

Appendix A

Chipping Barnet Area LCC proposals Review

Brunswick Park Ward

LCC proposal

Protected cycle lanes on Russell Lane and Bestile Circus

High speed rat running motor traffic is intimidating for cyclists in this ward. Protected space for cyclists at the most hazardous points such as the uphill section of Russell lane and at Bestile circus would remove the barriers to cycling in the area.

Review

Bestyle Circus This location is outside the borough and has not been considered in this report.

Russell Lane

The 'uphill' section of Russell Lane is chiefly in two parts:

- (1) A single carriageway section from the mini-roundabout at the junction with Brunswick Park Road and Church Hill Road that is approximately 230m long and 7.25m wide kerb to kerb.
- (2) A dual carriageway section approximately 390m long with an uphill carriageway that is 5.5m wide.
- (3) A flatter single carriageway section about 300m long from the end of the dual carriageway to Oakleigh Road North

(1) The single carriageway section is too narrow to incorporate a minimum width cycle lane (1.5m) with two 3m wide general traffic lanes. In lightly trafficked locations arrangements with less space can be introduced but Russell Lane is a busy road carrying a frequent bus service and the 'dynamic width' needed by cyclists is greater uphill to allow for 'wobble-room'. There appears to be scope to set back the kerb sufficiently to provide the minimum widths shown above, however initial indications are that there are buried utility services in the area that may need to be diverted or protected before the works could proceed. Further enquiries and potentially trial excavation would be required to establish the extent and cost of this – but depending on the exact location, material and depth of services these costs may be significant.

Currently parking is not controlled on this section of Russell Lane, with parking commonly occurring on the downhill side of the road. In order to avoid increased congestion and vehicles encroaching on an uphill cycle lane in order to pass, restriction of parking on both sides of throughout the single carriageway section would be required. A mandatory cycle lane would restrict parking on the uphill side of the road. This should operate at least throughout the daytime (7am to 7pm). A mandatory lane would be preferable to an advisory lane given the vulnerability of cyclists if motor vehicles encroach on a relatively narrow uphill lane.

(2) A generous cycle lane and adjacent general traffic lane could be installed through the dual carriageway section of the road. In order to ensure the benefits to cyclists are not undermined by parking in the cycle lane installation as a mandatory cycle lane or as an advisory lane supported by waiting restrictions would be necessary. (Waiting restrictions to reinforce no parking in a mandatory lane might also be advisable). Although parking occurs in this section the shops (and hence parking associated with these) are on the other side of the road. Premises on the uphill side of the road are generally residential and most have off street parking.

If utility costs for section 1 were found to be high, introduction of a cycle facility and/or parking controls through the dual carriageway section only could still be beneficial for cyclists.

(3) The flatter single carriageway section is around 8.5m wide at the narrowest point – adequate for a cycle lane in one direction while maintaining two lanes of general traffic. Restricting parking on the side of the road with the cycle lane would be needed. Residential properties on much of this section are set back behind wide verges with mature trees. They do not have off-street parking and so use the road to park. Some additional parking might be provided in compensation on the verges. The verges are maintained as housing assets and further investigation would be required to establish

whether this would be acceptable. The additional costs of providing such facilities are not included in the estimate below.

Budget estimate:

Surveys, trial holes etc	£10,000
Set back kerb and make good carriageway (section 1)	£23,000
Signs and lines	£5,000
Introduce traffic order (advertising etc – assumes single order)	£1,000
Subtotal	£39,000
Scheme development, design & supervision costs	£12,000
Total	£47,000
<i>Contingency figure if gas main diversion required in section 1 – say £500/m</i>	<i>£115,000</i>
<i>Total with utility contingency</i>	<i>£162,000</i>

Breakdown of Design & Supervision costs

Scheme development and design	£5,000
Traffic order consultation/making	£3,000
Implementation	£4,000
Subtotal	£12,000

Coppetts Ward

LCC proposal

Safe routes for cycling to the Colney Hatch/Woodhouse Road shopping area

The junction of A1003 Woodhouse road with Colney Hatch Lane is a depressed shopping area where masses of road space are wasted and blocked by queuing motor traffic. Simplifying the traffic junction would free up space for high quality cycle access and improved public realm for pedestrian access to shops and cafes.

Review

This proposal would involve a major junction redesign. In addition to the suggested opportunity there are issues at this junction in terms of general traffic movement and for buses turning right from Woodhouse Road to Colney Hatch Lane. The current traffic signal arrangement has been optimised as far as possible given the current conflicting demands.

A study to identify options for a redesigned junction, including surveys, traffic modelling and identifying outline costs for the options is estimated at **£25,000**.

East Barnet Ward

LCC proposal

A cycling route along the Pymmes Brook Trail

The Pymmes Brook Trail should be made accessible for considerate cycling because it's ideal for less able cyclists such as families and older people. It provides the only safe link across the railway in this area. This cycle route would connect the communities of High Barnet and East Barnet with the open spaces and University Campus in Trent Park and beyond.

Review

This is understood to refer to the bridleway that currently runs from Games Road near the boundary with the London borough of Barnet westwards through Hadley Common towards High Barnet. The

section roughly from the rear of JCoSS school towards Bakers Hill that provides the link over the railway is a surfaced track. However the section east of the school is unmetalled and uneven, becoming narrow at the east end. It is muddy in wet weather with run-off creating channels in the path. Cycling is permitted on bridleways but with no requirement for the surface to be suitable for cycling. The London Cycle Guide maps identify the section noting 'off road bikes recommended'. The unmetalled section of the route is around 600m long.

Any changes to the current arrangement should include consultation with Hadley Commoners and other users of the route. Although numbers of horse riders using the route are not thought to be particularly high, the route does provide a link between locations (in Barnet and at Trent Park) where there are horse riding establishments. Riders may prefer to retain an unmetalled surface. Experience in Enfield with an unmetalled surfacing material (on routes through Forty Hall and Hillyfields) suggests this would be slightly cheaper than a tarmac surface. The material used seems to have performed well despite flooding during extreme weather conditions although areas with high run-off suffered. The Enfield application has not been subject to horse traffic (although the supplier identifies bridleways as a potential use) so further investigation would be required to be confident of durability.

A budget overall cost for provision of a 2.5m – 3m wide track a metalled surface throughout the currently unmetalled stretch is **£120,000**. This includes some allowance for restricted access.

High Barnet Ward

LCC proposal

Protected cycle lanes along the A1000 Great North Road

Protected space for cycling created standard will connect with neighbouring wards and allow many more people to cycle to work and shopping areas on the Great North Road.

This measure is part of a concerted vision for a Cycle Superhighway route along the entire A1000 (the historic A1 / Great North Road) from High Barnet to East Finchely, connecting with TfL's Cycle Superhighway 12 (along the A1) into the City of London

Review

A1000: See separate A1000 review.

Oakleigh Ward

LCC proposal

Oakleigh Ward Protected cycle lanes along the A1000 & Longmore Avenue under the railway

Protected space for cycling is needed on the A1000. Separate cycle routes should be in place where the road narrows on Longmore Avenue under the rail viaduct. This measure is part of a concerted vision for a Cycle Superhighway route along the entire A1000 (the historic A1 / Great North Road) from High Barnet to East Finchely,

Review

A1000: See separate A1000 review.

Longmore Avenue:

The carriageway passes through one arch of the railway bridge with footways passing through adjacent arches. The arch and carriageway width is inadequate (at around 7.5m) to accommodate dedicated cycle lanes on carriageway without major changes for general traffic (e.g. by making the road one-way or signalling movement through the bridge). However the footways that pass through the adjacent arches are generous at around 3.8m wide. A transition from cycling on the carriageway each side of the bridge to using a lane on the pavement could be introduced.

The existing footway through each arch of the bridge could be divided into an approximately 1.8m wide pedestrian section and a 2.0m wide cycling section. (Allowance is made for a buffer zone as the route would be immediately adjacent to the side of the arch. It would not really be adequate to

accommodate opposing cyclists but in practice most cycle traffic would be travelling westbound through the southern arch and eastbound through the northern arch).

Work that would be needed to accommodate this includes:

Works	Budget estimate
1. Relocation of 4 No lighting columns under the bridge arches	4 x £1000 + contingency for work in restricted space. £5,000
2. Provision of a transition between the carriageway and footway in advance of the bridge in each direction	2 x £5000 (assumes provision of angled ramp rather than simply a dropped kerb and tactiles). £10,000
3. A transition back from footway to carriageway after the bridge in each direction. Ideally kerb realignment or buildout (and at a minimum road markings) to provide protection to cyclists rejoining the carriageway	2 x £5,000 (including build-out for protection) £10,000
4. Removal (or relocation if feasible) of the pedestrian refuge to the east of the bridge (necessary to allow safe transition back onto the carriageway). More detailed consideration would be needed to establish whether relocation closer to Lancaster Road or to the other side of the bridge would be feasible (impact on turning movements).	£10,000 (including relocation) £10,000
5. On the west side of the bridge a tree and a post (that may be associated with communications equipment) restrict the space available. Removal or relocation of these would be preferable if it can be achieved.	Allow £10,000 (contingency for relocation of comms equipment/provision of replacement tree). £10,000
6. Additional footway renewal on the southwest side of the bridge beyond that required as part of kerbworks, and relocation of equipment above.	Allow £10,000 £10,000
7. Provide signs and lines	£1,000
Sub-total	Say £60,000
Other items	
Investigations (surveys, trial excavations etc)	£5,000
Development and detailed design	£15,000
Works supervision	£5,000
Sub-total	£25,000
Total	£85,000

Totteridge Ward

LCC proposal

Protected cycle lanes along the A1000 High Road

A1000 High Street should have protected space for cycling, which will allow many more people to cycle to work and cycle to the shopping areas on the High Road. This measure is part of a concerted vision for a Cycle Superhighway route along the entire A1000 (the historic A1 / Great North Road) from High Barnet to East Finchley, connecting with TfL's Cycle Superhighway 12 (along the A1) into the City of London. In creating the superhighway route, St. Margaret's Ave should be closed to through motor traffic as it is currently a nasty rat run.

Review

A1000: See separate A1000 review.

St Margaret's Avenue:

In closing a road the need for vehicles (particularly larger vehicles) reaching the closure to turn needs to be considered. A closure of St Margaret's Avenue at, or close to the Totteridge Lane end of the road, effected with bollards and an emergency access gate, would permit other motor vehicles to turn at the junction with Manus Way.

Closure would have an impact on the traffic signals at the junction of the A1000 with Totteridge Lane. Both vehicles accessing St Margaret's Avenue and vehicles using it as a through route would be forced to access from a particular direction and this would inevitably increase the numbers of vehicles passing through the traffic signal junction. The scale of the impact would need to be identified through traffic surveys and potentially junction modelling in order to obtain the necessary network assurance permissions for the work

While the construction costs are likely to be modest at around £5,000, the cost of undertaking the assessment of impacts on the traffic signalled junction and progressing the proposal to detailed design stage could be in the region of £20,000. Alternatively any assessment of impacts might be incorporated in assessments that would be needed as part of consideration of a route along the A1000.

Budget construction cost: £5,000

Other costs: £20,000

Underhill

LCC proposal

Protected cycle lanes along A1000 Barnet Hill

The A1000 Barnet Hill is the major route through here and is also the main accessible north-south route for people on bikes. It needs to have protected space for cycling to the Cycle Superhighway standard to accommodate all modes of traffic serving the local community.

This measure part of a concerted vision for a Cycle Superhighway route along the entire A1000 (the historic A1 / Great North Road) from High Barnet to East Finchely, connecting with TfL's Cycle Superhighway 12 (along the A1) into the City of London.

Review

A1000: See separate A1000 review.

A1000

The LCC proposals include a series of requests for a superhighway route along the A1000. These note that they are part of a concerted vision for a Cycle Superhighway route along the entire A1000 (the historic A1 / Great North Road) from High Barnet to East Finchely, connecting with TfL's Cycle Superhighway 12 (along the A1) into the City of London.

Review

We understand that TfL's proposals for Cycle Superhighway 12 from Central London to East Finchley or Muswell Hill are not now expected to proceed in the form originally envisaged however a Quietway Route (intended to be a cross-London network of high-quality, low-traffic cycle routes) is being considered following a similar alignment. This might ultimately link to a Quietway following the existing off road and quiet road route cycle route that parallels the A1000 through much of the Chipping Barnet area.

The A1000 nevertheless remains a route well used by existing cyclists and may be a natural route choice for new cyclists as they become more confident.

A variety of features to provide a direct continuous route for cyclists might form part of a cycle superhighway but provision of decent width on-carriageway cycle lanes that are not obstructed by parking (ideally available 24 hours a day) with provision for cyclists junctions. Advanced stop line

(ASL) reservoirs for cyclists would be expected at all traffic signal junction with provision for cyclists to reach these and particular consideration given to negotiating difficult areas. Coloured surfacing is not required on cycle lanes and the use of this has generally been avoided in Barnet generally, because of the implications for future maintenance and appearance of the street scene. However in difficult locations it may help to highlight the presence of a route or cyclists generally when other treatments are not an option and review below identifies some locations where this might be part of a solution. Consideration is given below to the feasibility of making provision in different sections of the road, noting constraints and potential issues, locations where more detailed investigations would be needed or alternative approaches might be appropriate.

Cost of provision of facilities on the sections between major junctions may be relatively modest (although more major proposals in the Chipping Barnet Area in conjunction with other work are

Coniston Close to Rasper Road

The carriageway is around 12 metres wide without other features except bus stops and a zebra crossing from Coniston Road to Green Road. Parking is essentially unrestricted and is common. An arrangement permitting parking on one side of the road only with a buffer zone then a cycle lane, two general traffic lanes and a second cycle lane could be accommodated. The lanes would start after the crossing and bus stops (or be discontinuous through these features assuming they were present in the area to the south).

The overall carriageway width increases between Green Road and Rasper Road and a central reserve is provided with a zebra crossing (and a bus stop). Cycle lanes would be discontinuous through the controlled area of the zebra crossing but proposed changes to current regulations are expected to provide more options for providing greater continuity through this area.

Costs to introduce signs, lines and parking restrictions would be in the order of £5000 excluding the costs of development, detailed design, consultation and supervision etc.

Rasper Road to south of Whetstone Signals

Two 6m+ carriageways are provided separated by a discontinuous central reservation. Tidal peak hour parking restrictions are provided at the south end of this stretch with 'at any time' parking restrictions further north. Without restricting parking further it is almost inevitable that a cycle lane in the area would not be useable outside peak periods. Extension of the peak hour restrictions to cover a greater part of the day, if not all the time, should be included. Some compromise on lane continuity to accommodate loading may be needed.

More extensive work to consider measures to assist cyclists turning into or out of Friern Barnet Road has not been included here but may be beneficial.

Whetstone signals

The current traffic management arrangements at the junction are complex and the junction operates close to capacity at the moment. Any proposals for cycle provision at the junction would require traffic modelling to determine impacts on the operation of the junction and the A1000.

Cyclists travelling ahead on the A1000 need to move out of (or to the right of) the left hand turn lane. The provision of advanced stop line (ASL) reservoirs for cyclists would be the most basic provision but space constraints limit the options for providing feeder lanes to these without reducing lanes available, and consequent impacts on junction operation. While layouts involving ASLs but no significant feeder lane are available they would be unsuitable in the context of a superhighway route.

Major changes to the junction are likely to be needed to make good provision for cyclists here. Alternative junction layouts to help accommodate the development growth expected in the area are being investigated currently which may provide the opportunity to achieve this.

Whetstone High Road (Athenaeum Road to Downland Close)

The carriageway width is generally between 12 and 13 metres with tidal parking restrictions at peak hours (7-10am southbound and 4-7pm southbound). In order to provide for general traffic lanes and a cycle lanes in each direction parking on one side of the road would need to be restricted throughout the day. Parking could be retained on the other side of the road with a buffer zone provided to the

cycle lane. The wide footways in the area might permit alternative parking provision to be made in some locations. Dedicated provision would also be needed to accommodate loading and disabled parking. Where pedestrian refuges are provided the space is sufficient to permit a cycle lane and a general traffic lane to be provided on each side.

Whetstone High Road (Downland Close to Travelodge/Halfords)

North of Downland Close pedestrian refuges, with central hatching and turning gaps are provided. Parking controls are mainly 7am-7pm with some tidal restrictions provided. The overall carriageway width is around 12m and a cycle lane and general traffic lane in each direction could be accommodated, with possible adjustments to the central features. Restricting parking further to 24 hours or at least 7am-7pm throughout would be needed.

South of Buckingham Avenue (Travelodge/Halfords) to Friern Mount Drive

The main carriageway width is between 12 and 13 metres wide. There are central queuing / right turn pocket areas in parts of the road. A zebra crossing with a central refuge is provided just north of Buckingham Avenue and a pedestrian refuge near Friern Mount Drive. A service road is present on the east side of the road. Parking is unrestricted except at the zebra crossing and bus stops in the area. There is space past the central features for a cycle lane and general traffic lane to be provided – with parking restricted where this is not already the case. Parking in the service road would still be possible. Where central markings etc are not present parking might also be accommodated on one side of the A1000. Provision for southbound cycles might also be made in the service road if necessary but this would be a poorer option for cyclists and introduce complications crossing side roads.

Friern Mount Drive to Farnham Close

The carriageway is around 12 metres wide. Parking is currently unrestricted but most properties have off-street parking. A cycle lane and general traffic lane in each direction could be provided. Parking might be provided on one side of the road with a buffer zone to the cycle lane if needed.

Farnham Road to Walfield Avenue (north)

The main carriageway is between 10.5m and 12.5 with a narrow service road on the west side. A zebra crossing with pedestrian reservation is provided near the junction with Walfield Avenue (south). Space is adequate past the crossing for cycles and general traffic. Parking is unrestricted except at the crossing currently. With cycle lanes provided parking might be provided on one side of the road in part of the area. Parking in the service road currently occurs even though in the northern part there is really inadequate space for this.

Walfield Avenue (north) to Lyonsdown Road

The carriageway varies between 9.5m and about 13m wide with right turn provision at the junctions of Northumberland Road and Willenhall Avenue. On-street parking is currently unrestricted although demand at this location is not great. Some adjustment to the central markings may be required to accommodate cycle lanes.

Lyonsdown Road junction

The current arrangement at this junction presents difficulties for southbound cyclists who need to move across the left turn slip road to continue ahead. A heavy left turning movement would still be a problem if a nearside cycle lane were provided due to left-turners cutting across cyclists travelling ahead. A cycle lane could be provided moving from the nearside to a position between the left and ahead lanes (with relocation of the pedestrian refuge at the crossing to the west), but the conflict with left turning traffic would still exist to some degree. An alternative arrangement that provides for ahead and straight-on movements for all traffic from the left hand southbound lane might be introduced. Prominent road markings (cycle symbols centrally in the lane and possibly a coloured surface treatment across the full width of the lane) could then be used to encourage cyclists to take a primary (central) position in the lane and to encourage other users of the lane to think of it as a space primarily for cyclists which other road users have been permitted to use too.

Either arrangement would require narrowing of the northbound carriageway and relocation of the central reservation. Two southbound lanes of traffic passing the junction could make turning movements more difficult and potentially less safe however. Full signalisation of the junction might

also need to be considered. (A wide footway exists on to the east on the southbound approach to the junction, but would not provide a practical alternative route as it would need to stop at the junction).

Lyonsdown Road to Raydean Road

Away from the Lyonsdown Road junction the main carriageway is around 10-10.5m wide. Parking is uncontrolled and on street parking associated, at least in part, with the motor works to the west of the road, occurs. A service road is present for part of the stretch on the west of the road with a wide eastern footway. Two pedestrian refuges are present within this stretch with a right turn pocket associated with the adjacent side road in each case. Space is inadequate to accommodate both a general traffic lane and a cycle lane in both directions within the current carriageway if the refuges are retained. At present space for southbound cyclists past the islands is within a range that may result in vehicles trying to pass cyclists where space does not permit. Except at the islands there is space to accommodate a cycle lane and a general traffic lane in each direction if parking is prevented. Adjustments at the refuges and junctions to widen the road locally would be needed at the pedestrian refuges. The wide footways provide scope for adjustments and might permit alternative parking provision to be made in some locations if necessary.

Raydean Road to Station Road

The carriageway continues around 10m wide to the approach to the signals. A right turn waiting facility for southbound traffic turning into Raydean Road is provided. Tidal waiting restrictions (7-10am southbound, 4-7pm northbound) are provided through much of this stretch. Cycle and general traffic lanes can be accommodated with further restrictions to parking, however at the junction with Raydean Road localised carriageway widening so that the right turn provision can be retained would be advisable to avoid right turners holding up traffic travelling ahead. The service road at this location could provide an alternative route for northbound cyclists (if the current northbound no entry restriction were removed for all traffic or via a contra-flow cycle lane). However parking in the service road would then need greater control, and keeping the route on the main carriageway would be preferable from the point of view of continuity of the route.

A1000 junction with Station Road

In order to maintain the current number of general traffic lanes at the junction (and so maintain junction capacity) adjustments to the junction would be needed. The left turn slip roads from the southbound A1000 into Station Road and from Station Road to the A1000 will also present difficulties for cyclists. Wide service road west of the junction and space on the central island suggest that a significant redesign of the junction to provide more space in a more conventional arrangement may be possible. The service road might provide a bypass for northbound cyclists in some potential arrangements and this help reduce the scale of work needed at the main junction. However to accommodate southbound cyclists and other traffic (and to ensure provision for turning cyclists) significant redesign is likely to be needed. Construction costs for a major junction improvements might be in the region of £1M+ and the likelihood that significant expensive utility diversion would be needed would increase this considerably. A study to identify and model outline proposals, including lower cost proposals if possible, could be expected to cost around **£25,000**.

Station Road to Underhill

The existing carriageway space under the bridge would not accommodate the existing general traffic a lanes and cycle lanes. Some cycle provision might be made on the wide western footway but this would come into conflict with the Fairfield Way and Underhill junctions. However using the wide footway to provide a widened carriageway overall and relocate the pedestrian crossing refuge further west could permit a cycle lane to be provided on the carriageway in each direction. Localised widening at the Underhill junction would be needed and previous investigations in this area have highlighted the presence of utility services that would be particularly expensive to divert. Once again a study to identify and model outline options would be needed as a first step at a cost of around £20,000.

The current left turn lane arrangement into Fairfield Way and Underhill will present a particular difficulty for cyclists. This might be addressed by restricting some turning movements but with potentially adverse impacts on the surrounding network and the operation of the traffic signals. Provision of a cycle lane within the widened carriageway approaching an advanced stop line at the signals between the two general traffic lanes would be an alternative or an arrangement similar to that suggested for Lyonsdown Road might also be employed, using a coloured surface across the full

width of the inside lane to encourage road users to think of the entire lane as space primarily for cyclists that other road users are permitted to use.

Barnet Hill

The road is currently mainly set out with two general traffic lanes uphill and a single lane downhill. The uphill lane provides an opportunity for lighter motor vehicles to pass slow moving buses or lorries on the hill. The (approx.) 10m carriageway would provide just enough room for a single general traffic lane and a cycle lane in each direction. A wider than minimum cycle lane would be needed on the downhill side of the road because of the presence of the wall adjacent to the carriageway and would be desirable on the uphill side to allow for cyclist 'wobble' while travelling uphill. Removal of the 'overtaking' facility for uphill traffic might increase driver frustration and could be expected to have some impact on traffic capacity of the A1000, although the presence of traffic signalled junctions at both ends may limit the impact of this.

A1000 junction with the Meadway

The overall highway width each side of the junction provides very limited scope to introduce cycle lanes without impacting on the operation of the junction. The footways are relatively narrow in this area and heavily used so taking significant space from these is not really an option. However loss of general traffic lanes at the stop line would undoubtedly affect the junction capacity. Without restricting movements into or out of Meadway or accepting the impacts on the main road of reduced traffic capacity at the junction, a solution using a coloured surface treatment to highlight the whole inside lane in both directions on the A1000 (as suggested at the Lyonsdown Road and Underhill junctions) might provide a suitable means of maintaining the continuity of the route.

High Street from the Meadway junction to Wood Street

Much of the High Street maintains two general traffic lanes in each direction currently, with parking, loading and some bus stop and stand provision in inset bays. However at the narrowest point the general width and bus stops restrict the available width to one lane in each direction. In order to accommodate cycle lanes through this part of the High Street reduction to a single general traffic lane in each direction throughout would be needed. Separately adjustments to mitigate the effects of the pinchpoint on general traffic movement are being explored. Care would be needed in arrangements at the Wood Street junction but reasonable provision within the space available seems feasible in conjunction with a single general lane in each direction further south.

Wood Street to Moxon Street

The width of road beside the church would prevent the provision of cycle lanes. Cycle use of the stretch could be made prominent by the use of cycle route signs, cycle carriageway signing in the centre of each lane and possible coloured surfacing. Other options might be to introduce wider environmental changes throughout the High Street to change the character of the street to one where a 20mph speed limit could apply and traffic would be less dominant while still able to pass through, or to introduce one way traffic with a contra-flow cycle lane in conjunction with wider changes to traffic movement in the area.

High Street from Moxon Street to St Albans Road

The carriageway narrows from around 11m just north of Moxon Street to about 9m at The Spires before widening again to about 13m before the St Albans Road junction. Parking bays are provided in parts of the road.

A general traffic lane and a cycle lane in each direction could be provided through the entire length, but only limited parking could be retained. An arrangement that introduced a 20mph environment throughout the High Street and providing for cyclists in general traffic lanes through a less traffic dominated environment would be an alternative. The costs of developing and implementing such a scheme would clearly be high (in excess of £1M).

St Albans Road to Hadley Green Road

The carriageway width is mainly around 11 to 11.5m with a short stretch at Hadley Parade around 10m wide. A pedestrian refuge and build out is provided just north of Hadley Parade with lane widths of approx. 3.5m through this gap. These widths are not ideal for cyclists being with in a range that may encourage other vehicles to pass too close. Parking control varies from 'at any time' restrictions permitting loading only out of peak hours and parking bays allowing parking for residents or pay by phone. To provide a cycle lane and a general traffic lane through this area in each direction would

have an impact on permitted parking. Parking on one side of the road only with a buffer zone to the cycle lane could be accommodated at the widest points only. A change to the environment as suggested above could allow cycling in a 20mph area in lanes shared with general traffic, so retaining more space for other uses.

Hadley Green Road to Dury Road

The carriageway width through Hadley Green is slightly too narrow, at least in part, to accommodate adequate on-carriageway cycle lanes and general traffic lanes. Measures to mitigate the effects of a slightly sub-standard layout would need to be investigated. Permitted parking would also need to be restricted or removed.

There may also be scope to widen slightly onto the adjacent green at a cost of perhaps £50,000 over the 500m of Hadley Green. Further investigation into the maintenance implications of widening onto the adjacent green would be required. A route across the green would not be acceptable because it is recognised as an important area of grassland.

Hadley Highstone

A section of the road has a central reservation. On carriageway cycle lanes might be provided through this section if parking were prevented (and without restricting parking in the laybys). Currently on street parking, presumably by local residents, is common. If the central reserve were removed parking could be retained on one side of the road (with a buffer zone and then the cycle lane). The single carriageway sections are wide enough to accommodate cycle lanes. Again restriction of parking would be needed.

Special consideration would need to be given to treatment at the pedestrian island north of Dury Road. Provision of cycle symbols on the carriageway to highlight the presence of cyclists past the island and encourage them to take a primary road position at this point may be sufficient but depending on exact dimensions and detailed layout consideration adjustments or alternative pedestrian facilities may be needed.

Construction costs for provision of cycle lanes and associated parking restrictions and signage only in the area would be below £10,000. The construction costs would increase considerably if the central reserve were removed, the pedestrian refuge changed or other more major works were required. An alternative approach might be to consider a major re-design of the street environment in this location, although clearly this would be more expensive still.

North of Hadley Highstone

In this area the carriageway is generally too narrow to accommodate dedicated cycle lanes. The eastern footway is generally too narrow to accommodate shared use and there is little scope to widen the carriageway or make cycle provision on the western verge. Alternative routeing onward towards Potters Bar via Kitts End Road may be preferable to trying to treat the A1000.