-type: none"> <li>• Consider an area-wide 20mph speed limit on residential streets to reduce motor vehicle speeds, with supporting physical traffic calming measures as appropriate.</li> <li>• Construct off-road cycle infrastructure along Cripplegate Lane and Cedar Drive between Station Road (South) and Easteds Lane, where traffic flows are higher.</li> <li>• Install lighting on Easteds Lane route, potentially using low-level solar studs if appropriate.</li> <li>• On connecting paths within the residential estates, review barriers and introduce a design that enables all categories of cycle to use the route, such as bollards.</li> <li>• Enable contraflow cycling on one-way section of Station Road (South) and widen footway for shared-use by cyclists and pedestrians.</li> </ul>
Southwater Street and Coltstaple Lane	<p><i>Context: These are public highways likely to have at least 2,500 vehicles per day, with limited scope to divert traffic onto alternative routes. The section west of the A24 overbridge has a 30mph speed limit and the section to the east of the overbridge has a 40mph speed limit. There is limited natural surveillance and no street lighting. These lanes score poorly in the cycle route assessment.</i></p> <ul style="list-style-type: none"> <li>• Further work required to establish the feasibility of an off-carriageway, all-weather surface, path for this section. This may require agreement with third party land to achieve an appropriate route.</li> <li>• If a suitable alignment cannot be identified then an alternative may be to route via Reeds Lane. This would require a new grade-separated crossing (overbridge or underpass) of the A24. This is likely to require some land allocated in the Southwater Neighbourhood Plan Submission Version as local open space to achieve this.</li> </ul>
Pedlar's Way and Lovers' Lane	<p><i>Context: these are public bridleways with unsurfaced sections which are currently rutted, uneven and unsuitable for use by most cyclists or pedestrians.</i></p> <ul style="list-style-type: none"> <li>• Work with private landowners to agree package of improvements to enable all-year, all-weather use of the public bridleway alignments. This should comprise a path of at least 3.5m wide and improved surface. Suitable means of illumination should also be considered, to enable use during hours of darkness, potentially using solar studs.</li> </ul>
Queensway or Chesworth Lane and Denne Road	<p><i>Context: Two alternative routes towards the town centre, on largely residential streets with 30mph speed limits and lower traffic flows.</i></p> <ul style="list-style-type: none"> <li>• Consider introduction of 20mph speed limit, with supporting physical traffic calming measures if appropriate.</li> </ul>



# Corridor 5: Broadbridge Heath to Town Centre

Figure A12: Cycle route audit - key findings

## Context and key issues

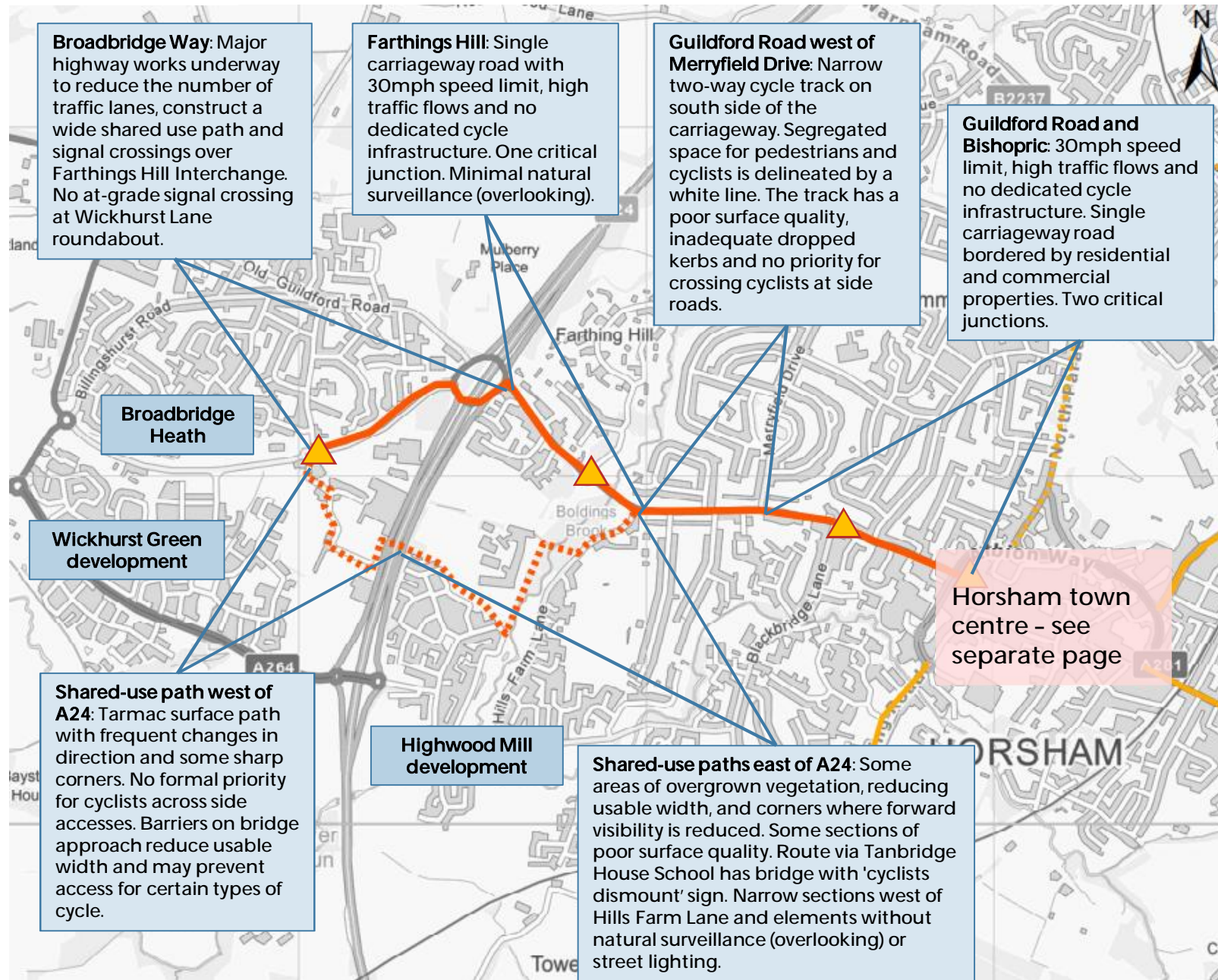
- Provides connections to key destinations including Horsham town centre, Tanbridge House School, Broadbridge Heath retail park and leisure centre
- Two route options considered. The Farthings Hill / Guildford Road route has very high traffic flows and two sections where cyclists are not protected from traffic. The route via the cycle/footbridge over the A24 is less direct and has frequent changes of direction but is traffic-free.



Existing narrow segregated path on Guildford Road, without priority across side roads

## Key

- Junction where cyclists potentially in conflict with high traffic flows



# Corridor 5: Broadbridge Heath to Town Centre

## Figure A13: Walking route audit - key findings

**Context and key issues**

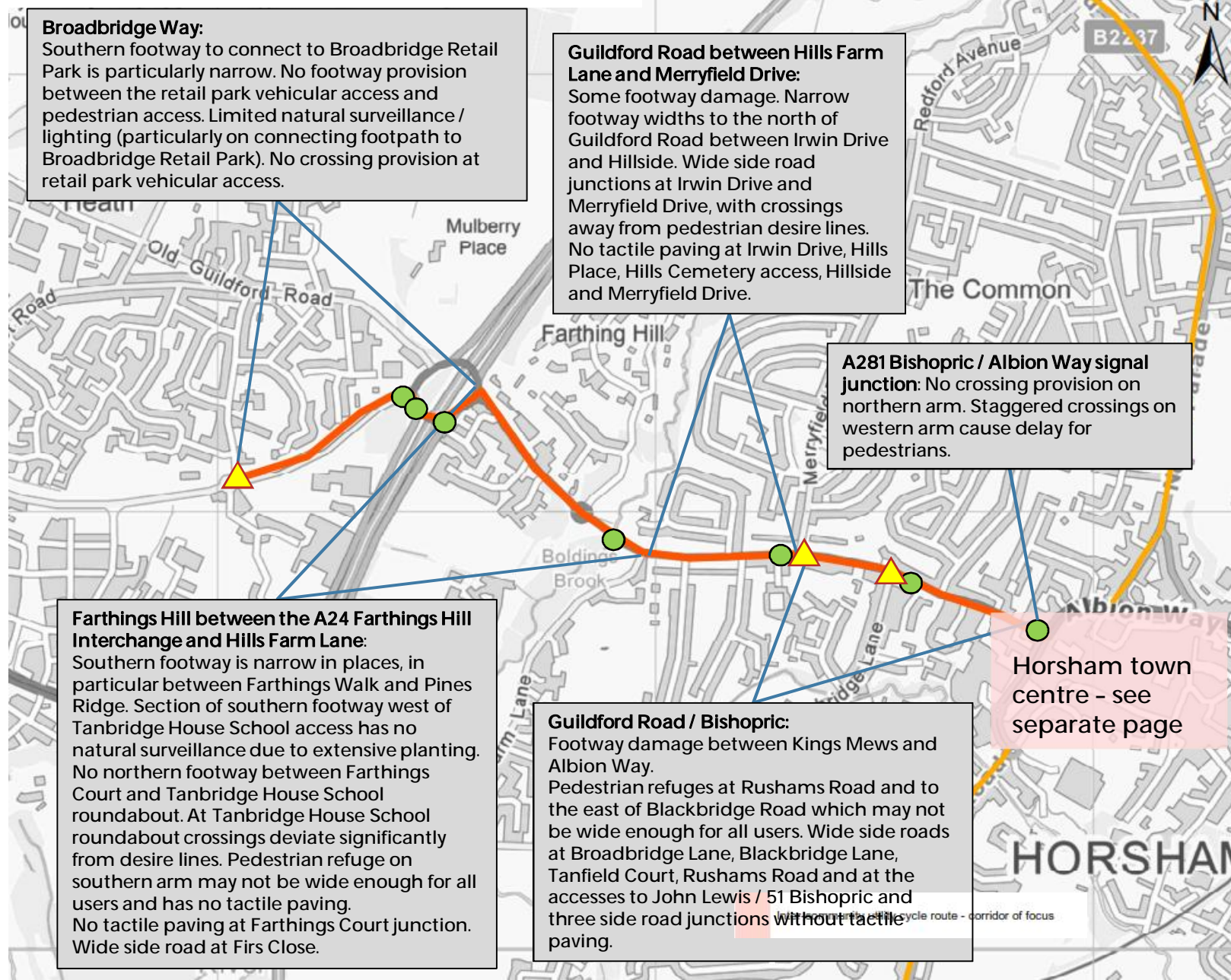
- Sections of narrow footway, with pedestrians in close proximity to high traffic flows on Guildford Road, particularly east of Farthings Hill Interchange;
- Most of the route has a 30mph speed limit, with 40mph speed limit west of Farthings Hill Interchange;
- Part of Broadbridge Way has no southern footway and much of Farthings Hill has no northern footway; and
- Several side road junctions with wide side road crossings and/or no tactile paving.



Wide side road crossing at Tanfield Court

**Key**

- Signal or zebra crossing
- ▲ Junction or crossing with high traffic flows and no signal or zebra crossing



# Corridor 5: Broadbridge Heath to Town Centre

**Table A7: Proposed improvements (western sections)**

Location	Proposed Infrastructure Improvements <small>(subject to further study, feasibility and consultation)</small>
Broadbridge Way (Tesco Roundabout to Farthings Hill Interchange)	<ul style="list-style-type: none"> <li>• Construct a cycle track, segregated from pedestrians, and footway of an appropriate standard (where currently missing) along the southern side of the former bypass, to provide access to the retail units. Widen existing sections of narrow footway where necessary.</li> <li>• Consider enhanced lighting where the existing footway is not fully illuminated.</li> <li>• Redesign the Broadbridge Retail Park access to accommodate safer cycling and pedestrian crossing movements.</li> </ul>
Farthings Hill	<ul style="list-style-type: none"> <li>• There is insufficient highway space between the property boundaries to provide a segregated cycle track or continuous footways on both sides of the carriageway if two traffic lanes are retained. Further detailed investigations are required to confirm whether there is sufficient space to overcome existing width constraints on the southern footway, or to widen and convert the southern footway into a shared-use path. This is likely to require the carriageway to be narrowed and realigned in places.</li> <li>• Redesign wide side road junction to reduce the speed of turning motor vehicles and minimise crossing distances. Introduce priority for cyclists and pedestrians where cycle tracks and footways cross lightly trafficked side roads, with raised tables for level crossing. Install tactile paving to current standards.</li> <li>• If monitoring of traffic speeds on the A281 corridor suggests non-adherence to speed limits, then, consider measures to reduce traffic vehicle speeds, such as physical or natural traffic calming features (such as carriageway narrowing / gateway traffic calming features).</li> <li>• A shared-use path along Farthings Hill is unlikely to provide the required level of capacity to meet cycle and pedestrian demand for travel between Broadbridge Heath and Horsham. Additional development is likely to occur at Broadbridge Heath. If this were located to the north then a new high-quality route will be required, with grade-separated crossing of the A24 between Farthings Hill Interchange and Robin Hood Roundabout, potentially using the existing Rookwood underpass.</li> </ul>
Tanbridge House School Roundabout	<ul style="list-style-type: none"> <li>• Redesign junction as compact, continental roundabout, to reduce vehicle speeds, provide sufficient space and appropriate visibility for east-west two-way cycle track, and with crossings closer to pedestrian desire lines. Introduce controlled or priority crossing on the south approach arm and install tactile paving in line with current standards.</li> </ul>
Shared-use path between Broadbridge Way and A24 overbridge	<ul style="list-style-type: none"> <li>• Work with private landowners to improve the existing cycle route, particularly in terms of directness, gentler bends and redesigned crossings, such as with formal priority for crossing cyclists.</li> <li>• Ensure that a direct and segregated cycle track connecting Wickhurst Lane to the A24 overbridge is delivered as part of any redevelopment of the superstore, council depot and neighbouring sites.</li> <li>• Ensure all sections of the bridge ramp can comfortably accommodate two-way cycle movements by all categories of cycle.</li> <li>• Construct north-south controlled crossing on Broadbridge Way to connect village centre to Tesco and leisure centre. This could either be additional to, or in place of the subway (with the subway filled in). Locating the crossing on the eastern side of the roundabout would be best aligned with the north-south desire line.</li> </ul>

# Corridor 5: Broadbridge Heath to Town Centre

Table A7: Proposed improvements (eastern sections)

Location	Proposed Infrastructure Improvements (subject to subject to further study, feasibility and consultation)
Shared-use path along southern and eastern edges of Tanbridge House School	<ul style="list-style-type: none"> <li>• Re-surface poor quality sections with smooth, machine laid tarmac. Cut back overhanging vegetation.</li> </ul>
Hills Farm Lane shared-use path	<ul style="list-style-type: none"> <li>• Construct wider, fully segregated, cycle track to comfortably accommodate two-way cycle traffic. This should incorporate gentle curves, good forward visibility and lighting throughout. Remove 'cyclists dismount' signs at bridge over Boldings Brook unless there are valid reasons for their retention.</li> <li>• Redesign A281 / Hills Farm Lane junction to enable safer cycle crossing movements, such as with signal controlled junction.</li> </ul>
Guildford Road	<ul style="list-style-type: none"> <li>• Construct two-way cycle track, fully segregated from pedestrians. It is recommended that the infrastructure be constructed on the southern side of the carriageway due to the greater available highway width over part of the section. Accommodating the cycle track will require the loss of some grassed verges and may require the narrowing of the carriageway.</li> <li>• Highway width constraints and the proposed cycle tracks mean that sections of narrow footway to the north of Guildford Road are likely to remain unless some additional carriageway space can be reallocated to widen them.</li> <li>• Redesign wide side roads to reduce the speeds of turning vehicles and minimise crossing distances. Introduce priority for cyclists and pedestrians where cycle tracks and footways cross lightly trafficked side roads, with raised tables for level crossing. Install controlled crossings at busier side road junctions, such as Hills Farm Lane, to enable safer cycle movements. Install tactile paving to current standards where missing.</li> <li>• Redesign Bishopric / Albion Way junction with parallel signal crossing for east-west cyclist and pedestrian movements to and from the town centre and consider whether crossing provision can be introduced on the northern arm of the junction. Review whether the existing two-stage crossing layout on the western arm, can be replaced to enable pedestrians to cross in fewer stages.</li> <li>• Review and, if required, amend pedestrian refuges to ensure there is suitable width for all users.</li> <li>• If monitoring of traffic speeds on the A281 corridor suggests non-adherence to speed limits, then, consider measures to reduce traffic vehicle speeds, such as with a reduced 20mph speed limit or physical / natural traffic calming features (such as carriageway narrowing / traffic calming features).</li> </ul>

# Corridor 6: Warnham Mill to Town Centre

## Figure A14: Walking route audit

### Context and key issues

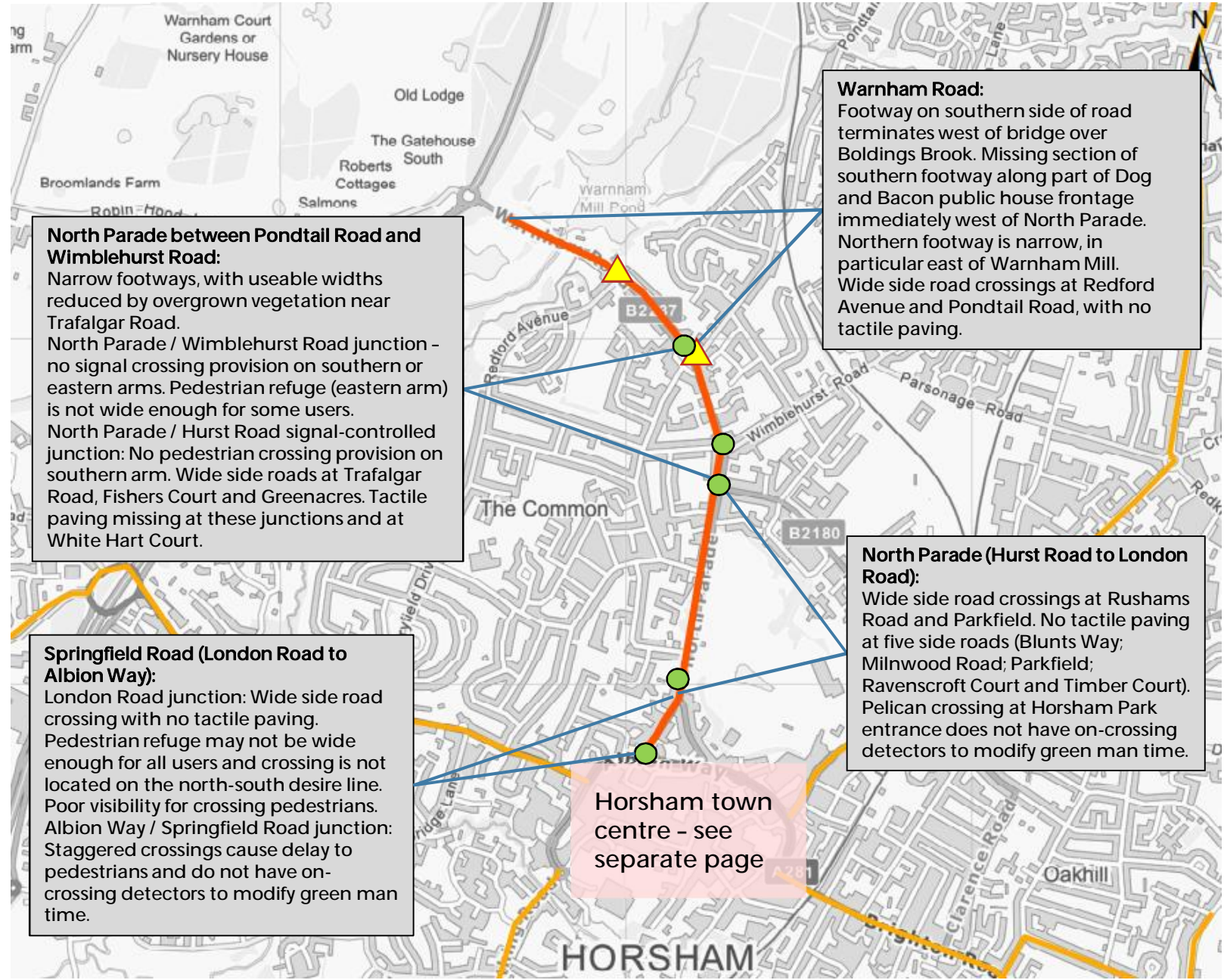
- Section west of Warnham Mill subject to national speed limit
- Section to the east has 30mph speed limit
- Narrow footway widths at various points, in particular east of Warnham Mill, with pedestrians in close proximity to high traffic flows.
- Several wide side road crossings, resulting in longer pedestrian crossing distances.



Wimblehurst Road arm of North Parade signal junction - no signal crossing and narrow pedestrian refuge

### Key

- Signal or zebra crossing
- ▲ Junction or crossing with high traffic flows and no signal or zebra crossing



# Corridor 6: Warnham Mill to Town Centre

**Table A8: Proposed improvements**

Location	Proposed Infrastructure Improvements <small>(subject to further study, feasibility and consultation)</small>
Warnham Road	<ul style="list-style-type: none"> <li>Widen narrow sections of footway through kerb realignment and carriageway narrowing, where carriageway width permits. Highway width constraints mean that some sections of narrow footway, or sections without footway on both sides, may remain unless one-way arrangements were introduced for motor vehicles to provide additional space or third-party land acquired.</li> <li>Redesign wide side roads (Redford Avenue and Pondtail Road) to reduce the speed of turning vehicles and pedestrian crossing distances. Introduce priority for pedestrians where footways cross lightly trafficked side roads and Warnham Mill access, with raised tables for level crossing. Consistently install tactile paving.</li> <li>Redesign North Parade junction adjacent to Dog and Bacon public house to accommodate a continuous footway.</li> <li>If monitoring of traffic speeds suggests non-adherence to speed limits, consider measures to reduce traffic speeds, such as carriageway narrowing / traffic calming features.</li> </ul>
North Parade (Pondtail Road to Hurst Road)	<ul style="list-style-type: none"> <li>Widen footways using sections of highway verge on North Parade. Redesign the North Parade / Wimblehurst Road and North Parade / Hurst Road signal-controlled junctions, to accommodate crossings on the pedestrian desire line, and with crossing phases on each arm. If retained as part of future junction design, amend the pedestrian refuge on the Wimblehurst Road arm to ensure there is suitable useable width for all users.</li> <li>Redesign wide side roads to reduce the speed of turning vehicles and pedestrian crossing distances. Introduce priority for pedestrians where footways cross lightly trafficked side roads, with raised tables for level crossing. Consistently install tactile paving.</li> <li>Further work is required to identify opportunities for potential new controlled crossings on North Parade, to improve east-west movements.</li> <li>If monitoring of traffic speeds suggests non-adherence to speed limits, consider measures to reduce traffic speeds, such as carriageway narrowing / traffic calming features.</li> </ul>
North Parade (Hurst Road to London Road) Springfield Road (London Road to Albion Way)	<ul style="list-style-type: none"> <li>Redesign the North Parade / London Road junction, to accommodate crossings on the pedestrian desire line and improve visibility for crossing pedestrians (such as with reduced junction widths or controlled crossings as appropriate). Review, and if required, amend the pedestrian refuge, to ensure there is suitable usable width for all users.</li> <li>Redesign current Albion Way / B2237 Springfield Road multi-stage crossing layout, to provide pedestrian crossings with a reduced number of crossing stages if feasible. Install on-crossing pedestrian detection as part of future signal crossing upgrades.</li> <li>Redesign wide side roads to reduce the speed of turning vehicles and pedestrian crossing distances. Introduce priority for pedestrians where footways cross lightly trafficked side roads, with raised tables for level crossing. Consistently install tactile paving.</li> </ul>

# Town centre cycle movements

## Context and key issues

Each of the cycle routes described on the previous pages lead to the town centre. However, many local journeys have destinations which require routes across, or via, the town centre. At present the following features combine to make parts of the town centre unsuitable for cycling journeys, and particularly for making journeys across the town centre:

- The dual carriageways of Albion Way and Park Way create major physical barriers, limiting crossing points into the town centre. Most of the at-grade crossings must be crossed in two-stages with staggered central islands, where cyclists can be in conflict with pedestrians. The dual carriageways themselves have high traffic flows, making them unsuitable as a cycle route around the town centre;
- Whilst the extensive pedestrianised area creates traffic-free streets, cycling is prohibited in several of them, limiting route options for cycle journeys;
- There are a number of one-way streets, some of which do not have contraflow arrangements to enable two-way cycling and which require lengthy diversions to avoid them. An example of this is the South Street-Carfax route, which is one-way northbound;
- Some streets, such as Blackhorse Way, have high traffic flows, which makes them unsuitable for cycling, and general motor traffic has the option of travelling north-east through the town centre as well as using Albion Way; and
- Some of the traffic-free routes for cycling are indirect, with many changes in direction, and limited natural surveillance (overlooking). There are also barriers in places which prevent certain cycle designs from using these routes.

## Recommendations

A range of measures are required to enhance cross-town cycle routes. Several of these were put forward to the County Council's Walking & Cycling Strategy. The nascent Horsham Town Centre Public Realm strategy may present an opportunity for further feasibility studies for:

- Bishopric, Worthing Road and Springfield Road connection to Cycle Corridors 1a, 4 and 5;
- Carfax;
- Worthing Road between Albion Way and the bus station connecting to Cycle Corridor 4;
- Vehicle movements on the Blackhorse Way - Carfax route by general traffic.

Protected cycle tracks would be required to make Albion Way / Park Way suitable for cycling. This could be achieved with a reduction in the number of traffic lanes; however this would be challenging to deliver.

It is also recommended that cycle routes are formalised through Horsham Park, with signing, and segregated cycle tracks, to provide alternative east-west options north of the town centre.