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Richborough

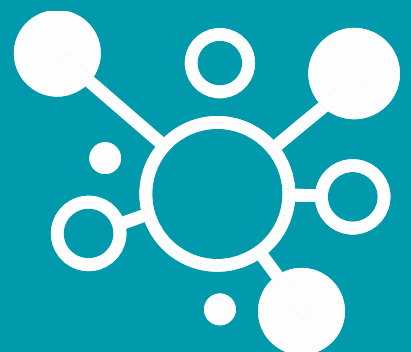
Project:
**Land North of Little Green Lane
Croxley Green**

Project No:
T24544
Report Title:
Travel Plan

Prepared by:
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T24544

Land off Little Green Lane, Croxley Green

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1.0 Introduction

Background

- 1.1 Hub Transport Planning Ltd has been commissioned by Richborough to provide transport advice for a proposed mixed-use residential-led development off Little Green Lane, Croxley Green.
- 1.2 1.3 This report supports an Outline application for construction of up to 600 residential dwellings (Use Class C3(a)), a 5-bedroom property for children's social care and supported living (Use Class C3(b)). Two vehicular access points from Little Green Lane and further pedestrian / cycleway accesses. A one form entry primary school (Use Class F1(a)) (plus expansion land for a two form entry primary school). A mixed use local centre including provision for NHS health and social care services (Use Class E(e)), community building (Use Class F2), retail and café provision (Use Class E(a-c)), car parking and associated infrastructure. A country park, areas for play and recreation, allotments, community orchard and landscaping with associated infrastructure including sustainable urban drainage systems. (All matters are reserved except for vehicular access).
- 1.3 The site location is shown on **Figure 1.1**.

Structure of the Report

- 1.4 This report is a Travel Plan and is intended to determine the relevant highway issues and indicate potential solutions, with reference to the impact of the proposed development site.
- 1.5 Following this introduction, the report is set out as follows:
- Section 2.0 – Background Information;
 - Section 3.0 – Policy Review and Travel Plan Objectives;
 - Section 4.0 – Sustainable Travel;
 - Section 5.0 – Travel Plan Targets;
 - Section 6.0 – Travel Plan Measures and Initiatives; and
 - Section 7.0 – Travel Plan Implementation and Monitoring.

Limitations of the Report

- 1.6 This report has been undertaken at the request of Richborough, thus should not be entrusted to any third party without written permission from Hub Transport Planning Ltd. However, should any information contained within this report be used by any unauthorised third party, it is done so entirely at their own risk and shall not be the responsibility of Hub Transport Planning Ltd.
- 1.7 This report has been compiled using data from a number of external sources (such as public transport websites); these sources are considered trustworthy and therefore the data provided is considered accurate and relevant at the time of preparing this report.

2.0 Background Information

Site Location

- 2.1 The site is located north of Little Green Lane, which lies to the north of the existing residential estate accessed from Baldwins Lane via Links Way, Durrants Drive, and Manor Way.
- 2.2 The site is bound by Rousebarn Lane to the east and north, along with woodland and open fields. Little Green Lane is a relatively narrow and lightly trafficked lane with a footway on the southern side of the carriageway, providing access to the residences along the Lane.
- 2.3 Little Green Lane rises sharply between Rousebarn Lane and a point halfway between Canterbury Way and Links Way. It then continues to rise westwards on a gentler incline past this point.
- 2.4 The majority of streets within the vicinity of the site are residential in nature, lit, and subject to 30mph speed limits and are therefore considered suitable for use by pedestrians and cyclists.
- 2.5 Current access roads to Little Green Lane are relatively wide, with the residential access roads of Durrants Drive and Links Way generally measuring over 7.3m in width.

Existing Active Travel Provision

- 2.6 The existing active travel provision is set out in **Section 4** of this report and **Section 6** sets out the proposals to improve existing infrastructure and promote active travel.
- 2.7 Similarly, proposals to improve bus services and promote the use of public transport by the residents of the site are also indicated in **Sections 4** and **6**.
- 2.8 The Beryl Bikes cycle hire scheme has expanded from Watford with Three Rivers District Council (TRDC) funding a 2-year pilot scheme within Croxley Green. This was launched in October 2024, with the introduction of 79 new bicycle bays, 100 bikes and 150 Beryl e-bikes.
- 2.9 The nearest Beryl docking stations to the proposed site are along Baldwins Lane; with one close to Winton Drive and the other close to the Post Office, to the west of Repton Way.

3.0 Policy Review and Travel Plan Objectives

Introduction

3.1 This section summarises the relevant transport policy documents against which the development proposals are considered at a national, regional, and local level. The most relevant policy documents relating to Travel planning at the site are detailed below:

- Hertfordshire Local Transport Plan 4 (2018 – 2032)
- Supporting documents & Strategies to Hertfordshire LTP 4 includes: *An Active Travel Strategy for Hertfordshire (2023- 2031)*
- Core Strategy Adopted Oct 2011: Local Development Framework (2011 – 2026)
- Local Cycling and Walking Infrastructure and Delivery Plan (2021)

Hertfordshire Local Transport Plan 4 (2018 – 2031)

3.2 The Hertfordshire Local Transport Plan in its 4th iteration sets out the key plans on how transport can help deliver a positive future vision of Hertfordshire by providing for safe and efficient travel and balancing a car-based approach to multi modal travel up until the year 2031. Some of the most relevant policies to this TP are set out in the paragraphs that follow.

Policy 1: Transport User Hierarchy

To support the creation of built environments that encourage greater and safer use of sustainable transport modes, the county council will, in the design of any scheme and development of any transport strategy, consider in the following order

- *Opportunities to reduce travel demand and the need to travel*
- *Vulnerable road user needs (such as pedestrians and cyclists)*
- *Passenger transport user needs*
- *Powered two wheeler (mopeds and motorbikes) user needs*
- *Other motor vehicle user needs*

Policy 3: Travel Plans and Behaviour Change The county council will encourage the widespread adoption of travel plans through:

- a) Working in partnership with large employers, businesses and other organisations to develop travel plans and implement Smarter Choices measures.
- b) Seeking the development, implementation and monitoring of travel plans as part of the planning process for new developments.
- c) Supporting school travel plans, and working closely with parents, pupils, teachers and local residents to deliver a network of more sustainable transport links to school. The application of personalised travel planning techniques, marketing and other behavioural change initiatives will be

considered when delivering physical transport improvements to maximise the potential to achieve modal shift

Policy 6: Accessibility - The county council will seek to increase the ease with which people, particularly disadvantaged groups, can access key services, by:

- a) *Working in partnership with key stakeholders such as bus and rail operators, community transport operators, the voluntary sector and public service providers.*
- b) *Supporting transport services which could include providing resource for bus and other transport services.*
- c) *Addressing the barriers to accessibility particularly regarding active modes and for people with impaired mobility.*
- d) *Promoting travel options and facilitating accessible travel information provision, including open data initiatives.*
- e) *Improving travel choices and options, including support for the provision of shared mobility initiatives*

Policy 7: Active Travel - Walking The county council will seek to encourage and promote walking by:

- a) *Implementing measures to increase the priority of pedestrians relative to motor vehicles, especially in town centres, and creating walking friendly town and neighbourhood centres.*
- b) *Delivering infrastructure to provide safer access to key services, and pedestrian facilities to enable and encourage walking.*
- c) *Identifying and promoting networks of pedestrian priority routes.*
- d) *Promoting walking as a mode of travel and for recreational enjoyment.*
- e) *Supporting the implementation of the Rights of Way Improvement Plan.*

Policy 8. Active Travel - Cycling The county council aims to deliver a step change in cycling, through:

- a) *Infrastructure improvements, especially within major urban areas to enable and encourage more cycling.*
- b) *Implementing measures to increase the priority of cyclists relative to motor vehicles.*
- c) *Improved safety for users including delivery of formal and informal cycle training schemes.*
- d) *Supporting promotion campaigns to inform, educate, reassure and encourage cycling provision and education, such as Bikeability.*
- e) *Facilitating provision of secure cycle parking.*

Policy 9: Buses *The county council will promote and support bus services to encourage reduced car use by:*

- a) *Supporting the delivery of infrastructure including bus priority measures, focussed on a core bus network, and by minimising bus service disruption from road congestion and the effects of road works.*
- b) *Providing and maintaining all bus stops, and other bus related highway infrastructure, to a consistent quality and standard across the county.*
- c) *Utilising new powers afforded to local authorities through the Bus Services Act 2017 as appropriate.*
- d) *Reviewing, procuring and supporting cost effective and efficient bus services to improve accessibility and respond to existing and potential passenger needs. Review existing services and take account of enhanced security provision.*
- e) *Working with a wide range of partners through the Intalink Quality Partnership to achieve improvements in facilities and services to improve the end to end journey by multi-modal interchange, accessibility, security and the journey experience.*
- f) *Working with partners to develop appropriate passenger fares, encourage the development of smart ticketing and to improve the provision and accuracy of passenger information.*
- g) *Working with partners to promote bus services as an option for work and school journeys, and promote and publicise the passenger transport network through a variety of media.*

Policy 18: Transport Safety and Security

The county council will seek to improve the perception of safety and security on Hertfordshire's transport system where this could deter people from travelling, particularly by active modes and passenger transport. This includes ensuring the county's transport system is resilient and prepared for instances of major alert.

LTP Supporting Strategy: An Active Travel Strategy for Hertfordshire (2023 – 2031)

- 3.3 The Active Travel Strategy builds on LTP 4, when making mention of numerous policies regarding active travel such as policy 1. The overall vision is "to create places where walking, wheeling and other forms of active travel are safe and so convenient that they become the natural choice for short trips." The strategy builds on LTP Policy 1 of Transport User Hierarchy, with Figure 12 of the document stating the key principles of growth and transport plans which include:

- *"Improved walking links within towns including new crossings on busy roads*
- *Improved road junctions to reduce delays on key roads and reduce rat-running on quieter roads*
- *Improved bus services and priority for buses at junctions*
- *Improved cycle links within and between towns, and cycle parking facilities at key locations*
- *Improved walking, cycling and bus connections to railway stations"*

Local Development Framework: Core Strategy Adopted (Oct 2011 - 2026)

- 3.4 The Core Strategy sets out the vision over the next 15-year period 2011-2026 and beyond, with the overarching vision of the District to remain a prosperous, safe and healthy place. The policies and chapters relevant to this Travel Plan are set out below.

Objective/ Policy	Outcomes
S7. To deliver improved and more integrated transport systems and reduce the need to travel by locating development in accessible locations	Providing alternatives to car travel through better public transport, better opportunities for cycling or walking, and by locating development at locations with good access to services, employment and a range of transport options, will be major contributors to achieving a more sustainable District. In particular, implementation of the Croxley Rail Link is supported, recognising its potential to enable more sustainable transport choices in the area. It will also be important to integrate transport networks to enable people to change easily between road, rail, bus and cycle travel.
PSP2: Development in Croxley Green	g) Contribute to an integrated approach to improve transport, including public transport, and movement into, and around, the Key Centres and connectivity with all other centres in the District, and service centres in adjoining authorities in Hertfordshire, Buckinghamshire and London and to increase public transport patronage
CP8: Infrastructure and Planning Obligations	Development will provide, or make adequate contribution towards, infrastructure and services to: a) Make a positive contribution to safeguarding or creating sustainable, linked communities b) Offset the loss of any infrastructure through compensatory provision c) Meet ongoing maintenance costs where appropriate.

CP10: Transport and Travel

The Council will promote transport measures identified in the Infrastructure Delivery Plan in partnership with Hertfordshire County Council, the Highways Agency and transport providers. Development proposals will be expected to contribute to the delivery of transport and travel measures identified as necessary for the development, either on-site as part of the development or through contributions to off-site provision as appropriate. Provision for interchange and access by public transport, walking and cycling will be regarded as particularly important. Every opportunity will need to be taken to integrate means of travel. The following transport and travel measures will be supported at appropriate locations across the District, and development will need to consider the provision of measures and facilities that encourage integration including:

- a) Secure cycle parking
- b) A safe network for pedestrians
- c) Taxi ranks

- d) *A layout to enable convenient access for buses*
- e) *Provision of covered waiting facilities*
- f) *Improvements to transport hubs within and including the provision of Mobi-Hubs where appropriate*
- g) *Links to and from the Grand Union Canal towpath*
- h) *Links to and from railway stations.*

The transfer of road freight to railways and canals in the District will be supported in principle, subject to the provision of a full Transport Assessment and the provisions of all other relevant local, regional or national policies, including an assessment of impact on the environment and amenity.

Development proposals

All development should be designed and located to minimise the impacts of travel by motor vehicle on the District. In particular, major development will be expected to be located in areas highly accessible by the most sustainable modes of transport, and to people of all abilities in a socially inclusive and safe manner, in accordance with the user hierarchy below. Priority will be given in the following order:

- I. Pedestrians, particularly people with restricted mobility*
- II. Cyclists and where appropriate, horse riders*
- III. Public transport (including taxis)*
- IV. All forms of motor vehicles.*

Development will need to demonstrate that:

- i) It provides a safe and adequate means of access*
- j) It is appropriate in scale to the existing transport infrastructure, including public transport and, where necessary, infrastructure can be improved*
- k) It is integrated with the wider network of transport routes, including public rights of way and cycle paths where appropriate*
- l) It makes adequate provision for all users, including car and other vehicle parking, giving priority to people with mobility difficulties, pedestrians, cyclists and equestrians*
- m) It includes, where appropriate, provision for public transport either within the scheme or through contributions*
- n) The impact of the proposal on transport has been fully assessed; for major development this should be done through a comprehensive Transport Assessment detailing the measures that will be used to reduce impacts*
- o) The proposal is accompanied by a draft Green Travel Plan for prospective users and employees of the development for all major development*

Local Cycling and Walking Infrastructure and Delivery Plan (2021)

- 3.5 The Local Cycling and Walking Infrastructure and Delivery Plan (LCWIP) is a plan which sets out the strategic outlines for making cycling and walking the natural choices for journeys. *“LCWIP process enables the identification of cycling and walking improvements required at the local level. The process enables a long-term approach to developing local cycling and walking networks, ideally over a 10 year period,”*

The key outputs of LCWIPs are:

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

- 3.6 Proposed schemes for Three Rivers District and Croxley are set out in Table 3.4 of the document which states the improvements which are yet to be complete in Croxley Green. These are as follows:

“TR7 - A412 Watford to Croxley Green station. Improve cyclist facilities between Watford and Croxley Green

TR8 - A412 Rickmansworth to Croxley Green Station. Improve cyclist facilities between Rickmansworth and Croxley Green

The integration of these proposals into the LCWIP network is considered in stages 3 and 4 of the LCWIP”

- 3.7 Further detail on the proposed LCWIP improvements is now available and we have included that report as **Appendix A** to this report; with the proviso that the plans remain indicative.

- 3.8 The plan describes various interventions in the Croxley area including improvements along the A412 towards Watford. A brief summary of the potential interventions includes:

- Various junctions on the A412 between Whippendell Road and Watford cycle routes 6 and 17 to give safe continuation of the cycle track over the mouth of each junction.
- Two-way cycle track on the north side of the A412 between Gade Avenue and Cassio Road.
- Improvement of A412/Metropolitan Station Approach/Hagden Lane signals to give additional priority to peds/cycles.
- Additional signalled crossings at A412/Ascot Road roundabout.
- Two-way cycle track on the south side of the A412 between Baldwins Lane and Ascot Road roundabouts and to continue westwards along the A412 past Croxley Station and The Green.
- Upgrade of crossing of A412 at Winton Approach to signal crossing with further crossings of the A412 and priority over side roads.

- 3.9 The interventions above are only one small part of the overall LCWIP and we can see that the proposal for a shared footway/cycleway from the development site towards Croxley Dames School and Baldwins Lane goes some way towards creating a suitable active travel link towards the A412 proposals.

4.0 Sustainable Travel

Introduction

- 4.1 It is generally accepted that walking and cycling provide important alternatives to the car and should also be encouraged to form part of longer trips via public transport. Indeed, it is noteworthy that the Institute of Highways and Transportation (IHT) has prepared several guidance documents that provide advice with respect to the provision of sustainable travel in conjunction with new developments. The suggested walking distances to common facilities is presented in **Table 1** below.

Table 1 - Suggested Walking Distances (IHT Guidelines)

	Town Centre (m)	Commuting/Schools/ Sightseeing (m)	Elsewhere
Desirable	200	500	400
Acceptable	400	1000	800
Preferred Maximum	800	2000	1200

Local Facilities

- 4.2 The location of available facilities which are local to the site can be seen in **Figure 4.1**; a list of these local facilities is provided in **Table 2** below. All distances are taken from the centre of the site and take account of existing footway infrastructure and Public Rights of Way (PRoW).
- 4.3 In addition to the IHT guidance, Manual for Streets (MfS) and the National Design Guide (2021) states that 'walkable neighbourhoods' are typically characterised by having a range of facilities within 10 minutes (up to about 800m) walking distance of residential areas which residents may access comfortably on foot.
- 4.4 MfS also states that the 800m walking distance is not an upper limit and references the former PPG13 guidance in respect of walking replacing short car trips, particularly those under 2km.
- 4.5 Manual for Street (MfS) guidance highlights that 'walkable neighbourhoods' are typically characterised as having a range of facilities within 10 minutes (up to about 800m) walking distance which can be accessed comfortably on foot.
- 4.6 Table NTS0303 from the 2023 National Travel Survey (released August 2024) indicates that the national average walk trip distance in 2023 was 0.7 miles or 1.12km.
- 4.7 The 2023 National Travel Survey (Table NTS0308) also shows that walking was the most frequent mode used for short trips, with 81% of trips under one mile (1.6km) being completed by foot in 2023, which is very similar to 2022 (83%) and 2021 (82%).
- 4.8 There is also potential for short car trips to be substituted for cycle trips, and for longer trips to be substituted by a combination of cycle and public transport trips.
- 4.9 The CIHT Planning for Cycling document (2014) states that "The majority of cycling trips are for short distances, with 80% being less than five miles and with 40% being less than two miles. However, the majority of trips by all modes are also short distances (67% are less than five miles, and 38% are less than two miles); therefore, the bicycle is a potential mode for many of these trips (DfT, 2014a)."

- 4.10 The DfT Cycling and Walking Investment Strategy (2017) also refers to the threshold of 5 miles (or 8km), stating that “Two out of every three personal trips are within five miles - an achievable distance to cycle for most people, with many shorter journeys also suitable for walking.”
- 4.11 The second cycling and walking investment strategy (CWIS2) published by DfT in 2022 states that one of the objectives is to increase the percentage of short journeys by walking and cycling in towns and cities from 41% in 2018/2019 to 46% in 2025.
- 4.12 The 2023 National Travel Survey (NTS) also shows that the average cycle trip distance (for all purposes) was 3.0 miles or 4.8km, with the previous year's NTS indicating that the average cycling distance was 3.6 miles or 5.76km. Therefore, it is reasonable to consider cycling as a viable mode of travel for distances up to 8km.
- 4.13 There are numerous facilities within Croxley including Little Green Junior School which is situated close to the junction of Lincoln Drive with Little Green Lane. There are numerous facilities available on Baldwins Lane adjacent to the recreation ground opposite Grove Crescent and opposite Croxley Danes School. A local centre is available towards Croxley Station along the A412. These facilities have been listed in **Table 2** and can be seen in **Figure 4.1**, along with the future proposed facilities which were mentioned at the public consultation event.

Table 2 – Distances to Local Facilities

Facility	Distance	GIS Reference
Education		
Little Green Junior School	450m	E1
Croxley Danes School	1.0km	E2
Malvern Way Infant and Nursery School	1.1km	E3
Yorke Mead Primary School	1.4km	E4
Ascot Road Community Free School	2.0km	E5
Bridgewater Horizons Day Nursery	2.1km	E6
Healthcare		
Baldwins Lane Surgery	1.0km	H1
Wilyman Chemists	1.0km	H2
Lloyds Pharmacy	1.7km	H3
New Road Surgery	1.8km	H4
New Road Dental Practice	2.0km	H5
Bridgewater Pharmacy	2.1km	H6
Bridgewater Surgery	2.1km	H7
Retail		
Spar Convenience Store	1.0km	R1
Llondis Convenience Store	1.0km	R2
Grocer on The Green	1.0km	R3
Co-op Food Store New Road	1.4km	R4
Shell Petrol Station	1.4km	R5
Nisa Local	1.8km	R6
Co-op Food Store Watford Road	1.8km	R7
Budgens supermarket	2.1km	R8

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Microns Mini Market	2.1km	R9
Morrisons	2.1km	R10
Costcutter	2.3km	R11
Leisure		
West Hertfordshire Golf Course	650m	L1
Cafe Amici	1.0km	L2
Taglio Per Uomo Barber Shop	1.0km	L3
We are Hair for You Baldwins Lane Hair Salon	1.0km	L4
Croxley Green Skate Park	1.1km	L5
Bliss Beauty Salon	1.1km	L6
The Corner Plaiice Takeaway	1.1km	L7
Baldwins Lane Play Area & Recreation Ground	1.2km	L8
Baldwins Lane Tennis Courts	1.2km	L9
Community Way Allotments	1.4km	L10
Croxley Guild Bowls Club	1.6km	L11
Barton Way Play Area	1.8km	L12
Croxley Green Library	1.8km	L13
Fox & Hounds Pub	1.8km	L14
Crazy Goat Co Coffee Company	1.9km	L15
The Coach & Horses Pub	1.9km	L16
The Artichoke Pub	2.0km	L17
The Shamrock Pub	2.1km	L18
Pucka Tucka Takeaway	2.1km	L19
Happy Palace Chinese Takeaway	2.1km	L20
Aroma Takeaway	2.3km	L21
Paya Takeaway	2.3km	L22
The Sportsman Pub	2.3km	L23
Community		
Catholic Church of St Bede	1.1km	C1
Croxley Green Baptist Church	1.2km	C2
St Oswald's Parish Church	1.4km	C3
New Road Dry Cleaners	1.8km	C4
Local Centre on the A412/Watford Road consists of takeaways, restaurants, barbershops, cafes, a post office, convenience store, a dentist and a pub	1.7km – 1.8km	
Croxley Station	1.8km	
Future Proposed Facilities		
One Form Entry Primary School with expansion Lane	On site	On site
Medical Centre & Pharmacy	On site	On site
Allotments & Gardens	On site	On site
Convenience Store	On site	On site
Healthy Eating Cafe	On site	On site

Accessibility on Foot

- 4.14 The existing footway on Little Green Lane runs alongside the southern side of the carriageway and measures approximately 1.5m in width, which at times, narrows to 1.0m as the Lane narrows when nearing a dip in the road when heading towards Rousebarn Lane; a verge is present in places.
- 4.15 According to Hertfordshire County Council's Public Rights of Way (PRoW) map, all footpaths to the north of Little Green Lane, including the PRoW which runs directly across the northern half of the development site, fall under Sarrat village. Footpath number 17 begins at the rear end of Kings Langley Swimming Club and cuts across the proposed development site towards West Hertfordshire Golf Course to connect Loudwater to Cassiobury Park.
- 4.16 PRoW numbers 63 and 18 are on the western periphery of the site and connect to PRoW 17. The entire walk route which encircles the northwestern perimeter of the site boundary is also known as Whippendell Walk Route 3, as these connect to Whippendell Woods to the north of the site.
- 4.17 Further west along Little Green Lane lies PRoW number 13 which runs along the periphery of the committed development known as Killingdown Farm. This connects Little Green Lane to the recreational areas along Baldwins Lane, including the Grounds, Tennis Courts and Croxley Skate Park to the south.
- 4.18 To the east of the Baldwins Lane, Durrants Drive mini roundabout lies footpath number 15 which runs at the rear end of St Oswald's Pre School and the front of Malvern Way Infant and Nursery School along Girton Way.
- 4.19 The closest bus stops to the site are located 30 metres to the east of the junction of Links Way and Baldwins Lane with the alternative stop being at the mini-roundabout of Durrants Drive and Baldwins Lane. The stops provide access to services 320 and 322. Continuous footways, each approximately 2.0 metres wide, are available along both sides of Durrants Drive and Links Way to access these stops. Paragraphs 4.53 and 4.54 indicate that a new bus service will be provided from the site with appropriate bus stops within the site.
- 4.20 Walking distances surrounding the site can be seen in **Figure 4.2**, highlighting the areas around Little Green Lane and Croxley which are accessible by foot.

Accessibility by Cycle

- 4.21 National Cycle Network Route 6 runs for approximately 30km from the outskirts of Uxbridge, heading north towards St Albans, via; South Harefield (12.4km away), Rickmansworth (5.5km away), Croxley Green (3.1km away), Watford (6km away), and How Wood (13.2km away).
- 4.22 National Cycle Route 6 is easily accessed on the Tolpits Lane A4145/Epsom Road junction, approximately 3km south of the development site.
- 4.23 **Figure 4.3** shows the 5km and 8km cycle distances from the site, as can be seen, surrounding settlements and the outskirts of the A412 Watford Road are accessible by bicycle.
- 4.24 It is also worth noting that there are other plans to improve cycle infrastructure including those in the Committee Report of the Local Cycling and Walking Infrastructure Plan (LCWIP) to improve and implement a cycleway along The Green "by removing strip of grass between footpath and road and widening path for cyclists and pedestrians."
- 4.25 Hertfordshire County Council also classifies cycle routes based on the level of experience, categorising them as easy, and moderate, recommended, advisory and challenging routes. Within Croxley routes including;

Rousebarn Lane, the A412/Watford Road, and NCN Route 6 along Tolpits Lane are identified as some of the easy, recommended routes which can be seen in **Appendix B** – Hertfordshire County Council's Map of Cycle routes.

- 4.26 Generally, the road network in and around Croxley has a speed limit of 30mph, with this at times dropping to 20mph on roads to the south and west of the Watford Junction railway station. The network is therefore considered generally safe for cycle use, certainly by experienced cyclists.

Accessibility by Bus

- 4.27 The services that stop on Baldwins Lane are the 320 and 322 Arriva and Hertfordshire services. A summary of the frequency and destinations served by these bus stops is provided in **Table 3** along with other services which stop at Two Bridges stop B along the A412 on Watford Road, approximately 1.4km from the site. The Watford Road stop close to the Harvester restaurant takes the form of a cantilever shelter.

Table 3 – Local Bus Services

Service No.	Route	Frequency per hour (approx.)		
		Mon - Fri	Sat	Sun
320	Maple Cross – Croxley Green – Watford – Hemel Hempstead	2 services at 08:58, 15:58	N/A	N/A
322	Hemel Hempstead – Watford – Croxley Green - Rickmansworth	Every 20 minutes from 06:07 – 19:25 Then every hour from 20:54 - 23:54	Every 20 minutes 08:01 – 19:54 Then every hour after 20:54 – 23:54	Every hour 08:47 – 22:58
336	North Bushey – Watford – Croxley Green – Rickmansworth - Chorleywood	Every hour from 10:10 – 19:10	Every hour 10:10 – 17:45	N/A
352	Watford – Croxley Green – Bovingdon – Hemel Hempstead	Every 2 hours from 10:28 – 18:38	Every 2 hours from 08:28 – 18:38	N/A
724	Harlow – Hertford – Hatfield – St Albans – Watford – Croxley Green – Rickmansworth – Heathrow Airport	01:02, 03:03 Then every hour from 05:03 – 00:02	Every 2 hours 01:04 - 00:04	Every 2 hours 03:04 – 22:31
725	Stevenage – Welwyn – St Albans – Croxley Green – Rickmansworth	Every 50 minutes from 09:35 – 20:34	08:19 Then Every hour from 09:35 – 18:34	N/A
951	Watford – Croxley Green – Rickmansworth – Staines – Thorpe Park	1 service at 13:05	1 service at 13:05	1 service at 13:05

- 4.28 Aside from the 322, the next most frequent is the 724 Arriva service which runs to Heathrow. This 24-hour bus runs 22 services throughout the day. Of the services provided in the table above, the 951 Sullivan Buses service is the least frequent, with only one service with the primary users being those attending Thorpe Theme Park.
- 4.29 The 725 Arriva and Hertfordshire bus has 12 services at an hourly frequency, whilst the 336 Red Rose Travel bus has 8 services at an hourly frequency. As well as this, the 352 Red Eagle bus has 5 services every 2 hours. All 3 services run from the late morning until the early evening.
- 4.30 Bus services are therefore considered as a suitable and viable option when travelling for employment, shopping, education, or leisure purposes. As seen in **Table 3**, there are 7 services that serve the future residents of the site, reaching as far as Hempstead, London Heathrow, Stevenage, and Harlow.
- 4.31 Although some residents will be inclined to use the services from Baldwins Lane and Watford Road, it is recognised that walk distances to these bus services is not ideal.

- 4.32 In order to further enhance the appeal of using public transport from the proposed development, it is proposed to bring a service into the site to serve Watford and important transport hubs. Major destinations between the site and Watford will also be served.
- 4.33 The precise routeing and frequency of service has yet to be finalised but discussions will continue with officers of HCC to seek to finalise such details before or during the application consultation period.

Accessibility by Rail

Croxley Underground Station

- 4.34 The nearest underground station is Croxley Underground Station which forms part of the Metropolitan line and runs from the A412 Watford Road, New Road junction approximately 1.8km from the site. This is an approximate 23-minute walk from the site, or a 6-minute cycle away.
- 4.35 Croxley Station features a car park with 91 spaces, which includes 3 designated bays for disabled individuals and 3 motorcycle parking spots. Additionally, there are 32 facilities for bicycle storage.
- 4.36 We are aware of ongoing plans in the LTP4 to enhance the sustainability and accessibility of the route to Croxley Station. To that end we shall carry out a walking audit from the site to the station.
- 4.37 The most direct walk route to the Croxley Station does include use of two footpath links; one linking Baldwins Lane to Girton Way (footpath number 15), and the other linking Malvern Way to Winton Crescent (footpath number 16). The Walking audit will concentrate on the current suitability of use of these routes and what, if anything, might be required to improve their attractiveness.
- 4.38 Additionally, as part of the consultation response from Transport for London (TfL) there has been a request for a contribution towards providing step-free access (lifts) at Croxley Underground station.
- 4.39 Services from Croxley run towards central London, Watford (one stop), and Rickmansworth, calling at stations along the way. For example services towards Aldgate call at the following stations amongst others;
- Harrow on the Hill (16mins)
 - Wembley Park (24mins)
 - Finchley Road (32mins)
 - Baker Street (38mins)
 - Euston Square (43 mins)
 - King's Cross St Pancras (53mins)
 - Liverpool Street (54mins)
 - Aldgate (56mins)
- 4.40 The earliest departure from Croxley to Aldgate is at 05:32 arriving at 06:27; there are five services between the stations in the period 07:00 to 08:00. During the afternoon peak 17:00-18:00, there are seven services from Croxley towards Aldgate. The latest running service to Aldgate is at 21:06, and on the return from Aldgate to Croxley, the latest service is at 21:13, leaving plenty of time for those commuting to/from work as well as those completing journeys to the city centre for leisure or shopping reasons.
- 4.41 From Croxley northbound, the service to Watford (terminus) is an approximate 4-minute journey, with the final departure to Watford being at 00:49, and the final service towards Rickmansworth being at 00:51. The earliest services to Watford begin at 06:20.

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Watford Underground Station

- 4.42 Watford Junction railway station is an approximate 15-minute cycle using road routes only or about 17 minutes cycle via road, Cassiobury Park and other off-road routes. The station has 354 spaces for cycles and the stands are overlooked by CCTV.
- 4.43 Watford Junction is a 10-minute drive away from the site. Watford Junction Station Car Park benefits from 763 car parking spaces and 9 disabled parking bays.
- 4.44 The station is served by several operators and numerous services. Destinations served at regular frequency along with typical journey times include;
- London Euston (15 mins to 54 mins)
 - North Wembley (24 mins)
 - Wembley Central (26 mins)
 - Harlesden (32 mins)
 - Queens Park (39 mins)
 - Kilburn High Road (41 mins)
 - Milton Keynes (45 mins)
 - King's Langley (5 mins)
 - Hemel Hempstead (12 mins)
 - Cheddington (27 mins)
 - Bletchley (24 mins)
 - St Albans Abbey (17 mins)
 - Garston (Hertfordshire) (5 mins)
 - How Wood (12 mins)
 - Park Street (14 mins)
 - Edinburgh (5 hrs 50 mins)
 - Milton Keynes Central (20 mins)
 - Rugby (46 mins)
 - Coventry (58 mins)
 - Birmingham New Street (1 hr 37 mins)
 - Crewe (1 hr 38 mins)
 - Preston (2 hrs 39 mins)

Summary of Baseline Conditions

- 4.45 The above review demonstrates that the proposed site is readily accessible by a variety of modes of transport that have the potential to reduce reliance on the private car, particularly as there are several facilities located within a reasonable walking distance.
- 4.46 The development site benefits from having an array of facilities nearby, all which fall within reasonable walking and cycling distance, including appropriate education facilities and local retail, health and leisure facilities.
- 4.47 The above review demonstrates that the proposed site is readily accessible by a variety of modes of transport that have the potential to reduce reliance on the private car, particularly as there are several facilities located within a reasonable walking distance. It is therefore considered that residents will have a real choice about how they travel and that the proposals therefore accord with guiding principles of the National Planning Policy Framework (NPPF).
- 4.48 Nevertheless, it is recognised that the walk distances to public transport interchanges and local facilities may deter some residents of the proposal site from making trips to them on foot.

Active and Sustainable Travel Proposals

- 4.49 Direct pedestrian/cycle access is proposed to the development site from Links Way and direct pedestrian access from Durrants Drive with traffic along Little Green Lane giving way.
- 4.50 The pedestrian/cycle link on the eastern side of Links Way will continue to Baldwins Lane providing safe and direct access to Croxley Danes School. The provision will require the removal of a small number of highway trees.
- 4.51 The Beryl Bikes cycle hire scheme has expanded from Watford with Three Rivers District Council funding a 2-year pilot scheme within Croxley Green. This was launched in October this year, with the introduction of 5 new bays and 15 e-bikes.
- 4.52 The nearest Beryl docking stations to the proposal site are along Baldwins Lane; with one fronting Winton Drive and the other fronting the Post Office. The applicant will investigate the possibility of having a Beryl Bikes station on the site.
- 4.53 It is proposed to bring a bus service into the site to serve Watford and important transport hubs. Major destinations between the site and Watford will also be served.
- 4.54 Bus stops and shelters will be provided on site along with real time bus information as appropriate.
- 4.55 Walking routes from the site towards Croxley Underground station have been audited and the route described is considered safe and suitable, albeit even though footpaths are lit there may be some reluctance to using them in hours of darkness.
- 4.56 The application has received a response from Transport for London (TfL). The primary focus of the response suggests that TfL will be seeking contributions towards step-free access to both platforms at this station. The proposal is high level at the moment but it is understood that TfL will be looking to introduce two lifts at the station and will be seeking appropriate developer contributions towards such provision.
- 4.57 No detailed costings of the proposal are available at present. However, the applicant has confirmed a willingness to make an appropriate contribution based upon a detailed costing of the proposal and a suitably

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forecasted level of use of the station by residents of the development. The applicant will continue consultation with TfL throughout the application process.

5.0 Travel Plan Targets

Method of Travel to Work

- 5.1 A key measure of the success of the Travel Plan will be with respect to the level of reduction in single occupancy car journeys in favour of other sustainable modes of transport.
- 5.2 Targets will be used to assess the effectiveness of the Travel Plan initiatives and measures which are outlined in **Section 6.0**, with the overall goal of meeting the Travel Plan aim and objectives which are stated in **Section 3.0**.
- 5.3 The modal split for travel to/from the site has been derived from local Census data and has been used to set the baseline mode share against which targets have been set. The baseline targets will be replaced once surveys have been completed following occupation.
- 5.4 Journey to Work (JTW) data from the 2011 Census provides a baseline modal split for JTW trips from the 2011 MSOA Three Rivers 006 which includes the main area of Croxley Green, based on the main mode of travel to work. The data is summarised below.
- Works mainly at or from home = 12.4%
 - Underground, Metro, Light Rail or Tram = 14.8%
 - Train = 2.7%
 - Bus, Minibus or Coach = 2.4%
 - Taxi = 0.2%
 - Motorcycle, Scooter or Moped = 0.8%
 - Car or Van driver = 55.2%
 - Car or Van Passenger = 3.4%
 - Bicycle = 1.7%
 - Walk = 6.4%
 - Other = 0.2%
- 5.5 Following the initial set of surveys, the site will seek to deliver a minimum reduction of 5% in single occupancy car journeys. In real terms, this would seek to reduce car driver trips by 3% (5% of 55.2%) to 52.2% from 55.2%.
- 5.6 The data set is included as **Appendix C** to this report.

6.0 Travel Plan Measures and Initiatives

Introduction

- 6.1 Travel Plans provide a package of measures to encourage site users to choose alternative travel options in preference to single occupancy car use.
- 6.2 There are also further, equally important, reasons for promoting sustainable travel including health and environmental benefits.

Promotion of Sustainable Modes of Travel

- 6.3 Residents will be encouraged to travel via sustainable modes, particularly walking and cycling, to minimise traffic impacts of the site on the local area; this will be done through the following sustainable travel measures and initiatives:
- Promoting walking to/from the site by:
 - o Providing maps of local walking routes from the site to key local facilities
 - o Consider how the site can best link into cycle and walking interventions as proposed by Three Rivers District Council in the Local Cycling and Walking Infrastructure Delivery Plan (LCWIP)
 - o Promoting the health benefits of walking.
 - Encouraging cycling to/from the site by:
 - o Provision of dedicated and shared cycle routes on site and through residential areas to the south;
 - o Providing secure on-plot storage;
 - o Providing maps of designated cycle routes in the vicinity of the site;
 - o Promoting the health benefits of cycling.
 - o Promoting cycling information websites.
 - o Promoting cycle hire schemes such as Beryl, with information here: <https://beryl.cc/scheme/watford>
 - o Provide Beryl Bike hub on site, if considered appropriate.
 - Encouraging the use of public transport by:
 - o Providing detailed public transport information, including timetables and fares, in Travel Packs provided to residents on arrival to the site e.g.; <https://www.threerivers.gov.uk/services/transport-and-streets/public-transport>;
 - o Providing information on Bus Passes, tickets and discounted fares such as the Hertfordshire Saver Card or [Intalink Card](#);
 - o Supporting a local bus link between the site and Watford including to import transport interchanges.
 - Encouraging sustainable car journeys by:
 - o Making residents aware of car club and car share schemes, such as <https://liftshare.com/uk>
 - o Provision of Electric Vehicle Charge Points

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-
- Promoting the Travel Plan and its measures by:
 - o Publicising the Travel Plan in the sales office and, ultimately, at the Community Hub and on the development website;
 - o Preparing and distributing Travel Packs to each dwelling on occupation.

7.0 Implementation and Monitoring

Travel Plan Information Packs

- 7.1 A key aspect in achieving the Travel Plan measures and initiatives will be the distribution of travel information to residents once the development is completed.
- 7.2 Each household will be provided with a Travel Pack which will contain information about the modes of transport which are available for journeys to and from the site. The information packs will include public transport and sustainable travel information about services and routes within the local area.
- 7.3 The packs will make residents aware of transport provision which is available to the nearest towns, local shops, schools, health and leisure facilities, bus stops, rail stations and nearby employment areas for those applicable.
- 7.4 The packs will also include maps giving details of safe pedestrian routes from the site, together with fare, contact and timetable information for public transport services.
- 7.5 A simple statement outlining the benefits of sustainable transport versus the use of private car will also be set out in the information pack, as well as the aims of the Travel Plan. The Travel Pack will also inform residents how to claim the public transport vouchers.

Travel Plan Co-Ordinator (TPC)

- 7.6 A fundamental aspect of any Travel Plan is the identification and appointing of a TPC for the site.
- 7.7 The TPC will be approachable, amenable to suggestions and possess a high level of interpersonal skills; they will be required to converse with outside bodies such as public transport operators and the local authority.
- 7.8 The TPC will be responsible for the setting up, promoting and monitoring the majority of the initiatives and schemes listed in **Table 5** below.
- 7.9 The management and implementation of the Travel Plan will be the responsibility of the housebuilder who will either appoint a member of their office team, or an external consultant, to be the TPC.

Table 1 – Action Plan

Travel Mode	Initiative	Target Date	Person Responsible	Other Delivery Partners
Cycling	Providing residents with secure cycle storage	Prior to occupation	Housebuilder	
	Providing details of local cycle routes to key facilities	On occupation	TPC	
	Provide residents with information on cycle hire schemes including Beryl	On occupation	TPC	
Public Transport	Supporting a new bus service from the development towards Watford, including links to local transport interchanges	To be agreed with HCC/TRDC	Housebuilder	Public transport provider/HCC
	Provision of detailed public transport information, including appropriate bus/rail services, fares and journey planners	On occupation	TPC	Public transport providers
	Provide information on the Intalink Card/ Hertfordshire Saver Card https://www.intalink.org.uk/connect	On occupation	Housebuilder	Public transport provider
Walking	Providing a map of local walking routes to key local facilities	On occupation	TPC	
	Providing appropriate pedestrian linkages to/from the existing footway network	Prior to occupation	Housebuilder	LCC
Encouraging Sustainable Car Journeys	Promoting the benefits of car sharing to residents at the site	On occupation	TPC	
Promoting the Travel Plan	Publicising the Travel Plan on the development website	Prior to occupation	TPC	
	Preparation of resident Travel Packs	On occupation	TPC	

Travel Surveys

- 7.10 Travel surveys will be produced for the new residents to complete; at this stage, it is considered that the surveys should be undertaken within the first six months of the first occupation at the site.
- 7.11 The travel surveys will derive the initial modal split and thus facilitate the setting of realistic targets.
- 7.12 The surveys will then be undertaken on an annual basis, avoiding holiday periods, for a period of three years in order to monitor the effectiveness of initiatives.
- 7.13 The Travel Plan and its objectives will be reviewed by the TPC on an annual basis, the survey results summarised and then discussed with the local highway authority.

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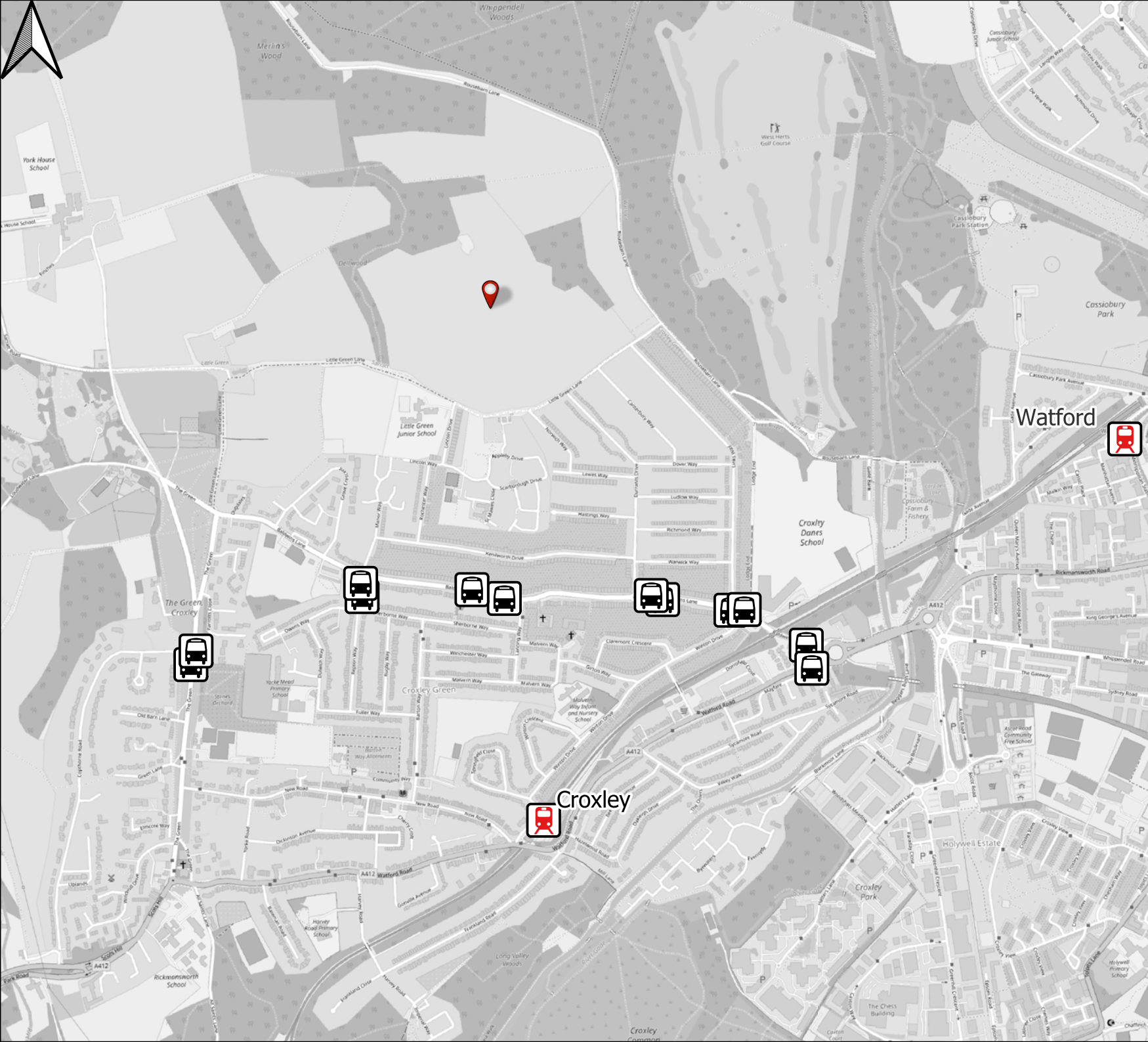
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Figures



Legend

-  Site
-  Train Station
-  Bus Stops

Figure 1.1 - Site Location

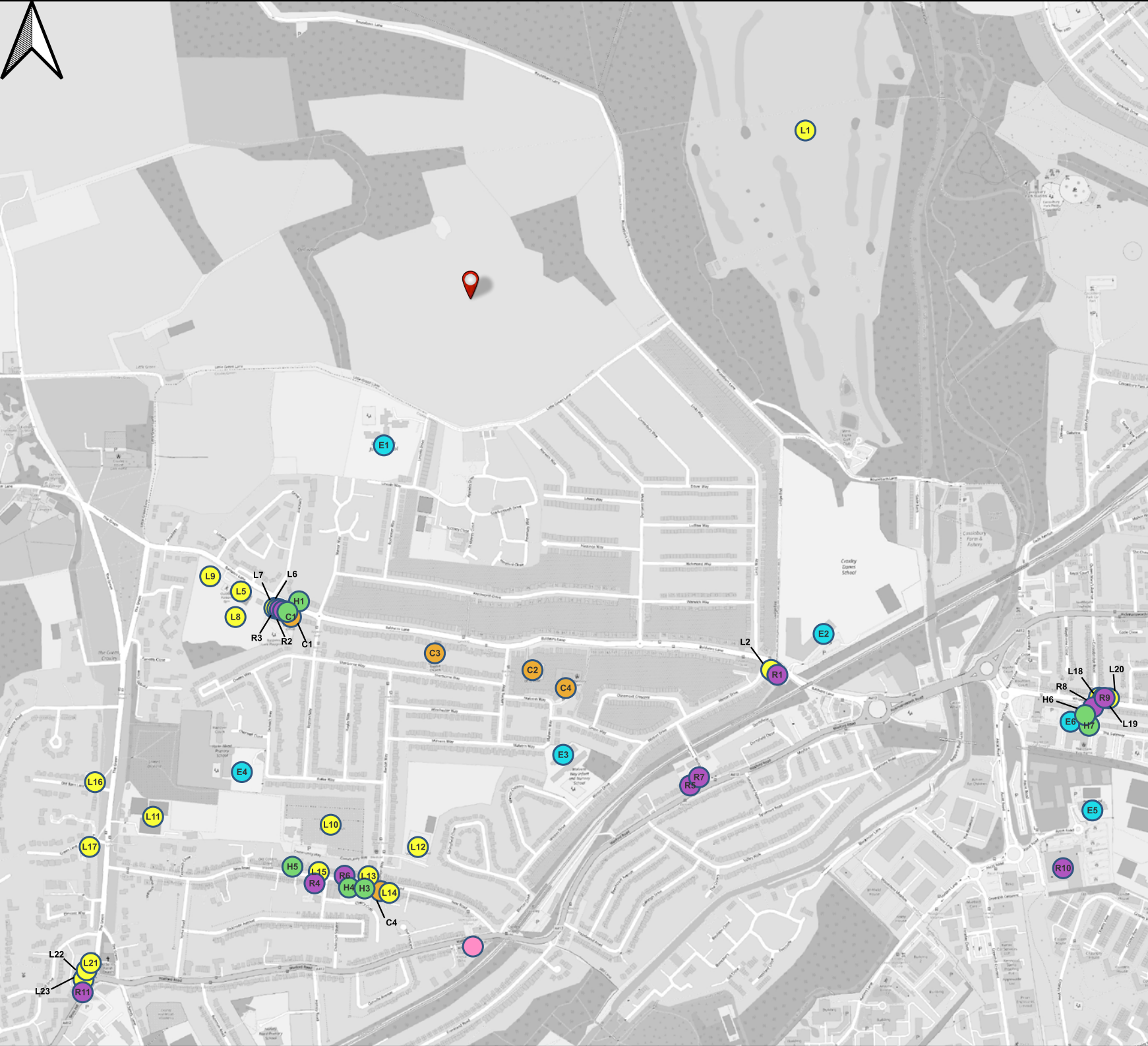
 Richborough


TRANSPORT PLANNING LTD

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0 200 400 600 m





Legend

- Site
- Education
- Healthcare
- Community
- Retail
- Leisure
- Local Centre

Figure 4.1 - Local Facilities

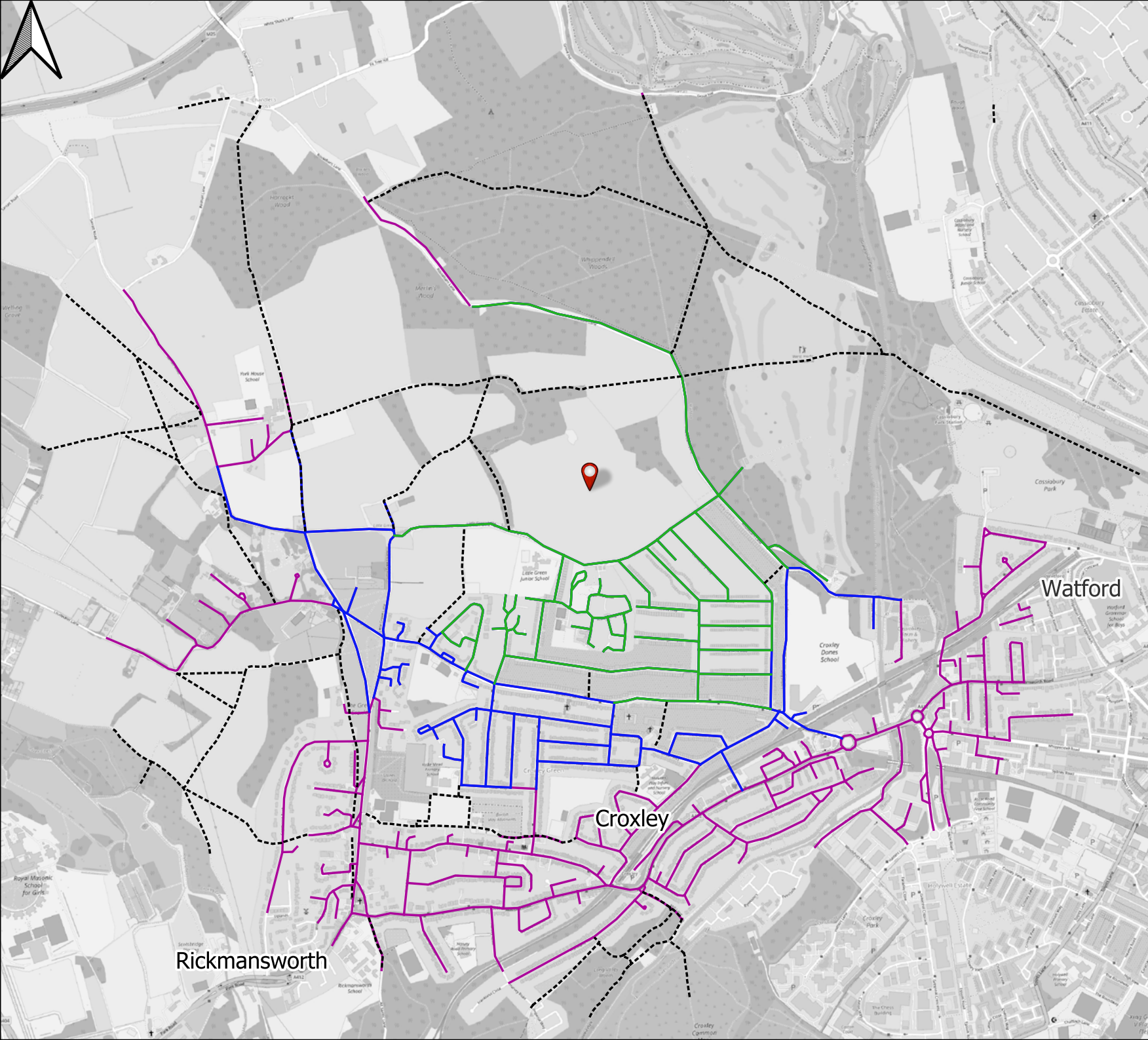
 Richborough


hub
TRANSPORT PLANNING LTD

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0 100 200 300 400 500 m





Legend

- Site
- Hertfordshire CC PRoW
- Road Network 2km
 - 800m
 - 1200m
 - 2000m

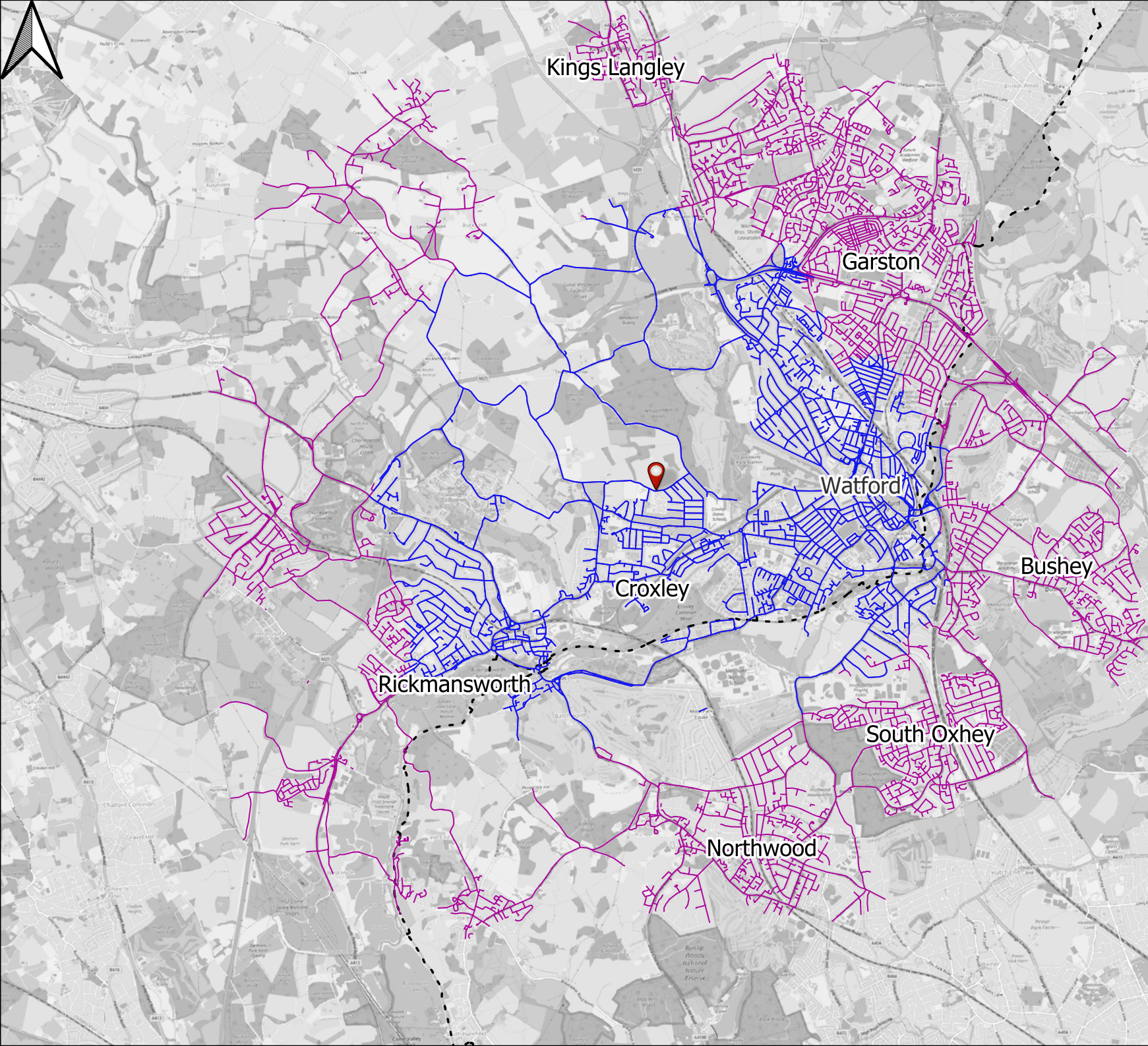
Figure 4.2 - Walking Distances

Richborough

hub
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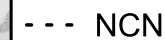
0 200 400 600 800 m



Legend



Site

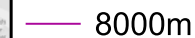


NCN

Road Network 8km



5000m



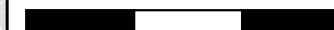
8000m

Figure 4.3 - Cycling Distances



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0 1 2 3 km



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Appendix A

LCWIP Improvements

Appendix A

Potential Cycling and Walking Interventions

Watford and Three Rivers Local Cycling and Walking Infrastructure Plan (LCWIP)

Cycling Interventions

Potential Measures Introduction

Contents

This document provides the following for each of the priority routes identified:

- Location plan, showing the route in the context of the wider network
- Summary plans of suggested interventions

Guide to plans

The maps on the following pages are intended to show high-level measures and indicative locations only.

All measures will be subject to further feasibility and safety assessment and public consultation.

Items shown are as follows:

-  Modal Filter
-  Crossing
-  Potential Alternative Route
-  Connecting Route
-  Large Junction Improvement
-  Medium Junction Improvement
-  Minor Junction Improvement
-  District Boundary

Legend

- Modal Filter
- Crossing
- Potential Alternative Route
- Connecting Route
- Large Junction Improvement
- Medium Junction Improvement
- Minor Junction Improvement
- District Boundary

Two-way cycle track

On the north side of the A412 from Gade Avenue to Cassio Road, real-locating space from hatching and removing guard railing where necessary. Convert traffic islands into controlled crossings where there are pedestrian desire lines.

Add a priority crossing across Cassiobury Park Avenue and retain the toucan crossing over the A412.

Tie in with Watford cycle routes 6 and 17 (cycle track at footway level).

Redesign these junctions to safely continue the cycle facility over the junction mouth (giving cyclists priority).

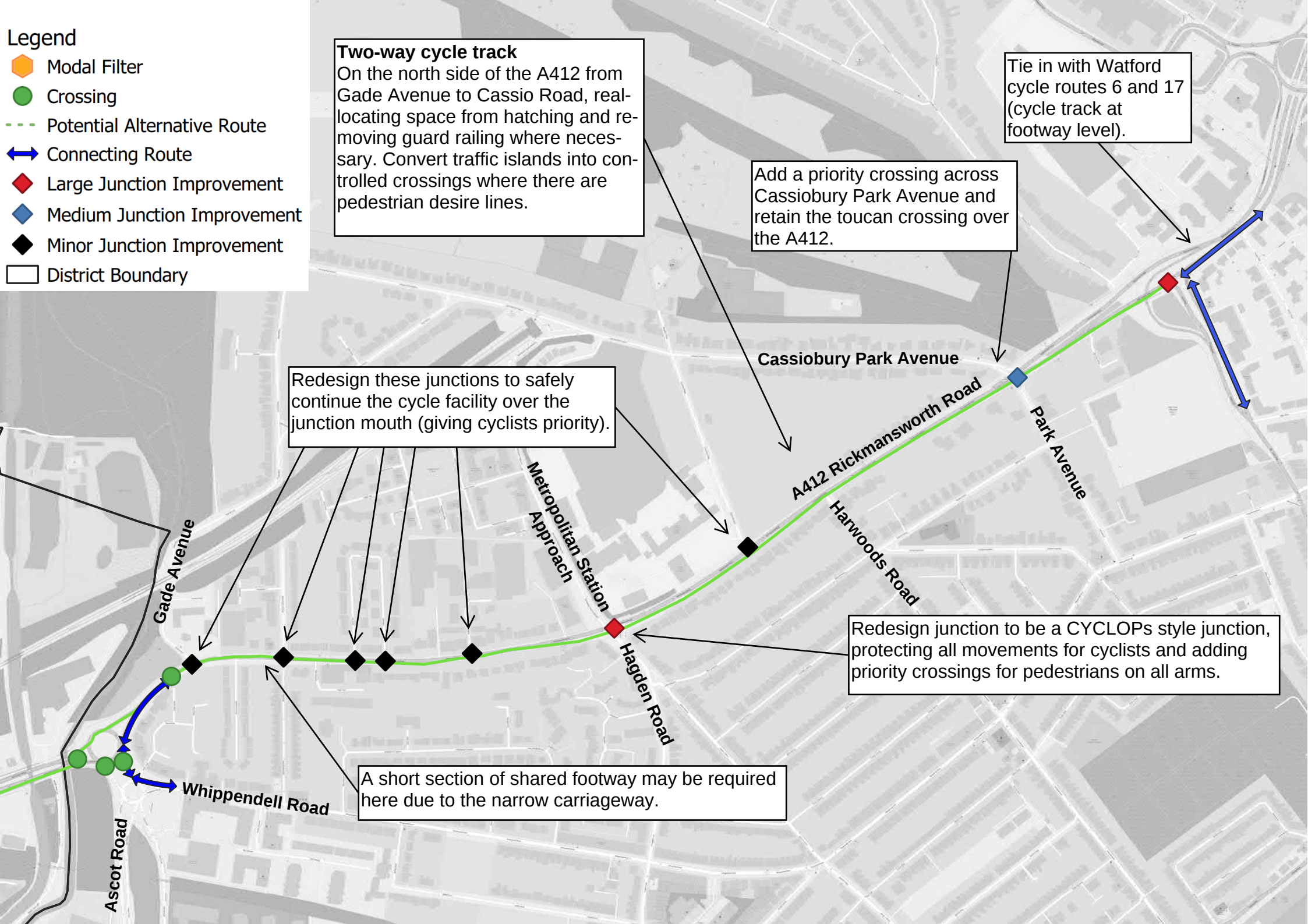
Cassiobury Park Avenue

A412 Rickmansworth Road

Park Avenue

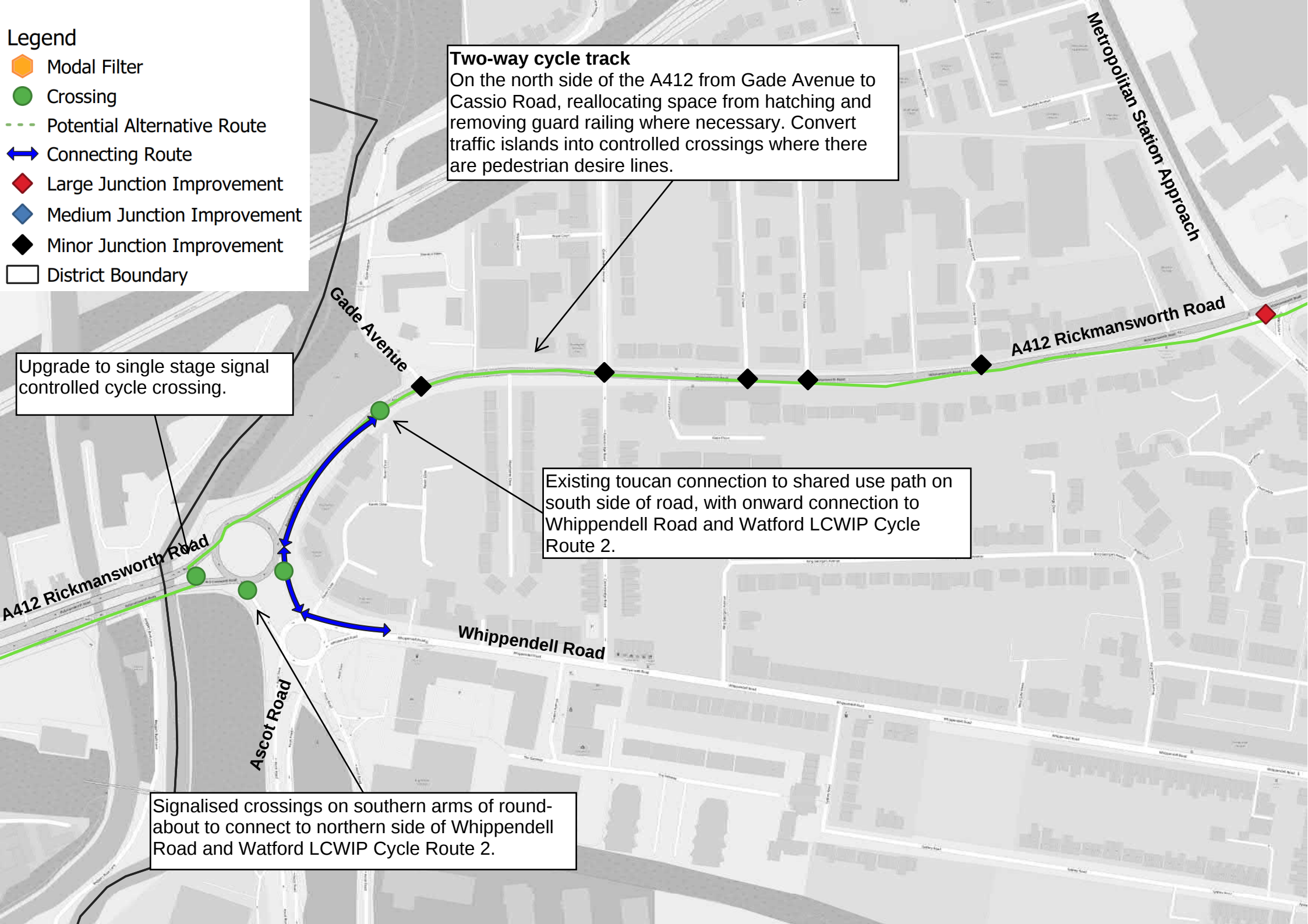
Redesign junction to be a CYCLOPS style junction, protecting all movements for cyclists and adding priority crossings for pedestrians on all arms.

A short section of shared footway may be required here due to the narrow carriageway.



Legend

- Modal Filter
- Crossing
- Potential Alternative Route
- Connecting Route
- Large Junction Improvement
- Medium Junction Improvement
- Minor Junction Improvement
- District Boundary



Two-way cycle track

On the north side of the A412 from Gade Avenue to Cassio Road, reallocating space from hatching and removing guard railing where necessary. Convert traffic islands into controlled crossings where there are pedestrian desire lines.

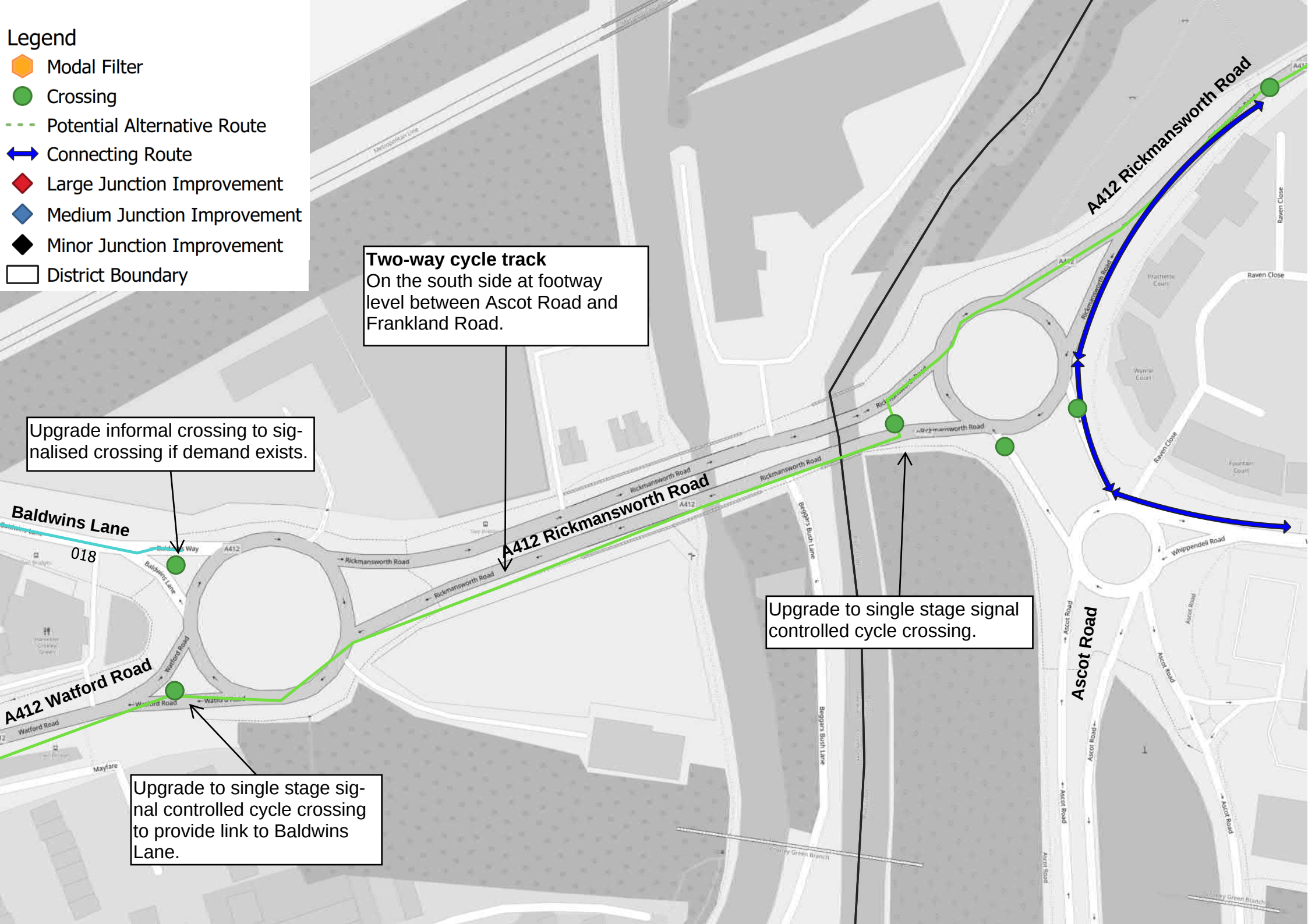
Upgrade to single stage signal controlled cycle crossing.

Existing toucan connection to shared use path on south side of road, with onward connection to Whippendell Road and Watford LCWIP Cycle Route 2.

Signalised crossings on southern arms of roundabout to connect to northern side of Whippendell Road and Watford LCWIP Cycle Route 2.

Legend

- Modal Filter
- Crossing
- Potential Alternative Route
- Connecting Route
- Large Junction Improvement
- Medium Junction Improvement
- Minor Junction Improvement
- District Boundary

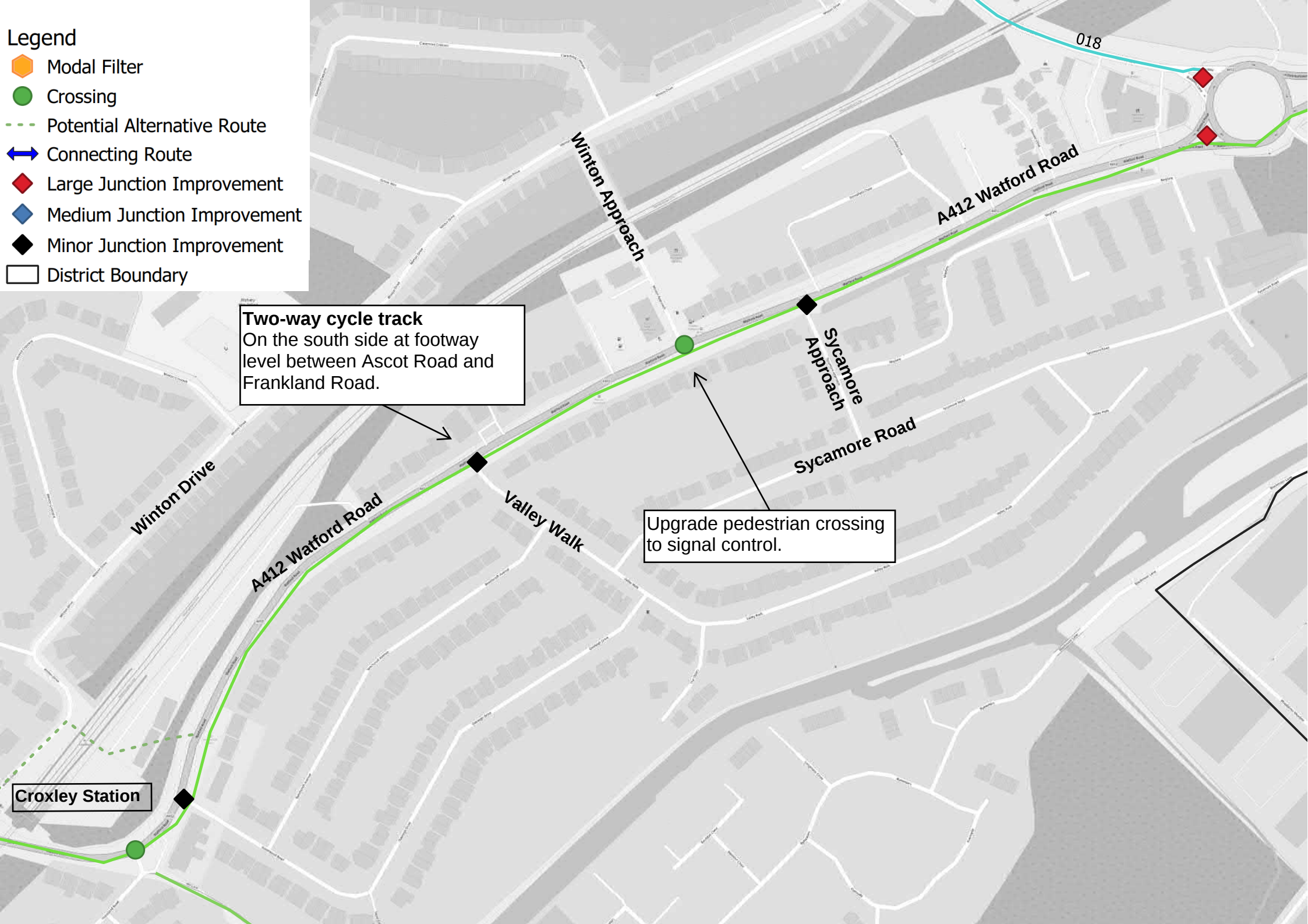


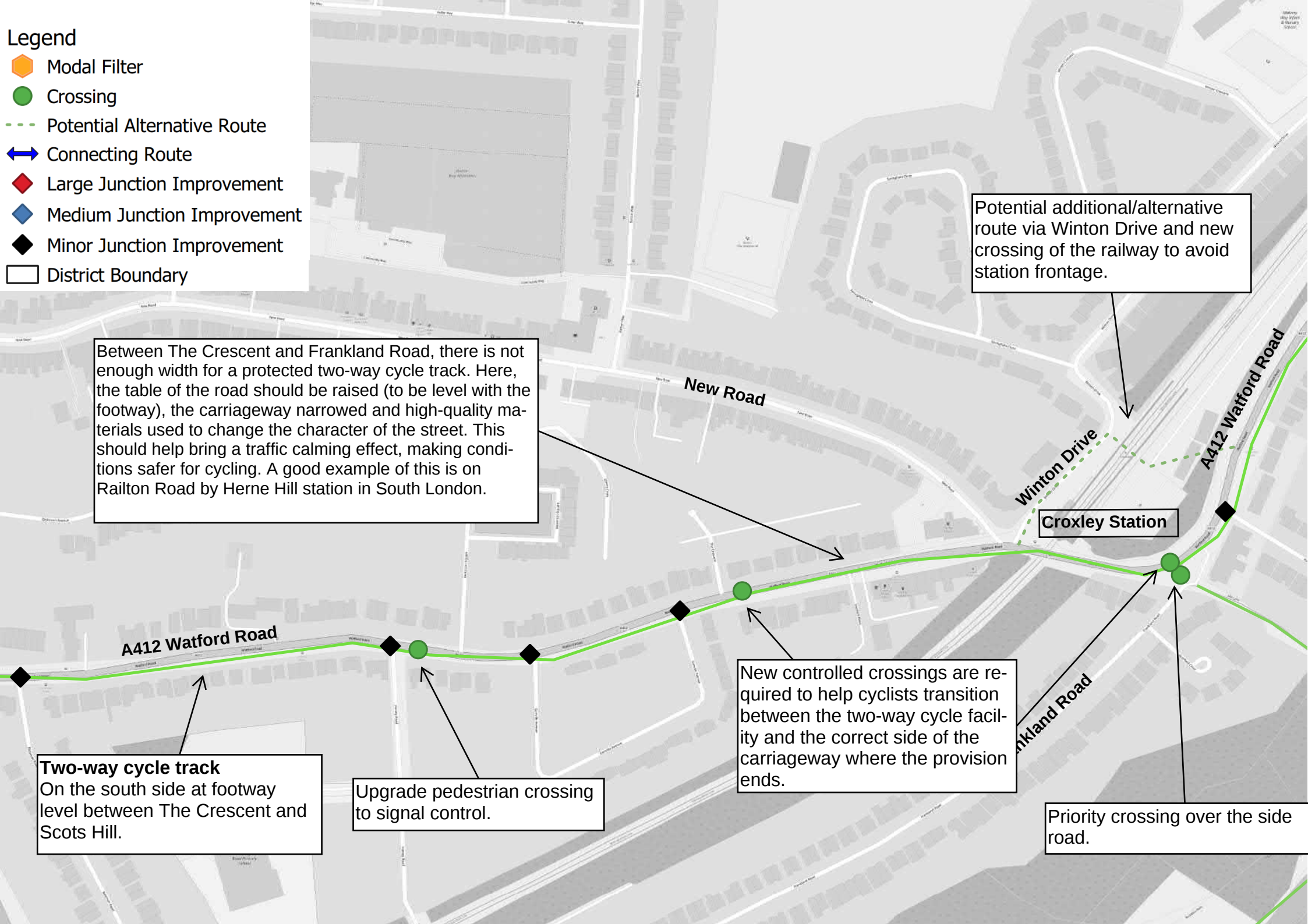
Two-way cycle track
On the south side at footway level between Ascot Road and Frankland Road.

Upgrade informal crossing to signalised crossing if demand exists.

Upgrade to single stage signal controlled cycle crossing.

Upgrade to single stage signal controlled cycle crossing to provide link to Baldwins Lane.





- Legend**
- Modal Filter
 - Crossing
 - Potential Alternative Route
 - Connecting Route
 - Large Junction Improvement
 - Medium Junction Improvement
 - Minor Junction Improvement
 - District Boundary

Potential additional/alternative route via Winton Drive and new crossing of the railway to avoid station frontage.

Between The Crescent and Frankland Road, there is not enough width for a protected two-way cycle track. Here, the table of the road should be raised (to be level with the footway), the carriageway narrowed and high-quality materials used to change the character of the street. This should help bring a traffic calming effect, making conditions safer for cycling. A good example of this is on Railton Road by Herne Hill station in South London.

Croxley Station

Two-way cycle track
On the south side at footway level between The Crescent and Scots Hill.

Upgrade pedestrian crossing to signal control.

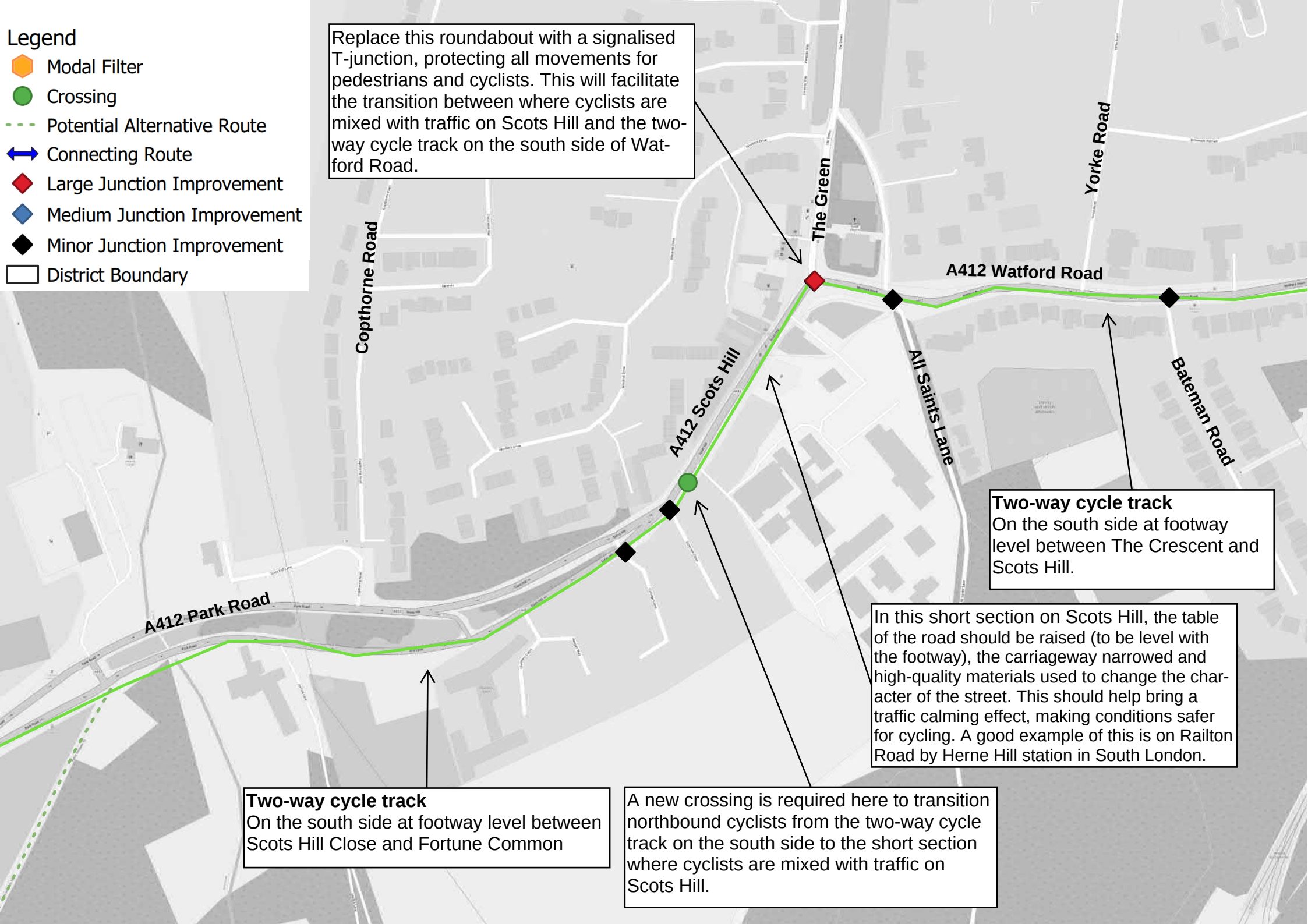
New controlled crossings are required to help cyclists transition between the two-way cycle facility and the correct side of the carriageway where the provision ends.

Priority crossing over the side road.

Legend

- Modal Filter
- Crossing
- Potential Alternative Route
- Connecting Route
- Large Junction Improvement
- Medium Junction Improvement
- Minor Junction Improvement
- District Boundary

Replace this roundabout with a signalised T-junction, protecting all movements for pedestrians and cyclists. This will facilitate the transition between where cyclists are mixed with traffic on Scots Hill and the two-way cycle track on the south side of Watford Road.



A412 Watford Road

Yorke Road

The Green

All Saints Lane

Bateman Road

A412 Scots Hill

Copthorne Road

A412 Park Road

Two-way cycle track
On the south side at footway level between The Crescent and Scots Hill.

In this short section on Scots Hill, the table of the road should be raised (to be level with the footway), the carriageway narrowed and high-quality materials used to change the character of the street. This should help bring a traffic calming effect, making conditions safer for cycling. A good example of this is on Railton Road by Herne Hill station in South London.

Two-way cycle track
On the south side at footway level between Scots Hill Close and Fortune Common

A new crossing is required here to transition northbound cyclists from the two-way cycle track on the south side to the short section where cyclists are mixed with traffic on Scots Hill.

Legend

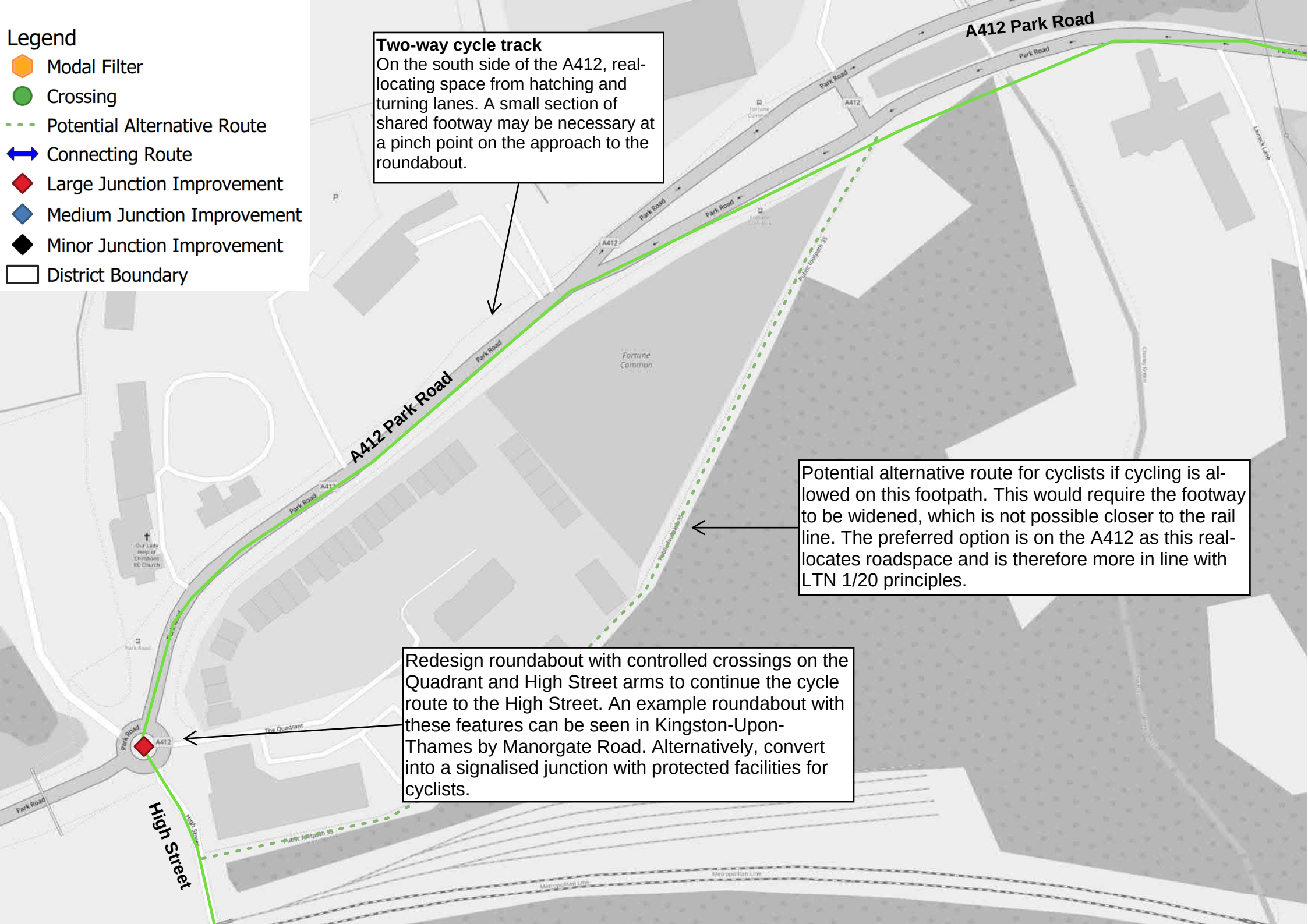
- Modal Filter
- Crossing
- Potential Alternative Route
- Connecting Route
- Large Junction Improvement
- Medium Junction Improvement
- Minor Junction Improvement
- District Boundary

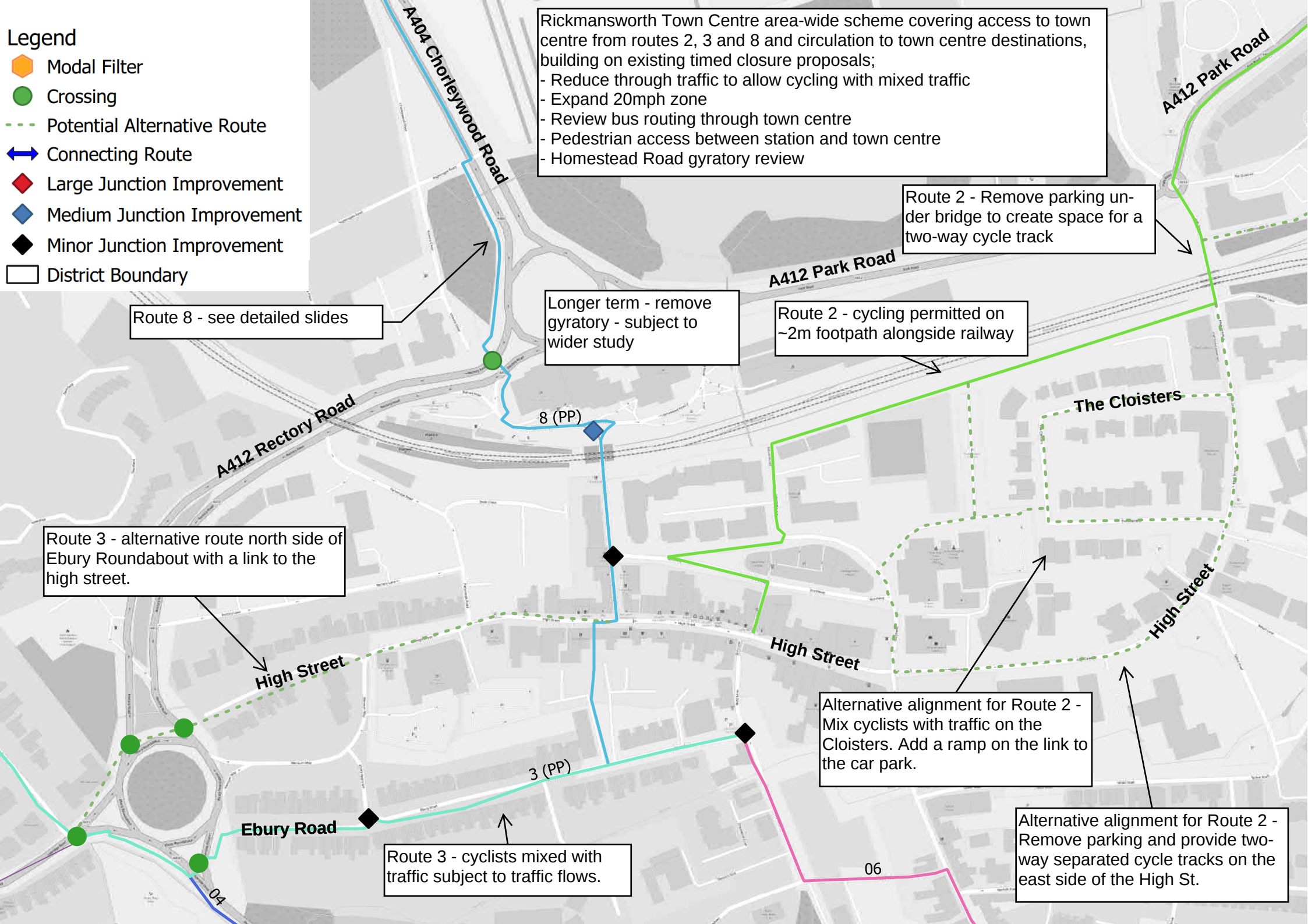
Two-way cycle track

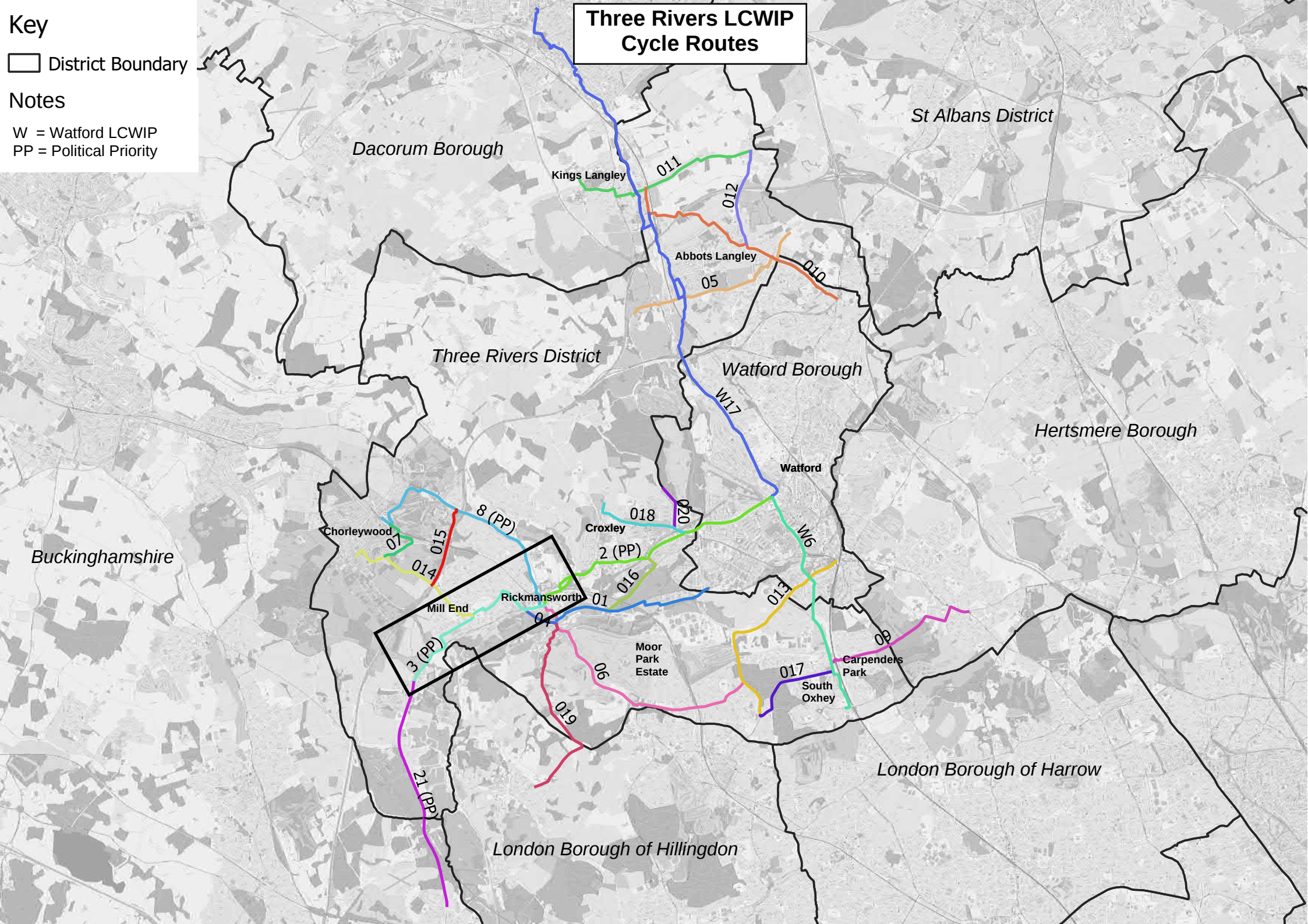
On the south side of the A412, real-locating space from hatching and turning lanes. A small section of shared footway may be necessary at a pinch point on the approach to the roundabout.

Potential alternative route for cyclists if cycling is allowed on this footpath. This would require the footway to be widened, which is not possible closer to the rail line. The preferred option is on the A412 as this real-locates roadspace and is therefore more in line with LTN 1/20 principles.

Redesign roundabout with controlled crossings on the Quadrant and High Street arms to continue the cycle route to the High Street. An example roundabout with these features can be seen in Kingston-Upon-Thames by Manorgate Road. Alternatively, convert into a signalised junction with protected facilities for cyclists.

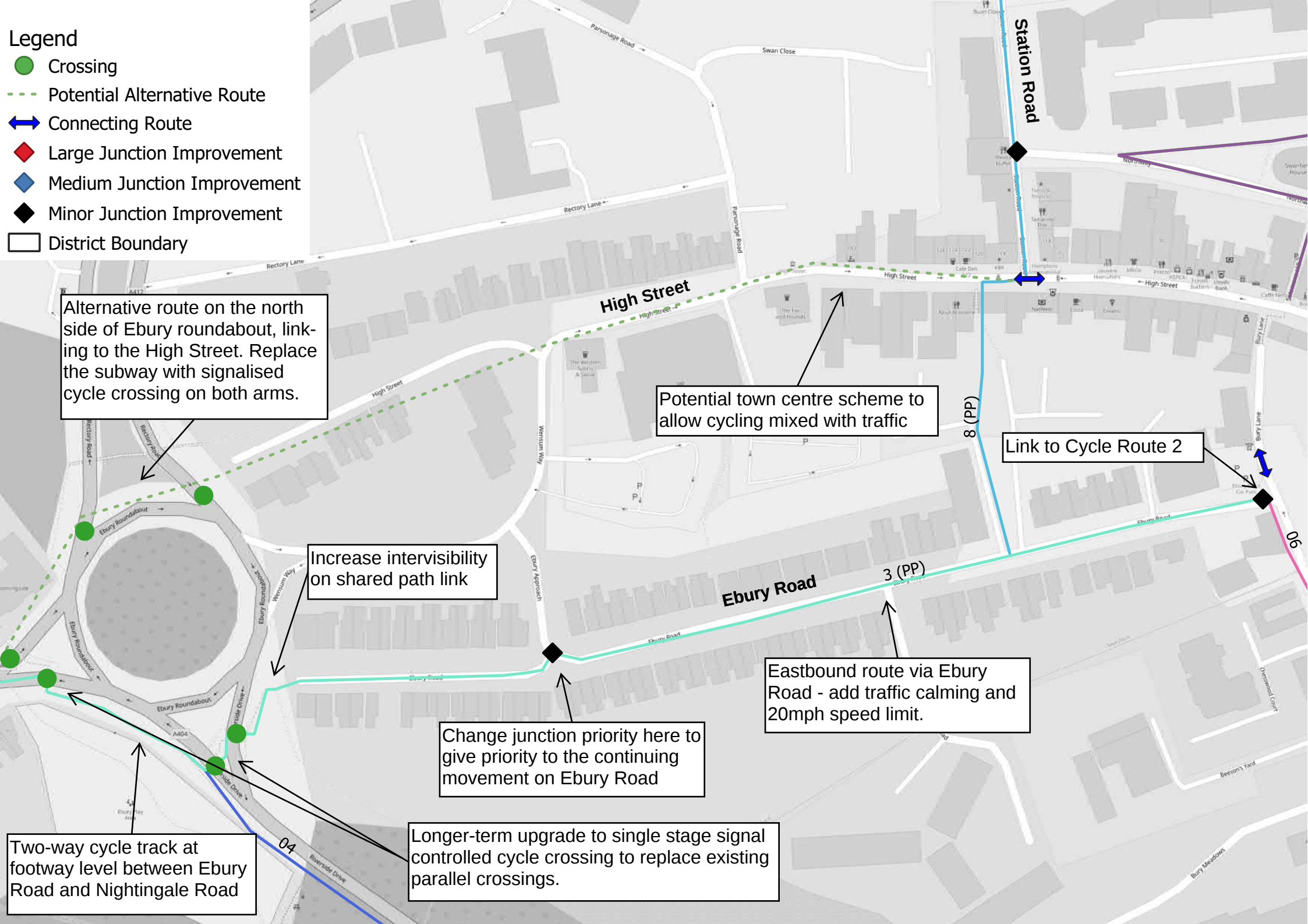






Legend

- Crossing
- - - Potential Alternative Route
- ↔ Connecting Route
- ◆ Large Junction Improvement
- ◆ Medium Junction Improvement
- ◆ Minor Junction Improvement
- District Boundary



Alternative route on the north side of Ebury roundabout, linking to the High Street. Replace the subway with signalised cycle crossing on both arms.

Potential town centre scheme to allow cycling mixed with traffic

Link to Cycle Route 2

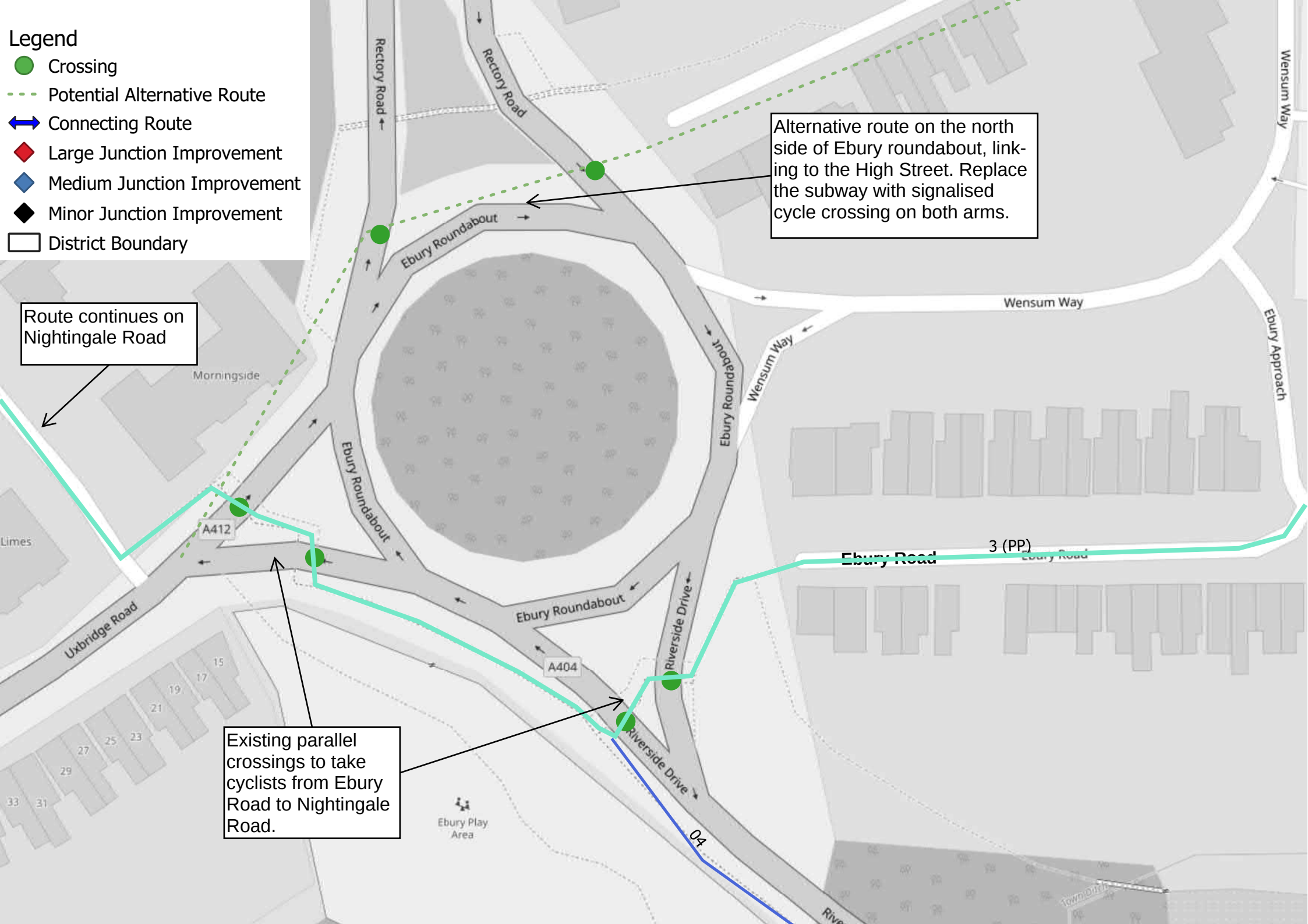
Increase intervisibility on shared path link

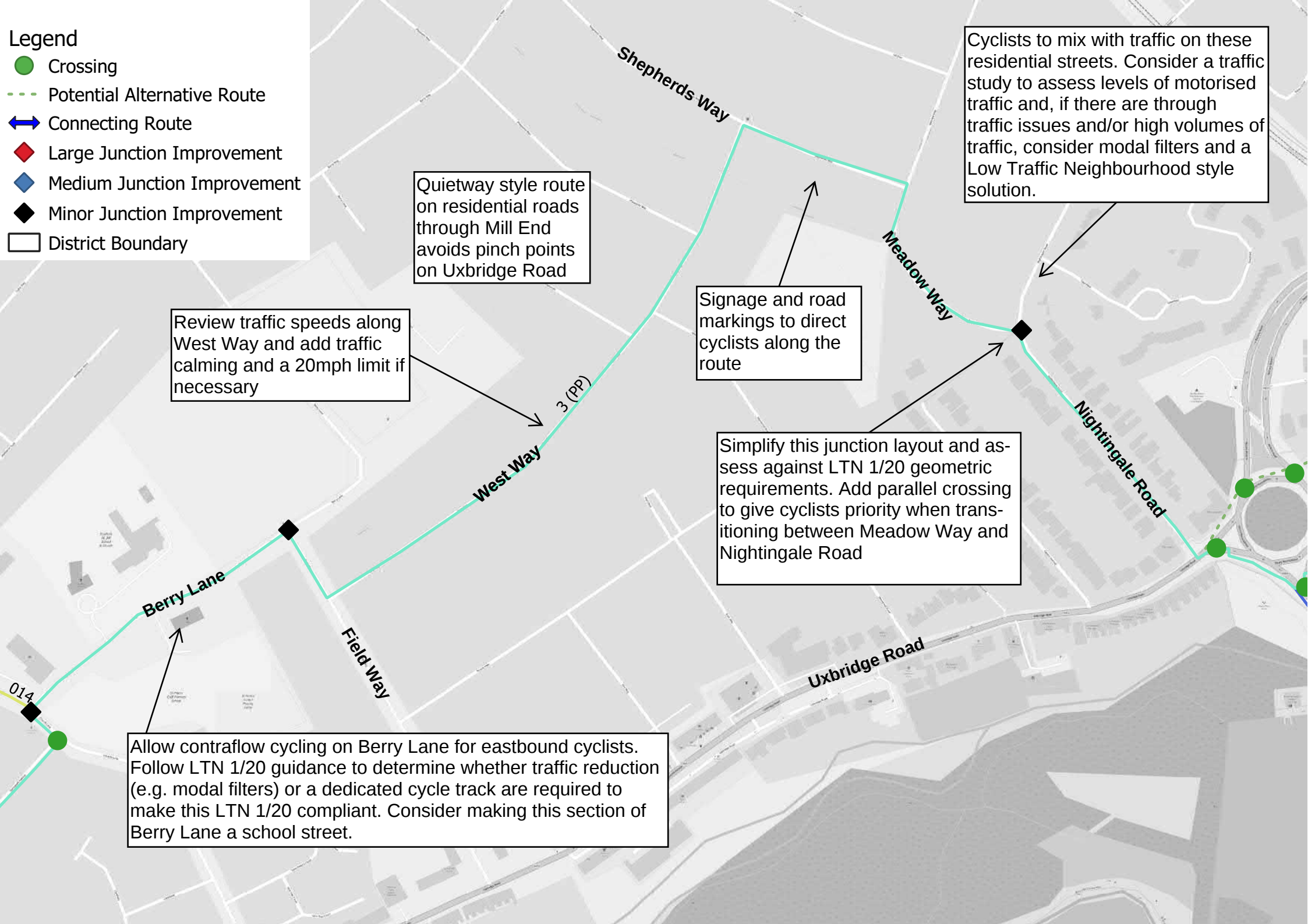
Change junction priority here to give priority to the continuing movement on Ebury Road

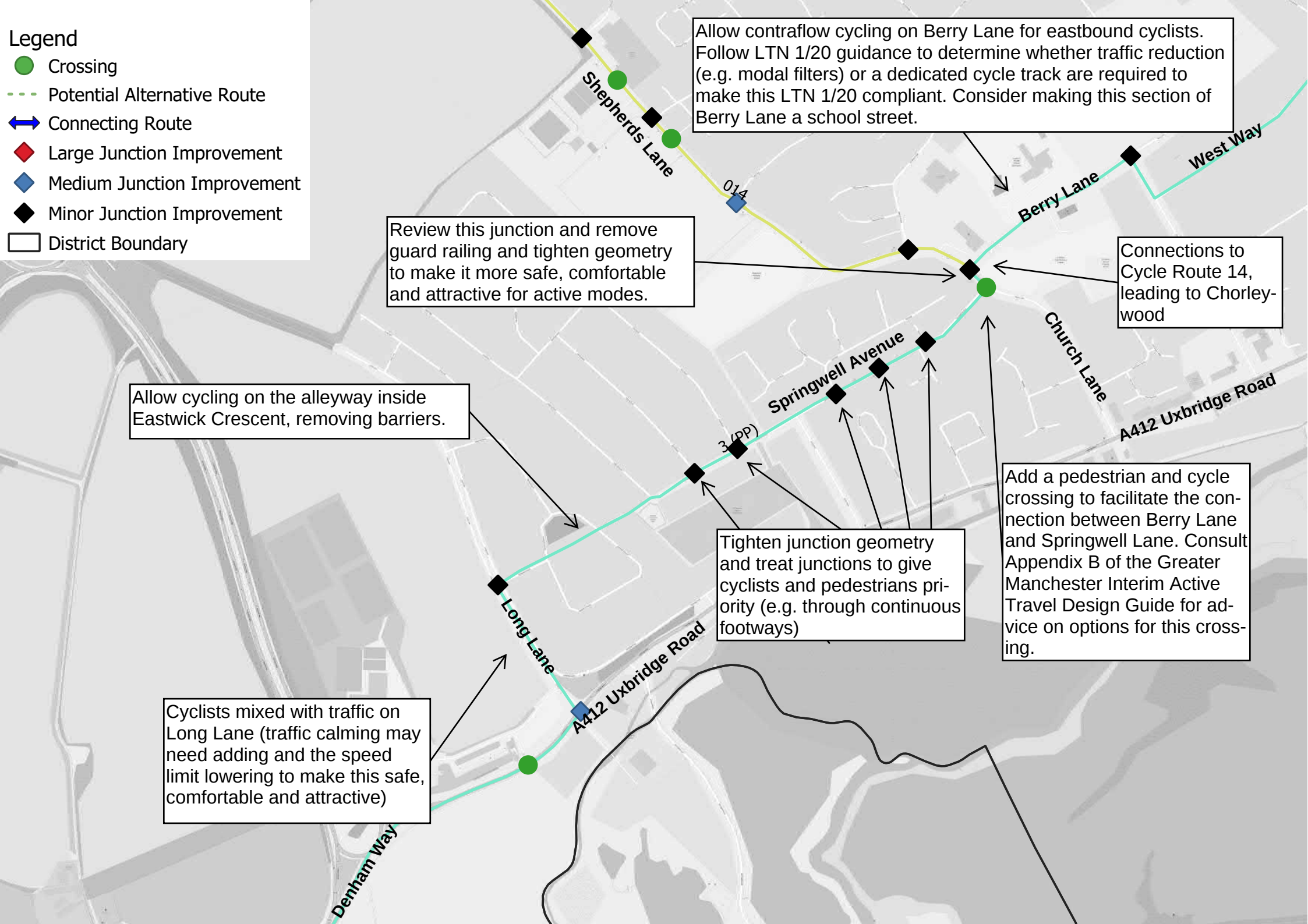
Eastbound route via Ebury Road - add traffic calming and 20mph speed limit.

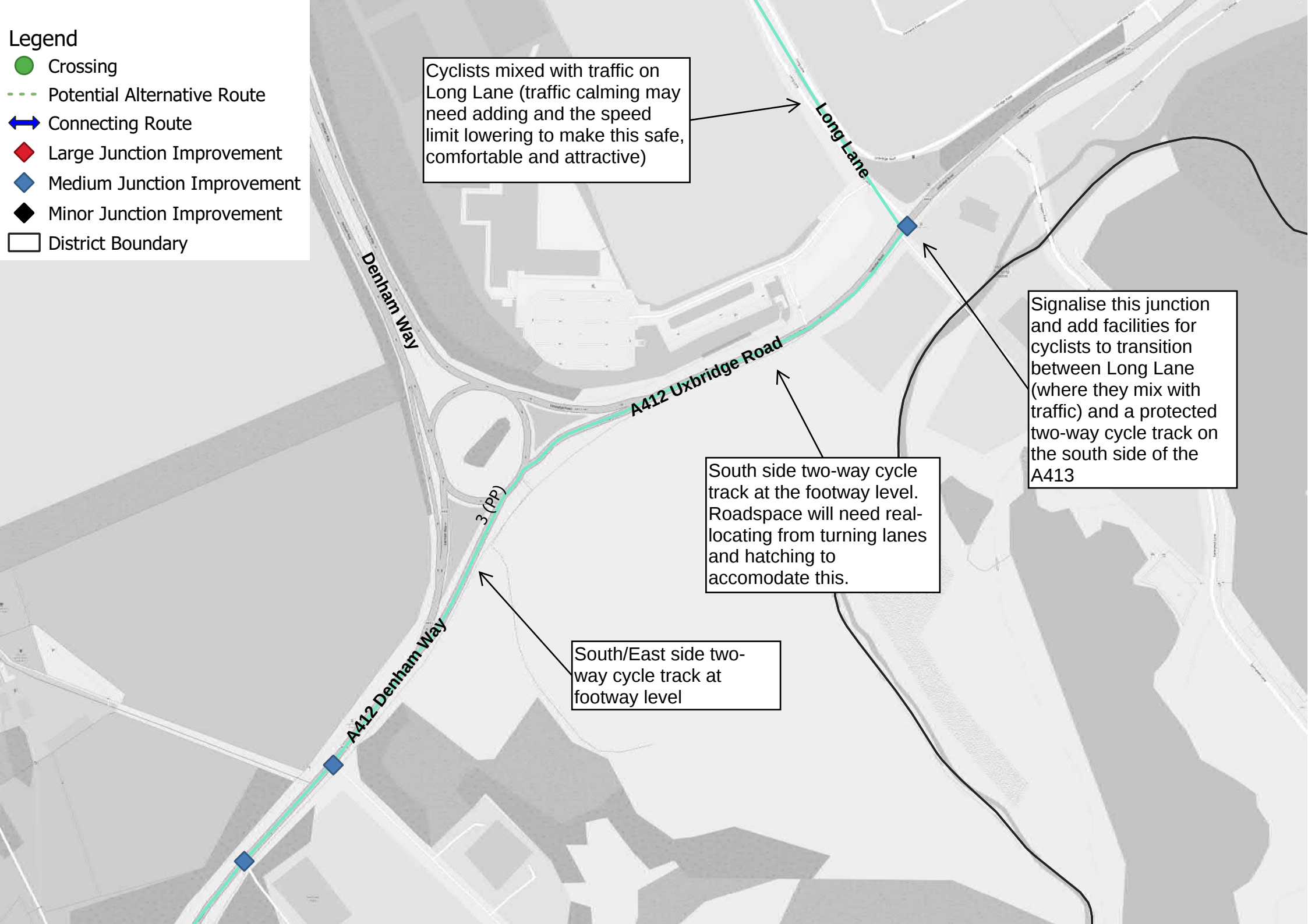
Longer-term upgrade to single stage signal controlled cycle crossing to replace existing parallel crossings.

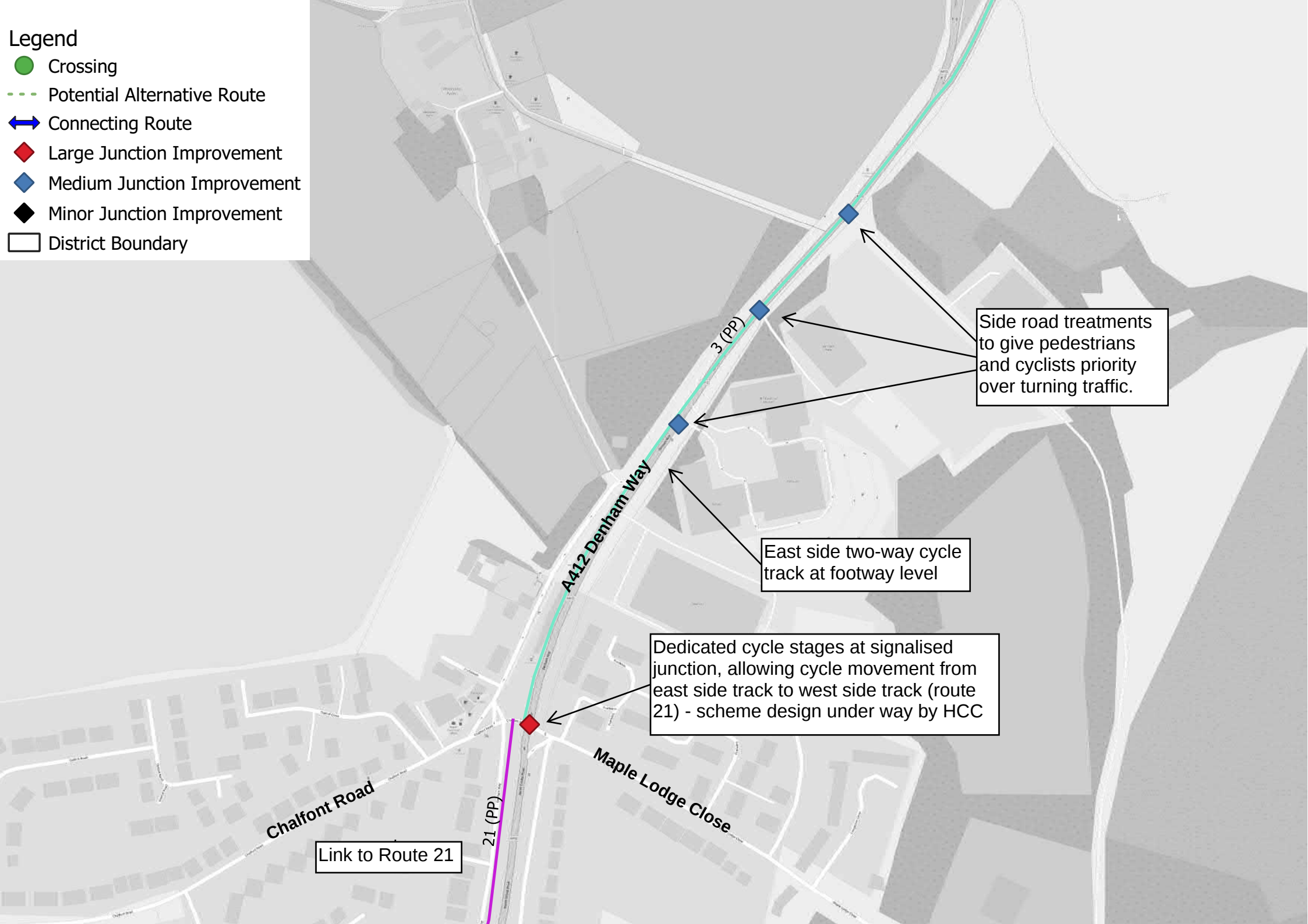
Two-way cycle track at footway level between Ebury Road and Nightingale Road

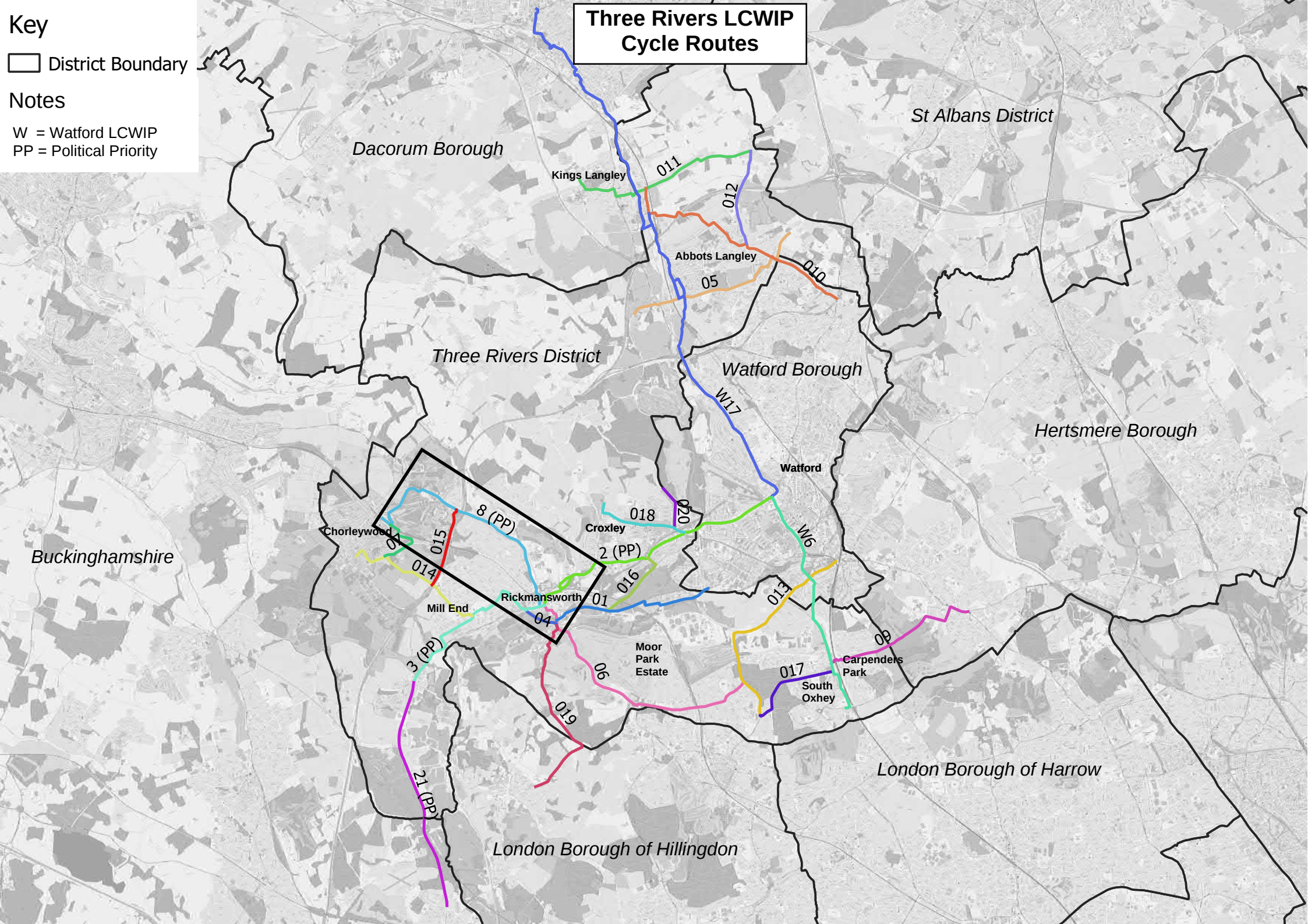












Legend

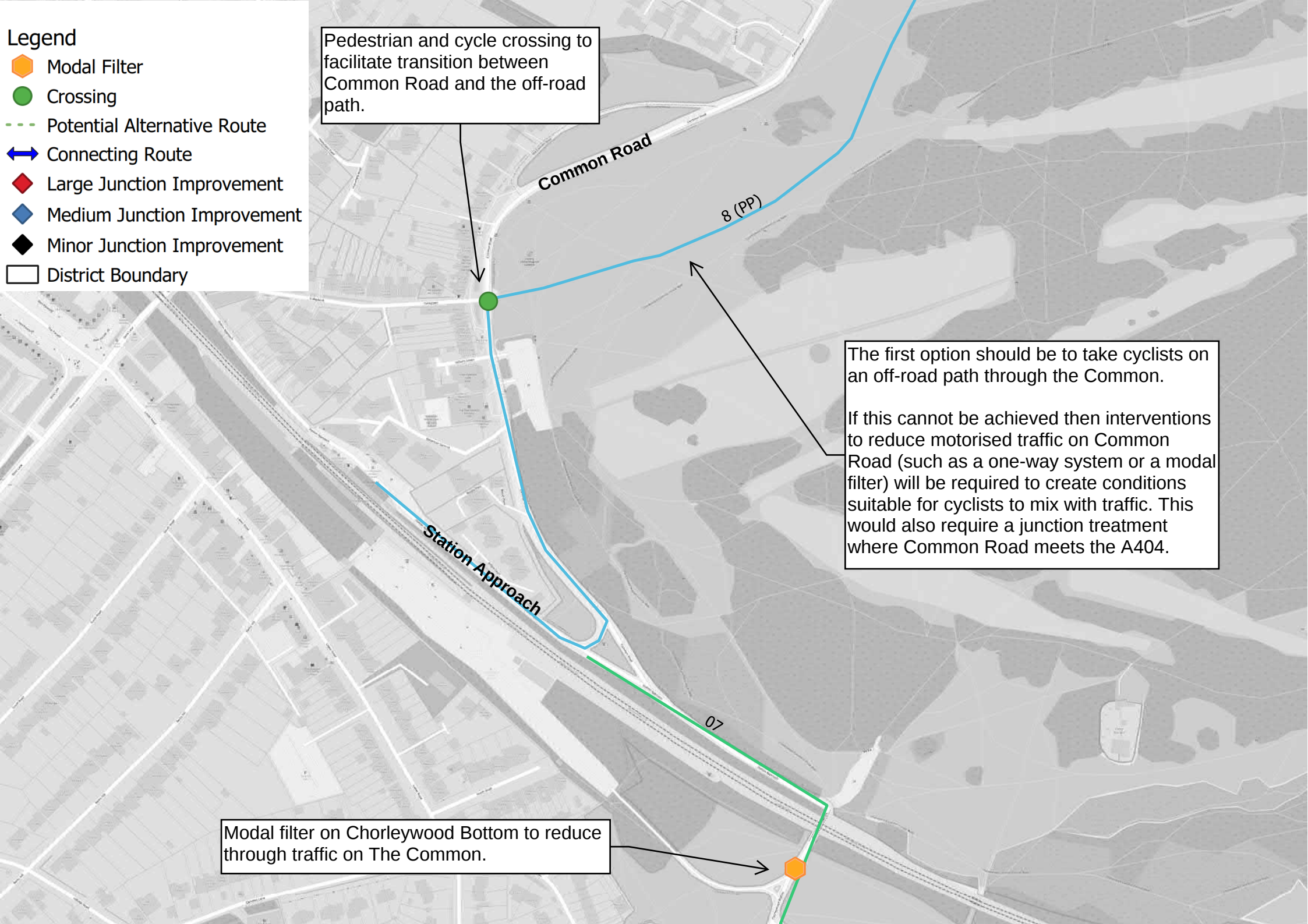
- Modal Filter
- Crossing
- Potential Alternative Route
- Connecting Route
- Large Junction Improvement
- Medium Junction Improvement
- Minor Junction Improvement
- District Boundary

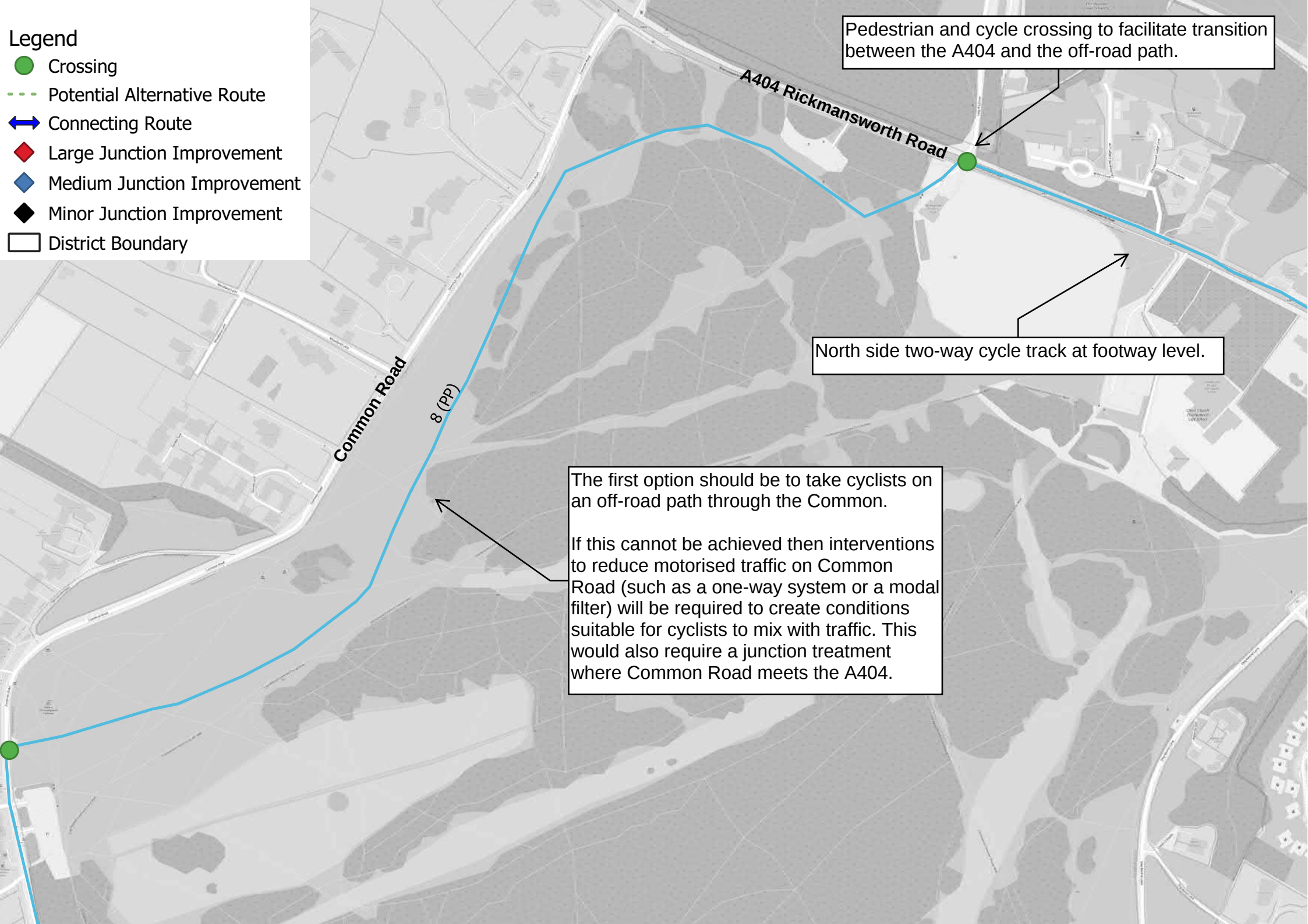
Pedestrian and cycle crossing to facilitate transition between Common Road and the off-road path.

The first option should be to take cyclists on an off-road path through the Common.

If this cannot be achieved then interventions to reduce motorised traffic on Common Road (such as a one-way system or a modal filter) will be required to create conditions suitable for cyclists to mix with traffic. This would also require a junction treatment where Common Road meets the A404.

Modal filter on Chorleywood Bottom to reduce through traffic on The Common.





Legend

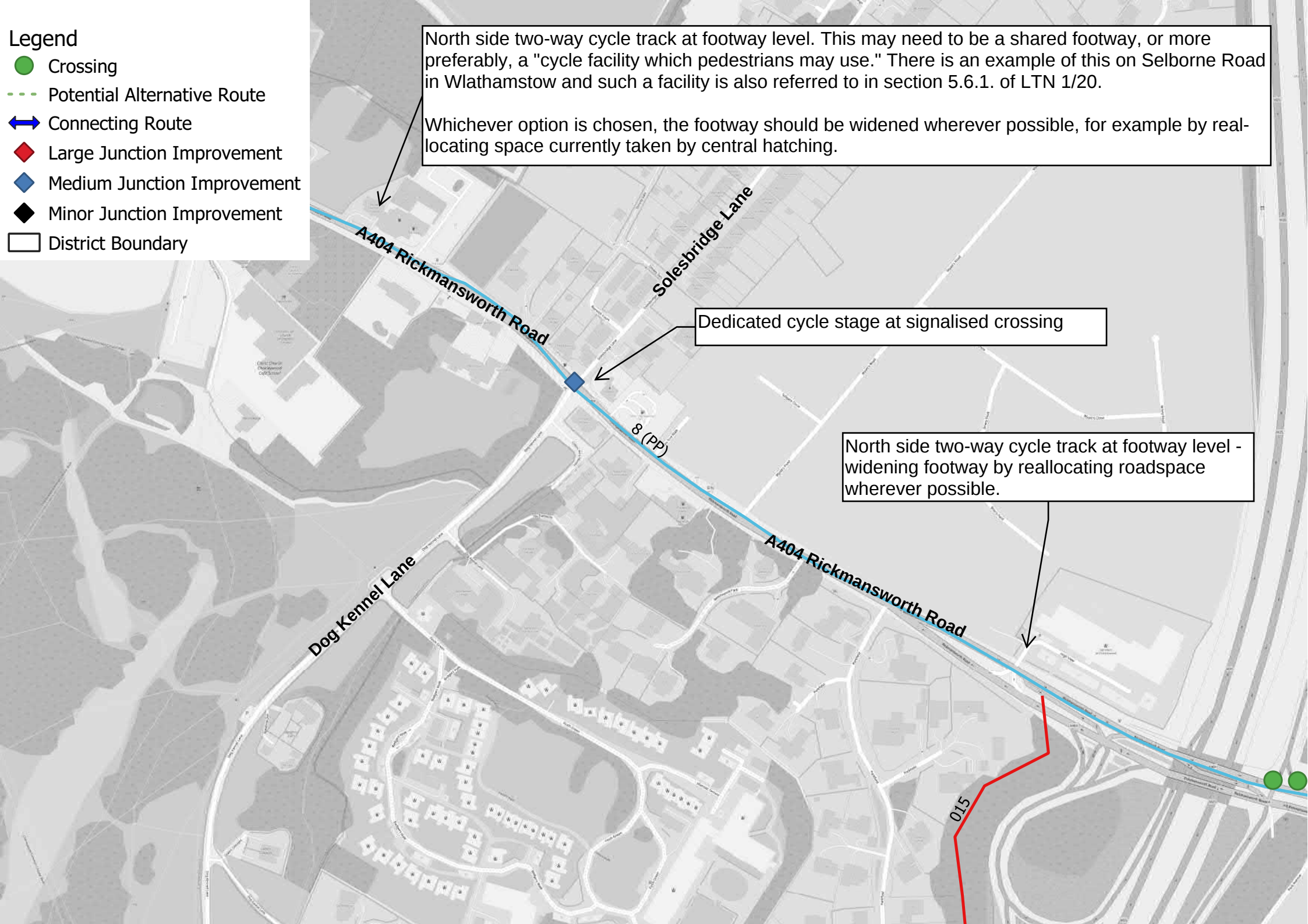
- Crossing
- - - Potential Alternative Route
- ↔ Connecting Route
- ◆ Large Junction Improvement
- ◆ Medium Junction Improvement
- ◆ Minor Junction Improvement
- District Boundary

North side two-way cycle track at footway level. This may need to be a shared footway, or more preferably, a "cycle facility which pedestrians may use." There is an example of this on Selborne Road in Wlathamstow and such a facility is also referred to in section 5.6.1. of LTN 1/20.

Whichever option is chosen, the footway should be widened wherever possible, for example by real-locating space currently taken by central hatching.

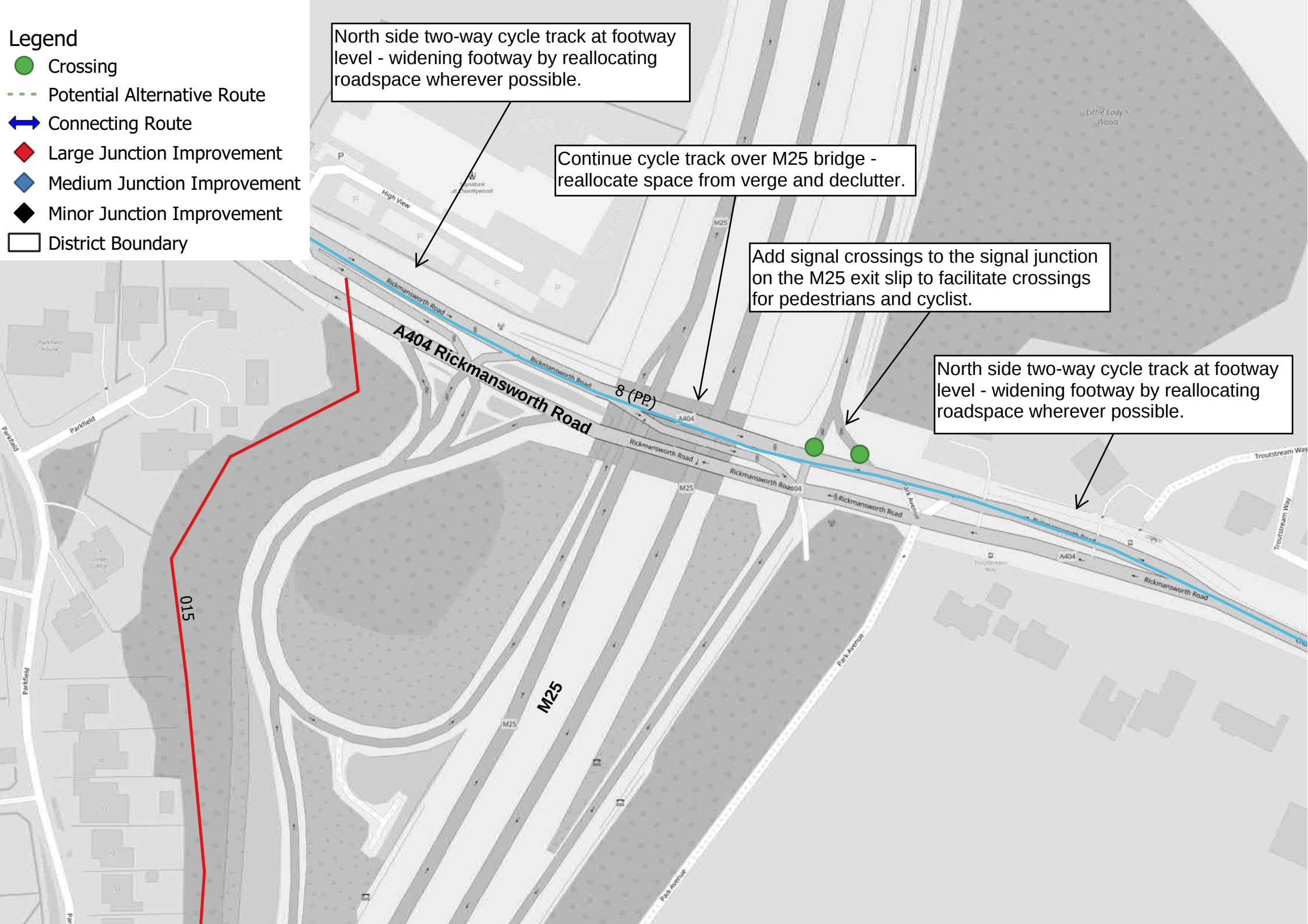
Dedicated cycle stage at signalised crossing

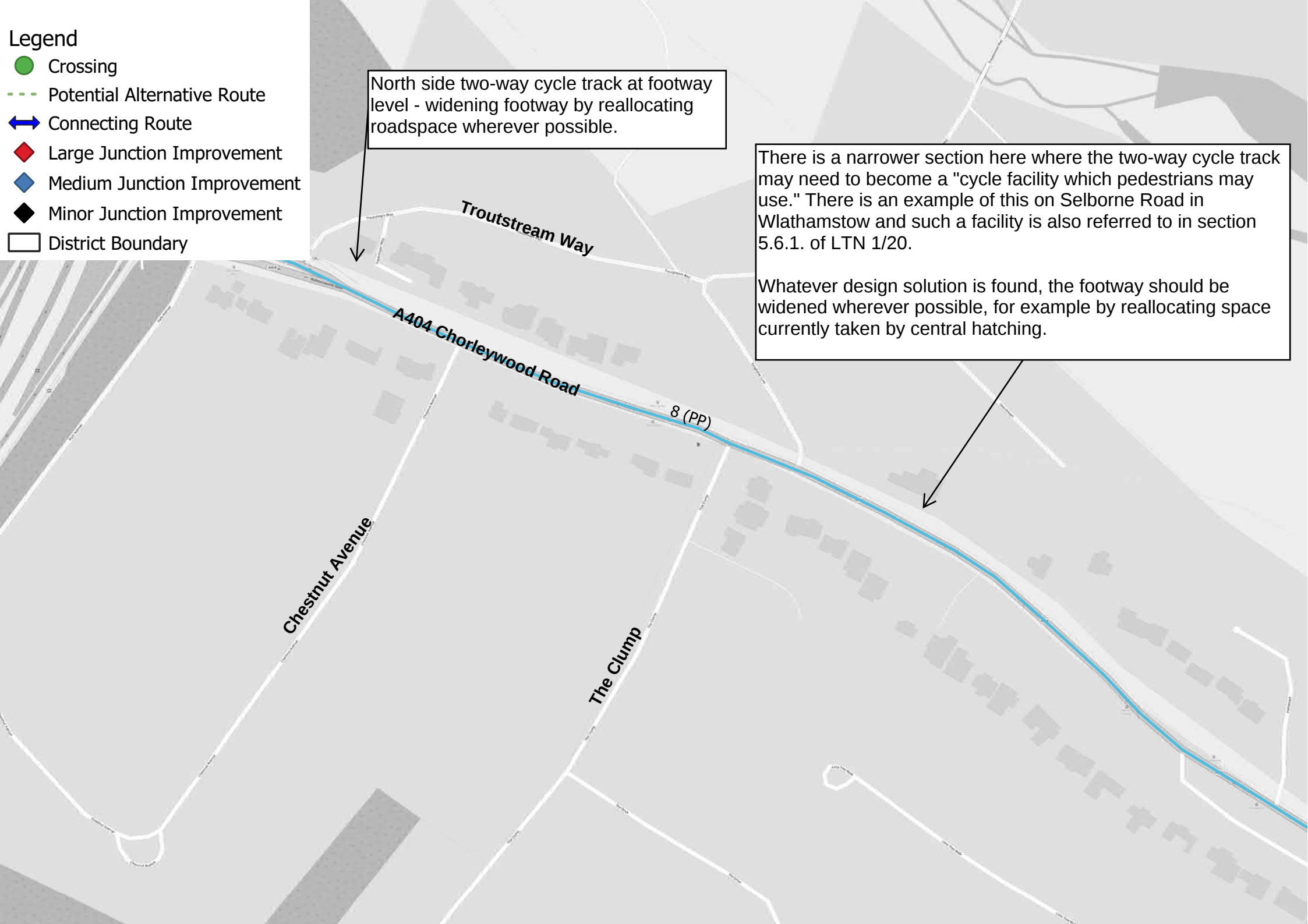
North side two-way cycle track at footway level - widening footway by reallocating road space wherever possible.



Legend

-  Crossing
-  Potential Alternative Route
-  Connecting Route
-  Large Junction Improvement
-  Medium Junction Improvement
-  Minor Junction Improvement
-  District Boundary





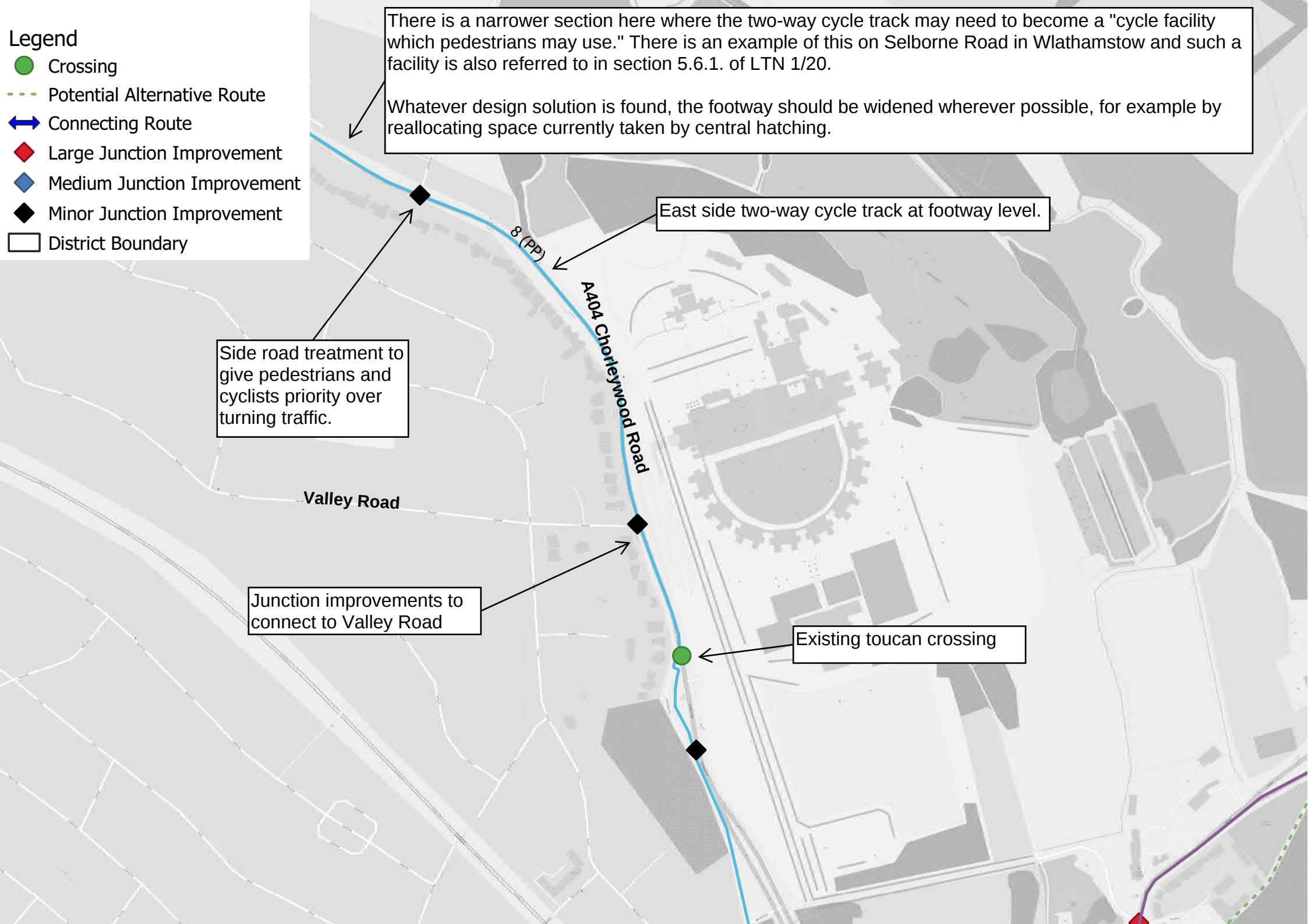
Legend

- Crossing
- - - Potential Alternative Route
- ↔ Connecting Route
- ◆ Large Junction Improvement
- ◆ Medium Junction Improvement
- ◆ Minor Junction Improvement
- District Boundary

North side two-way cycle track at footway level - widening footway by reallocating roadspace wherever possible.

There is a narrower section here where the two-way cycle track may need to become a "cycle facility which pedestrians may use." There is an example of this on Selborne Road in Wlathamstow and such a facility is also referred to in section 5.6.1. of LTN 1/20.

Whatever design solution is found, the footway should be widened wherever possible, for example by reallocating space currently taken by central hatching.



Legend

- Crossing
- - - Potential Alternative Route
- ↔ Connecting Route
- ◆ Large Junction Improvement
- ◆ Medium Junction Improvement
- ◆ Minor Junction Improvement
- District Boundary

There is a narrower section here where the two-way cycle track may need to become a "cycle facility which pedestrians may use." There is an example of this on Selborne Road in Wlathamstow and such a facility is also referred to in section 5.6.1. of LTN 1/20.

Whatever design solution is found, the footway should be widened wherever possible, for example by reallocating space currently taken by central hatching.

East side two-way cycle track at footway level.

Side road treatment to give pedestrians and cyclists priority over turning traffic.

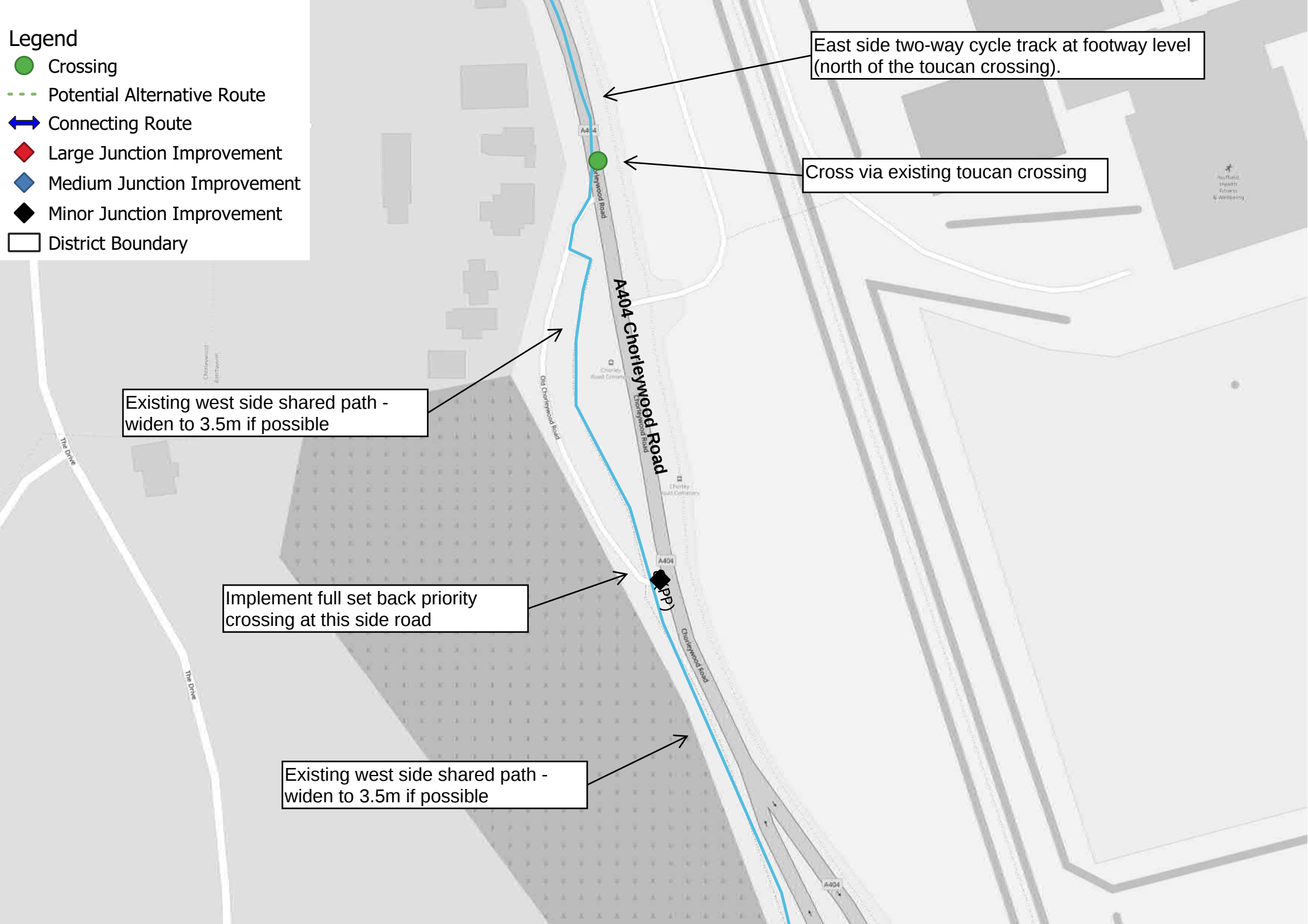
Junction improvements to connect to Valley Road

Existing toucan crossing

Valley Road

A4004 Chorleywood Road

8 (PP)



Legend

- Crossing
- - - Potential Alternative Route
- ↔ Connecting Route
- ◆ Large Junction Improvement
- ◆ Medium Junction Improvement
- ◆ Minor Junction Improvement
- District Boundary

East side two-way cycle track at footway level (north of the toucan crossing).

Cross via existing toucan crossing

Existing west side shared path - widen to 3.5m if possible

Implement full set back priority crossing at this side road

Existing west side shared path - widen to 3.5m if possible

Legend

- Crossing
- Potential Alternative Route
- Connecting Route
- Large Junction Improvement
- Medium Junction Improvement
- Minor Junction Improvement
- District Boundary

-  Crossing
-  Potential Alternative Route
-  Connecting Route
-  Large Junction Improvement
-  Medium Junction Improvement
-  Minor Junction Improvement
-  District Boundary

Existing west side shared path -
widen to 3.5m if possible

Extend kerbs, reduce kerb radii, raise junction and add parallel crossing for continuation of the cycle route from Victoria Close to Chorleywood Close
--

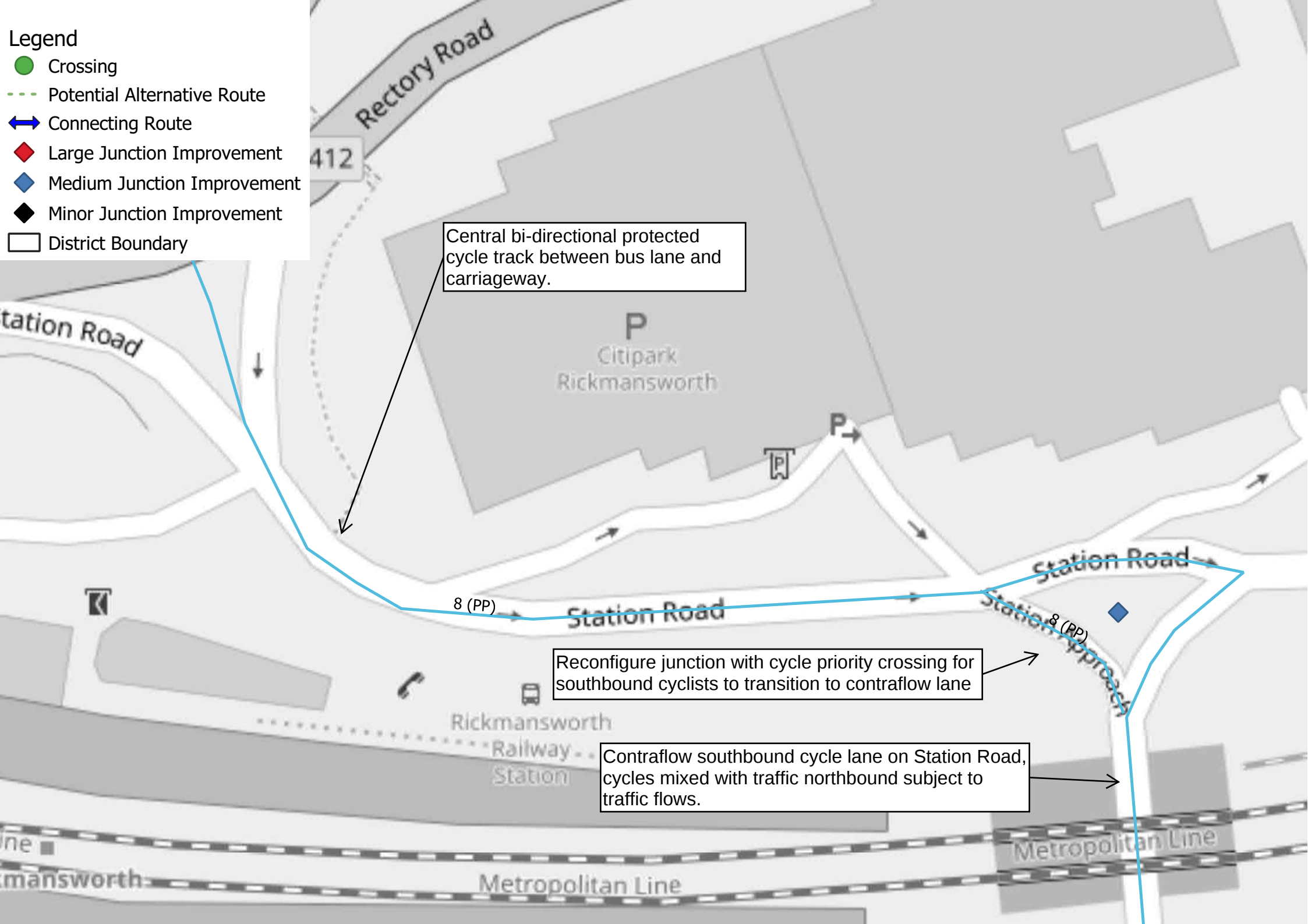
Cyclists mixed with traffic in a low-traffic environment

At-grade signalised pedestrian and cycle crossing, ideally a single stage crossing.

Legend

-  Crossing
-  Potential Alternative Route
-  Connecting Route
-  Large Junction Improvement
-  Medium Junction Improvement
-  Minor Junction Improvement
-  District Boundary

- ### Legend
-  Crossing
 -  Potential Alternative Route
 -  Connecting Route
 -  Large Junction Improvement
 -  Medium Junction Improvement
 -  Minor Junction Improvement
 -  District Boundary



[illegible]

-
- Legend**
- Crossing
 - - - Potential Alternative Route
 - ↔ Connecting Route
 - ◆ Large Junction Improvement
 - ◆ Medium Junction Improvement
 - ◆ Minor Junction Improvement
 - District Boundary
- Map Labels:**
- Station Road
 - High Street
 - Northway
 - Solomons Hill
 - Swan Close
 - Parsonage Road
 - Homestead Road
 - Metropolitan Line
 - Rickmansworth Railway Station
 - Ashleigh Court
 - Swanfield House
 - Boots
 - Caffe Nero
 - Lloyds Bank
 - Fratelli Barbers
 - RSPCA
 - Prezzo
 - M&Co
 - Louvre Haircutters
 - Hopsons International
 - 114
 - 112
 - 118
 - 120
 - 122
 - 124
 - 126
 - 183
 - The Fox and Hounds
 - Rasal Brasserie
 - NatWest
 - Costa
 - Creams
 - KBA
 - Cafe Deli
 - Mexica Buffet
 - Trend & Thomas
 - Tamarind Thai
 - Buon Cibou
- Text Boxes:**
- Northbound cyclists mixed with traffic subject to traffic flows
 - Extend Station Road 20mph limit to the north
 - Replace 7 pay and display bays on Station Road and Northway with Southbound contraflow stepped cycle track - previous HCC design as basis.
 - Links to route 2 and 3

Legend

- Crossing
- - - Potential Alternative Route
- ↔ Connecting Route
- ◆ Large Junction Improvement
- ◆ Medium Junction Improvement
- ◆ Minor Junction Improvement
- District Boundary

Map Details:

- Station Road:** A blue line running north-south, labeled 'Station Road' and '8 (PP)'.
- High Street:** A green dashed line running east-west, labeled 'High Street'.
- Northway:** A green line running east-west, labeled 'Northway'.
- Solomons Hill:** A green line running north-south, labeled 'Solomons Hill'.
- Key Locations:** Rickmansworth Railway Station, Ashleigh Court, Swanfield House, Cafe Deli, KBA, NatWest, Costa, Creams, Louvere Haircutters, M&Co, Prezzo, RSPCA, Fratelli Barbers, Lloyds Bank, Caffè Nero, Boots.
- Annotations:**
 - Northbound cyclists mixed with traffic subject to traffic flows
 - Extend Station Road 20mph limit to the north
 - Replace 7 pay and display bays on Station Road and Northway with Southbound contraflow stepped cycle track - previous HCC design as basis.
 - Links to route 2 and 3

Legend

- Crossing
- - - Potential Alternative Route
- ↔ Connecting Route
- ◆ Large Junction Improvement
- ◆ Medium Junction Improvement
- ◆ Minor Junction Improvement
- District Boundary

Map Labels:

- Station Road
- High Street
- Northway
- Solomons Hill
- Swan Close
- Parsonage Road
- Homestead Road
- Metropolitan Line
- Rickmansworth Railway Station
- Ashleigh Court
- Swanfield House
- Boots
- Caffe Nero
- Lloyds Bank
- Fratelli Barbers
- RSPCA
- Prezzo
- M&Co
- Louvre Haircutters
- Hopsons International
- 114
- 112
- 118
- 120
- 122
- 124
- 126
- 183
- The Fox and Hounds
- Rasal Brasserie
- NatWest
- Costa
- Creams
- KBA
- Cafe Deli
- Mexica Buffet
- Trend & Thomas
- Tamarind Thai
- Buon Cibou

Text Boxes:

- Northbound cyclists mixed with traffic subject to traffic flows
- Extend Station Road 20mph limit to the north
- Replace 7 pay and display bays on Station Road and Northway with Southbound contraflow stepped cycle track - previous HCC design as basis.
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Legend

- Crossing
- - - Potential Alternative Route
- ↔ Connecting Route
- ◆ Large Junction Improvement
- ◆ Medium Junction Improvement
- ◆ Minor Junction Improvement
- District Boundary

The map shows Station Road running north-south, intersecting with High Street at the bottom. A blue line indicates the proposed cycle route along Station Road, with a blue diamond at the junction with High Street. A green dashed line shows a potential alternative route along High Street. A blue double-headed arrow indicates a connecting route at the junction. Text boxes provide additional information:

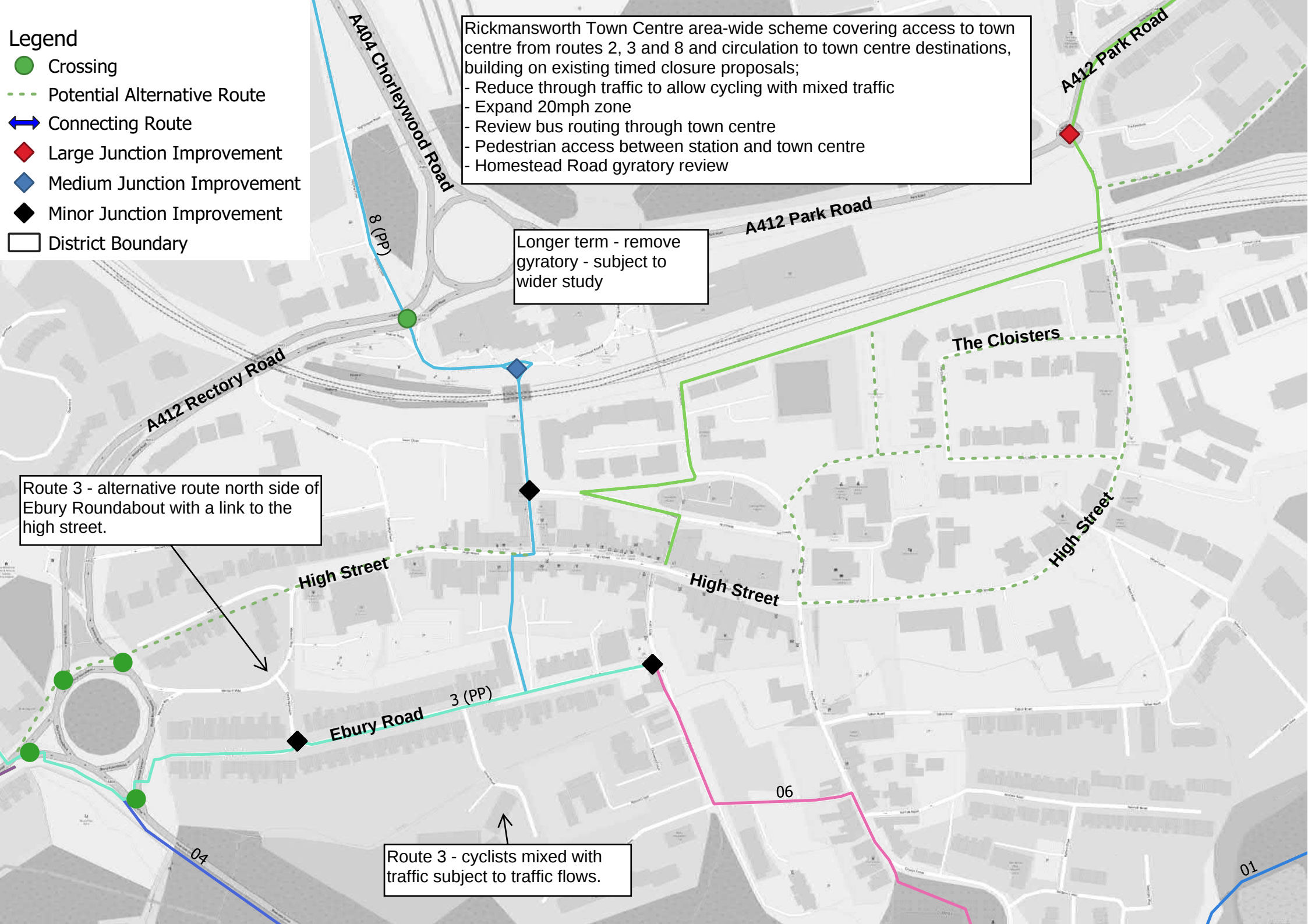
- "Northbound cyclists mixed with traffic subject to traffic flows" points to the northbound section of Station Road.
- "Extend Station Road 20mph limit to the north" points to the northbound section of Station Road.
- "Replace 7 pay and display bays on Station Road and Northway with Southbound contraflow stepped cycle track - previous HCC design as basis." points to the southbound section of Station Road.
- "Links to route 2 and 3" points to the junction with High Street.

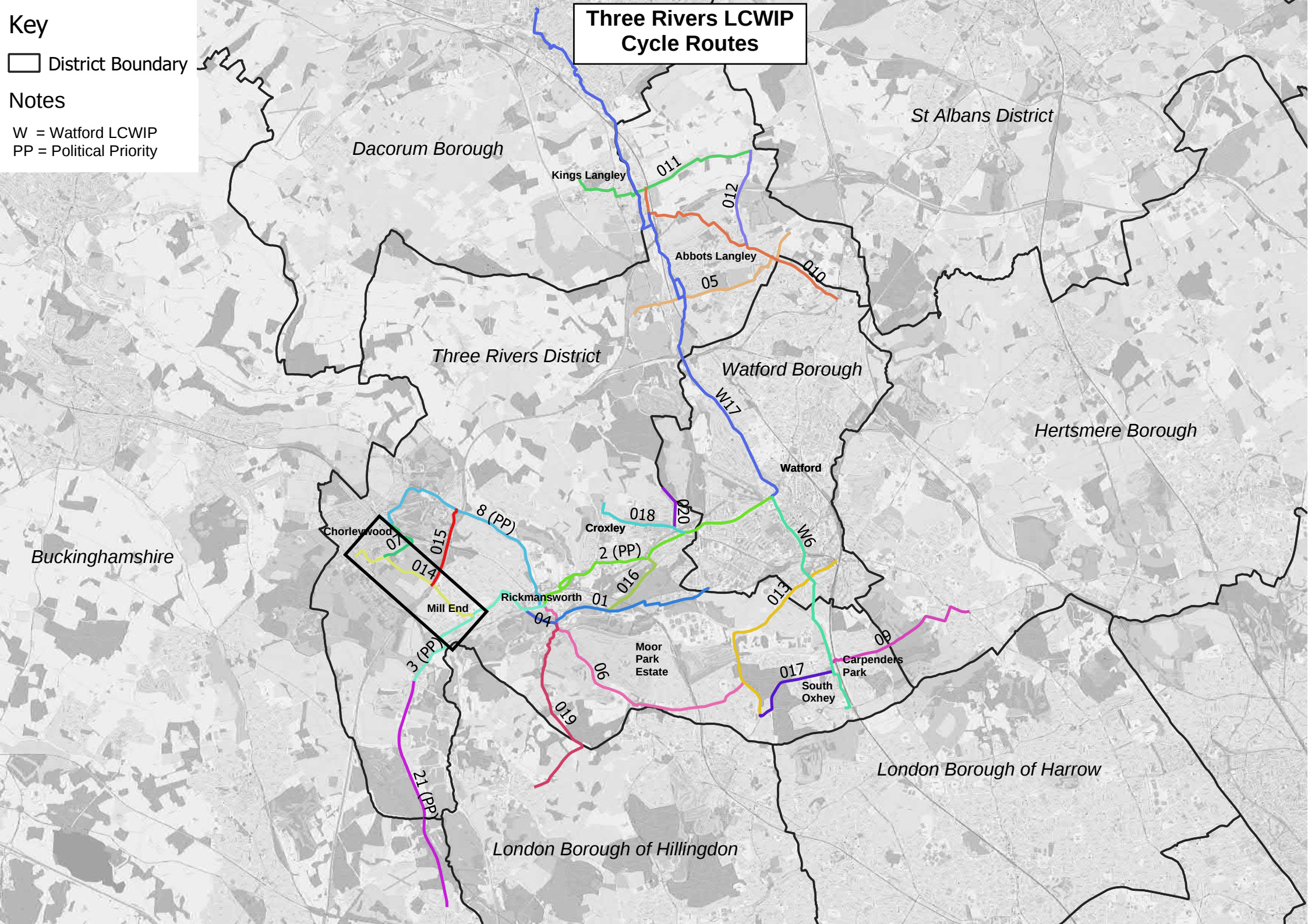
Legend

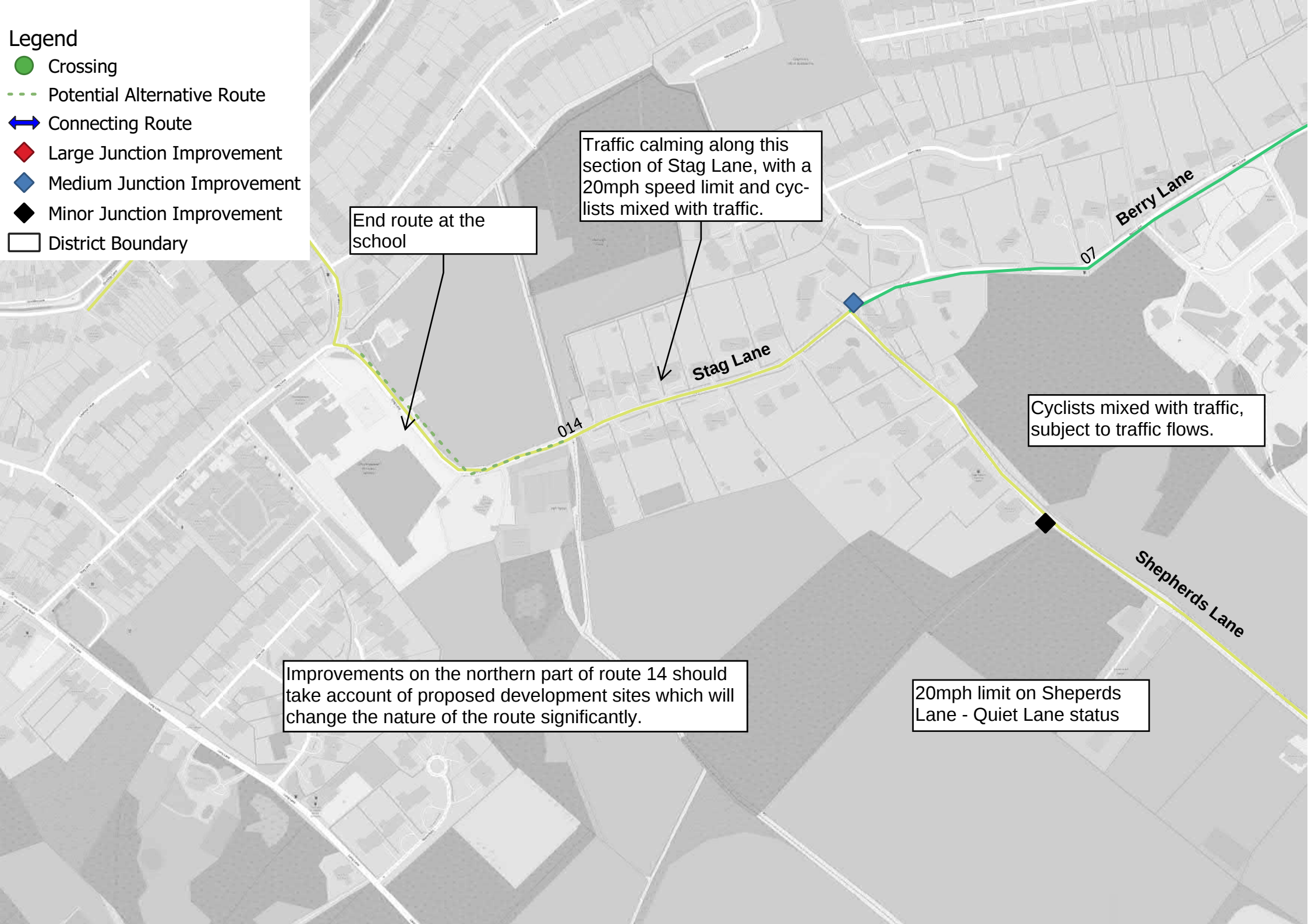
- Crossing
- - - Potential Alternative Route
- ↔ Connecting Route
- ◆ Large Junction Improvement
- ◆ Medium Junction Improvement
- ◆ Minor Junction Improvement
- District Boundary

The map shows Station Road running north-south, intersecting with High Street at the bottom. A blue line indicates the proposed cycle route along Station Road, with a blue diamond at the junction with High Street. A green dashed line shows a potential alternative route along High Street. A blue double-headed arrow indicates a connecting route at the junction. Text boxes provide additional information:

- "Northbound cyclists mixed with traffic subject to traffic flows" points to the northbound section of Station Road.
- "Extend Station Road 20mph limit to the north" points to the northbound section of Station Road.
- "Replace 7 pay and display bays on Station Road and Northway with Southbound contraflow stepped cycle track - previous HCC design as basis." points to the southbound section of Station Road.
- "Links to route 2 and 3" points to the junction with High Street.







- Legend**
- Crossing
 - - - Potential Alternative Route
 - ↔ Connecting Route
 - ◆ Large Junction Improvement
 - ◆ Medium Junction Improvement
 - ◆ Minor Junction Improvement
 - District Boundary

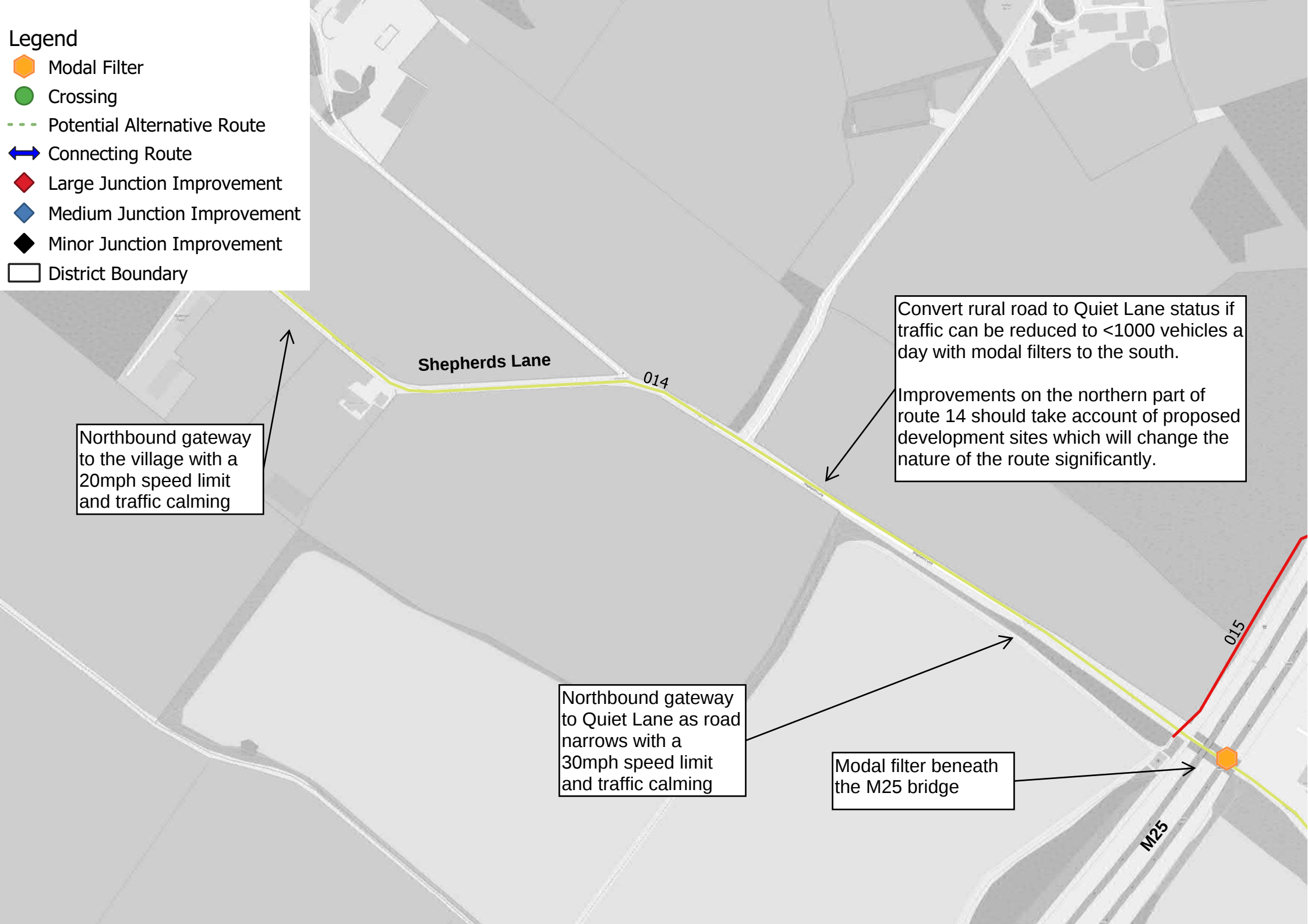
End route at the school

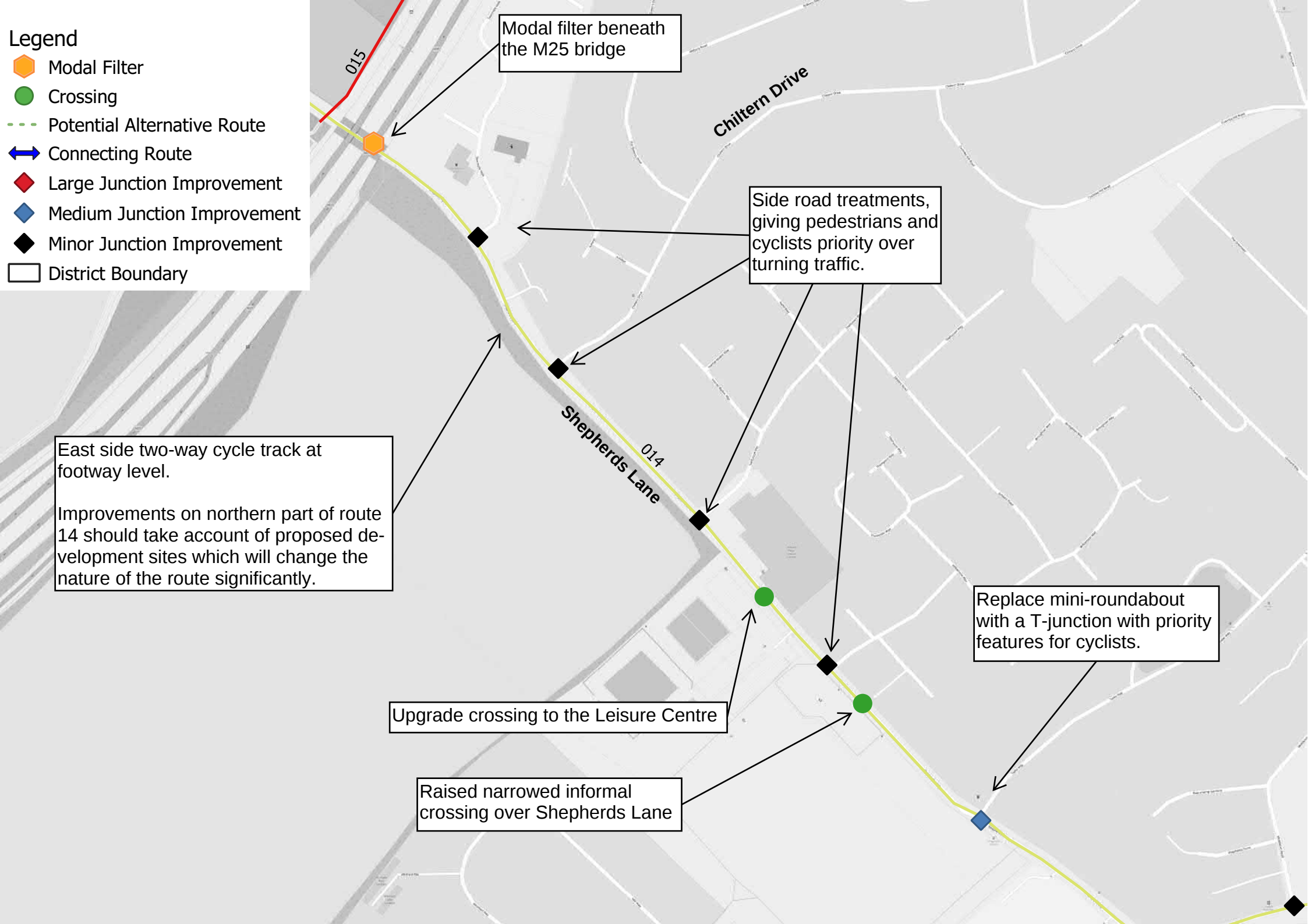
Traffic calming along this section of Stag Lane, with a 20mph speed limit and cyclists mixed with traffic.

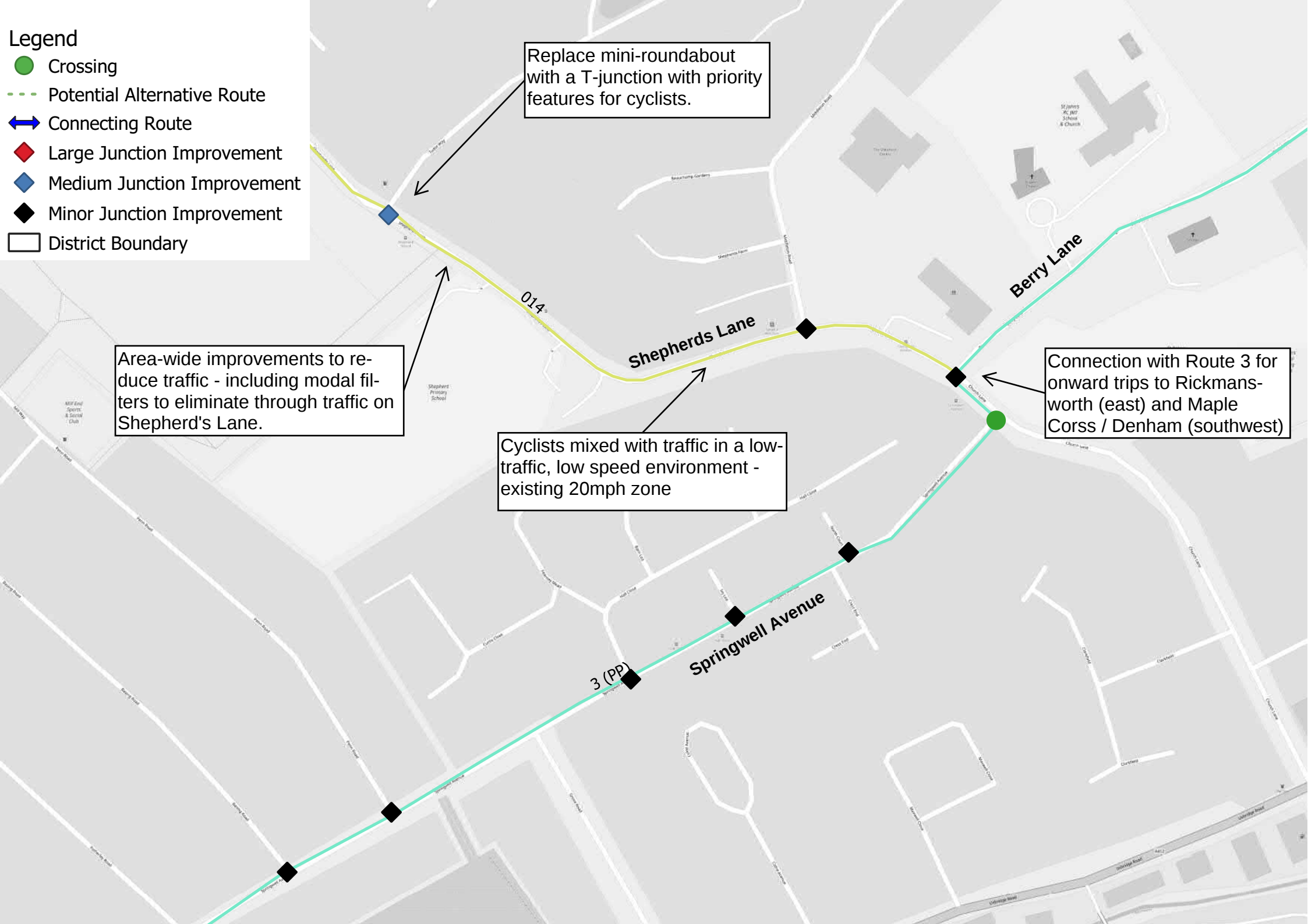
Cyclists mixed with traffic, subject to traffic flows.

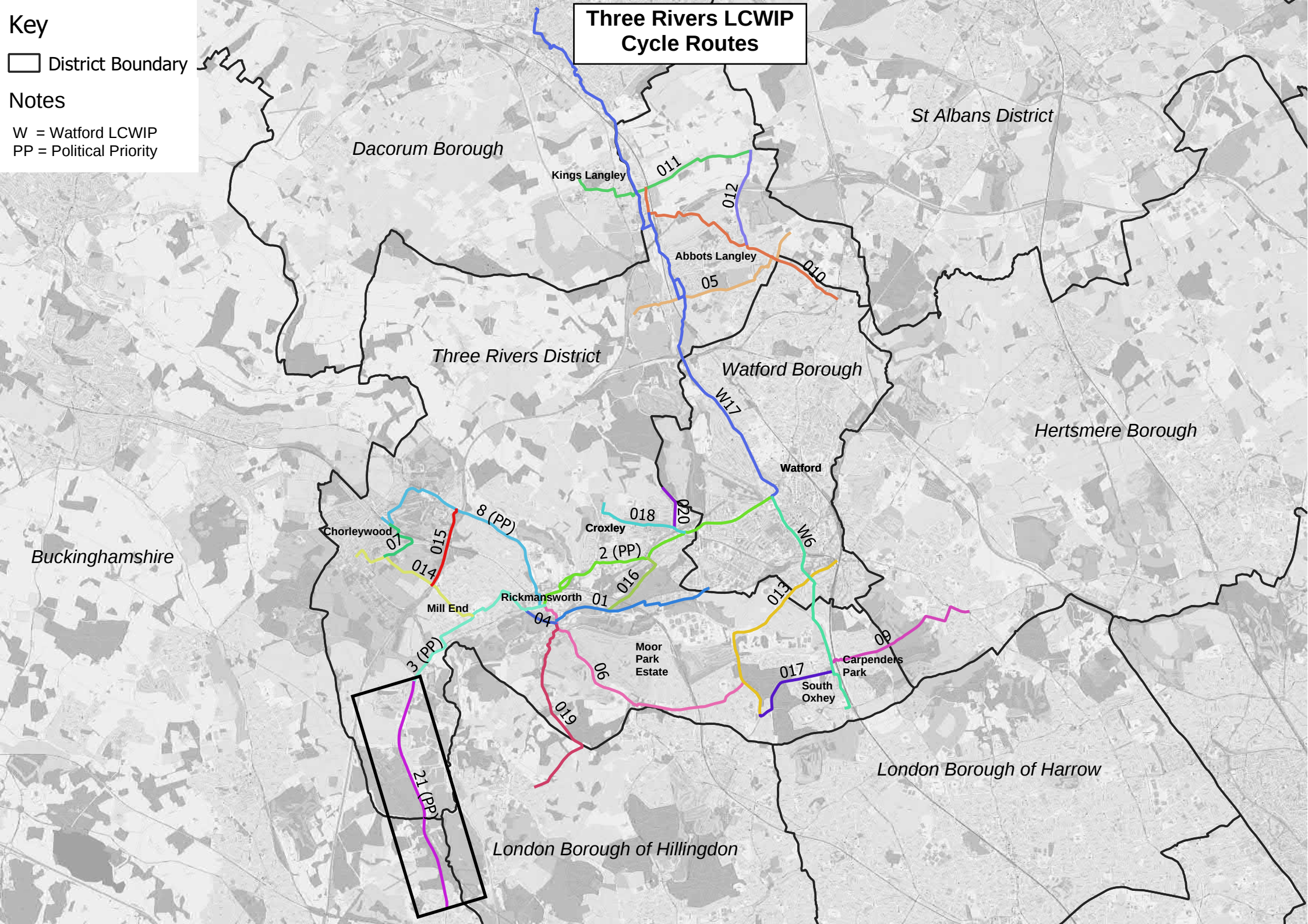
Improvements on the northern part of route 14 should take account of proposed development sites which will change the nature of the route significantly.

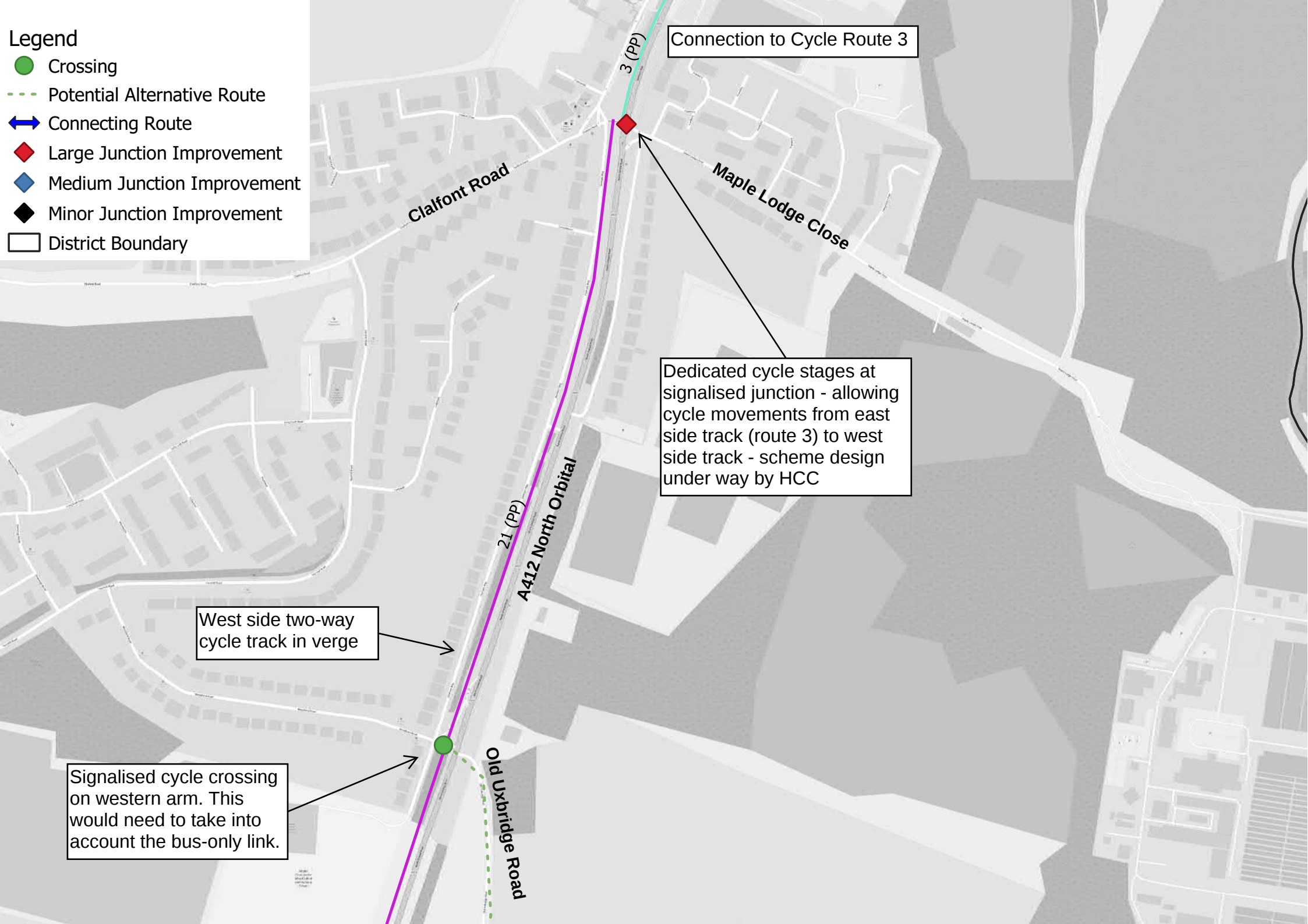
20mph limit on Sheperds Lane - Quiet Lane status











Legend

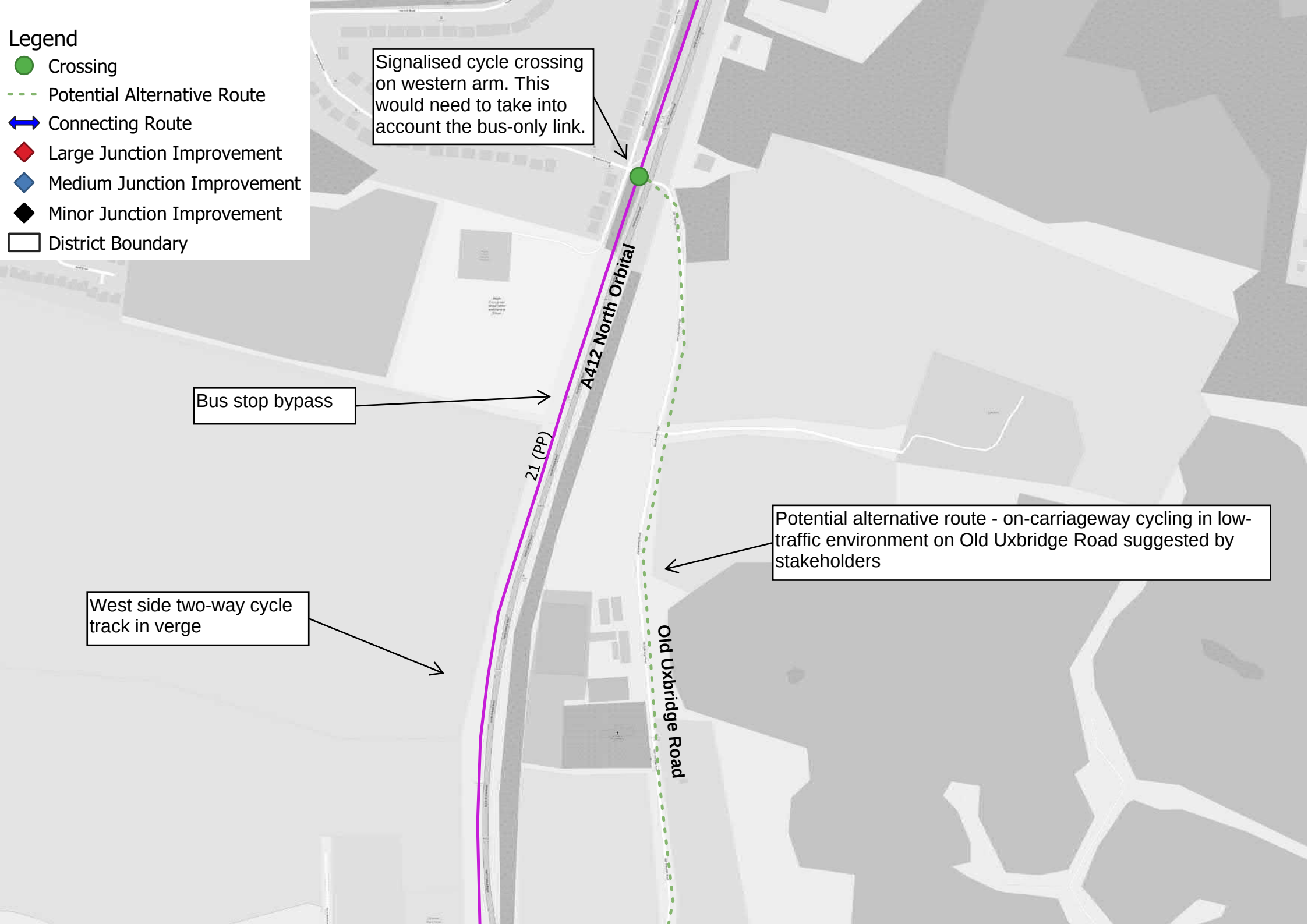
- Crossing
- Potential Alternative Route
- Connecting Route
- Large Junction Improvement
- Medium Junction Improvement
- Minor Junction Improvement
- District Boundary

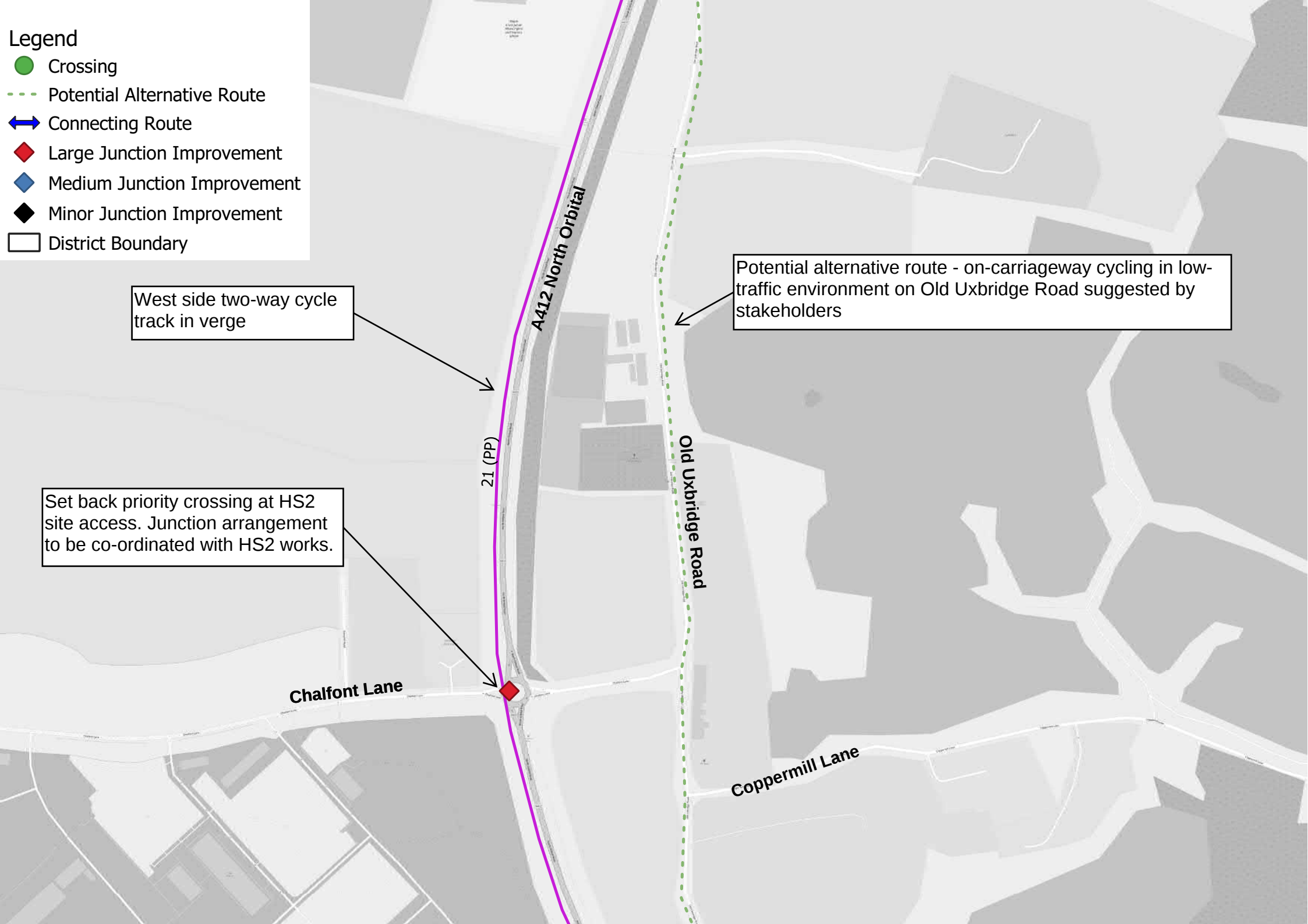
Connection to Cycle Route 3

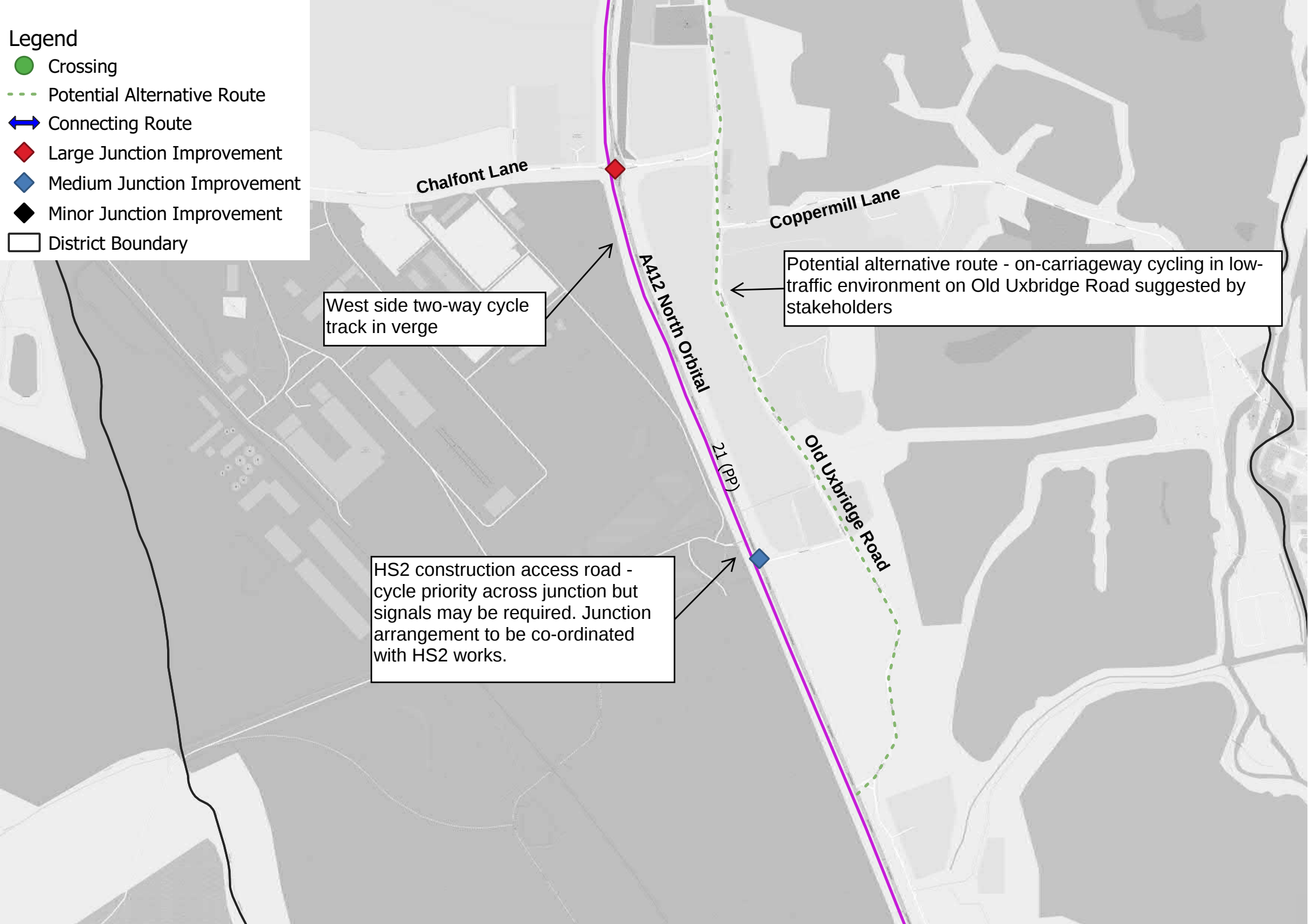
Dedicated cycle stages at signalised junction - allowing cycle movements from east side track (route 3) to west side track - scheme design under way by HCC

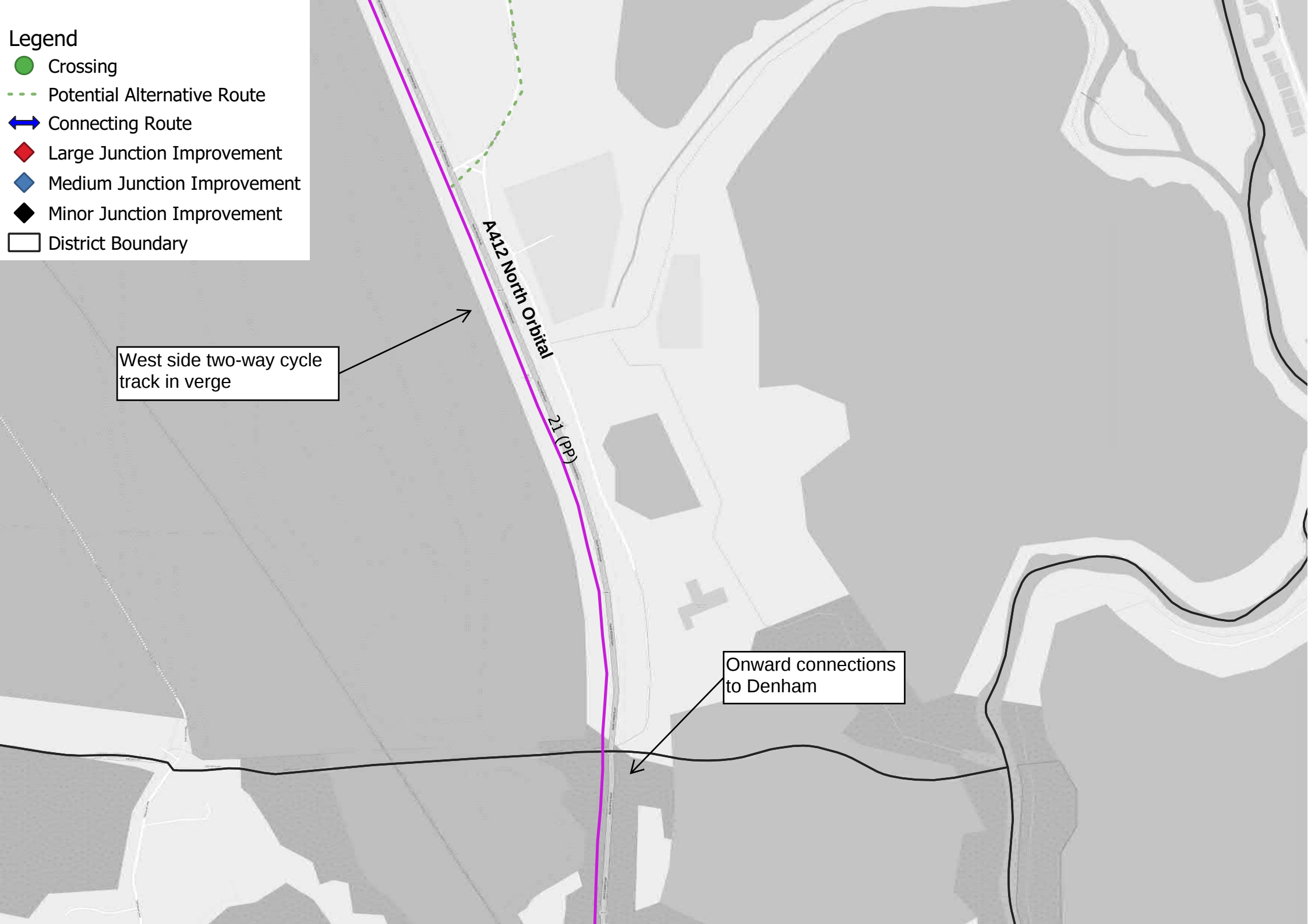
West side two-way cycle track in verge

Signalised cycle crossing on western arm. This would need to take into account the bus-only link.









Walking Interventions

General design considerations

- Provide raised entry treatments on all side roads
- Tactile paving on all dropped kerbs at pedestrian crossing points
- Provide direct pedestrian crossing points
- Resurface footways where necessary and address all pinch points – 2m target clear width; 1.5m minimum width is acceptable for short sections only
- Maintain footways to provide a smooth surface. Trim vegetation to retain 2m width
- Provide designated parking bays to help reduce footway/verge parking – also acts as traffic calming
- Where designated bays cannot be provided, consider providing planters on the verges to deter pavement/verge parking
- Reduce speed limits
- Remove guardrail
- Make routes legible – take the most direct path, reduce signage and features such as paving where possible

Potential Measures Introduction

Contents

This document provides the following for each of the priority routes identified:

- Location plan, showing the route in the context of the wider network
- Summary plans of suggested interventions

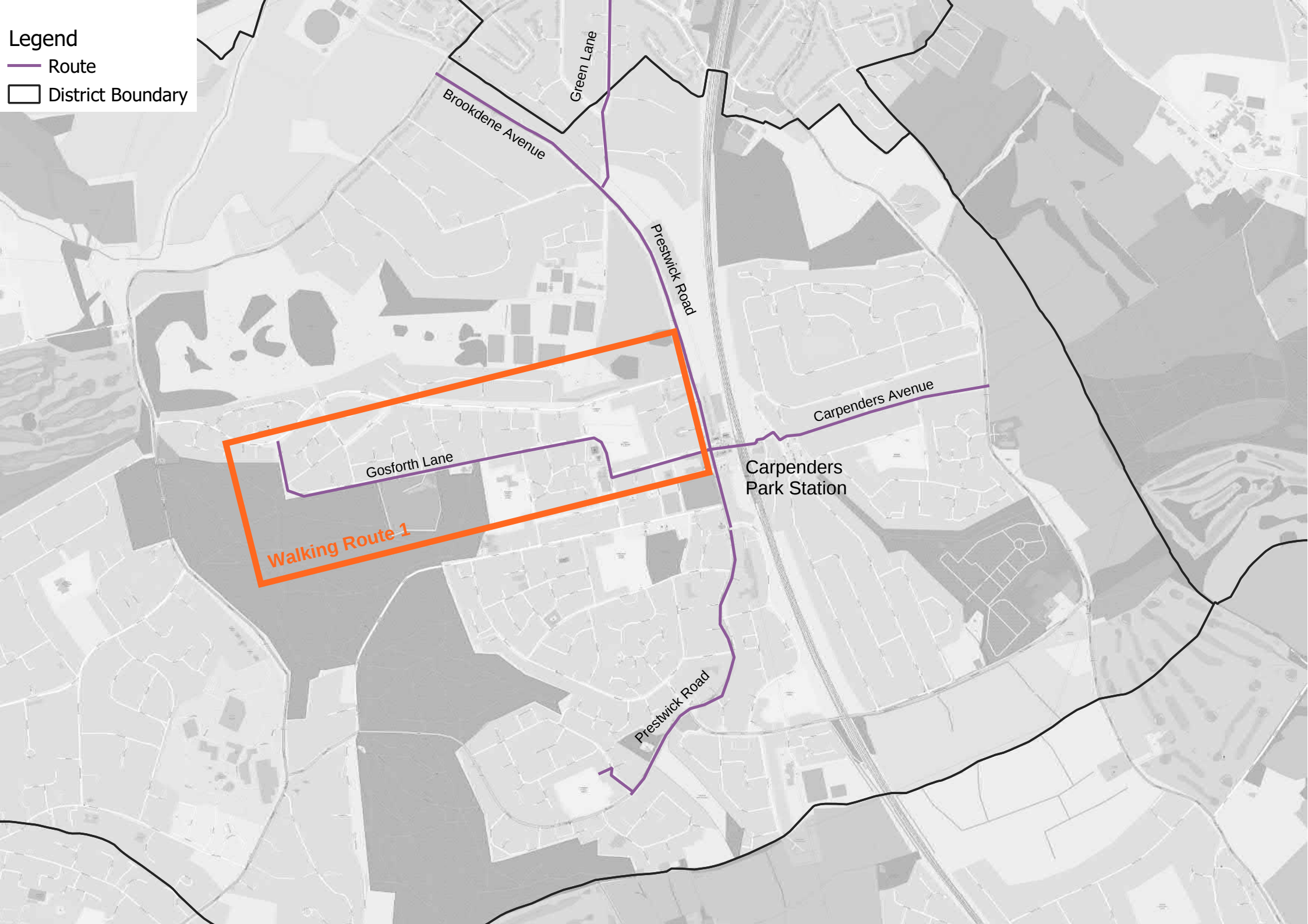
Guide to plans

The maps on the following pages are intended to show high-level measures and indicative locations only.

All measures will be subject to further feasibility and safety assessment and public consultation.

Items shown are as follows:

-  Modal Filter
-  Crossing
-  Potential Alternative Route
-  Connecting Route
-  Large Junction Improvement
-  Medium Junction Improvement
-  Minor Junction Improvement
-  District Boundary



Legend

- Route
- District Boundary

Brookdene Avenue

Green Lane

Prestwick Road

Gosforth Lane

Carpenders Avenue

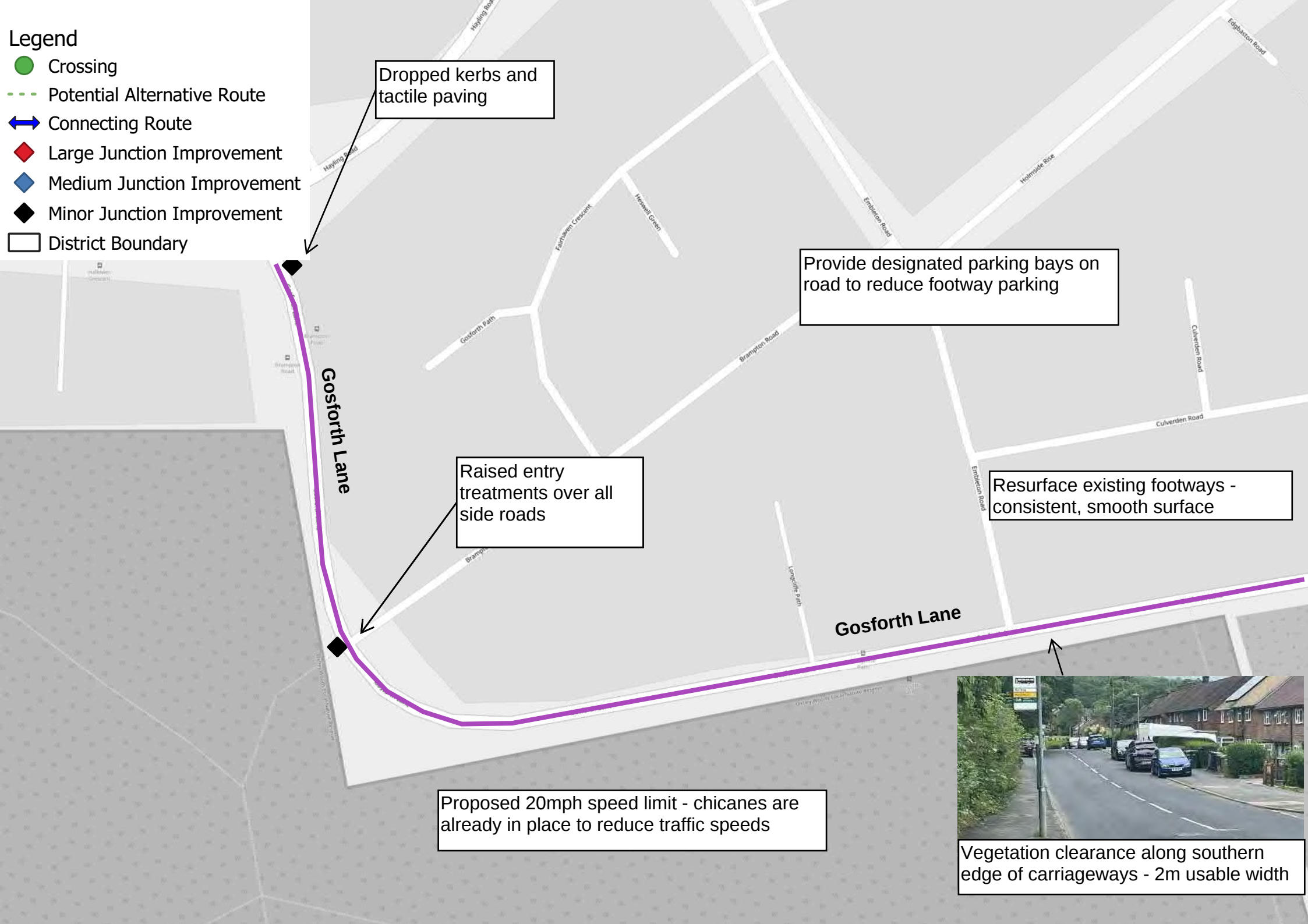
Carpenders Park Station

Walking Route 1

Prestwick Road

Legend

-  Crossing
-  Potential Alternative Route
-  Connecting Route
-  Large Junction Improvement
-  Medium Junction Improvement
-  Minor Junction Improvement
-  District Boundary



Dropped kerbs and tactile paving

Provide designated parking bays on road to reduce footway parking

Raised entry treatments over all side roads

Resurface existing footways - consistent, smooth surface

Proposed 20mph speed limit - chicanes are already in place to reduce traffic speeds



Vegetation clearance along southern edge of carriageways - 2m usable width

Legend

- Crossing
- - - Potential Alternative Route
- ↔ Connecting Route
- ◆ Large Junction Improvement
- ◆ Medium Junction Improvement
- ◆ Minor Junction Improvement
- District Boundary

Provide pedestrian crossing for school access. Remove guard-rail and double height kerb & introduce traffic calming / formal parking bays

Raised entry treatments over all side roads

Resurface existing footways - consistent, smooth surface. 2m minimum usable width

Improve access to bus stop - restrict parking around bus stop, realign footway to cater for desire line on corner and build out footway to improve visibility



Provide a raised direct crossing to the station on the northern side of the carriageway. Remove guardrail

Provide informal raised pedestrian crossing to leisure centre. Restrict parking around crossing to improve visibility

Remove parking bays from footway - provide on-road bays to increase useable footway width



Remove bollards at crossing - add tactiles to bring to standard. Consider using planters to deter pavement parking and improve public realm





Legend

- Route
- District Boundary

Walking Route 2

Green Lane

Brookdene Avenue

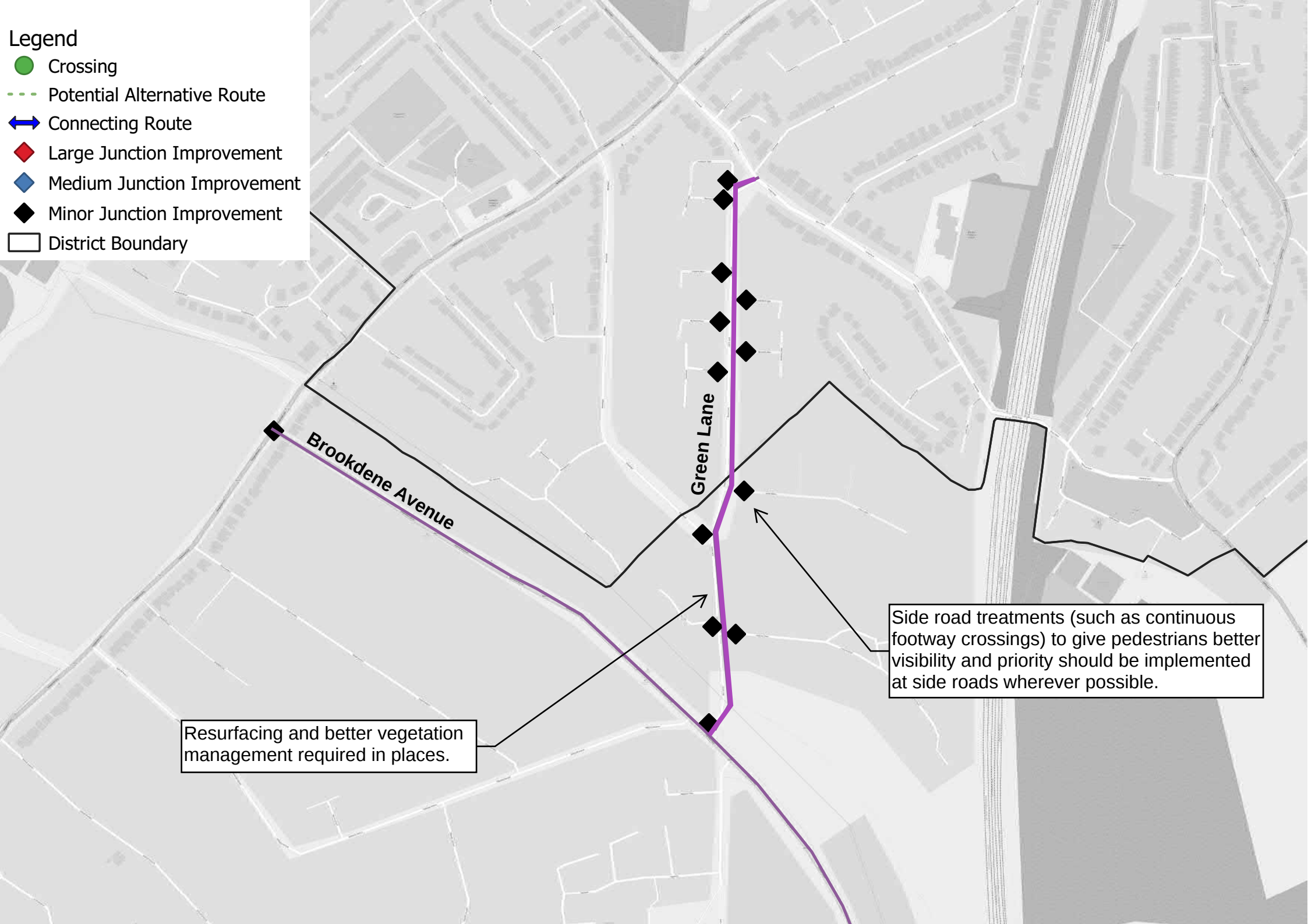
Prestwick Road

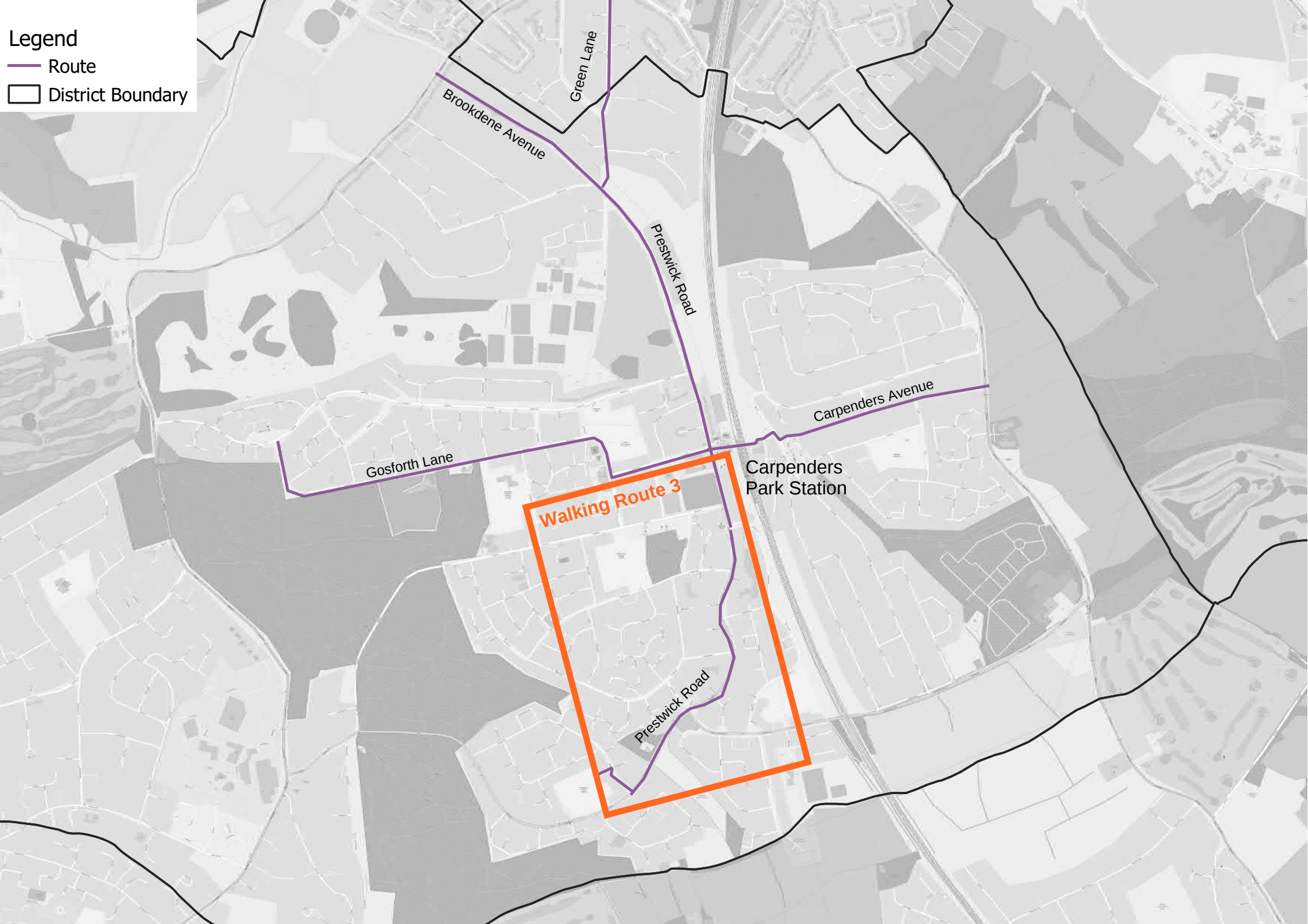
Gosforth Lane

Carpenders Avenue

Carpenders
Park Station

Prestwick Road





Legend

- Route
- District Boundary

Brookdene Avenue

Green Lane

Prestwick Road

Gosforth Lane

Carpenders Avenue

Carpenders
Park Station

Walking Route 3

Prestwick Road

Legend

- Crossing
- - - Potential Alternative Route
- ↔ Connecting Route
- ◆ Large Junction Improvement
- ◆ Medium Junction Improvement
- ◆ Minor Junction Improvement
- District Boundary

Watford cycle route 6 shares the same alignment as this route and will improve walking in conjunction. In the short term, shared use will be retained with the following improvements shown on these pages. In the long-term the shared use should be replaced with dedicated separated facilities for pedestrians and cyclists. It should be noted that this will require the removal of footway parking from one side of the road and the reallocation of hatching and turning pockets.

Existing separated shared use on western side - resurface and maintain vegetation to retain width as part of cycle route 6, but include crossing points in the verge to provide access to shops

Convert mini-roundabout to a priority T-junction with controlled pedestrian crossings on all arms. Remove all guard railing.

End of existing shared use - proposals to extend shared use as part of cycle route 6 on eastern side of carriageway. Absolute minimum 3m, ideal minimum 4m

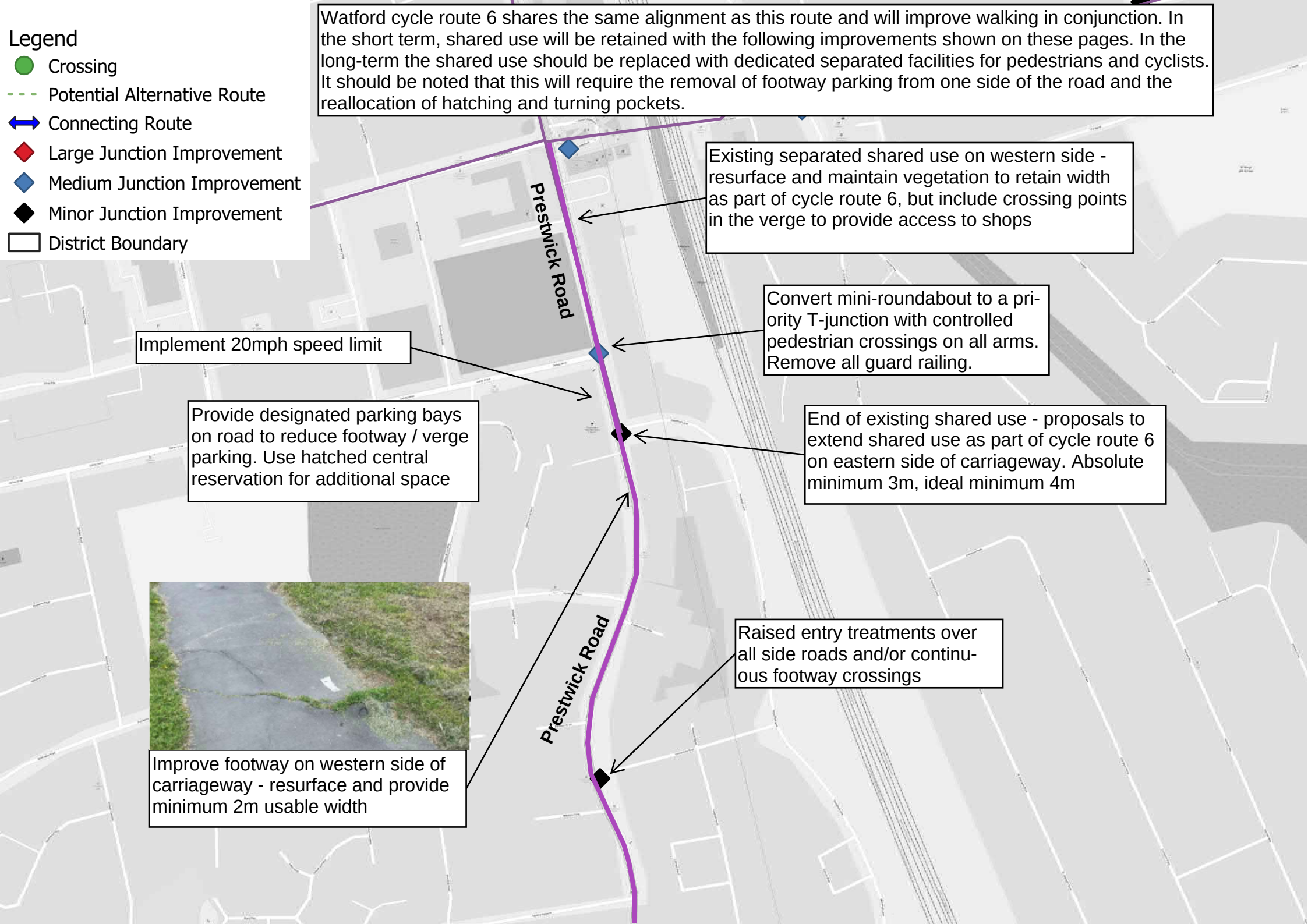
Raised entry treatments over all side roads and/or continuous footway crossings

Implement 20mph speed limit

Provide designated parking bays on road to reduce footway / verge parking. Use hatched central reservation for additional space

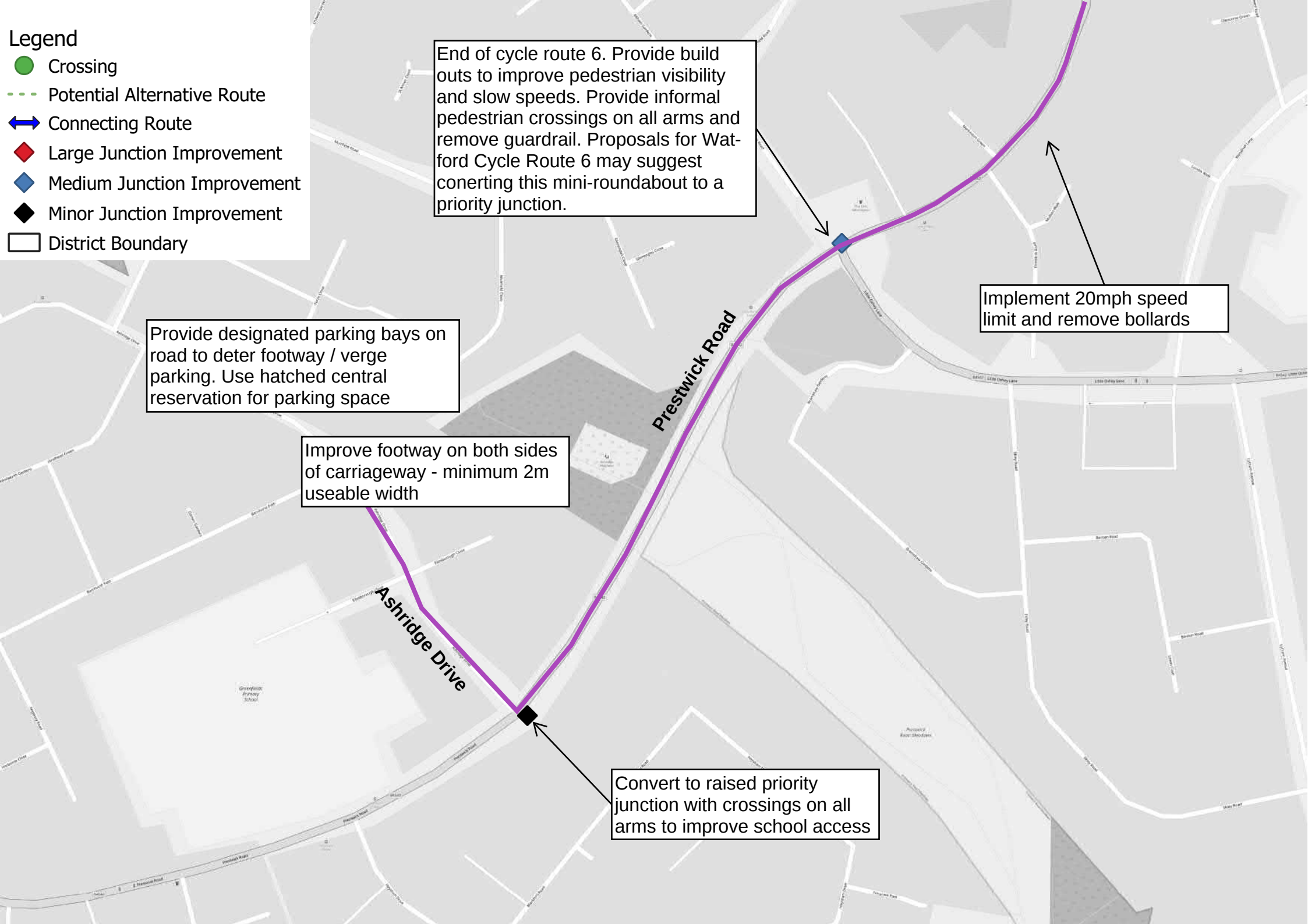


Improve footway on western side of carriageway - resurface and provide minimum 2m usable width



Legend

-  Crossing
-  Potential Alternative Route
-  Connecting Route
-  Large Junction Improvement
-  Medium Junction Improvement
-  Minor Junction Improvement
-  District Boundary



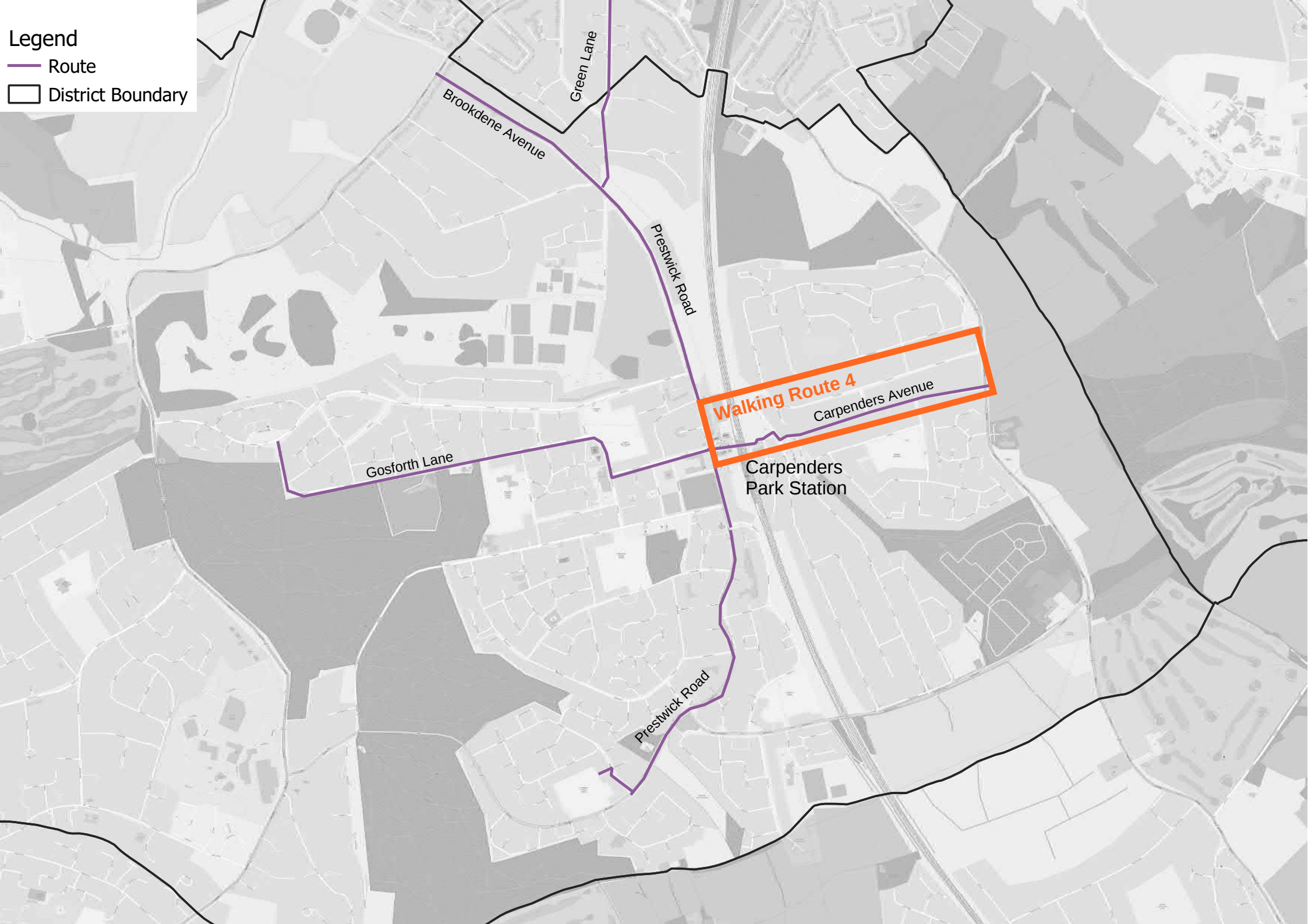
End of cycle route 6. Provide build outs to improve pedestrian visibility and slow speeds. Provide informal pedestrian crossings on all arms and remove guardrail. Proposals for Watford Cycle Route 6 may suggest converting this mini-roundabout to a priority junction.

Implement 20mph speed limit and remove bollards

Provide designated parking bays on road to deter footway / verge parking. Use hatched central reservation for parking space

Improve footway on both sides of carriageway - minimum 2m useable width

Convert to raised priority junction with crossings on all arms to improve school access



Legend

- Route
- District Boundary

Brookdene Avenue

Green Lane

Prestwick Road

Gosforth Lane

Prestwick Road

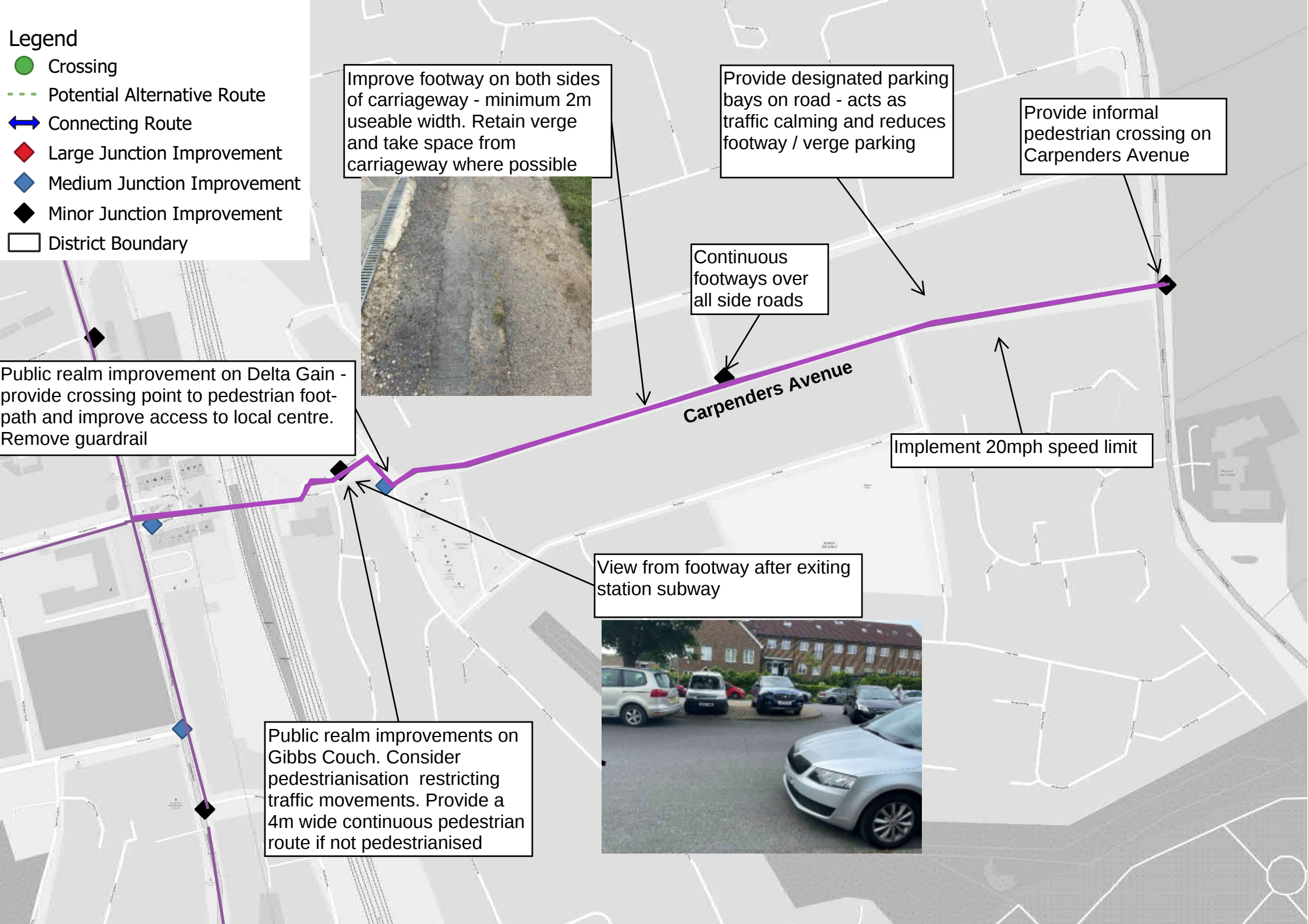
Walking Route 4

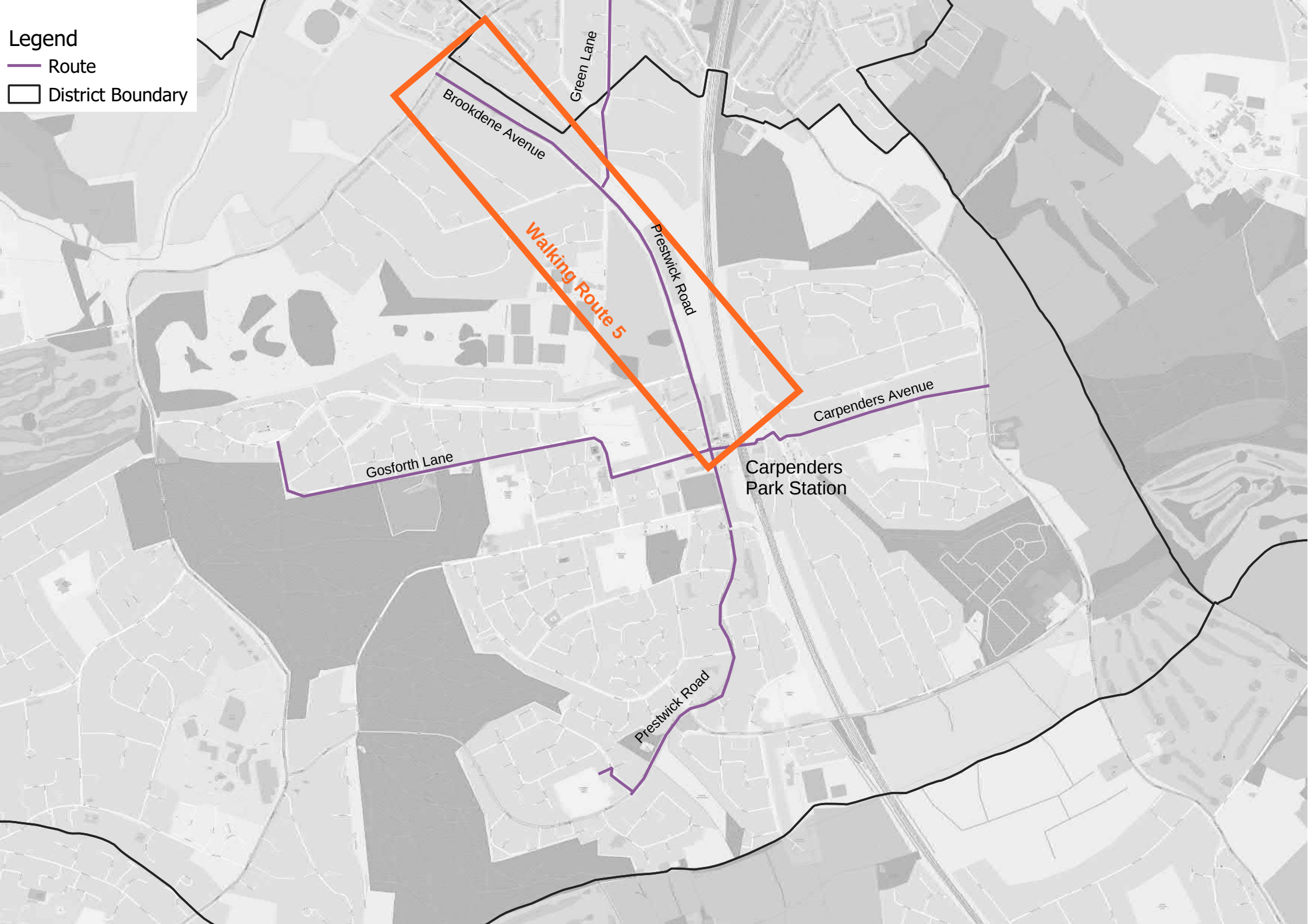
Carpenders Avenue

Carpenders
Park Station

Legend

- Crossing
- - - Potential Alternative Route
- ↔ Connecting Route
- ◆ Large Junction Improvement
- ◆ Medium Junction Improvement
- ◆ Minor Junction Improvement
- District Boundary





Legend

- Route
- District Boundary

Brookdene Avenue

Green Lane

Walking Route 5

Prestwick Road

Gosforth Lane

Carpenders Avenue

Carpenders
Park Station

Prestwick Road

Legend

- Crossing
- - - Potential Alternative Route
- ↔ Connecting Route
- ◆ Large Junction Improvement
- ◆ Medium Junction Improvement
- ◆ Minor Junction Improvement
- District Boundary

New 20mph speed limit north of Green Lane

End of existing shared use

Watford cycle route 6 to improve walking in conjunction - short term improvements to retain shared use. Walking improvements as shown should be made in the short term

Remove guardrail and build out to improve pedestrian visibility. Provide pedestrian signals on all arms of junction

Improve footway on both sides of carriageway – minimum 2m useable width with smooth surface. Include build outs at bus stops & reducing street clutter



Provide designated parking bays on road to reduce footway parking



Improve junction legibility and directness - provide direct raised crossing from Green Lane over Prestwick Road

Existing separated shared use on western side - resurface and maintain vegetation to retain width as part of cycle route 6

Brookdene Avenue

Prestwick Road

Legend

- Crossing
- - - Potential Alternative Route
- ↔ Connecting Route
- ◆ Large Junction Improvement
- ◆ Medium Junction Improvement
- ◆ Minor Junction Improvement
- District Boundary

Watford cycle route 6 to improve walking in conjunction - short term improvements to retain shared use. Walking improvements as shown should be made in the short term



Improve informal crossing and route legibility - raise crossing, widen central island, remove guardrail and deterrent paving. Deter footway parking on western edge of carriageway to improve visibility

Prestwick Road

Convert mini-roundabout to a priority T-junction, removing guard railing and adding controlled crossings for pedestrians and cyclists on each arm.

Existing separated shared use on western side - resurface and maintain vegetation to retain width as part of Watford LCWIP cycle route 6

Provide additional designated parking bays on road to reduce footway / verge parking. Use hatched central reservation for additional space

T24544

Land off Little Green Lane, Croxley Green

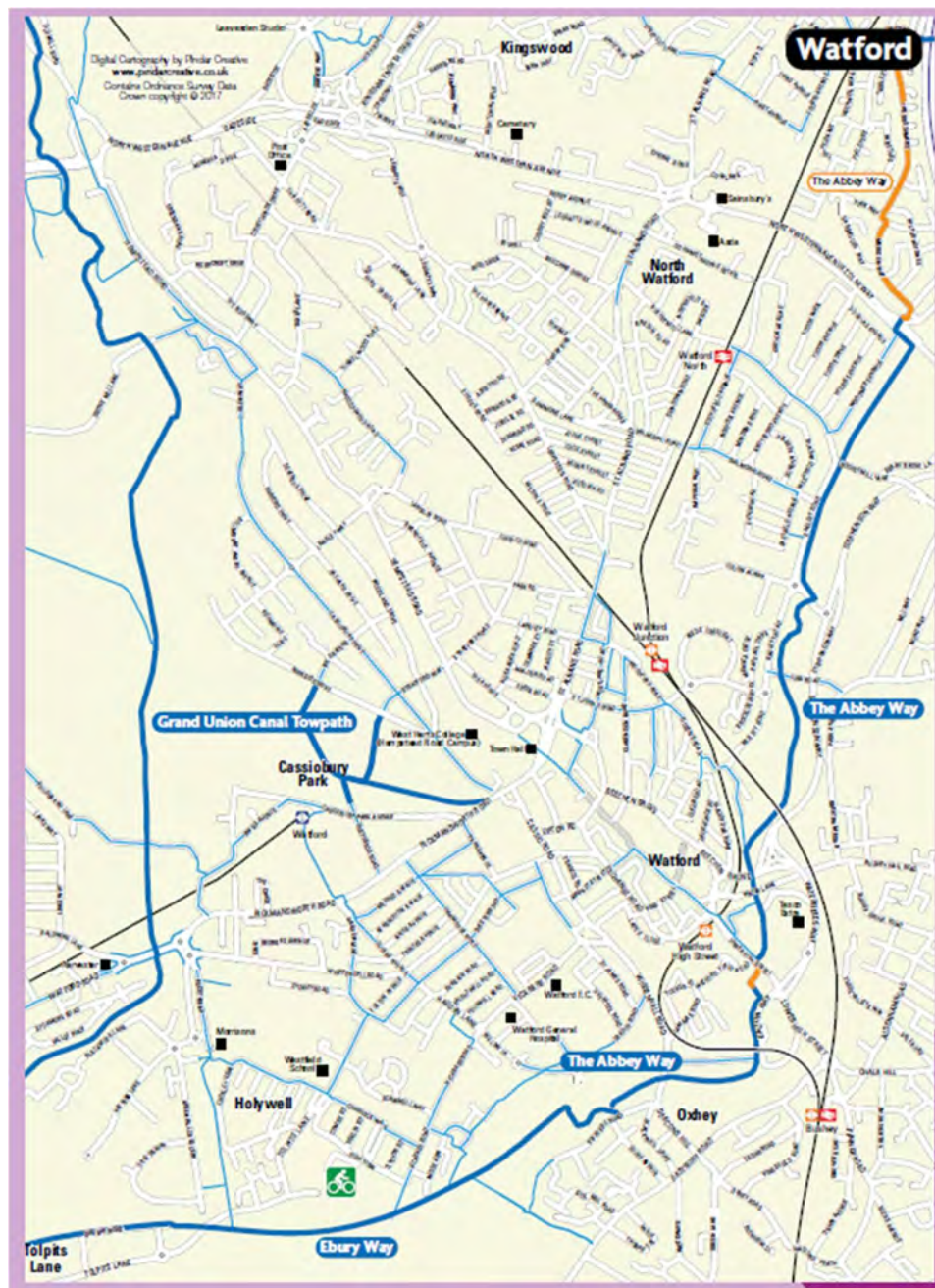


Appendix B

Hertfordshire County Council's Map of Cycle Routes

Appendix F

Hertfordshire CC's Cycle Route Map



KEY

- **EASY** traffic free routes, mostly flat. Perfect for beginners, families and commuters. These have a mix of paved and unpaved surfaces.
- **EASY/MODERATE** often including larger sections of cycle paths and quiet roads. These are perfect for cyclists looking to increase their cycling and begin exploring the county.
- **MEDIUM** recommended road based loops, some of which have short sections of cycle path. These are perfect for cyclists looking to improve their fitness and explore the county's many picturesque lanes.
- **CHALLENGING** longer routes taking in some of the best roads and hills of the county.
- ⋯ **RECOMMENDED** linking routes.
- **ADVISORY** other routes.

T24544

Land off Little Green Lane, Croxley Green



Appendix C

Census Journey to Work Data

QS703EW - Method of Travel to Work (2001 specification)

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population	All usual residents aged 16 to 74
units	Persons
area type	2011 super output areas - middle layer
area name	E02004961 : Three Rivers 006

Method of Travel to Work	2011	Work Pop	Percent
All categories: Method of travel to work	6,573	4,835	100
Work mainly at or from home	599	599	12.4
Underground, metro, light rail, tram	715	715	14.8
Train	129	129	2.7
Bus, minibuss or coach	115	115	2.4
Taxi	10	10	0.2
Motorcycle, scooter or moped	39	39	0.8
Driving a car or van	2,667	2,667	55.2
Passenger in a car or van	162	162	3.4
Bicycle	80	80	1.7
On foot	309	309	6.4
Other method of travel to work	10	10	0.2
Not in employment	1,738		

In order to protect against disclosure of personal information, records have been swapped between different geographic areas. Some counts will be affected, particularly small counts at the lowest geographies.