

# Kings Langley Walking & Cycling Network Proposals

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V1.0, July 2018

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Head Office  
Sustrans  
2 Cathedral Square  
College Green  
Bristol  
BS1 5DD

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Registered Charity No. 326550 (England and Wales) SC039263 (Scotland)  
VAT Registration No. 416740656

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## Revision History

Revision	Date	Comments
0.1	26/April/2018	Draft1 for internal review
0.2	30/April/2018	Draft 2 for review by client
1.0	17/July/2018	Initial release

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# 1. Executive Summary

Kings Langley is experiencing traffic congestion issues which are becoming increasingly commonplace. To help tackle congestion and pollution, it is widely recognised that there is a need to increase levels of active and sustainable travel in Kings Langley.

This report was commissioned, by Kings Langley Parish Council, to research options for increasing walking and cycling opportunities within the village of Kings Langley and propose routes which could form the core of a network. The aim of this network is to improve connectivity throughout the town and enable people to see walking & cycling to key destinations such as schools, employment areas and the town centre as a convenient, pleasant and safe way to travel. Following this report the proposed routes can then be taken forward for more detailed feasibility studies.

The potential positive outcomes of enhancing the walking and cycling environment in Kings Langley are wide ranging and include an improved urban realm, improved health of citizens, reduced congestion and air pollution. However there are significant steps required in order to enable this to happen.

## 1.1 Report findings

Existing walking and cycling provision.

Although Kings Langley is no more than 1 ½ miles across in any direction, there are a number of factors that reduce the desire to walk or cycle in the town:

- A constrained historical street layout with adaptations as the town has grown. Priority has been given to motorised traffic therefore creating a less favourable environment for pedestrians and cyclists.
- Limited connectivity and permeability across the town - part of the reason for this is the severance effect created by the canal and the A4251
- Insufficient and unconnected cycle routes - mean that cyclists mostly use the same routes as cars, HGVs & buses. Fear of motor traffic is a significant factor in leading people to avoid cycling.
- Narrow alleyways and lack of cut-throughs – many alleyways are of inadequate width for reasonable use by cyclists, child buggies, mobility scooters & wheelchairs.
- Lack of signage, mapping and promotion of routes – good maps that are readily available, accurate and comprehensive are essential to promoting increased walking & cycling.
- Inadequate cycle parking provision – cycle parking needs to be well located and secure.

## 1.2 Key proposals

### Changes to the road environment

- 20 mph zone
- Zebra crossings
- Apply the principles used in Berkhamsted to the High St

## Route Proposals

- Towpath enhancements – The towpath has the potential to be the flagship route in Kings Langley but to achieve this adequate width is required to accommodate the likely number of users. A good width is a minimum of 2 metres & preferably 3 metres but it is recognised that this may not be possible in all locations.
- Improved access to the towpath.
- Upgraded traffic free routes through public open spaces.
- Links to the railway station
- All routes need to be well supported - by signage, maps, good quality cycle parking & promotion.

## Quick Wins

These are improvements to walking and cycling provision that can be achieved easily, quickly and at low cost:

- Mapping and promotion
- Additional signage

## Next steps

Next steps will require partnership working, enthusiasm and sustained commitment to set in motion:

- targeting of priorities
- feasibility studies
- funding and allocation of resource

## 1.3 Conclusion

It is clear that the current solutions to getting around Kings Langley are leading to congestion. There is the danger of air quality problems as seen further north on the A4251 in Apsley.

If things are left to grow organically, then it is likely that the current problems will simply get worse. The long term goal is to enhance the environment so that walking & cycling are accepted as viable and desirable ways of getting around within the urban area.

This will require a mixture of infrastructure and behaviour change.

This report makes practical proposals to achieve that change.



## 2. Introduction

Kings Langley is a large village of about five & a half thousand people. The Parish of Kings Langley is slightly different to the contiguous urban area which also includes the area to the east of the canal which is the parish boundary.

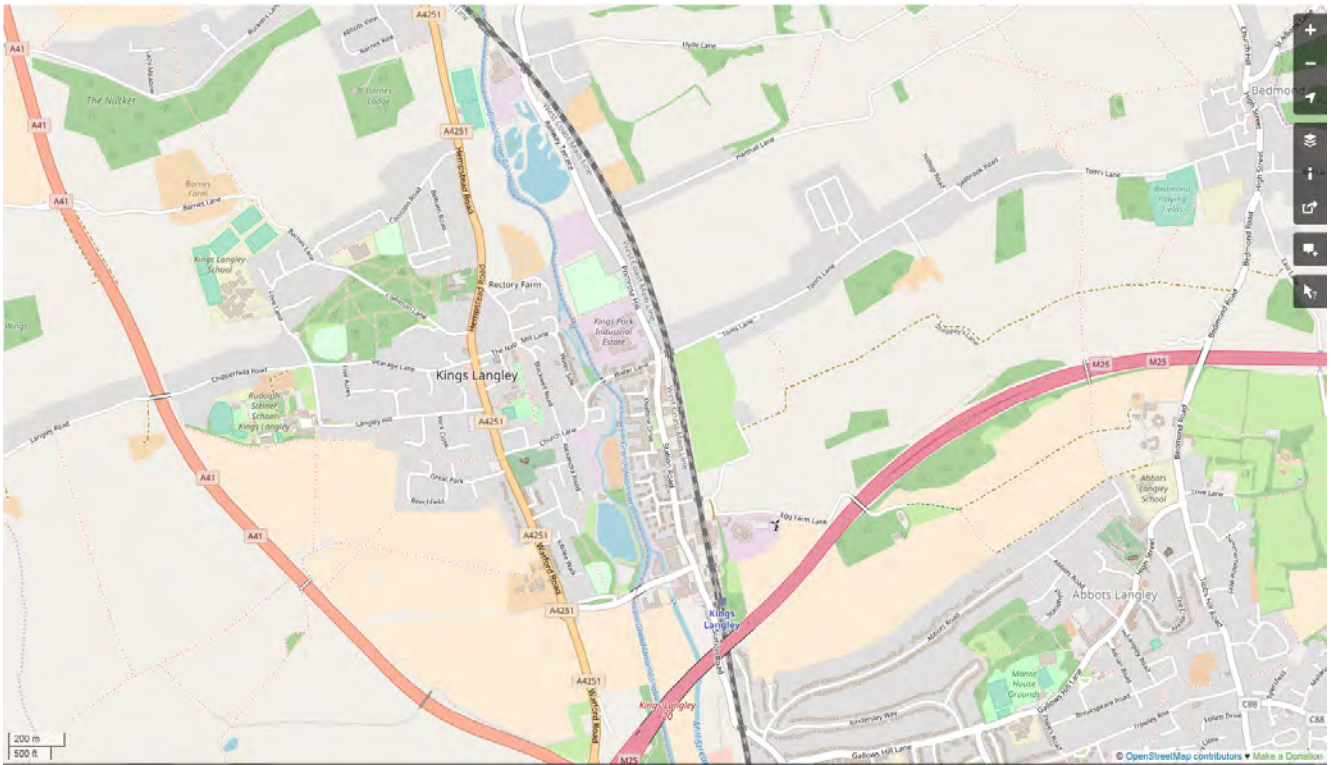


Figure 1 - Kings Langley

It is essentially linear and aligned NW to SE along both sides of the valley of the River Gade and is dominated by three transport corridors: road, canal and rail. Each of these corridors creates severance issues of varying degrees. Any walking & cycling network inevitably focusses on these issues.

The road layout is representative of the pre mass motoring era and various schemes, including a bypass have been built over the years in an attempt to handle the growth in motorised traffic.



Figure 2 - Kings Langley High St in 1951



Figure 3 - Kings Langley High St in 2017

The A41 Hemel Hempstead bypass was built at the end of the 1980s and takes a lot of traffic that previously went along the High St which was the old A41 and is now the A4251. No traffic calming or reallocation of roadspace measures were taken and today traffic levels have since built back up to create a High Street dominated by through traffic.

The fact remains that the layout of the town was not designed for motorised traffic, so later adaptations have had mixed results as they always deliver vehicles back to the older roads. This has resulted in congestion. The valley location does mean there are hills but ridge and valley routes are not hilly and Berkhamsted is just as hilly with more cycling.

Hertfordshire County Council accepts in its latest Local Transport Plan (LTP4) that it is not possible to simply build the way out of the current traffic situation. In the preface to the Local Transport Plan from November 2017 the Portfolio holder states – “Our response to growth cannot be to just build more roads and encourage more and more car use. Our health, local environment and urban centres will be vastly improved if we can get more people to walk, cycle and use passenger transport”[1]. This means that making better use of existing resources is essential, including shifting to other modes. Within large villages the size of Kings Langley, which is fortunate to be no more than 1 ½ miles across in any direction, the contribution of walking and cycling is key to success.

Kings Langley also has a hinterland of other settlements that look to it for schools and other services. This inevitably draws in a lot of traffic. Working with Dacorum BC, Three Rivers DC and Watford BC as well as neighbouring parish councils will be essential to improving hinterland links.

## **2.1 Objectives & outcomes**

The aim of this study is to research options for increasing walking and cycling opportunities within Kings Langley and propose routes which could form a core network – including a flagship route. Following this report these proposed routes can then be taken forward for more detailed feasibility studies.

The potential positive outcomes of enhancing the walking and cycling offer in Kings Langley are wide ranging and include an improved urban realm, improved health of citizens, reduced congestion and air pollution.

## **2.2 Methodology**

Sustrans’ approach for delivering this report involved two main stages:

- Identification and auditing of existing cycling/walking facilities.
- Identification of opportunities and route proposals – to link in to existing foot, cycle and bridleways.

Completion of these report stages involved:

- Review of previous studies.
- Identification of key destinations within the town and examination of their place within a walking and cycling network. Need to identify key assets that need protection in the planning system to allow them to be used for route development.

In order to complete the report a detailed desktop study of the area, along with site visits on foot and bike were undertaken.

The desktop study used OpenStreetMap, Google Streetview, the online definitive map of rights of way, and published route information to identify key destinations. A site visit was then undertaken to observe current infrastructure usage and identify other local routes not always obvious from map based research.

## 2.3 Areas for further study

Each of the route proposals will need to be developed further.

An important & useful further piece of work is to assess the Bikeability rating of all the roads which are not part of the proposed routes in Kings Langley. This will enable the proposed routes to be extended along suitable roads. The proposals will result in routes which are either level 1 or level 2.

Bikeability [2] is the modern version of cycling proficiency and has three levels which are basically:

Level 1: Traffic free routes

Level 2: Quiet roads

Level 3: Busier roads, complex junctions and roundabouts

Levels 1 and 2 are those taught in schools.

Analysing roads in this way has been done in St Albans, Tring and Berkhamsted amongst others in Hertfordshire. This is to a degree subjective within the criteria for each level, but still useful. The results tend to be the same wherever it is done, namely islands of Bikeability level 2 rated roads connected via Bikeability level 3 rated roads and there are often great changes in the 'level' along routes. It is not uncommon to see Level 1 to Level 3 transitions which are areas of great danger - the equivalent to turning off a country lane onto a motorway. This reflects the cell like structure of many urban areas, Kings Langley included. An approach to solving this is to start with a Bikeability map and then look where connections should be improved.

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### 3. Walking and Cycling in Kings Langley today

This section of the report investigates the current provision for walking and cycling in Kings Langley, examining the condition and effectiveness of existing infrastructure and the present numbers of people choosing to walk and cycle in the town.

#### 3.1 The challenges of a historical setting

It is possible to walk and cycle in Kings Langley at the moment, but the environment has not been tuned to favour those modes. This environment comprises an ancient core with adaptations up to the 1980s, with a few scattered later additions. The core of the village with its centuries old street layout has unrestricted access for motorised traffic even after the construction of the bypass. The typical result of this strategy is what is seen in Kings Langley, namely that traffic builds up until the congestion levels that triggered the construction of the bypass are reached again. The induced demand effect was first observed with turnpike roads in the 18<sup>th</sup> Century and has been seen consistently.

This is a significant challenge and one which is faced by many historic towns nationwide. A good example of contrasting approaches is the old A41 through Kings Langley and Apsley to Berkhamsted. When the new A41 Hemel bypass was built at the end of the 1980s, Berkhamsted introduced significant traffic calming measures in its high street, whereas Kings Langley and Apsley did not. Today traffic levels in Kings Langley and Apsley are back to where they were before the bypass, whereas Berkhamsted has retained at least some of the early gains of bypass construction.



Figure 4 - Berkhamsted High St, showing traffic calming, mid afternoon



Figure 5 - Kings Langley High St, same mid afternoon

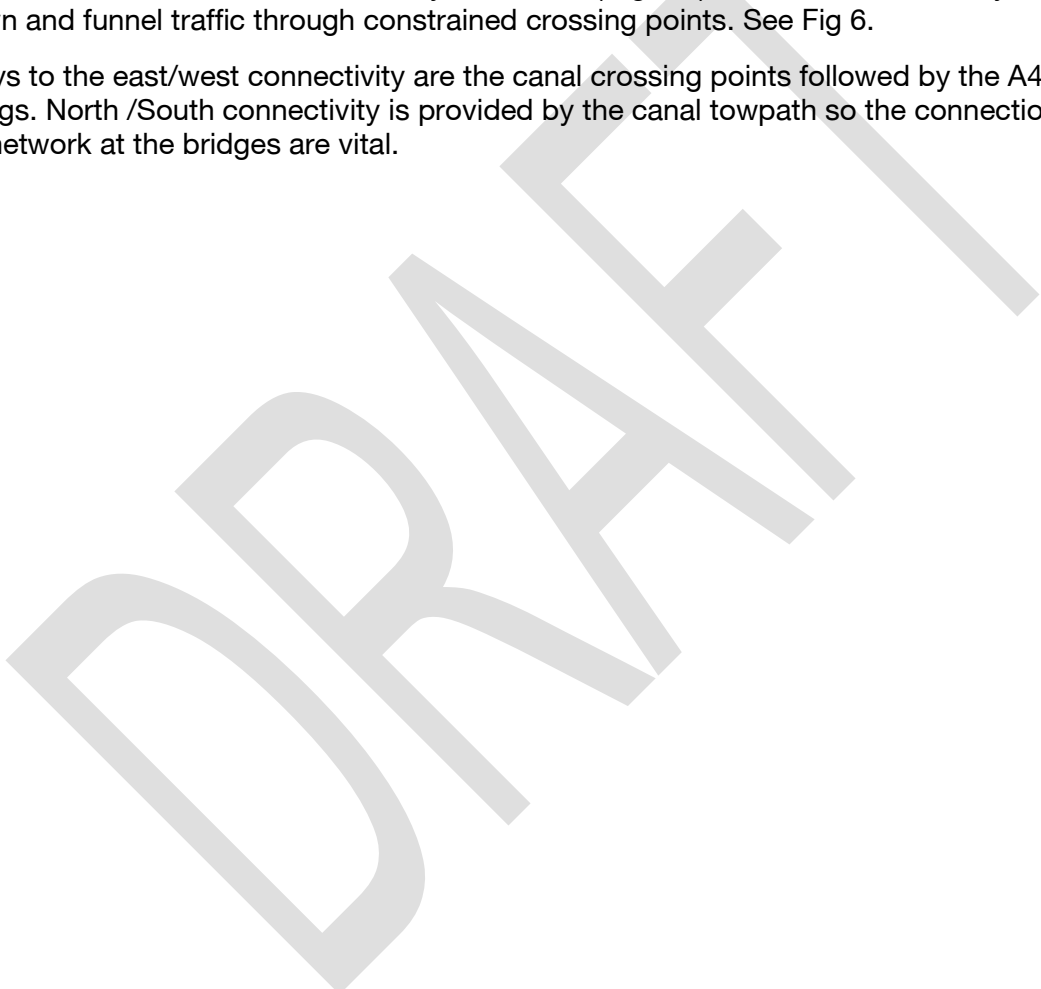
The two objectives of enabling unrestricted vehicle access with low congestion and pollution, whilst retaining the attractive environment of a shire market town work against each other. There are places with low congestion, 70 mph roads and easy vehicular access: a good example is Milton Keynes. This is also a very low density town (2,584 people per square) with everything further apart, than in an older town such as Kings Langley. Even Milton Keynes is starting to complain of congestion and its low density makes shifting to walking & cycling difficult, e.g. the train station is nearly a mile from the shopping centre, which is itself half a mile long. Recent work in Milton Keynes as part of the MK2050 [5] programme is also showing that residents prefer to have facilities close together, especially in the town centre.

In Kings Langley the challenge of balancing a historic layout with the more recent demands of increasing vehicular traffic, has resulted in an environment where walking and cycling are more difficult than they need to be. Roads are narrow, congested and difficult to cross, pedestrian and cycling routes are often not signed, air quality can be poor in key locations and the town seems to be divided into disconnected cells with little permeability between them. This is a situation that has clearly taken many years to develop.

### **3.2 Current permeability and severance in Kings Langley**

Currently cyclists have to use most of the same routes as cars when travelling around Kings Langley and can easily get caught up in the same congestion. Those wishing to walk and cycle also face significant challenges in terms of connectivity and permeability across the town. Part of the reason for this is the severance effect created by the A4251 (High St), canal, and the railway, which divide the town and funnel traffic through constrained crossing points. See Fig 6.

The keys to the east/west connectivity are the canal crossing points followed by the A4251 crossings. North /South connectivity is provided by the canal towpath so the connections to the rest of the network at the bridges are vital.



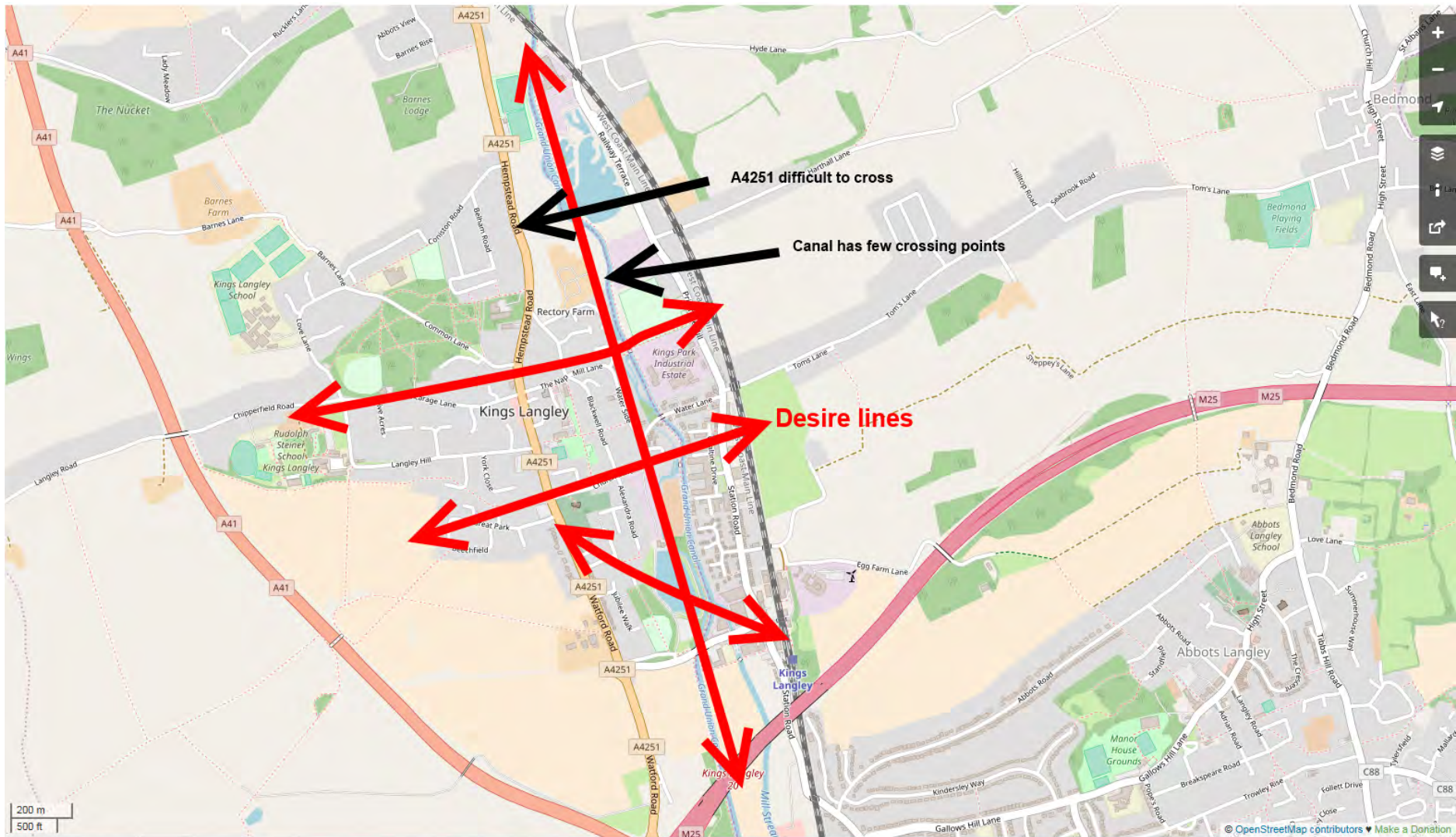


Figure 6 - Key desire lines and canal crossing points

### 3.3 Canal bridges from the south to the north

The canal towpath is the traffic free north/south route for cycling through Kings Langley. The towpath varies in width and surface quality. Width can be gained by cutting hedges back and there are plans to surface more of the towpath in 2018 to produce a smooth path.

The bridges and access points are key to its accessibility. These are now discussed in turn starting at the south end.

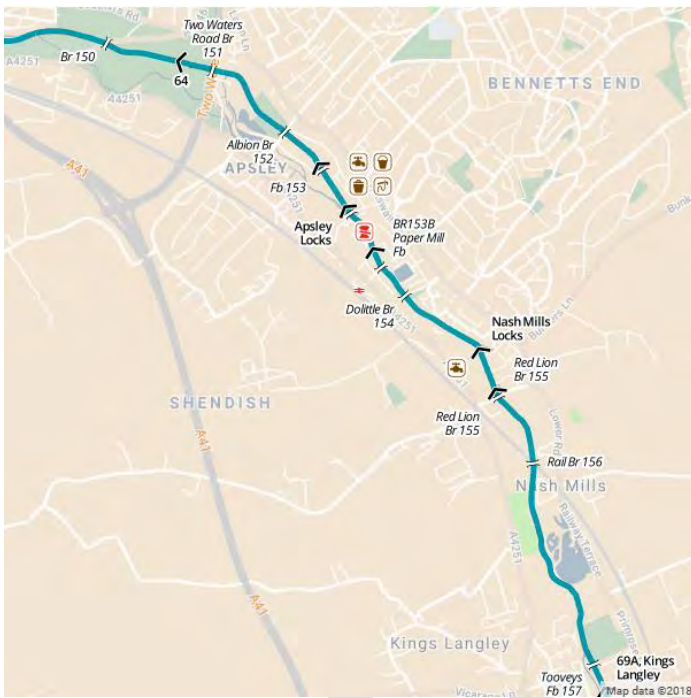


Figure 7 - GU Canal bridges North

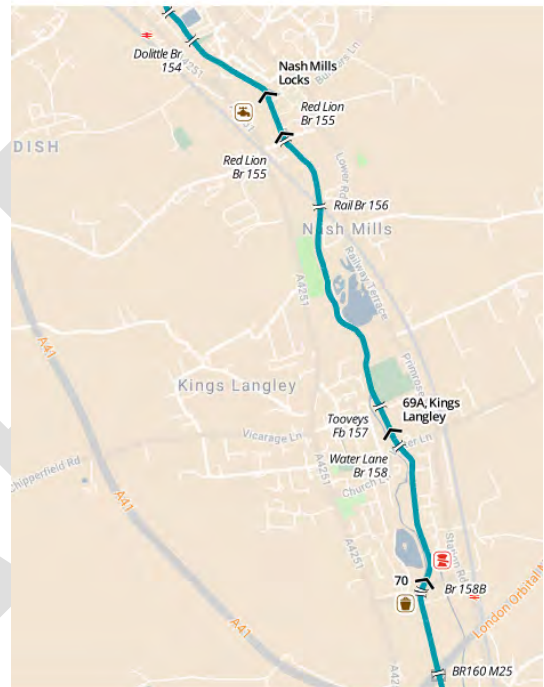


Figure 8 - GU Canal bridges South



## Bridge 159 – Home Park



Figure 9 - Looking south



Figure 10 - Looking north



Figure 11 – Steps to towpath on south side, west bank



Figure 12 – Access on south side, west bank

The access in Fig 12 is not obvious and the link to the towpath is only suitable for pedestrians. This is difficult to improve in the constrained environment. The bridge links to the station footpath which is narrow, poorly lit and has blind corners.



Figure 13 - Bridge deck looking west

The parapet height on the bridge needs ideally to be 1.4m for cycling. The gradient of paths to the bridge should be no more than 1 in 20 for disabled use.

### Bridge 159B – Home Park Mill Link Road



Figure 14 – View looking south



Figure 15 – Access on north side, west bank

The access is cluttered and not obvious but is easily improved.

**Bridge 158, Water Lane**



*Figure 16 – Looking south*



*Figure 17 – Access to road on north side, east bank*



*Figure 18 – North side access from road*



*Figure 19 - Access on south side, east bank*



*Figure 20 - Access on south side, east bank*



*Figure 21 - Access on south side, east bank*



*Figure 22 - Access on south side, east bank road end*

The access on the north side east bank is excellent but needs improved connection to the road. The access on the south side, east bank is poor with a bad surface and a blind corner.

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## Bridge 157 Tooveys



Figure 23 - View looking east



Figure 24 - Steep steps



Figure 25 - Deck



Figure 26 - view on east bank looking south

This bridge replaced a swing bridge some time between 1938 and 1960. It has very steep steps and a narrow deck which makes it very difficult or impossible for many types of user e.g. mobility scooter or parent with child buggy, to use. It is on a key east/west traffic free alignment from the High St to Primrose Hill

## B155A Nash Mills bridleway



Figure 27 - View looking north



Figure 28 - Link to road looking north



Figure 29 - Link to road

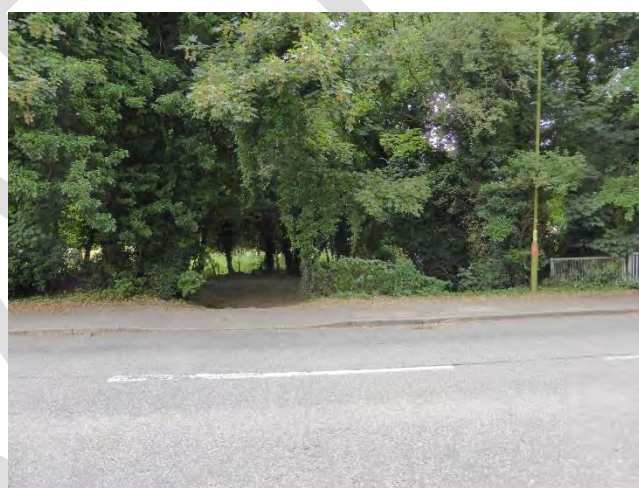


Figure 30 - Access from road looking south



Figure 31 - Bridge looking south

This bridge is accompanied by a useful link to the road. The area needs some maintenance and the connection to the road needs improving for bikes.

## B155 Red Lion Lane



Figure 32 - Access to road, south side



Figure 33 - Access to road, south side



Figure 34 - Crossover point. Towpath changes bank



Figure 35 - Access, north side

The key feature of this bridge is that the towpath changes bank, so pedestrians and cyclists have to go up to the road and cross to the other bank. This needs improving for cyclists for example by making the pavement on the bridge shared use.

## B no number between 154 & 155



Figure 36 - View from south



Figure 37 - View from north

This bridge is stepped with wheeling channels. These channels can be difficult to use especially if a bike has panniers or a child seat. They also appear to be too close to the parapets. Obviously this bridge cannot be used by mobility scooters.

## B154 Dolittle



Figure 38 - View looking west



Figure 39 - Using the bridge

This is a traditional hump backed canal bridge and as such there are constraints on how it can be improved. The surface has changes in level as the tarmac has broken away. It would be easier to use if the tarmac were smooth. The parapets are also lower than recommended for cycling which is 1.4m.



### 3.4 The High Street

The High St forms the A4251 which connects to the M25 Jn 20 roundabout at the south end and to Hemel Hempstead at the north. The A4251 used to be the A41 but when the new A41 Hemel bypass was built no measures were installed to discourage traffic building up again. This has been done with some success on the A4251 in Berkhamsted.

The central section containing shops and services is about 350m long and has two Pelican controlled crossings for pedestrians located near the north end and at the approximate midpoint of the High St. The constant flow of traffic and the channelling of pedestrians via the Pelican crossings very effectively separates the west side from the east.



Figure 40 - Looking north



Figure 41 - Looking north nearer the south end

Berkhamsted by contrast has a number of raised table courtesy crossings, Pelicans with raised tables, careful design of parking bays, 20mph limit and other traffic calming features. This helps reduce the dominance of traffic and connects both sides of the High St.

Less requirement to mix with motorised vehicles tends to increase levels of cycling.



Figure 42 - Raised table courtesy crossing in Berkhamsted



Figure 43 - Berhamsted High St looking north

An important aspect of cycling infrastructure and one that is easy to install is cycle parking. There is some in Kings Langley and other street furniture is also used. Although it is an easy thing to improve it is important to realise that cycling infrastructure doesn't stop at cycle parking.



Figure 44 - Hoop style



Figure 45 - Use of fence to lock to

### 3.5 Cycling statistics

Official cycling statistics tend to be for the whole Dacorum area where Hemel Hempstead makes the largest contribution.

Councils have also been cutting back on collecting cycling statistics in recent years.

The cycle parking at the station is well used with nearly 2/3 of the parking in use which demonstrates that there are commuters cycling. The station is seeing a steady increase in the number of passengers so improving cycling to the station has to be a key goal [4].



Figure 46 - Cycle parking at Kings Langley station

One area where there are good statistics is regarding accidents. Fig 47 show accident locations and types. The darker the colour the more serious the accident. As is typical these tend to be at junctions or where there is some sort of width reduction.

One important factor to take into account is that the sorts of cyclists the proposed routes are aimed at are really pedestrians on bikes. These cyclists tend to think and act as pedestrians even when on a bike. They are not the sports cyclists that are so visible on the roads.

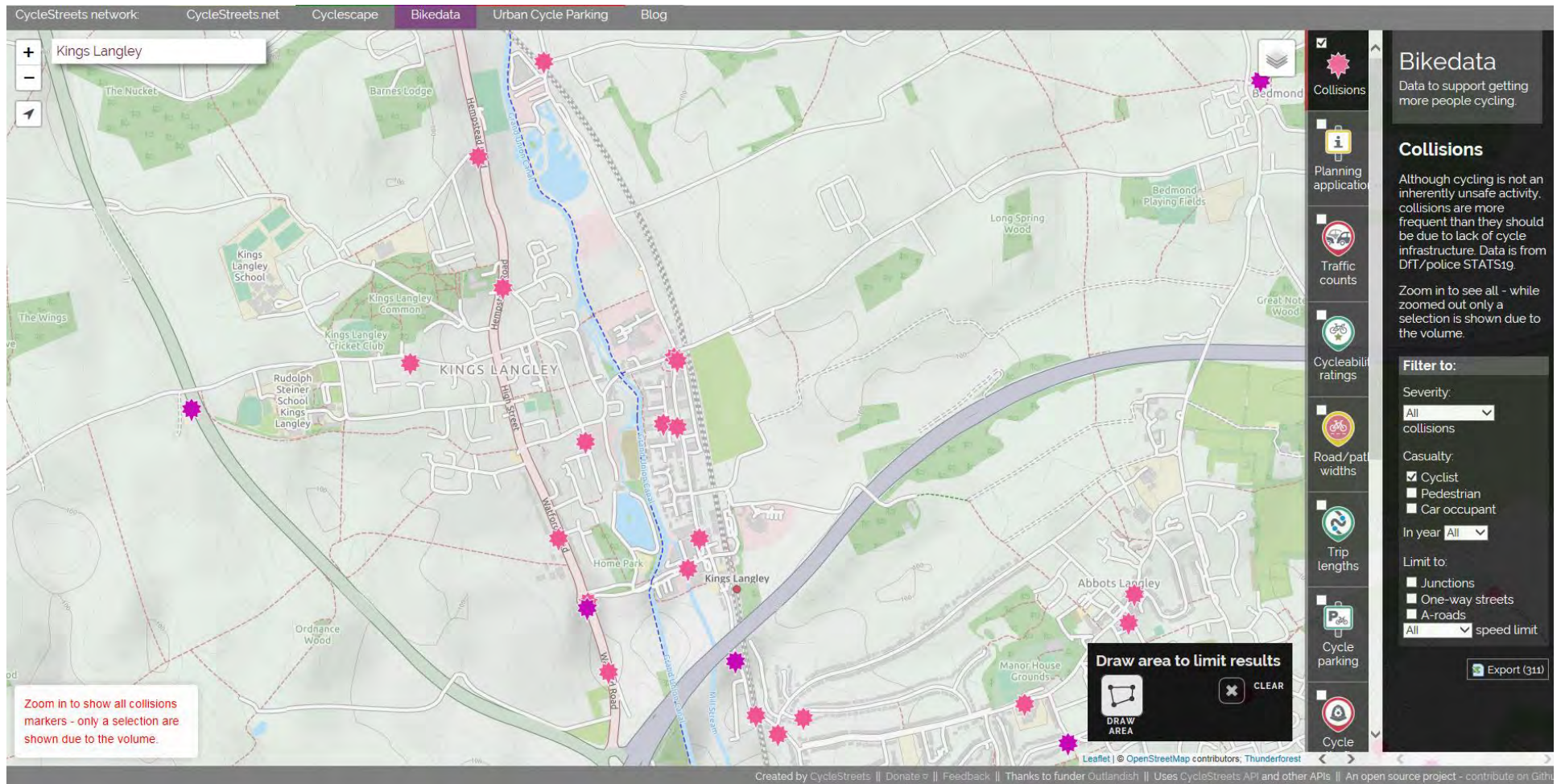


Figure 47 - Cycling accidents 2006-16

### 3.6 Maps and information

Way marking for cycle parking and routes is a vital resource when trying to increase levels of walking and cycling. Especially important are maps which show the cut-throughs and alleyways which can shorten journeys.

The Travelsmart project run by Sustrans in 2013 produce a local travel map that included Kings Langley and was issued free to those who wanted one. The section covering Kings Langley is shown in Fig 45.

An important source of information is the web and the OpenStreetMap website provides useful mapping information where routes have been crowd sourced. As a consequence it doesn't always have the highest level of accuracy. This is shown in Fig 49.

It is clear from both of these that there are not many routes, especially traffic free ones which are the most popular type, in Kings Langley.

Signage for walking and cycling is poor across the town especially the towpath links. Rights of Way footpaths are adequately signed.

Three routes should be signed specifically:

- Towpath.
- Park cross route. The two paths that cross in the middle of the park.
- Station link.



Figure 48 - Local Travel Map 2013

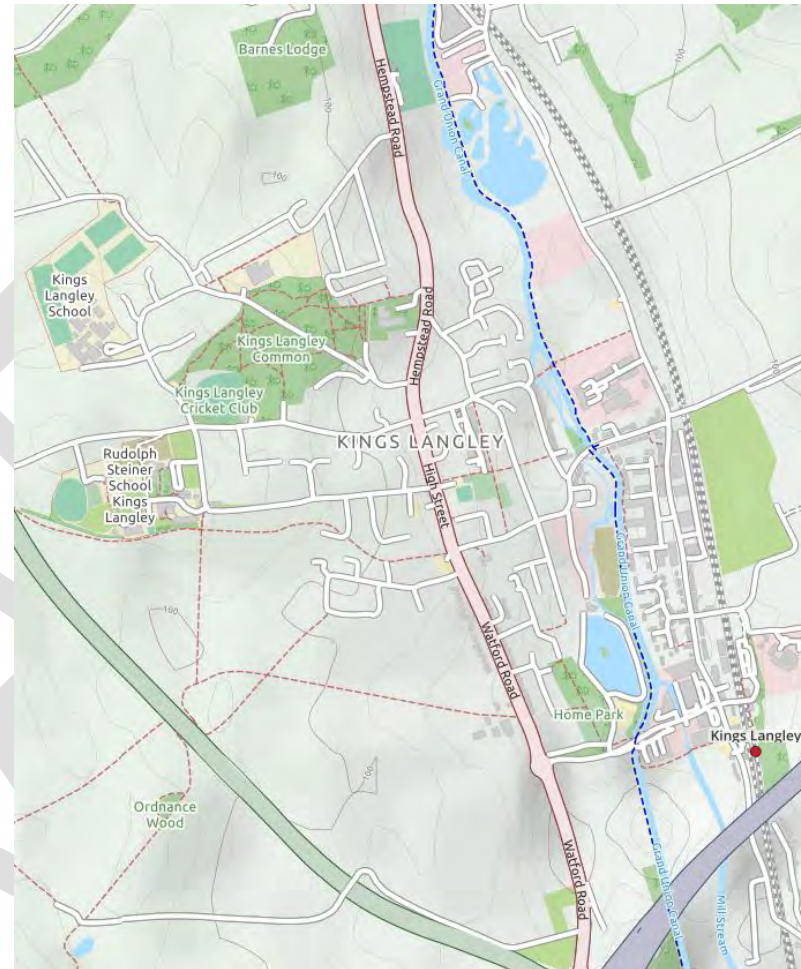


Figure 49 - OpenStreetMap



## 4. Proposals

### 4.1 Town wide

#### 20 mph

Hertfordshire County Council has adopted the following basic policy for 20mph [3]:

- Not on A or B roads. N.B. Berkhamsted High St is 20mph and an A road
- For signage only schemes, only where existing speeds in zones or roads are already below 25mph

It is proposed that this policy is implemented throughout Kings Langley

#### Shared use paths

There are a number of paths away from the highway which could be upgraded to shared use. It is vital that this upgrade is not just a status change but also includes width increase and treatment of blind corners.

### 4.2 High Street

The basic proposal is to introduce the measures used in Berkhamsted to Kings Langley which include 20mph, courtesy crossings and better designed parking areas

One of the problems with controlled pedestrian crossings such as Pelicans in areas where you are trying to increase the number of pedestrians is that they are tuned in favour of traffic. It is proposed to reverse that tuning and replace the controlled crossings with Zebra crossings where the priority lies with the pedestrian.

### 4.3 Grand Union canal corridor

The Grand Union canal corridor provides the main north/south corridor in the village and therefore its connections each side are critical. This is a different design criteria compared to when it was built which is why the access points are the weak links.

The whole towpath should be surfaced with a sealed surface and widened as far as possible by cutting back hedges.

Access at bridges needs to be improved especially the connections to the road so that is easier and safer to turn into and out of the access point.

The bridge B157 Tooveys is part of a key east/west corridor from Primrose Hill to the north end of the High St but is very difficult to use due to the steep steps and narrow deck. The site is constrained on the west bank but a replacement to the bridge either in the general area would be a significant improvement to permeability.

The key partners will be Herts Highways and CRT.

### 4.4 East/West corridors

There are a number of existing routes that run from the High St towards the canal that can be upgraded to provide either traffic free or light traffic routes.

## 4.5 North/South corridor

There is a path that runs north/south from Church Lane to The Nap which could be upgraded to provide a traffic free route.

## 4.6 Access to station

The stations is clearly a key destination but the access is poor in the station area. There is an existing footpath but it is rather narrow, poorly lit and has blind corners. Roads around statins tend to get very busy at commute times.

## 4.7 Maps

The next pages contain more details in map form with accompanying text. All the maps have the same key:

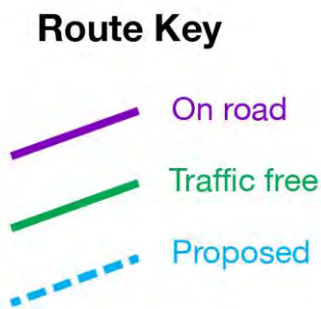


Figure 50 - Map key



Proposal group	Proposal	Priority	Difficulty	Cost	Notes	Benefits
Town wide	20mph	High	Medium	Medium		Calms roads for other users
Town wide	Shared use paths	High	Low	Low	Most of the paths need little work or just widening	Create more permeability for cycling
High St	20mph	High	Medium	Medium	This has been done in Berkhamsted	Reconnect both sides of the High St to each other
High St	Replace crossing with zebra	High	Low	Low	This has been done in Berkhamsted	Reconnect both sides of the High St to each other
GU corridor	Towpath surfacing	High	Medium	High	Surface the currently unsurfaced sections	Key N/S corridor
GU corridor	New bridge	Medium	High	High	B157 Tooveys. Replace bridge or new bridge in vicinity	The current bridge has very steep steps & a narrow deck and is unusable by many groups
GU corridor	Access at bridges	High	Low	High	Improve access to the towpath at each bridge	The towpath is easier to get to
E/W corridor	Upgrade existing routes	High	Low	Low		Improves permeability at low cost
N/S corridor	Upgrade existing routes	High	Low	Low		Improves permeability at low cost
Access to station	Improve routes to the station	Medium	High	High	The station is well used & increasing in use. Access is therefore critical	Reduce driving to the station
Maps		High	Low	Low	Both paper and online maps are required	Gives people information about facilities encouraging use at low cost

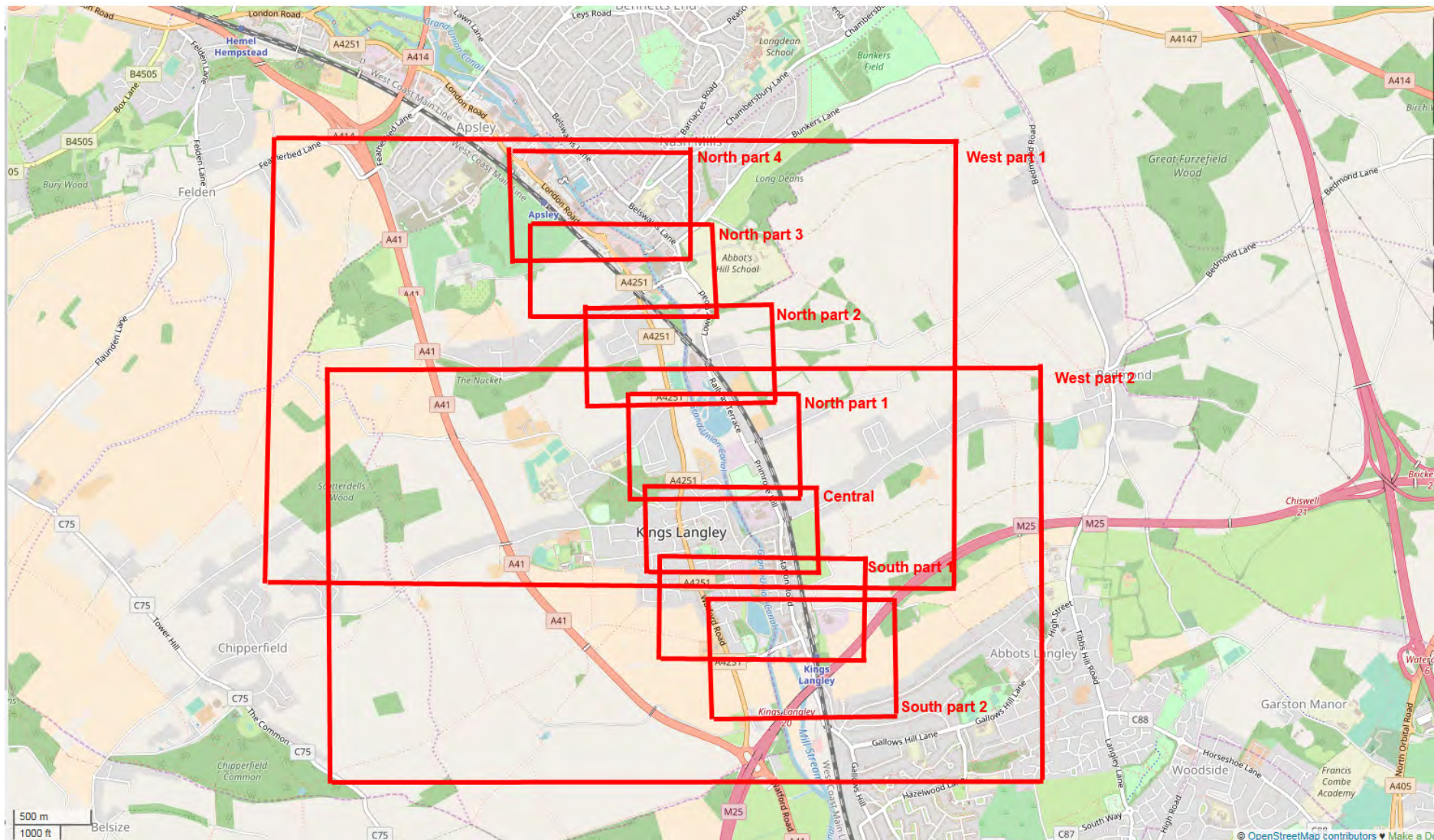


Figure 51 - Index map



Figure 52 - Overview

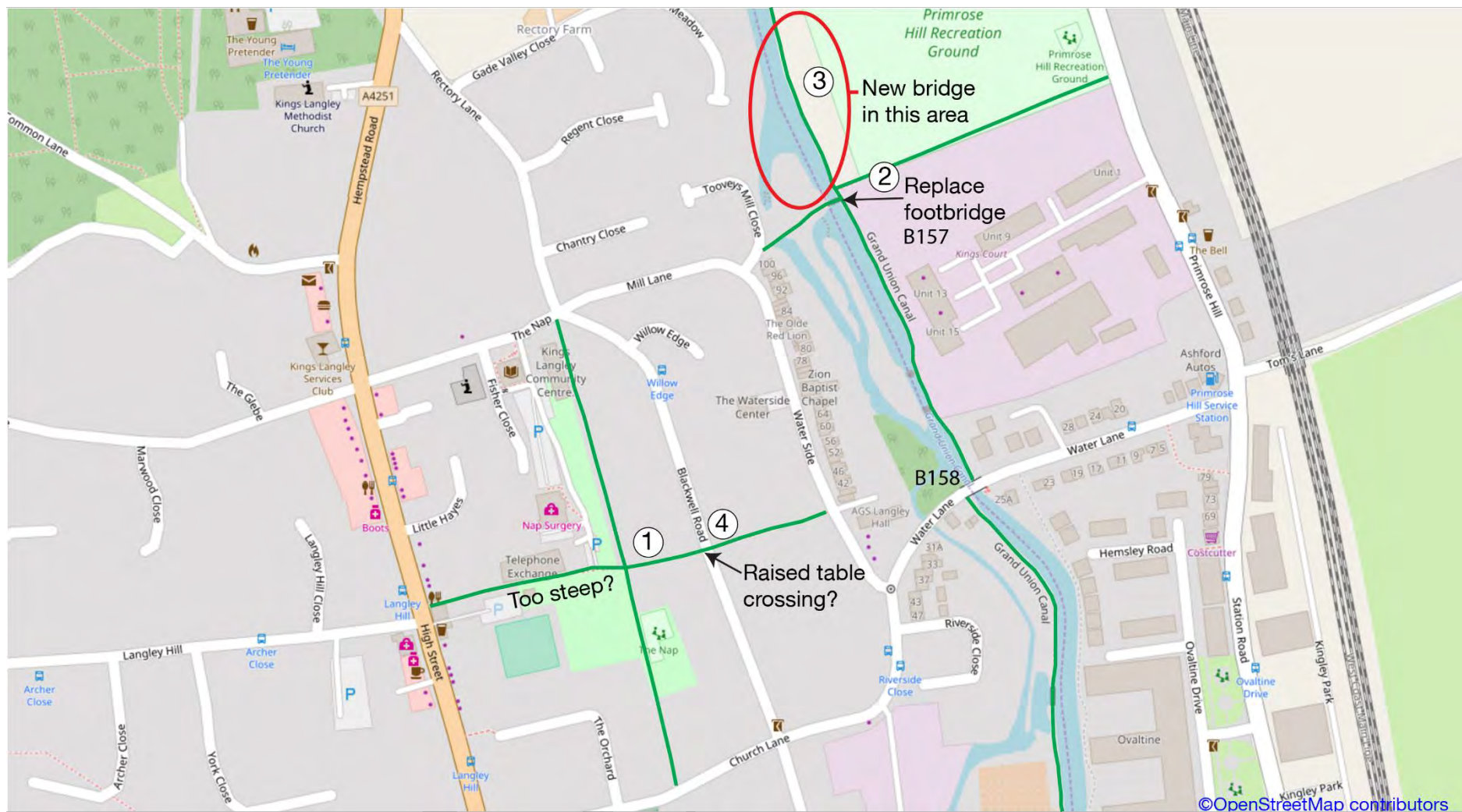
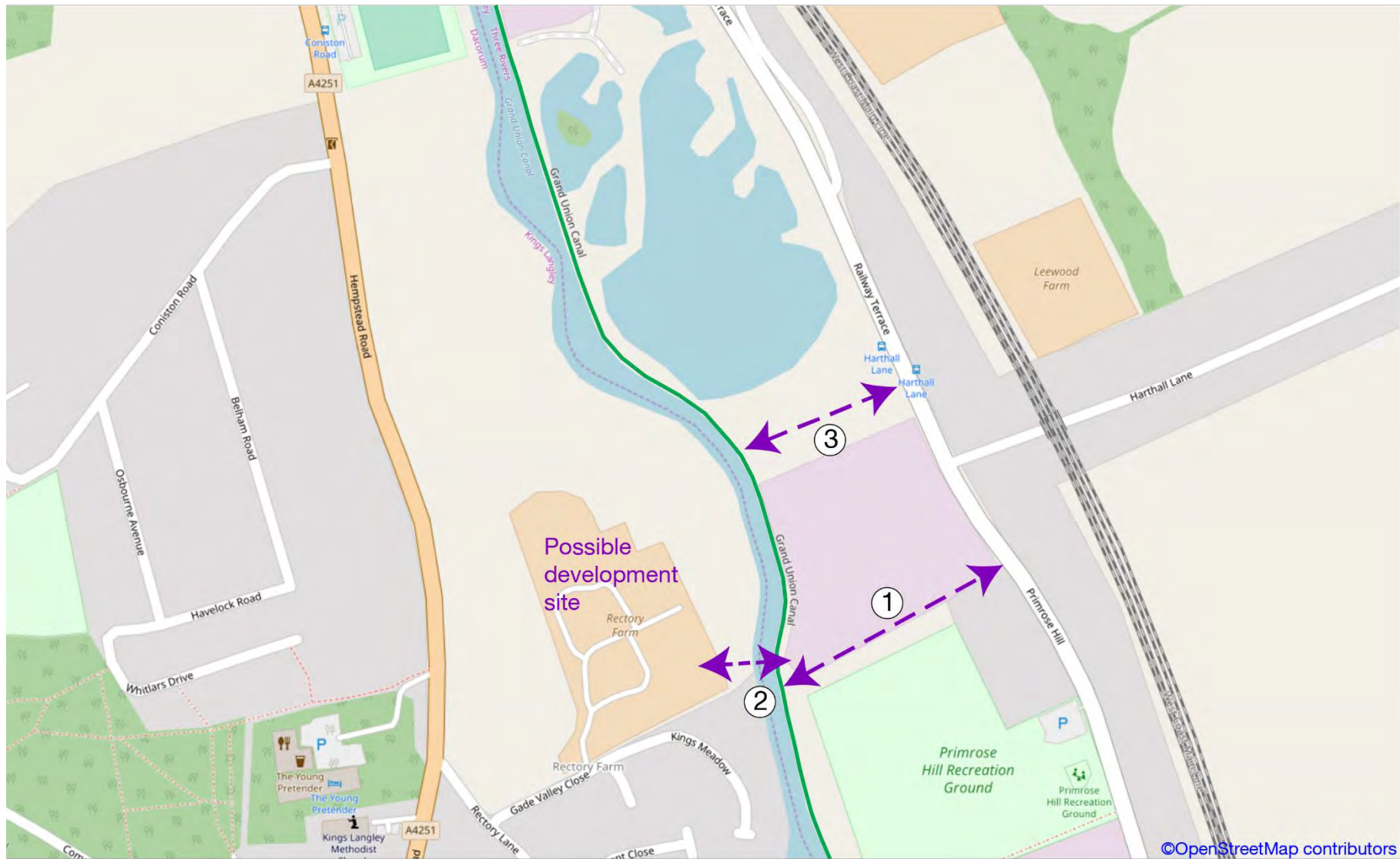


Figure 53 - Central area

1. Convert to shared use. Path may be too steep & need some cycle calming.
2. B157 Tooveys has steep steps & a narrow deck. Propose to replace or
3. An alternative would be to provide a new bridge in the area identified.
4. Where the path crosses the road a raised table crossing provides continuity.



©OpenStreetMap contributors

Figure 54 North area part 1

1. Option for improved access to Primrose Hill.
2. Possible location for a new bridge.
3. Option for improved access to Primrose Hill.

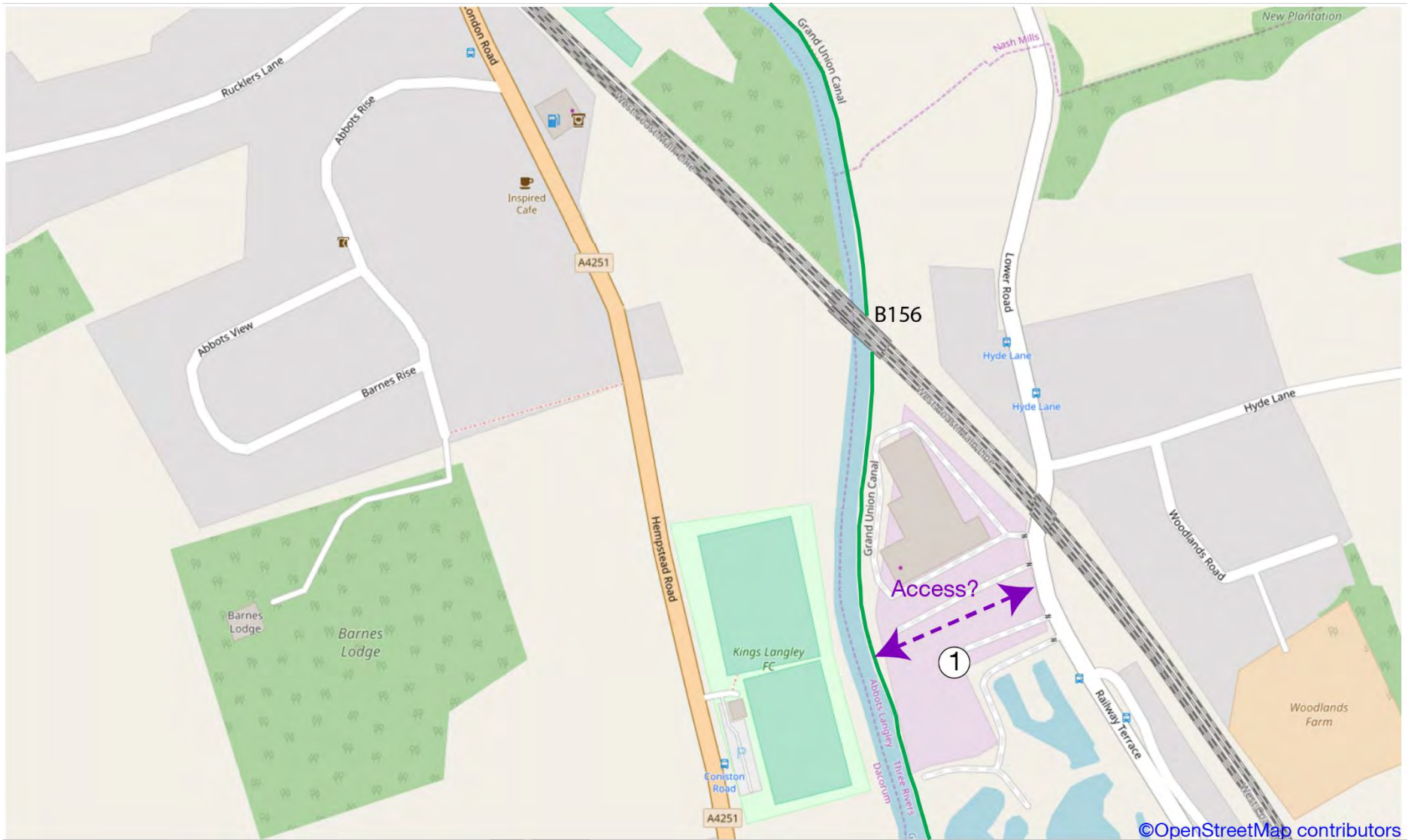


Figure 55 - North section 2

1. Option for improved access to Railway Terrace.

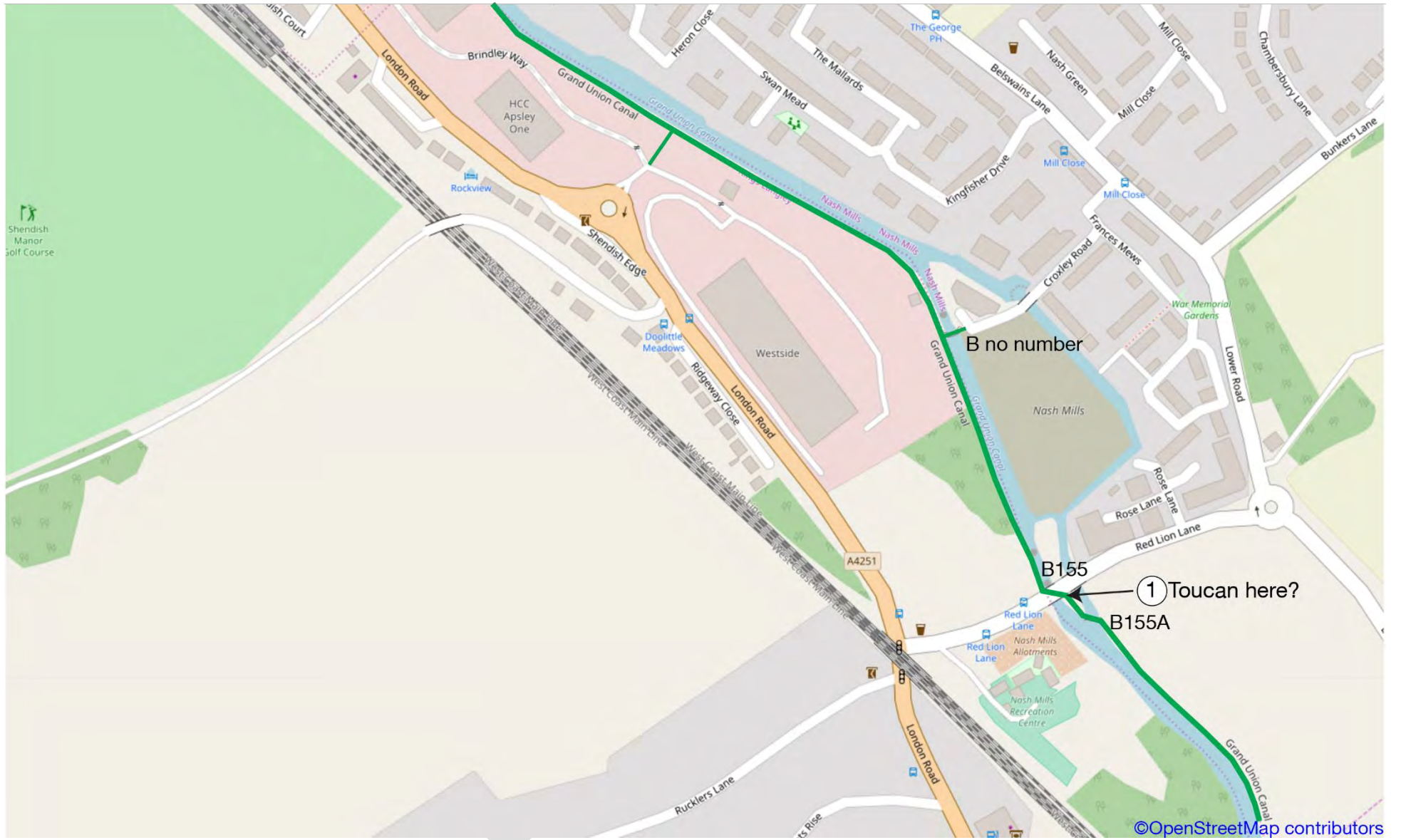


Figure 56 - North section 3

1. Add Toucan pedestrian and cyclist controlled crossing or cycling zebra here to assist crossing the road.



Figure 57 - North section 4

1. CRT are planning to resurface this section in 2018.



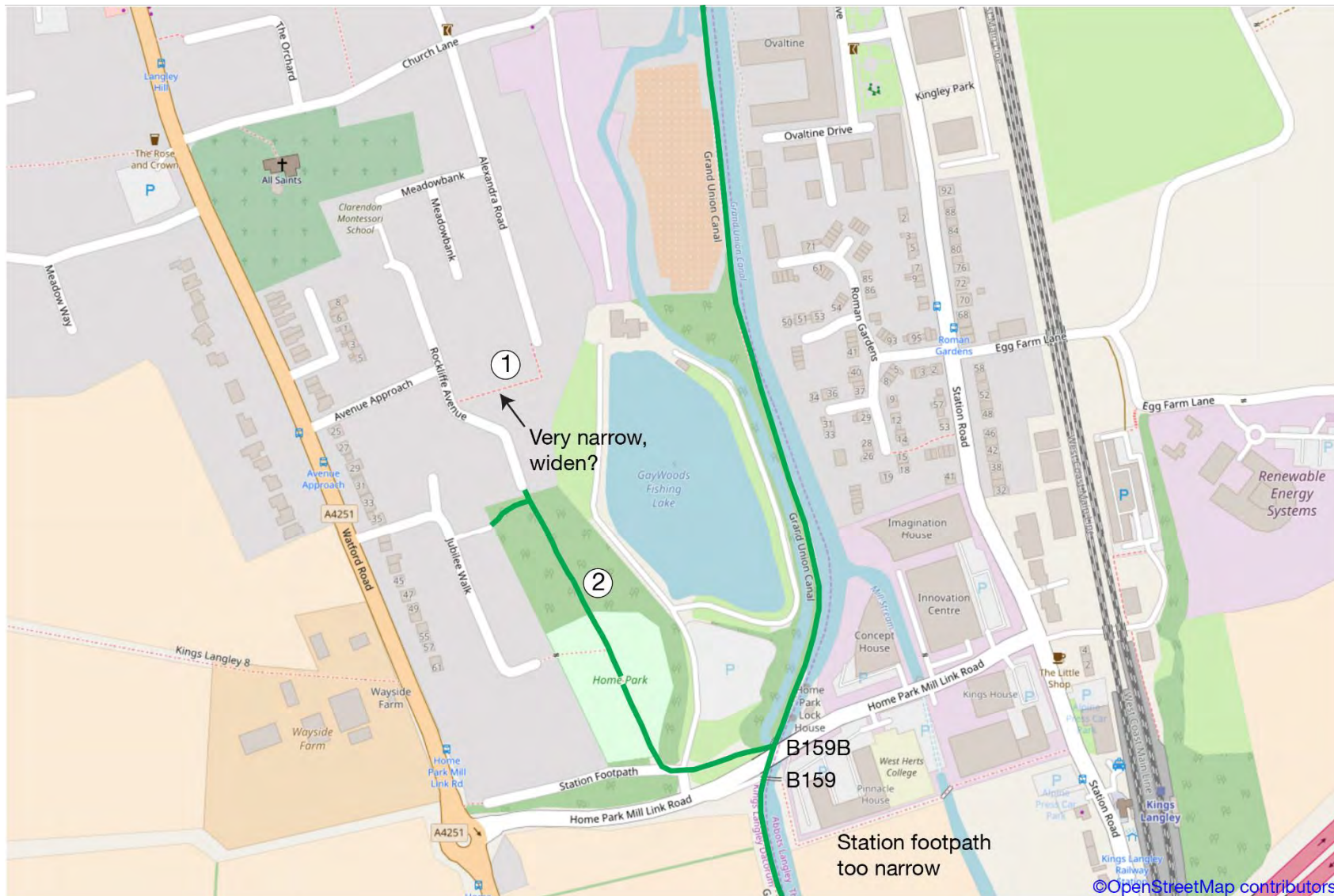


Figure 58 - South section 1

1. This path is too narrow for shared use and has a blind corner. Improvement would require land acquisition.
2. This path is an ideal one to upgrade to shared use as it bypasses Watford Rd.



©OpenStreetMap contributors

Figure 59 - South section 2

1. Widen access. This would require land acquisition
2. Improve access to towpath.
3. Improve crossing to B159 access to assist pedestrians.

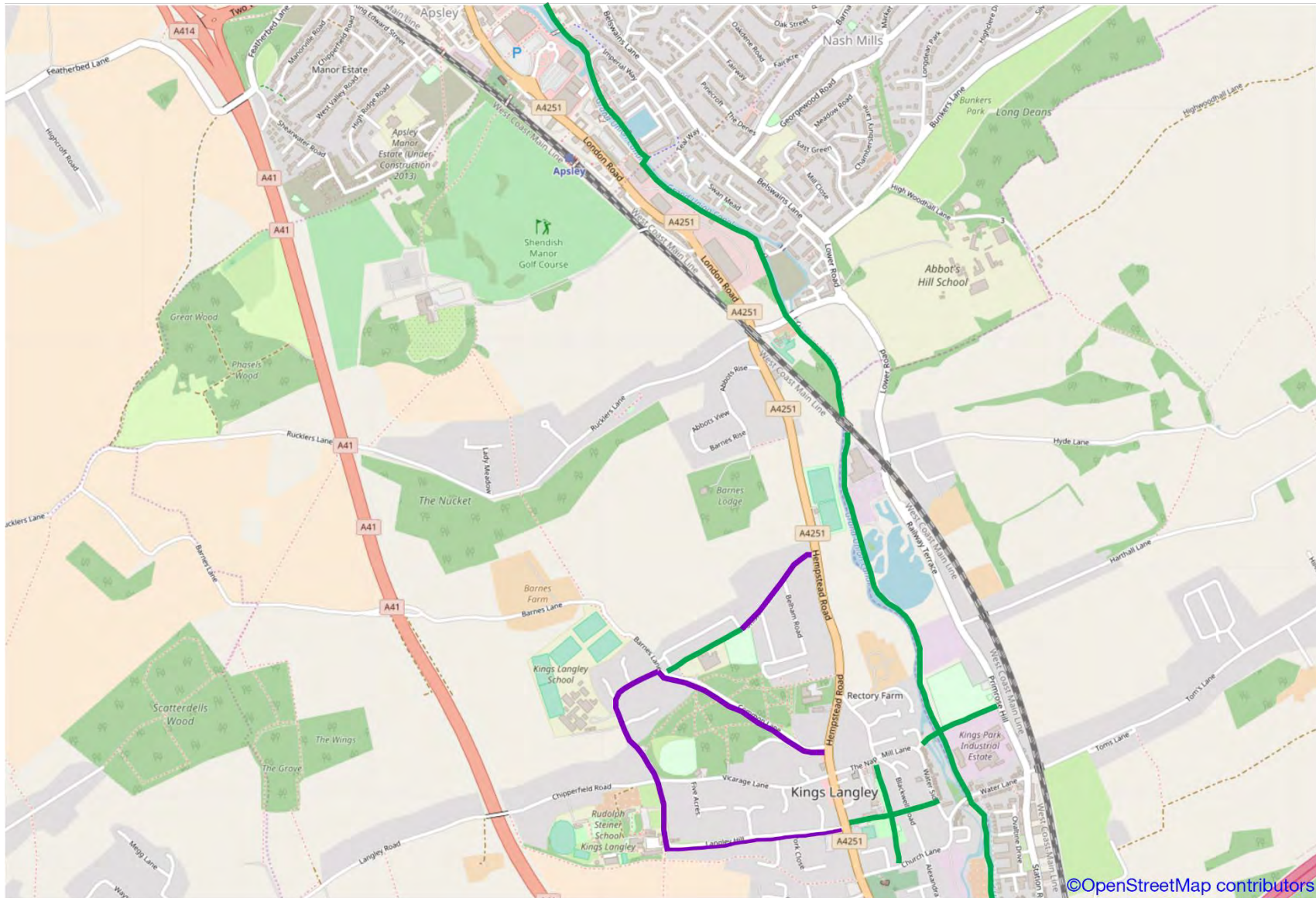


Figure 62 - West section 1

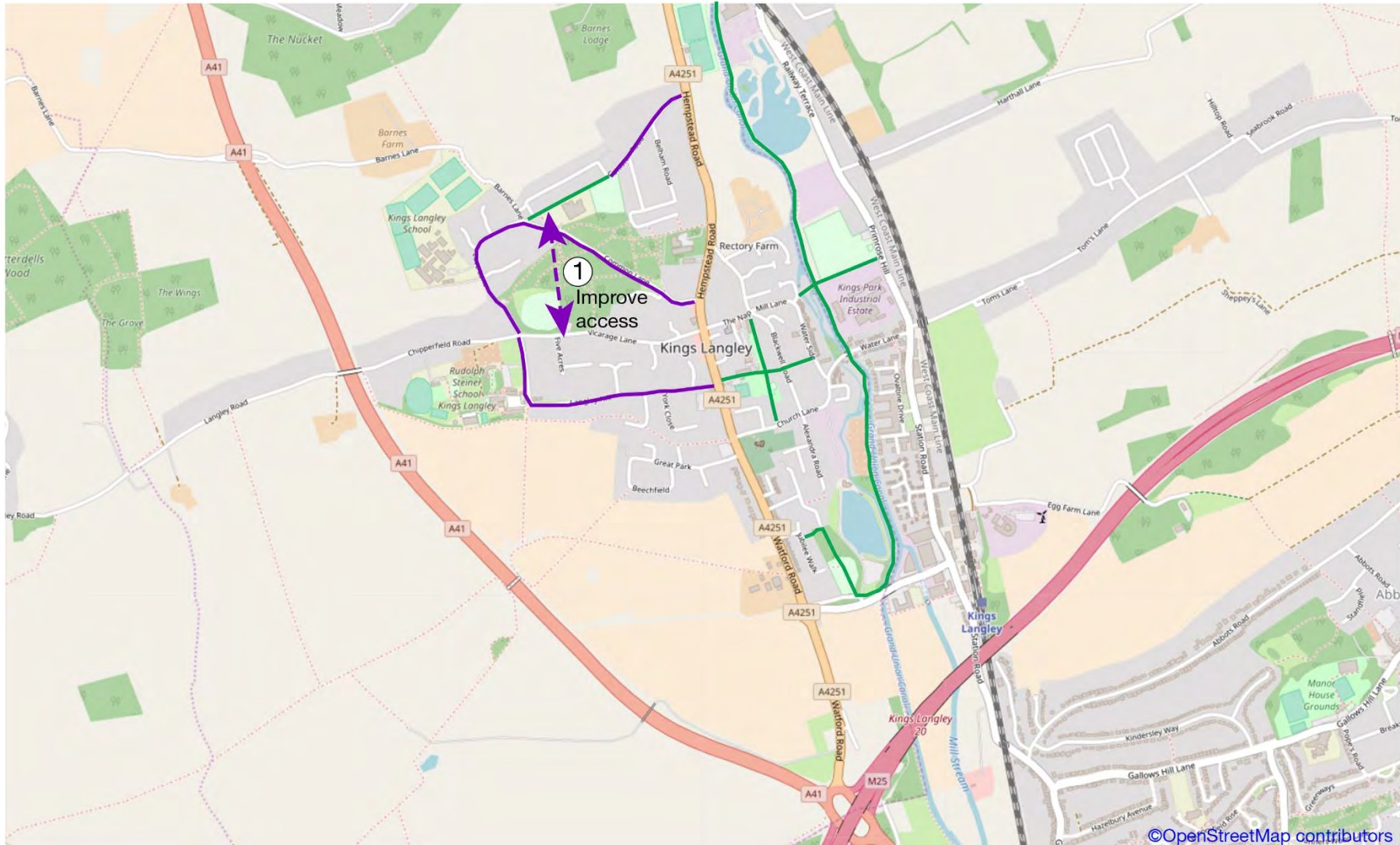


Figure 63 - West section 2

- 1. Improve access and paths in an appropriate way across the Common.

## References

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