

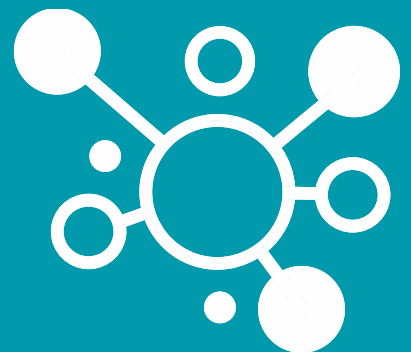
Client:
Richborough

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

Project No:
T24544
Report Title:
Active Travel Route Audit

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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 residential-led development off Little Green Lane, Croxley Green.
- 1.2 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, a 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 intended to determine the relevant active and sustainable travel 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 – Local Facilities and Active and Sustainable Travel;
 - Section 4.0 – Active and Sustainable Travel Audit;
 - Section 5.0 – Summary and Conclusion.

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 operator and local authority websites); these sources are considered to be trustworthy and therefore the data provided is considered to be accurate and relevant at the time of preparing this report.

2.0 Background Information

- 2.1 The proposed development lies 3km to the west of Watford (as the crow flies) and is bound by Rousebarn Lane to the east. Woodland and open fields lie to the north along with Rousebarn Lane which leads to Chandler's Cross to the northwest. Little Green Lane lies to the south of the site and footpath Whippendell Walk 3 runs along the western boundary of the site.
- 2.2 Little Green Lane is a relatively narrow and lightly trafficked lane that passes along the site frontage. The lane fluctuates in width, with the easternmost section being approximately 4.5m wide with a 1.8m footway on the southern side of Little Green Lane. The lane then narrows to about 3.0m at a point west of Durrants Drive and then widens again to approximately 4.0m.
- 2.3 The lane rises sharply between Rousebarn Lane and a point halfway between Canterbury Way and Links Way. It then continues to rise in a westward direction on a gentler incline past this point.
- 2.4 Little Green Lane is relatively lightly trafficked, giving access to dwellings off Rousebarn Lane to the east and West Herts Golf Club off Rousebarn Lane.
- 2.5 Access roads to Little Green Lane are relatively wide, with the residential access roads of Durrants Drive and Links Way generally measuring about 7.3m in width.
- 2.6 To the south of Links Way and Durrants Drive is Baldwins Lane. Links Way gives way to Baldwins Lane by means of a priority junction with ghost island provision for the right turn to Links Way. The junction of Baldwins Lane and Durrants Drive is formed by a mini-roundabout. Both Links Way and Durrants Drive will form the wider access routes to the proposed development off Little Green Lane.
- 2.7 Much of the length of Baldwins Lane is traffic-calmed using speed control cushions and raised table junctions. Several pedestrian crossings are also located along Baldwins Lane including one to the east of Link's Way.

Highway Network Observations and Traffic Conditions

Manor Way/Baldwins Lane/Repton Way Mini-Roundabout

- 2.8 This four-arm mini-roundabout junction was generally observed operating within capacity during the AM peak period. Occasional queues of one or two vehicles were observed on Manor Road, but these queues were generally short-lived. These observations are borne out by the queue survey data which indicates limited queuing in either peak hour.

Durrants Drive/Baldwins Lane Mini-Roundabout

- 2.9 This three-arm raised table junction was observed to be operating within capacity. On occasion, limited queues of one or two vehicles were observed, although these cleared quickly. During the majority of the AM peak, the junction was clear of queuing. These observations are borne out by the queue survey data which indicates limited queuing in either peak hour.
- 2.10 It is noted that the visibility is limited looking to the right from the roundabout entry from Durrants Drive. As a result, traffic cautiously enters from this direction and, on occasion, this can lead to vehicles on the other two arms also waiting on entry unsure as to right of way. This leads to short periods when the main road assumes right of way over the side road.

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Links Way/Baldwins Lane priority T-junction

- 2.11 This priority T-junction has a short ghost-island right turn provision (back-to-back right turn lanes with Winton Drive). The junction was generally observed operating well within capacity, with only occasional limited queues on Links Way. The observations are borne out by the queue survey data which indicates limited queuing in either peak hour.
- 2.12 The Strategic Road Network (SRN) can be found at several points near the site. The M25 junction 18 is situated c.3.7km west of the site, while the M1 junction 2 lies 5.2km east (as the crow flies).

3.0 Local Facilities and Active and Sustainable Travel

- 3.1 It is generally understood that walking and cycling provide important alternatives to the private car and should also be encouraged to form part of longer journeys 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 acceptable walking distances to common facilities are 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

- 3.2 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.
- 3.3 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.
- 3.4 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.
- 3.5 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.
- 3.6 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%).
- 3.7 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.
- 3.8 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)."
- 3.9 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."

- 3.10 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.
- 3.11 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.
- 3.12 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. Several facilities are also available along Baldwins Lane, including some adjacent to the recreation ground opposite Grove Crescent and others opposite Croxley Danes School. A local centre is also available towards Croxley Station along the A412. These facilities have been listed in **Table 2** and can be seen in **Figure 3.1**, along with the future proposed facilities which were indicated at the public consultation event.

Table 2 – Distance 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
Microns Mini Market	2.1km	R9
Morrisons	2.1km	R10
Costcutter	2.3km	R11
Leisure		

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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 Plaice 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		
Baldwins Lane Post Office	1.1km	C1
Catholic Church of St Bede	1.1km	C2
Croxley Green Baptist Church	1.2km	C3
St Oswald's Parish Church	1.4km	C4
New Road Dry Cleaners	1.8km	C5
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

- 3.13 It is worth noting that as part of the future proposed facilities, Beryl Bikes docking stations are also to be included on site. Further details of the Beryl Bikes scheme can be seen in section 3.70 of this report.

Accessibility by Active Modes

- 3.14 According to Hertfordshire County Council's (HCC) definitive map, there are several Public Rights of Way (PRoWs) in and around the proposed site, which include:
- Footpath Sarrat 17 which runs approximately 290m immediately north of the centre of the site and runs from the rear end of York House school, 1.45km east before reaching Rousebarn Lane
 - Footpath Sarrat 18 begins north of Killingdown Farm Way and Little Green Lane and heads northeast to connect with Sarrat 17
 - Footpath Sarrat 63 fronts Little Green Junior School, approximately 250m east of Lincoln Drive. The path is approximately 360m in length and connects to footpath 18
 - Footpath 31 within Watford extends from footpath 18, and acts as a shortcut towards Cassiobury Park, when heading through the West Hertfordshire Golf Club
- 3.15 Several other PRoWs within Whippendell Woods connect into footpath 63, including footpaths; 12, 30 and 79, which serve as leisurely routes to the north of the site.
- 3.16 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.
- 3.17 The Hertfordshire County Council's Public Rights of Way (PRoW) map provides details of the footpaths running through and close to the proposal site. Footpath number 17 begins at the rear end of Kings Langley Swimming Club to the west, where it meets PRoW 15, and runs across the proposed development towards West Hertfordshire Golf Course to connect Loudwater to Cassiobury Park.
- 3.18 PRoW numbers 63 and 18 are on the western periphery of the site and connect with PRoW 17. The entire walk route which encircles the northwestern perimeter of the site boundary is also known as Whippendell Walk Route 3 and connects to Whippendell Woods to the north of the site.
- 3.19 PRoW number 13 lies a little way to the west of Little Green Junior School and links Little Green Lane to Baldwins Lane in the south. The route 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.
- 3.20 A road improvements letter sent to local residents, <https://croxleygreen-pc.gov.uk/wp-content/uploads/2024/04/HILL-Croxley-Green-Little-Green-Lane-Road-Closure.-1.pdf>, indicates that works to parts of PRoW number 17 were to be subject to improvements to remove the existing verge and replace this with tarmac, in efforts to make this a safer, accessible active travel link and provide a suitable access to the proposed development. The works appear to have been completed.
- 3.21 The closest bus stops to site are currently 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. Continuous footways, each approximately 2.0 metres wide, are available along both sides of Durrants Drive and Links Way to access these stops. In paragraph 3.43 onwards, we set out the intention to bring a new service into the site with bus stops at appropriate locations.
- 3.22 Walking distances surrounding the site can be seen in **Figure 3.2**, highlighting the areas around Little Green Lane and Croxley which are accessible on foot.

- 3.23 Following consultation with HCC officers, a review of potential enhancements and improvements to PRowS in the vicinity of the site to enhance site accessibility has been undertaken in the active travel audits in **Section 4.0** of this report.

Accessibility by Cycle

- 3.24 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).
- 3.25 National Cycle Route 6 runs on a N-S axis and can be accessed on the Tolpits Lane A4145/Epsom Road junction, approximately 3km south of the development site.
- 3.26 **Figure 3.3** 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.
- 3.27 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.”
- 3.28 Hertfordshire County Council also classifies cycle routes based on the level of difficulty of use, categorising them as easy, 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.
- 3.29 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 Watford Junction railway station. The network is therefore considered generally safe and suitable for cycle use, certainly by experienced cyclists.

Local Cycle and Walking Infrastructure Plan (LCWIP)

- 3.30 Improvements are proposed to enhance active travel within Croxley Green and, of particular relevance, are the is the route between Watford and Rickmansworth via Croxley as indicated in the LCWIP. The planned interventions include the redesign of junctions and upgrades to cycle infrastructure. Three Rivers District Council (TRDC) and Watford District Council (WDC) have been consulting on a joint LCWIP which was recently debated at Committee. We have included the plan as **Appendix C** to this report, with the proviso that the plan remains indicative.
- 3.31 The LCWIP for Watford and Three Rivers District Council also includes a wide range of projects, including highway improvements to make it easier and safer to access the local centre and station on foot and cycle. The site will seek to create legible and effective connections which enhance active travel in Croxley, encouraging healthy active lifestyles for future residents and residents of surrounding areas accessing the amenities provided as part of the development.
- 3.32 The consultation response from ATE also stated that *Alternative measures should be considered, including managing pavement parking, enhancing placemaking and introducing traffic calming which reduces conflicts, to ensure this route is attractive to all users....*

Cycle Route Integration with LCWIP:

o Contributions to the cycleway along The Green.

o Cycle priority improvements along the A412 corridor towards Watford.

“Discussions with the PRow and Highway Authority are needed to determine appropriate contributions. It is considered that there is a significant opportunity to benefit from the proximity of the site to existing PRow network.”

3.33 The planned 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.

3.34 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.

Accessibility by Bus

3.35 The services that stop on Baldwins Lane are the 320 and 322 Arriva and Hertfordshire services. The services run towards Watford. The nearest stop for the 320 and 322 services is to the east of the mini roundabout on Durrants Drive and Baldwins Lane, which takes the form of a flagpole stop, approximately 750m away from the site. There is also a stop to the east of Links Way, along Baldwins Lane which is slightly further in proximity at around 950m away, taking the form of a cantilever shelter.

3.36 A summary of the frequency and destinations served by these bus stops is provided in **Table 3** below.

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Table 3 – Local Bus Services

Service No.	Route	Frequency per hour (approx.)		
		Mon - Fri	Sat	Sun
From Baldwins Lane				
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
From A412 Watford Road				
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 – Bovington – 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
Future Proposed Services				
22	Watford Junction – Watford – Croxley Green – Rickmansworth	Every 30 minutes from 06:50 – 18:50	Every 30 minutes from 06:50 – 18:50	N/A

- 3.37 Aside from services 320 and 322, all remaining services run from the Two Bridges stop B along the A412 on Watford Road, approximately 1.4km away from the site. The bus stop along the A412 takes place in the form of a cantilever shelter and is at the rear end of the Harvester restaurant. This serves a multitude of services including the 336 Red Rose Travel service, 352 Red Eagle service, the 951 Sullivan Bus service and the 724 and 725 Arriva Hertfordshire and Essex services.
- 3.38 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 3** above, the 951 is the least frequent, with only one service with the primary users being those attending Thorpe theme park.
- 3.39 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.
- 3.40 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.
- 3.41 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.
- 3.42 ATE made comments with regard to the existing bus services, including that which stated “While the site is generally well served by public transport, the distance to the nearest bus stop exceeds the recommended

standard. The proposed new bus service within the site could improve access, but further details on funding, frequency, routes, and operating hours are needed.”

- 3.43 The development proposes to serve the development by means of a dedicated bus service, referred to as service number 22. The service will run between Watford Junction, Watford, Croxley Green, and Rickmansworth, serving rail stations at Watford Junction, Watford Underground, close to Croxley Underground, and Rickmansworth. The proposed service and timetabling has been provided by discussed with HCC.
- 3.44 The proposed service is expected to operate at a frequency of every 30 minutes. The route will serve the following locations: Watford Junction, Beechen Grove, High Street, Rickmansworth Road, Cassiobury Park Avenue, Baldwins Lane, Repton Way, and Rickmansworth Railway Station.
- 3.45 The proposed bus route is set to run for approximately 12 hours per day, with the service timings indicated in **Table 3**. The planned route of the 22 service and detailed timetable can be seen in **Appendix A**, with the costings that will inform s106 contributions indicated in **Table 4** below.

Table 4 – Shopping trips from the proposed development

Time Period	Daily	No. of Days	Annual	Cost @ £12 per hr	12% Sickness	13% Holiday	Total
School Day Hours	36.03	190	6845.70	£82,1482.40	£9,857.81	£10,679.29	£102,685.50
Non-School Hours	36.03	64	2305.92	£27,671.04	£3,597.24	£3597.24	£34,588.80
Saturday Hours	36.03	52	1873.56	£2697.93	£2,697.93	£2922.75	£28,103.40
Total Operational Staff Costs							£165,377.70
Time Period	Daily	No. of Days	Annual	Cost @ 8mpg	Litres @4.55 conversion	Price set at £1.40	Total
School Day Mileage	359.90	190	68381.00	8547.63	38891.69	£1.40	£54,448.37
Non-School Mileage	359.90	64	23033.60	2879.20	13100.36		£18,340.50
Saturday Mileage	359.90	56	18714.80	2339.35	10644.04		£14,901.66
Total Mileage							£87,690.53
Total Annual Costs							
Operational Staff Costs					£163,377.70		
Mileage Costs					£87,690.53		
Fixed Costs					£330,000.00		
£583,068.23							
Cost + 15%					£670,528.47		
Cost + 20%					£699,681.88		
Cash Revenue per annum					£220,503.60		

Card Revenue per annum	£88,201.44
Est. Annual Revenue	£308,705.04
Net Cost per Annum	£390,976.84

Accessibility by Rail

Croxley Underground Station

- 3.46 The nearest underground station is Croxley 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.
- 3.47 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.
- 3.48 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 have carried out an active travel audit from the site to the station, which is set out earlier in this report.
- 3.49 The most direct walking route to Croxley Station is mostly alongside relatively lightly trafficked roads and includes two footpath routes. The footpath routes are lit and tarmacked, although not overlooked except in part.
- 3.50 Based on the active travel audit of the most direct route to Croxley Station, it seems that all reasonable measures have been undertaken to ensure that these routes are as safe as possible for use by pedestrians and possibly cyclists.
- 3.51 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. We consider later in this report the likely use of the station by residents of the proposal site.
- 3.52 The Metropolitan line runs from Croxley to Aldgate and calls at the following points 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)
- 3.53 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 leisurely journeys to the city centre.

- 3.54 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.
- 3.55 It is understood that consideration is being given by TfL to the potential for step-free access to platforms at Croxley station. We have contacted TfL to provide our initial estimate of forecast peak hour demand from the development at Croxley station. We have asked for details of any proposed scheme, costings, and anticipated funding package in order that the developer could consider making a suitable and proportionate contribution towards an appropriately costed scheme for the step-free access at Croxley Green Station. TfL has indicated that a response will be forthcoming, but this is still awaited at the time of writing.
- 3.56 With regards to cycle parking, ATE stated, “It is understood that cycle parking provision will comply with local standards. *Thought should also be given LTN 1/20 standards. Parking should be as convenient as car parking with unobstructed access to secure facilities provided by the developer. The need for further cycle parking provision should be explored at Croxley Underground Station.*”
- 3.57 Therefore, in line with ATE’s comments, the suggested minimum cycle parking capacity for different types of land use in Table 11.1 of LTN 1/20 has been explored. According to TfL’s station footfall documents for 2024/25, annual usage for Croxley Station was 645,525. (TfL.co.uk) Therefore, on average (excluding Sundays), an estimated 2069 people use Croxley Station on a daily basis.
- 3.58 According to Table 11.1 of the guidance, one parking space is required per 200 daily users at a major interchange; therefore, 10 cycle parking spaces are required. At present, there are more than triple this level of spaces provided, with 32 facilities for bicycle storage as well as an additional five cycle parking bays associated with the Beryl Bikes scheme. On-site observations after the morning peak hour indicate that spare cycle spaces are available.
- 3.59 As such, the existing provision is considered sufficient and capable of accommodating cycle parking, having been assessed against LTN 1/20 standards.

Watford Underground Station

- 3.60 The Watford Underground station is about a 28-minute walk from the site via Rousebarn Lane and the Watford Green Loop. The station offers the same level of service as that at Croxley Station.
- 3.61 The route is advertised as a leisure route and given the steepness of the Rousebarn Lane element of the route, the lack of lighting, and occasionally surface water flooding, it is most likely to be used primarily during good weather and in the late spring, summer, and early autumn months.

Watford Junction Railway Station

- 3.62 Watford junction is an approximate 15-minute cycle using road routes only, or about 17 minutes cycle via Rousebarn Lane heading north alongside the site, off-road routes, Cassiobury Park, and Rickmansworth Road footway/cycleway. The station has 354 spaces for cycles and the stands are overlooked by CCTV.
- 3.63 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.

3.64 The London Overground service runs towards:

London Euston, (54mins) calling at;

- Watford High Street (3mins)
- North Wembley (24 mins)
- Wembley Central (26 mins)
- Harlesden (32 mins)
- Queens Park (39 mins)
- Kilburn High Road (41mins)

3.65 West Midlands Railway services also run to London Euston on a regular basis from Watford Junction.

3.66 The West Midlands Railway train service runs towards:

Milton Keynes Central, (45mins) calling at;

- King's Langley (5 mins)
- Hemel Hempstead (12 mins)
- Cheddington (27 mins)
- Bletchley (24 mins)

3.67 The West Midlands Railway train service runs towards:

St Albans Abbey, (17mins) calling at;

- Watford North (3 mins)
- Garston (Hertfordshire) (5 mins)
- How Wood (12 mins)
- Park Street (14mins)

3.68 The Avanti West Coast Service runs towards:

Edinburgh, (5 hours 50mins) calling at:

- Milton Keynes Central (20 mins)
- Rugby (46 mins)
- Coventry (58 mins)
- Birmingham New Street (1hour 37mins)
- Crewe (27 mins)

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- Preston (2hrs 39mins)

Summary of Baseline Conditions

- 3.69 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.
- 3.70 The proposed 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.
- 3.71 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).

Active and Sustainable Travel Proposals

- 3.72 Direct pedestrian/cycle access is proposed to the development site from Canterbury Way and direct pedestrian access from Durrants Drive, with traffic along Little Green Lane giving way.
- 3.73 A pedestrian/cycle link is proposed direct from the site via Canterbury Way/Dover Way to continue via Links Way to Baldwins Lane, providing safe and direct access to Croxley Danes School and, via the existing signalled crossing, to the shops/facilities opposite. The provision will require the removal of a small number of highway trees.
- 3.74 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.
- 3.75 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 development proposal will include Beryl Bikes docking stations on-site to promote active travel and enhance the proposed scheme. All Beryl Bikes stations in the vicinity of the site can be seen in **Appendix A** as well as online here: <https://beryl.cc/scheme/watford>.
- 3.76 Ongoing discussions between the developer and HCC indicate that the proposed development will incorporate the service labelled as number 22, which is planned to connect to the site along Durrants Drive. The anticipated route will connect the three main stations—Rickmansworth, Watford, and Watford Junction—and will serve key local destinations, including Watford High Street. While the route is not expected to directly serve Croxley Station, it will pass approximately 350 metres from the station, near the junction of New Road and Barton Way. Destinations between the site and Watford will also be served, such as the local centres along Baldwins Lane and Watford High Street.
- 3.77 The proposed service is expected to operate at a frequency of up to every 30 minutes. The route will serve the following locations, amongst others: Watford Junction, Beechen Grove, High Street, Rickmansworth Road, Cassiobury Park Avenue, Baldwins Lane, Repton Way, and Rickmansworth Railway Station.
- 3.78 The developer will seek to promote the use of the service by making a bus taster season ticket available to every household on the proposal site.
- 3.79 Bus stops and shelters will be provided on site, along with real-time bus information as appropriate. As well as provision of stops and shelters on the site, it is proposed that two pairs of bus stops are provided along Durrants Drive to encourage use of the service by those in the existing residential development to the south. Precise locations of stops will be considered at the detailed stage of the application.
- 3.80 In addition to the above schemes, in an attempt to reduce single car occupancy use and promote sustainable methods of travel, the proposed development is also set to include two designated carpooling parking spaces to encourage residents to car share.
- 3.81 The developer will consider appropriate contributions to a suitably costed/funded scheme for step-free access at Croxley station. Details are awaited from TfL.

4.0 Active and Sustainable Travel Audit

Background

- 4.1 Following Active Travel England's response to the Transport Assessment previously submitted in association with the proposed development off Little Green Lane, a more detailed active travel route audit has now been completed. The opportunity to undertake the assessments using both the ATE Route Audit Tool and the Cycling Level of Service (CLoS) tool discussed in LTN 1/20 was explored. These examine the connectivity, safety, comfort, and coherence of the routes surrounding the immediate vicinity of the site.
- 4.2 However, both of the tools are only really relevant to well advanced designed schemes, generally being promoted by public sector or quasi-public sector bodies. They are also used for the assessment of routes that can be utilised by cyclists as well as pedestrians.
- 4.3 In this instance, we are considering how existing routes might be used by active travellers and any potential improvements that might be made to assist active travel. However, in the case of all routes assessed, parts of those routes are not designated for use by cyclists. We do not consider that the scoring systems applied in the assessment tools are necessarily relevant to this project, but we have utilised the general criteria used in the tools to provide a qualitative assessment of the routes.
- 4.4 Given the limited applicability of the ATE CLoS scoring systems to non-cycling routes, a full assessment was not deemed appropriate. Instead, we have drawn on the core criteria of; safety, comfort, connectivity and coherence as outlined in the tools, to undertake a qualitative assessment of the routes. This ensures a context-specific evaluation of the footpaths surrounding the site based on the current usage and conditions.
- 4.5 Regarding the previous application submitted, ATE stated, *"While it identifies several destinations accessible on foot or by cycle, it does not include maps to illustrate key routes. The assessment provides photographs and commentary on walking routes but lacks a cycling audit, unlike the walking audit."*
- 4.6 The walking routes assessed are included on a plan included as **Appendix A**. The layout of the ATE Route Check Tool and CLoS tools are included as **Appendix D** in part to demonstrate that this assessment has been carried out with the underlying principles outlined in the tools having been considered.

Route to Croxley Station

- 4.7 The primary route from the proposal site to Croxley Station would take residents along Little Green Lane and then southwards along Durrants Drive. There are also routes through the residential estate to the south via other residential streets. These streets serve residential properties and are therefore overlooked and are well lit. The streets provide footways of sufficient width and in a good state of repair and provide a comfortable pedestrian environment, supporting active travel.
- 4.8 At present cyclists would utilise the street network within this residential estate. On several site visits, the streets within the estate have been observed to operate with only limited levels of traffic present and are considered safe and suitable for cyclists of all levels of ability.
- 4.9 Arriving at Baldwins Lane, the pedestrian would turn right and proceed to an informal crossing of Baldwins Lane before continuing westwards to meet public footpath number 15. While the crossing is informal, visibility is good and allows active travel users to reach the southern side of Baldwins Lane safely.

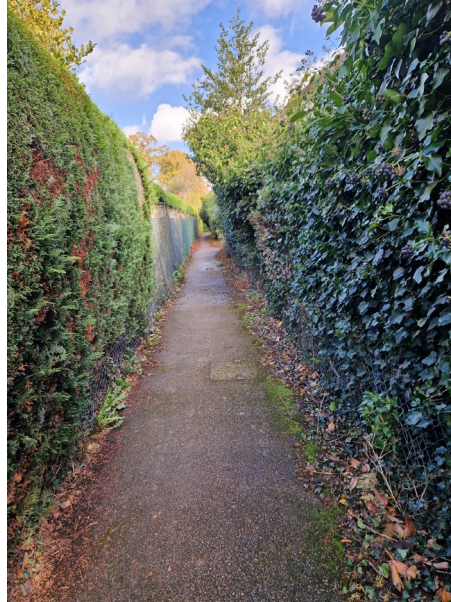
- 4.10 The cyclist would negotiate the right turn at the junction. Although Baldwins Lane is busier than the street network within the residential estate, it is a traffic/speed-calmed route with speed cushions at regular intervals.



- 4.11 Footpath 15 to the east of 153 Baldwins Lane, measures approximately 1.0m-1.5m in width and is 170m in length before reaching Girton Way. The surface is tarmacked and in a reasonable state of repair. The route is lit and partway along the route, it is overlooked by apartments, which contributes to a sense of safety. However, upon visiting the site, there were some minor obstructions noted, including leaf fall and low overhanging bushes/vegetation at one location, which could impede pedestrians. Some general routine maintenance such as pruning and debris clearance of the route would be helpful to encourage active travel use. The lack of cycling-specific signage along Baldwins Lane advising cyclists to dismount could present a minor safety concern due to the path's constrained width. Therefore, as part of the development proposals, it is likely that contributions will be made to add signage and wayfinding of the route.
- 4.12 The alternative route would take active travellers via Lancing Way and Malvern Way, adding just a little time to the walk/cycle journey and could serve as a more accessible or appealing option for some pedestrians and likely much quicker for cyclists who would otherwise need to dismount to use the footpath.

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- 4.13 Inconsistencies in signage along Footpath 15 were noted. The signage at the northern end of the route suggests that cycling is prohibited, but the signage from the opposite end (Girton Way) suggests that only motor vehicles are barred from using the route. This inconsistency may lead to confusion and inappropriate use by cyclists. Therefore, as also indicated above, it is likely that contributions will be made to improve signage and wayfinding of the route, including indications to cyclists to dismount.
- 4.14 Turning right on Girton Way and then left on Malvern Way, both lightly trafficked residential streets, and passing Malvern Way Infant & Nursery School footpath number 16 is reached which is 100m in length. The alternative route towards Croxley station would have pedestrians/cyclists using Malvern Way to reach Barton Way and from there onwards via New Road to Croxley Station.
- 4.15 This footpath is relatively wide at 2.0m to 2.5m, has a smooth tarmac surface and is well lit by means of column-mounted lamps



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- 4.16 The photograph above is the southern end of the footpath and the signage provides walk times and directions towards Croxley station. From this point onwards lie c.2.0m footways and dropped kerb crossings alongside lightly trafficked streets to reach Croxley Station. The footways ensure comfort and safe accessibility for pedestrians and the lightly trafficked streets are safe and suitable for cycle use.

Route to Watford Station and beyond

- 4.17 The alternative route towards Watford Station, rather than via the perfectly good route via the residential estate to the south using Baldwins Lane and New Road, would take pedestrians or cyclists southwards along Rousebarn Lane, taking a left turn at the junction of Rousebarn Lane with Lodge End.



- 4.18 This route is an unlit, relatively narrow, country lane with no lighting and no footways. The route rises steeply to overlook the pitches associated with Croxley Danes School before descending sharply towards a bridge over the Grand Union Canal. This section of the route is suited to recreational walkers and cyclists but, due to its width, lack of lighting, and gradient is unlikely to be attractive as an all year round commuter route.

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Land off Little Green Lane, Croxley Green



- 4.19 The cycle route signage is noted in the top left-hand corner of the photograph above, along with the weight limit on the bridge over the canal; the signage suggests this is not suitable for motor vehicles. The following photograph indicates the cycle route signage more clearly.



- 4.20 The weight-restricted bridge and the surrounding road conditions make the route somewhat unsuitable for general vehicular traffic and, as a result, the initial vehicular element of route is extremely lightly trafficked. The lack of footways and lighting, the narrowness and steepness of the route, means that the route is unlikely to be suitable for all active travel users, and use in times of darkness would be a concern. However, this part of the route may be used as an alternative by some outside of hours of darkness and additional signage from Rousebarn Lane would assist.
- 4.21 Continuing over the canal bridge, the pedestrian or cyclist travels a short distance before being met with a bollard that physically prohibits cars from travelling any further along the route.
- 4.22 The route beyond this point is tarmacked and proceeds between Cassiobury Park pools and fisheries on one side and the River Gade on the other side. The route was travelled following a period of very heavy rain and some limited surface flooding was experienced at certain points along the route. Signing further along the route advises of seasonal flooding. The route forms part of a leisure route known as the Watford Green Loop. (Note: the route was also travelled in summer conditions with no surface water flooding present).
- 4.23 Although not an ideal width for shared pedestrian/cyclist use, the route is suitably surfaced to allow use by pedestrians and cyclists.



- 4.24 The route continues to a bridge crossing the River Gade and meets Gade Avenue at a signalled crossing. In order to reach Watford Station, the pedestrian/cyclist would turn left along Gade Avenue and take relatively lightly trafficked streets and residential roads to the station.
- 4.25 The route past Watford Station is along Cassiobury Park Avenue to meet Rickmansworth Road. From this point the route continues via a shared footway/cycleway towards Watford.
- 4.26 Whilst this alternative route provides an interesting walk and cycle route, the route via the residential estate to the south of the development, Baldwins Lane, and the A412, provides a higher standard, safe access route towards Watford station and Watford for pedestrians and cyclists; especially with the new shared footway/cycleway proposed across Little Green Lane and along Canterbury Way, Dover Way, and Links Way to meet Baldwins Lane.

- 4.27 The route via Rousebarn Lane is considered secondary to the more formalised pedestrian and cyclist infrastructure via Baldwins Lane and the A412 Rickmansworth Road, which offers safer, all-weather connectivity to Watford.

Route through Cassiobury Park via West Hertfordshire Golf Club

- 4.28 An alternative route to Watford Station has also been walked. Sarratt FP17 runs west-east across the site from FP63 and FP18 (Whippendell Walk 3) on the western edge of the site to Rousebarn Lane on the eastern perimeter of the site, where the route continues as Watford FP31. Footpath 18 also connects to Little Green Lane and the Killingdown Farm development.
- 4.29 Footpath 17 is unbound and approximately 3.0 metres wide as it crosses the site. This part of the route is not designed for use by cyclists.
- 4.30 After crossing Rousebarn Lane the route narrows and climbs sharply through a wooded area and proceeds for an additional 735 metres alternating between wooded areas and fairways on the golf course. Again, this part of the route is not designed or appropriate for use by cyclists. The nature of the route, via wooded areas and the golf course, does not lend itself to physical improvements such as surfacing or lighting.



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Land off Little Green Lane, Croxley Green



- 4.31 The crossings of the golf course are clearly signed, with walkers warned to look in the appropriate direction and asked to proceed with caution. There is a sharp descent before FP31 meets FP30 to continue across the canal and River Gade.

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Land off Little Green Lane, Croxley Green



- 4.32 When heading southeast, through Cassiobury Park, the route passes Watford Miniature Railway as well as Cedar Café and continues southeast, passing a Beryl Bikes station which can support onward active travel trips onwards towards Watford. The route through Cassiobury Park is well surfaced and suitable for cycling during the daytime.
- 4.33 Informal footpath connections are available along the River Gade through Cassiobury Park to meet Gade Avenue and Cassiobury Park Avenue and onwards to Watford Metropolitan Station.

Overall

- 4.34 ATE commented on the potential for improvements to these active travel routes in response to the previous planning application associated with the proposed development:
- “Upgrades to Public Rights of Way (PRoW):
 - Footpath 17 improvements towards West Hertfordshire Golf Course.
 - Enhancements to PRoWs 63 and 18 to improve connectivity.
 - Cycle Route Integration with LCWIP:
 - Contributions to the cycleway along The Green.
 - Cycle priority improvements along the A412 corridor towards Watford.”

- 4.35 Regarding the comments made by ATE, the footpaths referred to above which head towards Cassiobury Park and Watford Station are primarily recreational and seasonal routes, which are subject to surface water pooling in wet conditions.
- 4.36 The route across the golf course offers high recreational value. It also offers a quiet, non-overlooked and non-lit, alternative route to what is considered the main route towards Watford Metropolitan Station via the residential estate to the south, Baldwins Lane, Rickmansworth Road and Gade Avenue.
- 4.37 The route would benefit from signage towards Cassiobury Park and Watford Station, but any physical improvement works are not proposed given the recreational nature of the land through wooded areas, a private golf course, and along the River Gade.
- 4.38 These environmental constraints are likely to render these recreational routes unsuitable for many potential users in poor weather/lighting conditions. Consequently these routes are viewed as secondary routes, which may be unusable at times, whilst the alternative routes via the residential estate to the south of the proposed development and along Baldwins Lane, are usable all-year round and are lit with paved surfaces and the development will provide a shared footway/cycleway along Canterbury Way/Dover Way/Links Way towards Croxley Danes School and shops on Baldwins Lane.
- 4.39 It is acknowledged that the development should make suitable contributions towards planned LCWIP improvements, particularly along the corridor towards Watford.

5.0 Summary

- 5.1 Hub Transport Planning Ltd has been commissioned by Richborough to produce an Active Travel Audit for a proposed residential-led mixed-use development of 600 dwellings off Little Green Lane, Croxley Green.
- 5.2 This audit supports the Hybrid application comprising: 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, a community orchard and landscaping with associated infrastructure including sustainable urban drainage systems. (All matters are reserved except for vehicular access.)
- 5.3 Proposed vehicular points of access include Durrants Drive and Links Way, with priority active travel links to be provided alongside the vehicular access points as well as from Canterbury Way, with the Canterbury Way route providing a shared footway/cycleway onwards to Dover Way and Links Way to Baldwins Lane.
- 5.4 Shared footway and cycleway provision is available across the local highway network, with some on-road cycle routes which provide access to the local centres along Baldwins Lane, New Road and Watford Road. Paths are generally wide, well-paved, have street lighting present and remain relatively safe and suitable for all active modes of travel.
- 5.5 It is acknowledged that use of either of the active travel tools referred to in this report would identify off-street routes as requiring physical improvements. However, as indicated in this audit, parts of the routes assessed are not suitable for improvement as that would entirely change the nature of these recreational routes. For the route to Croxley Station, elements of the route are via relatively narrow, unlit footpaths. However, the alternative routes for active travellers add little to journey times and, in the case of cyclists, would reduce journey times compared to the need to dismount. Other routes, which are subject to seasonal flooding issues are available as secondary routes. These alternative routes will be signed from the development.
- 5.6 It is recognised that the LCWIP indicates potential cycling and walking interventions and the need to improve active travel links along the Watford to Rickmansworth corridor. The development proposals include plans to improve pedestrian/cyclist connectivity within the site and to provide off-site active travel improvements through the residential estate to the south to provide safe and convenient connections to key local facilities such as Croxley Danes Secondary School and local shops.
- 5.7 The development will promote improved signage to make cyclists aware of routes which narrow to inform them to dismount. The development Square will include a Beryl Bikes docking station to assist in the promotion and success of this scheme and to encourage active and sustainable travel from the site.
- 5.8 The development is set to introduce a dedicated bus service (labelled as number 22) to allow residents of the site easy access to reach major transport interchanges such as; Watford Junction, Croxley, Watford and Rickmansworth. The route also provides access to local facilities and to major destinations including Watford High Street and Rickmansworth.
- 5.9 The developer is aware that TfL is considering provision of step-free access at Croxley Station. No details of the proposed scheme, costings and funding mechanism have yet been made available. However, the developer will consider a suitable and proportionate contribution towards an appropriately costed scheme for

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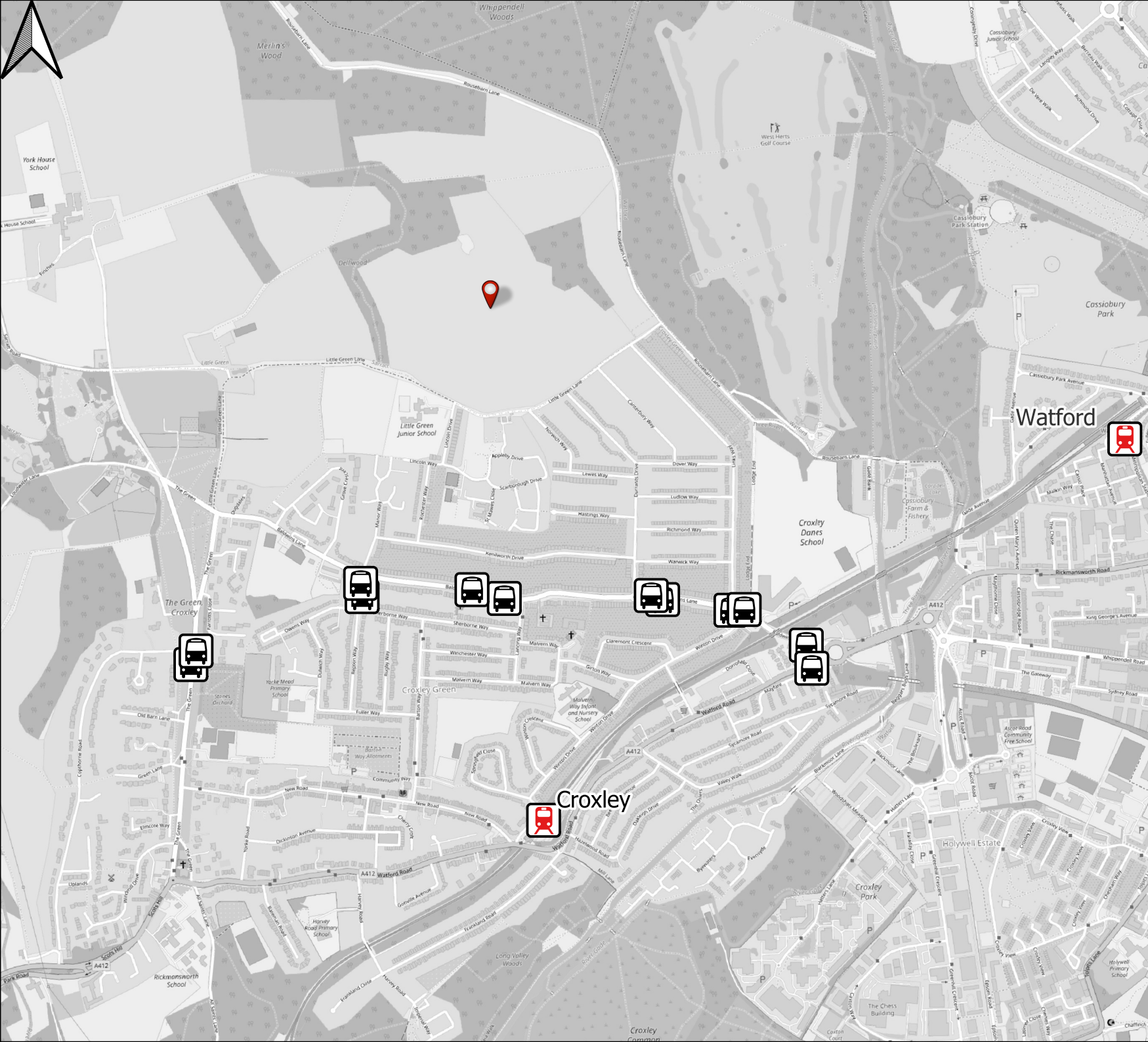
the proposal, if appropriate. The developer will, of course, be funding a new bus service to provide access to the London Underground network at Watford Station and close to Croxley Station. Correspondence has been initiated with TfL regarding the potential additional demand from the proposed development at the station in an attempt to finalise a contribution and we are currently awaiting the promised details relating to the scheme.

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Land off Little Green Lane, Croxley Green

Figures



Legend

-  Site
-  Train Station
-  Bus Stops

Figure 1.1 - Site Location

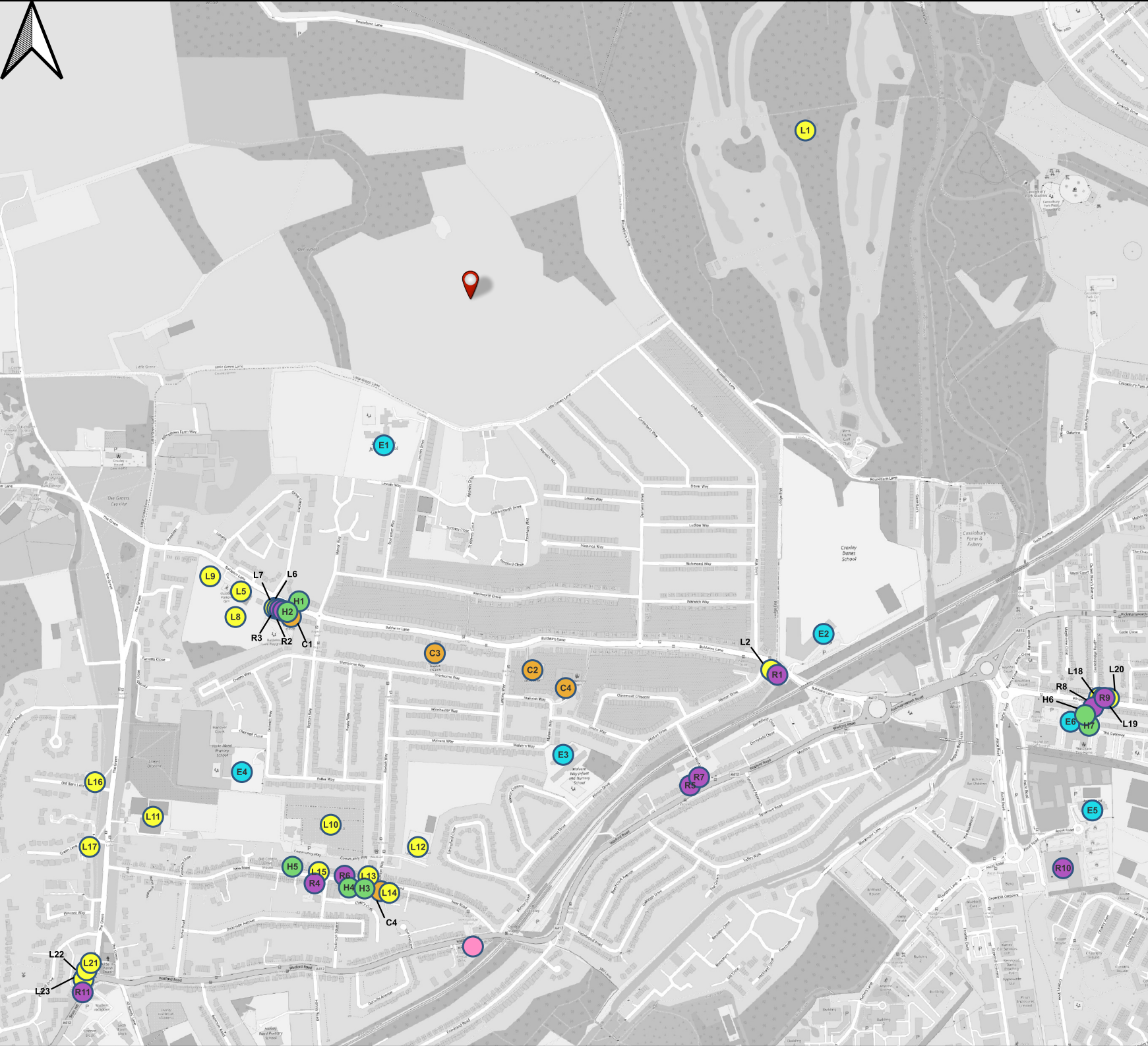
 Richborough


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0 200 400 600 m





Legend

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

Figure 3.1 - Local Facilities

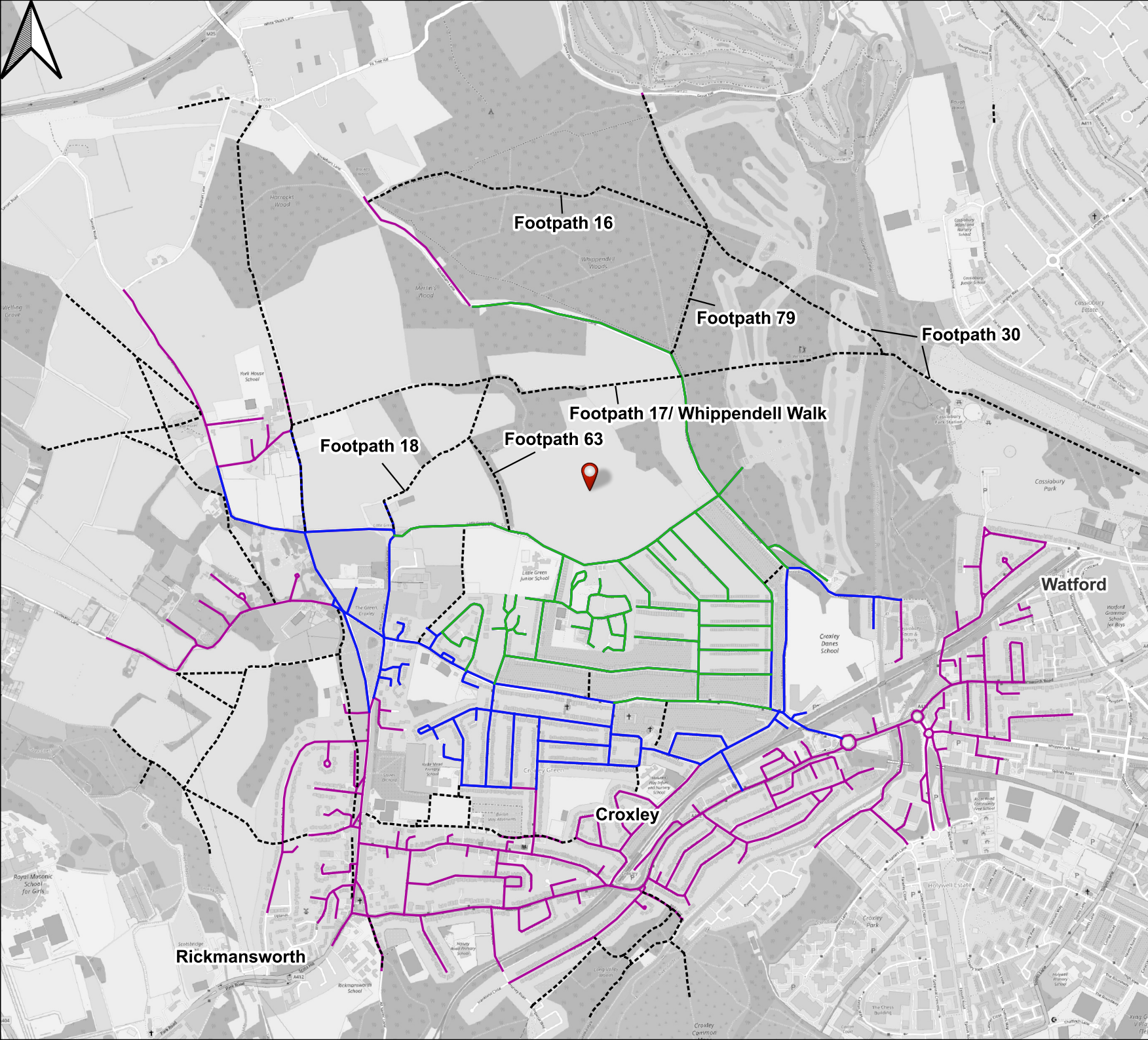
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hub
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0 100 200 300 400 500 m





Legend

-  Site
-  Hertfordshire CC PRow
- Walk Network 2km
 -  800m
 -  1200m
 -  2000m

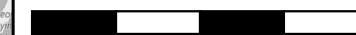
Figure 3.2 - Walking Distances

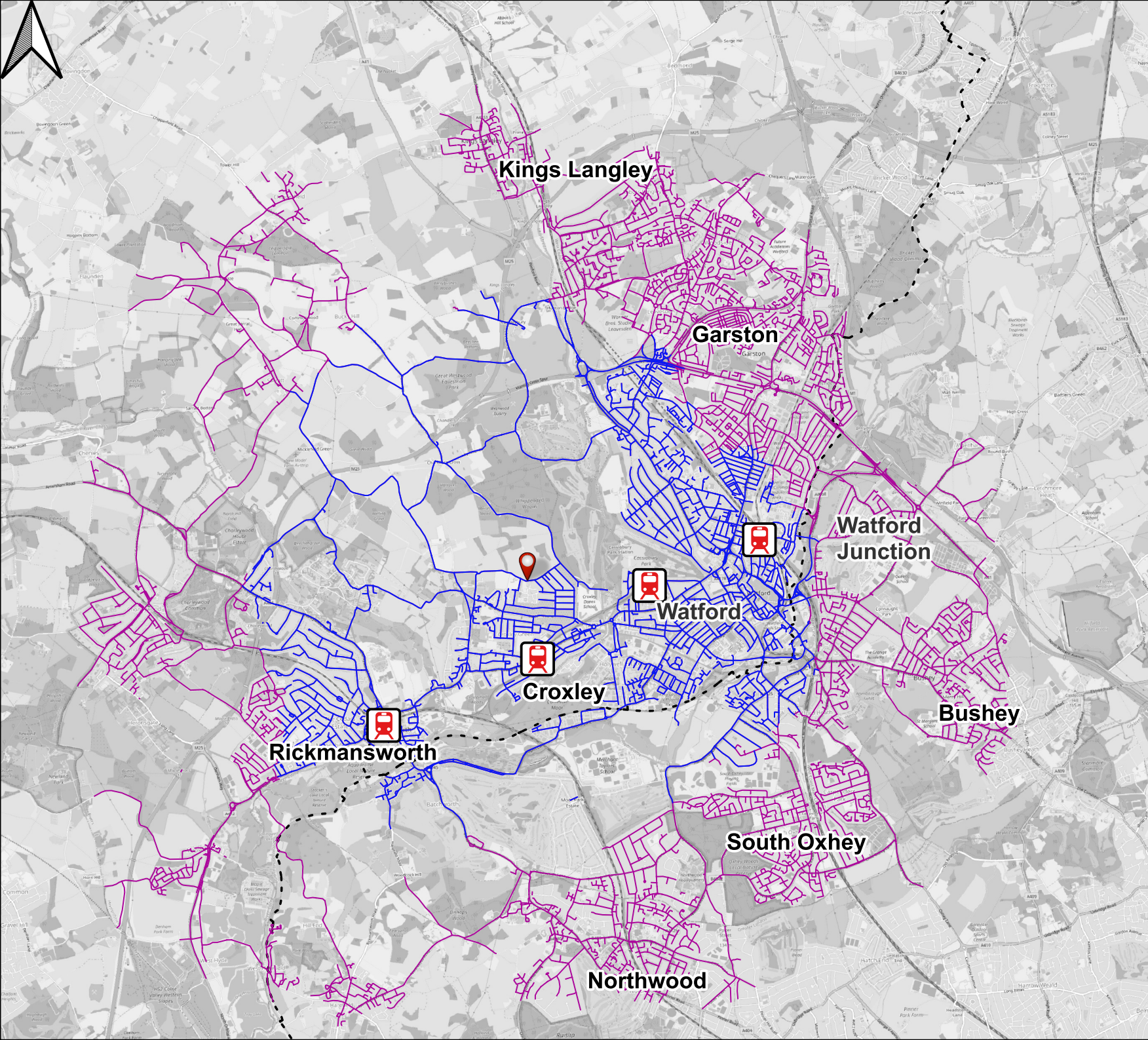
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0 200 400 600 800 m

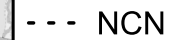




Legend



Site



NCN



Train Station

Cycle Network 8km

5000m

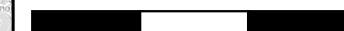
8000m

Figure 3.3 - Cycling Distances



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0 1 2 3 km



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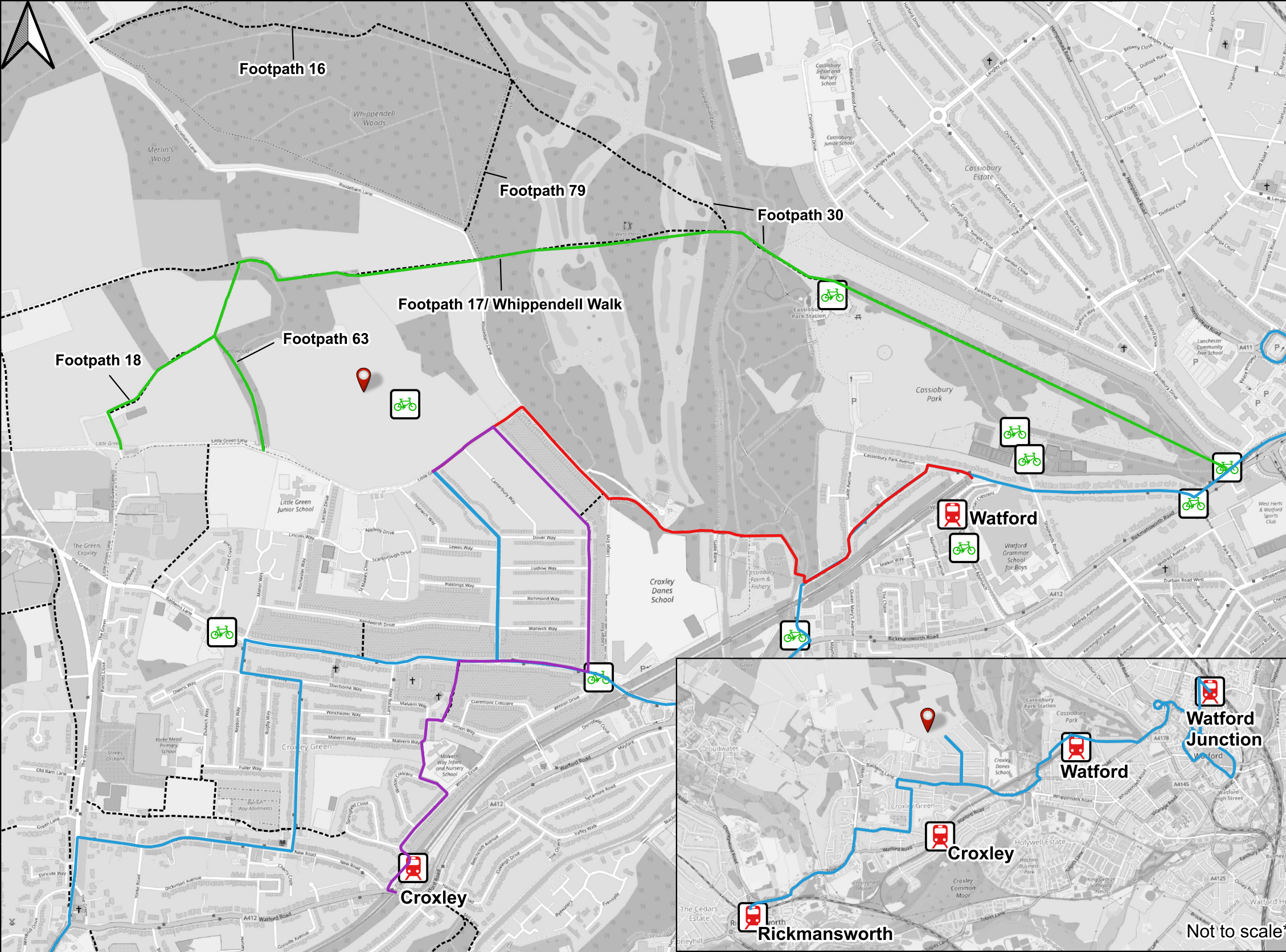
Drawings

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Land off Little Green Lane, Croxley Green

Appendix A

Active Travel Audit Map



Legend

- Site
- ## Active Travel Routes

 - Whippendell Walk - Cassiobury Park
 - Rousebarn Lane - Watford Station
 - Baldwins Lane - Croxley Station
 - 22 Bus Service
 - Hertfordshire CC PRoW
 - Beryl Bikes
 - Train Station

Appendix A - Active Travel Map

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050100150200250300 m

Not to scale*

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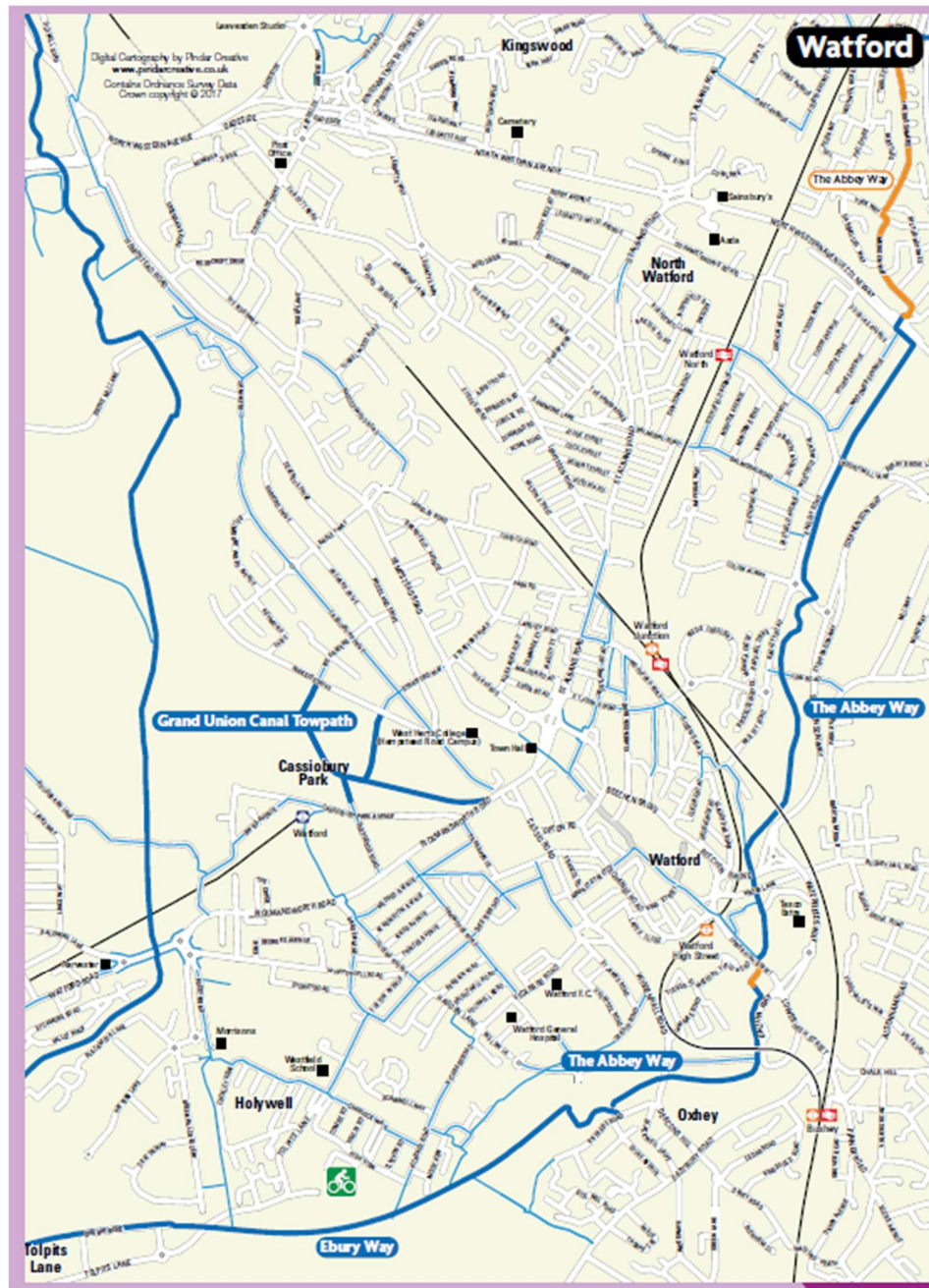


Appendix B

Hertfordshire County Council's Cycle Route Map

Appendix B

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.

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Land off Little Green Lane, Croxley Green

Appendix C

Three Rivers and Watford LCWIP

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).

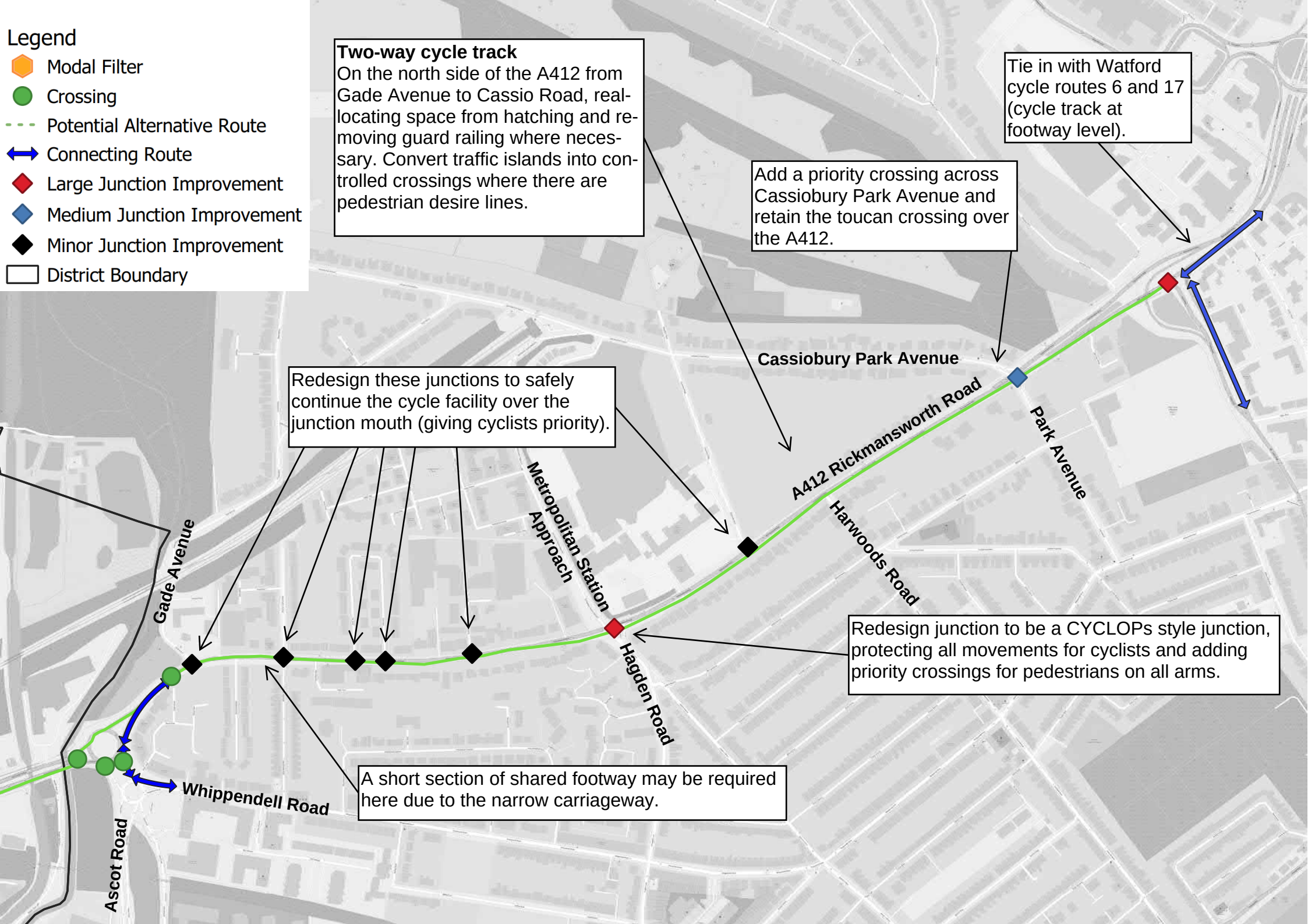
Cassiobury Park Avenue

A412 Rickmansworth Road

Park Avenue

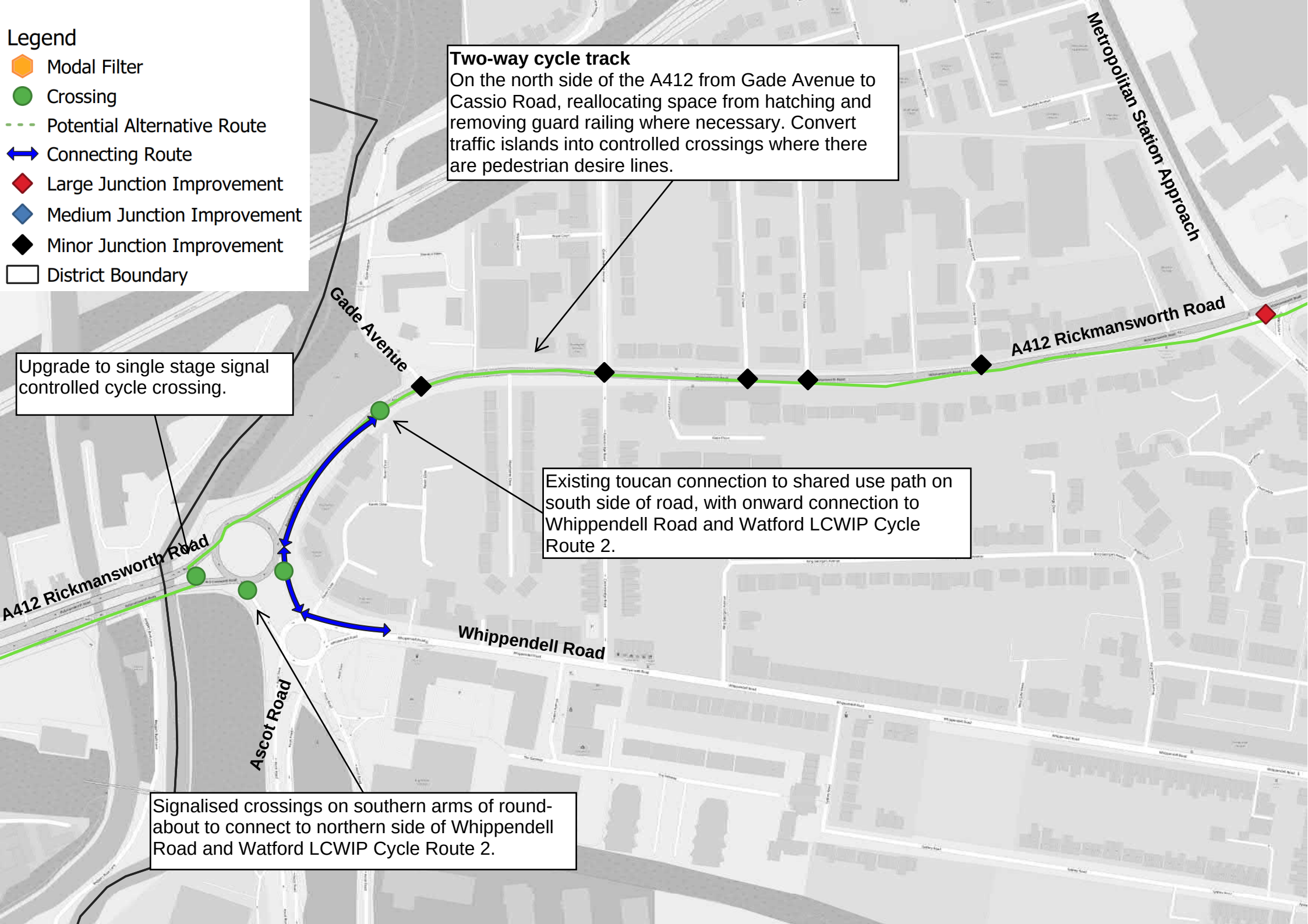
Redesign junction to be a CYCLOPS style junction, protecting all movements for cyclists and adding priority crossings for pedestrians on all arms.

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.

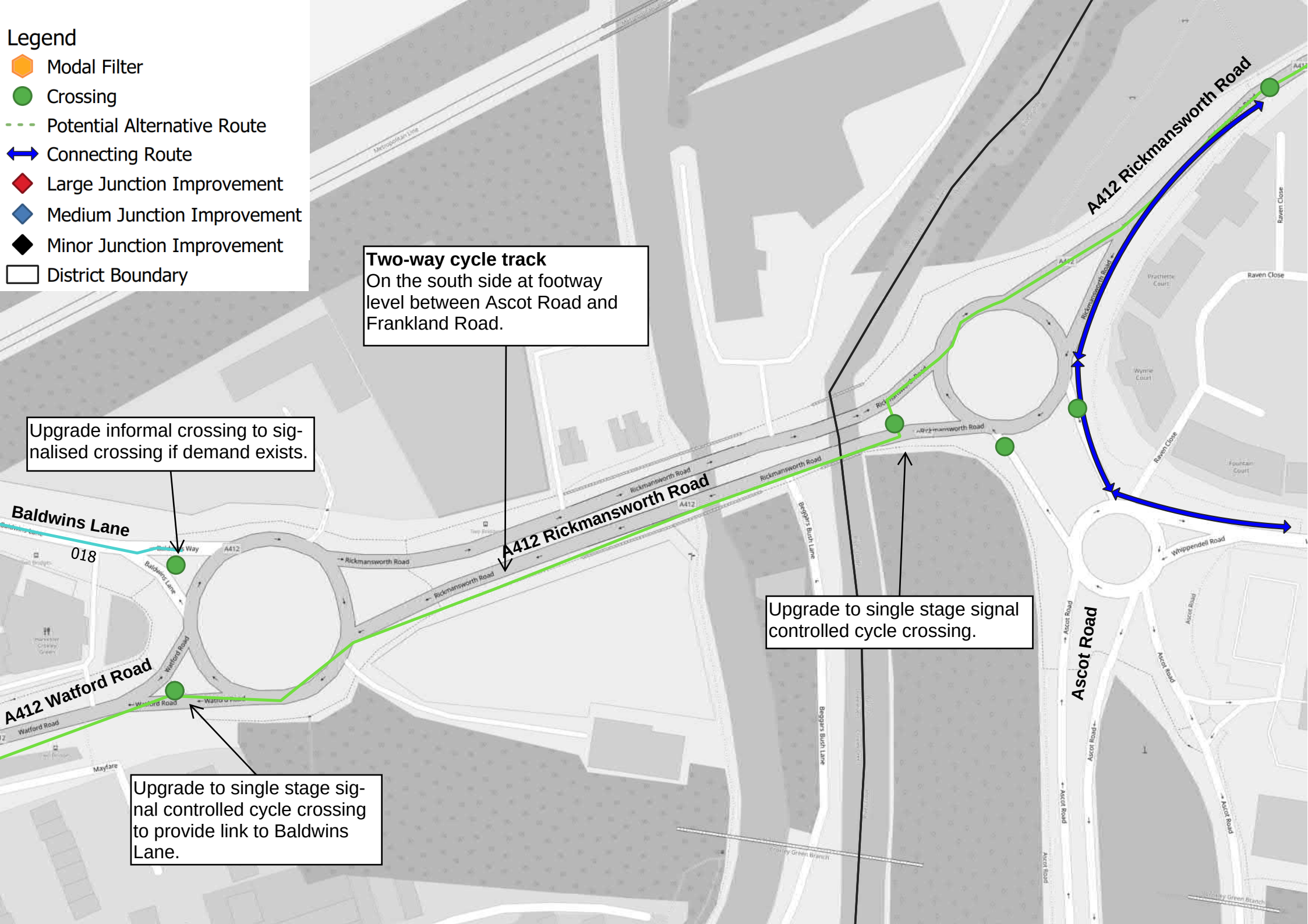
Upgrade to single stage signal controlled cycle crossing.

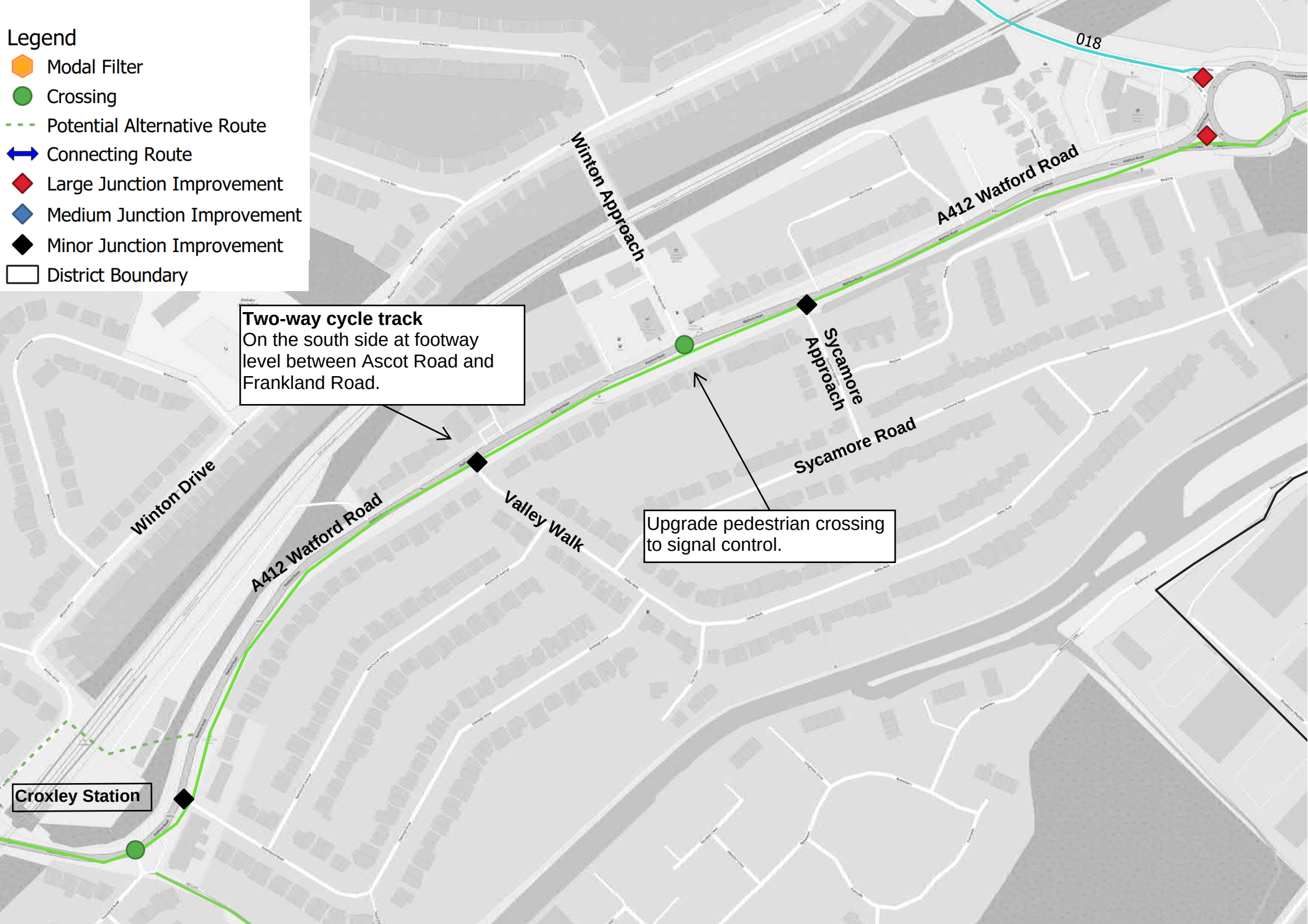
Existing toucan connection to shared use path on south side of road, with onward connection to Whippendell Road and Watford LCWIP Cycle Route 2.

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





Legend

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

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.

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

Croxley Station

A412 Watford Road

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.

New Road

Winton Drive

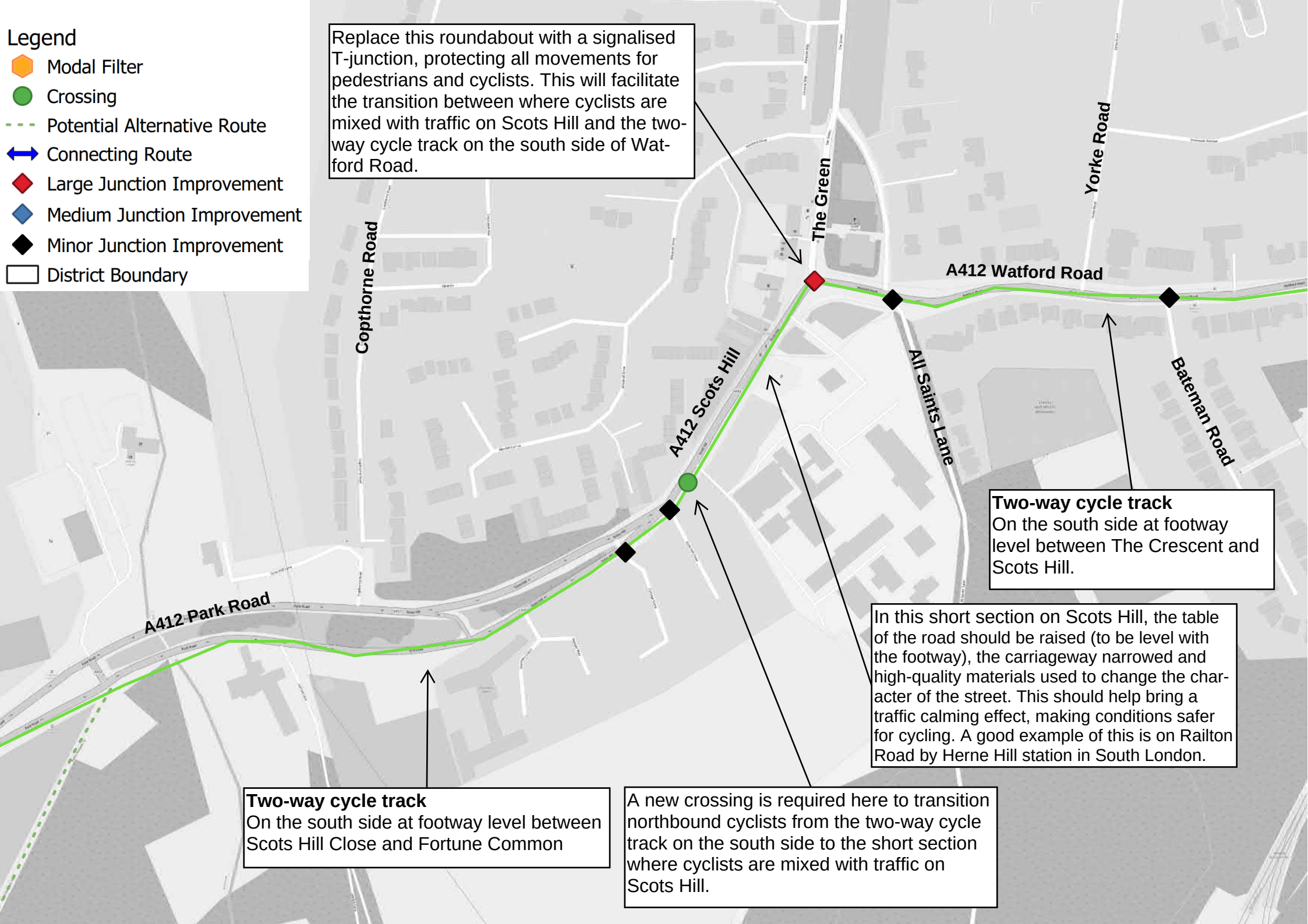
A412 Watford Road

Frankland 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.



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

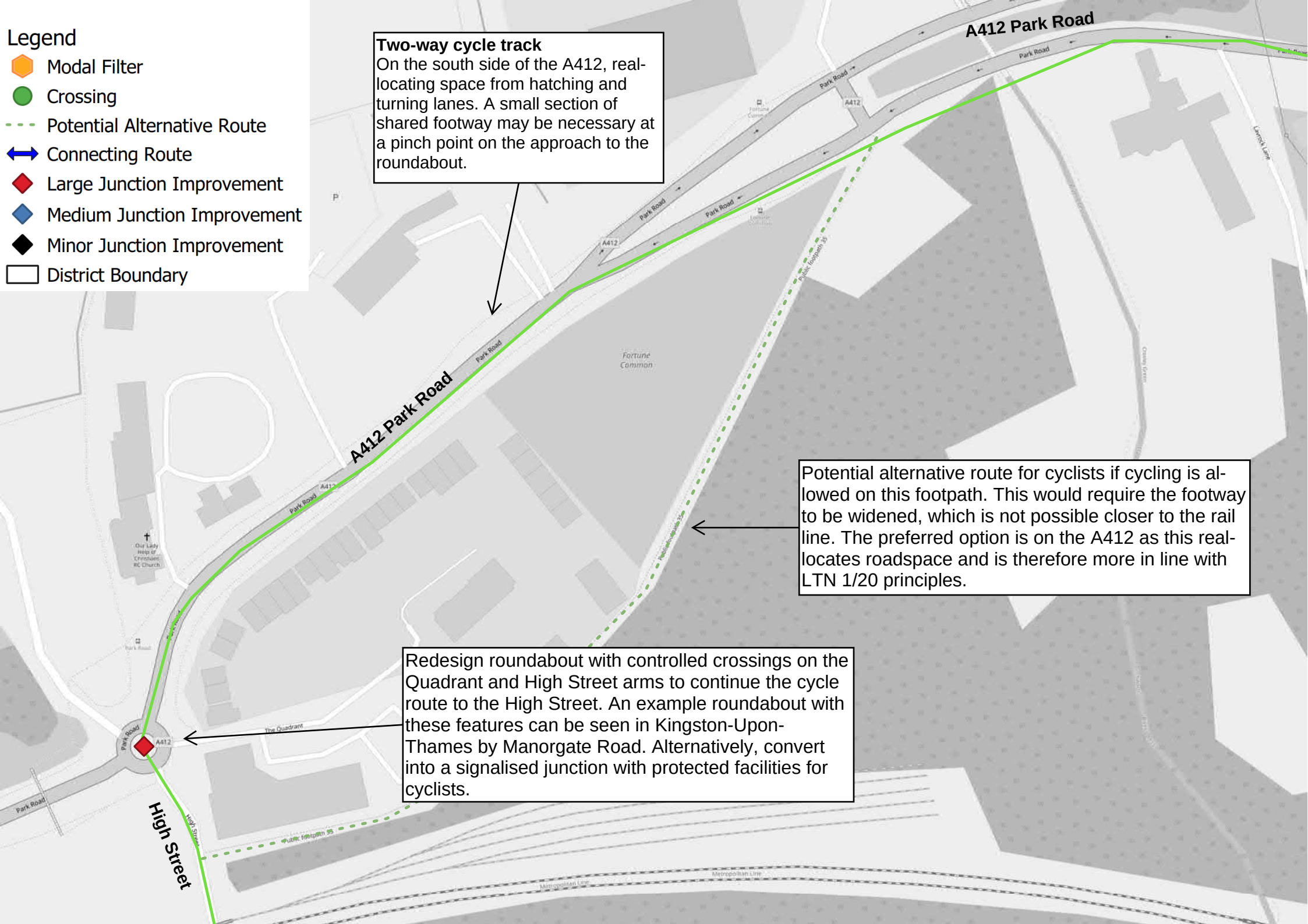
- Modal Filter
- Crossing
- Potential Alternative Route
- Connecting Route
- Large Junction Improvement
- Medium Junction Improvement
- Minor Junction Improvement
- District Boundary

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.

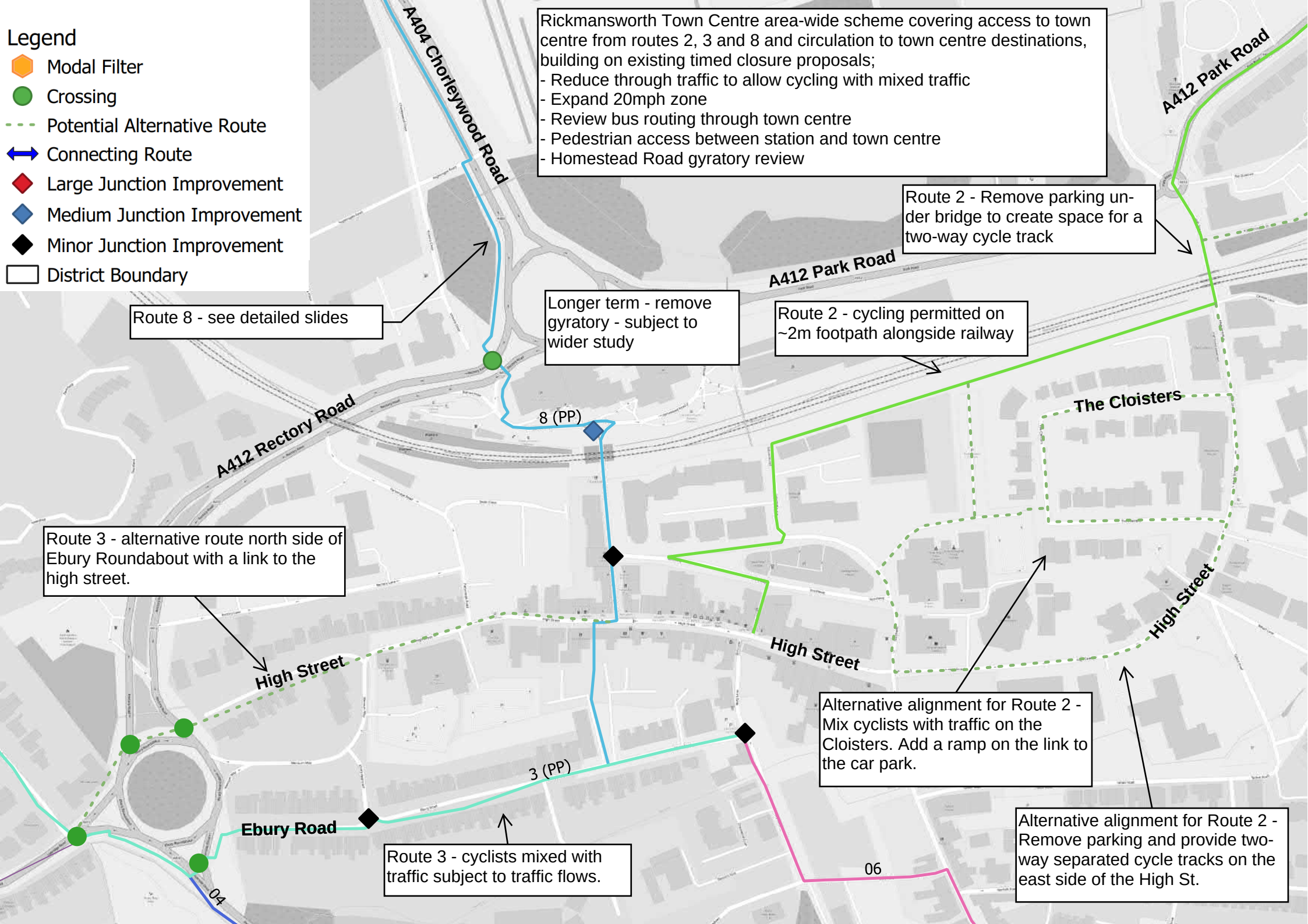
Potential alternative route for cyclists if cycling is allowed on this footpath. This would require the footway to be widened, which is not possible closer to the rail line. The preferred option is on the A412 as this real-locates roadspace and is therefore more in line with LTN 1/20 principles.

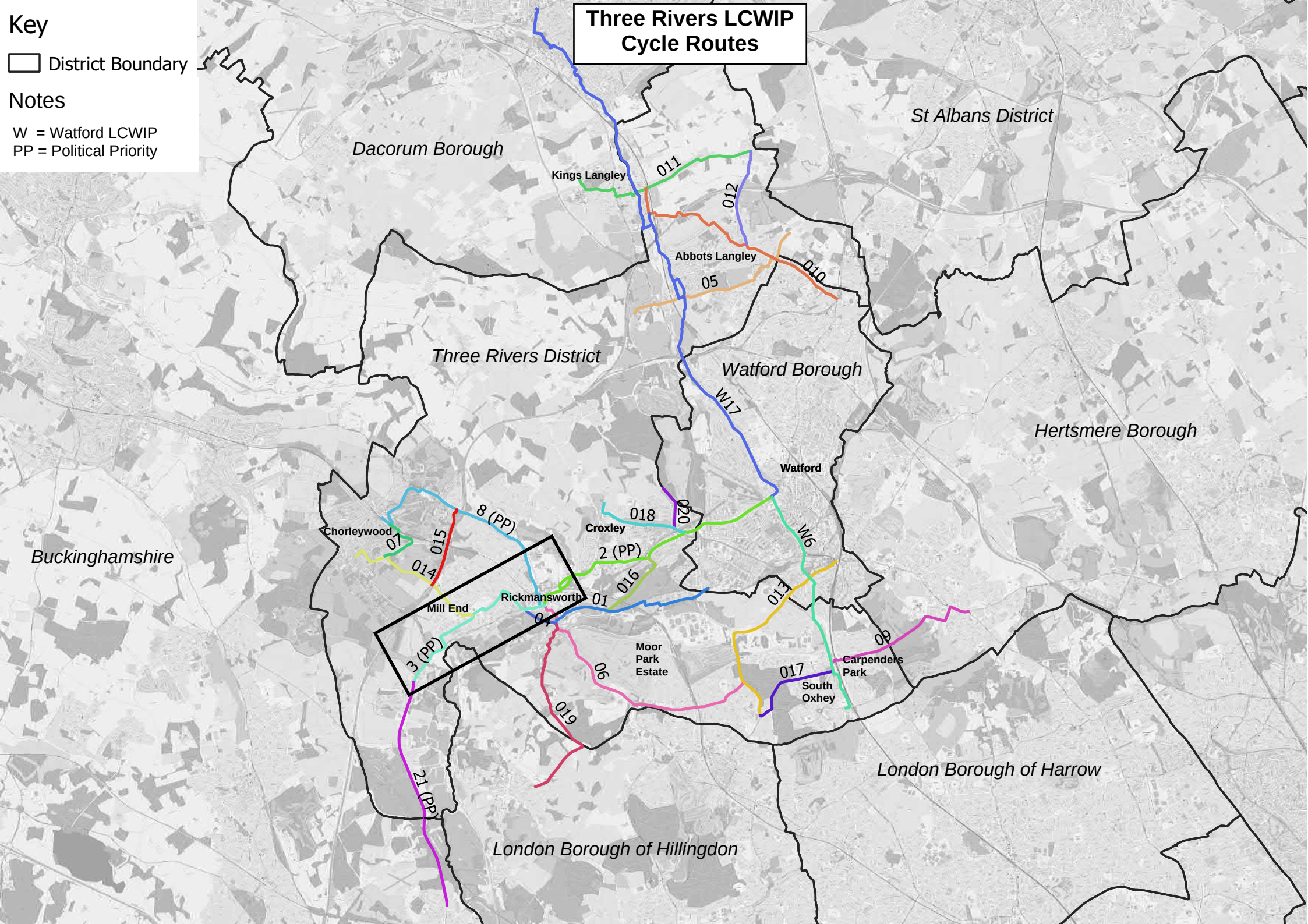
Redesign roundabout with controlled crossings on the Quadrant and High Street arms to continue the cycle route to the High Street. An example roundabout with these features can be seen in Kingston-Upon-Thames by Manorgate Road. Alternatively, convert into a signalised junction with protected facilities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



Legend

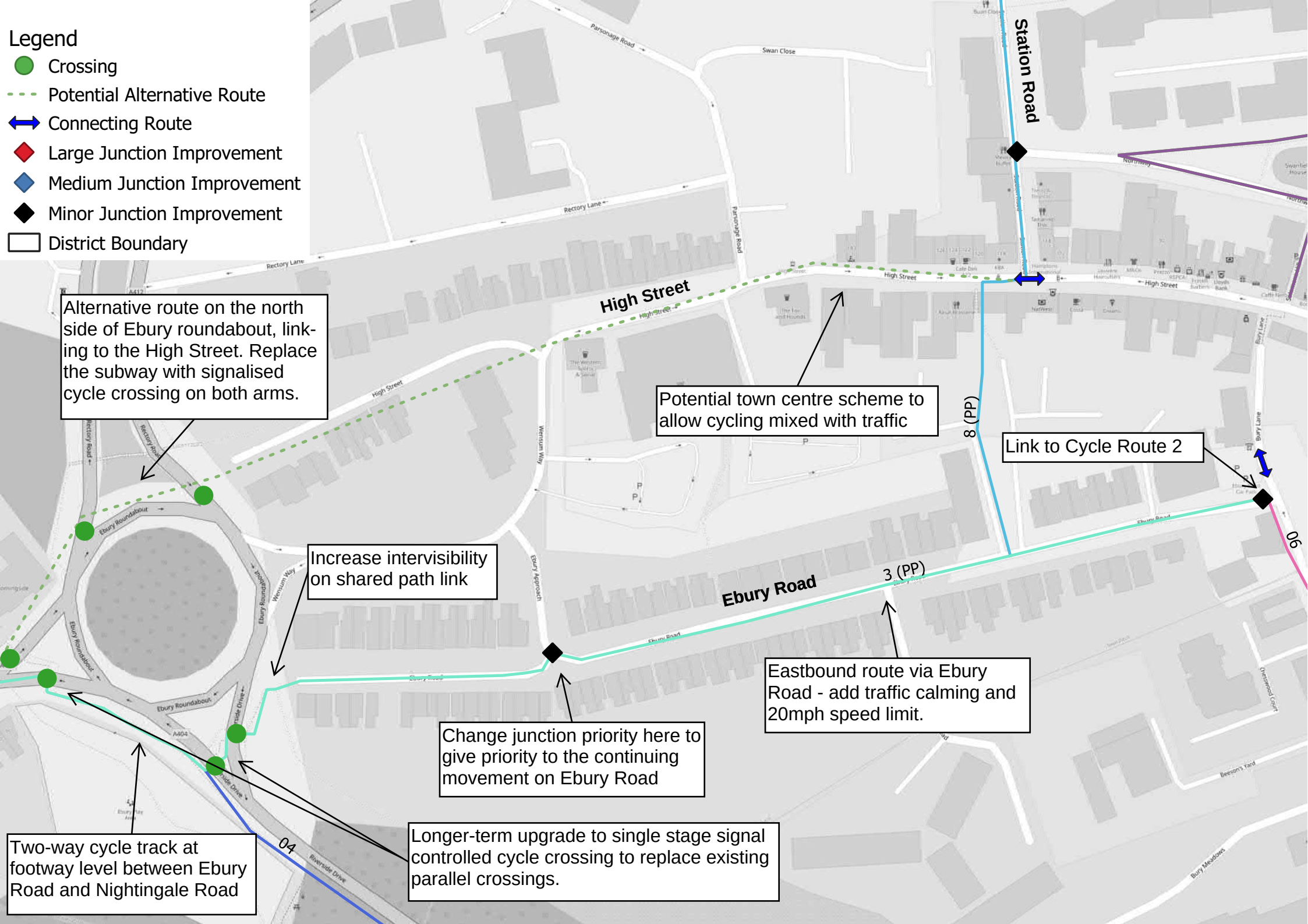
- Modal Filter
- Crossing
- Potential Alternative Route
- Connecting Route
- Large Junction Improvement
- Medium Junction Improvement
- Minor Junction Improvement
- District Boundary

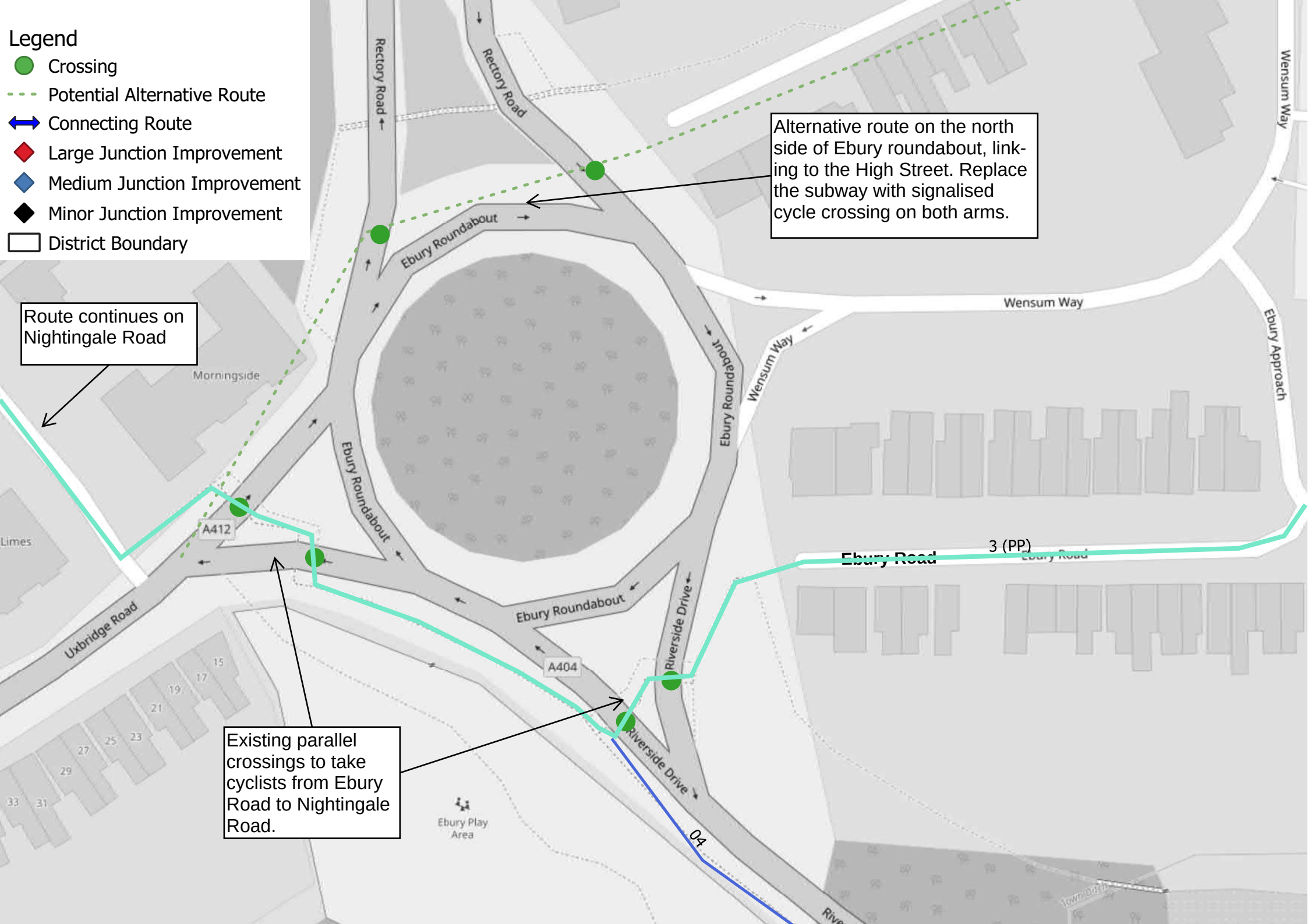


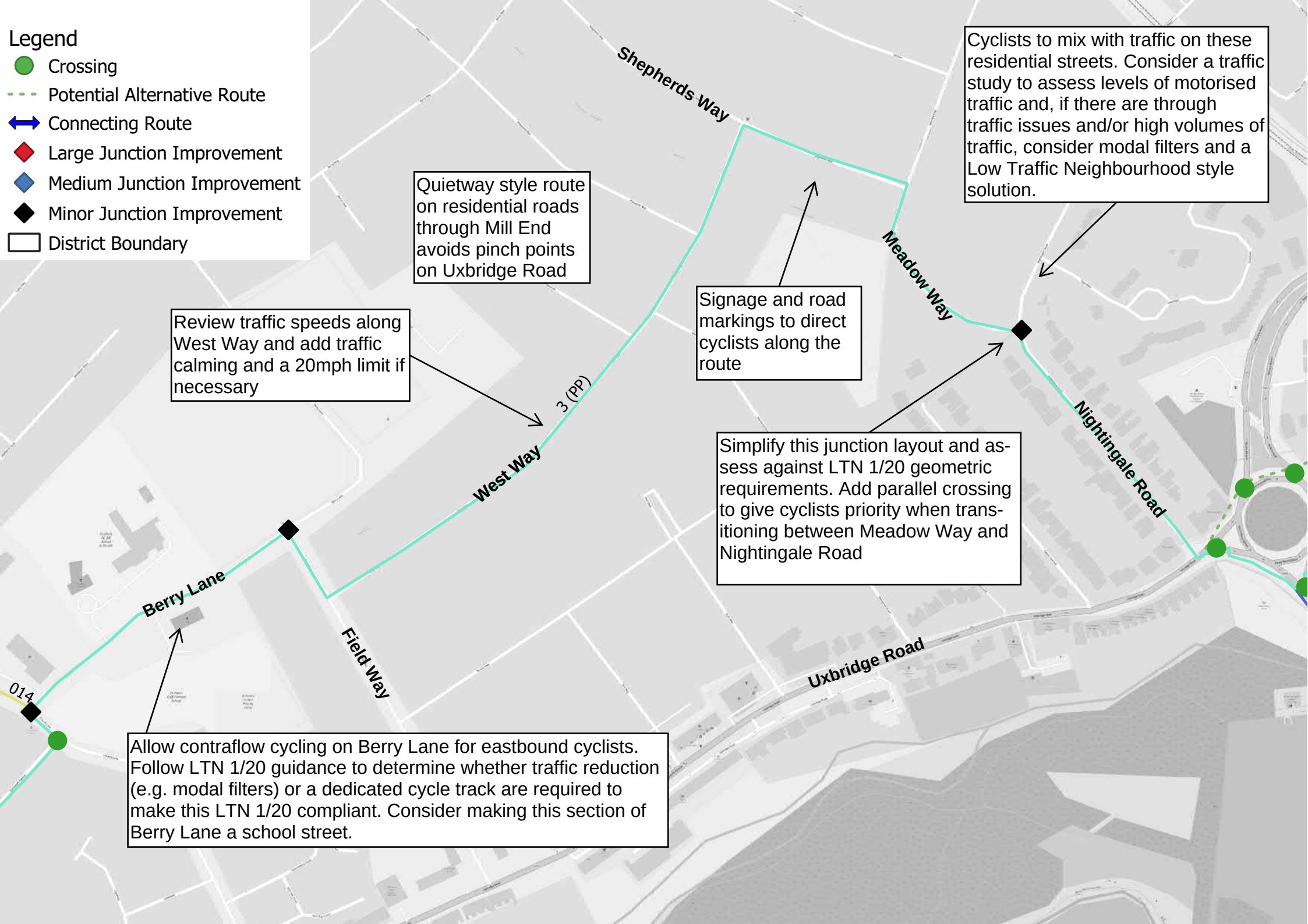


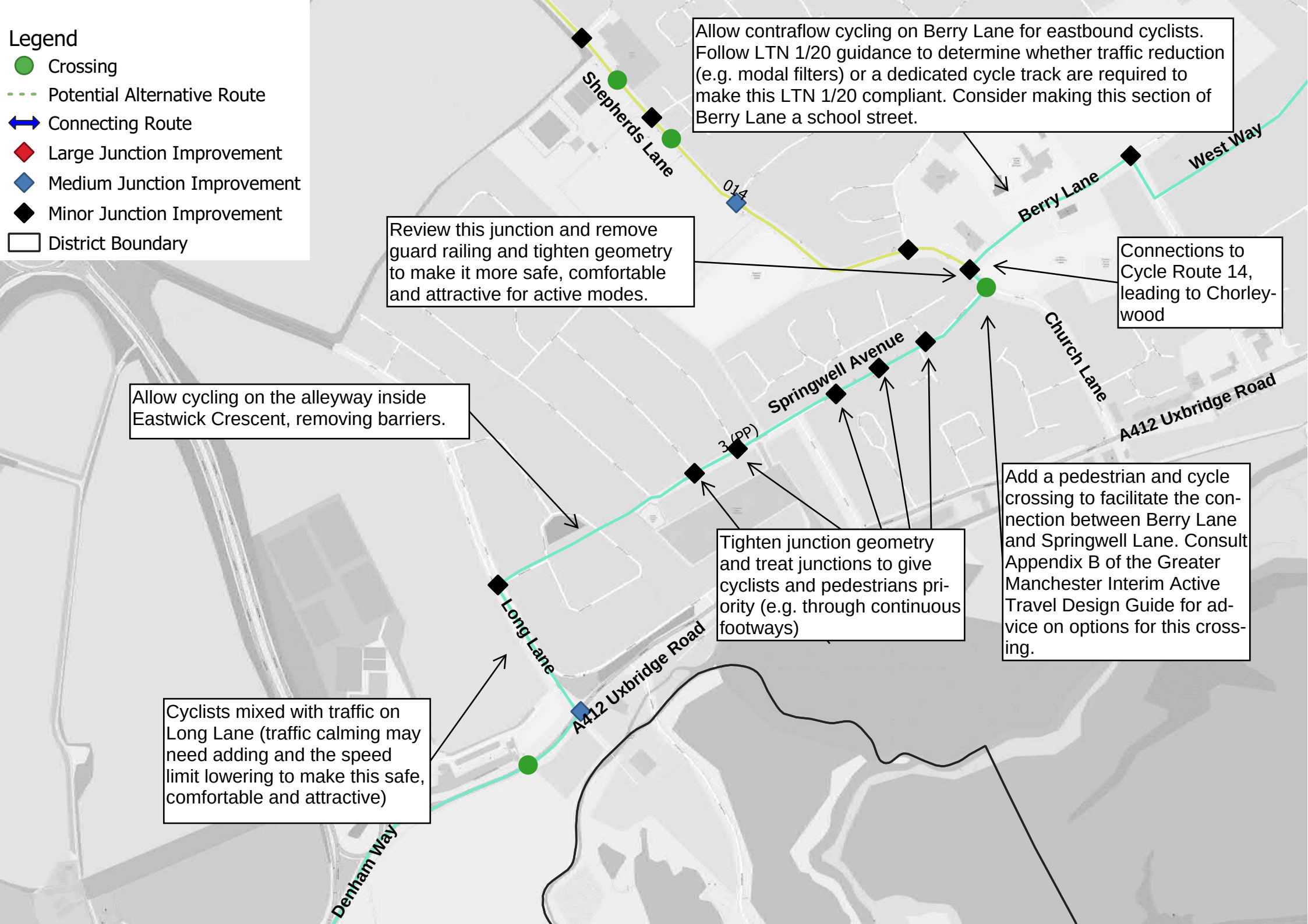
Legend

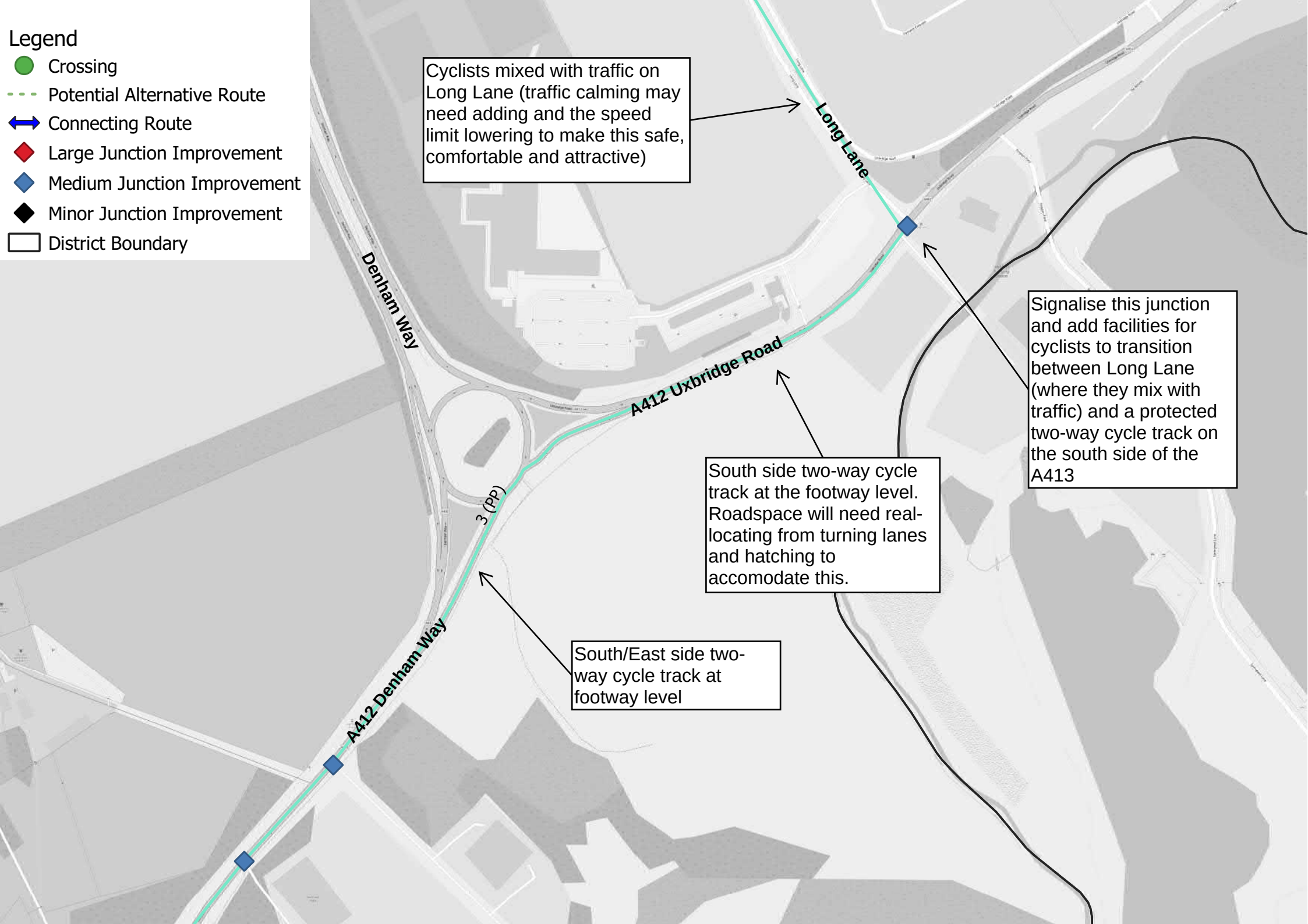
- Crossing
- - - Potential Alternative Route
- ↔ Connecting Route
- ◆ Large Junction Improvement
- ◆ Medium Junction Improvement
- ◆ Minor Junction Improvement
- District Boundary

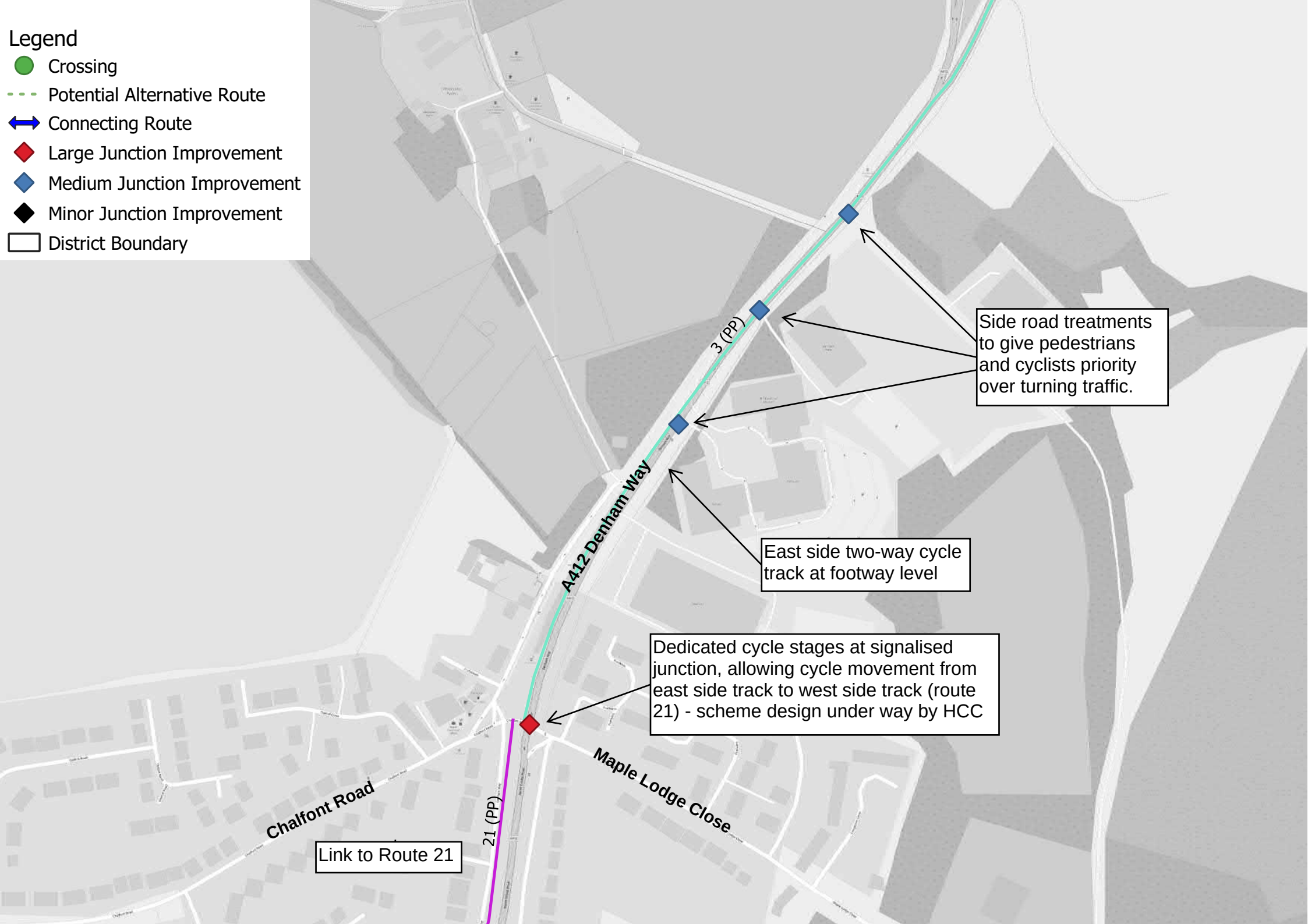


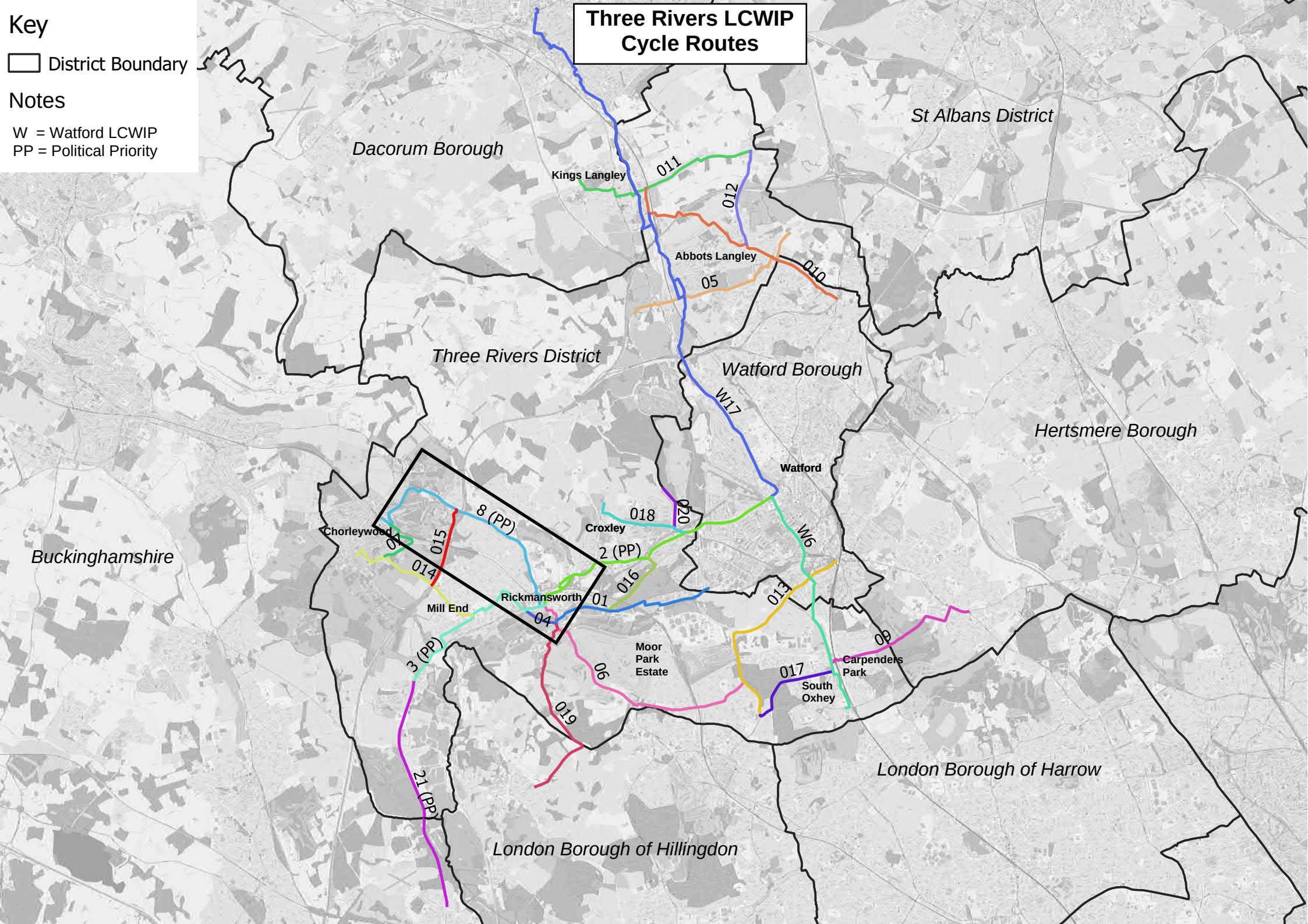












Legend

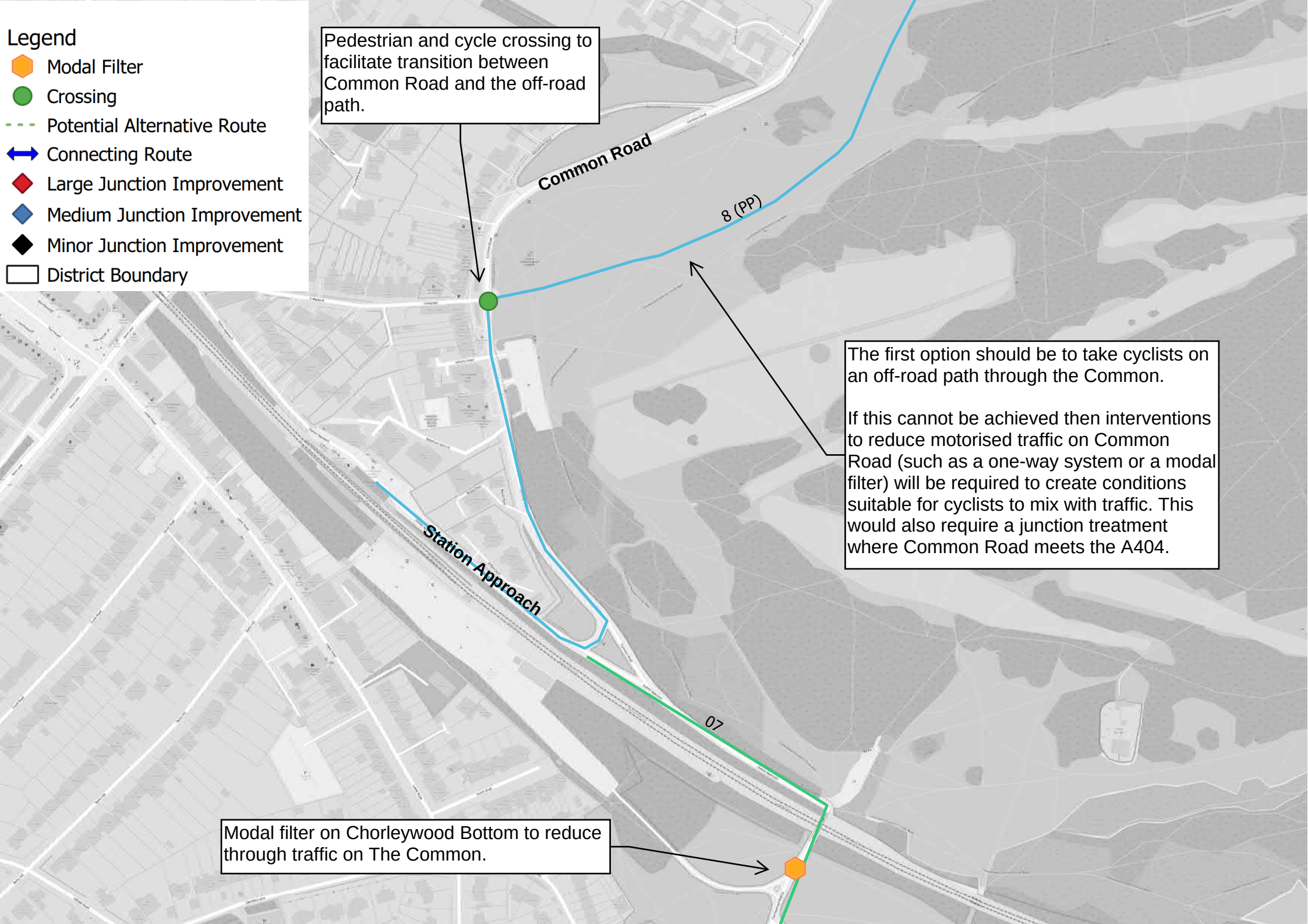
- Modal Filter
- Crossing
- Potential Alternative Route
- Connecting Route
- Large Junction Improvement
- Medium Junction Improvement
- Minor Junction Improvement
- District Boundary

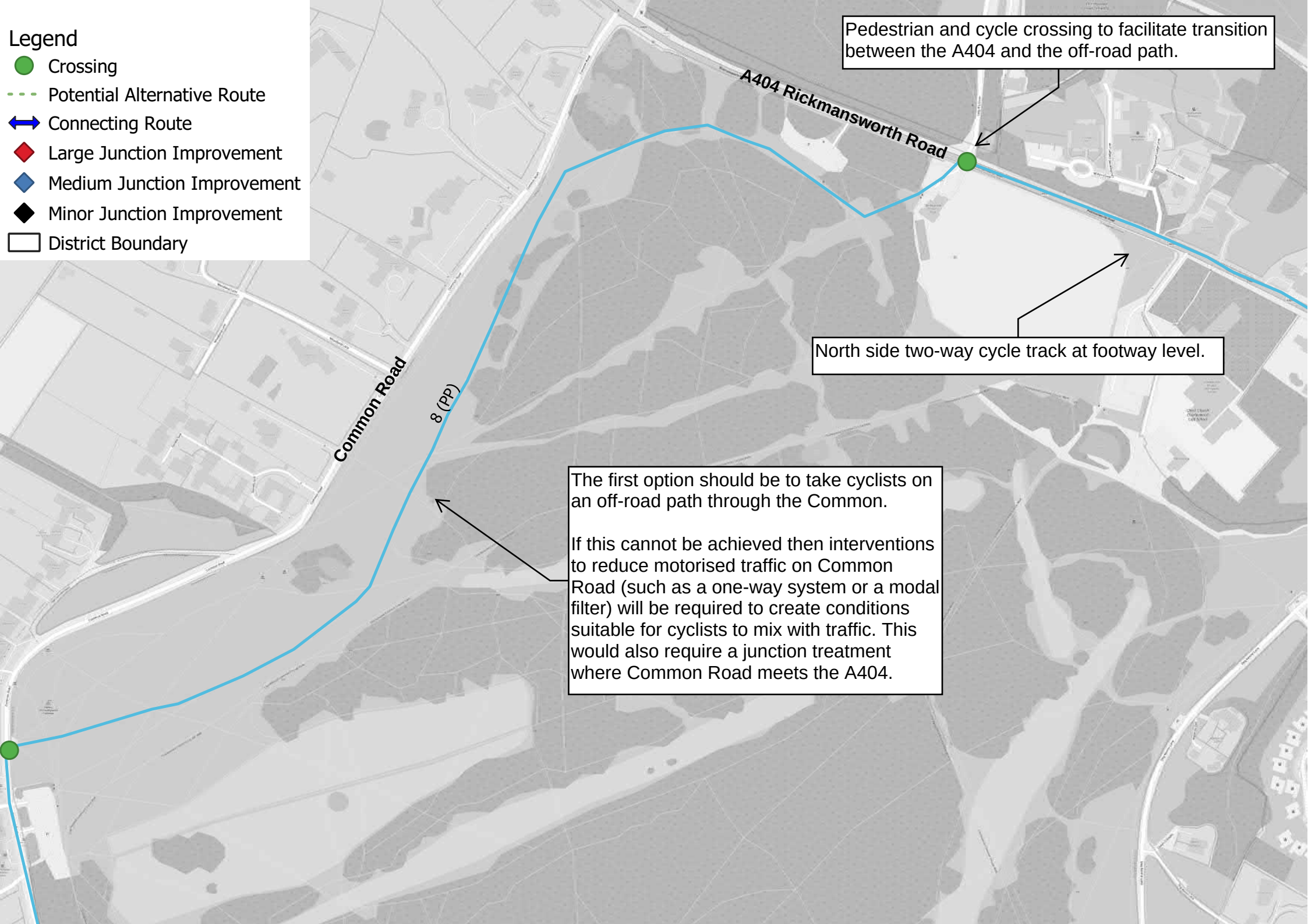
Pedestrian and cycle crossing to facilitate transition between Common Road and the off-road path.

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

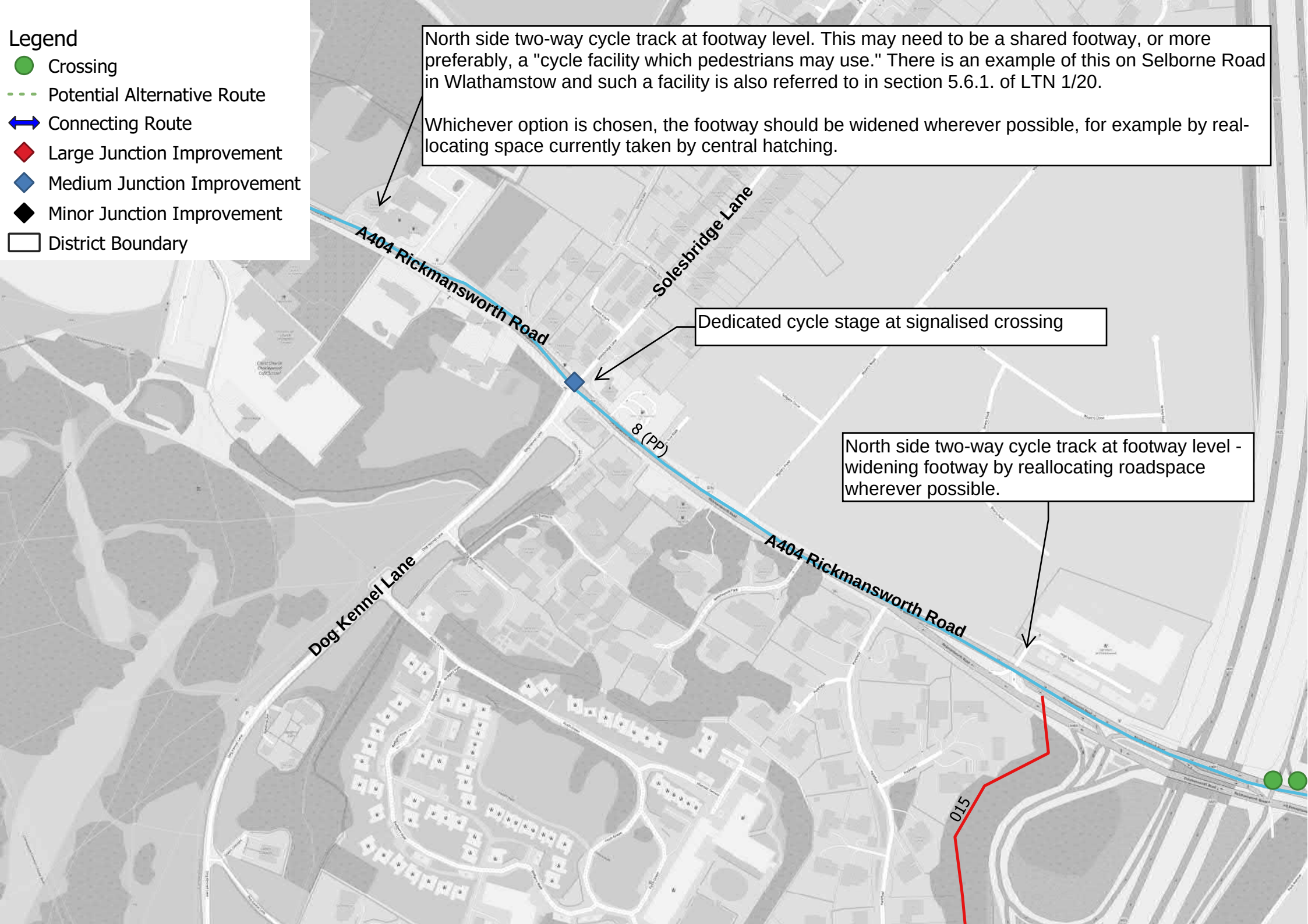
- Crossing
- - - Potential Alternative Route
- ↔ Connecting Route
- ◆ Large Junction Improvement
- ◆ Medium Junction Improvement
- ◆ Minor Junction Improvement
- District Boundary

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.

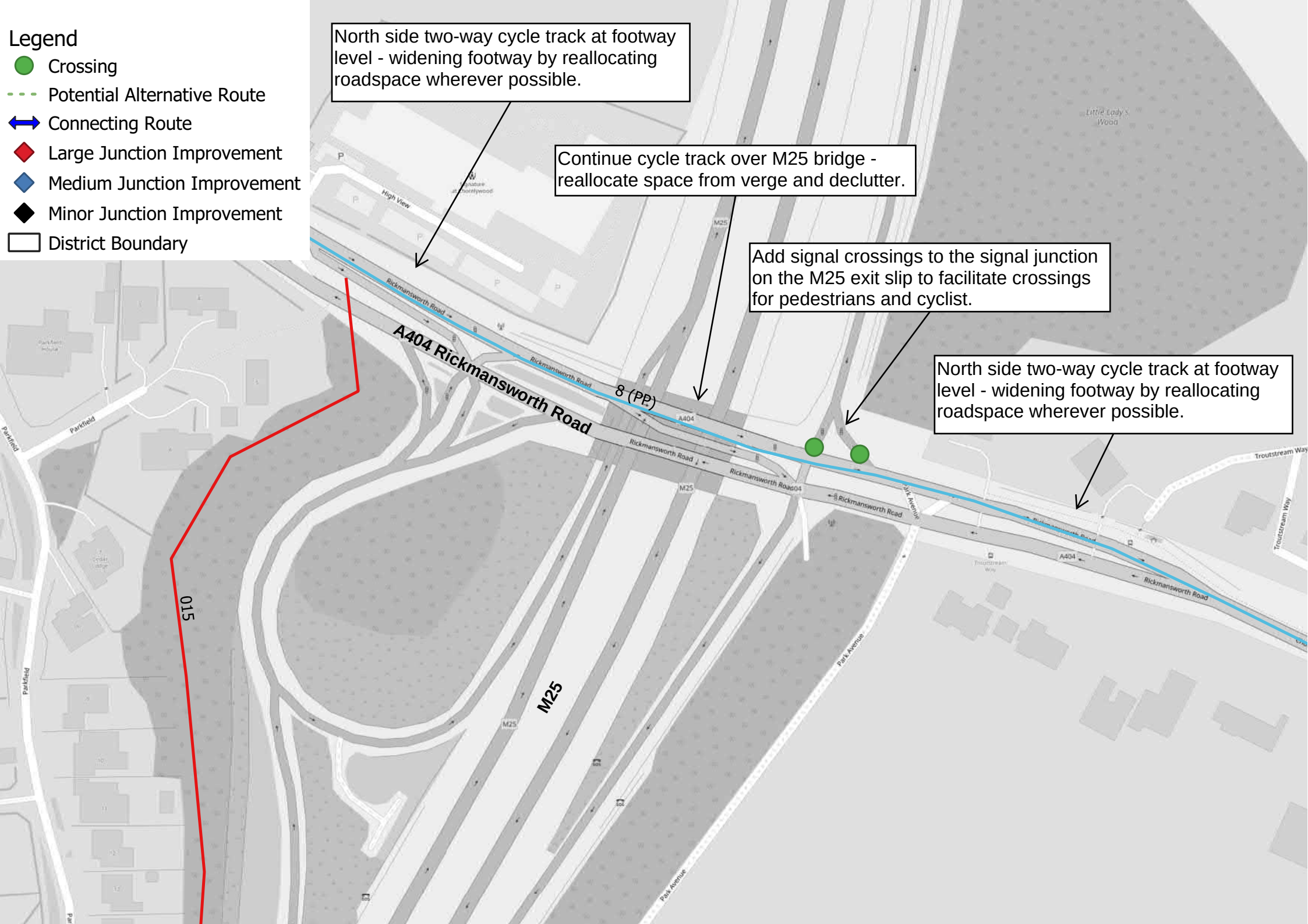
Dedicated cycle stage at signalised crossing

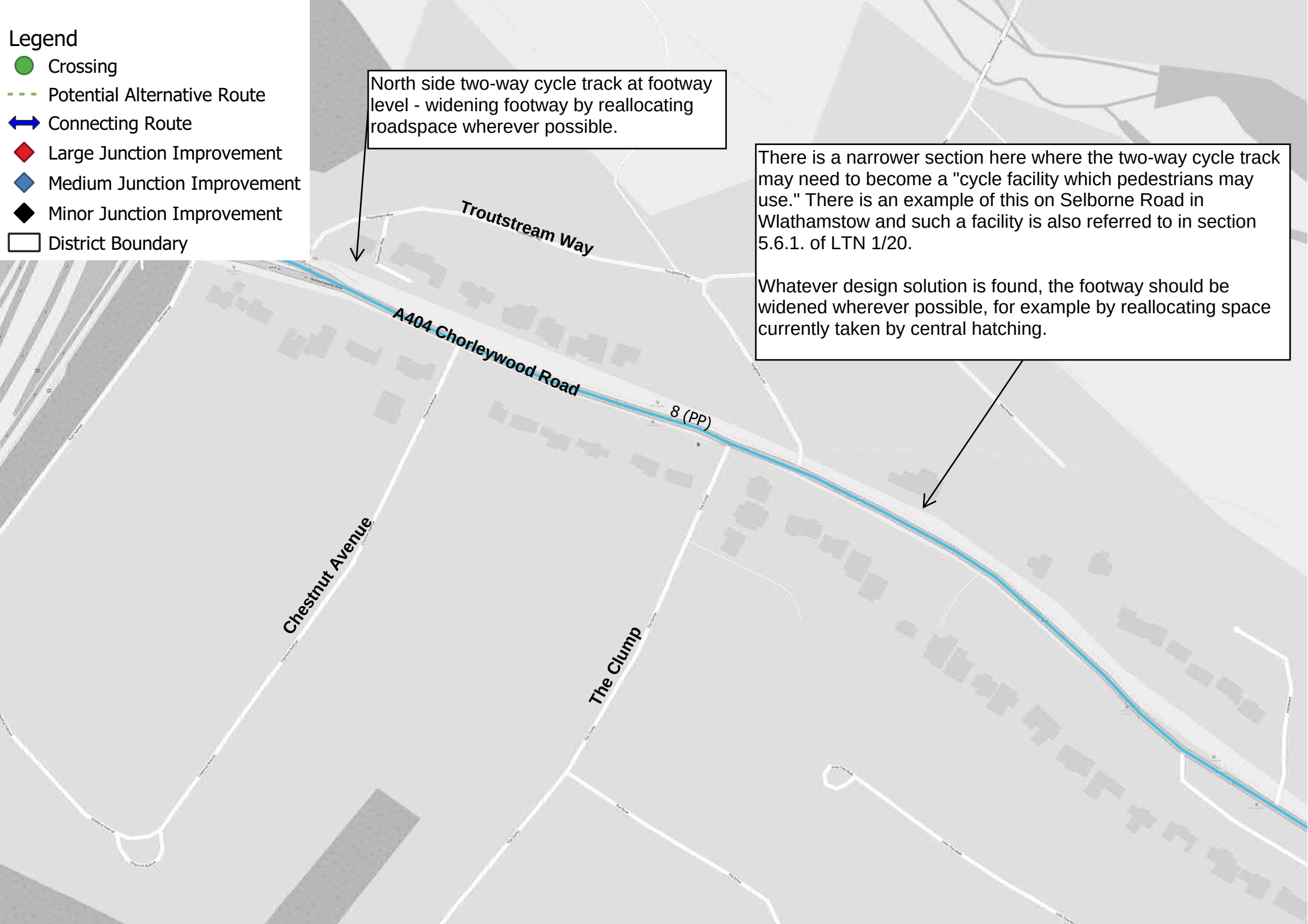
North side two-way cycle track at footway level - widening footway by reallocating roadspace wherever possible.



Legend

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





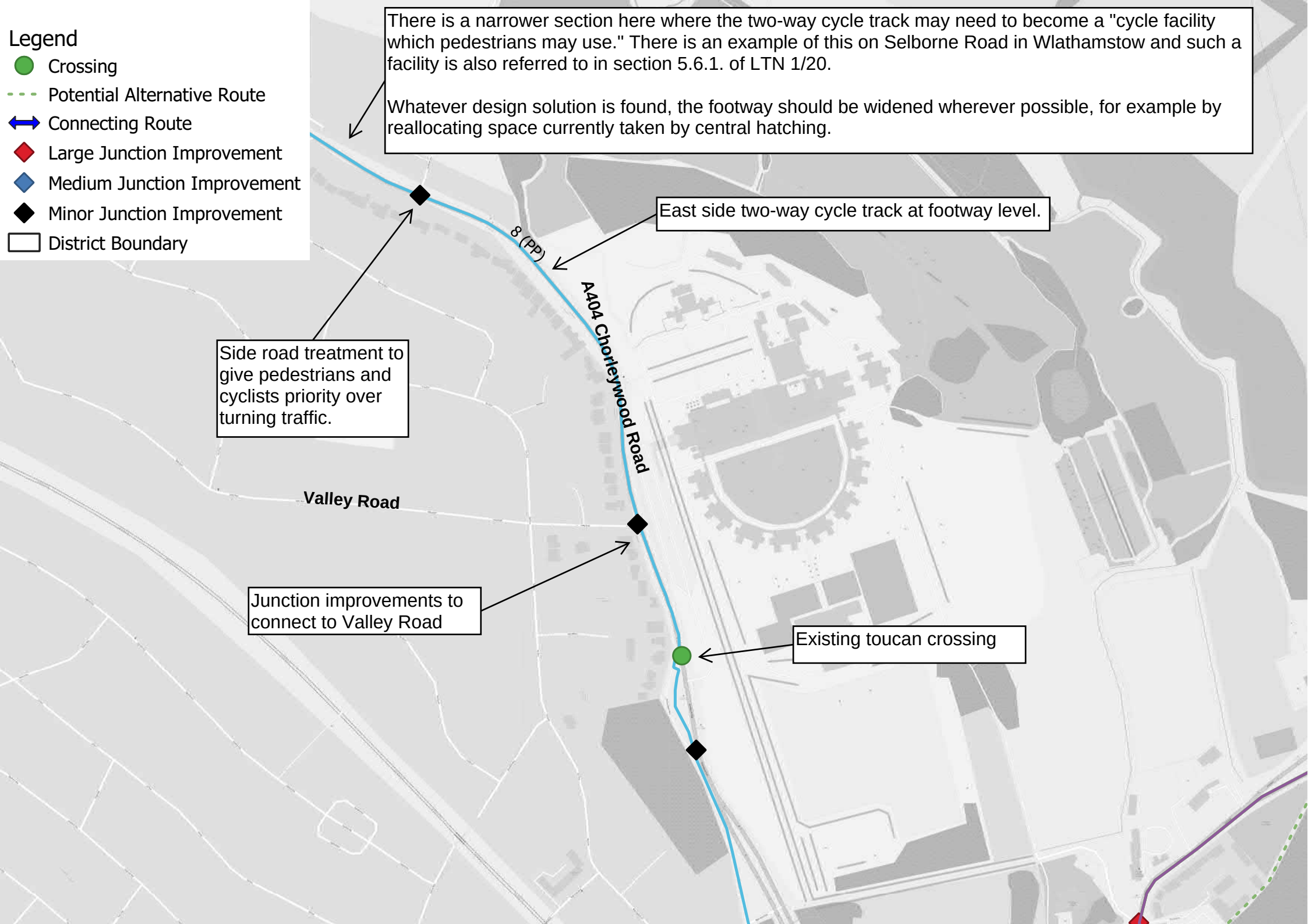
Legend

-  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.

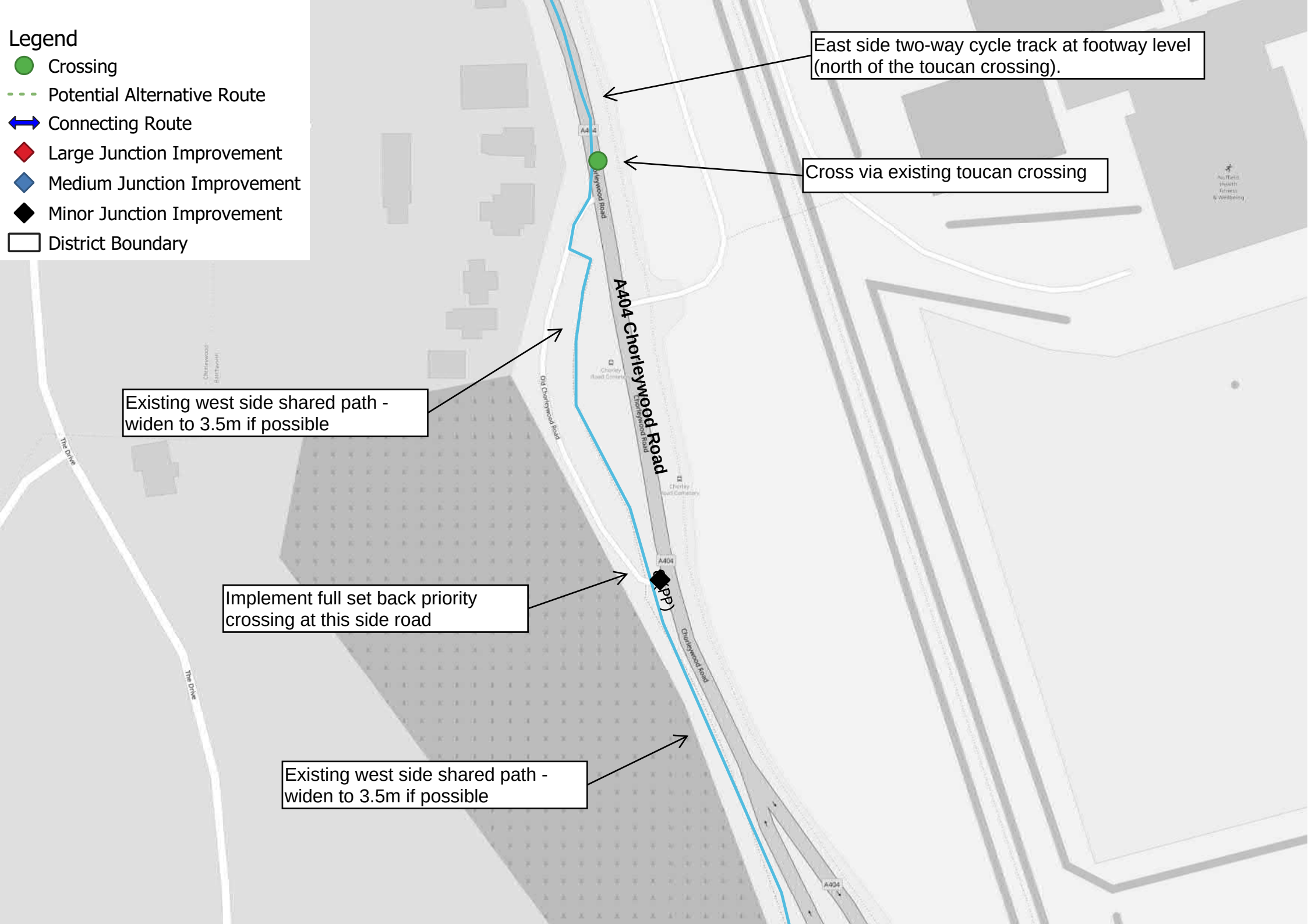
Junction improvements to connect to Valley Road

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

A close-up photograph of a road surface. A white arrow points to a label 'A40-4' which is placed on a light-colored, textured material, possibly a repair or a specific type of pavement. The surrounding road surface is dark and appears to be asphalt.

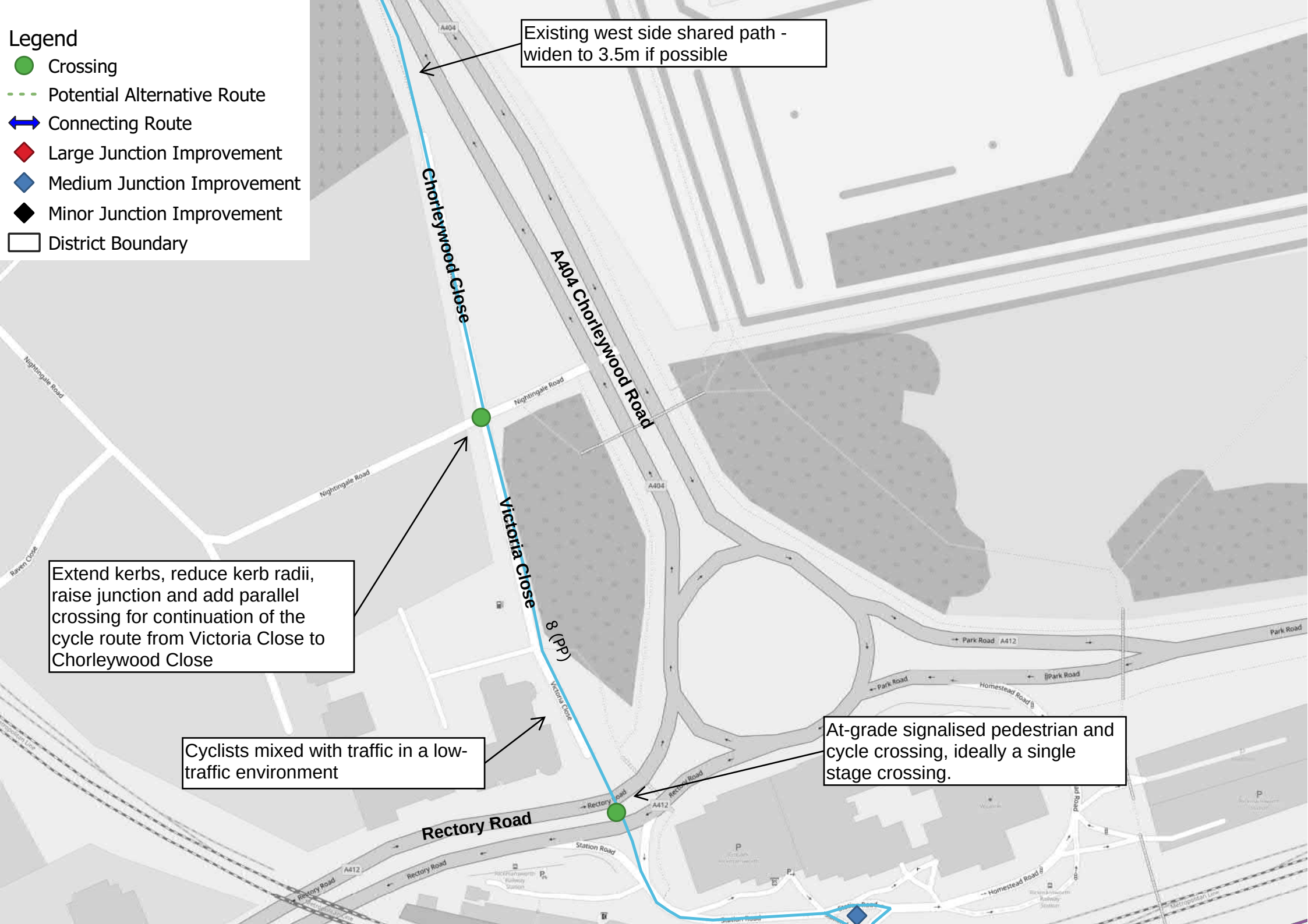
Chorleywood Close

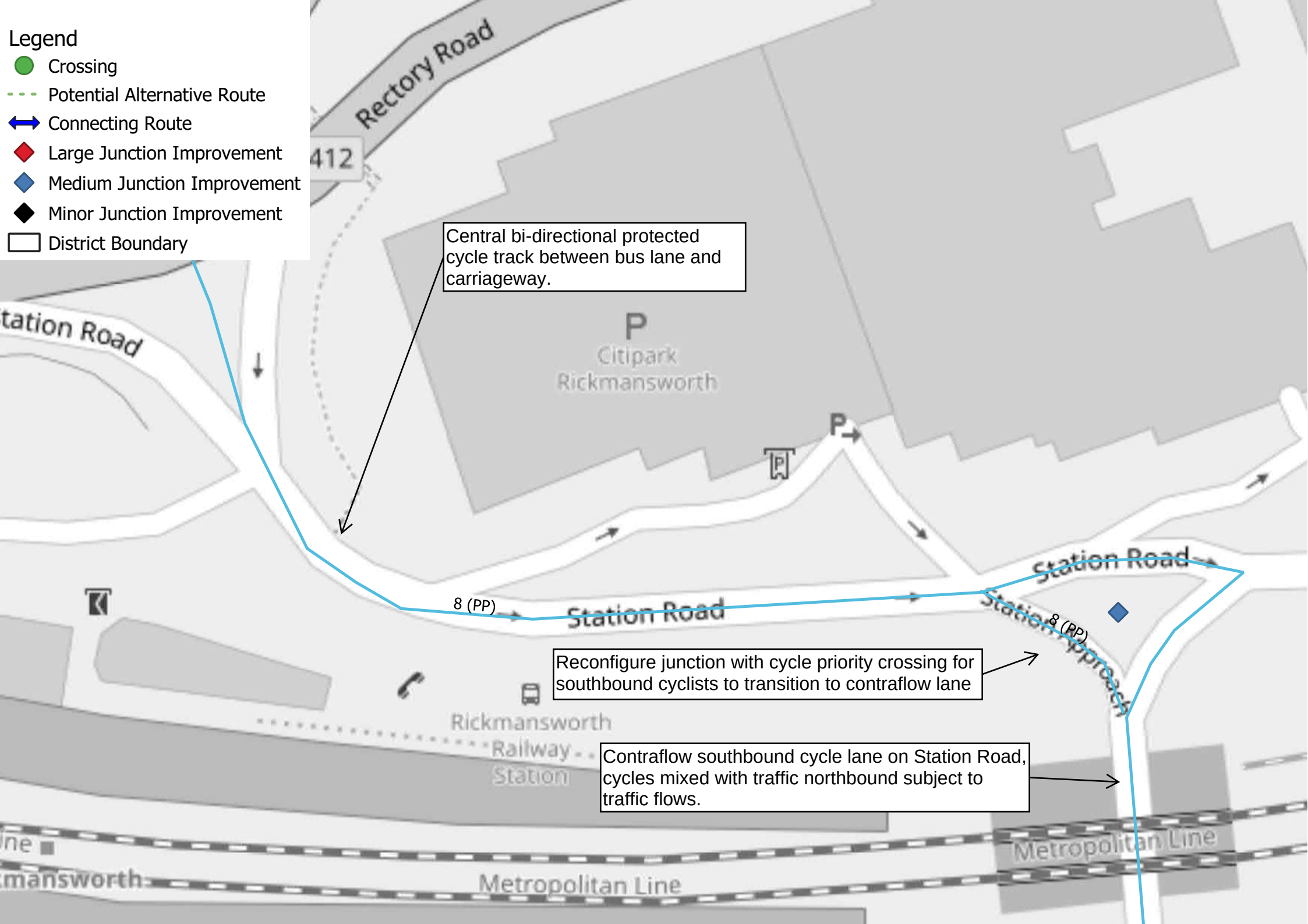
Victoria Close

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

Map Details:

- Station Road:** A vertical road running through the center of the map. It features a blue line indicating a cycle route and a black diamond symbol indicating a medium junction improvement at its intersection with High Street.
- High Street:** A horizontal road at the bottom of the map. It features a blue line indicating a cycle route and a black diamond symbol indicating a medium junction improvement at its intersection with Station Road.
- Northway:** A diagonal road on the right side of the map, running from the top right towards the bottom right. It features a blue line indicating a cycle route and a black diamond symbol indicating a medium junction improvement at its intersection with Station Road.
- Callouts:**
 - "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 and Northway.
 - "Links to route 2 and 3" points to the intersection of Station Road and High Street.

- [illegible]

[illegible]

Legend

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

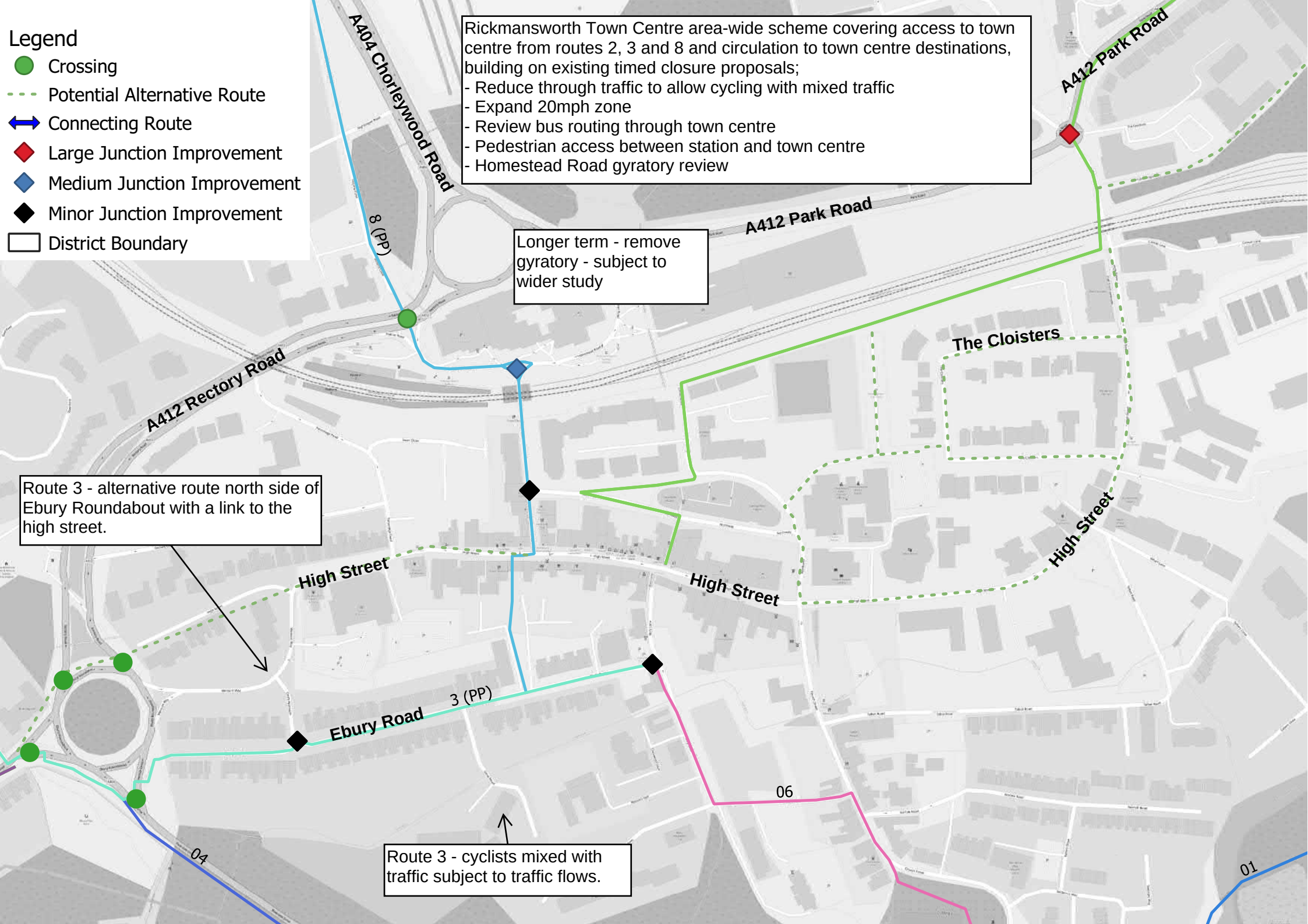
The map shows Station Road running north-south, intersecting with High Street at the bottom. A blue line indicates the proposed cycle route along Station Road. Key features include:

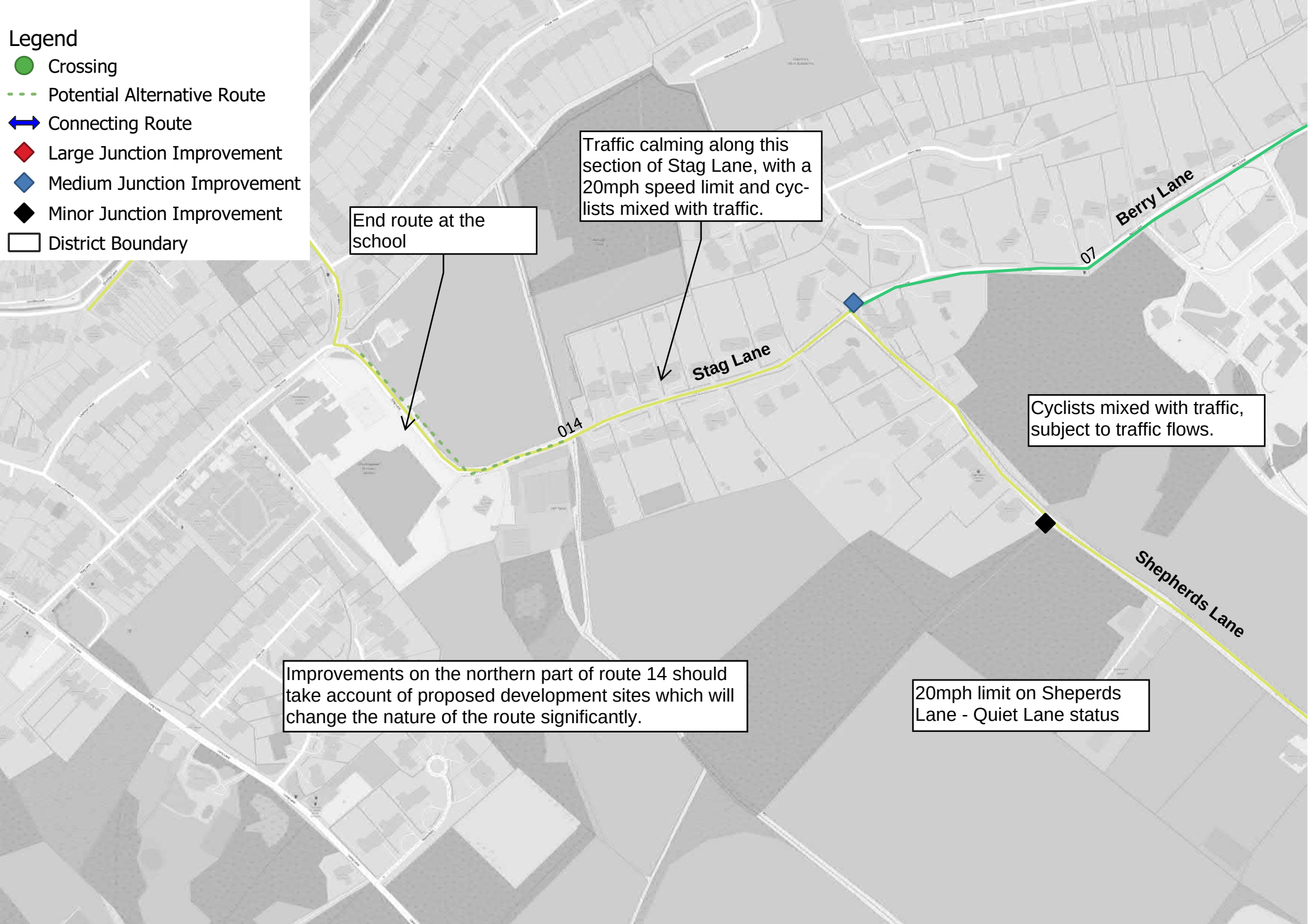
- A crossing point labeled "8 (PP)" near the top.
- A junction improvement symbol (black diamond) at the intersection of Station Road and Northway.
- A connecting route symbol (blue double arrow) between Station Road and High Street.
- A potential alternative route shown as a dashed green line along High Street.
- District boundaries are indicated by white outlines.

Annotations:

- "Northbound cyclists mixed with traffic subject to traffic flows" points to the northern section of Station Road.
- "Extend Station Road 20mph limit to the north" points to the northern 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 northern section of Station Road.
- "Links to route 2 and 3" points to the intersection of Station Road and High Street.

[illegible][illegible]





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

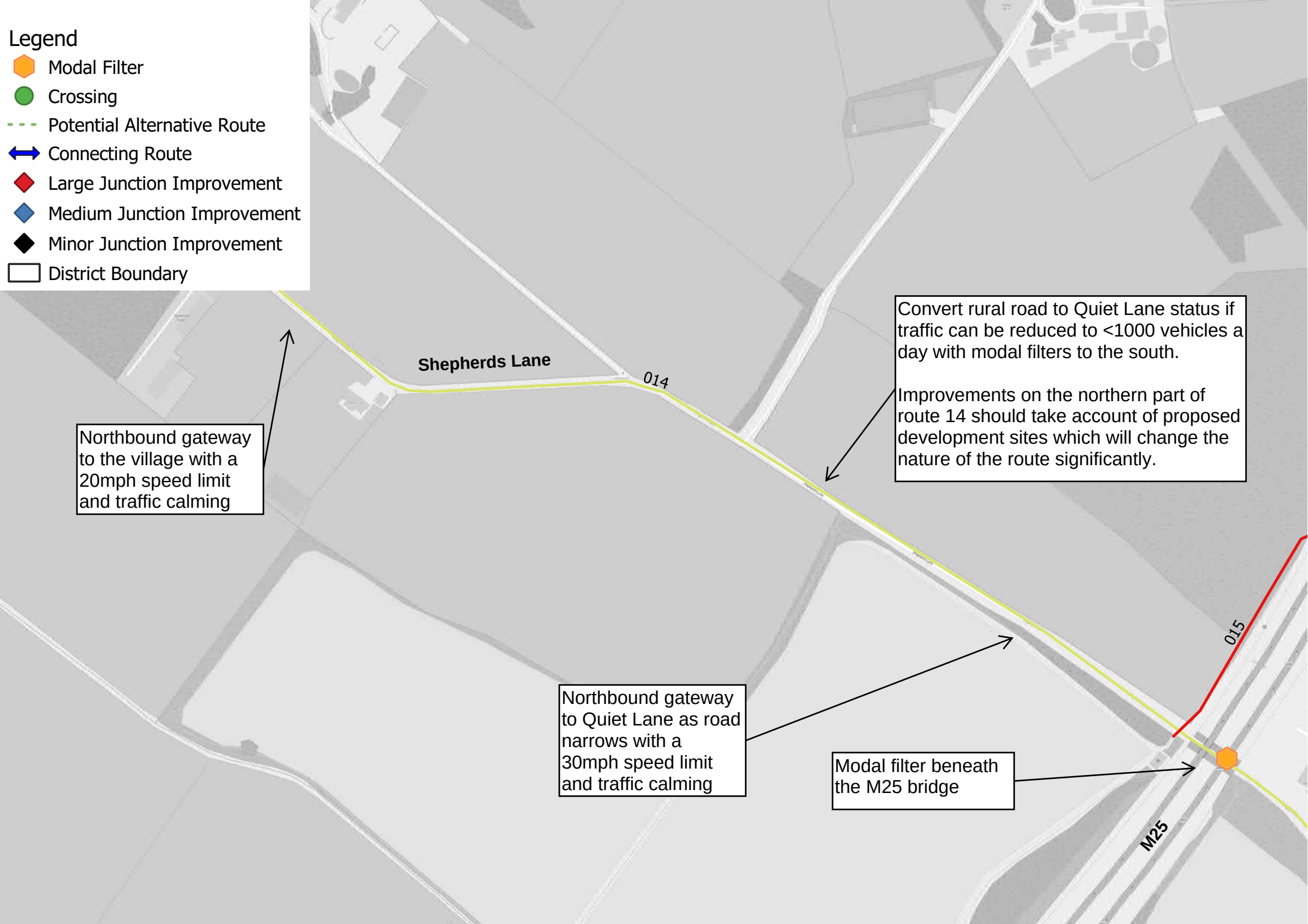
End route at the school

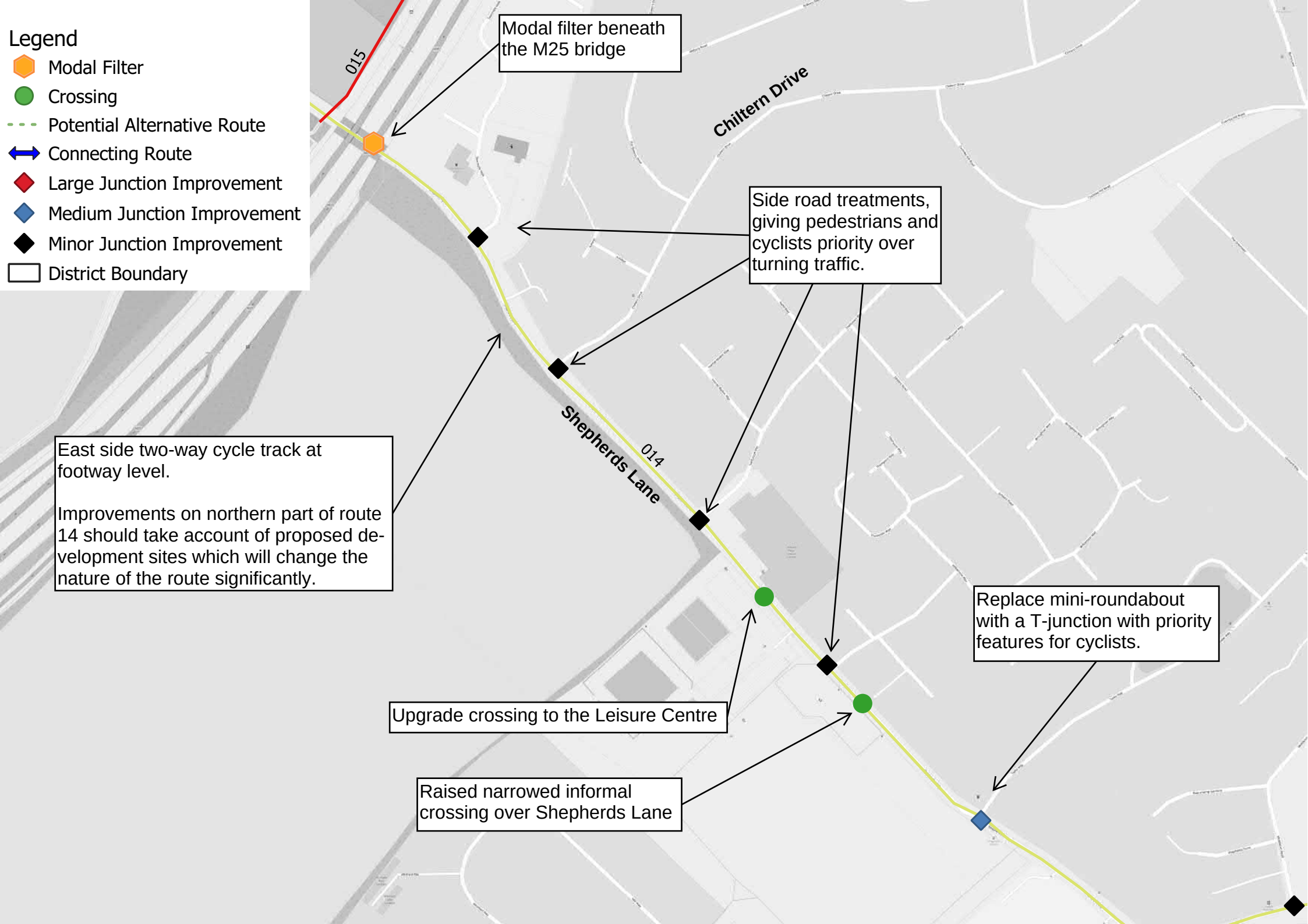
Traffic calming along this section of Stag Lane, with a 20mph speed limit and cyclists mixed with traffic.

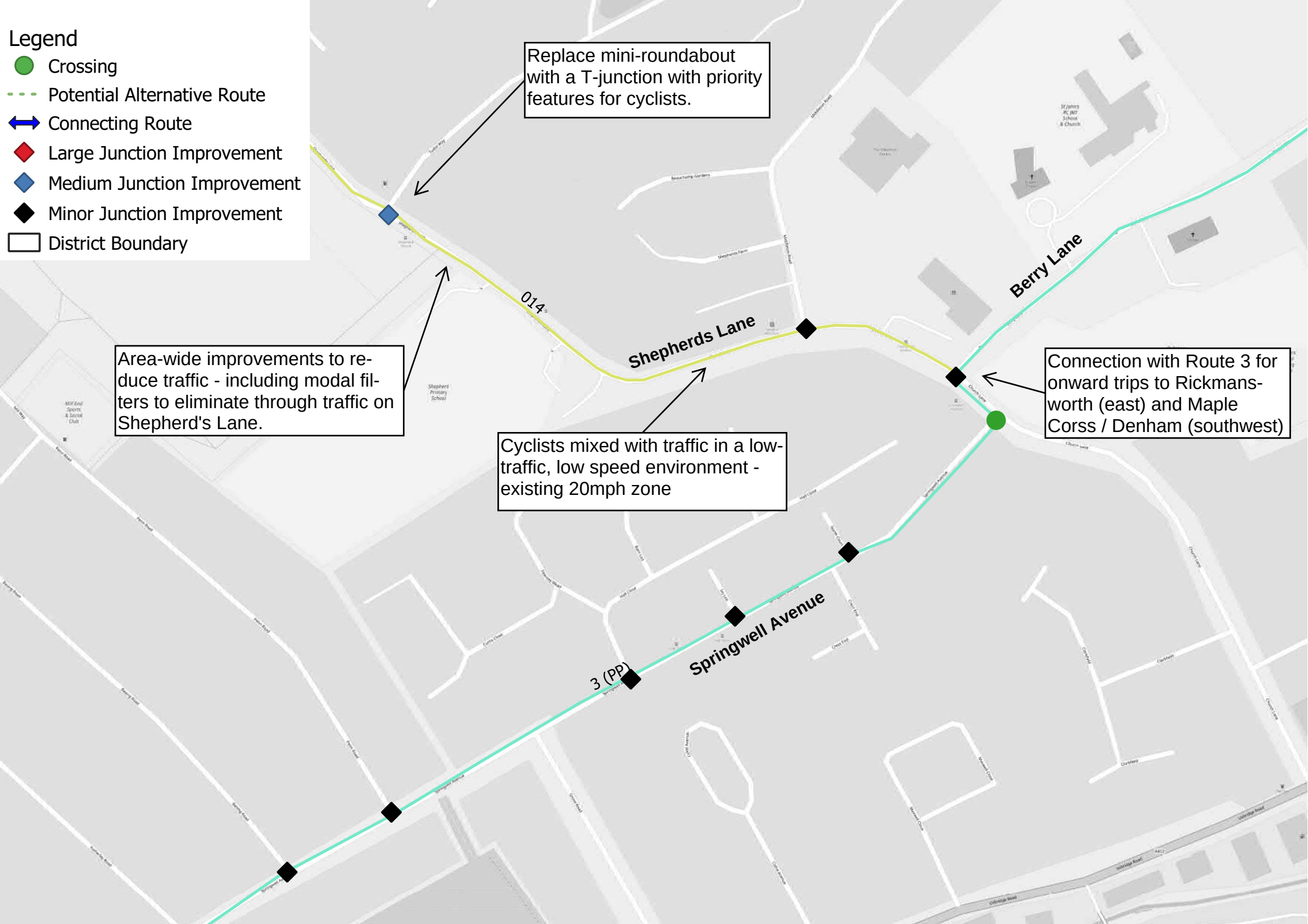
Cyclists mixed with traffic, subject to traffic flows.

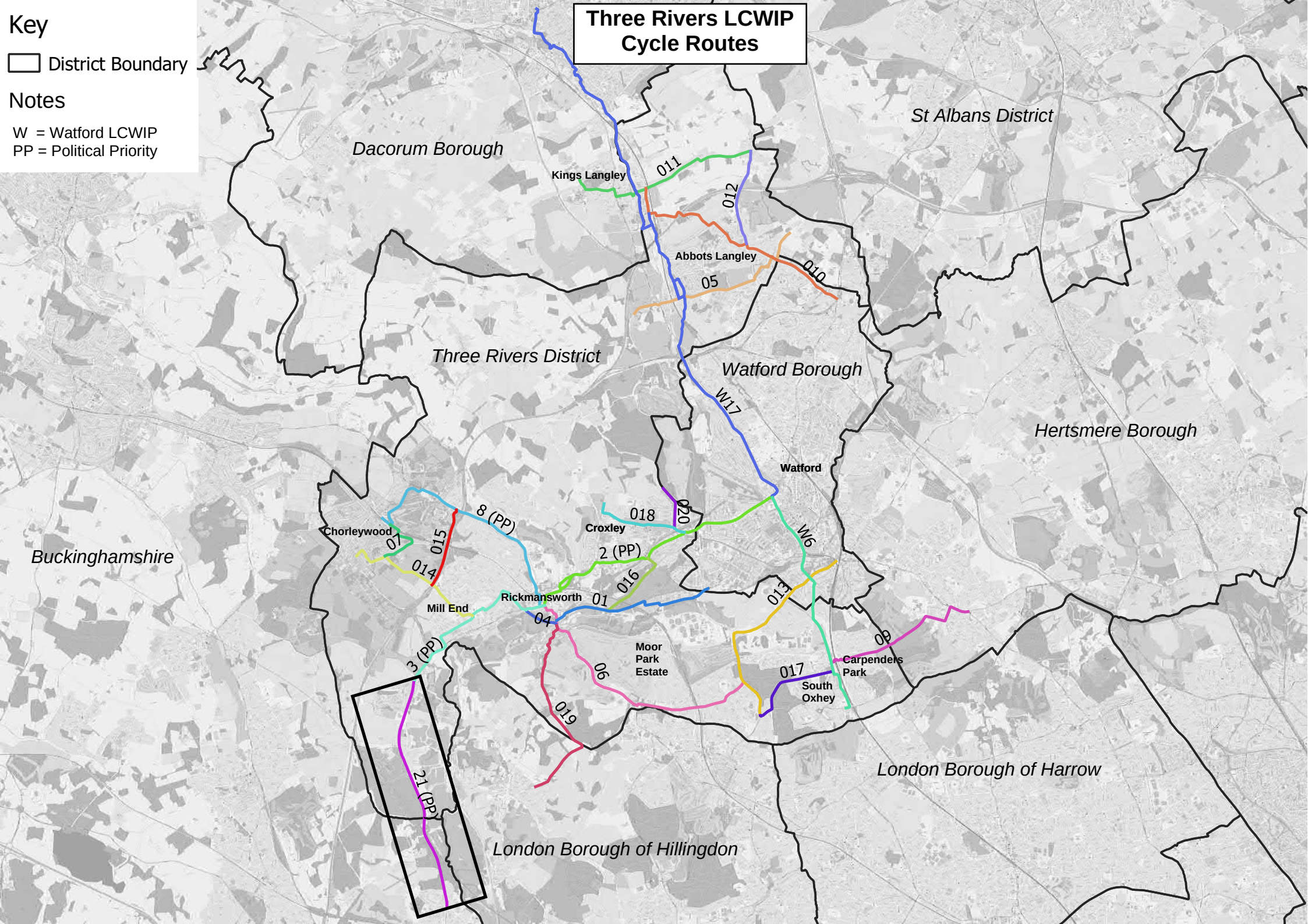
Improvements on the northern part of route 14 should take account of proposed development sites which will change the nature of the route significantly.

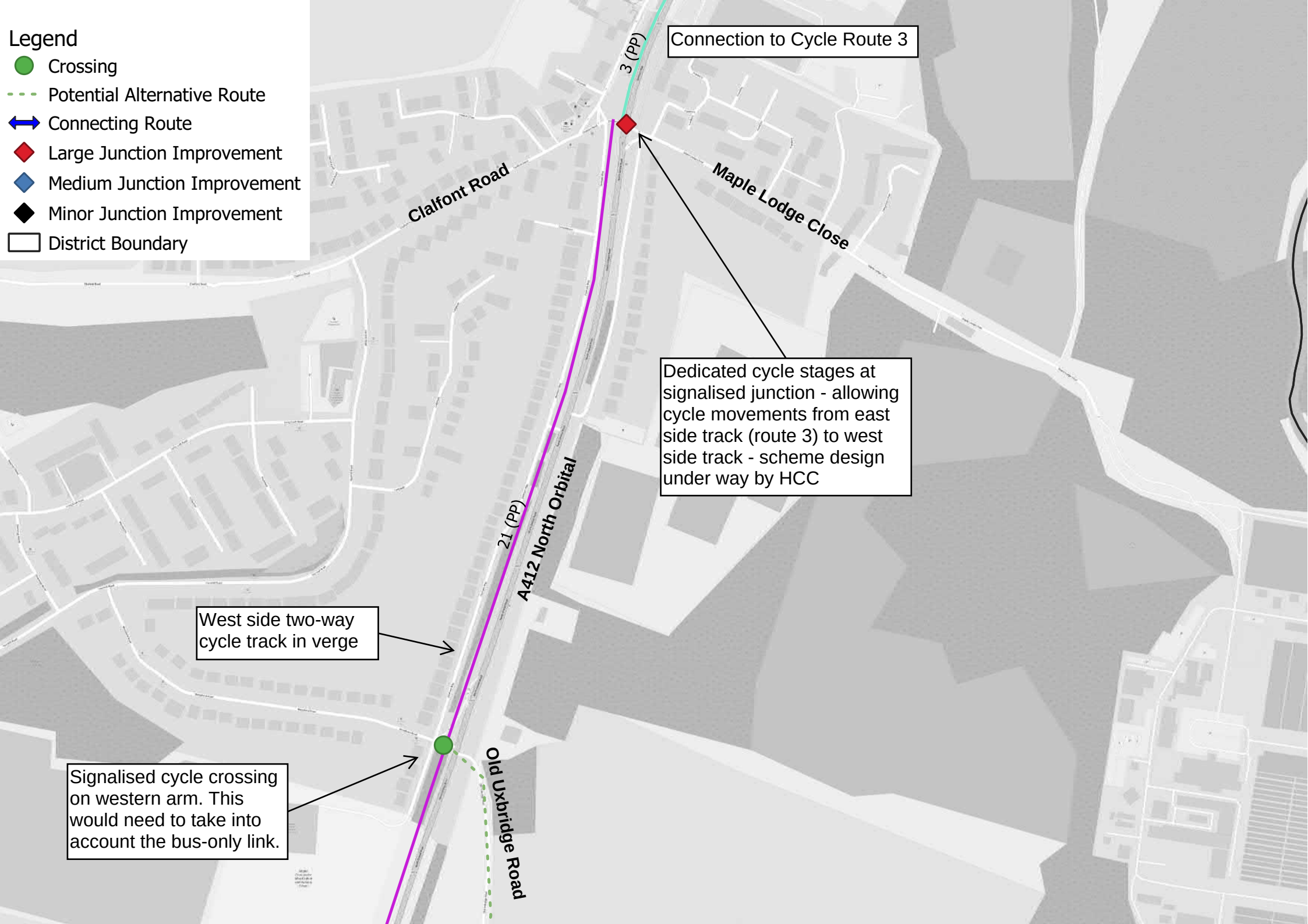
20mph limit on Sheperds Lane - Quiet Lane status

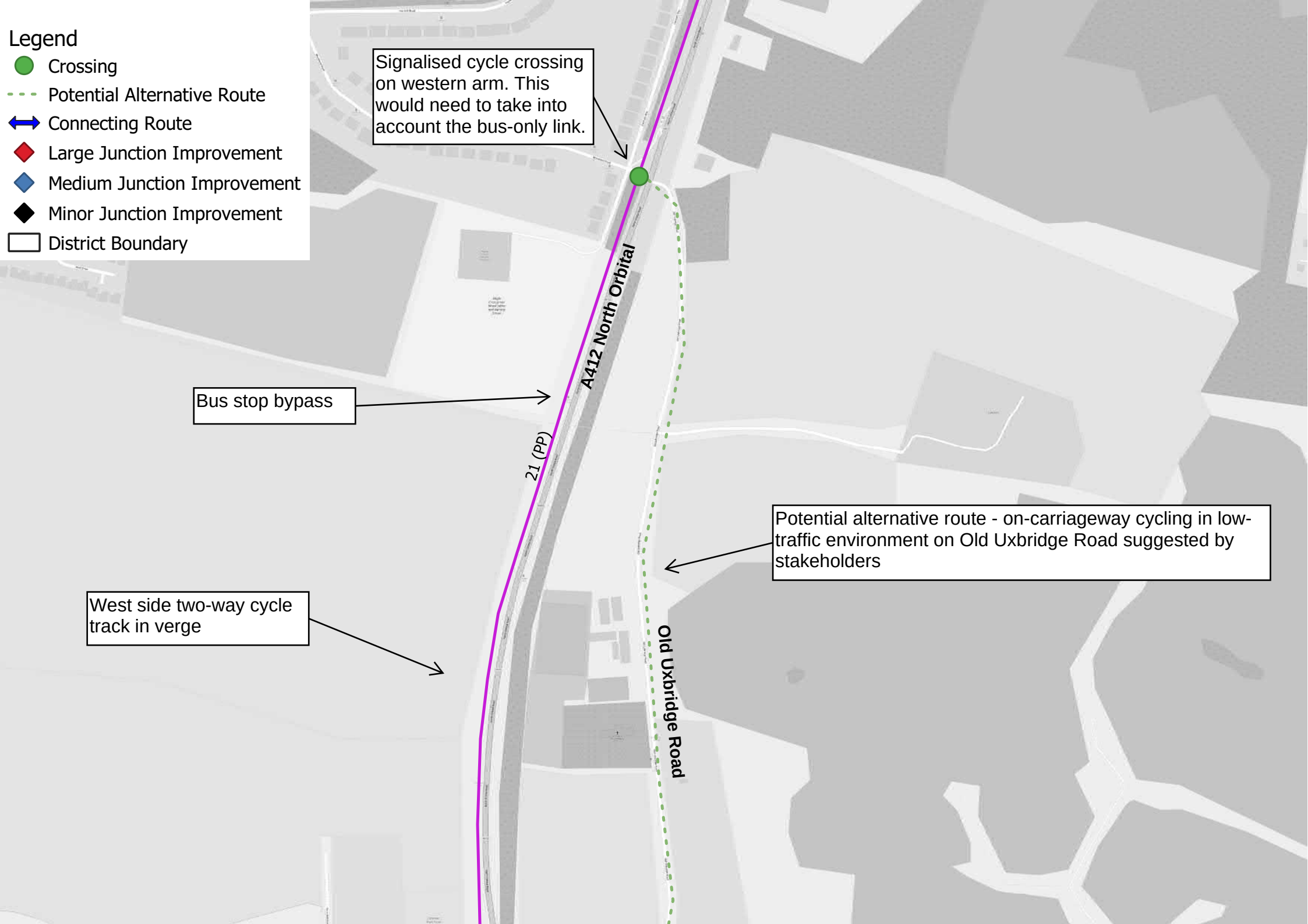


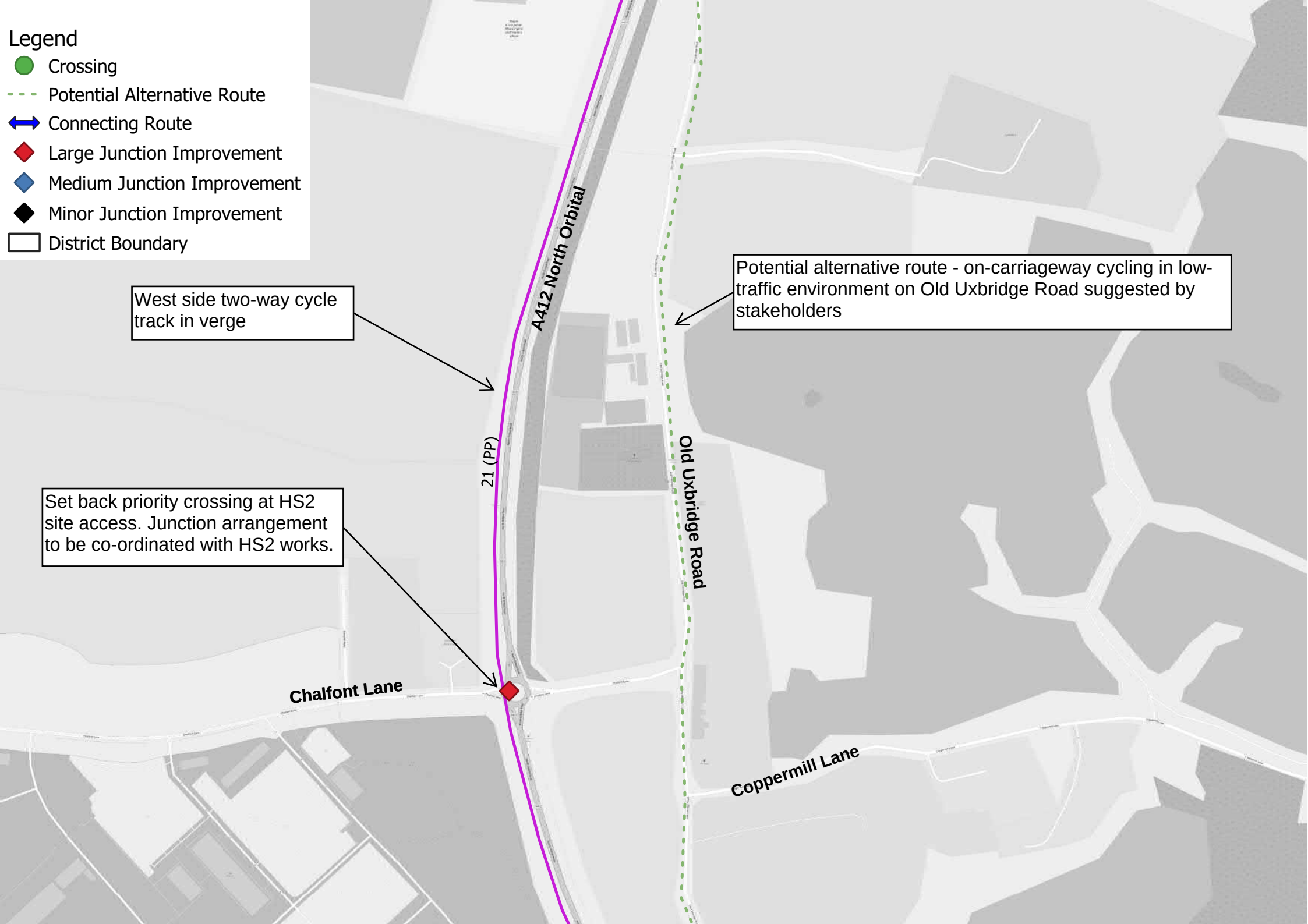


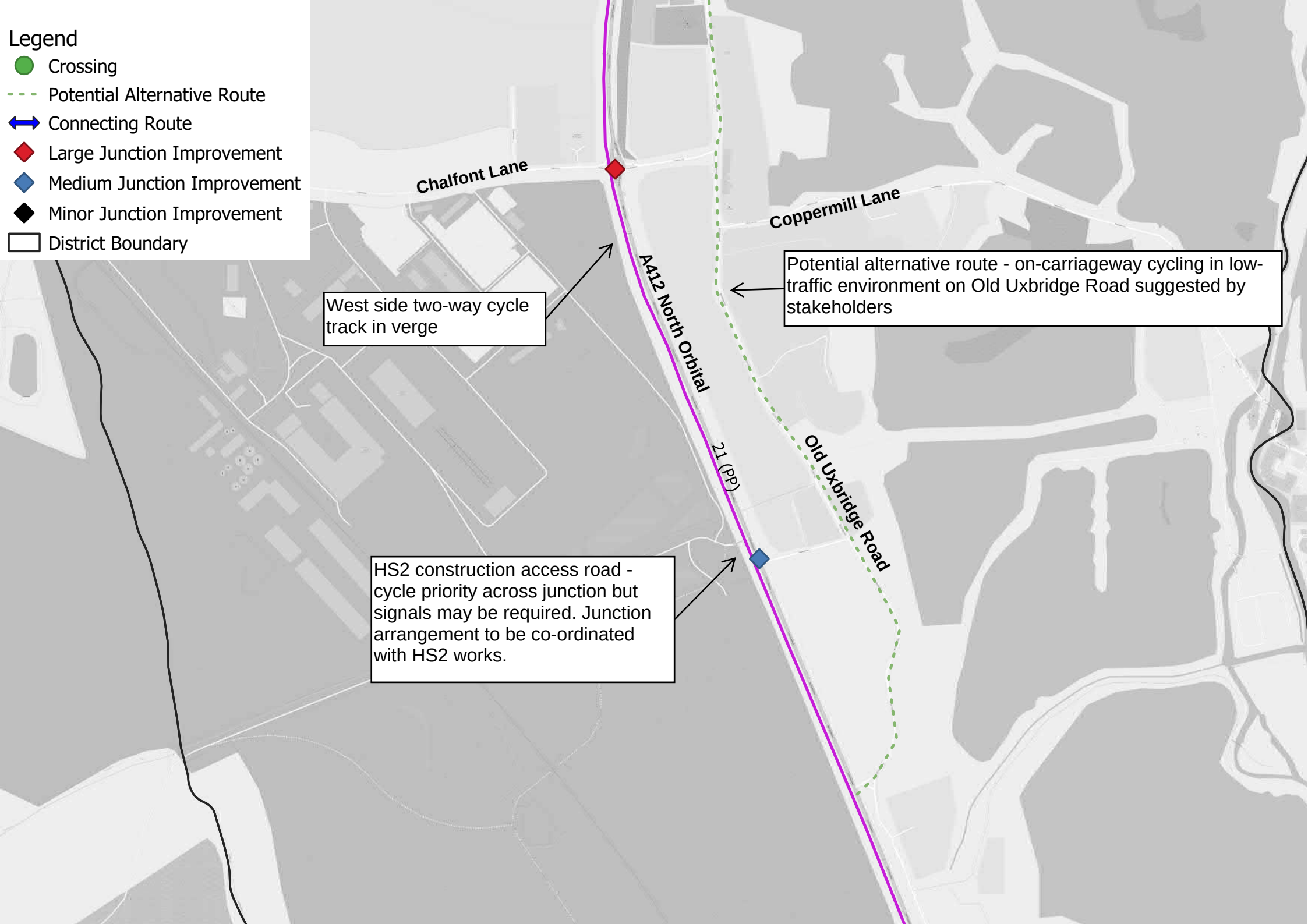


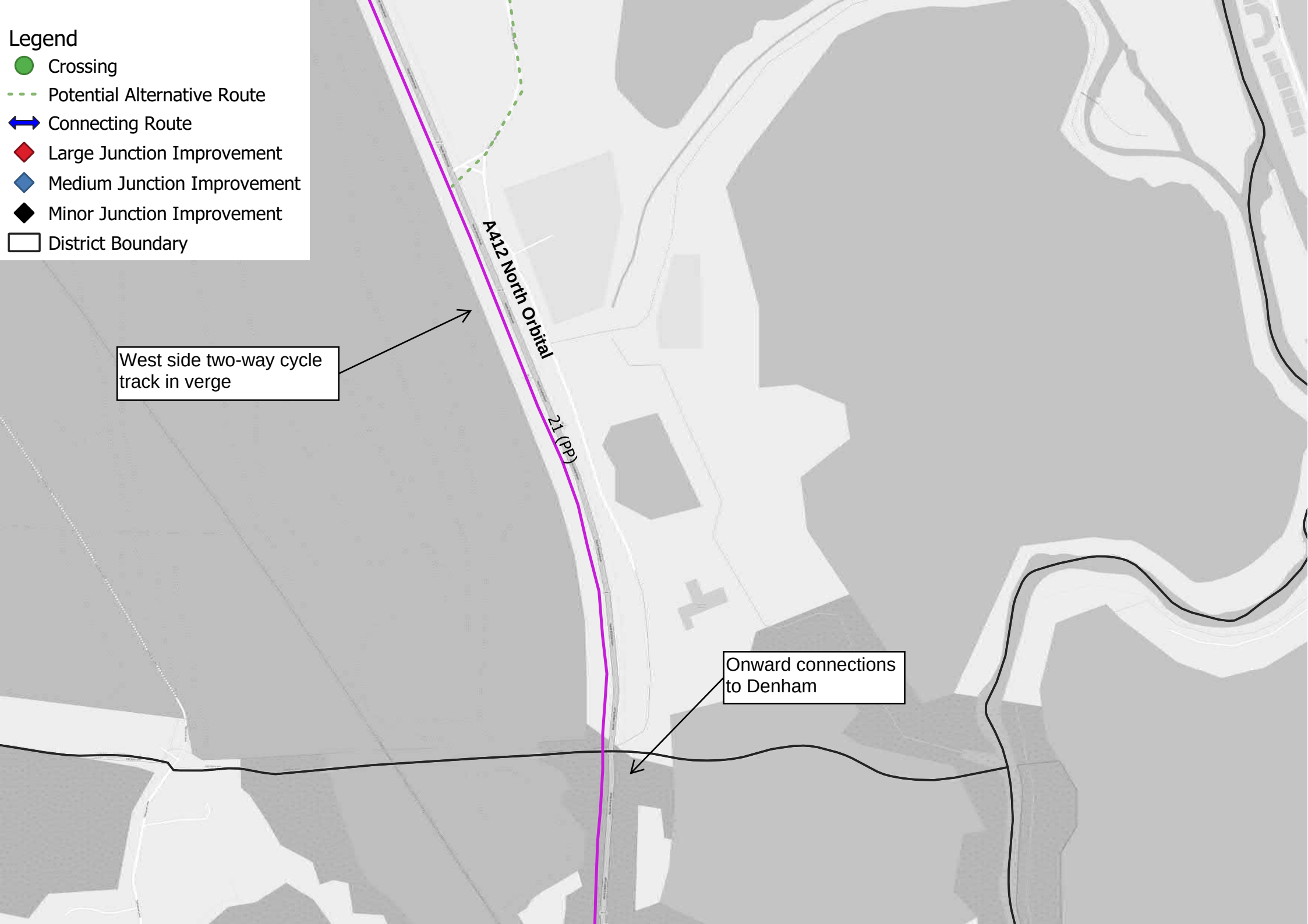












Walking Interventions

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

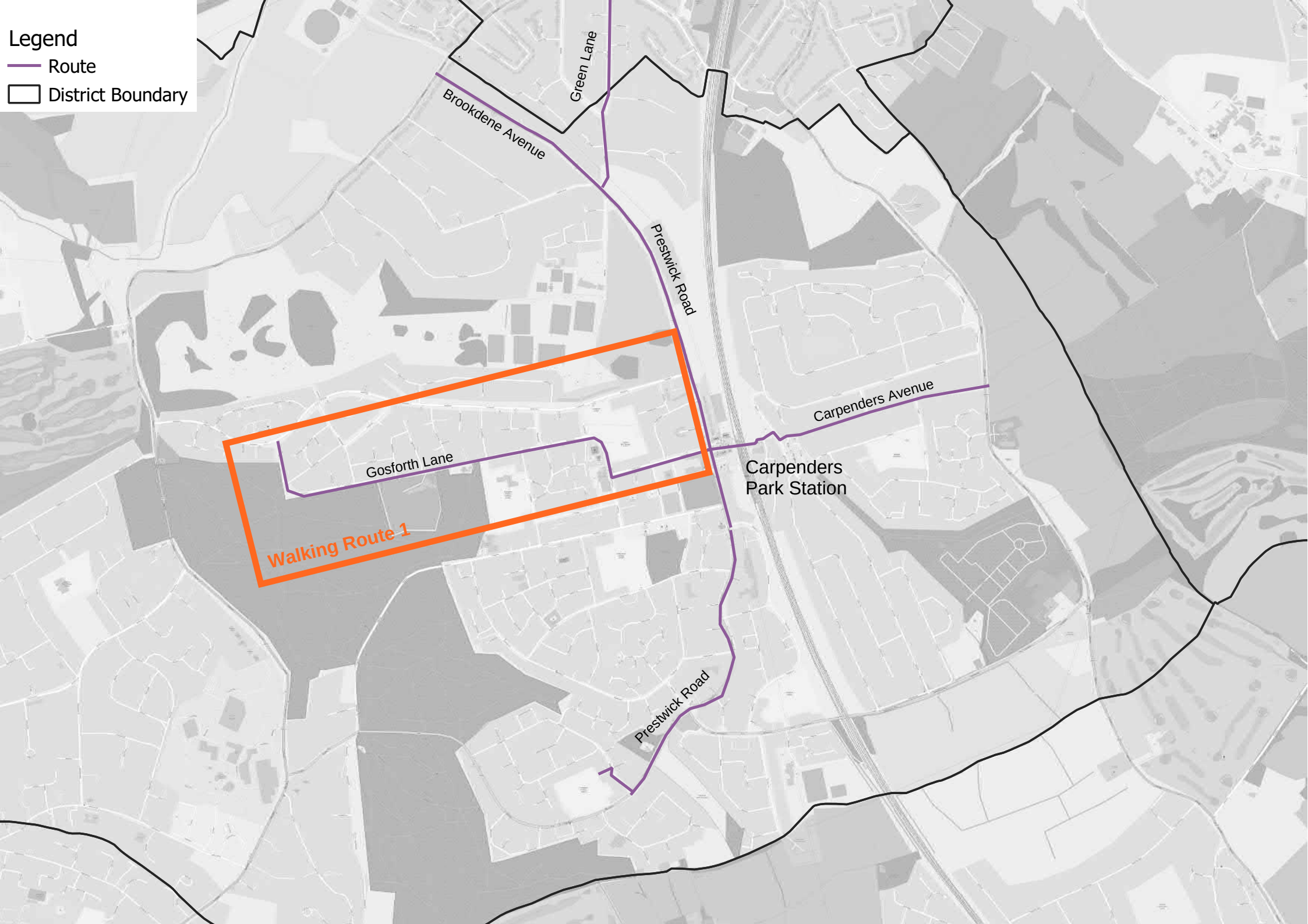
Guide to plans

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

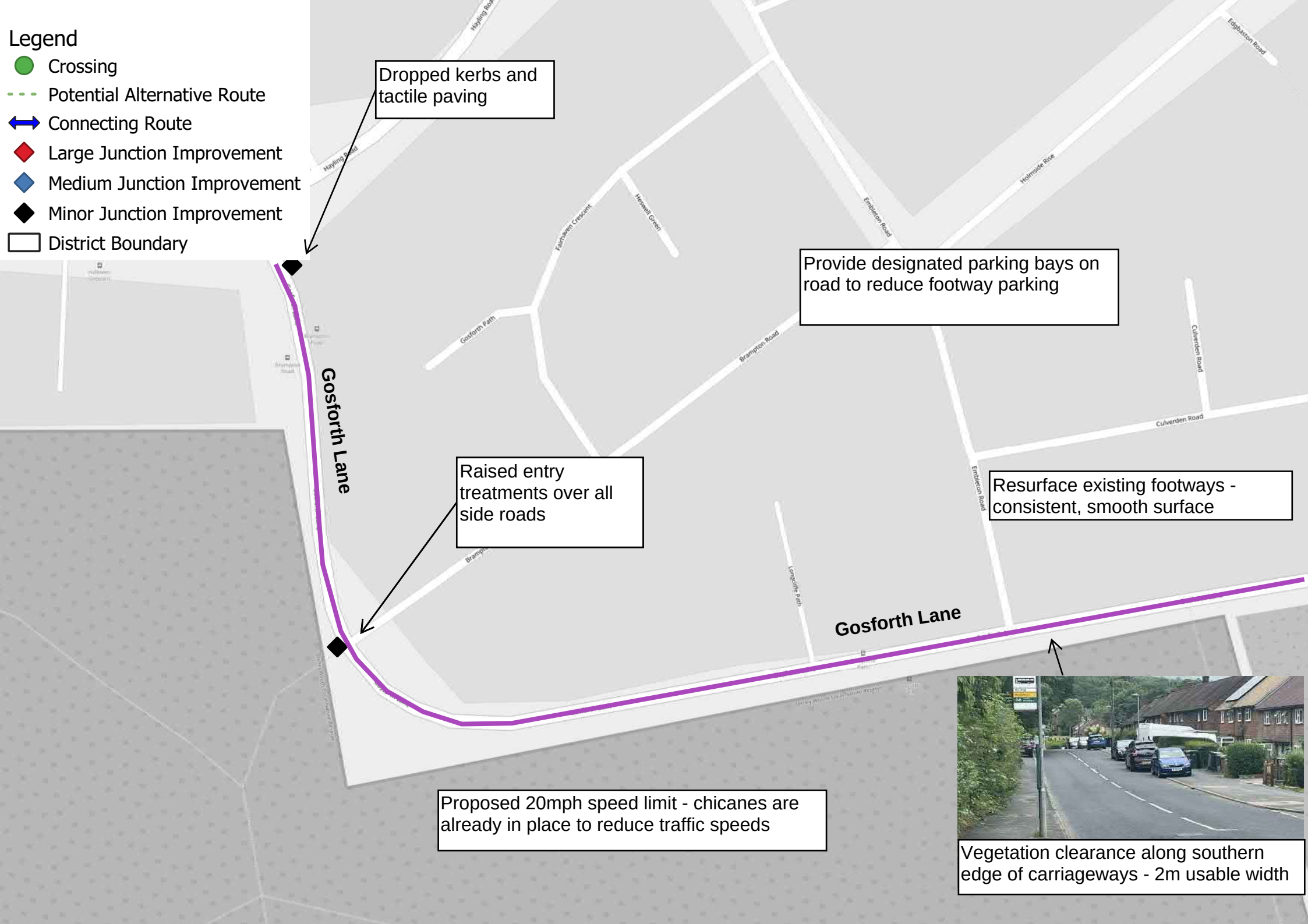
Carpenders Avenue

Gosforth Lane

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

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

Gosforth Lane

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

Fairfield Avenue

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

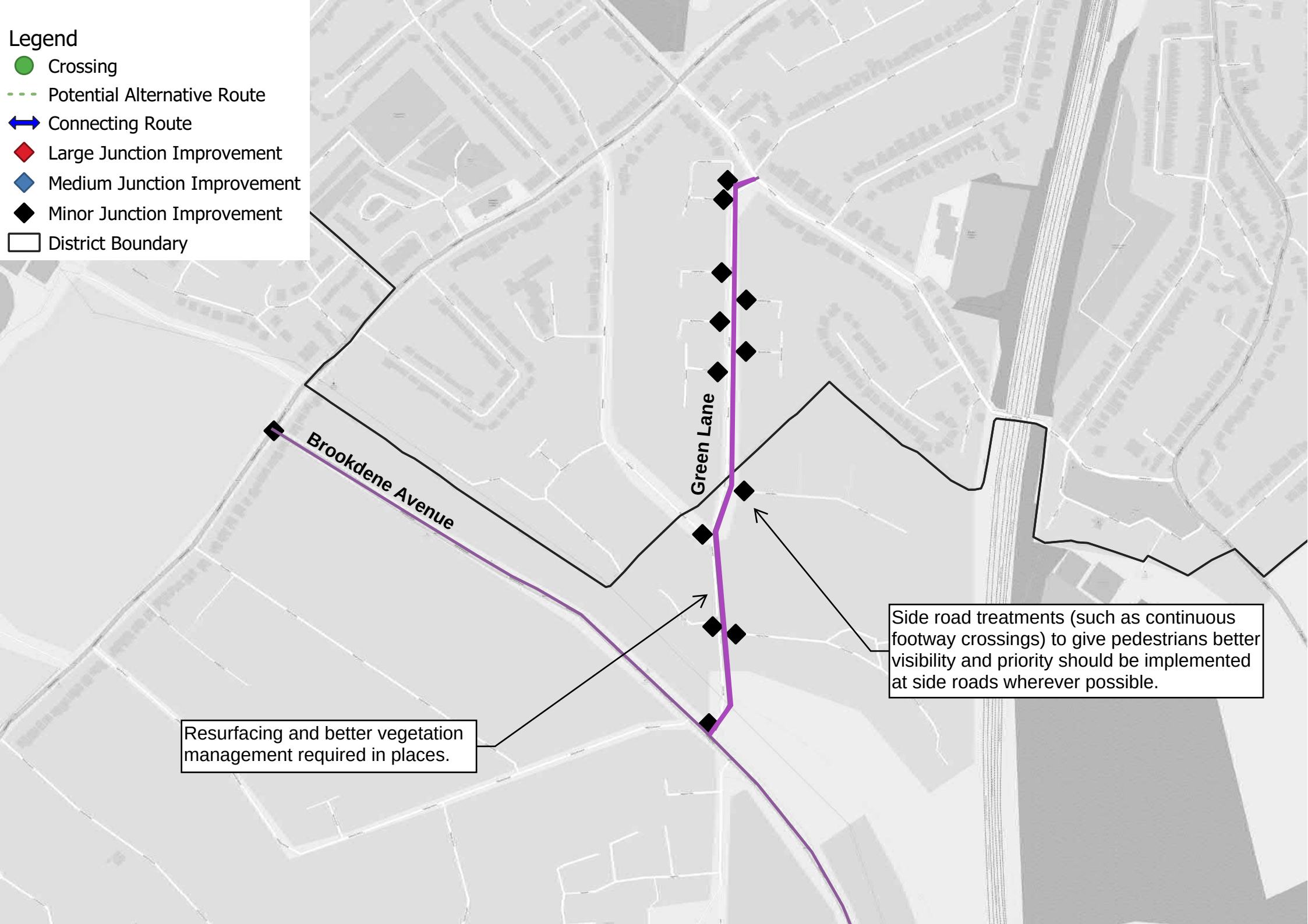
Prestwick Road

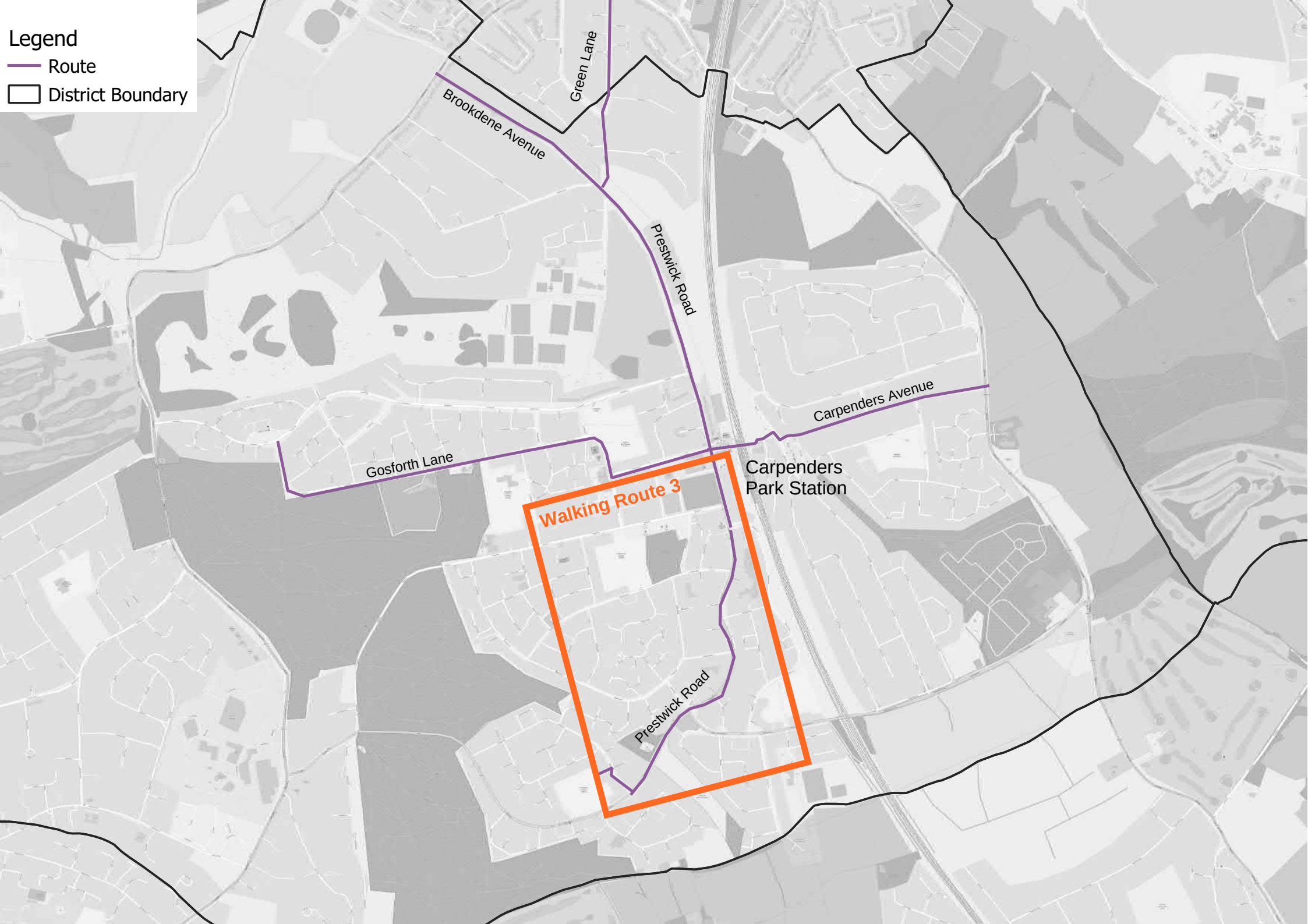
Gosforth Lane

Carpenders Avenue

Carpenders
Park Station

Prestwick Road





Legend

- Route
- District Boundary

Brookdene Avenue

Green Lane

Prestwick Road

Carpenders Avenue

Gosforth Lane

Walking Route 3

Carpenders Park Station

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

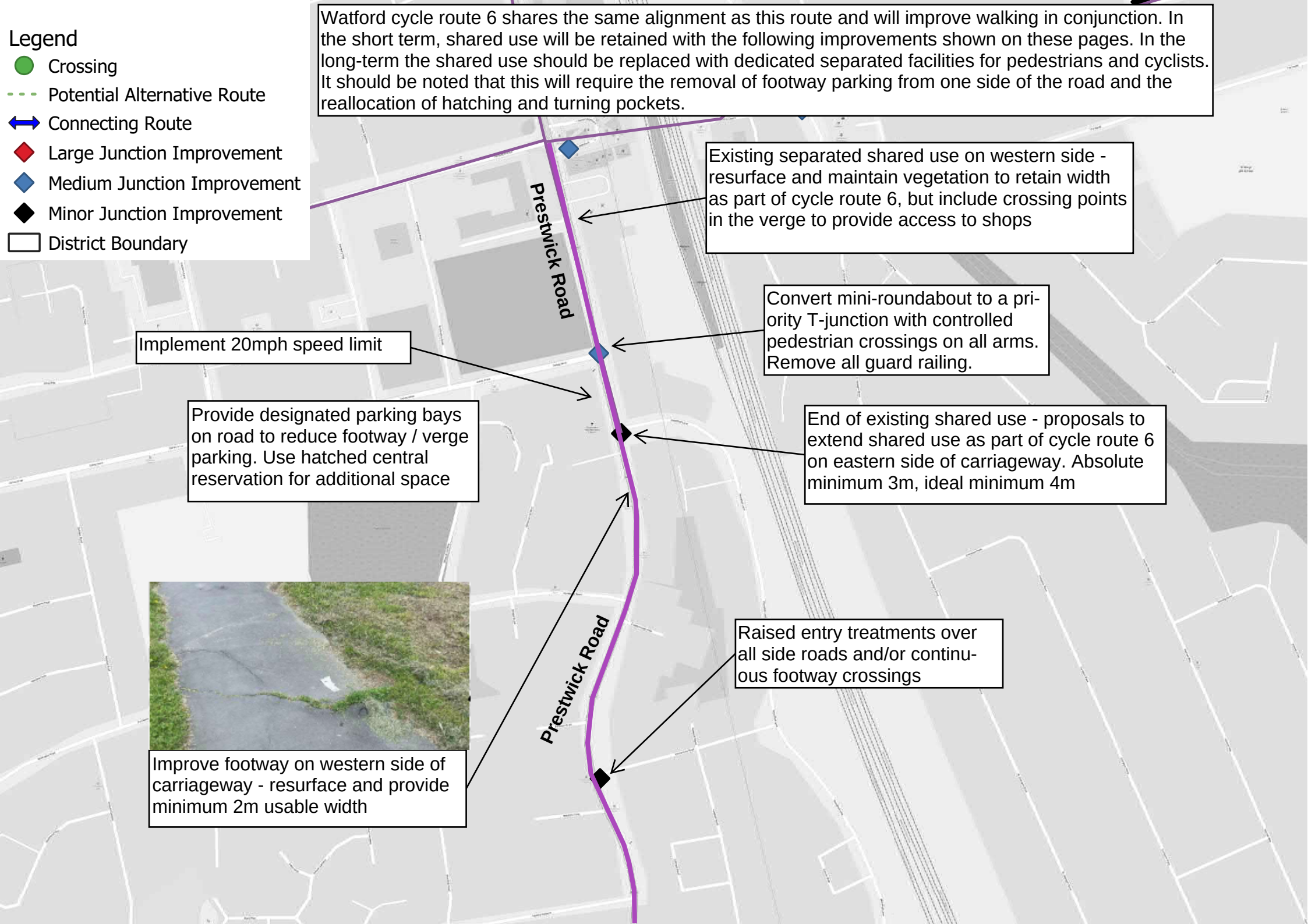
Raised entry treatments over all side roads and/or continuous footway crossings

Implement 20mph speed limit

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

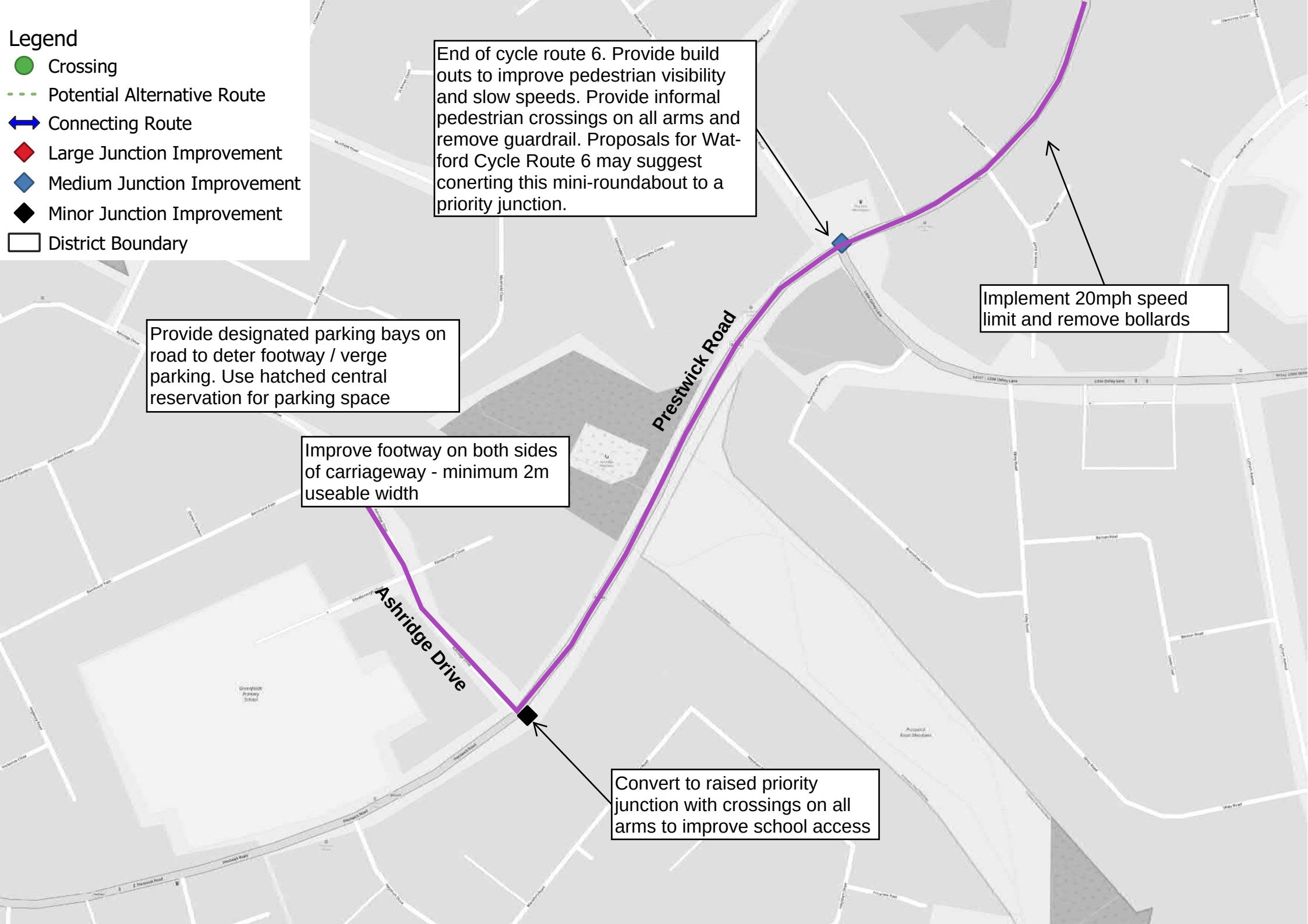


Improve footway on western side of carriageway - resurface and provide minimum 2m usable width



Legend

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



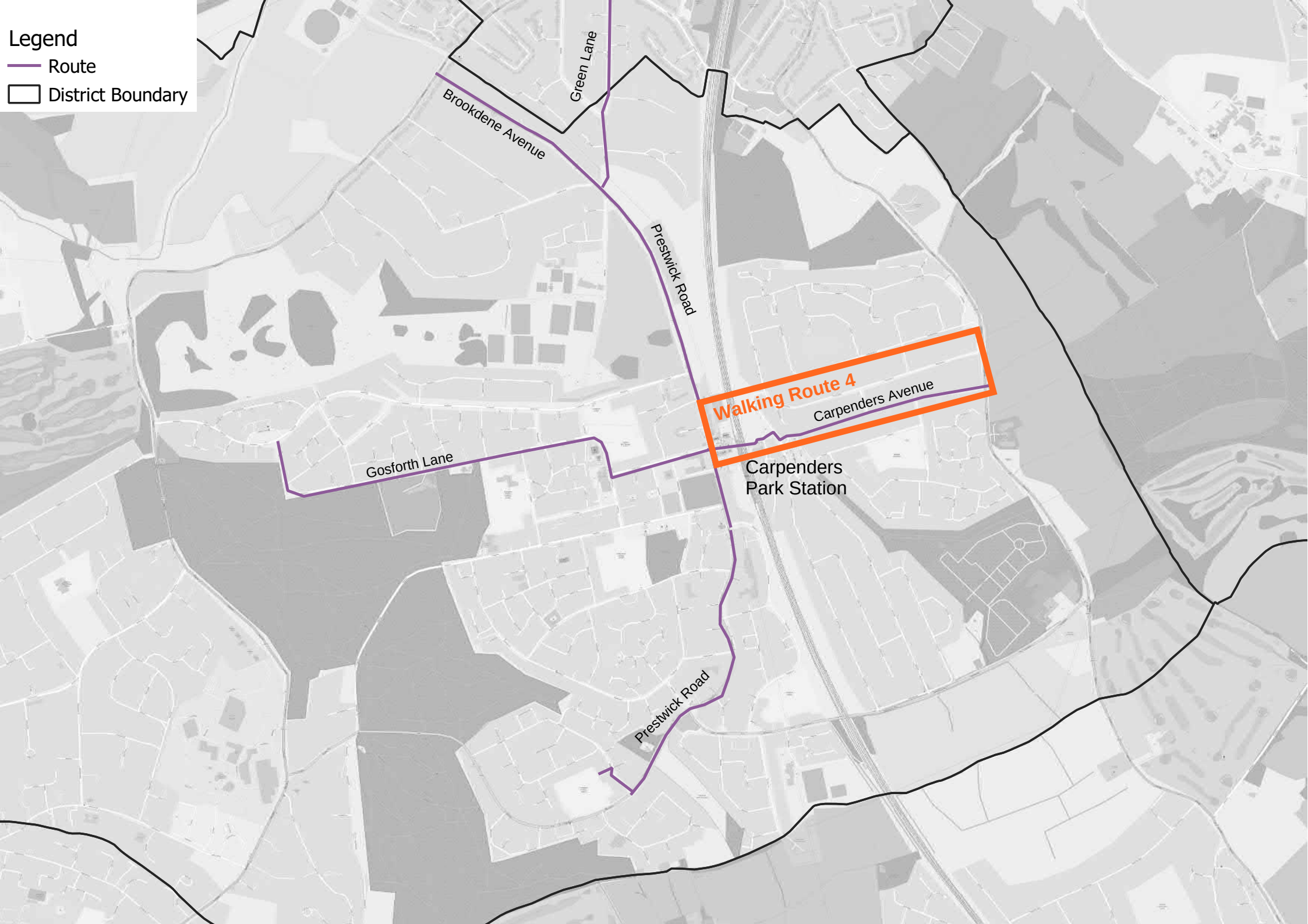
End of cycle route 6. Provide build outs to improve pedestrian visibility and slow speeds. Provide informal pedestrian crossings on all arms and remove guardrail. Proposals for Watford Cycle Route 6 may suggest converting this mini-roundabout to a priority junction.

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

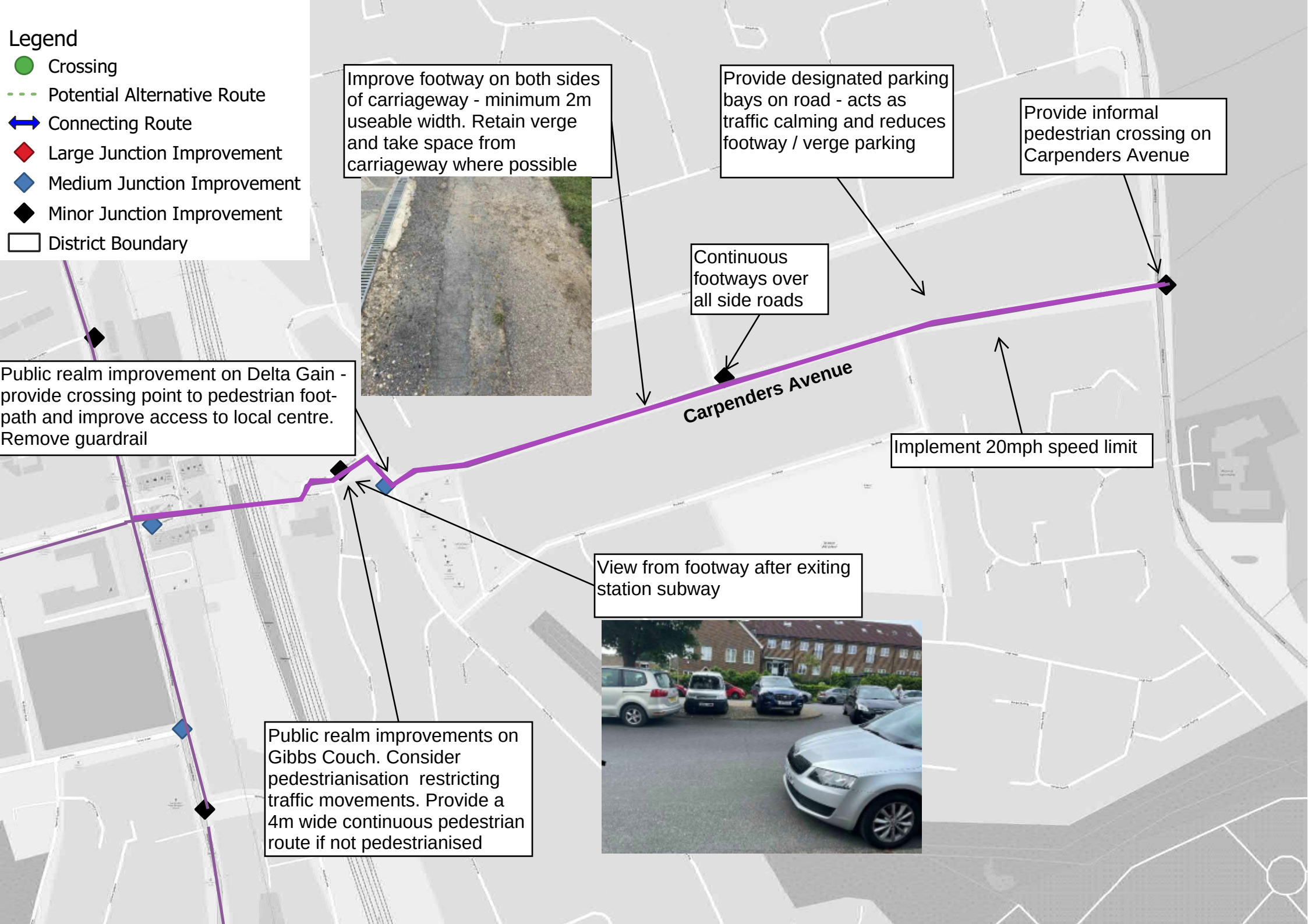
Walking Route 4

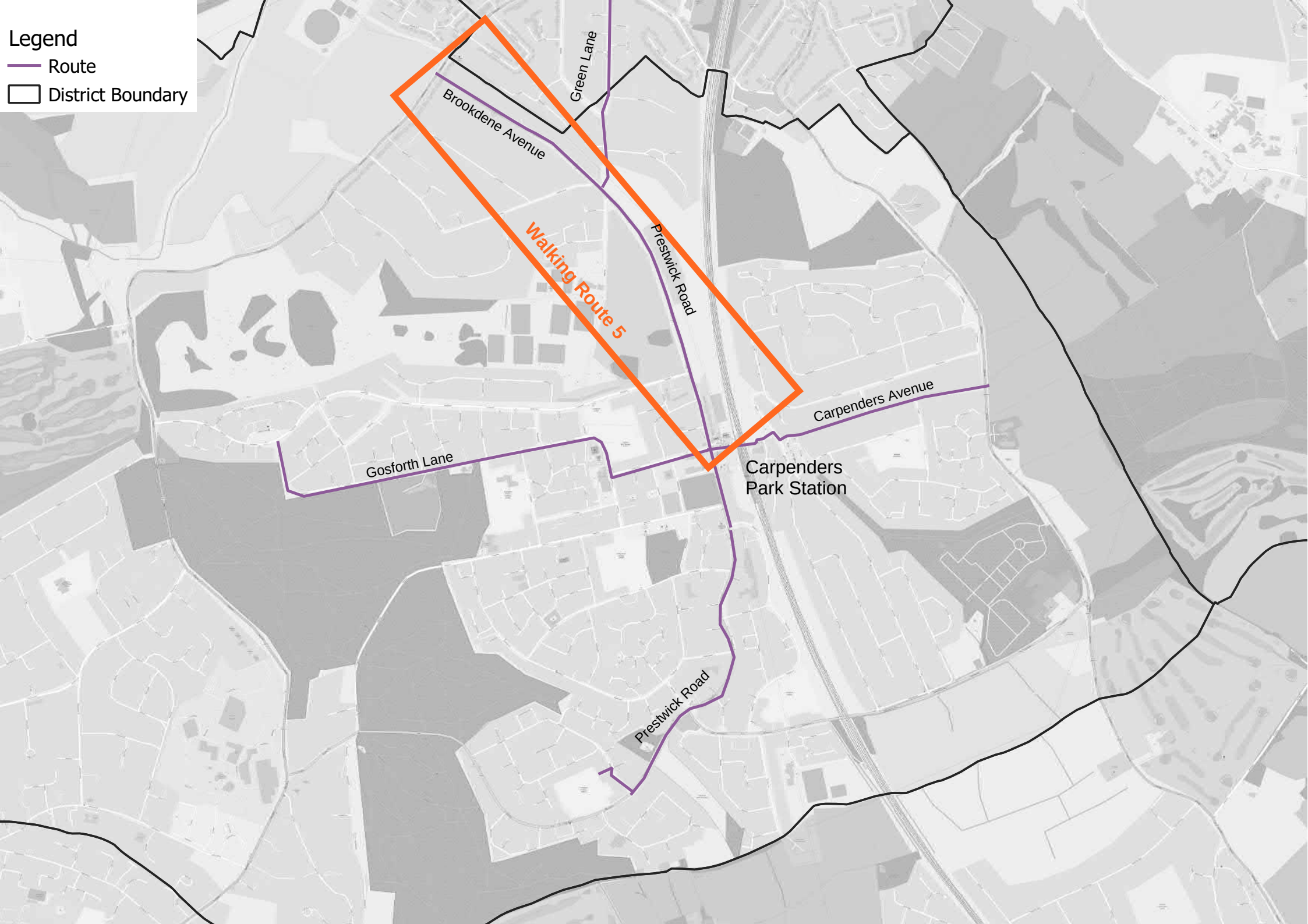
Carpenders Avenue

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

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 D

ATE Route Tool and CLoS Scoring Sheets

Scores can be given for each section to indicate the quality of the design according to the criteria provided:
 C for critical factors, which indicate that improvements are required for this section of work (black)
 0 for poor provision (red)
 1 for provision which is adequate but should be improved if possible (amber)
 2 for good quality provision (green)

Where the route or section may fall under multiple scores, always go with the lowest one, as this tool is to identify where improvements can be made to the route.

Where multiple sections are required, please copy the 'CLOS Tool' sheet, and rename the tabs to indicate the section identifiers.

Comments are available, as criteria is qualitative, so comments can be used to justify the scoring provided, allowing the audit to be better understood and reviewed by other stakeholders

1.1.2 The guidance contains tools which give local authorities flexibility on infrastructure design and sets a measurable quality threshold to achieve when designing cycling schemes. The Cycling Level of Service (CLOS) at Appendix A and the Junction Assessment tools (JAT) at Appendix B are new mechanisms introduced to set minimum quality criteria. Only schemes with a minimum score of 70% under the CLOS, no critical fails and under the JAT no red-scored turning movements will generally be considered for funding. Where schemes are proposed for funding that do not meet these minimum criteria, authorities will be required to justify their design choices. It still gives local authorities flexibility on design of infrastructure, but sets an objective and measurable quality threshold. Use of these tools is explained in more detail in Chapter 4, Section 4.5.

4.5.3 A recommended **Cycling Level of Service** (CLOS) tool is provided in Appendix A. This includes a simple scoring assessment based on attributes of the five design criteria, which can be used to identify strengths and weaknesses, and therefore what the design needs to address. The tool includes some factors that are considered to be 'Critical Fails' – results that represent unsafe conditions for cycling which must be addressed (or an alternative route found).

4.5.4 Cycling rarely happens in isolation, and it may be useful to consider adopting a whole street approach, such as TfL's **Healthy Streets Check for Designers**.¹⁷

4.5.5 Good cycle infrastructure is normally accessible to a wide range of people but an independent **Access Audit** (see 4.5.11) should be carried out to identify any negative impacts on other users such as access to disabled parking bays or potential trip hazards. Within that context, it is still important to meet the cycling design quality, which the CLOS tool measures.

4.5.6 A cycle route may consist of different types of infrastructure along its length. It may therefore be necessary to split the route into consistent sections (in terms of design) and then assess each section independently. It may only be necessary to assess the more problematic sections to analyse the type and severity of the issues, on the basis that the overall quality of the route is determined by its constraints.

Cycle Level of Service Tool Summary

KEY: Quality of Section
Low: Score < 50%
Intermediate: 50% <= Score < 70%
High: Score > 70%
Critical: Design fails due to one or more critical scores.

**Route
Length**

Key Requirement	Factor	Design principle	Indicators	Critical	0 (Red)	1 (Amber)	2 (Green)	Score	Comments
Cohesion	Connections	Cyclists should be able to easily and safely join and navigate along different sections of the same route and between different routes in the network.	1. Ability to join/leave route safely and easily: consider left and right turns		Cyclists cannot connect to other routes without dismounting	Cyclists can connect to other routes with minimal disruption to their journey	Cyclists have dedicated connections to other routes provided, with no interruption to their journey		
	Continuity and Wayfinding	Routes should be complete with no gaps in provision. 'End of route' signs should not be installed – cyclists should be shown how the route continues. Cyclists should not be 'abandoned', particularly at junctions where provision may be required to ensure safe crossing movements.	2. Provision for cyclists throughout the whole length of the route		Cyclists are 'abandoned' at points along the route with no clear indication of how to continue their journey.	The route is made up of discrete sections, but cyclists can clearly understand how to navigate between them, including through junctions.	Cyclists are provided with a continuous route, including through junctions		
	Density of Network	Cycle networks should provide a mesh (or grid) of routes across the town or city. The density of the network is the distance between the routes which make up the grid pattern. The ultimate aim should be a network with a mesh width of 250m.	3. Density of routes based on mesh width ie distances between primary and secondary routes within the network		Route contributes to a network density mesh width >1000	Route contributes to a network density mesh width 250 – 1000m	Route contributes to a network density mesh width <250m		
Directness	Distance	Routes should follow the shortest option available and be as near to the 'as the-crow-flies' distance as possible.	4. Deviation of route Deviation Factor is calculated by dividing the actual distance along the route by the straight line (crow-fly) distance, or shortest road alternative.		Deviation factor against straight line or shortest road alternative >1.4	Deviation factor against straight line or shortest road alternative 1.2 – 1.4	Deviation factor against straight line or shortest road alternative <1.2		
	Time: Frequency of required stops or give ways	The number of times a cyclist has to stop or loses right of way on a route should be minimised. This includes stopping and give ways at junctions or crossings, motorcycle barriers, pedestrian-only zones etc.	5. Stopping and give way frequency		The number of stops or give ways on the route is more than 4 per km	The number of stops or give ways on the route is between 2 and 4 per km	The number of stops or give ways on the route is less than 2 per km		
	Time: Delay at junctions	The length of delay caused by junctions should be minimised. This includes assessing impact of multiple or single stage crossings, signal timings, toucan crossings etc.	6. Delay at junctions		Delay for cyclists at junctions is greater than for motor vehicles	Delay for cyclists at junctions is similar to delay for motor vehicles	Delay is shorter than for motor vehicles or cyclists are not required to stop at junctions (eg bypass at signals)		
	Time: Delay on links	The length of delay caused by not being able to bypass slow moving traffic.	7. Ability to maintain own speed on links		Cyclists travel at speed of slowest vehicle (including a cycle) ahead	Cyclists can usually pass slow traffic and other cyclists	Cyclists can always choose an appropriate speed.		
	Gradients	Routes should avoid steep gradients where possible. Uphill sections increase time, effort and discomfort. Where these are encountered, routes should be planned to minimise climbing gradient and allow users to retain momentum gained on the descent.	8. Gradient		Route includes sections steeper than the gradients recommended Chapter 5 of LTN 1/20	There are no sections of route steeper than the gradients recommended in Chapter 5 fo LTN 1/20	There are no sections of route which steeper than 2%		
	Reduce/ remove speed differences where cyclists are sharing the carriageway	Where cyclists and motor vehicles are sharing the carriageway, the key to reducing severity of collisions is reducing the speeds of motor vehicles so that they more closely match that of cyclists. This is particularly important at points where risk of collision is greater, such as at junctions.	9. Motor traffic speed on approach and through junctions where cyclists are sharing the carriageway through the junction	85th percentile > 37mph (60kph)	85th percentile >30mph	85th percentile 20mph-30mph	85th percentile <20mph		
			10. Motor traffic speed on sections of shared carriageway	85th percentile > 37mph (60kph)	85th percentile >30mph	85th percentile 20mph-30mph	85th percentile <20mph		
	Avoid high motor traffic volumes where cyclists are sharing the	Cyclists should not be required to share the carriageway with high volumes of motor vehicles. This is particularly important at points where risk of collision is greater	11. Motor traffic volume on sections of shared carriageway, expressed as	>10000 AADT, or >5% HGV	5000-10000 AADT and 2-5%HGV	2500-5000 and <2% HGV	0-2500 AADT		

Safety		Where risk of collision is greater, such as at junctions.	Expressed as vehicles per peak hour						
	Risk of collision	Where speed differences and high motor vehicle flows cannot be reduced cyclists should be separated from traffic – see Figure 4.1. This separation can be achieved at varying degrees through on-road cycle lanes, hybrid tracks and off-road provision. Such segregation should reduce the risk of collision from beside or behind the cyclist.	12. Segregation to reduce risk of collision alongside or from behind	Cyclists sharing carriageway – nearside lane in critical range between 3.2m and 3.9m wide and traffic volumes prevent motor vehicles moving easily into opposite lane to pass cyclists.	Cyclists in unrestricted traffic lanes outside critical range (3.2m to 3.9m) or in cycle lanes less than 1.8m wide.	Cyclists in cycle lanes at least 1.8m wide on carriageway; 85th percentile motor traffic speed max 30mph.	Cyclists on route away from motor traffic (off road provision) or in offcarriageway cycle track. Cyclists in hybrid/light segregated track; 85th percentile motor traffic speed max 30mph.		
		A high proportion of collisions involving cyclists occur at junctions. Junctions therefore need particular attention to reduce the risk of collision. Junction treatments include: Minor/side roads – cyclist priority and/or speed reduction across side roads Major roads – separation of cyclists from motor traffic through junctions.	13. Conflicting movements at junctions		Side road junctions frequent and/ or untreated. Major junctions, conflicting cycle/ motor traffic movements not separated	Side road junctions infrequent and with effective entry treatments. Major junctions, principal conflicting cycle/ motor traffic movements separated.	Side roads closed or treated to blend in with footway. Major junctions, all conflicting cycle/motor traffic streams separated.		
	Avoid complex design	Avoid complex designs which require users to process large amounts of information. Good network design should be self explanatory and self-evident to all road users. All users should understand where they and other road users should be and what movements they might make.	14. Legible road markings and road layout		Faded, old, unclear, complex road markings/ unclear or unfamiliar road layout	Generally legible road markings and road layout but some elements could be improved	Clear, understandable, simple road markings and road layout		
	Consider and reduce risk from kerbside activity	Routes should be assessed in terms of all multi-functional uses of a street including car parking, bus stops, parking, including collision with opened door.	15. Conflict with kerbside activity	Narrow cycle lanes <1.5m or less (including any buffer) alongside parking/loading	Significant conflict with kerbside activity (eg nearside cycle lane < 2m (including buffer) wide alongside kerbside parking)	Some conflict with kerbside activity – eg less frequent activity on nearside of cyclists, min 2m cycle lanes including buffer.	No/very limited conflict with kerbside activity or width of cycle lane including buffer exceeds 3m.		
	Reduce severity of collisions where they do occur	Wherever possible routes should include “evasion room” (such as grass verges) and avoid any unnecessary physical hazards such as guardrail, build outs, etc. to reduce the severity of a collision should it occur.	16. Evasion room and unnecessary hazards		Cyclists at risk of being trapped by physical hazards along more than half of the route.	The number of physical hazards could be further reduced	The route includes evasion room and avoids any physical hazards.		
Comfort	Surface quality	Density of defects including non cycle friendly ironworks, raised/sunken covers/ gullies, potholes, poor quality carriageway paint (eg from previous cycle lane)	17. Major and minor defects		Numerous minor defects or any number of major defects	Minor and occasional defects	Smooth high grip surface		
		Pavement or carriageway construction providing smooth and level surface	18. Surface type		Any bumpy, unbound, slippery, and potentially hazardous surface.	Hand-laid materials, concrete pavements with frequent joints.	Machine laid smooth and non slip surface – eg Thin Surfacing, or firm and closely jointed blocks undisturbed by turning heavy vehicles.		
	Effective width without conflict	Cyclists should be able to comfortably cycle without risk of conflict with other users both on and off road.	19. Desirable minimum widths according to volume of cyclists and route type (where cyclists are separated from motor vehicles).		More than 25% of the route includes cycle provision with widths which are no more than 25% below desirable minimum values.	No more than 25% of the route includes cycle provision with widths which are no more than 25% below desirable minimum	Recommended widths are maintained throughout whole route		
	Wayfinding	Non-local cyclists should be able to navigate the routes without the need to refer to maps.	20. Signing		Route signing is poor with signs missing at key decision points.	Gaps identified in route signing which could be improved	Route is well signed with signs located at all decision points and junctions		
	Social safety and perceived vulnerability of user	Routes should be appealing and be perceived as safe and usable. Well used, well maintained, lit, overlooked routes are more attractive and therefore more likely	21. Lighting		Most or all of route is unlit	Short and infrequent unlit/ poorly lit sections	Route is lit to highway standards throughout		

Attractiveness		to be used.	22. Isolation		Route is generally away from activity	Route is mainly overlooked and is not far from activity throughout its length	Route is overlooked throughout its length		
	Impact on pedestrians, including people with disabilities	ntroduction of dedicated on-road cycle provision can enable people to cycle on-road rather than using footways which are not suitable for shared use. Introducing cycling onto well used footpaths may reduce the quality of provision for both users, particularly if the shared use path does not meet recommended widths.	23. Impact on pedestrians, Pedestrian Comfort Level based on Pedestrian Comfort guide for London (Section 6.1)		Route impacts negatively on pedestrian provision, Pedestrian Comfort is at Level C or below.	No impact on pedestrian provision or Pedestrian Comfort Level remains at B or above.	Pedestrian provision enhanced by cycling provision, or Pedestrian Comfort Level remains at A		
	Minimise street clutter	Signing required to support scheme layout	24. Signs informative and consistent but not overbearing or of inappropriate size		Large number of signs needed, difficult to follow and/ or leading to clutter	Moderate amount of signing particularly around junctions.	Signing for wayfinding purposes only and not causing additional obstruction.		
	Secure cycle parking	Ease of access to secure cycle parking within businesses and on-street	25. Evidence of bicycles parked to street furniture or cycle stands		No additional cycle parking provided or inadequate provision in insecure nonoverlooked areas	Some secure cycle parking provided but not enough to meet demand	Secure cycle parking provided, sufficient to meet demand		
Audit Score Total								0	

Audit Score Percentage	0%
Contain Critical?	No
Cohesion	0%
Directness	0%
Safety	0%
Comfort	0%
Attractiveness	0%

KEY: Quality of Section	
0	Low: Score<50
1	Intermediate: 50<=Score<70
2	High: Score>70
C	Critical: Design fails due to one or more critical scores.

				Route Check						
				Street Check						
Metric	Mode	#	Description	Red	Amber	Green	Existing		Proposed	
				0	1	2	Score	Comments / assumptions	Score	Comments / assumptions

ACCESSIBILITY

Gradient	Walking / Wheeling / Cycling	ST17	Steepest gradient due to underlying terrain. (For gradients at ramps, dropped kerbs and cambers, see metrics SAJ4 and SAJ5).	More than 5%.	3-5%.	Less than 3%.				
Tactile Information and Signal Equipment	Walking / Wheeling / Cycling	ST18	Adherence of tactile paving to recommended layouts and colours in 'Guidance on the Use of Tactile Paving Surfaces' and accessibility of signal equipment.	Guidance on tactile paving has not been considered. Or, there is signal equipment which is incorrectly situated, inaccessible or faulty (for example in terms of rotating cones).	Guidance on tactile paving has been considered, but the area is not fully legible.	Guidance on tactile paving has been considered and the area is fully legible.				
Barriers	Walking / Wheeling / Cycling	ST19	Presence and accessibility of barriers.	Barriers are not accessible by wheelchair users and/or users on solo upright cycles (as defined in LTN 1/20) and/or mobility scooters.	All barriers are accessible by wheelchair users, mobility scooters, and by users on solo upright cycles (as defined in LTN 1/20), with sufficient space to turn.	All barriers are accessible by the cycle design vehicle referenced in LTN 1/20, with sufficient space to turn. Or, there are no barriers.				
Bus Stops	Walking / Wheeling / Cycling	ST20	Interactions at bus stops.	At bus stops, cyclists regularly have to wait behind buses or overtake them in general traffic lanes. Or, there are likely to be high-level interactions between pedestrians and cyclists.	At bus stops, cyclists are protected from buses and traffic; but there are likely to be medium-level interactions between pedestrians and cyclists.	At bus stops, cyclists are protected from buses and traffic and interactions between pedestrians and cyclists are likely to be low-level.				
Wheelchair Access	Wheeling	ST21	Accessibility of pedestrian facilities by wheelchair.	Pedestrian facilities (including any crossings, connections and public transport interchange facilities) are not wheelchair accessible.	All pedestrian facilities (including any crossings, connections and public transport interchange facilities) are step-free and accessible for wheelchair users, but some interaction with cyclists is possible.	All pedestrian facilities (including crossings, connections and public transport interchange facilities) are step-free and accessible for wheelchair users, and there is no potential for interaction with cyclists.				
Access to Taxis and Blue Badge Parking	Walking / Wheeling / Cycling	ST22	Distance to accessible pick-up, drop-off or hailing points, or blue badge parking facilities.	Where people meet, wait, or spend time in numbers, it is over 150m to the nearest accessible pick-up, drop-off or hailing points, or blue badge parking facilities.	Where people meet, wait, or spend time in numbers, it is less than 150m to the nearest accessible pick-up, drop-off or hailing points, or blue badge parking facilities.	Where people meet, wait, or spend time in numbers, it is less than 50m to nearest accessible pick-up, drop-off or hailing points, or blue badge parking facilities.				
Access to Toilets	Walking / Wheeling / Cycling	ST23	Provision of sanitary facilities. E.g. toilets and/or baby change facilities.	Where people meet, wait, or spend time in numbers, it is over 150m to the nearest accessible sanitary facilities.	Where people meet, wait or spend time in numbers, it is less than 150m to the nearest accessible sanitary facilities.	Where people meet, wait or spend time in numbers, it is less than 50m to the nearest accessible sanitary facilities.				

COMFORT

Cycling Surface Material	Cycling	ST24	Type of cycling surface material.	Unsurfaced/unbound or unstable blocks/setts.	Hand-laid asphalt or smooth blocks.	Machine-laid asphalt or smooth and firm blocks undisturbed by turning vehicles.				
Walking/Wheeling Surface Material	Walking / Wheeling	ST25	Type of walking/wheeling surface material.	The surface is low-grip (i.e. PTV of 25 or lower). If paved, the joints are wider than 5mm.	The surface is medium-grip (i.e. PTV of between 26 and 36). If paved, the joints are 5mm or less.	The surface is high-grip (i.e. PTV of 35 or higher). If paved, the joints are mortared.				
Effective Width for Cyclists	Cycling	ST26	Effective width for cyclists (when not mixed with motor traffic).	At pinch points, cycle facility widths and/or buffers are below the absolute minimums recommended in LTN 1/20.	Recommended desirable minimum widths from LTN 1/20 are maintained for cycle facilities and buffers throughout the whole route, except at pinch points where absolute minimum widths recommended in LTN 1/20 are maintained.	Recommended desirable minimum widths from LTN 1/20 are maintained or exceeded for cycle facilities and buffers throughout whole route.				

DIRECTNESS

Deviation of Cycle Route	Cycling	ST27	Deviation of cycle route against straight line or shortest alternative.	Deviation factor against straight line or shortest alternative greater than 1.4.	Deviation factor against straight line or shortest alternative 1.2-1.4.	Deviation factor against straight line or shortest alternative less than 1.2.				
Pedestrian Crossing Locations	Walking / Wheeling	ST28	Alignment of crossings with desire lines.	No crossings are located on desire lines.	Some crossings are located on desire lines.	All crossings are located on desire lines, and all desire lines are provided for.				
Cyclist Delay at Junctions	Cycling	ST29	Delay to cyclists at junctions.	Delay for cyclists at junctions is greater than the delay to motor vehicles.	Delay for cyclists at junctions is similar to that of motor vehicles.	Delay for cyclists is shorter than that of motor vehicles or cyclists are not required to stop at junctions (e.g. bypass at signals).				
Cyclist Delay on Links	Cycling	ST30	Delay to cyclists on links.	Cyclists have no opportunities to pass slower moving vehicles (including other cyclists).	Cyclists have some opportunities to pass slower moving vehicles (including other cyclists).	Cyclists can always progress without being delayed by other vehicles.				
Pedestrian Delay at Junctions	Walking / Wheeling	ST31	Delay to pedestrians at signal controlled junctions.	Maximum waiting time over 60 seconds.	Maximum waiting time 40-60 seconds.	Maximum waiting time up to 40 seconds.				
Pedestrian Delay at Standalone Signal Crossings	Walking / Wheeling	ST32	Delay to pedestrians at stand-alone signal crossings.	After pressing the button, pedestrians must wait over 10 seconds for an invitation to cross.	After pressing the button, pedestrians must wait up to 10 seconds for an invitation to cross.	Crossings rest on the green for pedestrians. Or, the time between pressing the button and the invitation to cross has been minimised as much as is safe to do so.				

ATTRACTIVENESS

Wayfinding	Walking / Wheeling / Cycling	ST33	Effectiveness of signage and road markings on wayfinding.	Route signage is poor with signs missing at key decision points. Pedestrians and cyclists follow signs and road markings intended for motor traffic. Or, signs and road markings are faded or unclear.	Some cycle and pedestrian specific direction signing. There are gaps in signage and road markings which could be improved.	Route is well signed for pedestrians and cyclists with signs and road markings located at all decision points and junctions. Signs and road markings are clear, easily visible and legible.				
Places to Rest	Walking / Wheeling	ST34	Distance between resting points.	More than 150m.	50-150m.	Less than 50m.				
Places to Shelter	Walking / Wheeling	ST35	Distance between shelter points.	More than 150m.	50-150m.	Less than 50m.				
Lighting	Walking / Wheeling / Cycling	ST36	Extent of lighting.	Long stretches of darkness. Or, no lighting.	Short stretches of darkness. Or, bat-friendly lighting.	Route lit thoroughly, including any public transport waiting areas.				
Cycle Parking	Cycling	ST37	Ease of access to cycle parking on- and off-street.	Insufficient or inappropriate cycle parking.	Some accessible and overlooked cycle parking provided but not enough to meet present demand.	Accessible and overlooked cycle parking provided, sufficient to meet present and future demand, including provision for a range of cycle vehicles and users.				
Impact of Cycling on Walking	Walking / Wheeling / Cycling	ST38	Presence of shared use cycle tracks and toucan crossings.	On urban streets, cyclists are expected to use shared use cycle tracks and/or toucan crossings, bringing them into potential conflict with pedestrians. In rural areas or motor traffic free environments, shared use cycle tracks fail the width requirements set out in Table 6-3 of LTN 1/20.	In rural areas or motor traffic free environments, shared use cycle tracks pass the width requirements set out in Table 6-3 of LTN 1/20 and are designed in a way that minimises potential conflict between cyclists and pedestrians.	There are no shared use cycle tracks.				

COHESION

Impact of Motor Traffic on Pedestrians and Cyclists	Walking / Wheeling / Cycling	ST39	Measures taken to manage motor traffic in a way that benefits active modes.	There are no measures to manage motor traffic that benefit active modes.	There are some measures to manage motor traffic that benefit active modes.	There are measures to manage motor traffic which prioritise active modes. Or, the route is completely separate from motor traffic.				
Transitions for Cyclists	Cycling	ST40	Ability to transition on and off the route safely and easily.	Cyclists cannot transition on or off the route without dismounting.	Cyclists can transition on and off the route with minimal disruption to their journey.	Cyclists have dedicated, legible and understandable transitions on and off the route at all key points. Protected cycle facilities are easy to join and leave.				
Route Continuity	Walking / Wheeling / Cycling	ST41	Continuity of walking, wheeling and cycling routes.	Provisions for walking, wheeling and cycling along the route are discontinuous.	Provisions for walking, wheeling and cycling along the route are continuous but may be indirect or have sections which are unattractive to navigate.	Provisions for walking, wheeling and cycling along the route are direct, continuous, intuitive and legible.				
Consistency of Route	Walking / Wheeling / Cycling	ST42	Consistency of provision for pedestrians and cyclists.	Multiple changes of provision on the route.	Some changes of provision on the route.	Provision is consistent throughout the route.				

PRESENCE OF HORSES

Are horse riders expected on this route?

Unanswered

Metric	Mode	#	Description
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Route Check
Path Check

Red 0	Amber 1	Green 2	Existing Score	Comments / assumptions	Proposed Score	Comments / assumptions

ACCESSIBILITY

Barriers	All Active Modes	PA17	Presence and accessibility of barriers.	Any public access points (e.g. interfaces with public highway) to the path are restricted by barriers that would inhibit legitimate users. Or, there are barriers along the path that inhibit legitimate users.	Key public access points (e.g. interfaces with public highway) do not have barriers, but other public access points have barriers that would inhibit legitimate users.	No public access points to the path have barriers that would inhibit legitimate users.				
Steps	All Active Modes	PA18	Presence of steps.	Steps are unavoidable at key public access points (e.g. interfaces with public highway). Or, there are unavoidable steps along the path.	A step free route is possible at key public access points (e.g. interfaces with public highway) and along the path, but steps are present at other public access points.	A step free route is possible at all public access points and along the path.				
Gradient	Walking / Wheeling / Cycling	PA19	Steepest gradient due to underlying terrain.	Any gradients of ramps, dropped kerbs and cambers, see metric SA4 and SA5.	5.5%.	Less than 5%.				
Tactile Information and Signal Equipment	All Active Modes	PA20	Adherence of tactile paving to recommended layouts and colours in accordance with the use of Tactile Paving Surface ¹ and accessibility of signal equipment.	Guidance on tactile paving has not been considered. Or, there is signal equipment which is incorrectly coloured, inaccessible or faulty (for example in terms of relating cones).	Guidance on tactile paving has been considered, but the area is not fully tactile.	Guidance on tactile paving has been considered and the area is fully tactile.				
Ability to Turn Around	All Active Modes	PA21	Presence and frequency of turning points (open and flat areas of at least 4m).	There are no turning points. Or, turning points are over 30m apart or not provided between all public access points.	Turning points are approximately 30m apart.	The path is at least 4m wide. Or, turning points are less than 30m apart and provided between all public access points.				

DIRECTNESS

Deviation of Path Against Straight Line	All Active Modes	PA22	Extent to which the path deviates against the straight line.	Deviation factor against straight line greater than 1.5.	Deviation factor against straight line 1.2-1.5.	Deviation factor against straight line less than 1.2.				
Deviation of Path Against Nearest Alternative Route	All Active Modes	PA24	Extent to which the path deviates against the nearest alternative route.	Deviation factor against nearest alternative route greater than 1.5.	Deviation factor against nearest alternative route between 1.2-1.5.	Deviation factor against nearest alternative route less than 1.2.				
Crossing Locations	All Active Modes	PA26	Alignment of crossings with desire lines.	No crossings are located on desire lines.	Some crossings are located on desire lines.	All crossings are located on desire lines, and all desire lines are provided for.				
Delay at Crossings	All Active Modes	PA28	Delay to path users at signal crossings.	Maximum waiting time over 60 seconds.	Maximum waiting time 40-60 seconds.	Maximum waiting time up to 40 seconds.				

ATTRACTIVENESS

Places to Rest	Walking / Wheeling / Cycling	PA27	Distance between resting points.	More than 100m.	40-100m.	Less than 40m.				
Access to Shelter	Walking / Wheeling / Cycling	PA28	Distance between shelter points.	More than 100m.	40-100m.	Less than 40m.				
Lighting	All Active Modes	PA29	Extent of lighting.	Long stretches of darkness or no lighting.	Short stretches of darkness or inappropriate lighting.	Appropriate lighting throughout the path.				
Cycle Parking	Cycling	PA40	Extent of access to cycle parking at key points along path.	Inefficient or inappropriate cycle parking.	Some accessible and convenient cycle parking provided but not enough to meet present demand.	Any public transport waiting areas at access points have cycle parking. Accessible and convenient cycle parking provided, sufficient to meet present and future demand, including provision for a range of cycle facilities and users.				
Impact of Users on Each Other	All Active Modes	PA41	Potential for interaction between modes.	In rural areas or motor traffic free environments, shared use cycle tracks that meet the width requirements set out in Table 5.3 of LTN 1/20. Or, horses share facilities with pedestrians and cyclists in a facility under 3.0m wide.	Shared use facilities pass the width requirements set out in Table 5.3 of LTN 1/20 and are designed in a way that minimises potential conflict between cyclists and pedestrians. Or, horses share facilities with pedestrians and cyclists in a facility over 3.0m wide.	There are no shared use facilities. If horse riding is permitted, a separate resting stop is provided.				

COHESION

Ease of Navigation	All Active Modes	PA42	Ease of navigation when travelling along the route.	There are multiple points along the route where the way forward is unclear due to the path environment, design features, or inconsistent signage.	There is one point along the route where the way forward is unclear due to the path environment, design features, or inconsistent signage.	The way forward along the route is clear due to the path environment and design features. If signage is provided at decision points, it is present.				
Wayfinding	All Active Modes	PA43	Effectiveness of signage on wayfinding.	Signage on the route is confusing or missing links. Links between the path and surrounding routes at access points are not legible.	Signage on the route is regular and consistent, creating legible links between the path and surrounding routes at access points. However, information on nearby destinations is not provided or is limited.	Signage on the route is regular and consistent, creating legible links between the path and surrounding routes at access points. Information on nearby destinations is provided.				
Proximity to Destinations	Walking / Wheeling / Cycling	PA44	Route links to public transport interchanges and other destinations. Other destinations could include: • Local high streets • Schools and colleges • Hospitals and healthcare • Access to green and blue spaces • Training points • Tourist destinations, etc.	The route is not within 400m of any public transport interchange or other destinations.	The route is within 400m of a public transport interchange or other destination.	The route is within 400m of at least one public transport interchange and at least one other destination.				
Quality of Connections	Walking / Wheeling / Cycling	PA45	Quality of connections to public transport interchanges or other destinations.	Walking, wheeling and cycling connections are inaccessible or offer a low level of service.	Walking, wheeling and cycling connections are accessible and offer a medium level of service.	Walking, wheeling and cycling connections are accessible and offer a high level of service.				
Connectivity with Other Horse Riding Routes	Horse Riding	PA46	Connectivity with other routes appropriate for horse riding.	The route does not link to other routes appropriate for horse riding.	The route links to one other route appropriate for horse riding.	The route links to two or more other routes appropriate for horse riding.				

Access Points Loading and Parking		PA47	Impact of an on-street loading and parking provision at access points to the path.	No designated provision and no protection risk of abuse or blockage, impeding the movement of all legitimate path users.	EITHER adequate marked loading and parking provision in the street area where needed OR suitable protection of path access points to maintain suitable access for all legitimate path users.	EITHER adequate marked loading and parking provision in the street area where needed AND suitable protection of path access points to maintain suitable access for all legitimate path users. Or, no loading or parking provision necessary.	0		0	
Width		PA48	Is the gateway wide enough for faster path users to overtake slower users comfortably and without causing congestion?	The path has long and/or frequent stretches where widths are below 2m (shared use or cycleway) or 2m (dedicated footway or trotting strip) on a single level. If horses are sharing with other modes, minimum widths are below 4m.	The path has short and/or occasional stretches where widths are below 2m (shared use or cycleway) or 2m (dedicated footway or trotting strip) on a single level. If horses are sharing with other modes, minimum widths are between 4.0m and 4.5m.	The path has no stretches where widths are below 2m (shared use or cycleway) or 2m (dedicated footway or trotting strip) on a single level. If horses are sharing with other modes, minimum widths are greater than 4.5m.	2		2	
Drainage		PA49	Effect of drainage and water on user experience, biodiversity, and climate resilience.	There are regular periods where the whole width of the path is under water.	Much of the path is accessible although it may be narrowed due to standing water during particularly heavy rainfall.	The path is possible even during extreme weather events, with a minimum width of 3m surface remaining clear of any standing water.	0		0	

Wheelchair Access		15	Wheelchair access	Provision facilities (including any crossings, connections and public transport interchange facilities) are not wheelchair accessible.	All pedestrian facilities (including any crossings, connections and public transport interchange facilities) are step free and accessible for wheelchair users, but some interaction with cyclists is possible.	All pedestrian facilities (including crossings, connections and public transport interchange facilities) are step free and accessible for wheelchair users, and there is no potential for interaction with cyclists.	1		2	
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