



Walking and Cycling improvements

National Cycle Network Route 135, Stock to Southend

Study on behalf of Rochford District
Council, Essex County Council,
Chelmsford City Council and
Southend Borough Council

September 2014

About Sustrans

Sustrans makes smarter travel choices possible, desirable and inevitable. We're a leading UK charity enabling people to travel by foot, bike or public transport for more of the journeys we make every day. We work with families, communities, policy-makers and partner organisations so that people are able to choose healthier, cleaner and cheaper journeys, with better places and spaces to move through and live in.

It's time we all began making smarter travel choices. Make your move and support Sustrans today.

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Report prepared for Essex County Council, Southend Borough Council, Chelmsford Borough Council and Rochford District Council by Sustrans

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Purpose of this report

The Rochford Local Highway Panel commissioned Sustrans to undertake this feasibility study as the development of a cycle route between Stock, Rayleigh, Hockley and Southend fits many of the districts, counties and regions Strategic Objectives (see Section 2 for more information).

It has long been Sustrans' desire to see the creation of a new stretch of National Cycle Network (NCN) to link Stock and Southend. This new stretch of route would be approximately 37 kilometres long (from NCN13 in Stock to NCN16, City Beach, Southend Sea front) and would be numbered NCN 135. A number of potential link routes exist from the proposed NCN135 route which acts as a spinal route to the wider community of Rochford District. These opportunities were not developed beyond initial scoping in this study and a more detailed cycle strategy is recommended.

Of all the routes Sustrans wishes to see created in the East of England, it is fair to say that this particular stretch of NCN has garnered the most interest, and this has only intensified as a new national focus on cycling has gained momentum.

The distance between some of the main areas of habitation on the route and existing and future hubs of employment is eminently suitable for regular cycle-commuting and walking. Linking Chelmsford City (which is already well connected in the National Cycle Network) with Rochford District and Southend (which is also well connected in the National Cycle Network) will also increase the opportunities for both recreational cycling and cycle tourism. There is much interest in recreational cycling locally, witnessed by Southend having its own thriving cycling club, and by the growing success of local cycle shops, whilst increased opportunities for cycle tourism fits very well with other local initiatives, such as the excellent "The Cake Escape" and "Bike Friendly Cafes" (initiatives in Southend and Essex marketing local cafes as being 'cyclist friendly').

This report also sets out estimates for the various costs associated with the development of the link and it discusses the possibility of delivering the works in phases, to suit possible sources of funding.

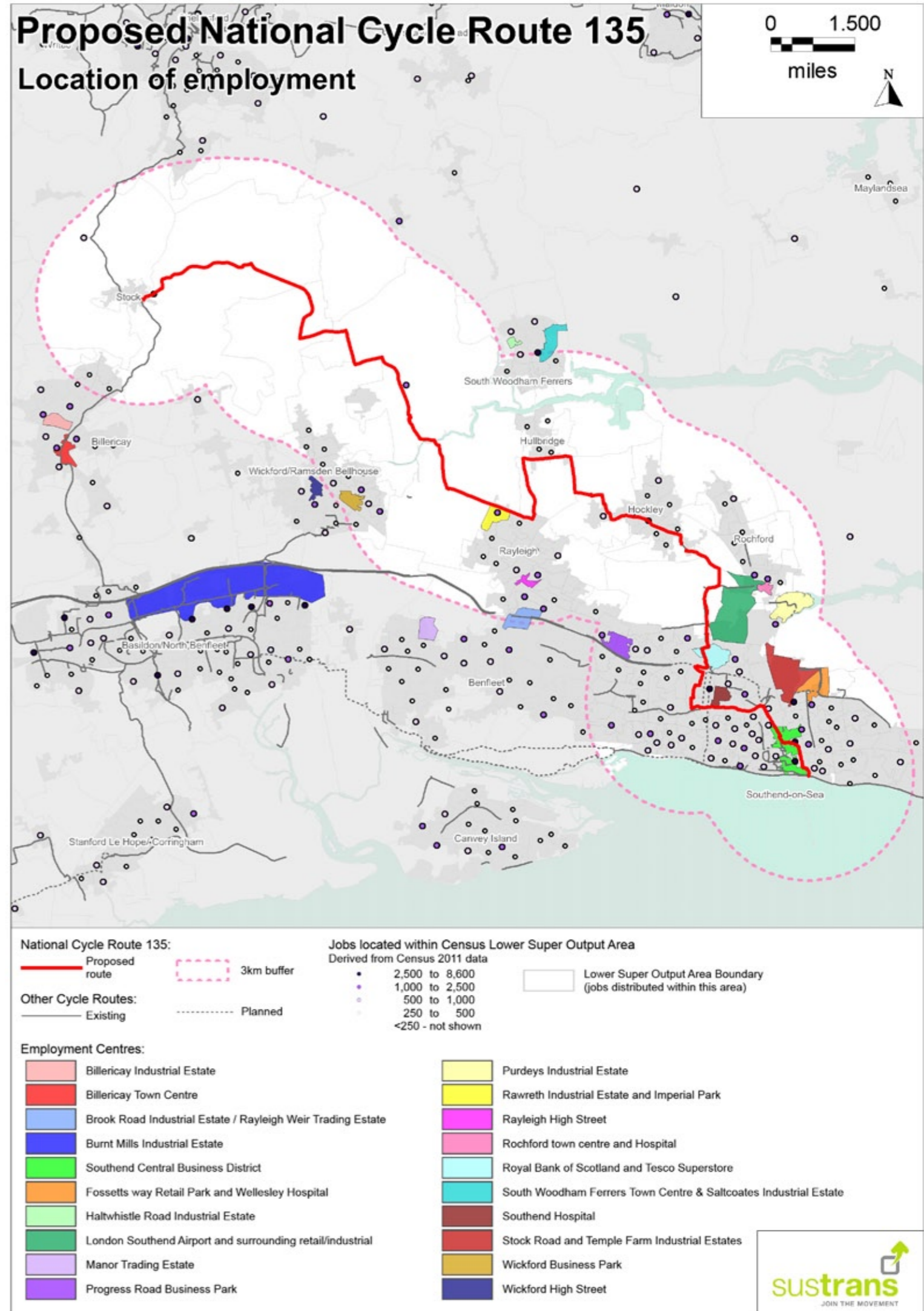
Geographical Background

In transport planning terms, the area's focus is very much on Hullbridge, Hockley, Hawkwell, Rochford, London Southend Airport Environs and Southend as the main location of services and facilities, and major hubs for transport, providing connections to Essex, London and the rest of the United Kingdom.

In 2009, Rochford had a population of 83,100 people (representing just under 6% of the total population of Essex), with 24,600 of those living in Hockley and Hawkwell.

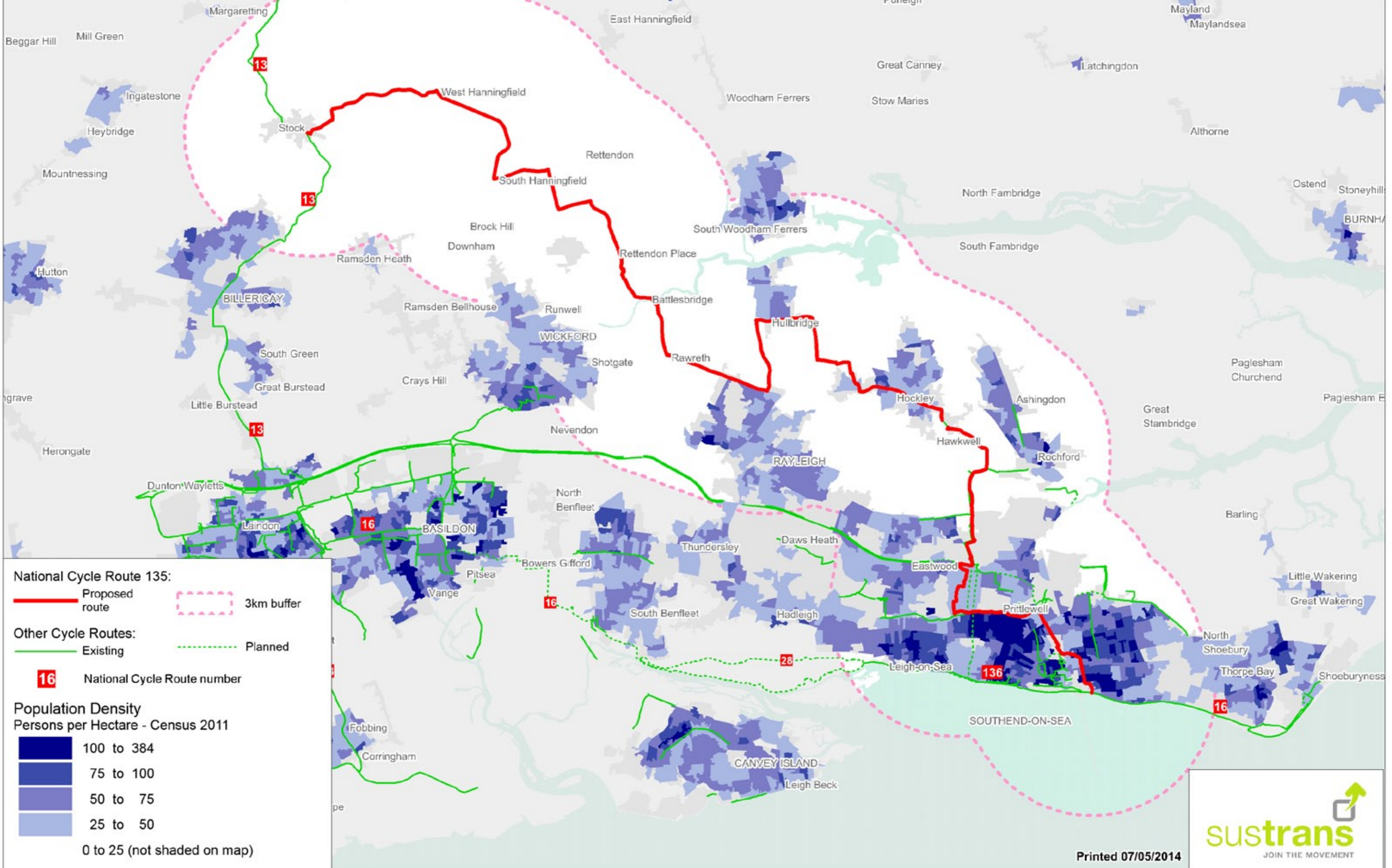
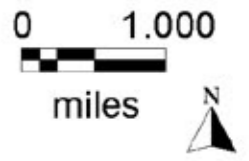
Latest travel to work data from the Essex County Council Tracker survey shows that in Rochford around 71% of workers travel 30 minutes or less to work (Essex highest: 77% Harlow, Essex lowest: 58% Castle Point). 92% of Rochford residents live within an hour's commute of their work.

The number of residents living in the district who are aged 65 and over is expected to increase from 16,400 people to over 27,300. This takes the proportion of people in this age bracket from 19.7% of the districts population to over a quarter of the residents by 2035.



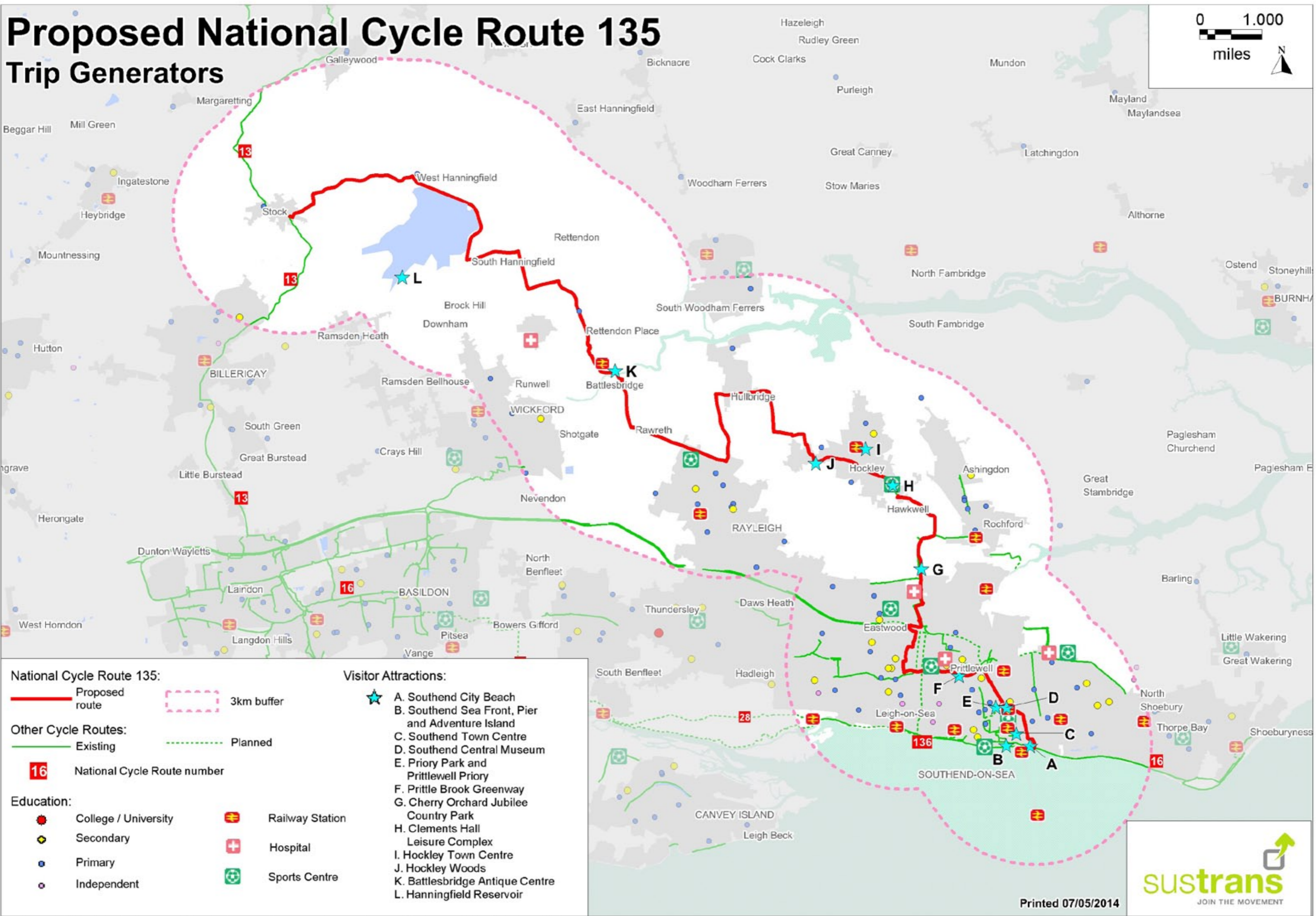
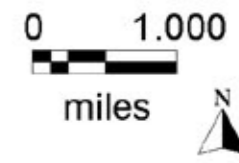
Proposed National Cycle Route 135

Population density



Proposed National Cycle Route 135

Trip Generators



National Cycle Route 135:

- Proposed route
- 3km buffer
- Other Cycle Routes:
- Existing
- - - Planned
- 16 National Cycle Route number

Visitor Attractions:

- ★ A. Southend City Beach
- B. Southend Sea Front, Pier and Adventure Island
- C. Southend Town Centre
- D. Southend Central Museum
- E. Priory Park and Prittlewell Priory
- F. Prittle Brook Greenway
- G. Cherry Orchard Jubilee Country Park
- H. Clements Hall Leisure Complex
- I. Hockley Town Centre
- J. Hockley Woods
- K. Battlesbridge Antique Centre
- L. Hanningfield Reservoir

Education:

- College / University
- Secondary
- Primary
- Independent
- + Railway Station
- + Hospital
- + Sports Centre

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Policy Context

Introduction

Developing new routes to add to the National Cycle Network meets many objectives at national, regional and local level. This section of the report brings together key policies and plans to which the development of a route linking Stock and Southend aligns perfectly, and it opens with Sustrans' own narrative on the need for the National Cycle Network.

Sustrans' 'National Cycle Network Strategy 2009-2013'

In the UK we are travelling further and faster than ever before. We are also using our cars more, often for short journeys that could be walked or cycled. The National Cycle Network provides alternative routes to car travel for many everyday journeys. As climate change emissions from car travel continue to rise and obesity from lack of physical activity rises in epidemic proportions, alternatives have never been more necessary.

As governments of the UK search for policies that lead to a sustainable transport system the National Cycle Network provides an exemplar for the creation of environments that enable people to walk and cycle for their everyday local journeys. Catalysed by UK legislation for statutory reduction in climate change emissions governments, businesses and individuals are now beginning to be faced with choices that will over time associate a number of costs to high carbon behaviour – making walking and cycling more necessary.

At present only 2% of journeys in the UK are undertaken by cycle with many other countries having a much higher proportion – The Netherlands for example has 27% of all journeys undertaken by cycle.

The National Cycle Network is one of the ways that Sustrans seeks to influence the proportion of UK journeys that are taken on foot and by cycle. Sustrans calls on the Governments of the UK to adopt policies that will enable 4 out of 5 local journeys to be made by foot, bike and public transport by 2020. By providing both strategic infrastructure and routes, the National Cycle Network provides a practical alternative for people's everyday journeys, thereby contributing to the achievement of the 4 out of 5 journey objective.

Enabling people to cycle and walk more will tackle five critical challenges:

- Obesity and related health conditions – enabling people to be more physically active for everyday journeys (like cycling to school or walking to the shops) will transform the health of adults and children throughout the UK.
- Climate change – personal car use is responsible for 13% of total carbon dioxide (CO2) emissions in the UK. Enabling people to leave their car behind for many of the 58% of car journeys that are less than 5 miles (and longer journeys as a result of better integration of travel) will make an important contribution to achieving the UK's CO2 reduction targets.
- Energy security – as oil becomes more expensive, and as the UK seeks to de-carbonise the energy used in our homes, hospitals, schools and other essential places, enabling people to travel in the most energy efficient way possible for short, local journeys will increase our economic resilience in the face of rising energy prices.
- Congestion – Car traffic has increased some 15% in the last ten years with resulting congestion in Britain costing £10 billion per year. Enabling people to choose an alternative to car travel will reduce congestion and improve quality of life.
- Liveability and place making – by improving the place/built environment and enabling people to walk or cycle to local facilities the liveability of neighbourhoods and town/cities will be enhanced which in turn has a profound effect on the quality of life experienced by those people.

Essex Transport Strategy: the local Transport Plan for Essex

Extracts from the two key sets of Guiding Principles/Strategic Objectives in the "Executive Summary" chapter of this plan, which support the improvement of cycle facilities, are set out below.

Transport Priorities

Using a combination of the evidence base compiled in support of the Essex Transport strategy, evidence from the individual district/borough Core Strategies, and the findings from stakeholder and public consultations, Essex County Council have determined a list of key priorities.

Priorities for Thames Gateway

- Providing for and promoting access by sustainable modes of travel to new development areas;
- Improving the attractiveness and ease of use of public spaces to support regeneration
- Improving public transport links within and between the Thames Gateway towns (including the A13 Passenger Transport Corridor and sers schemes);
- Improving journey time reliability on strategic inter-urban routes including the A127, A129, A130 and the A13;
- Improving the availability of sustainable travel choices and raising public awareness of these through travel planning;
- Improving access to London Gateway port and Southend Airport.
- Addressing maintenance, signing and broken links in the cycle network to improve conditions for cyclists and create a safer atmosphere for cycling.

The Essex Area Priorities

This appendix below shows the priorities for the Thames Gateway planning area which has been determined through evidence compiled in support of the Local Transport Plan, evidence prepared in support of the individual district/borough Local Development Frameworks, and stakeholder and public consultation findings.

Local Centres (Benfleet, Billericay, Canvey, Hadleigh, Rayleigh, Rochford, Wickford)

- Providing for and promoting access by sustainable modes of transport to development areas
- Improving the attractiveness and usability of streets and public spaces to support regeneration
- Providing travel planning services aimed at improving awareness of travel choices
- Improving journey time reliability on congested routes
- Improving access to green spaces

Rochford Core Strategy

A number of the Rochford Core Strategy "Key Priorities" and "Policies" also align perfectly with the development of the route:

The Council are preparing a collection of different documents known as the Local Development Framework or LDF/Core Strategy, which will set out how the District will develop in the future. The LDF will gradually replace the Rochford District Replacement Local Plan which was adopted in 2006.

The Sustainable Community Strategy within the LDF identifies seven key priorities:

- Supporting the Ageing Population
- Fostering Greater Community Cohesion
- Strengthening the Third Sector (voluntary sector)
- Increasing Accessibility to Services
- Keeping Rochford Safe
- Encouraging Economic Development: Skills, Employment and Enterprise
- Promoting a Greener District

The LDF has suggests a two-pronged approach will be necessary to improve people’s opportunity to cycle: an improved network of safe and convenient cycle paths, together with the proof secure cycle parking and other facilities such as lockers, changing rooms, showers etc. at destinations. The LDF Cycling and Walking policy is as follows:

Policy T6 – Cycling and Walking

The Council will work with Essex County Council, along with other organisations such as Sustrans, to ensure that a safe and convenient network of cycle and pedestrian routes is put in place to link homes, workplaces, services and town centres. Where developments generate a potential demand to travel, developers will be required to contribute to the delivery of such a network. The Council will also continue to require developers to provide facilities for cyclists at all new developments. The Council will also seek the further development of cyclepaths, footpaths and bridleways that, having regard to ecological interests, open up and develop the access network alongside the District’s rivers. The Council will also encourage new cycle and footpath links with neighbouring authorities.

Thames Gateway Green Grid Strategy

As part of ensuring that the regeneration of the Thames Gateway is sustainable, a strategy has been produced – the Green Grid Strategy – which has a number of aims including ‘connecting new communities with existing neighbourhoods, to regenerate riverside, local attractions and the countryside; create high quality new green space links in areas of opportunity and need; and plan and promote the Green Grid network as part of a sustainable transport strategy’.

The Council will work with partners, including neighbouring authorities, to aid the delivery of the following greenways identified in the Thames Gateway Green Grid Strategy which are of relevance to Rochford District:

Greenway 18: Central Southend (to Rochford)

Greenway 21: City to Sea/Shoreline.

Local Area Agreements (LAA2) – The Essex Local Area Agreement 2008-2011

The Local Area Agreement forms a partnership between Rochford District Council, Essex County Council and other councils in the locality (excluding Southend and Thurrock). It identifies 10 key priorities for the District and surrounding areas which need addressing in order to achieve the Essex Strategy’s vision, which is simply “To support Essex people to liberate their potential to enjoy the best quality of life in Britain”

The following outlines the role the proposed route will play in delivering LAA2 priorities.

LAA2 priority	Key section/policies of core strategy
Priority 5: Essex roads are safer, less congested and everyone has access to essential services.	The Transport chapter seeks to improve the highway network through the District, where appropriate, particularly east to west connections. It also seeks to encourage alternative modes of transport and decrease reliance on the private car through, for example, travel plans
Priority 9: A smaller carbon footprint with less waste	Cycling and Walking/ Policy T6

Joint Area Action Plan

The Joint Area Action Plan (JAAP) has been prepared by Rochford District Council and Southend-on-Sea Borough Council in response to the challenges and opportunities offered by London Southend Airport together with an airport related employment cluster. The plan (which at the time of writing this report is yet to be adopted is intended to integrate land use, transport, environmental and regeneration proposals with clear mechanisms for delivery.

Following receipt of the Examination Inspector’s interim report, RDC and SBC have agreed a Schedule of Modifications to the JAAP. These modifications will be subject to a period of public consultation before being submitted – together with the results of the consultation – for the Inspector’s consideration. These modifications include amendment to Policy T5.

The proposed can be viewed in the Rochford District Council and Southend Borough Council – JAAP Submission Document Examination: Proposed Schedule of Changes to the London Southend and Environs Joint Area Action Plan Submission Document (February 2013)

Policy T5 - Walking and Cycling suggests that all development will be required to contribute towards the timely construction of new, as well as improvements to existing, walking and segregated cycling infrastructure and facilities in the JAAP area and the integration of these facilities into the wider network.

Policy T5 also specifies that the development will be required to contribute towards, but not exclusively, the following improvements:

- The establishment of a segregated route for walking and cycling to the north of the JAAP area linking to Hall Road funded through Saxon Business Park phases 1A and 1B;
- Improving cycling and walking linkages between Cherry Orchard Way and Nestuda Way funded by Saxon Business Park phases 1A and 1B;
- Improve walking and cycling by enhancing accessibility, providing secure cycle storage and changing facilities for workers and visitors and appropriate training for cyclists; and
- Towards a network of routes identified in the emerging transport strategy

The Route

This report assesses the feasibility of a route (with alternative options) for linking Stock to Southend

The Main Route

The route follows rural roads, all the way from the centre of Stock (at the junction with NCN13) to the crossing of Main Road at Rettendon Place. To the north of Rettendon Place it takes the form of a shared use footway as far as the outskirts of Battlesbridge before a mixture of on carriageway and footway conversions to Hullbridge. Some of the footway is shared use already, some would need to be re-designated as such, and a large stretch of footway would need to be re-designated as shared use.

Traffic calming and some on highway provision would ensure safe passage through Hullbridge before the proposed route would utilise Blountswood Road and Murrels lane as 'quiet roads'. Again traffic calming and some on highway provision would ensure safe passage through Hockley and Hawkwell before existing and new provision would provide a link to Rochford and Hall Road utilising Ironwell Lane as a greenway.

At Cherry Orchard Way the route would tie in with the existing shared use footway that follows the B1013 alongside the proposed Saxon Business Park, then via Nestuda way which in turn connects to the existing stretch of cycle network and the Toucan crossing of the A127. At this point the route will combine a network of quiet roads that lead to the Prittle Brook Greenway that in turn connects, via provision alongside Victoria Avenue, right into the centre of Southend.

The route would then follow the existing Cycle Southend route from Southend Victoria Station to City Beach where it will link with the promenade/ shared use footway/ cycle track and NCN 16 linking Shoeburyness with Chalkwell.

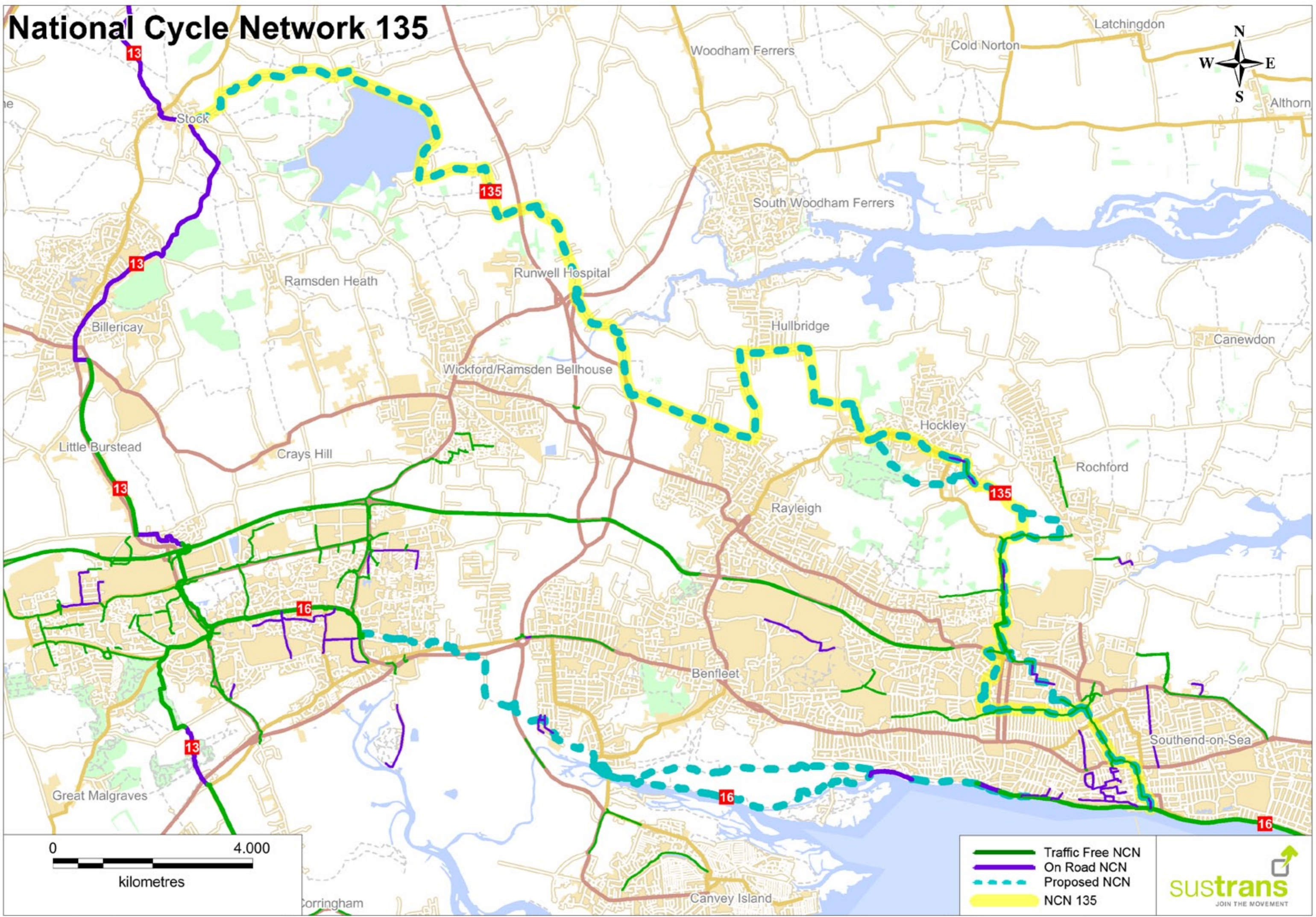
This route would traverse a significant amount of shared use footway, but with a number of sections on carriageway that will require some investment to create a more appealing cycling environment.

Other routes

As part of the commission to undertake this Feasibility Study, Sustrans investigated a number of alternative routes including additional 'off-road' routes within the vicinity of Runwell, Rawreth and Hockley (inc Hockley Woods), assessing whether these might enable the route to 'leave' the environs of the carriageway sooner (when heading in a Stock to Southend direction). None of these routes proved practicable and were not developed beyond initial scoping.

In addition a number of alternative highway routes were also investigated and were not developed beyond initial scoping.

National Cycle Network 135



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Route details: Map 1

The following notes are written from the perspective of a journey taken in the direction of Stock to Southend. Paragraph numbers correspond to locations marked on Map 1.

1. Mill Road, Stock. An on-road route here, with no intervention, other than signage, necessary.



2. Downham Road, Stock. An on-road route here, with no intervention, other than signage, necessary. Nature of the rural route suggests that speeds are limited therefore suitable for rural NCN route.

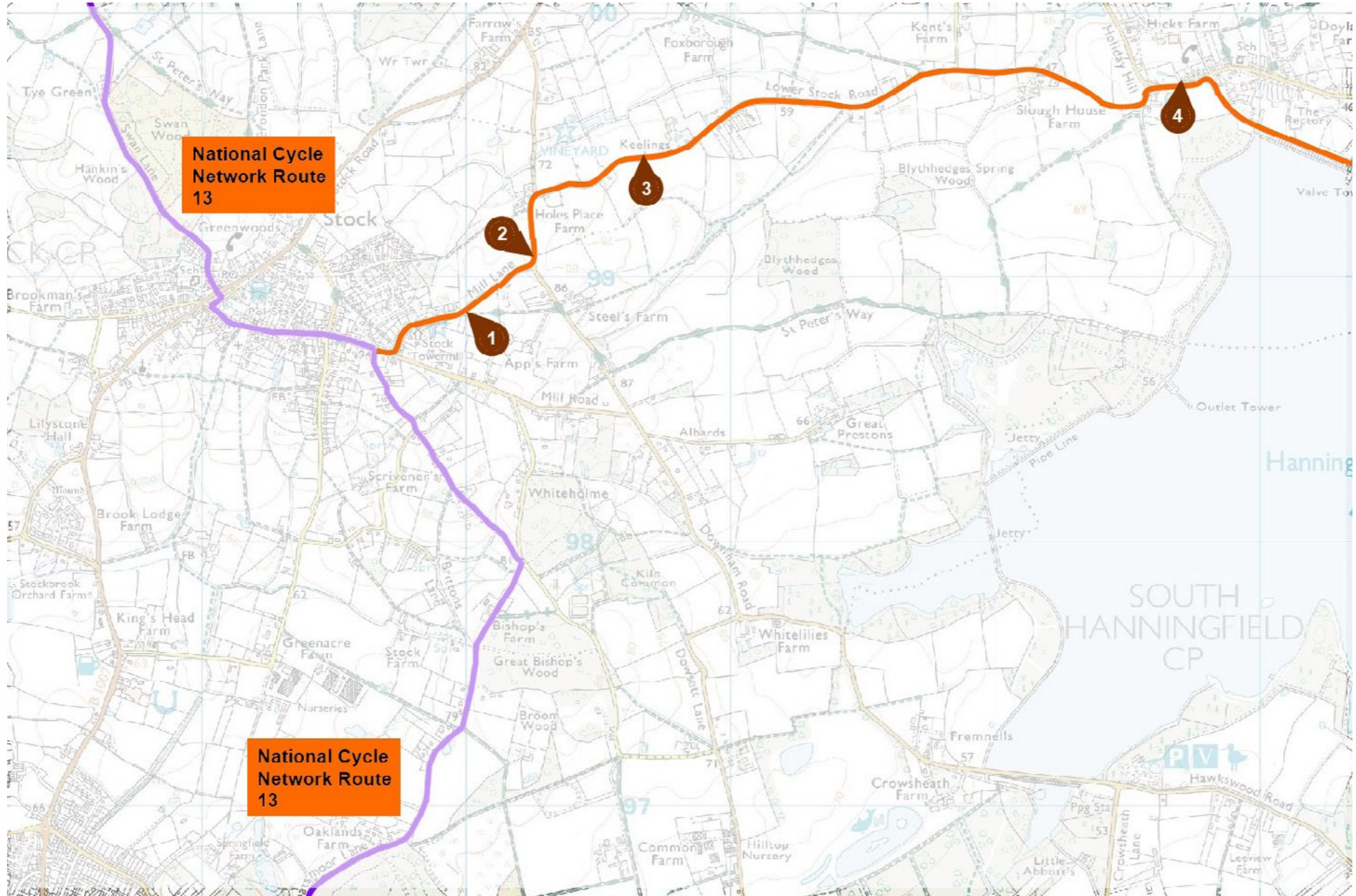


3. Lower Road, Stock. An on-road route here, with no intervention, other than signage, necessary. Again, nature of the rural route suggests that speeds are limited therefore suitable for rural NCN route.



4. Church Road, West Hanningfield. As above.

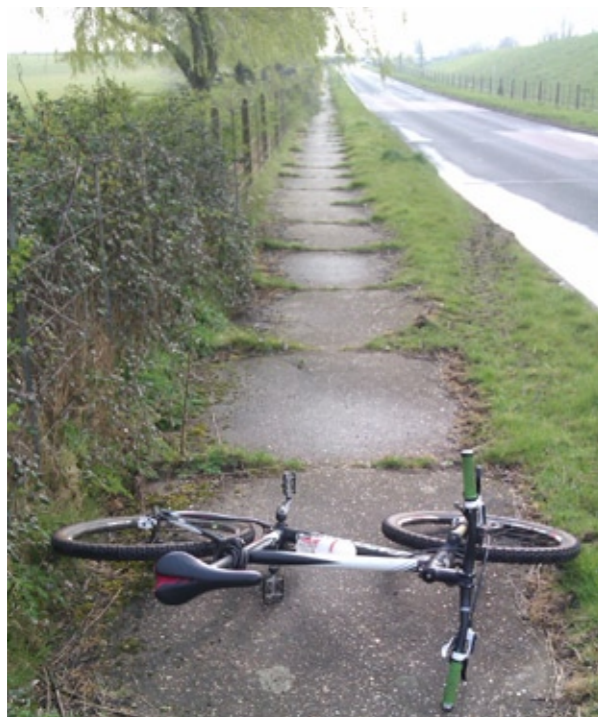
NCN135 Map 1



- Binding Margin -

Route details: Map 2

5. Middlemead, West Hanningfield. A national speed limit section of carriageway with motor vehicle speeds much above 60mph - unsuitable for cycling on the carriageway. At time of the scoping study (midday, mid week) there was evidence of high speeds and potential conflict between cyclists and fast moving vehicles. Speed reduction would make this a more attractive area for cycling, failing that some remedial works on the footway are necessary. Existing concrete block footway in poor condition, generally 1.5 metre wide, but with a 'verge' roughly 1 metre wide between the edge of the path and the carriageway, so some widening is possible. This stretch is approximately 2.5km long. Highway signs would need to be altered to remove support post from the path.



6. Uncontrolled crossing of Middlemead. Good visibility here, but further consideration needed as to most appropriate position and type. Consider painted treatment on the carriageway surface to indicate cycle route crossing.



7. Middlemead, West Hanningfield. As per 5 above existing concrete block footway in poor condition, generally 1.5 metre wide, but with a 'verge' roughly 1 metre wide between the edge of the path and the carriageway, so some widening is possible. This stretch is approximately 800m long.



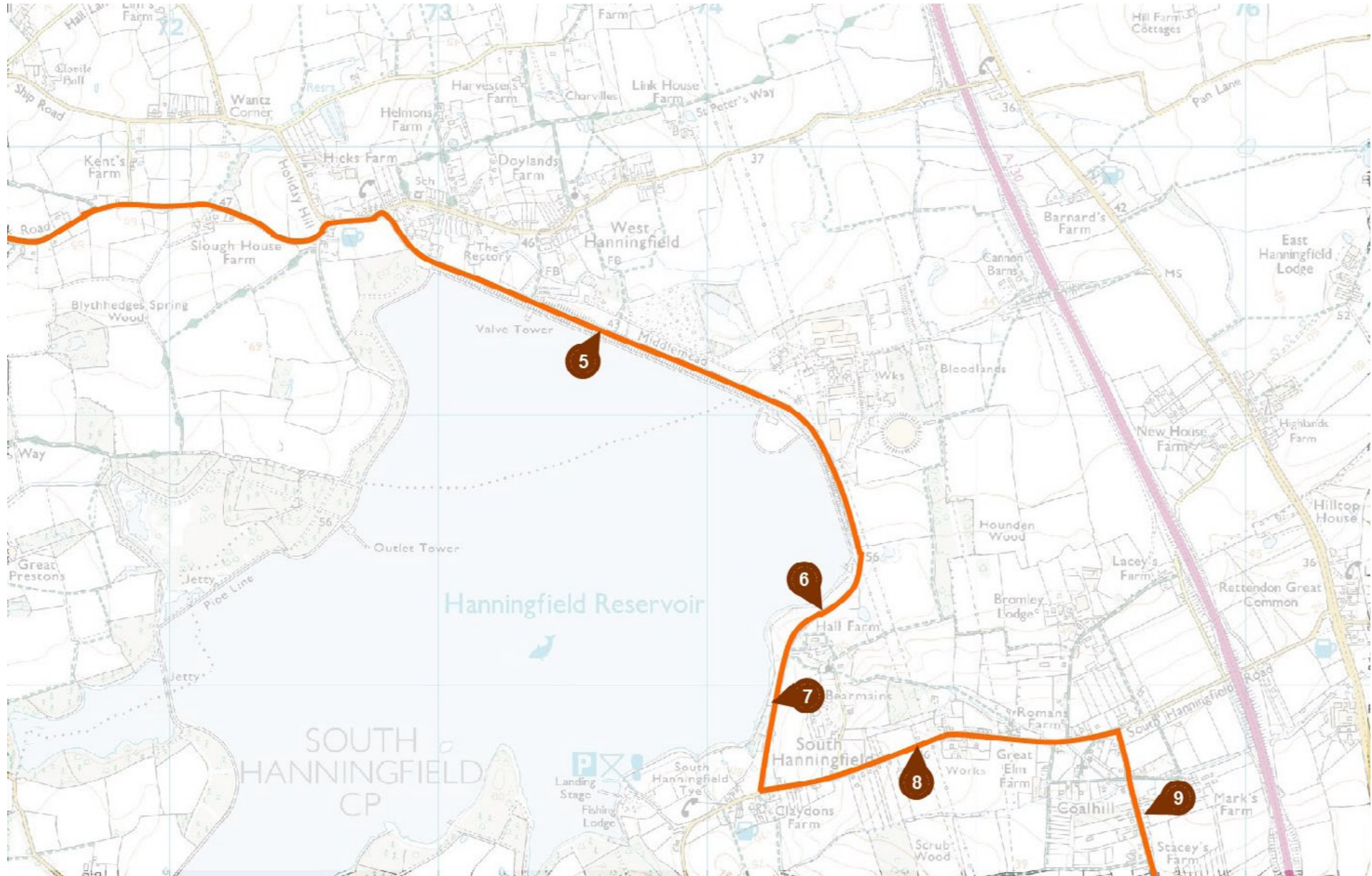
8. South Hanningfield Road to junction with Chalk Street. An on-road route here, with no intervention, other than signage, necessary. A 40mph speed limit exists here but traffic speed on day of assessment seemed high. To create a safer more appealing environment for cyclist on the NCN consider speed reduction in this area to 30mph.



9. Chalk Street remains a pleasant route to cycle on beyond the turn-off from South Hanningfield Road.



NCN135 Map 2



- Binding Margin -

Route details: Map 3

10. Hoe Lane. An on-road route here under the busy A130, with no intervention, other than signage, necessary. Again, nature of the rural route suggests that speeds are limited therefore suitable for rural NCN route.

11. Hoe Lane was selected as an alternative to the Runwell Hall farm access track. At the time of the scoping study large, locked security gates prevent public access to the track that would link to Runwell Chase. Part of the original route proposed by stakeholders.



12. Junction of Hoe Lane and Main Road. Poor inter-visibility here between cyclists emerging from Hoe Lane and fast moving traffic on Main Road. Consider if there is the possibility of increasing visibility (would require hedge removal) or whether hatchings on the road might 'push' vehicles towards the centre of the carriageway. Consider painted treatment on the carriageway surface to indicate cycle route crossing. High speed traffic here increases potential conflict with cyclists – detailed study required before recommendation.



13. Existing tarmac footway, 350 metres long, alongside the road carriageway. Path condition is good. Between 1.5 and 2 metres wide up to the commercial properties, 4 metres wide in the 'dip' in front of commercial properties (service road).

Consider converting the footway to shared use and painted treatment across the entrance to the commercial properties.



14. Approximately 500 metres of existing macadam footway in good condition, generally between 1 and 1.5 metres wide but with a 'verge' roughly 1 metre wide between the edge of the path and the carriageway, so some widening is possible.

15. Existing shared use footway, good condition, up to 5m metres wide. No work needed. There is a bus stop with shelter near the school, which could cause some conflict between cyclists and bus passengers, but the limited use of the stop means that this is unlikely to be a particular problem.



16. Unsegregated shared use section linking village to Rettendon Turnpike is separated from carriageway with kerb segregation and wooden fence. Excellent example of rural link.



17. Rettendon Turnpike is a busy junction serving the A130, South Woodham Ferrers and a number of 'local' routes. The junction is the point where Runwell road becomes Burnham Road and it is also the point where the statutory speed limit changes; 40mph heading towards Rettendon Place and Battlesbridge/ National Speed Limit heading towards South Woodham Ferrers. Existing shared use footway, generally poor condition macadam.

The seasoned riders of Forty Plus cycling club (Southend) and the CTC (South Essex Area) fear this junction especially at busy times of day.



18. Evidence of existing cycle route across this junction remain in place (in the form of a below standard unsegregated shared use path with uncontrolled crossings at each road crossing). Consider upgrading the junction, this would require, possible junction re-alignment, new flush kerbs, widening, removal / repainting of

the lined route, moving uncontrolled crossings 5m back (1 car length) from give way lines (some consideration should also be taken with regards to the use of raised tables or zebras), introduce right angle approaches to crossing to maximise visibility for cyclists and some works to bring the route onto the carriageway (Hawk Hill) on the Battlesbridge side of the junction.

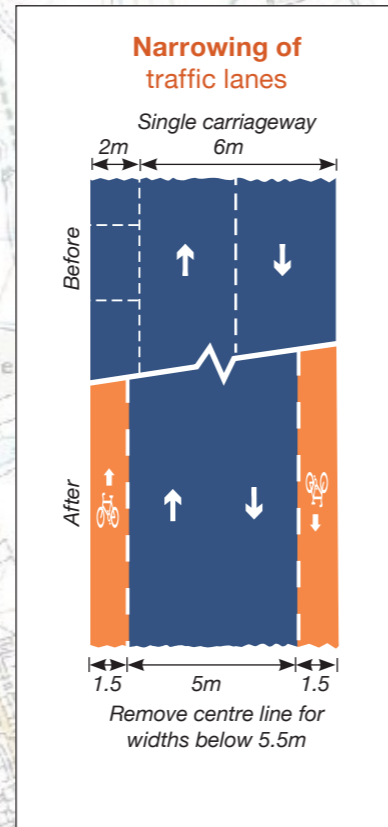
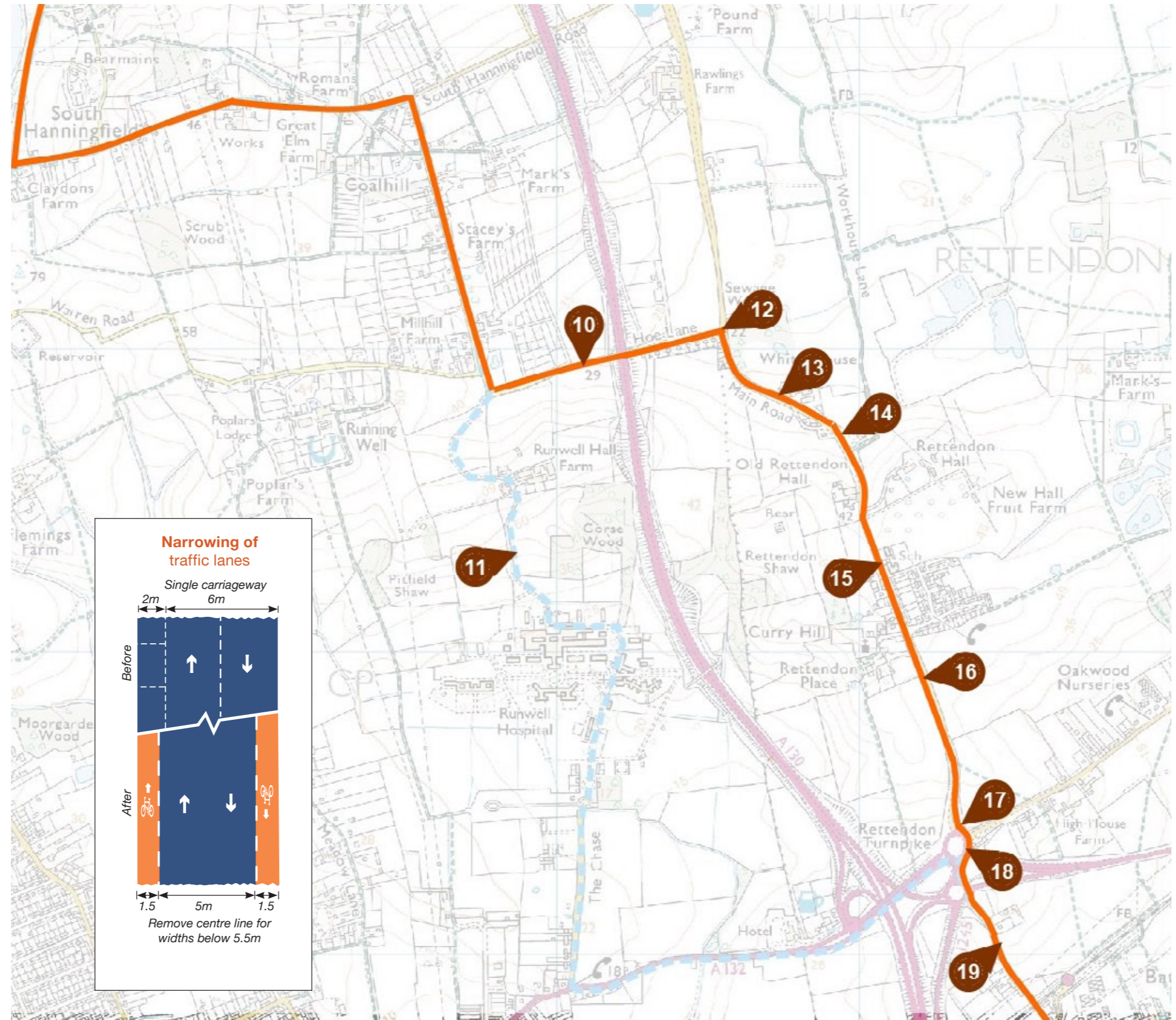


19. Hawk Hill/Chelmsford Road provide limited opportunities for off carriageway provision. Consider reallocation of road space by removing centre line and introducing on-carriageway advisory cycle lanes to carry both directions of travel. One way working under the railway bridge may also be considered to reduce conflict between large vehicles. Consider improving signage and one-way working on Battlesbridge bridge to allow cyclist to cross bridge.

Nb* Reallocation of road space makes an important statement about relative priority of different transport users, as it not only promotes cycling but can act as a restraint on motor traffic.

NCN135 Map 3

The Battlesbridge bridge is a problem as cyclists can be caught out by vehicles approaching in the opposite direction not visible at the moment when the cyclist commits". Comments from representative of Forty Plus cycling club (Southend) and the CTC (South Essex Area).



Route details: Map 4

20. Beeches Road/Watery Lane are very busy, narrow roads with little or no room for any intervention. It does not appear to be a suitable route for the NCN to take. Additionally the proposed alternative route would engage with the community of Rawreth and provide a much needed link between Rawreth, Rayleigh and Hullbridge.

Forty Plus cycling club (Southend) and the CTC (South Essex Area) experience of Beeches Road and Watery Lane have not been pleasant ones. They refer to them as rat runs that get extremely busy as peak hours. They are narrow and traffic travels at high speeds with drivers often taking dangerous chances. Peter Wotherspoon, who represented the groups during consultation, would prefer to see the route follow Rawreth Lane which he believes is the best option. Peter stated that he feels safe when he is inside the 30mph zone on Rawreth lane but would like to see off highway provision from Rawreth.

On Beeches Road and Watery Lane, Hullbridge –there were 2 recorded RTA's involving cyclists at Watery Lane j/w Lower Road Lower Road with 1 on Church Road, Hullbridge.

21. The 'Old Chelmsford Road'. Ideal road for route with very low volume of traffic / low speed. No treatment needed (other than confirmatory signage and flush kerb where route joins footway).



22. Approximately 220 metres of existing macadam footway in good condition alongside the A1245, generally between 1.5 and 2 metres wide.

Highway signs would need to be altered to remove support post from the path. There is cut through to Bedloes Avenue that could be used with no treatment needed (other than confirmatory signage and flush kerb where route joins carriageway).



23. Bedloes Avenue. Ideal road for route with very low volume of traffic / low speed. No treatment needed (other than confirmatory).

24. Rawreth Lane. Footway continues as a 'footway only' for a further 200 metres (where it meets the entrance to cricket club and recreation ground). 1.5 metres wide but lamp posts, telegraph poles (at the back edge of the footway) and residential boundaries reduce the clear width to between 1.5 and 1 metre in places for the first 150m. Existing macadam footway in good condition. Then, in the next 50 metres, footway widens with a stretch nearing 2 metres wide but with a 'verge' roughly 1 metre wide between the edge of the path and the carriageway, so some widening is possible.

Consider conversion to shared use footway. Consider if footway can be widened to increase clear space for cyclists and pedestrians.



25. Footway alongside road carriageway, from the cricket club, to side turn for Rawreth Industrial Estate access. Approximately 1km of footway in reasonable condition, variable width, but typically 1.5 – 2m metres but with a 'verge' roughly 1.2 metres wide between the edge of the path and the boundary fence, so some widening is possible.

Consider conversion to shared use footway. Consider if footway can be widened where necessary to increase clear space for cyclists and pedestrians.



26. Existing tarmac footway, 380 metres long, alongside road carriageway. Path condition varies between reasonable and poor. Between 1 and 1.5 metres wide (but possibly wider under the encroaching hedges) up to the junction of Rawreth Lane and Priory Chase/Asda. There are a number lamp posts in the footway in the last section, reducing the clear width to less than 1m; consider moving posts.

Consider conversion to shared use footway. Consider if footway can be widened where necessary to increase clear space for cyclists and pedestrians.



27. Junction of Rawreth Lane and Priory Chase/Asda. Shared use path route (#26 above) would use the existing traffic signals here (which do not have a pedestrian phase) to cross the Rawreth Lane and then use the existing shared use facility. Consider installing Toucan crossing.

28. Route follows existing shared use footway, 2.5 metres wide, generally good condition for 170 metres until officially shared usage ends. Footway then continues as a 'footway only' for a further 770 metres (where it meets junction with Hullbridge Road). 3 metres wide for the first 160 metres as far as Downhall Park Way. There is a bus stop without shelter here, but the relatively low usage of the stop combined with excellent visibility means that cyclist/bus stop user conflict is unlikely. Surface is in excellent condition. Then, in the next 610 metres (between Downhall Park Way and Hullbridge Road), footway narrows to 2 metres, with a stretch nearing 1.5 metres in width. Surface again is in excellent condition. Consider localised re-instatement of full width of path.

Consider conversion to shared use footway. Consider if footway can be widened where necessary to increase clear space for cyclists and pedestrians.

29. This alternative route would continue along Trender Avenue (i.e. not continue along Rawreth Lane), until Vanderbilt Avenue is met, where the route turns left and then continues on to Hullbridge Road to join Lower Road in Hullbridge. This route was discounted as an alternative to Rawreth Lane and Hullbridge Road. Unfortunately the road turns into a private road that is gated and therefore does not provide a suitable link route.

30. Alternative to #26,27,28 and 29. Consider reallocation of road space along Rawreth Lane (from Havana Drive to Hullbridge Road) by removing centre line and introducing on-carriageway advisory cycle lanes to carry both directions of travel (cycle lanes stops 20-30m before roundabout so cyclists mix with traffic on approach). Reallocation of road space makes an important statement about relative priority of different transport users, as it not only promotes cycling but can act as a restraint on motor traffic.

31. Hullbridge Road Junction. Junction of Rawreth Lane and Hullbridge Road. A busy mini-roundabout with poor inter-visibility here between traffic emerging from Hullbridge Road and those turning into Rawreth Lane. Consider if there is the possibility of creating a shared use facility on the northern side of Rawreth Lane and western side of Hullbridge road with suitable crossing facilities linking with the small shopping arcade and Ferndale Road.

NCN135 Map 4

32. Ferndale Road. This short section would be an ideal road for route with very low volume of traffic / low speed. No treatment needed (other than confirmatory signage and flush kerbs to join footway).

33. Existing macadam footway in good condition, generally 1 metre wide, but with a 'verge' roughly 1.5 metres wide between the edge of the path and the boundary fence in places, so some widening is possible. This stretch is approximately 1.8km long (where it meets junction with Lower Road). Highway sign would need to be altered to remove support post from the path.

Or, consider reallocation of road space by removing centre line and introducing on-carriageway advisory cycle lanes to carry both directions of travel and reducing speed limit to 30mph as far as the junction with Lower Road.

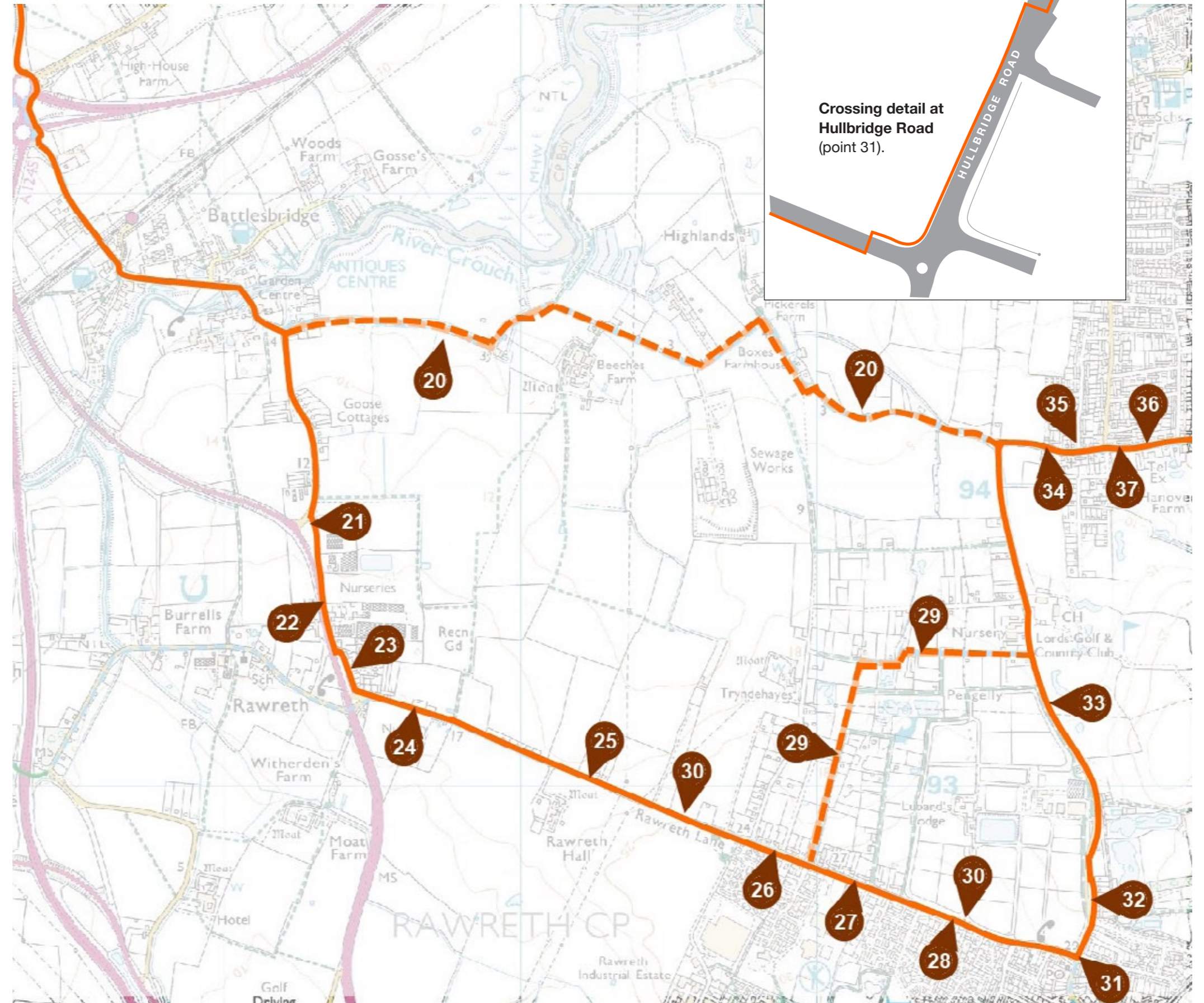
34. Footway continues as a 'footway only' along Lower road for 300 metres (where it meets with existing zebra crossing) in reasonable condition, variable width, but typically 2 metres total width.

Consider conversion to shared use footway. Consider if footway can be widened to increase clear space for cyclists and pedestrians. Some works will be required to bring the route onto the carriageway (Lower Road) at the zebra crossing.

35. Some works to bring the route onto the carriageway.

36. Consider reallocation of road space by removing centre line and introducing on-carriageway advisory cycle lanes to carry both directions of travel as far as the junction with Blountswood Road. Consider wider cycle lane in the uphill direction only on Coventry Hill. Where pinch points cannot be removed (such as central islands) consider marking large cycle symbols centrally. Where a cycle lane is provided it should be continued through the pinch point with a width of at least 1.5m.

37. Cycle lanes stop 20-30m before roundabout with Ferry Road so cyclists mix with traffic on approach



Route details: Map 5(i)

- 38. Cycle lane continued across junction with increased width.
- 39. Central island where pinch point in carriageway cannot be removed consider marking large cycle symbol centrally. Cycle lane should be continued through the pinch point with a width of at least 1.5m.
- 40. Blountswood Road, generally poor condition track. Some stretches tend towards mud in wetter months. Path generally 4 metres wide for the first 120 metres after Lower Road junction, after which the track is generally 2 to 3 metres wide (this as a result of the over grown vegetation). Total length of this stretch is 720 metres.



- 41. Consider minimum 3m wide path (4m wide would encourage groups to use the route) with 1m mown verges. Sealed surface is imperative where intended for commuting and other utility trips - surface dressed top to bitumen base course may be appropriate along the entire length. Route heavily used by equestrians therefore suitable surface finish will need consideration.

One important factor for the local Forty Plus cycling club riders is the surface quality. Mapping often doesn't show if the route is suitable for road bikes and the group have been disappointed in the past to find a surface that is impassable.

- 42. Murrells Lane. An on-road route here, with no intervention, other than signage, necessary.



- 43. Church Road. An on-road route here, with no intervention, other than signage, necessary.
- 44. Aldermans Hill/Main Road. Existing tarmac footway alongside the road carriageway. Path condition varies between reasonable and poor. Between 1 and 1.5 metres wide as far as Spa Road roundabout. There are a number lamp posts in the footway and shop frontages in the last section, reducing the clear width to less than 1m.

Consider reallocation of road space by introducing on-carriageway advisory cycle lanes to carry both directions of travel as far as Spa Road roundabout (cycle lanes stops 20-30m before roundabout so cyclists mix with traffic on approach). Nb* Without traffic volume data we have made assumptions to allow for this recommendation.

Making the approaches including Main Road, Spa road and the roundabout more cycle/ pedestrian friendly is essential to encouraging more people to cycle/walk to employment opportunities at the airport and more generally in the town/to the station.

There are a number of ways in which provision for cyclists and pedestrians could be improved. One approach would be to convert some or all of the area to 'shared space'.

A reduction of the speed limit through this area to 20 mph would also be helpful.

A detailed concept plan for this area is recommended - Sustrans are able to offer a full concept development service including vehicle tracking



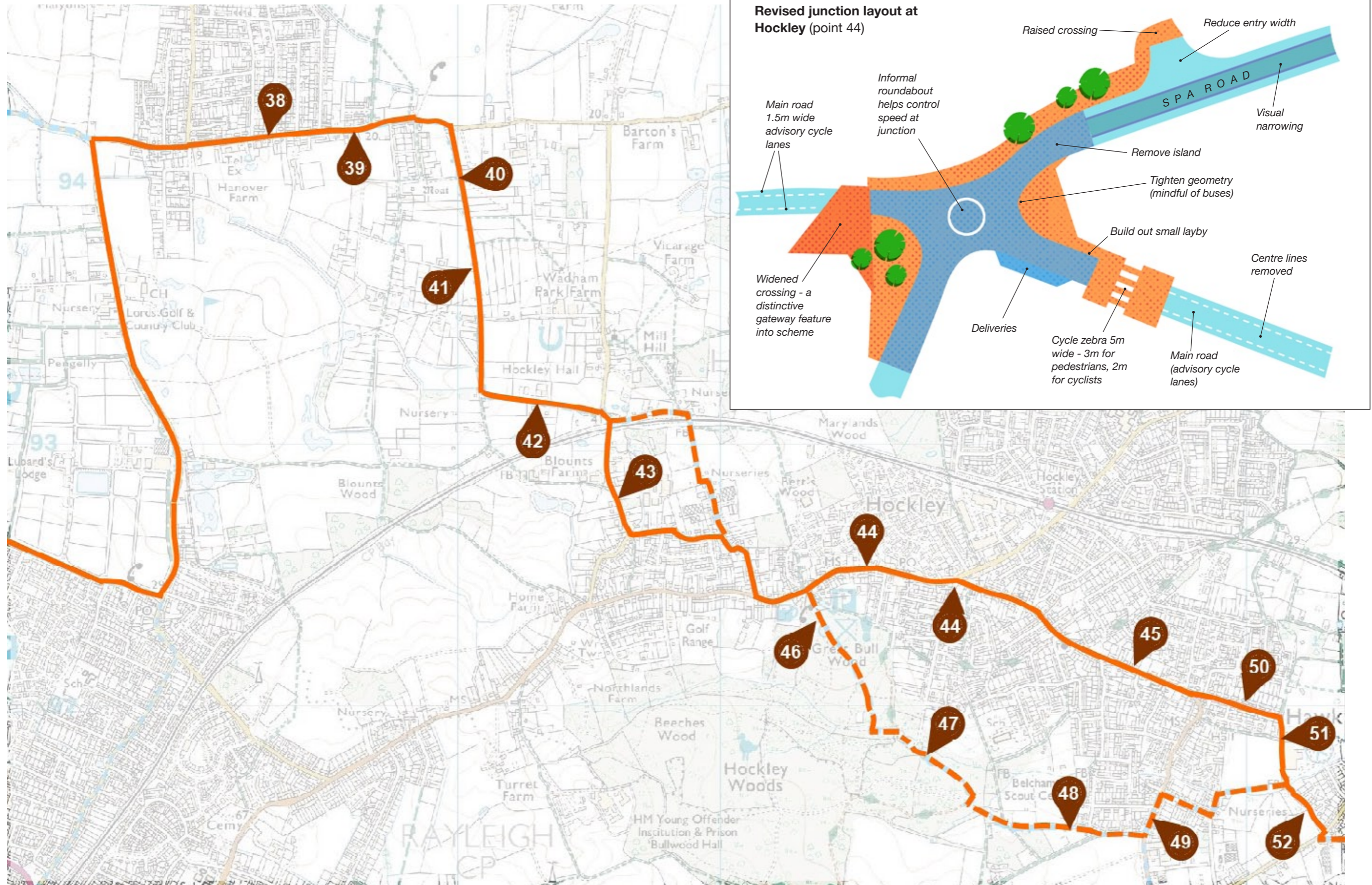
Shared Space at Stonehouse High Street. An example of Inspiring Infrastructure that could be applied to Hockley High Street

NB*, According to the Road Traffic Accident statistics from ECC there were a total of 6 accidents involving cyclists on the B1013 in Hockley and Hawkwell (inc High Road (3), Aldermans Hill (0), Main Road (1), Southend Road (1) and Hall Road (1)).

According to Forty Plus cycling club (Southend) and the CTC (South Essex Area) Main Road in Hockley is extremely busy and not a pleasant place to ride in its present state. However, with some amendments they could see the benefit to this route over Hockley Woods to attract more cyclists and possibly reduce congestion.



NCN135 Map 5 (i)



- Binding Margin -

Route details: Map 5 (ii)

45. Southend Road (from Spa Roundabout to Hockley Rise). Consider reallocation of road space by introducing on-carriageway advisory cycle lanes (1.5m) to carry both directions of travel. Main Road from Hockley Rise to Hawkwell Park Drive consider 2m wide advisory cycle lane on the uphill lane and move centre lines accordingly. At junction with Hockley Rise and Hawkwell Park Avenue consider 'Village Gateway' of raised tables and suitable road markings to encourage slower speeds and provide safer crossing points for Non-motorised users. Nb* Without traffic volume data we have made assumptions to allow for this recommendation.



48. Holyoak Lane and Mt Bovers Lane. Restricted by-ways therefore no intervention, other than signage, necessary. Surface conditions do vary and some improvement measures would be required to accommodate utility cyclists.

49. Consider reallocation of road space by removing centre line and introducing on-carriageway advisory cycle lanes to carry both directions of travel. Use proposed routes through new development to link with Clements Hall Way.

50. Hawkwell Park Drive. An on-road route here, with no intervention, other than signage, necessary

51. Existing shared use footway linking Clement Hall Way, Sweyne Drive and Hawkwell Park drive, good condition. No work needed.



The following sections (46/, 47/, 48/ and 49/) considers an alternative route, proposed as part of consultation. This alternative route would utilise existing permissive public rights of way through Hockley Woods (i.e. not continue on Main Road). However any detailed planning would require consultation with local interested parties (plus Natural England and Forestry Commission) and take into account sections of the woods have Site of Special Scientific Interest (SSSI) status.

46. Car park with site office. Route could come through Geotech surfaced car park area without need for any modification.

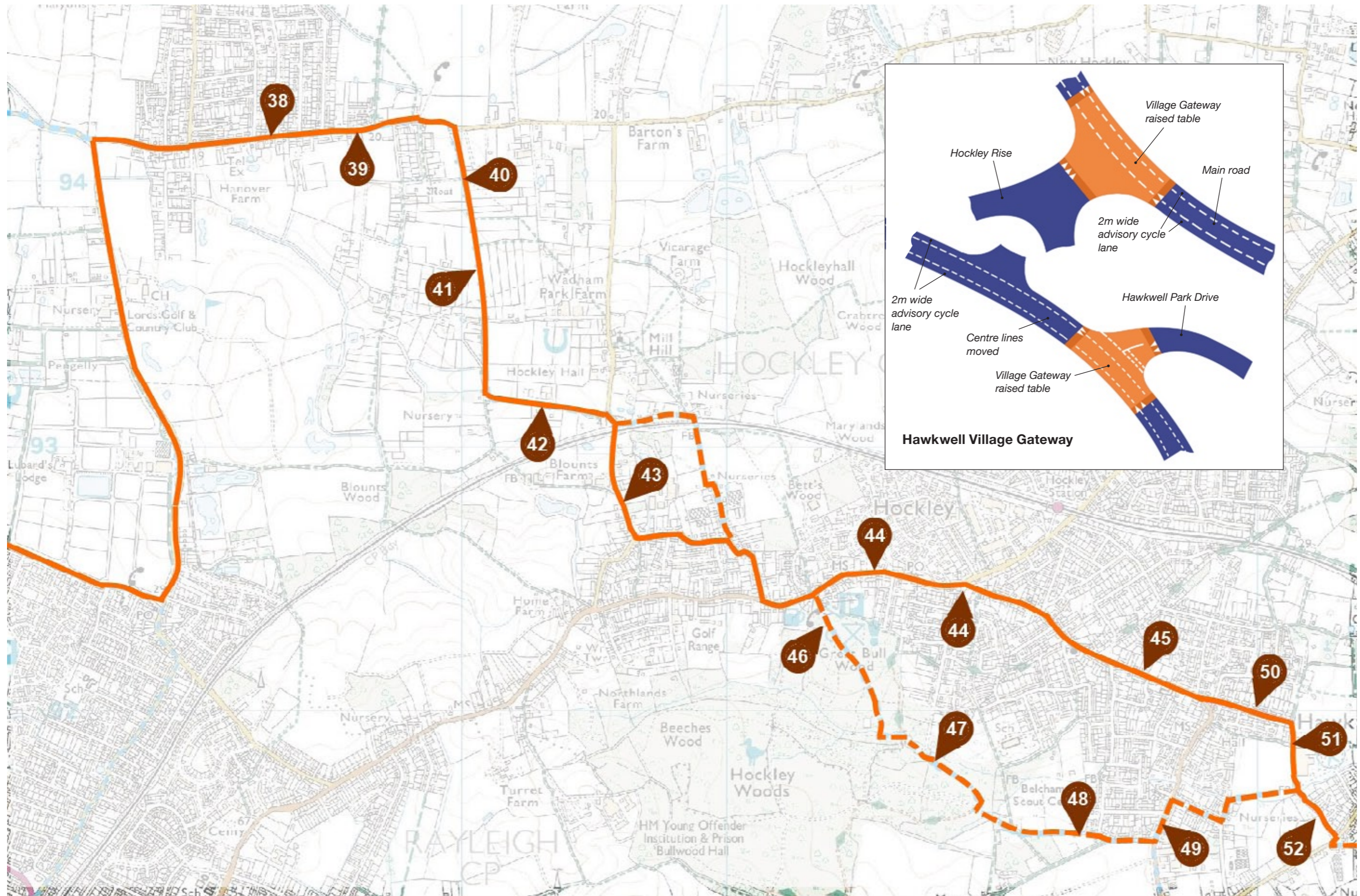
47. Permissive right of way exists in Hockley Woods therefore negotiations with landowners would be required to establish permission for cycling. Existing footpath, generally good condition compacted type 1 and gravel. Some stretches tend towards mud in wetter months.



52. Clements Hall Way. An on-road route here, with no intervention, other than signage, necessary. Clements Hall Way is a generally quiet 30mph road and has the advantage of serving the new residential area currently under construction (176 houses where a cycle way and footpath network, public open space and landscaping will be created) and Clements Hall Leisure centre.



NCN135 Map 5 (ii)



- Binding Margin -

Route details: Map 6

53. Rectory Road, an uncontrolled crossing would be necessary to link Ironwell Lane with Clement Hall Drive. Consider re-marking road junction with large cycle symbol. Nb* It will be important to see how this junction functions when residential development on Clement Hall Way is completed.



54. Ironwell Lane is an urban fringe/semi-rural traffic free byway, the surface is of a poor standard and while it is now suitable as a walking route, it would need widening and significant surface improvements to accommodate utility cyclists. Ironwell lane and BW55 are used by equestrians and as a result their requirements must be considered.

Consider minimum 3m wide path (4m wide would encourage groups to use the route) with 1m mown verges. Sealed surface is imperative where intended for commuting and other utility trips - surface dressed top to bitumen base course may be appropriate along the entire length.



Example of existing shared use greenway on Cherry Orchard Lane

55. Bridleway 55 links the mid-point of Ironwell Lane to Hall Road to the south. Surface improvements would be needed to create a suitable environment for walkers and cyclists.

Consider minimum 3m wide path (4m wide would encourage groups to use the route) with 1m mown verges. Sealed surface is imperative where intended for commuting and other utility trips - surface dressed top to bitumen base course may be appropriate along the entire length.

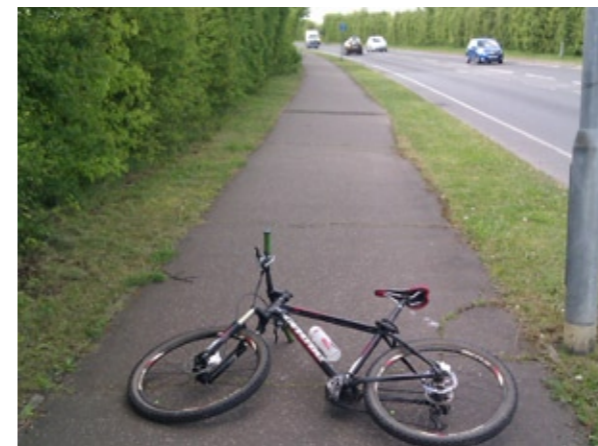


56. Bridleway 55 emerges onto Hall Road and while an uncontrolled crossing exists to the west a signalised crossing would assist vulnerable road users here. Plans for the development of Hall Road suggest a revised road layout and a new speed limit of 30mph. A roundabout is proposed at the entrance to the new development with no detail in the planning application of suitable crossing. This should be considered in the early planning stages of the site.

57. Hall Road. Existing shared use footway, good condition, 2.5 metres wide. Vegetation encroachment is evident on sections of the route – consider improved maintenance programme. No work needed.



58. Cherry Orchard Way. Existing shared use footway 2.5 metres wide, good condition although evidence found of longitudinal cracks. No work needed.



59. Consideration is required where the route crosses the new entrance to Saxon business park, a suitable crossing will need to be included in any development plans.

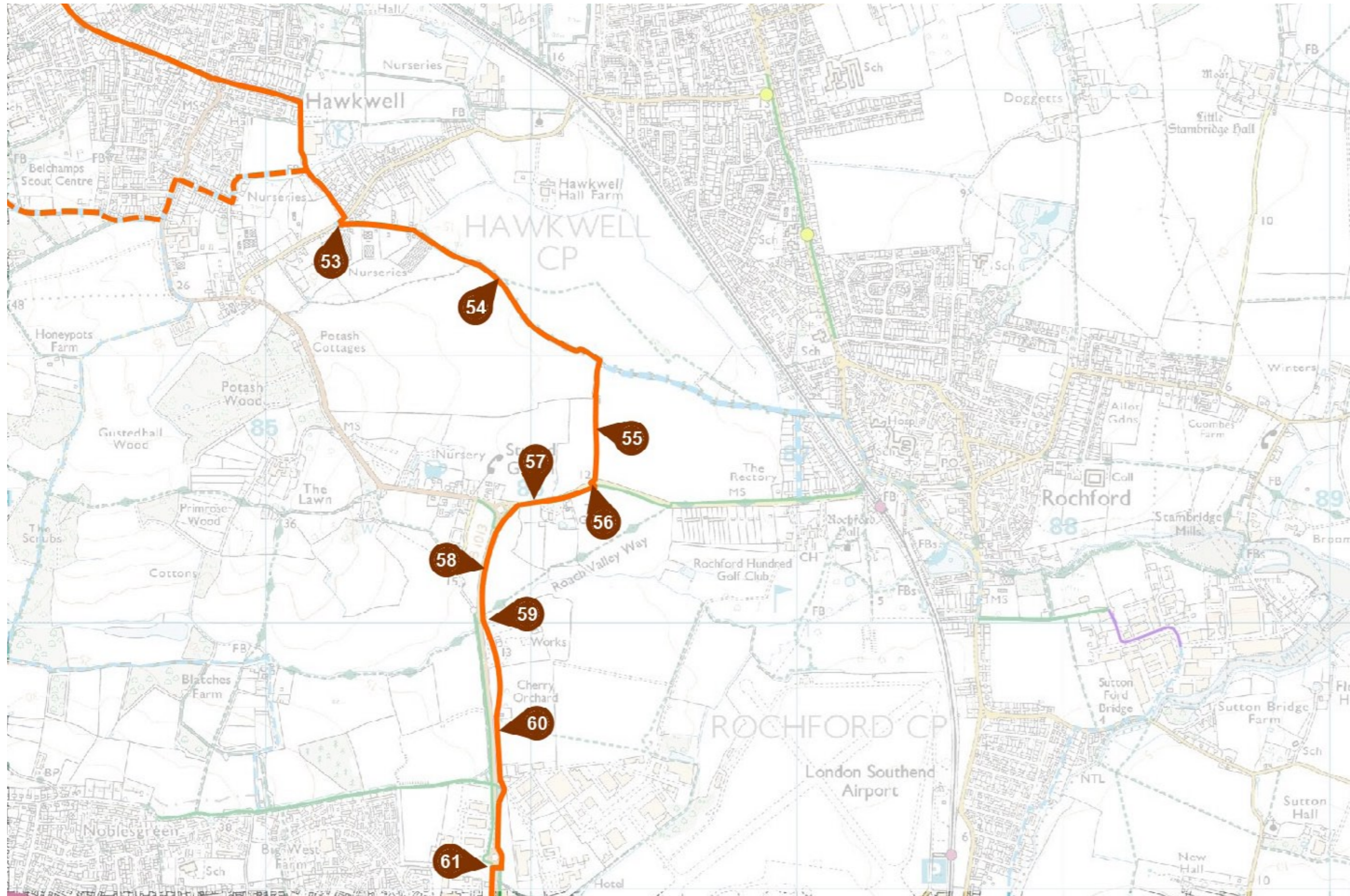


60. Cherry Orchard Lane. Existing shared use footway, good condition. No work needed.

61. Uncontrolled crossing of Cherry Orchard Way. Consider setting back 5m from give way line; consider use of a raised table or zebra.



NCN135 Map 6



- Binding Margin -

Route details: Map 7

62. Cherry Orchard Way. Existing shared use footway, good condition. Traffic signs will need reconfiguring as they present an obstacle at present.



63. Uncontrolled crossing of Eastwoodbury Lane. Consider setting back 5m from give way line; consider use of a raised table or zebra.

64. Eastwoodbury Lane. Existing shared use footway, good condition. No work needed.

65. Nestuda Way. Existing shared use footway, good condition. No work needed.



66. Prince Avenue (A127). Existing shared use footway and Toucan crossings, good condition. No work needed.

Consider removing 'Cyclists Dismount' signs found on the Toucan crossing.



67. Somerset Avenue, to junction with Bridgewater Drive. An on-road route here, with no intervention, other than signage, necessary.



68. Reasonably good visibility here, but to create a direct route priority could be given to the minor road.



69. Mannering Gardens, to junction with Kenilworth Gardens. An on-road route here, with no intervention, other than signage, necessary.



70. This staggered crossroads is difficult for cyclists (and pedestrians) to negotiate because of heavy (and turning) traffic. Crossings would assist vulnerable users here. Further west, on Blenheim Chase, Southend Borough Council have shown willingness to reallocate road space which makes an important statement about relative priority of different transport users. Removal of a traffic lane to provide a cycle track and uncontrolled crossing points here would promote cycling and act as a restraint on motor traffic.

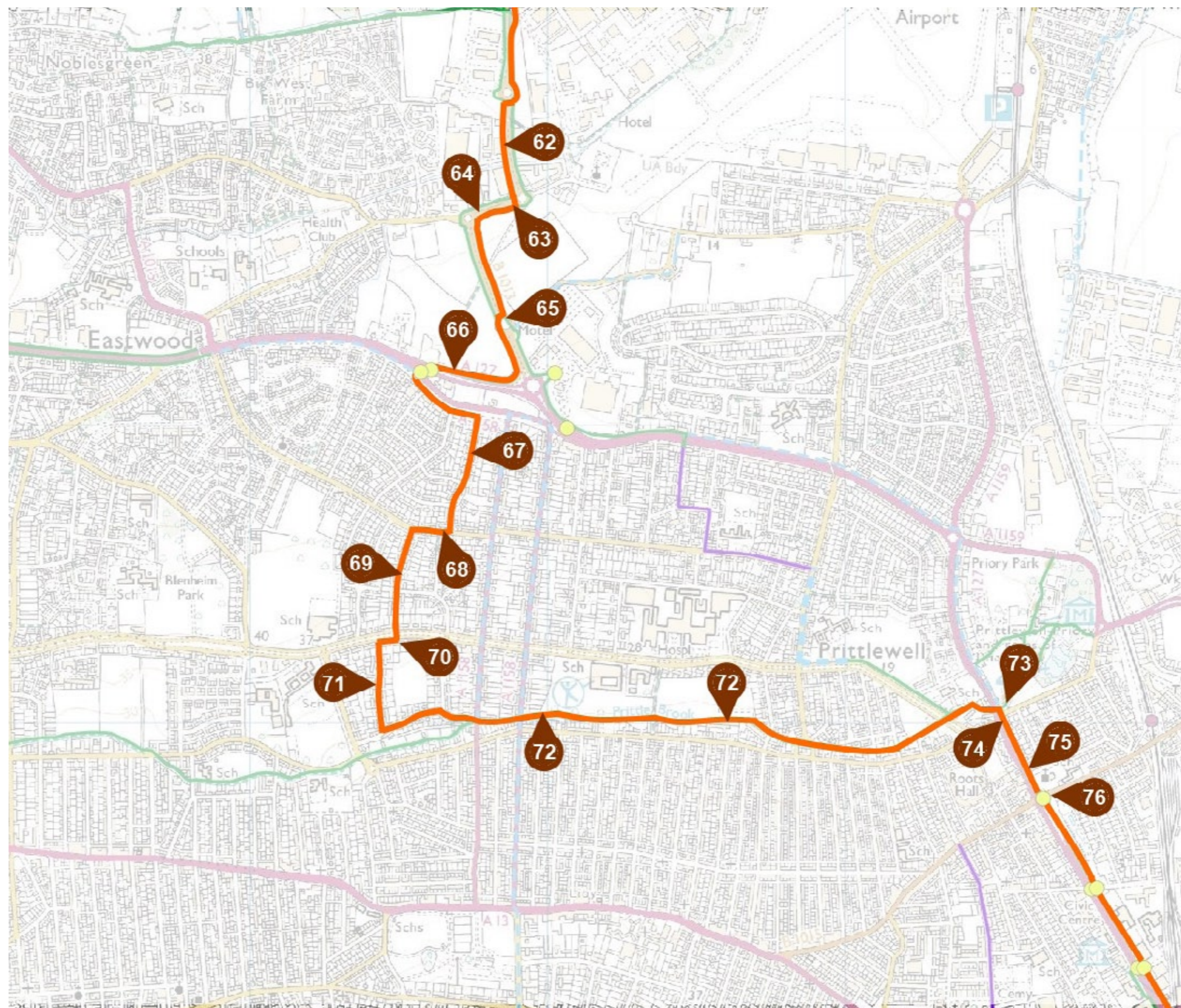


NCN135 Map 7

71. St James Gardens/Clatterfield Gardens, to junction with Southbourne Grove. An on-road route here, with no intervention, other than signage, necessary.



72. Prittle Brook Greenway. Route follows facility, 3 metres wide, excellent condition for 1.8km until Victoria Avenue.
73. Attention also needs to be paid to the junction of Victoria Avenue and Priory Crescent. The junction is a key meeting point of cycling, walking and vehicular movement and changes are needed to improve provision for Non Motorised Users. Existing pelican crossings need to be widened (approx. 4m) and converted to Toucan and the junction re-designed to allow for diagonal movements (Change timing on crossing (currently 8 seconds on green, 15 seconds dead). Introduce a countdown timer on diagonal phase). 'Gateways' to Priory Park and the Prittle Brook Greenway need to be established to highlight their presence.
74. It is clear that the footway that runs along the frontages of the houses in this short stretch is pinched by boundary fences. This reduces the clear width available for pedestrians (at present) and for cyclists (as proposed). Consider conversion to shared use footway and widening as part of junction improvements (see above) to increase clear space for cyclists and pedestrians.
75. Victoria Avenue (A127) to Carnarvon Road. Existing shared use footway and Toucan crossings, good condition. No work needed.
76. Consider upgrading the timings to a single phase crossing.



Route details: Map 8

77. Route follows existing shared use footway, 1.5 metres wide, generally good condition for 650 metres until officially shared usage ends. Consider raising the level of the cycle track to grade level and opening the area between Canarvon Road and Southend Museum as shared use.

Footway then continues as a 'footway only' for a further 140 metres (where it meets shared use facilities on Victoria Gateway). 4 metres wide, but signs and vegetation (at the front edge of the footway) reduce the clear width to 2 metres in places.

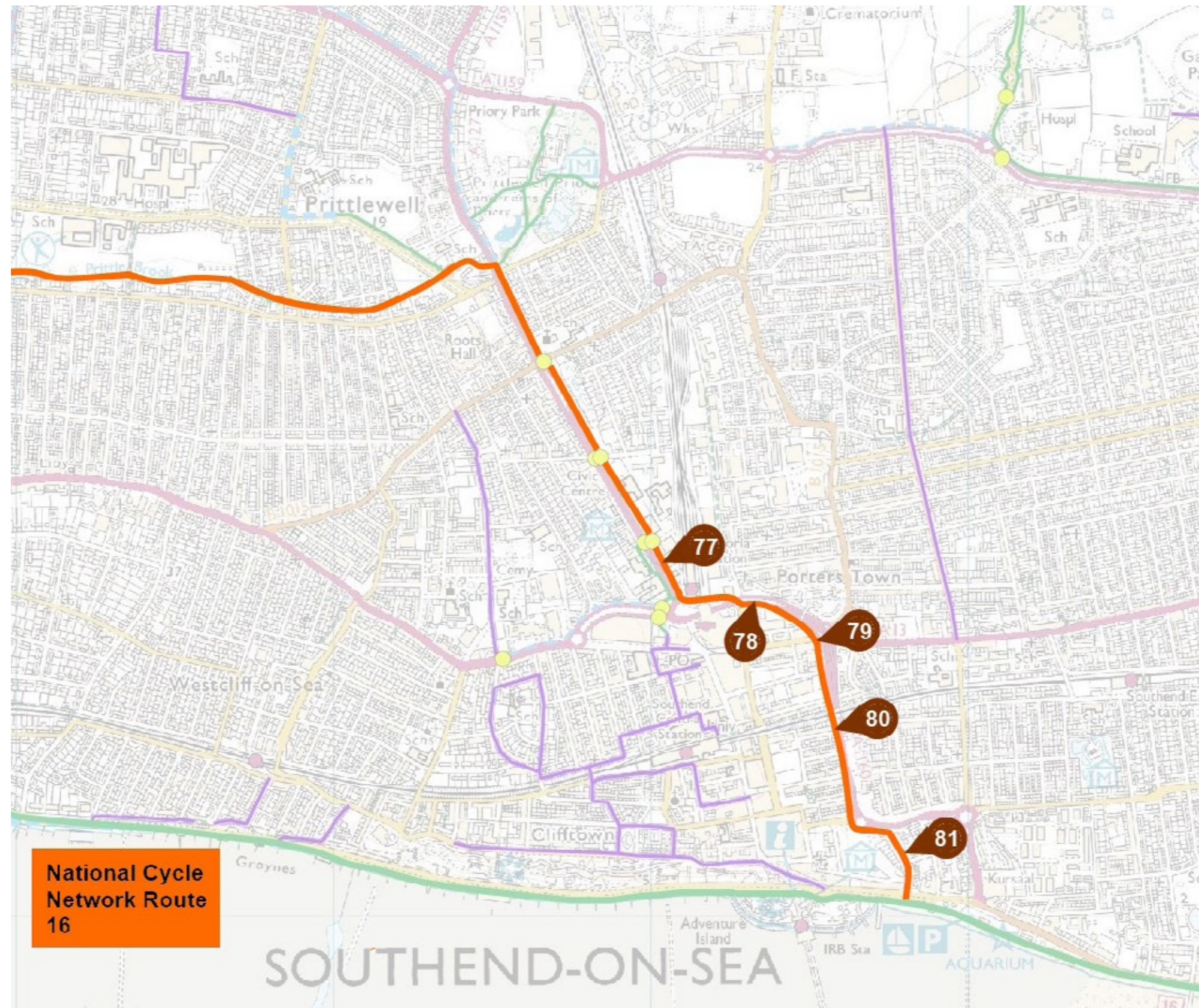
Surface here is excellent. Consider localised re-instatement of full width of path and converting to shared use.

78. Victoria Gateway via Queensway to Southchurch Road. Existing shared use footway and Toucan crossings, good condition. No work needed.

79. Remove 'Cyclists Dismount' signs. Note: Whilst cyclists do not have priority on a zebra crossing, they are permitted to use them provided cycle tracks are provided each side.

80. Southchurch Road to Chancellor Road. Existing shared use footway and crossings, good condition. No work needed.

81. Southchurch Road to Marine Parade. Existing shared use footway and crossings, good condition. No work needed.



Delivering & monitoring the improvements

The various improvements proposed in this feasibility study have been brought together in the table below with an indication of costs, relative priorities and an assessment of the ease with which the improvements can be delivered.

Each factor (cost, priority and 'deliverability') is rated on a low (L), medium (M) and high (H) scale. The cost estimates relate to the following broad ranges: L= less than £10,000; M= £10,000- £50,000; H= £50,000- £100,000 (and, exceptionally, H+= over £100,000).

The improvements will be further discussed with the stakeholder group, while funding sources and a possible programme of works are explored, following which a more detailed version of this Action Plan will be drawn up by the project stakeholder group to deliver the improvements. The stakeholder group has representation from Essex County Council, Chelmsford City Council, Rochford District Council, Southend Borough Council and Sustrans.

Ref #	Nature of Improvements	Cost	Priority	Deliverability
Hanningfield				
5,6 and 7	Construct new path; 3m x 3300m dbm Reposition signs Carriageway painting	H	L	L
12.	Carriageway painting	L	M	H
13.	Carriageway painting	L	M	M
Rettendon and Battlesbridge				
14.	Widen existing path; 1.5m x 500m dbm	M	M	M
17.	Patch repairs	L	M	H
18.	Carriageway painting and other re-lining works; Install flush kerbs Widen path; 1m x 270m dbm	M	M	M
19.	Carriageway painting and other re-lining works;	L	M	H

Rawreth and Rayleh				
21.	Install flush kerbs	L	M	H
22.	Reposition signs Install flush kerbs	L	M	H
24.	Widen path; 1.5m x 250m dbm Carriageway painting;	L	M	L
25.	Widen path; 1.5m x 1000m dbm Reposition signs	H	M	L
26, 27 and 28	Cut back hedge/ vegetation; 380m Widen path; 1.5m x 500m dbm Reposition signs Carriageway painting and other re-lining works; Install Toucan crossing signal equipment Patch repairs	H	H	M
30.	Carriageway painting and other re-lining works; 1200m	H	H	L
31.				
32.	Install flush kerbs	L	M	H
33.	Widen path; 1.5m x 1800m dbm Reposition signs	H	H	L
Hullbridge				
34, 35, 36, 37, 38 and 39	Widen path; 1m x 300m dbm Install flush kerbs Carriageway painting and other re-lining works; 1300m	H	H	M
41.	Cut back hedge/ vegetation; 380m Construct new path; 3m x 900m dbm Timber Bollards Lighting and associated works Artwork/benches with localised widening.	H	M	L

Hockley and Hawkwell				
44 and 45	Carriageway painting and other re-lining works; 1800m Creation of 'shared space' around Spa Road roundabout. Altering the geometry of the roundabout A reduction of the speed limit to 20 mph	H+	H	M
6,47.48 and 49	Carriageway painting and other re-lining works; 180m Patch repairs	L	M	H
52.	Carriageway painting inc Cycle logos Cycle Parking	L	H	H
53.	Carriageway painting	L	H	H
54.	Cut back hedge/ vegetation; Construct new path; 3m x 750m dbm Carriageway painting inc Cycle logos Timber Bollards Lighting and associated works Artwork/benches with localised widening	H	H	L
55.	Cut back hedge/ vegetation; Construct new path; 3m x 470m dbm Timber Bollards Lighting and associated works Artwork/benches with localised widening	H	H	L
Southend				
56.	Toucan Crossing Carriageway painting	H	H	M
59.	Carriageway painting	H	H	H
61.	Uncontrolled crossing of Cherry Orchard Way. Consider setting back 5m from give way line; consider use of a raised table or zebra.	M	H	M
63.	Uncontrolled crossing of Eastwoodbury Lane. Consider setting back 5m from give way line; consider use of a raised table or zebra.	M	H	M
67.68 and 69	Carriageway painting inc Cycle logos	L	H	H
70.	Widen path; 1.5m x 66m dbm Reposition signs Carriageway painting	H	H	L
73 & 74.	Toucan Crossings x 2 Carriageway painting Install flush kerbs Gateways to Priory Park and the Prittle Brook Greenway. Widen path; 1.5m x 10m dbm	H	H	L
77.	Widen path; 1.5m x 140m dbm	L	H	H
79.	Remove 'Cyclists Dismount' signs.	L	H	H
	Retro-reflective direction and repeater signs along the entire route	L	H	H

Security

In areas that are prone to vandalism and other anti-social behaviour it is sometimes preferable to maintain a visual relationship between Greenway and highway to improve 'natural surveillance' and thus personal security. Where this is not possible it is preferred to rely on the popularity of the route to provide casual and informal surveillance.

Long Term Maintenance/Asset Management Plan

This report has emphasised the value of good quality construction. The better the route, the higher quality the surface, the more complete the drainage, the less will be the need for major repair works. By investing in the best possible design and construction we can minimise subsequent maintenance requirements.

Ideally the routes, particularly the Greenways, will be seen by the public as their own and they will be motivated to look after them, defend them against abuse, clear up rubbish and raise funds for additional features, improvements and so forth. This public involvement should be adopted as part of the management of the route, with local committees, local representatives, local volunteers and numerous events all designed to ensure that the sense of their local space is fostered as far as possible.

Local Sustrans volunteers can help to look after the local network of routes, and so encourage more people to walk and cycle. They can be the 'eyes and ears' for Sustrans and our many partners and deal with minor maintenance problems and report major problems so they get dealt with rapidly.

Sustrans maintains over 600km of Greenways, both urban and rural, where routine maintenance costs vary between £1000/km for wholly rural and recreational routes, to £7,700/km for inner city railway corridors. It should be noted that these costs exclude the periodic replacement of the actual path wearing surface which varies from at least every 10 years for an unsealed path to much longer intervals on a well built bitmac surface.

Revenue funds are always restricted, and the sums allocated to walking and cycling routes are usually small and certainly nowhere near the amount which is needed for what should be seen as the preferred way of travelling for local journeys. maintenance costs incurred need to be included in any funding strategies while in addition we must encourage local authorities to prioritise maintenance works and to ensure that routes are seen as an integral part of travel. Cycling and Walking routes must be seen as a legitimate part of the transport fabric.

Implementation Plan

To be included following further consultation

Ongoing commitment to progressing land negotiations, planning matters and funding applications are part of the long term delivery plans of this project. A lead partner, possibly Sustrans, will need to produce a route development implementation plan for any new routes and work closely with the stakeholder group to ensure that NCN135 remains high on the local agenda.

The approvals needed before work could start and how best to obtain these.

Obtaining Planning Permission

As the proposal includes new civil engineering structures then planning consent is required. Initial discussions are underway with the stakeholder group and a planning application will need to be made before land costs are incurred. In almost all cases the application will be for "change of use" because the extent of "development" is minimal.

Environment Agency consent

EA consent is required under the Land Drainage Act 1991, the Water Resources Act 1991 and the Flood Defence Byelaws before carrying out any works in the vicinity or crossing of, main rivers, natural watercourses or flood defences.

Land Agreements

There are a number of key land owners that will be affected by this proposal and as a result careful and considered discussions need to take place with regards to the most appropriate land agreements (e.g. Licences, freehold purchases or agreements for lease) for each.

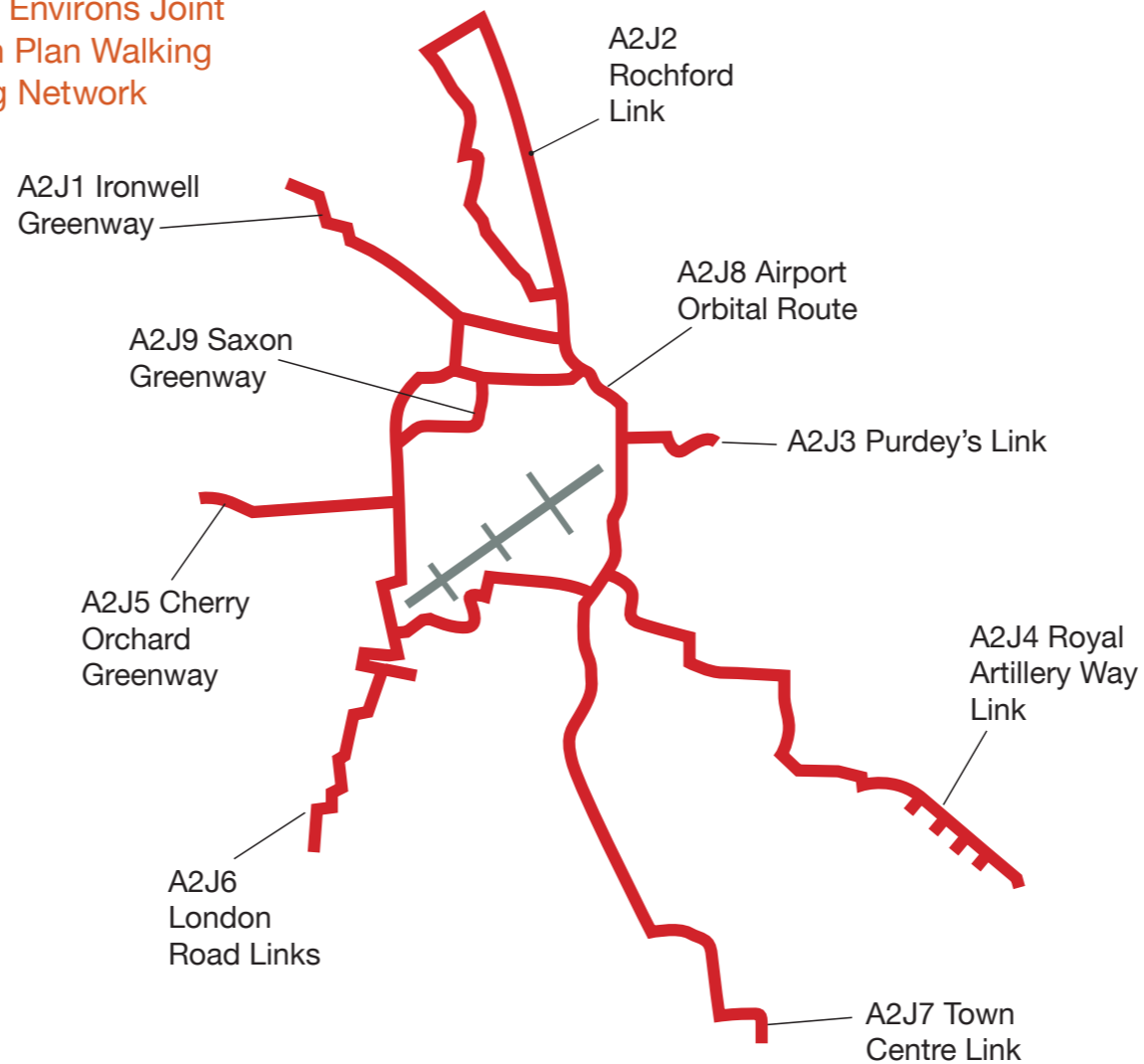
Funding applications

An important element to any project, we will be approaching a number of funders for support of the project. Funding options exist both locally, regionally, nationally and internationally and with so many different elements to the project there is opportunity for great interest and it is hoped that funders will be willing to pledge support of the project. Funding strategy discussions are underway and will continue with partners, stakeholders and local contacts while partnership working opportunities will be investigated in order to strengthen possible bids.

The purpose of this report is to help establish NCN135 as a priority scheme and to assist Sustrans and other interested parties in approaching potential funders.

At the time of writing this report a parallel study has been taking place with regards to the development of London Southend Airport and Environs Joint Area Action plan Walking and Cycling Network. Improving access to the airport and its environs the proposed network intersects and mirrors some of the proposals for NCN135. In particular the Ironwell Greenway, the Airport Orbital Route, the London Road Link and the Town Centre Link. It is therefore important to consider both reports when developing any infrastructure planning in the area.

Visual representation of the London Southend Airport and Environs Joint Area Action Plan Walking and Cycling Network



Consultation

Peter Wotherspoon. 40+ cycling club and CTC.

Matt Kyle. Grips Bikes.

Martin Philpotts. Sustrans Senior Engineer

JAAP and NCN135 Cycling and Walking feasibility projects working group – inc Essex County Council, Southend Borough Council and Rochford District Council.

Appendix

Rochford District Profile

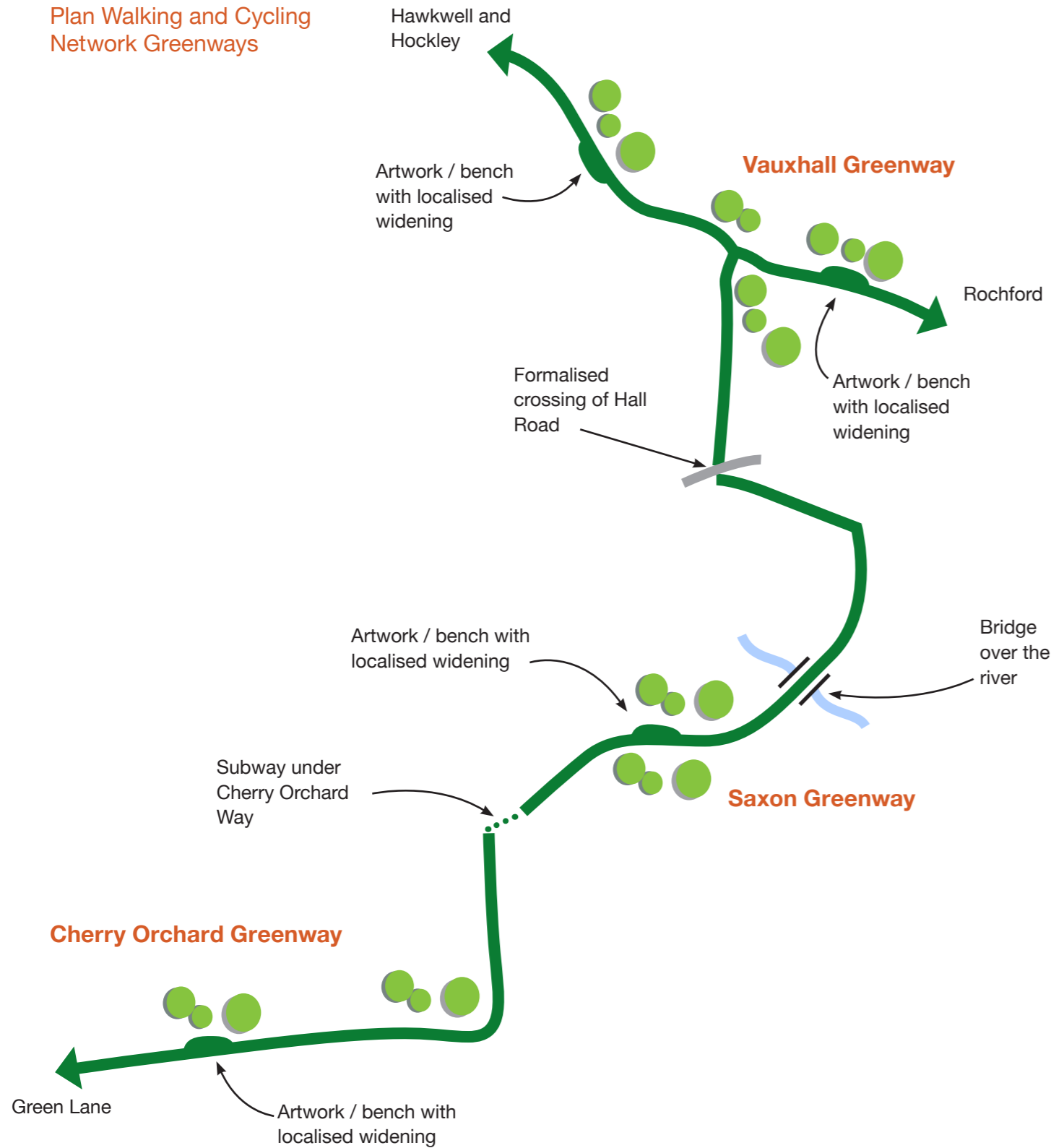
Essex Local Authority Portraits

Essex Transport Strategy: the Local Transport Plan for Essex

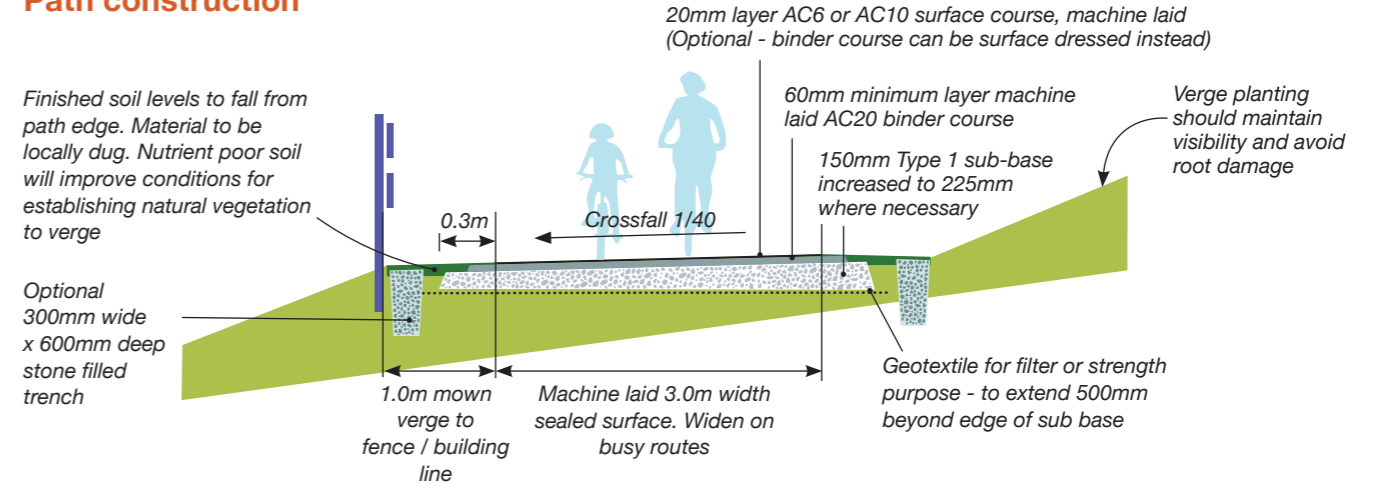
Local Development Framework – Core Strategy Adopted Version.

RTA statistics from Road Safety Engineer, Essex Highways - totals for period 01/05/2009 – 30/04/2014 involving cyclists.

Visual Representation of London Southend Airport and Environs Joint Area Action Plan Walking and Cycling Network Greenways



Path construction



Alternative option with camber

