Harlow & Gilston Garden Town LCWIP

Cycling Infrastructure Recommendations

PJA

Version	Date	Main Contributors	Approved by
Draft	10/09/20	AS, JY, BC	BC
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Contents

Summary

This booklet presents the infrastructure recommendations on the preferred LCWIP cycling corridors. The recommendations follow on from a baseline audit of existing conditions, undertaken using the LCWIP Cycle Route Seleciton Tool (RST). The recommendations are thus a specification for further design on each corridor or each sub-section of route as schemes come forward for further development. No recommendations are presented for Route 1, which is an orbital route wholly within the area covered by the Harlow Town Centre Masterplan. A set of town-wide recommendations are also made.

RST Scoring Themes

The Route Selection Tool (RST) enables a review of conditions for cycling and enables a before and after comparison of cycling conditions, based around six key themes: Directness, Gradient, Safety, Connectivity, Comfort and Critical Junctions.

This chapter briefly provides a summary of how the existing cycle facilities in Harlow performed against the six scoring themes. This context is particularly useful in the context of Harlow given it has a well-established network of cycle facilities throughout the town however not all of these facilities achieved good scores in the RST assessments. For example, the shared use sections provide a protected route for cyclists away from vehicular traffic which scores highly against 'safety' however the 'comfort' score is poor because the facilities are too narrow and increase conflict with pedestrians.

Directness – Directness compares the length of cycle routes against the equivalent vehicle route. The two most influential factors on Directness scores in Harlow were filtered vehicle-free routes and grade separated junctions. Filtered vehicle-free routes, including routes through residential areas and open spaces, generated much higher scores for Directness as cyclists were able to follow much shorter routes than vehicles. The Directness scores for routes with Grade-separated junctions were generally reduced as the design arrangement elongated the cycle alignment through the junction compared to the vehicle route. This was a particular issue at larger roundabout junctions such as Velizy Avenue/ Fourth Avenue and Second Avenue/Tripton Road.

Safety – This measure considers vehicle volumes and speeds along a link, and the exposure of cyclists to vehicles. A majority of the reviewed routes scored well on this category as cyclists were either using quiet residential streets with less than <2500 vehicles a day or were using segregated cycle facilities which separated cyclists from vehicles. Routes that scored poorly tended to be locally strategic routes where vehicle flows were higher without protection for cyclists, such as Kingsmoor Road and Sheering Road. Segregated routes in quieter areas also had scores reduced in this category because of lack of lighting and/or passive surveillance.

Connectivity – this reviews access to cycle routes and aims for at least 4 x connections per km of cycle route. All routes in Harlow scored strongly on this category with a mixture of vehicle access points and local walking/cycling routes in the network.

Comfort – Comfort assesses the width of cycle facilities, how much room space is allocated for cycling, interaction with pedestrians and surface quality. The guidance aims for a minimum 2.1m width for uni-flow cycle facilities and 3.5m for bi-directional facilities. On this basis, the scores across the nine routes varied considerably depending on the type of cycle infrastructure in place. The scores for shared use paths were particularly variable as the width of cycle facilities on shared use paths ranged from less than 1.5m up to 3m for two-way cycle flows.

Critical Junctions – this considers conditions for cyclists at signalised junctions and roundabouts based on a series of design factors, including vehicle flows, lane widths, turning risk, crossing provision and maintenance. Grade-separated junctions in Harlow scored well on this assessment as cyclists are fully protected from vehicle flows however not all junctions provided comprehensive access for cyclists and therefore scored lower. Existing junctions that scored poorly where those that did not include dedicated cycle crossing points, required cyclists to cross several lanes at once, or interaction with large vehicles.


Study Area: Harlow
Proposed Corridor Routes
Route 1 - 2.17km
Route 2 - 2.20km
Route 3 - 1.85km
Route 4 - 4.41km
Route 5 - 2.20km
Route 6 - 2.48km
Route 7 - 1.58km
Route 8 - 3.56km
Route 9 - 1.54km
PJA
EPPING FOREST DISTRICT COUNCIL, HARLOW COUNCIL, ESSEX COUNTY COUNCIL
HARLOW: LOCAL CYCLING AND WALKING INFRASTRUCTURE PLAN (LCWIP)
PROPOSED CYCLE CORRIDOR ROUTES
Harlow
Old Harlow
Gilston
Sawbridgeworth
High Wych
Sheering
Humsdon
Humsdonbury
Widford
Wareside
Roydon
Roydon Hamlet
Broadley Common
Nazeing
Lower Nazeing
Hastingwood
Mark Hall South
Nettleswell
Church Langley
Foster Street
Latton Bush
Brays Grove
Tye Green
Hare Street
Great Parndon
Little Parndon
Eastwick
Temple Fields
Nettleswell Cross
Church Gate Street
Houchen Tye
Hobbs Cross
Glen Faba
Dobb's Weir
Eastend
Gilston
Stewards
Ringmoor
0
1
2
km

Recommendations

Recommendations for each corridor are presented route-by-route in the subsequent section. However, a common set of core recommendations apply network wide, and should be developed in addition to specific corridor- or area-based measures.

Materials + Design

ECC should use the STC investment, S.106 and S.278 processes to develop a consistent treatment for cycle track in terms of materials. Existing black top being the same colour as pedestrian footways does not help with wayfinding or reminding users where they need to be. The use of Red aggregate with tinted binder in Waltham Forest and Leicester gives a consistent and strong visual consistency. It is also recommended that a "third" material type is used in shared use areas, to contrast with both conventional footways and cycletracks. For example, if there is a mixture of blacktop and ASP used in footways, use a buff coloured surface such as resin bound gravel on shared use routes. This can also be used on shared use routes in parks and open spaces to present a more visually pleasing material compared to blacktop, concrete or paving. We have included an example from Lea Bridge Road in Waltham Forest which illustrates a clearly delineated footway and cycle track, as well as a buffer strip providing additional protection for the cycle track from the carriageway.

Network Branding

The town already has an extensive cycle network which is signposted, however a route branding and signage strategy should be adopted to further enhance the network's legibility. Identifying key routes through the town which connect key destinations will help to highlight the availability of cross-town routes which will be particularly important for integrating new developments with the town and achieving the town's ambitious mode shift targets.

There is already a comprehensive system of signage in place, however the destinations and need for locally numbered or branded routes should be investigated to provide a consistent and cohesive network. This approach has been adopted in other 'New Towns' with similar layouts including Bracknell Forest which has colour-coded its main cycle routes. It is suggested that route branding and numbering should reflect existing numbering systems in common use in the town, such as Route 5 corresponding to Fifth Avenue for example, and significant bus routes or A-roads elsewhere (e.g. route 414).

Care should also be taken to avoiding confusing numbering, such as Route 1 being used which would clash with NCN Route 1 which follows a similar route to First Avenue. The wayfinding system should take into account destinations lying off the line of the key cycle routes by taking a "whole network approach". It is recommended that this network branding is also complementary to localised wayfinding recommendations identified in the Walking infrastructure recommendations of this LCWIP. The opposite example is from Bracknell Forest which has a comprehensive cycle network which (similarly to Harlow) includes many grade-seperated designs

Route 1: Town Centre Loop

Route overview

Route 1 would follow the town centre loop of Velizy Avenue/ Fourth Avenue/ Haydens Road/ Third Avenue. Currently, there are only dedicated cycle facilities located on Haydens Road. The cycle routes on the other sides of the town centre follow parallel grade-separated alignments which are routed under the main road network.

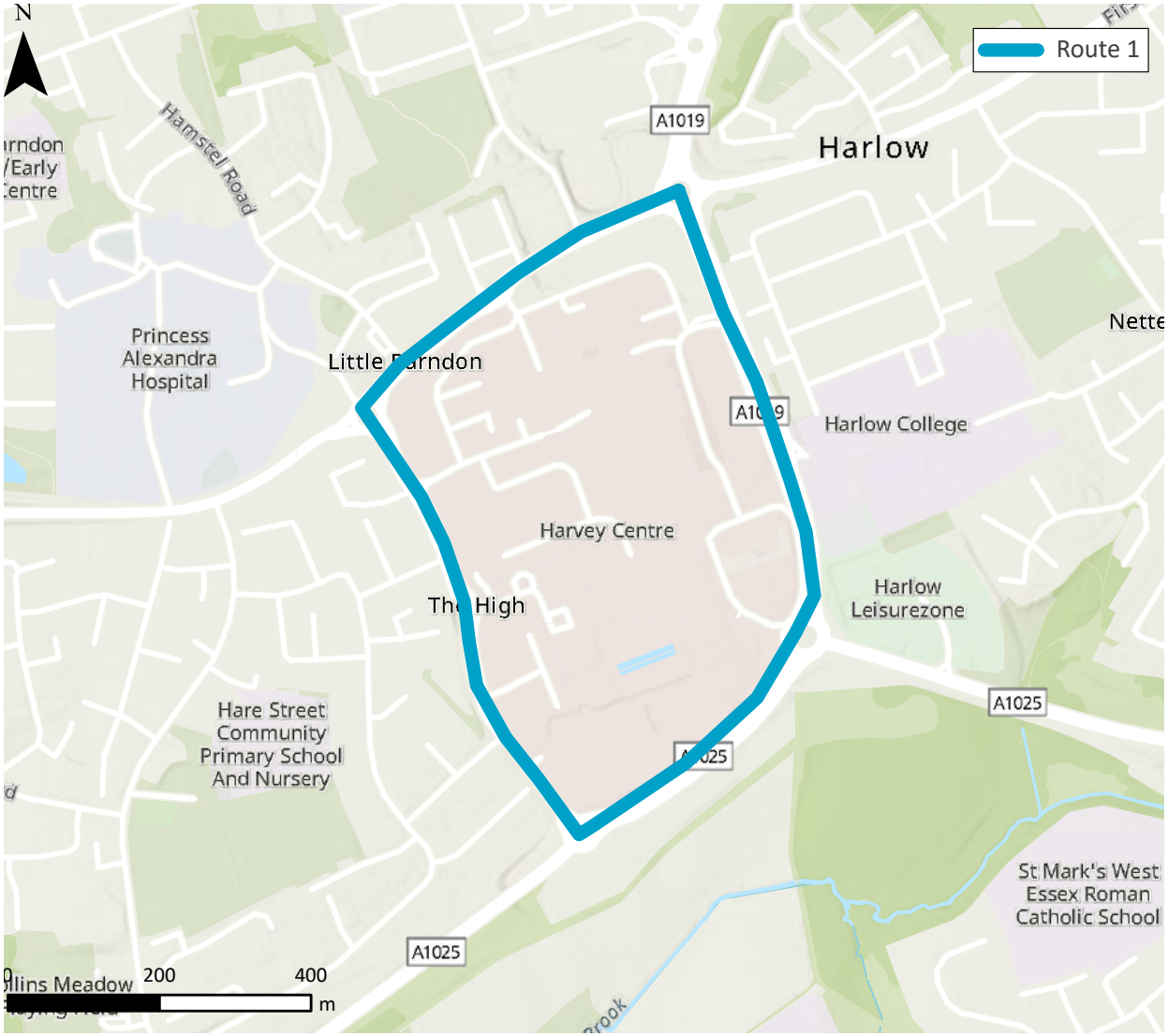
The design recommendations for Route 1 reflect the latest design proposals from the emerging Town Centre Masterplan. The key features of those proposals include:

- High-quality protected cycle facilities on the each of the main roads surrounding the centre. The current designs propose bi-directional cycle tracks around the town centre ideally 4m wide with priority over side entry junctions and connections into improved junctions.

- Conversion of existing grade-seperated junctions at Velizy Avenue/First Avenue and Haydens Road/Fourth Avenue to 'Dutch Style' roundabouts. These would significantly improve access to the town centre for walking and cycling by providing controlled at-grade crossing points on all arms.

- The conversion to at-grade facilities will require upgrades to the existing cycle network to ensure a seamless onward connection to surrounding areas.

- Installation of continuous footway layouts on all minor junctions around the town centre.



Route 2: Eastwick - Little Parndon - Town Centre

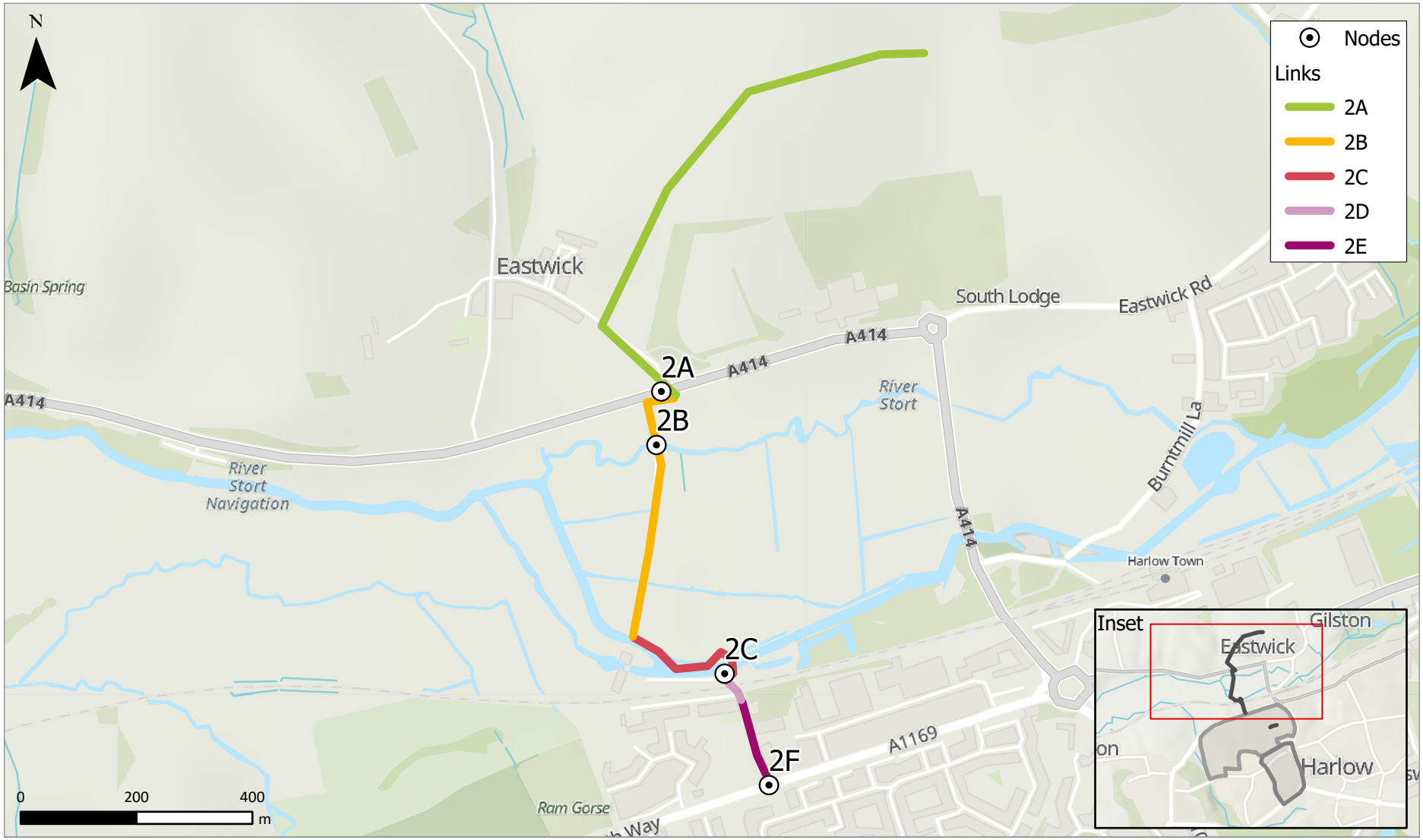
Route overview

Route 2 uses predominantly low-traffic and/or access-only streets with limited vehicle interaction along the route. The RST assessment assumed that cyclists therefore would be cycling on-road except for when using the dedicated cycle-only sections of the route. Improvements to the route should focus on raising awareness and legibility of the cycle route at key decision points such as local residential junctions, crossing of Elizabeth Way and the A414, and transition points into adjoining footpaths and cycle routes.

The route alignment through Parndon Mill might be contentious as there have been historical issues with cyclists passing through the estate. A short alternative alignment could be followed along the canal which would use a different bridge crossing of the River Stort and therefore avoiding Parndon Mill. The route is largely secluded north of the Hornbeams. As such, even with lighting, some users may feel unsafe on this route at night. Therefore, a supplementary connection parallel to the A414 via the development to Route 3 should be provided as part of the development layout.

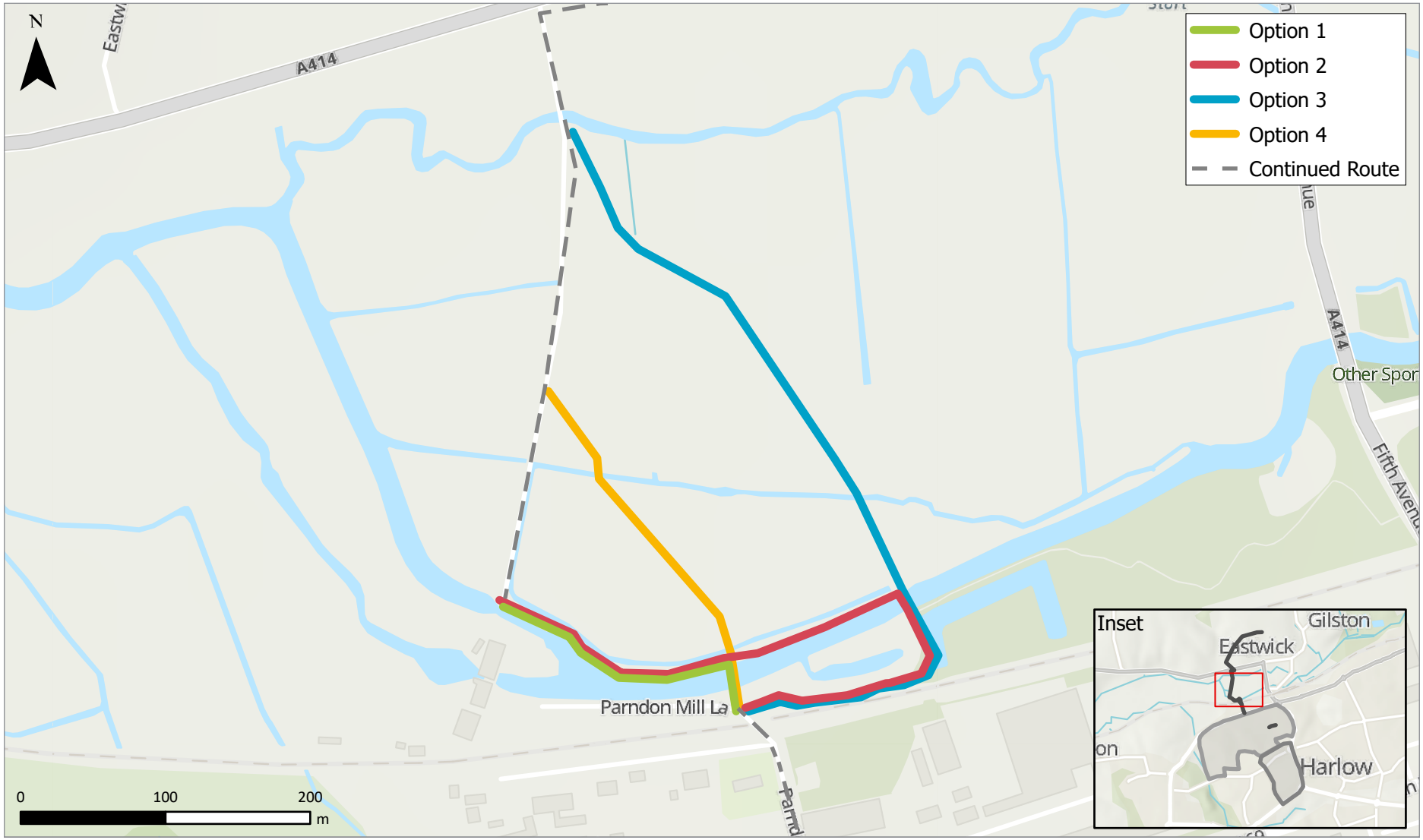
Route selection tool summary and recommendations

RST section	Extents	Existing conditions	Recommendations
n/a	Development to A414	-	A. The Gilston Garden Town development should ensure a high-quality cycle connection is provided to the A414 at Eastwick to tie-in with LCWIP route 2, and a controlled crossing provided over the A414. This may require a modal filter on the eastern arm of Eastwick Road. Internal connections within the GGT should ensure there is a connection between LCWIP routes 2 and 3 within the site, as route 2 may be unsuitable at night.
1	A414 to Parndon Mill	Unlit bridleway in open countryside, with limited use by motor vehicles (cul-de-sac section of general highway at northern end).	B. Improve surfacing. Re-build bridge adjacent to the ford over the river Stort. Provide lighting throughout. Some evidence of the bridleway being used for fly-tipping; consider stopping up or providing CCTV as part of new lighting scheme C. A new bridge over the Navigation and/or a new path across Parndon Mead would bypass the existing constraint of the grounds of Parndon Mill being unsuitable for cycling (*see diagrams on page 10*)
2	Parndon Mill to Elizabeth Way	Shared surface street, providing vehicular and pedestrian access to Parndon Mill. Unlit north of St Mary's church.	D. Provide additional lighting, and improve surfacing and drainage.
3	Elizabeth Way to The Hornbeams	Segregated pedestrian/cycle street. Lit but not overlooked.	E. New controlled crossing needed over Elizabeth Way. Suitable transition to/from the crossing the sections of route each side. F. Amend spacing and layout of bollards at the junction with the Hornbeams to ensure all types of design cycles in LTN 1/20 can be accommodated (see figure 5.2 in LTN 1/20). Transition between the cycle path and the carriageway may also benefit from a raised table on the latter.



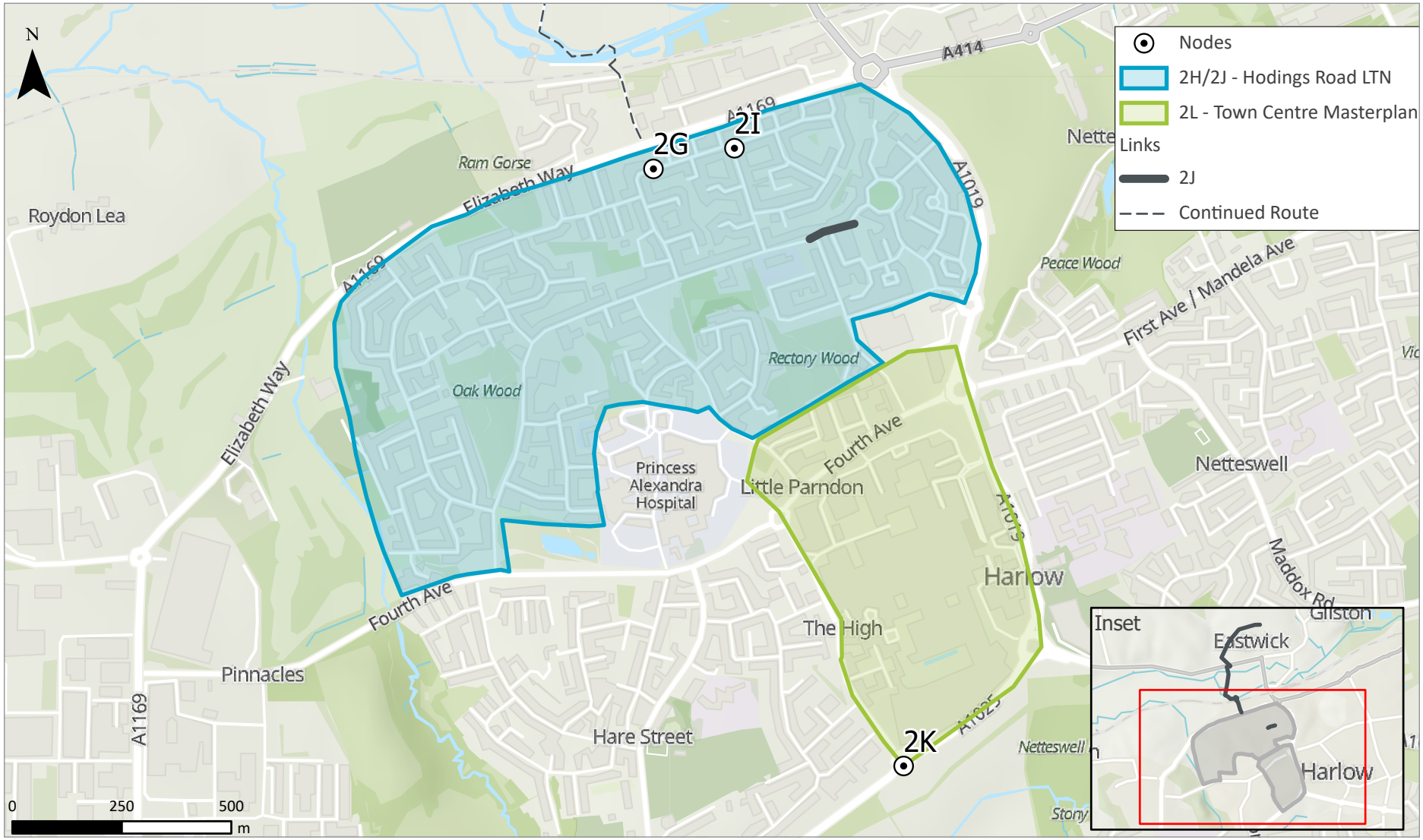
Route selection tool summary and recommendations

Parndon Mill grounds by-pass options	
Option 1	New bridge over Stort Navigation then use short section of existing navigation towpaths. Provide resurfacing, lighting and widening.
Option 2	Use existing bridge and navigation towpath. Provide resurfacing, lighting and widening
Option 3	Use existing bridge, then provide new sealed surface path across Parndon Mead with lighting (indicative alignment shown to tie-in to existing crossings over drainage ditches). Resurface, illuminate and widen existing paths.
Option 4	New bridge over Stort Navigation, then provide new sealed surface path across Parndon Mead with lighting (indicative alignment shown to tie-in to existing crossings over drainage ditches). Resurface, illuminate and widen existing paths.



Route selection tool summary and recommendations

RST section	Extents	Existing conditions	Recommendations
4	The Hornbeams to Hodings Road Road (Rivermill)	On-road cycle route, shared with motor vehicles on lightly-trafficked residential streets. Rivermill is subject to higher motor traffic flows during peak times, particularly drivers avoiding congestion on Elizabeth Way and Fifth Avenue.	G. A low-traffic neighbourhood (LTN) scheme has already been suggested, and this is strongly recommended for the sections of Route 2 between Elizabeth Way and the town centre. The LTN could become a 20mph zone, which then obviates the need for hump warning signs, offering scope for de-cluttering and reducing the number of electric connections to be maintained. Failing that, traffic calming measures should be upgraded, replacing the speed cushions with sinusoidal humps: these are bus/motorcycle/cycle- friendly, but are more effective on smaller four-wheel vehicles than cushions. H. The prominence of the junction at Rivermill / Hornbeams could be improved by providing a raised table.
5	Rivermill (Hodings Road Road) to Sainsbury's pedestrian/cycle access (Hodings Road Road)	On-road cycle route, shared with motor vehicles on a lightly-trafficked residential distributor road. However, motor traffic volumes are higher at peak times, particularly drivers avoiding congestion on Fifth Avenue and Elizabeth Way.	I. Include Hodings Road Road in any proposed Low Traffic Neighbourhood. Town centre redevelopment will also influence future function of Hodings Road. J. Create a new link from Hodings Road Road to Parish Way (by widening the existing footpath, and creating better transitions to/from the carriageway) to allow informal access between Route 2 and Route 3, thus improving the permeability and access of the overall network.
6	Hodings Road Road to Post Office Road	Segregated pedestrian/cycle street. Lit but not overlooked.	K. This section is within the area subject to the Town Centre Area Action Plan, and the subway is likely to be removed. Hence, this section is likely to be replaced with surface-level provision, integrated with the new land uses with much better passive surveillance. However, care should be taken to ensure that the new provision is suitably well-designed for both cycle and pedestrian traffic, with a clear and intuitive connection into the re-imagined cycle and walking networks within the town centre.



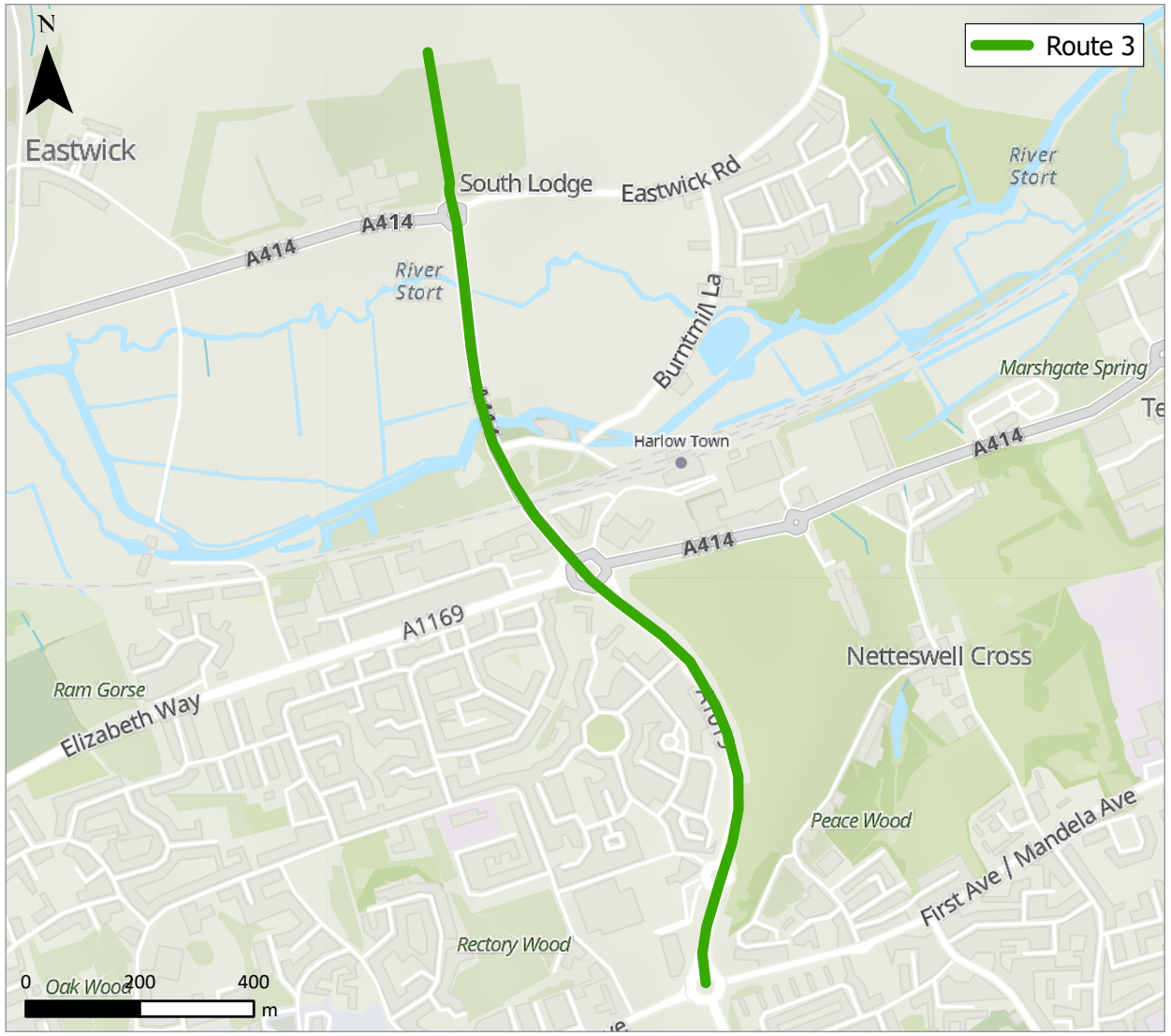

Car parks
Tarmac Street
Kitson Way
Harvey Centre

Route 3: Gilston – Fifth Avenue - Town Centre

Route overview

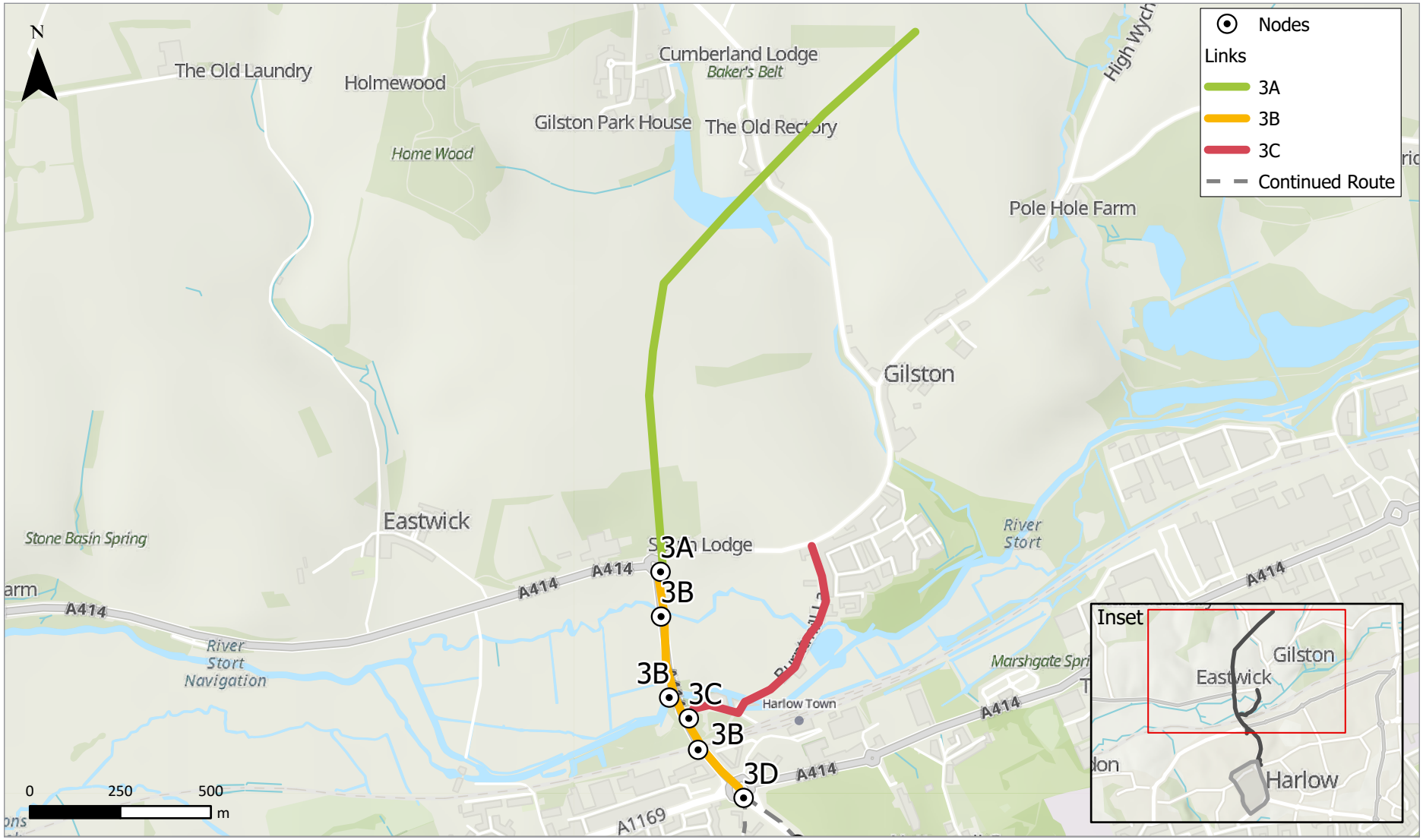
There are currently shared use cycle facilities between the Burnt Mill Roundabout and the Town Centre, however these are only provided on the eastern side of Fifth Avenue which reduces the connectivity of the route from surrounding areas. However, the major issues for cycling are on the northern sections of the route which is particularly uncomfortable for cycling including the Burnt Mill Roundabout. The design of Route 3 will need to be co-ordinated with the proposed STC north-south corridor which would connect the Gilston Garden Villages with Harlow centre.

The immediate main design focus should be on extending the existing protected cycle facilities up to Gilston to provide a continuous and safe route. The existing shared use facilities protect cyclists from vehicles however the shared use design could still be upgraded to fully segregated in order to increase pedestrian and cycle comfort. The Burnt Mill roundabout is major barrier to walking and cycling and the proposed STC upgrades to the junction (and corridor) should ensure the provision of improved pedestrian and cycle facilities through the junction, including routes via the junction for cyclists are as direct as the motor vehicle equivalent, for example by using a “hold the left turn” signalling arrangement that allows ahead cycle movements to run in parallel with the equivalent carriageway stage.

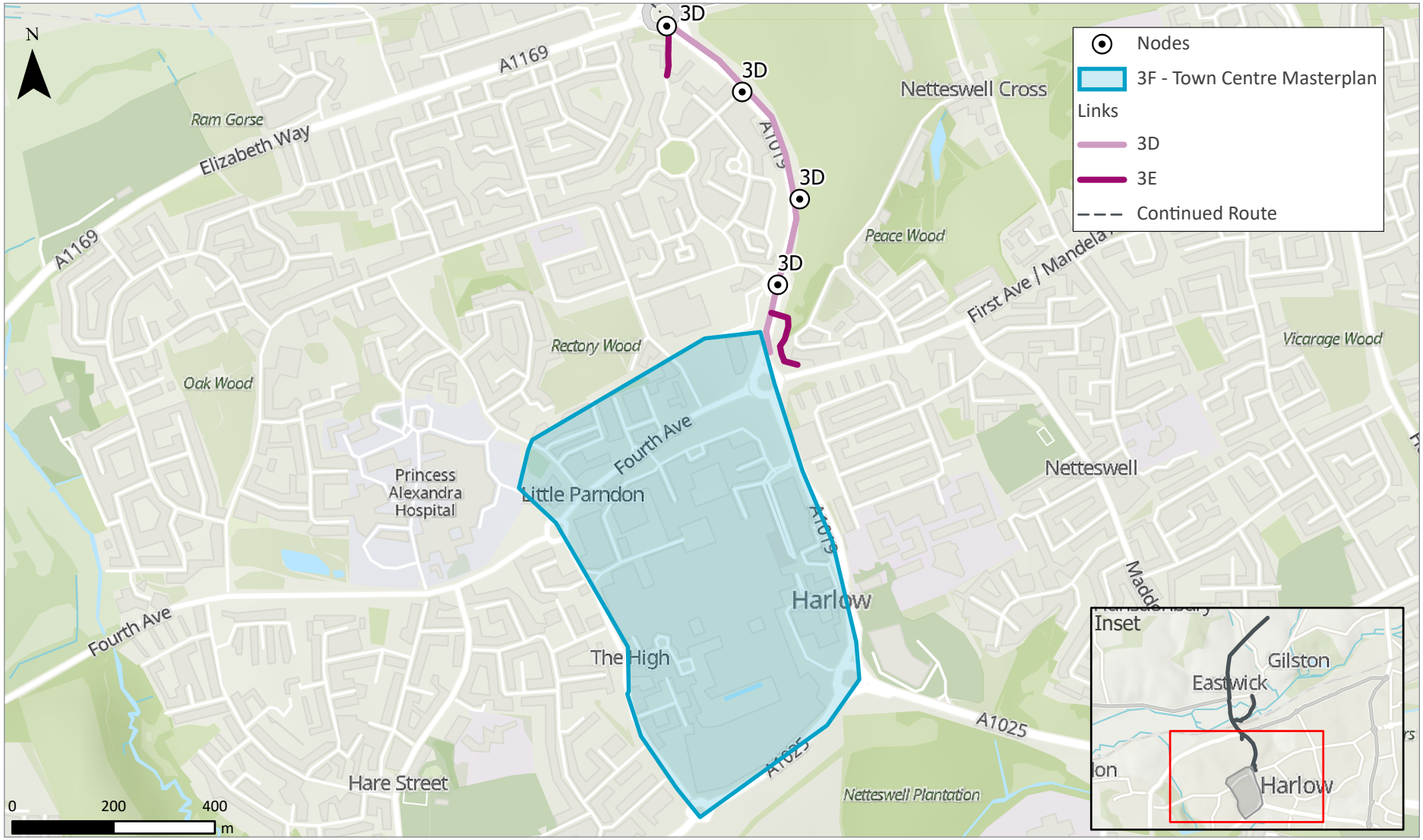


Route selection tool summary and recommendations

RST section	Extents	Existing conditions	Recommendations
n/a	Development to A414	-	A. The Gilston Garden Town development should ensure a high-quality cycle connection is provided to the A414 to tie-in with LCWIP route 3. Junctions should ensure that cycle traffic passes through with minimum additional delay compared to the equivalent motor vehicle routes. Staggered crossings shared with pedestrians should be avoided.
1	A414 to Burnt Mill	40mph primary road with lighting, but no passive surveillance. Shared use footway provided south of Burnt Mill Lane.	B. A high quality cycle route, separated from pedestrians and motor traffic is required, as this will be the primary link from the Garden Town to Harlow Town centre and the main railway station. Pedestrian footfall can expect to be high because of the proximity of the railway station and employment at Burnt Mill relative to the southern fringes of the Garden Town. This may necessitate new bridges over the river, navigation and railway. C. Pedestrian and cycle priority crossing to be provided over Burnt Mill Lane, by means of a cycle zebra set back into the side road. Development flows may well cause a significant increase in traffic volume on Burnt Mill Lane, against which mitigation in the form of a modal filter or one-way working should be investigated. Unchecked increases in traffic volumes on Burnt Mill Lane may make interaction with the cycle route difficult to manage.



RST section	Extents	Existing conditions	Recommendations
2	Burnt Mill to town centre	Existing segregated shared use footway. The cycle facility is on the opposite side of the road to where people live. The new housing development at Newstead Way hasn't been well-connected into the existing cycle network, as crossings are staggered and thus delays are experienced by cycle traffic compared to the single stage movements for vehicles turning into or out of the development at Fifth Avenue. Uninituitive connection into the town centre via subway under Fifth Avenue.	D. This facility should be improved as part of work on the Sustainable Transport Corridor (STC), including kerb separation between pedestrians and cyclists, and priority over the minor arms at uncontrolled junctions. The STC should seek to double up the provision, so a route is also provided on the western side of Fifth Avenue. (This could provide a better aligned connection to the likely new bridge locations suggested in section 1). Junctions should provide routes for cyclists that are as direct as equivalent movements for motor traffic. E. Care should be taken to ensure all cycle connections are catered for, including taking into account where extant links to the existing cycle tracks are located, e.g. Netteswell Orchard, and new links created to service sources of demand, e.g. a better connection from Burnt Mill junction to the northern end of Newstead Way, which is currently just a narrow footpath, whereas elsewhere in Harlow (e.g. The Hornbeams to Elizabeth Way), cycle traffic would have its own dedicated path adjacent to pedestrians. An improved connection from Burnt Mill to Newstead Way facilities transfer between Route 3 and Route 2, which provides a shorter route for people accessing the western part of the town centre from the north. F. The Town Centre Masterplan is proposing high quality surface crossings to replace the roundabouts and subways.



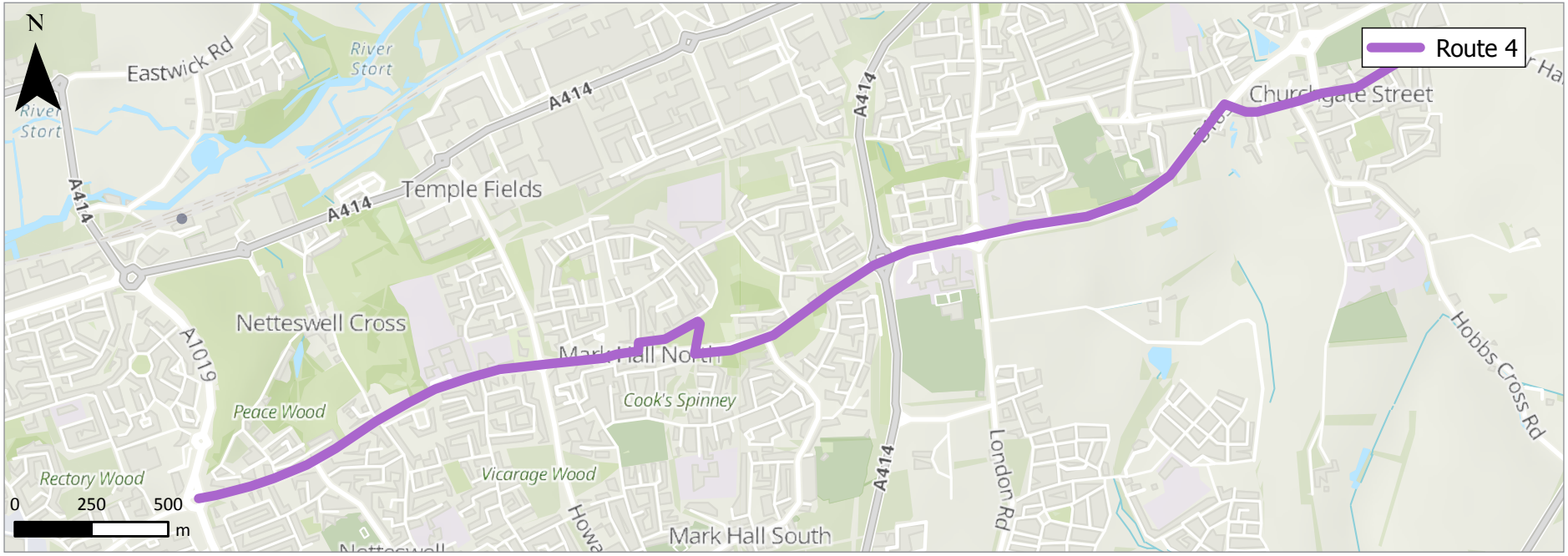
Route 4: Old Harlow – Mark Hall North – Town Centre

Route overview

Route 4 is the longest route in the LCWIP and would connect several local centres between Old Harlow and Harlow town centre, including Netteswell and Mark Hall North. There are currently cycle facilities along a majority of the route however the quality and continuity of these facilities varies considerably, ranging from kerb protected cycle facilities to narrow shared use paths. Consequently, the route feels disjointed to cycle on and is not always intuitive to follow.

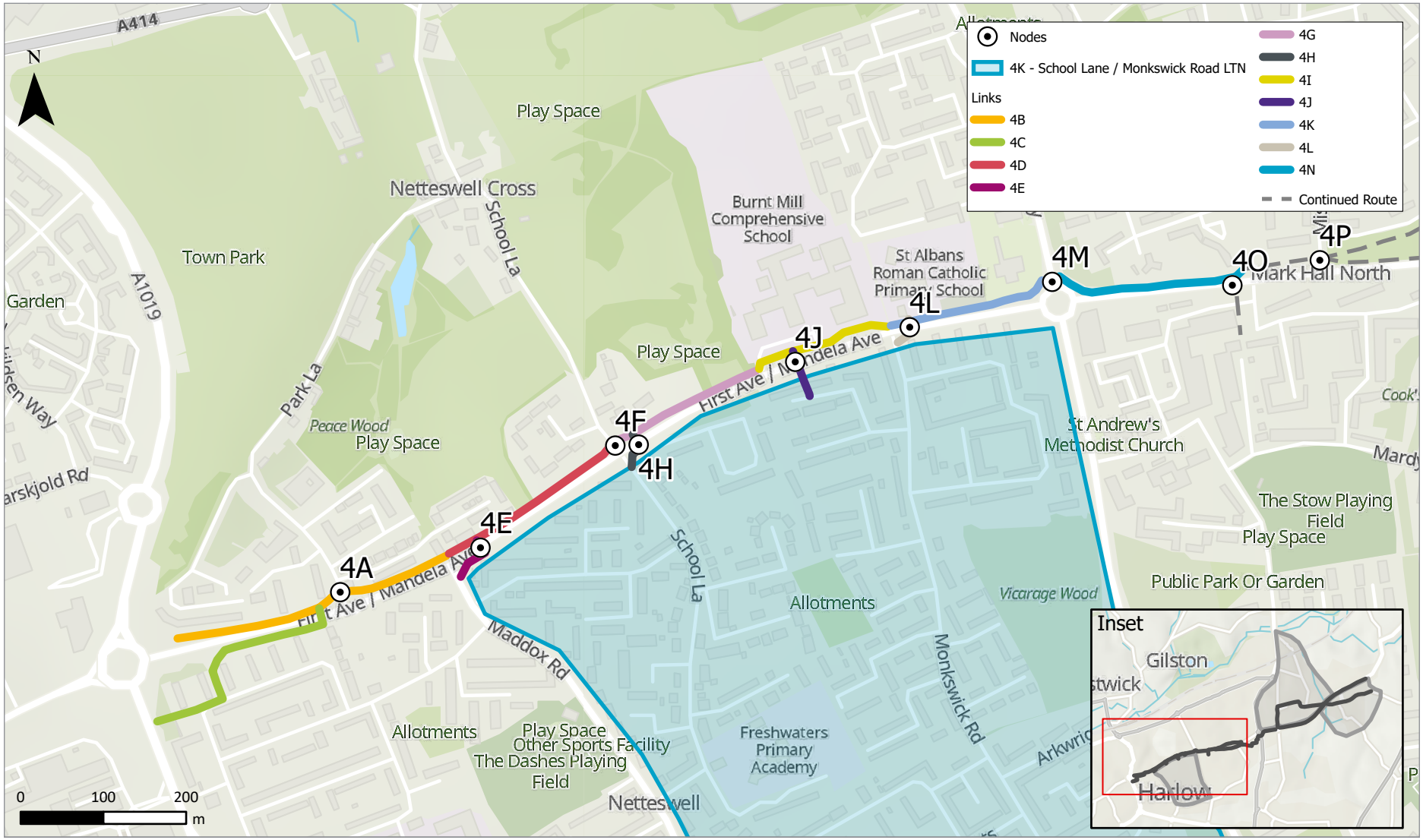
A further design constraint, as with several existing routes in Harlow, is the design layout which only includes cycle facilities on one side of the road which limits the route's connectivity and integration particularly around grade separated junctions. The grade-separation design actually elongates the length of cycle routes compared to the equivalent vehicle route. It should be noted that a limitation of the LCWIP's RST assessment is that it does fully reflect/consider the design of sub-standard shared use facilities which meant that narrow non-delineated shared use paths in Harlow still achieved a high score against 'safety' despite the cycling level of service being substandard.

The overarching design priority for the route will be to create a high-quality segregated and continuous cycle facility whilst also seeking to improve the overall streetscape and reduce the impact of vehicular traffic. Complimentary measures such as reducing the speed limit from 40mph and increasing the number of crossing points would help support this design. This arrangement is achievable, however feasibility varies along the route as the width and availability of highway changes, the design scope is particularly limited on Gilden Way (East of the London Road roundabout).



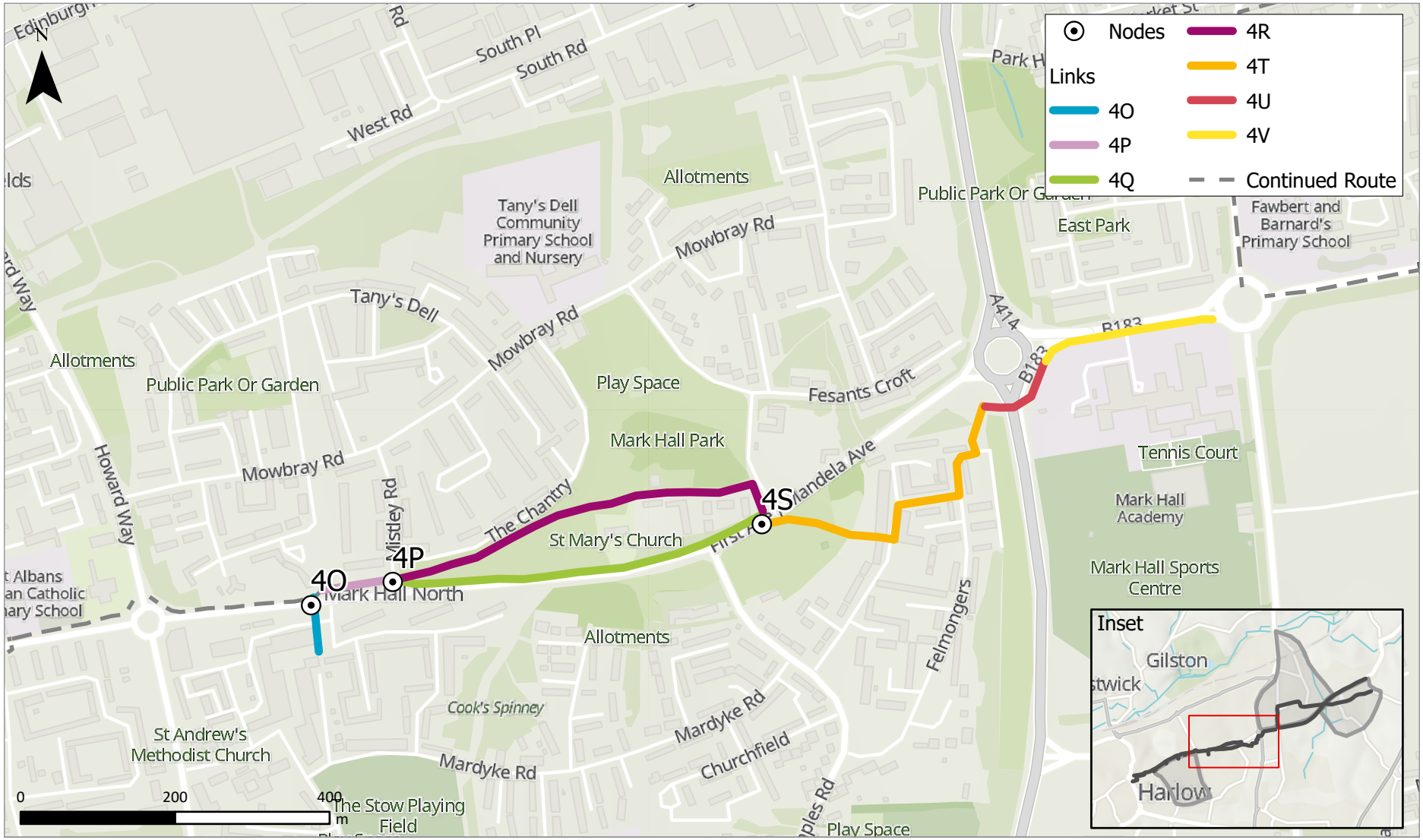
Route selection tool summary and recommendations

RST section	Extents	Existing conditions	Recommendations
1	Velizy Avenue to Maddox Road	Facilities on northern side of the road only. Wide shared use footway connecting into ramp under Fifth Avenue; becomes segregated east of Park Lane. Segregation is counter-intuitive as it is on the building side of the footway, rather than on the road side, presenting conflict with pedestrian accesses to properties.	A. Pedestrian/cycle zebra across Park Lane to give priority to pedestrians and cyclists. B. Swap current pedestrian and cycle provision over, introduce kerb separation, and provide cycle track zebra crossing points in line with pedestrian crossings and other accesses where suitable. C. Provide complementary facility on the southern side of the carriageway, including the link into the Hides, as far east as the controlled crossing point west of Park Lane (convert to Toucan).
2	Maddox Road to School Lane	Cycle facilities on northern side of the road only. Segregated shared use footway. Segregation is counter-intuitive as it is on the building side of the footway, rather than on the road side, presenting conflict with pedestrian accesses to properties.	D. Swap current pedestrian and cycle provision over, and introduce kerb separation with cycle track zebras at bus stops. Widen into grass verge to create wider footway and cycleway. E. Provide controlled crossing east of Maddox Road to facilitate access to/from housing area to the south, with short link of cycleway to connect to Maddox Road. F. Provide mode filter at School Lane to provide cycleway priority over side road. Both sides would be desirable (as part of LTN), but northern side essential.
3	School Lane to Mistley Road	Cycle facilities on northern side of the road only. Shared use footway. The downgrading of provision here reflects that the main cycle route is NCN 1, which diverts off via Town Park and Netteswell Road.	G. Use grass verge to create wider shared use footway. However, segregation from pedestrians is desirable, so cross-sections should be developed that can accommodate this, e.g. reduce existing 10.5m width carriageway by 1m to 9.5m (3.5m bus lane + 2 x 3m general traffic lanes). H. Convert pedestrian crossing at Old House Croft to TOUCAN, and provide better cycle link to Old House Croft and School Lane (south). I. Engage with Burnt Mill Academy with a view to moving their boundary fence to create a large footway outside the school so that the cycleway is less likely to be used as overspill footway space during busy times. Provide pedestrian/cycle priority over traffic entering and exiting the school. J. Provide TOUCAN crossing over First Avenue between each access to Burnt Mill school to allow pedestrian/cycle access to the alleyway leading to Halling Hill, adjusting the baffle wall to allow a horseshoe area for movement, rather than a constrained kink. K. Further widening east of Burnt Mill School is contingent on a Low Traffic Neighbourhood in Monkswick Road area, which may allow the removal of closure of its junction with First Avenue, allowing the existing space taken up by the right turn pocket to be reallocated to the footways and cycleway. This could also be achieved by banning the right turn in, or making the side road exit-only. Also scope to move St Albans Academy fence line as per Burnt Mill School. L. Convert pedestrian crossing outside St Albans Academy to TOUCAN, and provide short section of cycleway connecting into Monkswick Road. M. Signalise existing Howard Way roundabout or replace with signalised junction. N. Limited scope to widen shared use footway between Howard Way and Orchard Croft as carriageway is already 9.5m and operating with three vehicle lanes.

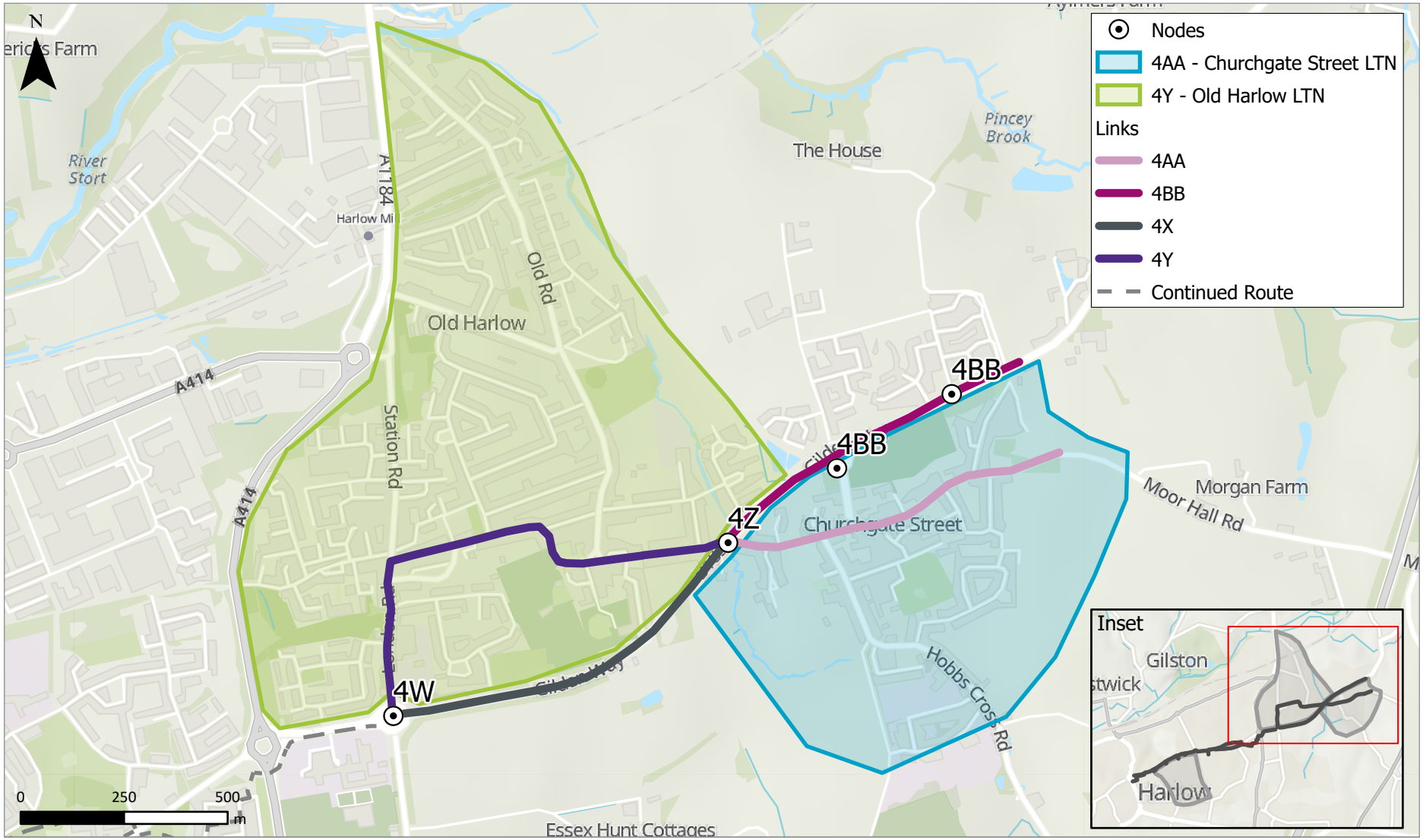


Route selection tool summary and recommendations

RST section	Extents	Existing conditions	Recommendations
			O. Convert Orchard Croft crossing to TOUCAN as link to/from the Stow local centre. P. East of Orchard Croft, use verge between First Avenue and Mistley Road service road to provide a cycleway and footway well set-back from traffic and avoiding the conflict, meeting Mistley Road with a set-back from the main road allowing a side road priority crossing to be provided using a cycle-zebra. Tighten up the junction geometry to reduce turning speeds.
4	Mistley Road to First Avenue (Cook's Spinnery underpass)	Cycles are signed via The Chantry to access cycleway that crosses beneath First Avenue to then get back on-line via ramp back up to southern side of First Avenue	Q. Online option – new cycleway in verge as far as Muskham Road, merging to shared use over bridge over Cook's Spinnery underpass. Provide ramp link to underpass. R. Offline option – new cycleway in verge connecting to The Gowers. Cycleway link from The Gowers to First Avenue parallel to Muskham Road.
5	First Avenue (Cook's Spinnery underpass) to London Road	Shared use footway on south side of the road, including underpass beneath A414 at roundabout. Shared use footways are constrained by bus stops and no verge buffer.	S. New TOUCAN crossing west of Muskham Road, or relocate existing signalised crossing further east: removal of eastern crossing allows extension of eastbound Bus Lane. T. New footway and cycleway links from First Avenue to Felmongers and from Felmongers to London Road underpass so that existing shared use footway is dedicated for pedestrian use only. U. Provide CCTV and public art lighting scheme in London Road subway V. Review street furniture locations and sign mounting methods to provide a less cluttered environment for pedestrians and cyclists. Provide kerb segregation between users, and cycle track zebras to bus stops. Engage with school to obtain land to widen footway/cyelway at pinch points.



RST section	Extents	Existing conditions	Recommendations
6	London Road to Sheering Road	No provision. Narrow footways with verges either side of 40mph purpose-build distributor road. B183 will soon become a link to the Motorway with the opening of M11 J7A.	W. Signalise roundabout to provide suitable and direct crossing routes for pedestrians and cyclists. Signalisation could include hamburger roundabout arrangement or conversion of existing roundabout to signalised cross roads (with straight-across crossings on all arms) X. Provision of dedicated cycleway in verge desirable to function as a strategic link, especially from Harlow East to Mark Hall college. A uni-directional track in each verge makes best use of limited space available. Y. However, Gilden Way is not overlooked by properties, and lacks any meaningful catchment of users. A low-traffic neighbourhood (LTN) solution in Old Harlow would allow the corridor to more usefully serve the residents of that area as well as bringing people to the destinations in the local centre. A bus/cycle gate on London Road and Mulberry Green at Gilden Way would create a large LTN between A414 and B183. An LTN may also complement Templefields Core Walking Zone. London Road bus gate could also function as a School Street outside Fawbert & Barnard Primary. The online route fulfils the LCWIP/STC corridor pending the implementation of the more challenging LTN braid.
7	Gilden Way to B183 via Churchgate Street	NCN route 1 signed on-road via the settlement. Existing on-road conditions may not be suitable at peak times, especially with increased flows associated with East of Harlow development and potential external traffic from places like Ongar and Matching Green using these routes to access M11 J7A.	Z. Upgrade crossing to TOUCAN at Mulberry Green / Sheering Road AA. Internal movement network in East of Harlow development should deliver a connection from Hobbs Cross Road and Moor Hall Road to Gilden Way and/or London Road so that Churchgate Street can have through traffic removed (LTN), as per the same process that was followed in Old Harlow with Netteswell Road being downgraded to ped/cycle only when the original new town was built. BB. A parallel route in the verge along Gilden Way is also desirable to provide a more direct and consistent link to/from Gilden Park. Constrained nature of verges in Gilden Way suggests a uni-directional track (one on each side) may make best use of space. Crossing and short connecting link to be provided at Aspen Way to connect to Gilden Park. Suitable safe and direct crossing treatment required at Sheering Road / Gilden Way roundabout. The online route fulfils the LCWIP/STC corridor pending the implementation of the more challenging LTN braid.



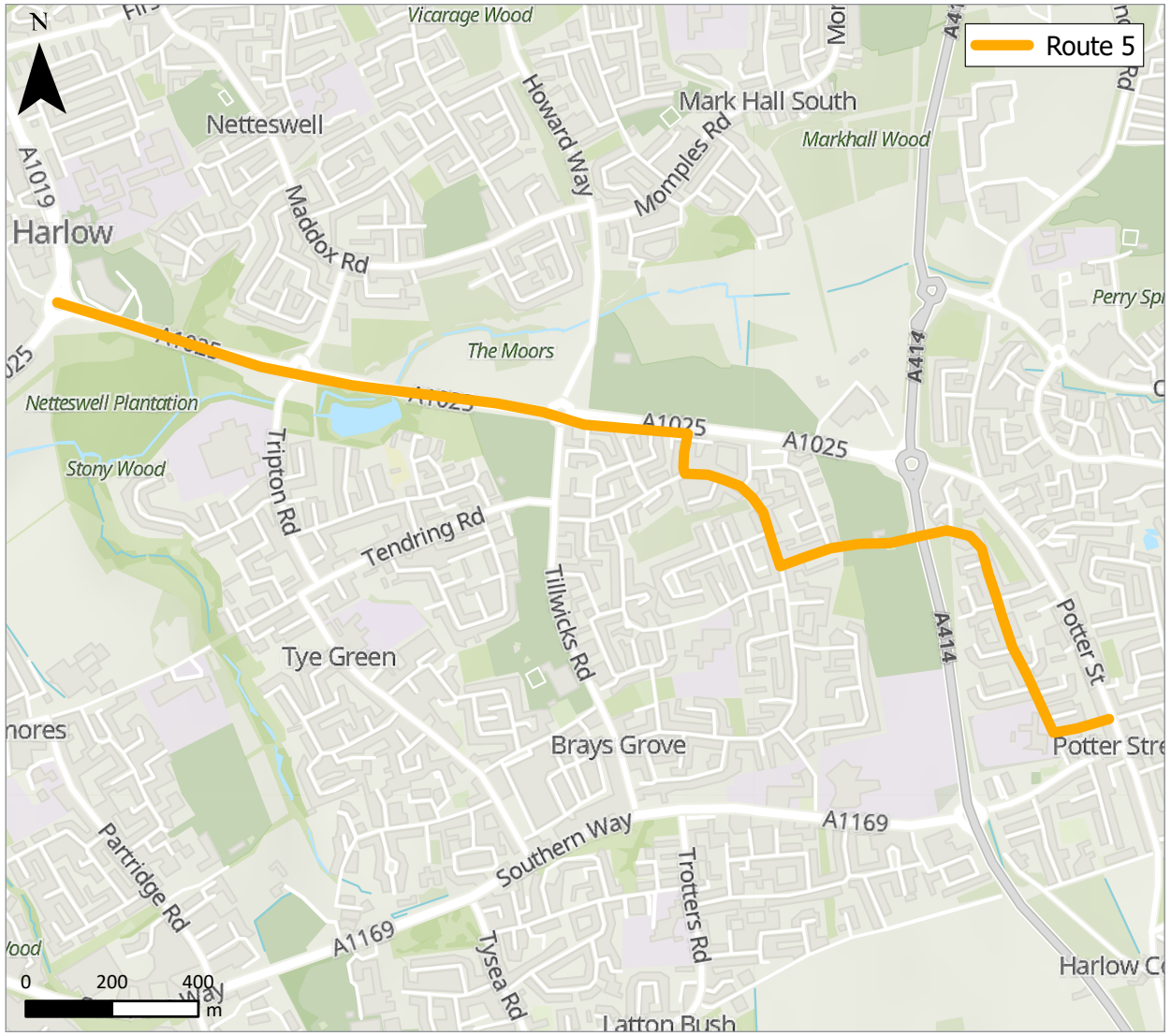
Route 5: Brays Grove – Second Avenue – Town Centre

Route overview

The route uses a combination of quiet residential streets and existing off-road shared use paths. On the shared use sections, cyclists are protected from vehicular traffic for a majority of the route however the existing shared use paths only provide narrow cycle facilities which should be widened particularly on the section between Tillwicks Road and Tripton Road. Access to the existing cycle facilities also needs to be improved at the Tillwicks Road and Tripton Road roundabouts as there are no cycle facilities throughout the whole junction.

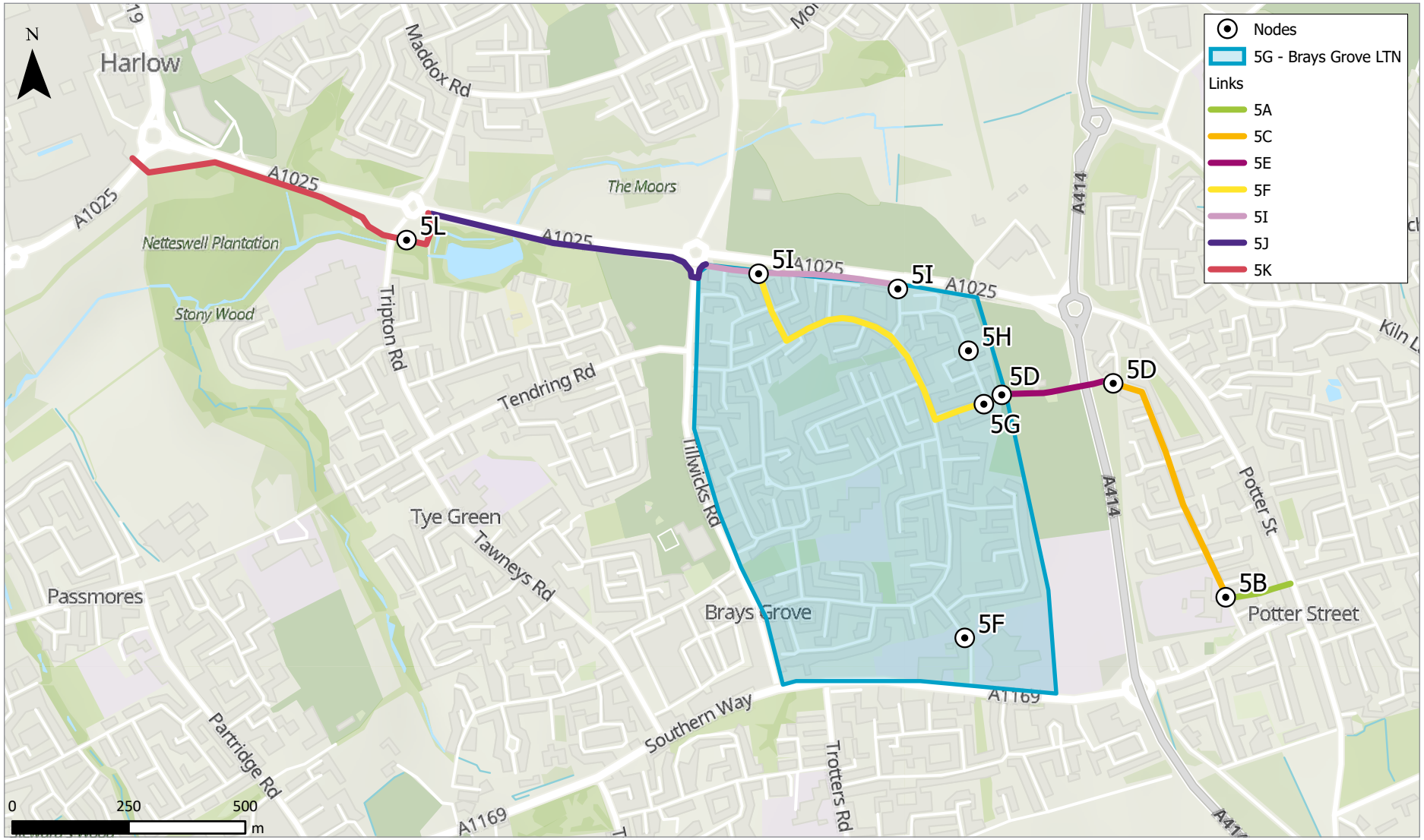
The shared use path runs along the south side of Second Avenue from the town centre beyond the Brays Grove area. The path uses a subway to avoid the roundabout at the junction with Tripton Road, but crosses Tillwicks Road at the surface via a TOUCAN crossing. The use of the subway compromises the route's legibility as it takes users away from a recognisable corridor (if they are used to navigating using the surface level highway network), and the direct route of the subway, if followed from the town centre, actually diverts users off the main corridor and on to Manston Road. There is an inconsistency between the provision of a grade separated subway at a relatively quiet junction (Second Avenue / Tripton Road / Manston Road), whereas a surface crossing is provided at the busier Second Avenue / Howard Way / Tillwicks Road junction.

The residential streets are reasonably comfortable to cycle on but would benefit from traffic calming particularly at key turning junctions for the cycle route. We have extended the route further east at the request of HDC so that it goes beyond Nicholls Road to connect with existing cycle facilities on Pytt Field, and therefore serving the Potter Street area.



Route selection tool summary and recommendations

RST section	Extents	Existing conditions	Recommendations
0	Potter Street village centre to Pytt Field	Short section of footpath from Red Lion to Carters Mead, then lightly-trafficked residential street Carters Mead as far as subway under A414	A. Cut back vegetation on footpath and widen to create more comfortable environment that can be shared between cycles and pedestrians. B. School Street mode filter outside Potter Street Academy to further reduce traffic volumes on Carters Mead C. Replace speed cushions with sinusoidal humps. Traffic calming may no longer be required if School Street mode filter is in place.
1	A414 to Nicholls Field	Shared path through subway and open space	D. Replace or re-position fire gates to ensure access by all types of Design Cycles set out in LTN 1/20. E. Provide lighting and public art through subway and park
2	Nicholls Field to North Grove / Great Brays	Residential streets, of which Tumbler Road is busier residential distributor road.	F. *Short-term:* improve traffic calming, especially at junctions where cycle route turns onto/off Tumbler Road. Replace speed cushions with cycle and ambulance-friendly sinusoidal humps. Resurface carriageway in places. G. Longer-term: engage with schools to introduce mode filter on Tracyes Road to create school street and to reduce through traffic on Tumblers Road. This would create an LTN in the entire Brays Grove area. H. Provide cycle exemption to One Way / No Entry on Nicholls Field
3	North Grove to Tillwicks Road	Cycleway and footway in verge, separated by low wooden fence and bushes.	I. Punch through to Great Brays and North Grove. Great Brays punch-through is essential; North Grove desirable. Great Brays provides route with the greatest passive surveillance and integration within the local area. Compensatory hardstanding may be required where informal parking is lost to achieve punch-through. J. Widen cycleway by removing buffer to footpath. Engage carefully with local residents to identify replacement of lost vegetation.
4	Tillwicks Road to Tripton Road	Cycleway and footway in verge, separated by paint strip.	K. Widen cycleway by taking space from grass verge, and replace paint strip with lozenge kerb. Resurface cycle track in contrasting red asphalt. Provide piggyback lighting from main carriageway lighting columns to provide better lighting of cycleway/footway.
5	Tripton Road to Town Centre		L. Provide fillet or chamfer at changes of direction to make route easier to follow, in addition to town-wide network signage strategy update. Resurface cycleway in contrasting red asphalt. Provide piggyback lighting from main carriageway lighting columns to provide better lighting of cycleway/footway. Provide improved lighting and public art in subways. Widen shared use sections; desirably providing separate cycleway.



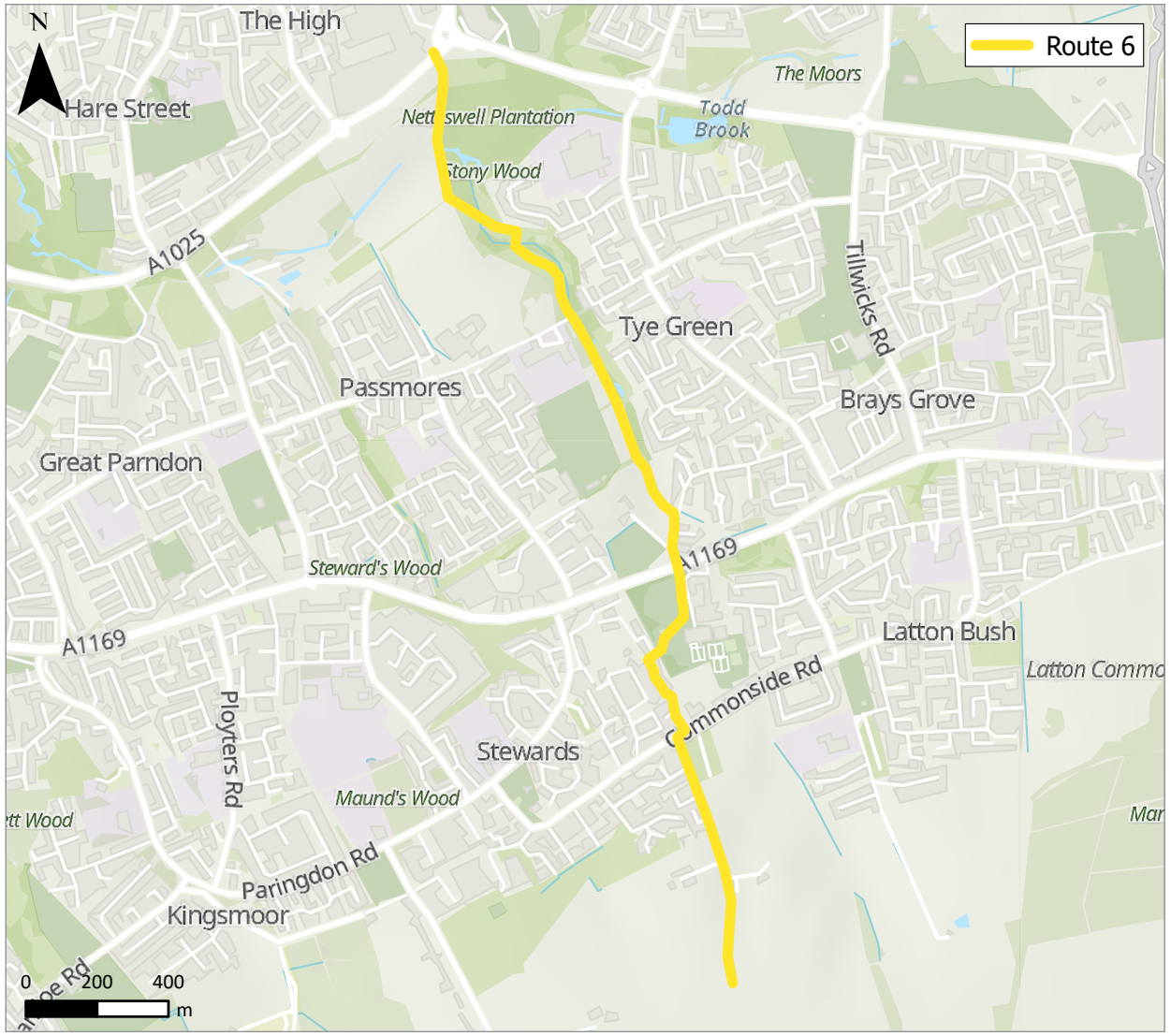
Route 6: Brays Grove – Second Avenue – Town Centre

Route overview

Route 6 is already a very comfortable and direct north-south cycle route between Latton Bush and the Town Centre. All of the route follows traffic-free or low-traffic routes, and cyclists are provided with a kerb protected cycle facility for a large majority of the route.

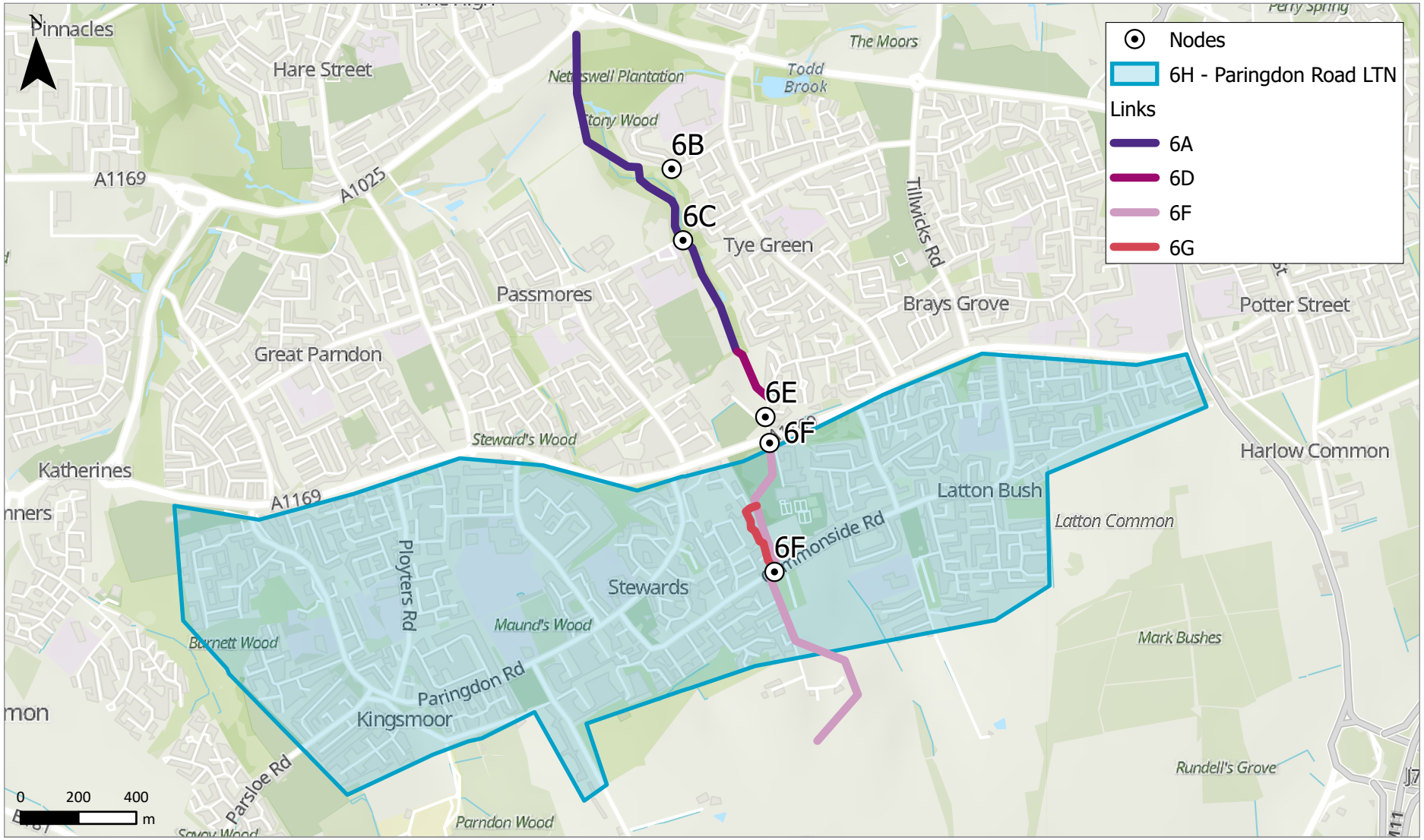
The main design recommendations are to widen a short section of shared use path between Goldsmiths and Tye Green Village as this section is particularly narrow and does not separate cyclists from vehicles. The maintenance of the existing path is also very poor and should be reviewed. There is also currently no crossing facility provided at the junction of Tye Green Village/Southern Way. Connections to adjoining cycle routes along the route should also be considered for improvement to enhance connectivity.

This route also follows the proposed alignment of the North-South Sustainable Transport Corridor, so improvements may be deliverable at part of the STC works, and indeed the delivery of the STC itself may require changes to the existing walking and cycling infrastructure. This process would see the route continue into the Latton Priority urban extension.



Route selection tool summary and recommendations

RST section	Extents	Existing conditions	Recommendations
1	Town Centre to Goldsmiths	Cycleway with adjacent footway in public open space. Lit, but poor surfacing.	A. Resurface cycleway in contrasting red asphalt. B. Review location of fire gate, bollards and kerbs at connection to Westfield / Stony Wood to ensure access is available to all types of design cycle set out in LTN 1/20. C. Provide flush transition to/from carriageway at Tendring Road – e.g. remove edging kerb and replace with constructed raised table.
2	Goldsmiths to Tye Green Village	Greenway in public open space	D. Create cycleway adjacent to path by using space in soft verge.
3	Tye Green Village to Southern Way	On-road with low traffic volumes (modal filter already in place)	E. Check accessibility of modal filter by all types of design cycle set out in LTN 1/20
-	Southern Way to Latton Priory	Public open space from Southern Way to Latton Priory	F. Deliver dedicated cycleway as part of STC. High quality priority or signalised crossings provided at Southern Way and Commonside Road. G. Short section of braided route via The Briars to provide cycle route with better passive surveillance and integration with local neighbourhood. H. Latton Priory Access Study recommended Low Traffic Neighbourhood in the Paringdon Road area to mitigate against traffic from Latton Priory using these residential streets in stead of the more appropriate access to the A414/B1393. This LTN approach is also beneficial to the LCWIP corridor as it provides low-traffic connections to the route. Exact extents of LTN to be determined. Indicative area shown.



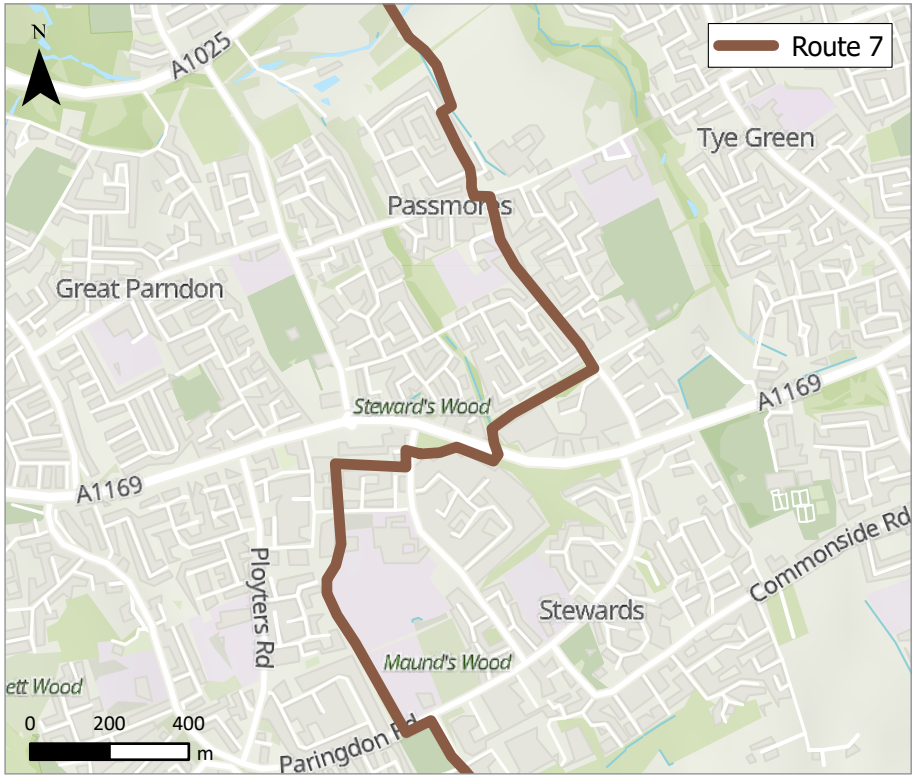
Route 7: Tye Green – Harlow Fields – Town Centre

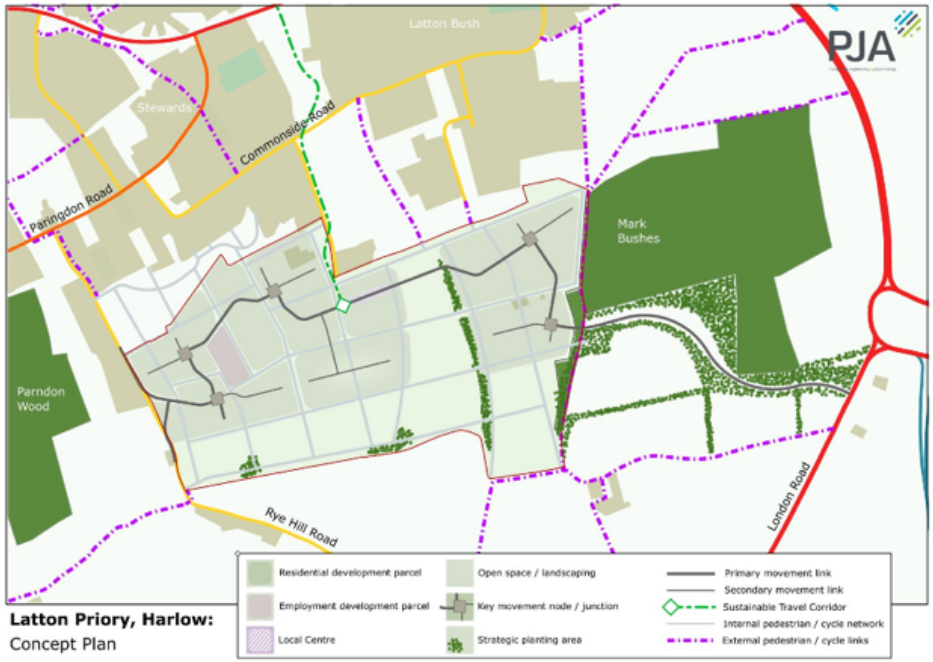
Route overview

Route 7 follows a combination of low-traffic residential streets and off-road shared use facilities. A majority of the route is comfortable to cycle along as cycle interactions with vehicles and pedestrians are limited. The route is also well connected with other local cycle facilities on Southern Way, Tendring Road and Goldsmiths.

While the initial desire line clustering and HCAP analysis indicated a core route between Staple Tye and Harlow town centre, this assessment projects the route to start back from the Latton Priory development area. PJA's Latton Priory Access study has identified scope for a cycleway connection into the development along Rye Hill Road, to tie into the existing cycleway leading from Paringdon Road to Staple Tye local centre.

The immediate focus north of Staple Tye needs to be on creating a surfaced path between the existing shared use path spurring from Willowfield and the parallel cycle path to Third Avenue (currently this is a loosely surfaced and narrow footpath). Design improvements should also focus on maintenance on Partridge Road, Tendring Road and Willowfield, and improve conditions for cycling at the roundabout junction of Partridge Road and Tendring Road.

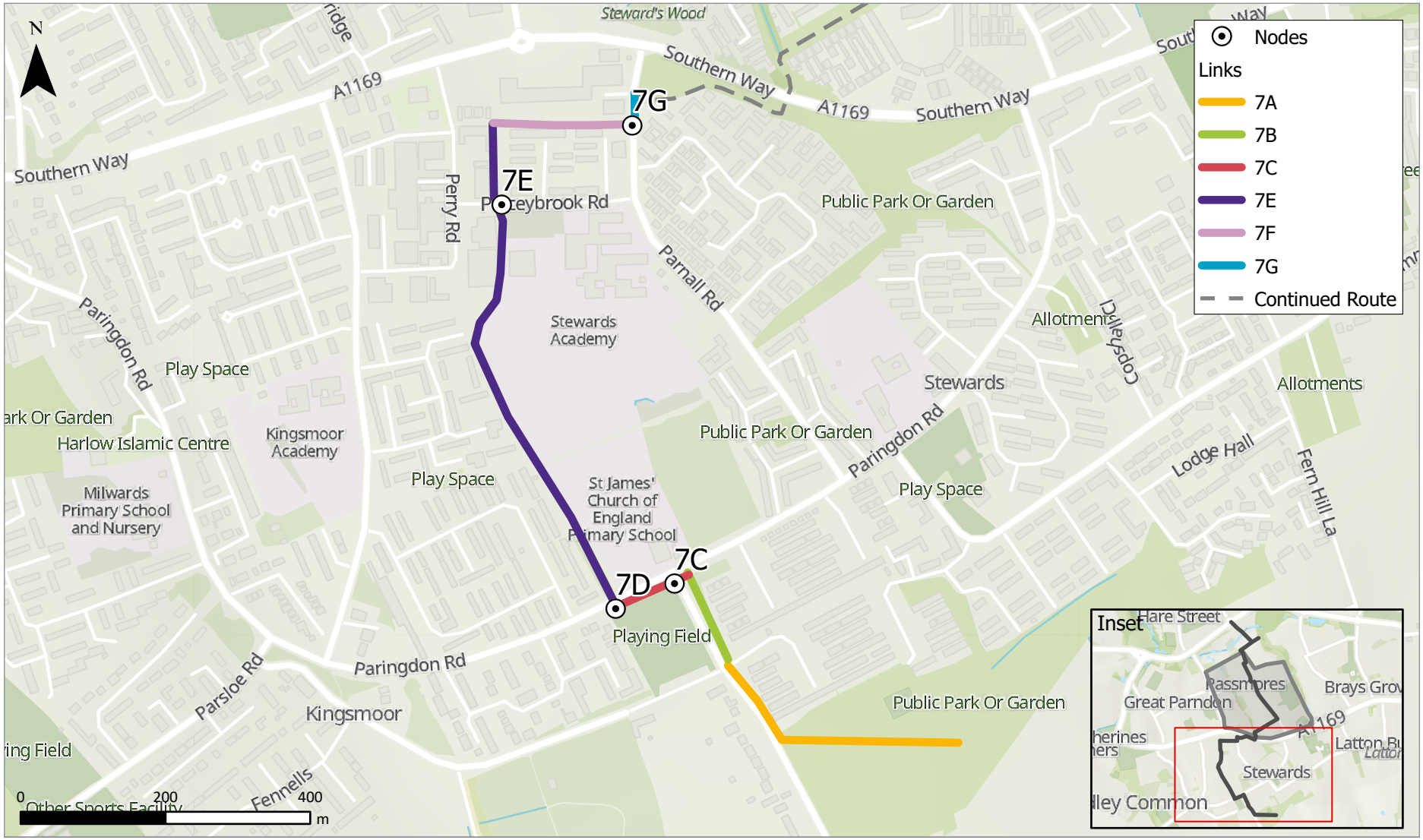




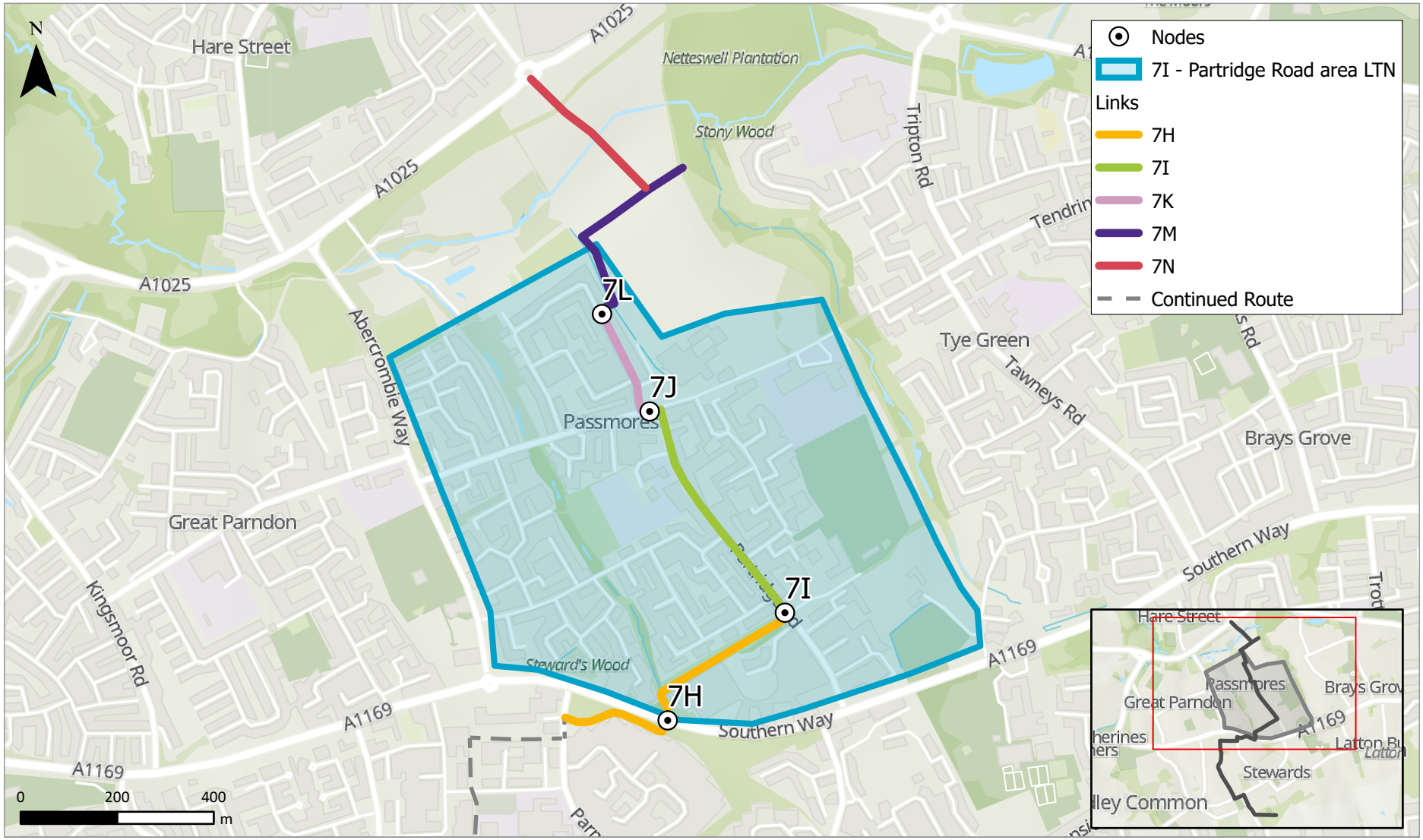
Latton Priory, Harlow:
Concept Plan

Route selection tool summary and recommendations

RST section	Extents	Existing conditions	Recommendations
-	Latton Priory site access to Paringdon Road	Rye Hill Road is a relatively busy unclassified road with footway on one side. Used to access B1393 (old A11) from Harlow. Traffic volumes likely to increase with new development. Some scope to create cycleway in verge, but less so south of Berecroft.	A. Consider modal filter on Rye Hill Road to re-route through traffic away from this area (as noted in Latton Priory Access Study). Short length of shared use footway south of Berecroft preferable to on-road route via Berecroft, which is less direct and would still required short section of shared use. B. Use verge to provide new cycleway adjacent to footpath between Berecroft and Paringdon Road C. Use public open space to provide cycleway/footway parallel to Paringdon Road. However, potential for 3-way mode filter outside St Thomas School to create "School Street". Cycle Zebra across Rye Hill Road. Upgrade street lighting to provide piggyback lighting in POS section of cycleway / footway.
-	Paringdon Road to Great Parndon Library	Existing cycle track adjacent to footpath to Staple Tye local centre, however short section north of Risdens housing estate.	D. Cycle Zebra across Paringdon Road to meet new path in POS. Amend post/gate arrangement to ensure accessibility by all cycle types in LTN 1.20 E. Resurface cycle track in red aggregate and provide lighting. Cycle zebra or cycle priority across Pinceybrook Road. F. New link across POS to the north of Risdens housing estate. Separate cycle track. G. Fill in bus stop layby to create cycle track on E side of Parnall Road, with Cycle Zebra tying in to new link across N side of Risdens. Bus stop to be relocate north, closer to Zebra Crossing to local centre (situated in-flow)
1	Great Parndon Library to Partridge Road	Mixture of off road cycleway adjacent to footway, and shared use greenway / footpath.	H. Resurface existing cycleway, improve lighting and wayfinding, introduce public art lighting scheme in subway. Widen into verge to create new kerb-segregated cycleway where existing shared use / footpath.
2	Goldsmiths to Tendring Road	Partridge Road – traffic calmed, but with guardrail outside school suggesting busy traffic at peak times.	I. Introduce modal filter north of Goldsmiths to create Low-Traffic neighbourhood and opportunity for linear park. Removal centreline road markings and school railings.



RST section	Extents	Existing conditions	Recommendations
3	Partridge Road to Willowfields	Tending Road staggered t-junction. Existing mini-roundabout on one arm of the staggered junction. Junction layout assumes optimisation of W-S and S-W movements.	J. Modal filter on Partridge Road obviates need for mini-roundabout. Replace with conventional staggered junction, with priority for movement along the staggered movement of the cycle route. Raised table and placemaking to enclose junction;
4	Tending Road to Cycle Gate	Willowfields – quiet residential estate. Limited width for cycles to pass oncoming cars when adjacent to parked vehicles.	K. Introduce 20mph limit and traffic calming as part of wider Low Traffic Neighbourhood. Determine suitable measures to ensure cycles and vehicles can pass safely – e.g. waiting restrictions, build outs or traffic calming at locations with poor inter-visibility and where traffic likely to be acceleration.
5	Cycle gate to Wooded area	Cycleway adjacent to footpath in open space	L. Improve prominence of access to cycle track at Willowfields, e.g. change junction priorities. M. Resurface cycle track. Install CCTV.
6	Wooded area to Third Avenue	Footpath through wooded area. Limited width and poor surfacing. Hilly.	N. Provide dedicated cycleway as part of STC connection from Haydens Road across open space to Tendring Road.

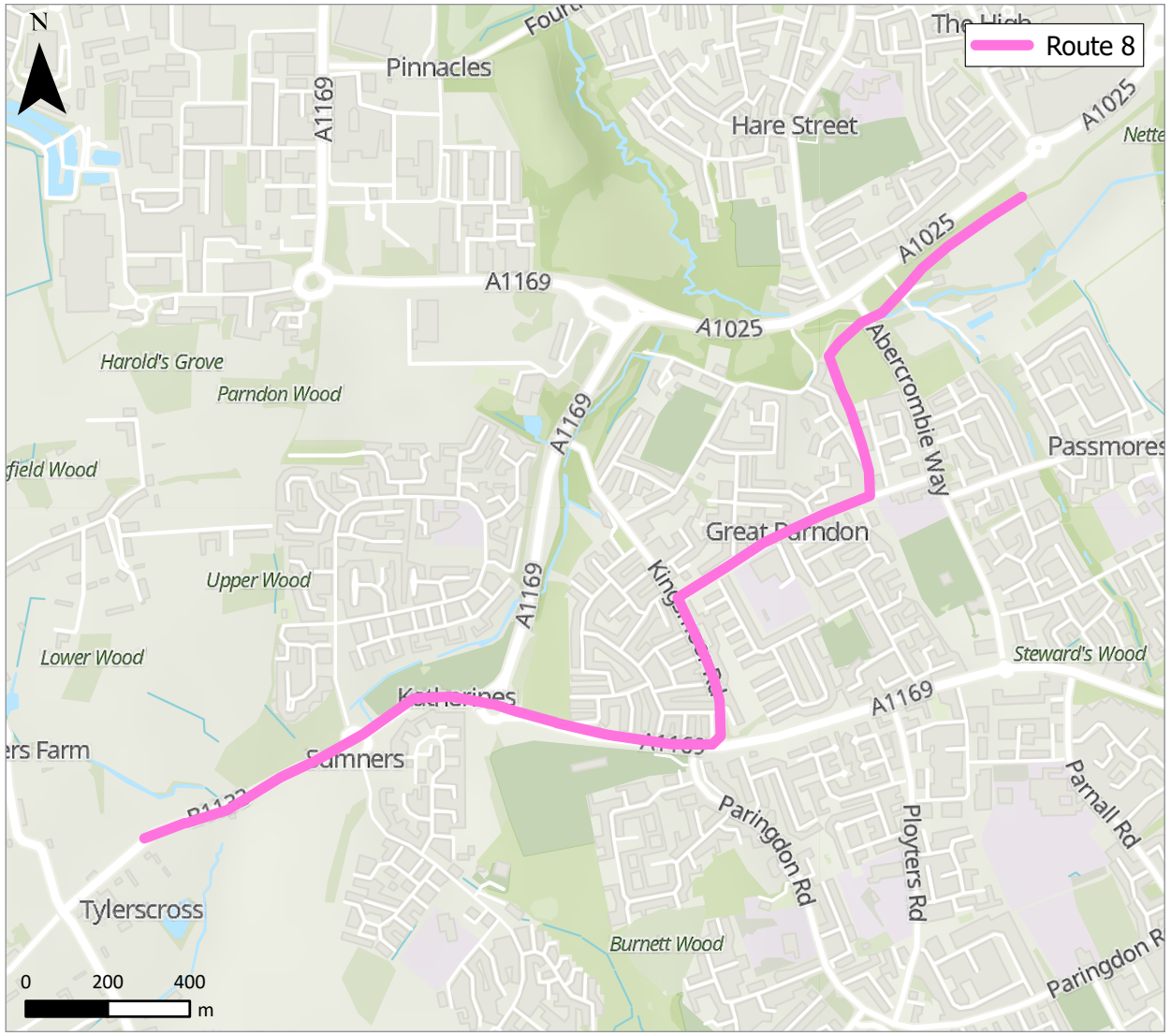


Route 8: Sumners – Great Parndon - Town Centre

Route overview

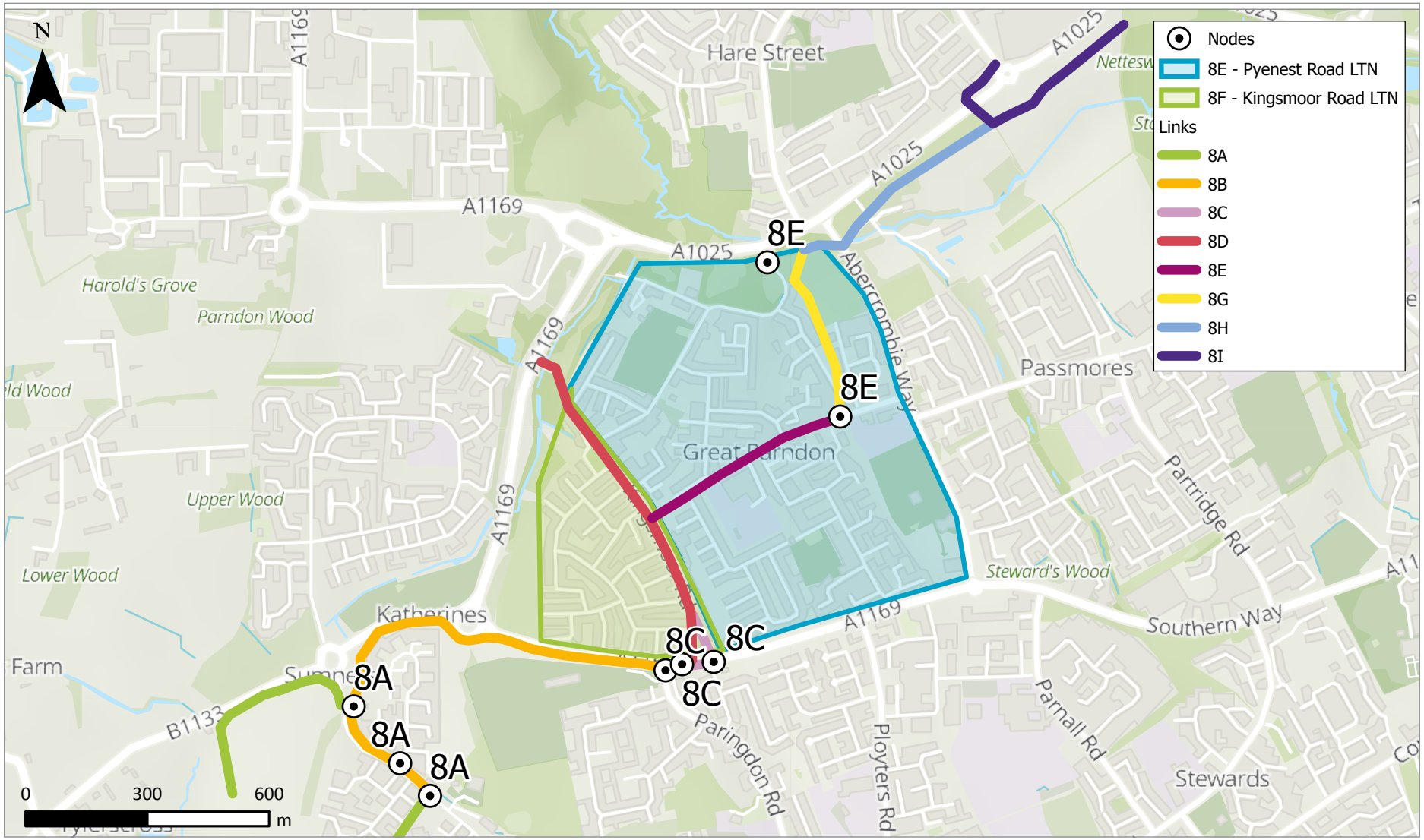
The existing protected sections of the route for cyclists are high-quality and provide a high level of service. Cyclists are able to use either kerb protected facilities or shared use paths (the RST western extent finished at the Broadley Road/ Brookside roundabout with Water Lane where the existing protected cycle facilities currently end in a westbound direction). The on-road sections of Route 8 between Southern Way and Woodwards are uncomfortable to cycle on because of vehicle volumes and speeds on the routes, and further compounded by lack of protection for cyclists from bus services. The transition from existing protected facilities to the on-road sections are also uncomfortable and should be reviewed.

The design focus of Route 8 should be on the proposed on-road sections and providing infrastructure to protect cyclists from vehicular traffic and buses. There is design scope on Kingsmoor Road to introduce protected cycle facilities however the highway is more constrained on Pyenest Road. Narrow uni-flow cycle tracks could be installed on Pyenest Road which would require the relocation of existing parking bays away from the street and widening of the existing footways into adjoining grass verges. Design proposals also need to upgrade the junctions of Pyenest Road/ Kingsmoor Road which has no cycle facilities. The double roundabout junction of Southern Way/ Kingsmoor Road/Paringdon Road which has no cycle facilities and is an important junction for cycle routes in the area.



Route selection tool summary and recommendations

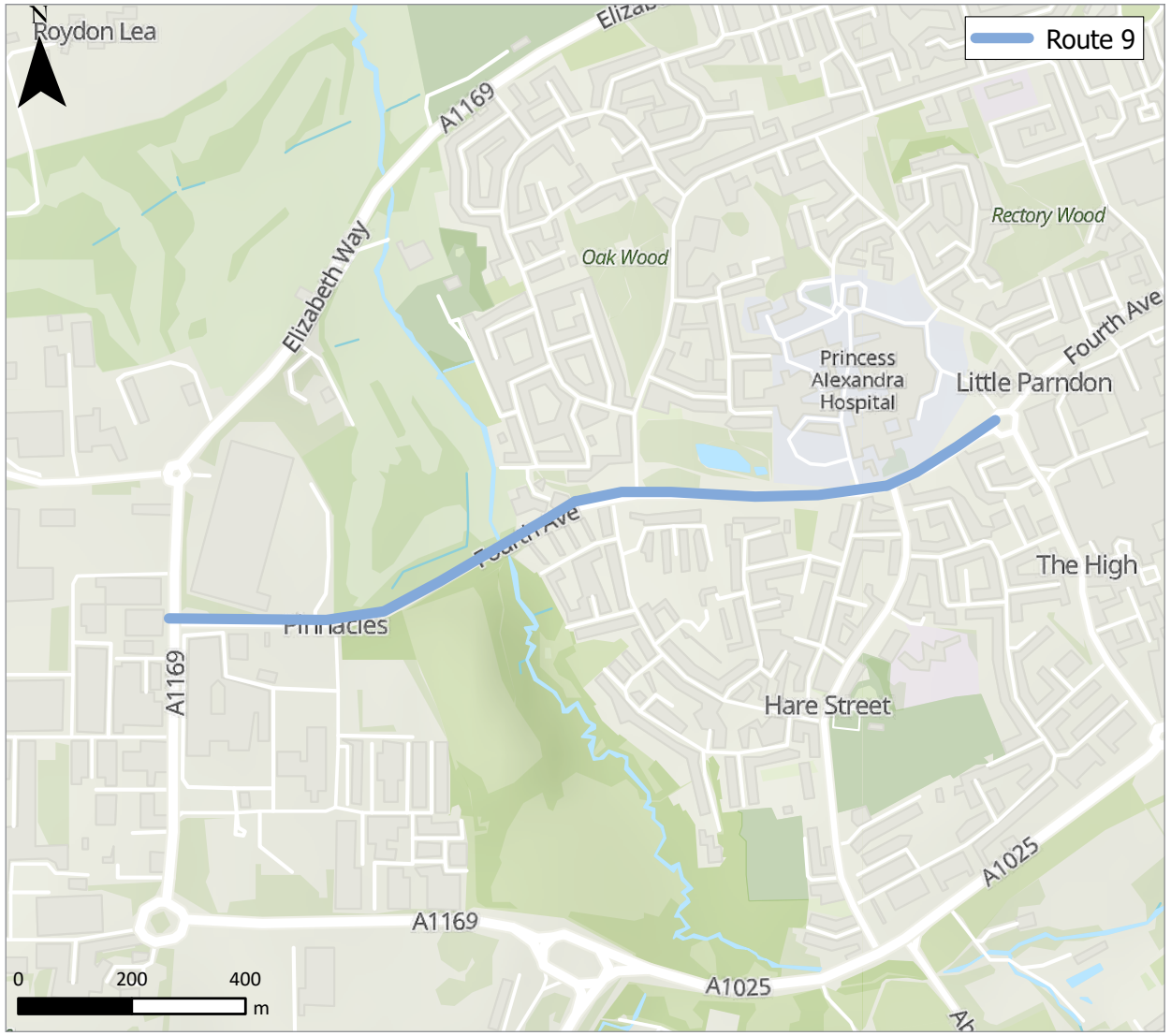
RST section	Extents	Existing conditions	Recommendations
-	Water Lane housing allocation to Broadley Road		A. Suitable connection from Water Lane housing extension to existing cycle track along Broadley Road. Level differences along Broadley Road limit the scope of connection points to either A1169 Roundabout or paths to the rear of / adjacent to Water Lane primary school. Suitable controlled/ cycle priority crossing(s) over Broadley Road required. Urban design of Water Lane housing extension to maximise frontage on and permeability to new cycle/walk links created.
1	Broadley Road to Kingsmoor Road	Cycleway in verge separated footway by half-height kerb. Runs to rear of houses with poor passive safety and far from lighting columns on other side of the road	B. Re-surface/surface-dress cycle track as part of network-wide re-branding. Introduce new lighting scheme on footway/cycleway side of the road, or relocate street lighting columns to other side of road where lighting is poor. C. Junction improvement required at Southern Way / Paringdon Road / Kingsmoor Road to improve continue of main cycle path along Southern Way, and connection to/from Kingsmoor Road. Options include displaced zebra crossing lining up with Kingsmoor Road service road, and utilising verge space east of Paringdon Road to alter junction geometry to provide appropriate cycle priority crossing over Paringdon Road.
2	Southern Way to Pyenest Road	(Kingsmoor Road). Sweeping residential distributor road, with significant length of no residential frontage. Slow markings and vehicle actuated warning signs hint at speeding issues. Likely a cut-through between Southern Way and Katherines Way.	D. Provide with-flow cycle tracks in grass verge, with priority over side roads. Floating parking where necessary. Requires some street furniture to be relocated to back of footway, e.g. Post Boxes, Lighting Columns, Cabinets. May require slight narrowing of carriageway. Potential to retain existing drainage gulley locations by using drainage kerbs around gulleys at any kerbline realignment. Desirable for cycle track treatment to continue to and tie-in with Katherines Way cycle path to avoid disjointed network.
3	Kingsmoor Road to Cycle Path	(Pyenest Road) Residential distributor road with two schools, and bus route. Slow markings as per Kingsmoor Road suggest issues with speeding. Pedestrian guardrail and centreline markings reinforce a message of through traffic dominance.	E. Space available in verge west of Jerounds (eastern arm). Development closes in east of Jerounds, and the road feels more intimate and residential. A mode filter west of Woodwards at junction with cycle path creates a Low Traffic Neighbourhood in Great Parndon area. Complementary mode filter would be required on Horseshoes Road to avoid traffic displacement. F. A wider LTN cell would obviate need for cycle tracks on Kingsmoor Road.
4	Pyenest Road to Third Avenue Parallel Cycleway	Existing footway / cycleway.	G. Re-surface/surface-dress cycle track as part of network-wide re-branding. Introduce new lighting. Provide new/improved connections to adjacent residential streets, i.e. Tylney Croft and Woodwards.
5	Third Avenue Parallel Cycleway to Third Avenue / Second Avenue Junction		H. Re-surface/surface-dress cycle track as part of network-wide re-branding. Introduce new lighting. I. Ensure intuitive access into town centre and other LCWIP cycle routes, following principles of other similar sections, e.g. lighting, surfacing, bollard spacing.



Route 9: Pinnacles - Town Centre

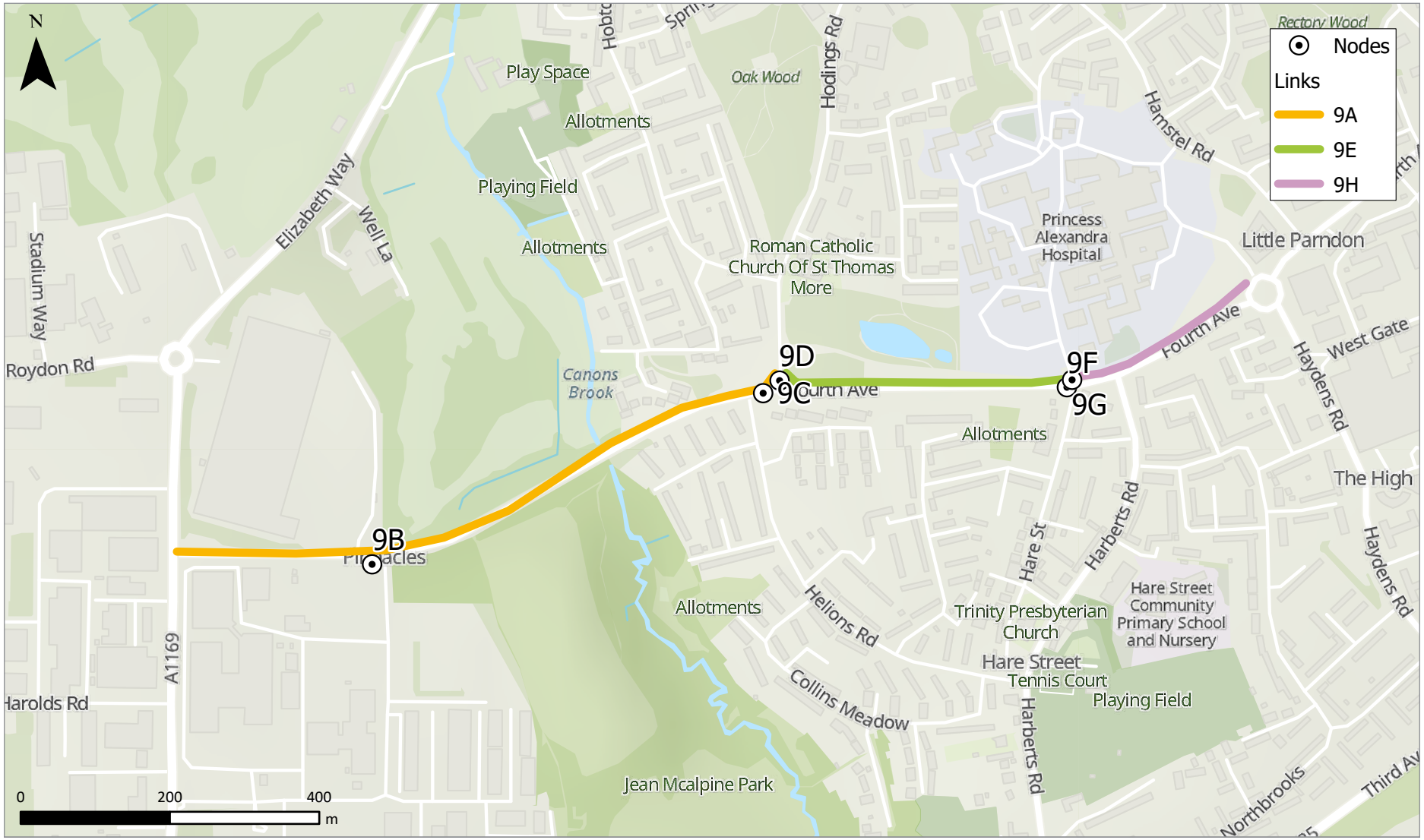
Route overview

Protected cycle facilities are provided throughout Route 9 except for a short-section of non-delineated shared use path between Hodings Road and the A+E entrance. The protected cycle facilities are 3m kerb protected cycle tracks which results in a high level of service. The main design focus for Route 9 should be on replace the existing shared use path with segregated cycle and pedestrian facilities. Design upgrades should also be considered for side-entry treatments as there are some wide access points adjoining the route which currently de-prioritise cyclists and pedestrians, in particular the access points to Poundland and access to the hospital car park.



Route selection tool summary and recommendations

RST section	Extents	Existing conditions	Recommendations
1	Elizabeth Way to Hodings Road (west)	Cycle track segregated from pedestrians and motor vehicles. Lacks continuity or safe crossing point at side roads / accesses.	A. Re-surface and wayfinding as part of consistent Harlow-wide cycle route branding strategy, to improve visibility of routes B. Provide cycleway/footway priority at Poundland RDC access subject to LTN 1/20 priority treatment, likely associated with measures to reduce traffic speed on main road to support this, which provides opportunity for better pedestrian connectivity to/from Coldharbour Road and bus stops. C. Provide controlled ped/cycle crossing or wide refuge to fulfil desire line to/from Helions Road D. Provide cycleway priority over side road at Hodings Road
2	Hodings Road (west) to Hospital Access	Shared footway/cycleway separated from main road through earth mound and trees. Poorly overlooked.	E. Provide new cycletrack alongside Fourth Avenue (in addition to path in open space), formed by taking space from verge and relocating lamp columns etc. F. Provide controlled ped/cycle crossing or wide refuge to fulfil desire line to/from Hare Street G. Provide cycleway/footway priority at Hospital access subject to LTN 1/20 priority treatment, likely associated with measures to reduce traffic speed on main road to support this. Longer term, deliver set back cycle priority crossing with zebra crossing as part of any hospital site redevelopment
3	Hospital Access to Haydens Road	Cycle track separate from pedestrians and motor vehicles, however strays from desire line mid-link.	H. Provide new cycle track alongside Fourth Avenue to tie-in to town centre junction re-modelling. Resurface existing infrastructure to provide clear, consistent link treatment.



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