

# Durham City Neighbourhood Plan Working Party

## Walking and cycling evidence paper

31 March 2019

### 1 Outline of this paper

This document is presented as part of the evidence base for the Durham City Neighbourhood Plan. It provides extra detail behind the maps of walking and cycling issues which are included in Appendix D of the Plan.

#### ***1.1 Purpose of the maps in relation to the transport policies***

The supporting text to Policy T1 refers to the pedestrian and cycling context maps in Appendix D. Paragraph 4.229 expands on the requirements of Policy T1 in respect of the assessment of the accessibility of developments. Developers are urged to have regard to the issues identified on the maps, and to this evidence paper, when preparing Transport Statements and Transport Assessments. The maps are one source of potential off-site improvements which might be achieved via planning obligations, as outlined in paragraph 4.232 of the Neighbourhood Plan. Planning officers and planning committee members may also find the document useful when considering the transport impacts of developments, particularly with regard to active travel modes.

The maps are referred to in *Looking Forwards* (Durham City Neighbourhood Plan Working Party, 2019), which accompanies the plan, in Initiative 16. This proposes that a programme of physical infrastructure improvements be carried out, with strong stakeholder involvement, building on the information gathered and summarised in the maps. It would be appropriate for this activity to be carried out as part of the development of a Local Cycling and Walking Infrastructure Plan (LCWIP) for Durham City, which will be taken forward by Durham County Council under the auspices of the Strategic Cycling and Walking Delivery Plan.

The maps do not make land use allocations or safeguard current or potential routes. They are a snapshot of cycling and walking conditions in Our Neighbourhood during the development of the plan, setting the context for the implementation of the transport policies. It is hoped that a means will be identified to keep the information refreshed. This could be via further community involvement under the auspices of the City of Durham Parish Council, or via the compilation of a Durham City Local Cycling and Walking Infrastructure Plan led by Durham County Council.

#### ***1.2 Development of the maps***

After presenting the maps, the bulk of the paper details the process of gathering the evidence and compiling the maps. For the walking issues (see [Section 5](#)) this was limited to community engagement activity and consultation on the plan, as there were no official documents to draw on.

The starting point for the cycling map was an engagement event, but several other documents were also studied. The cycle routes proposed for safeguarding in the withdrawn County Plan are explored in [Section 6.2](#) and those identified in the 2014 report by Transport Initiatives are outlined in [Section 6.3](#). These result in a basic network, which was analysed to see whether it met the recommendations for grid density (see [Section 6.5](#)). Any further routes which were suggested during the initial meeting with local cyclists were then reviewed in [Section 6.6](#) to determine whether it would be justifiable to add them to the map. This section therefore provides useful background information as to the reasoning for inclusion of routes which may be of benefit to developers and the Planning Authority. Finally the suitability assessment of current cycle routes was subjected to a sense check by comparison with assessments made by Durham County Council as part of their network audit

work implementing the county's cycling strategy. This forms the content of [Section 6.8](#).

### **1.3 Policy context**

The paper includes a review of the national and local policy context relating to walking and cycling.

National policy (see [Section 7](#)) provides strong support for measures to enable greater levels of cycling and walking. The DfT's *Cycling and Walking Investment Strategy* (see [7.2](#)) aims "to make cycling and walking the natural choices for shorter journeys, or as part of a longer journey".

Durham County Council policy (see [Section 8](#)) also supports these modes as a means of everyday travel, with the *Local Transport Plan 3* (see [8.2](#)) preferring walking and cycling to use of the car for short journeys. The *Durham City Sustainable Transport Delivery Plan* (see [8.5](#)) notes the potential for growth of cycling as well as walking and recommends that the emerging County Plan and the Neighbourhood Plan incorporate suitable policies to achieve high quality design for sustainable transport.

### **1.4 Evidence relating to cycling potential**

While it is generally accepted that the compactness of the city and the extensive footpath network encourage a high level of walking, there has often been scepticism about the role that cycling could play. The concluding sections of the paper therefore look at the potential contribution of cycling as a mode of transport in Our Neighbourhood.

The University's travel survey reports show that infrastructure is the most important factor in encouraging cycling for those living within a reasonable distance (see [Section 9](#)). Evidence from the *Propensity to Cycle Tool* (see [Section 10](#)) suggests that, with good infrastructure, the cycle to work share in Our Neighbourhood would rise from 3% at the 2011 census to 12% of journeys, with greater rises predicted for areas of the city beyond Our Neighbourhood, such as Newton Hall and Belmont. With wider use of e-bikes, diminishing the discouraging effect of the city's hills, modal share of 23% would be achievable. This evidence shows that the scope for cycling is far from negligible, especially for medium-distance journeys which would not currently be walked. Non-work journeys might see a greater shift, particularly those accessing education.

## **2 Map of pedestrian issues**

The map included in Appendix D occupies a single page, and at such a small scale some of the features overlap. This document has the map enlarged and split across four pages, allowing all the issues to be distinguished. A detailed listing of all the issues is provided, together with National Grid references. This provides in a list format the extra information which can be obtained via the interactive online version of the map, available at <http://npf.durhamcity.org.uk/the-plan/maps>

Further critical assessment would determine the scale and nature of these issues, as recommended in *Design Guidance: Active Travel (Wales) Act 2013* (Welsh Government, 2014) paragraph 5.6.44, p. 78. Such analysis would help identify which issues should be prioritised and possible solutions.

The issues are broadly categorised and colour-coded on the map as follows:

Accessibility issues	
Difficult road crossings	
Missing pavements	
Narrow pavements	
Poor surfaces	

In the lists which follow, the issues within each category are sorted roughly from north to south, in order to make it easier to locate them on the maps.

## 2.1 Accessibility issues

This section covers mainly covers problems that affect people using wheeled equipment such as children's pushchairs and wheelchairs. It is likely that there are many other issues of this type around Our Neighbourhood which have not been identified. Users will also be affected by issues listed under all of the other categories. The Equality Act 2010 places an obligation on local authorities and developers to make reasonable adjustments to avoid putting people with disabilities at a substantial disadvantage. Public bodies, including highways authorities, have a duty to promote and enhance equality.

See section 4.2 (page 31) of the *Design Guidance: Active Travel (Wales) Act 2013* (Welsh Government, 2014) which introduces the principles of inclusive design.

	Grid reference	Name	Description
1	NZ28084277	Leazes Lane	Dropped kerbs needed to cross from Gilesgate roundabout to pavement alongside Leazes Lane
2	NZ27094251	North Road	Pavements obstructed by A-boards
3	NZ27334247	Silver Street	The uneven style of paving is poor for wheelchair use, and the smoother paving in the margins is often obstructed by advertising A-boards.
4	NZ27494244	Elvet Bridge	During the public consultation, the surfaces on Elvet Bridge came in for

			criticism as being unsuitable for wheelchair use. This may have been addressed in the 2018 repaving of the bridge.
5	NZ27204243	Framwellgate Bridge	Surface poor for wheelchair use
6	NZ27444243	Saddler Street	The lack of kerbs on Saddler Street and in the Market Place makes it harder for users with guide dogs (but easier for wheelchair users). Obstruction by A-boards forces pedestrians into the carriageway at times where there is danger from heavy vehicles.
7	NZ27434232	Owengate	The pavements on each side of Owengate are narrow, and the road surface is bumpy so those with wheelchairs and buggies have particular difficulty.
8	NZ27894226	Old Elvet by County Court	While the footway on the south side of Old Elvet near the County Court is adequate in width, passage via wheelchair is usually blocked by parked cars overhanging the pavement.
9	NZ25744222	Access to footpath from Quarry House Lane	Access from Quarry House Lane onto footpath down to River Browney hard with a buggy (footpath 9), but any changes will need to avoid making the route attractive for mountain bikers.
10	NZ27404218	Dun Cow Lane	The recent Dun Cow Lane refurbishment did not provide for wheelchair users.
11	NZ27064201	Steps at end of Grove Street	Steps onto footpath from the end of Grove Street (leading to Prebends Bridge) hard to get a buggy down. No convenient alternative access to river.
12	NZ28004195	Whinney Hill	Narrow pavement with poor surface and occupied by parked cars makes passage with wheelchair/buggy difficult. This is exacerbated by cyclists riding on the pavement because the road is too busy.
13	NZ27344192	South Bailey	Poor surface to pavements, which are also narrow and lack dropped kerbs. Unusable by wheelchair.
14	NZ26684181	Steps from Archery Rise to	Steps from the end of Archery Rise onto

		Clay Lane	Clay Lane are hard with a buggy and impossible by wheelchair.
15	NZ26774102	Mill Hill Lane	No dropped kerb to allow wheelchairs to get onto the footway when coming from public footpath.
16	NZ26844100	Mill Hill Lane	No dropped kerb when footway swaps sides on Mill Hill Lane

## 2.2 *Difficult road crossings*

Road crossings primarily cause difficulty because of the speed or volume of road traffic, but in some cases the problem is as simple as sight-lines being obscured by parked vehicles. Perception of danger discourages parents from allowing children to travel independently, and can thereby increase the number of car trips. People with mobility problems who take longer to cross the road may be deterred from making certain journeys if there is a difficult crossing on the route.

Aside from signalised crossings, redesigning the carriageway to reduce the speeds of vehicles or the distance to cross the road can be very effective. Narrower lanes and tighter corner radii provide the visual cues that encourage slower vehicle speeds. Pedestrian refuges should be considered carefully as they create pinch points which can pose danger to cyclists.

	Grid reference	Name	Description
30	NZ26414393	B6532 hospital roundabout	Poor crossing facilities for pedestrians at roundabout
31	NZ26024387	A691 (Southfield Way) at Sniperley roundabout	Crossing the A691 Southfield Way at Sniperley roundabout: this crossing has to be done by schoolchildren going to Durham Johnston
32	NZ26274362	Land Registry roundabout	The A691 roundabout by the entrance to the Land Registry and the hospital has poor crossing facilities for walking and cycling
33	NZ26644339	County Hall roundabout	Several of the arms of the County Hall roundabout are hard to cross on foot or entail a long diversion to a signalised crossing.
34	NZ26314330	Springfield Park	Crossing towards The Grove from Springfield Park: poor visibility.
35	NZ26384321	Flassburn Road	Mouth of Flassburn Road is excessively

			wide. This is within a 20mph zone but the geometry of the street should reinforce the limit.
36	NZ28004272	By Claypath doctors' surgery	Crossing from the Claypath doctors' surgery to reach the footbridge over the A690
37	NZ26854270	Sutton Street and Station Approach	Walking along the north-east or the south-west side of North Road there are difficult crossings of Sutton Street and of Station Approach. It is also hard to cross North Road from Sutton Street to access the railway station.
38	NZ27144268	Crossing A691 by Milburngate roundabout	Crossing from the west side of Framwellgate Peth (A691) to the middle, using the pedestrian crossing at the Milburngate roundabout is risky, because cars turning left out of St Godric's Road (A690) do not realise there is another stop line so soon
39	NZ26794263	End of Flass Street and Waddington Street	Crossing the end of Flass Street and Waddington Street: the junction is very wide, allowing drivers to take the corner without reducing speed.
40	NZ27014256	By bus station exit, North Road	It can be dangerous crossing the exit from the bus station.
41	NZ26814245	Allergate, west end	At the west end of Allergate the mouth of the road is wide, and takes a long time to cross. This is also a point where people wish to cross the A690, and the zebra crossing further down the hill is too much of a diversion from the desire line.
42	NZ26784243	Hawthorn Terrace, east end	At the east end of Hawthorn Terrace the mouth of the road is wide, taking a long time to cross.
43	NZ27724235	Old Elvet by Territorial Lane	Cars parked on Old Elvet obscure the view of approaching vehicles, so to cross from Territorial Lane pedestrians have to wait in the road. A footway build-out would be beneficial.
44	NZ27694208	Hallgarth Street	Crossing Hallgarth Street from the end of Church Street: there is no pedestrian phase,

			it is hard to see the traffic lights, and the left filter from New Elvet catches pedestrians out.
45	NZ26594207	Crossgate Peth	Steps in poor repair. Speed of vehicles makes crossing harder.
46	NZ26354203	Percy Terrace	The turning to Percy Terrace has guard rails that prevent people walking the shortest distance across. The junction could be redesigned to dispense with these now that access to The Avenue is restricted.
47	NZ26924199	Quarryheads Lane by Durham School	Crossing Quarryheads Lane by Durham School
48	NZ26824196	Quarryheads Lane / Margery Lane	Crossing Quarryheads Lane / Margery Lane at the end of Clay Lane
49	NZ26984190	Footpath exit on Quarryheads Lane	Blind exit from top of steps up from footpath.
50	NZ27014184	Pimlico	Crossing Quarryheads Lane to turn into Pimlico
51	NZ26194175	A167 just south of car rental	Poor visibility at pedestrian refuge, and traffic fast.
52	NZ27084170	Quarryheads Lane by Prebends Bridge road	Crossing to/from the road leading to Prebends Bridge
53	NZ27504163	New Inn	Crossing from Church Street to the triangular island at the New Inn junction, people tend to forget to look behind for left-turning traffic
54	NZ27484161	New Inn	The traffic islands at the New Inn get very crowded at peak times. More frequent pedestrian phases at this junction would help accommodate the flow.
55	NZ27134160	Foot of Potters Bank	Pedestrian refuge too small and cars too fast approaching the roundabout
56	NZ28104152	Shincliffe Peth	Speed of vehicles and poor visibility makes crossing at foot of Shincliffe Peth harder
57	NZ27054143	Elvet Hill Road / Potters	Pedestrian refuge located where you

		Bank	cannot see round the corners onto Potters Bank.
--	--	------	---

### 2.3 *Missing pavements*

For an urban area such as Durham there is a remarkable number of roads which lack pavements on one side or sometimes both. In some cases this leads to pedestrians being tempted to walk in the carriageway. Where a pavement is missing on one side, that on the other side has to carry double the traffic, and is sometimes too narrow to cope with the demand.

	Grid reference	Name	Description
70	NZ26284336	Fieldhouse Lane	No pavement on west side from Springfield Park to the junction with North End
71	NZ26774300	North Road (north)	Pavement narrows and disappears in places.
72	NZ27514296	Freeman's Place	No pavement around back of Sixth Form Centre from leisure centre to The Sands
73	NZ26854274	Wharton Park	Former path via steps from North Road into Wharton Park could be reopened as part of more direct route to railway station and from Aykley Heads to North Road.
74	NZ25924220	Quarry House Lane	Quarry House Lane: although this is included in the "no footway" category, it would be appropriate seek designation as a Home Zone or Quiet Lane.
75	NZ26784202	Margery Lane	Margery Lane: No pavement on west side between Blind Lane and Briardene
76	NZ27034190	Pimlico	No pavement on Pimlico, which can sometimes be an issue if cars take it too fast. Perhaps a candidate for Quiet Lane designation, with traffic restrictions?
77	NZ26184187	A167 west side	Poor pavement: Cross View Terrace has pavements obstructed by parked cars. The alternative, by the A167, involves walking on the grass verge.
78	NZ25984140	Lowes Barn Bank	No pavement on north side of Lowes Barn Bank by Kipling Terrace



79	NZ28584119	A177	Gap in the footway on the Maiden Castle sports centre side
80	NZ27074114	Elvet Hill Road	West side pavement narrows then disappears.
81	NZ27474106	Hollingside Lane	No footway on Hollingside Lane
82	NZ26784100	Mill Hill Lane	Gap in footway on south side of Mill Hill Lane means people have to cross twice or walk in the road
83	NZ26594022	St Oswald's Drive	The footway on the north side of St Oswald's Drive runs out when you reach the post box on the corner, so people have to walk in the street to join the footway on South Road.

## 2.4 Narrow pavements

For basic accessibility a pavement should be wide enough to allow two wheelchair users to pass without either having to join the carriageway. Beyond this minimum requirement the desirable width of the pavement depends on the volume of pedestrian traffic.

The recommendations for widths of pavements can be found in *Design Guidance: Active Travel (Wales) Act 2013* (Welsh Government, 2014) at paragraph 4.7.2 onwards (p. 37), along with design element specifications on pages 276–277 for ordinary footways, and pages 320–323 for footways shared with cyclists.

	Grid reference	Name	Description
90	NZ26394387	Path to hospital from B6532	Path to the hospital from the B6532 near the bus stop just south of the roundabout is designated for cycle use, but it is not wide enough in places.
91	NZ26274343	North End	Footway on north side of North End is narrow from the path through to Southfield Way to beyond Fieldhouse Lane
92	NZ26244335	Springwell Road	Pavement on north side of Springwell Road quite narrow as it approaches Fieldhouse Lane
93	NZ26094323	A167 east side, Crossgate Moor	Pavement between Redhills Lane and Sniperley roundabout is not wide enough

			for sharing with cycles, especially at school times.
94	NZ27124291	Framwellgate Peth	The footway on the east side of Framwellgate Peth is designated as pedestrian/cyclist shared use. The pavement is not wide enough to allow for separation of cyclists and pedestrians. The steep hill, combined with the noise from the busy road mean that pedestrians often have no warning of cyclists descending at speed, which could be dangerous.
95	NZ28044279	Leazes Lane	Very narrow footway on Leazes Lane between the end of Renny Street and Ellis Leazes
96	NZ28254277	Station Lane	Narrow footway on Station Lane
97	NZ26884268	North Road, under viaduct	The south-west side of North Road, under the viaduct, has a quite narrow pavement.
98	NZ27294264	Milburngate Bridge	The footway on the north side of the Milburngate Bridge is designated for shared pedestrian/cycle use, but is not sufficiently wide to avoid close passing by cyclists.
99	NZ27424256	By St Nicholas Church	Events in the marketplace sometimes encroach on the space, making it hard to avoid walking in the carriageway.
100	NZ27634234	New Elvet	Pavement too narrow by bus stop on east side of New Elvet outside the former Three Tuns Hotel, and can be congested as far as the junction with Old Elvet.
101	NZ27624231	New Elvet (west side)	On the west side of New Elvet, the footway can get very congested. It is particularly narrow at the northern end outside the two public houses, and often obstructed by advertising boards.
102	NZ26864226	Margery Lane	Narrow pavement made narrower by overhanging plants alongside Palatine View
103	NZ26174203	A167 / George Street	Pavement leading from George Street to the A167 is too narrow for comfortable shared pedestrian/cycle use.

104	NZ26794198	Margery Lane	Narrow footway along Margery Lane: very busy with students in term time
105	NZ27764197	Hallgarth Street	From opposite the Victoria public house south to the private road leading to Whinney Hill, the pavement on the east side is too narrow in places.
106	NZ27644196	Church Street west	Pavement on west side of Church Street too narrow for the volume of term-time pedestrian traffic
107	NZ27804185	Hallgarth Street	Footway on the west side of Hallgarth Street is too narrow for the volume of foot traffic, and is extremely narrow at the northern end of the street.
108	NZ27584177	Church Street east	Church Street pavement too narrow for the volume of term-time pedestrian traffic
109	NZ27054175	Quarryheads Lane	Narrow pavement between Durham School and the roundabout at the bottom of Potters Bank. Drainage on the carriageway also poor along the length of the lane, and on the footway alongside the roundabout.
110	NZ27944160	Shincliffe Peth	Pavement up Shincliffe Peth is too narrow for the volume of pedestrians, especially when people try cycling on it too.
111	NZ25894149	Neville's Cross Bank	No safe space for cycles on Neville's Cross Bank, so some people cycle down the pavement. Pavement too narrow with the blind corner at junction with Lowes Barn Bank.
112	NZ27364130	South Road, west side	Pavements on both sides of South Road are too narrow between Elvet Hill Road and Stockton Road
113	NZ27344123	South Road, east side	Pavements on both sides of South Road are too narrow between Elvet Hill Road and Stockton Road
114	NZ28674111	A177	Narrow footway leading up to Shincliffe Bridge

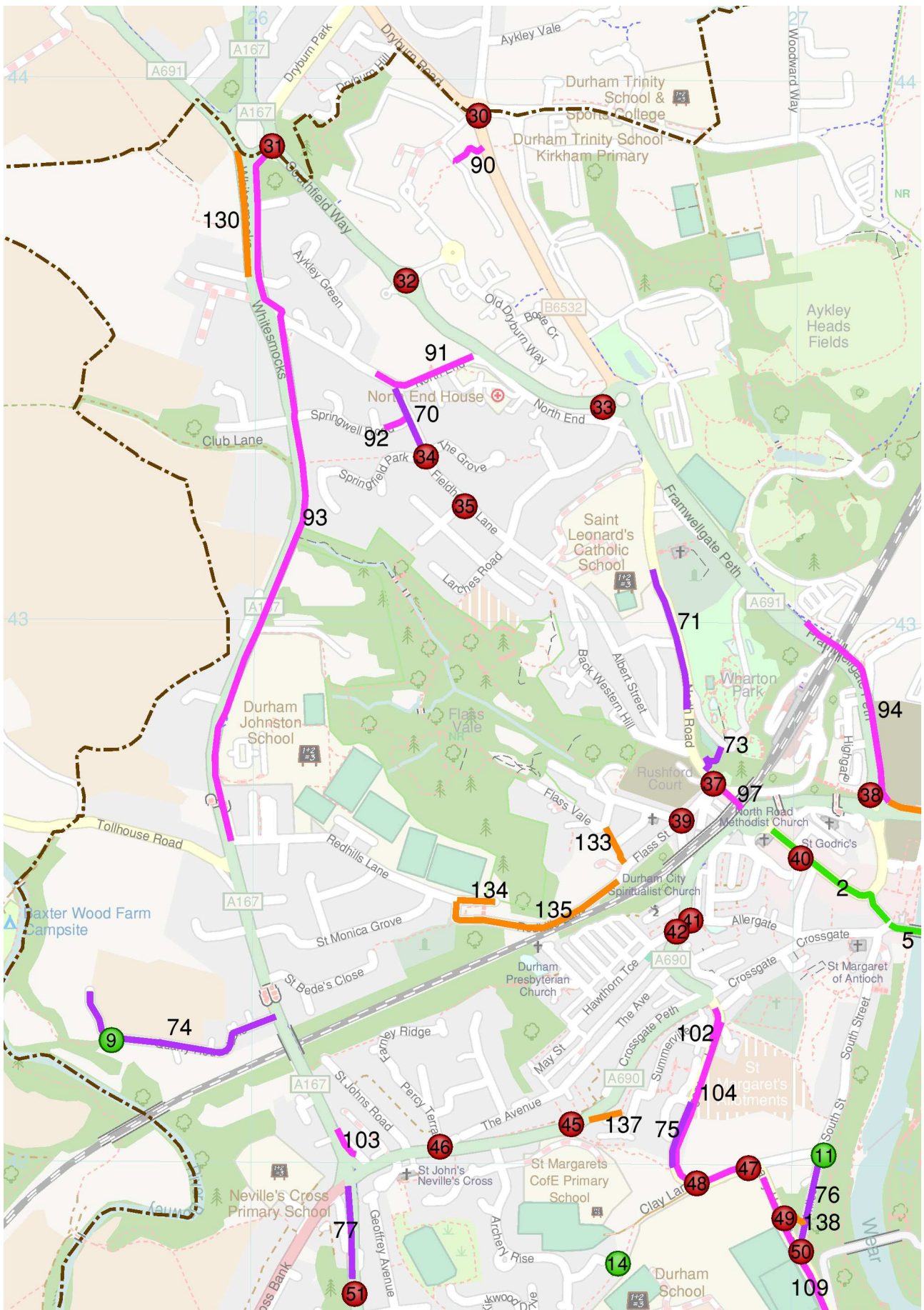
## 2.5 *Poor surfaces*

Poor surfaces can cause falls and injuries and may make access by wheelchair difficult. Some

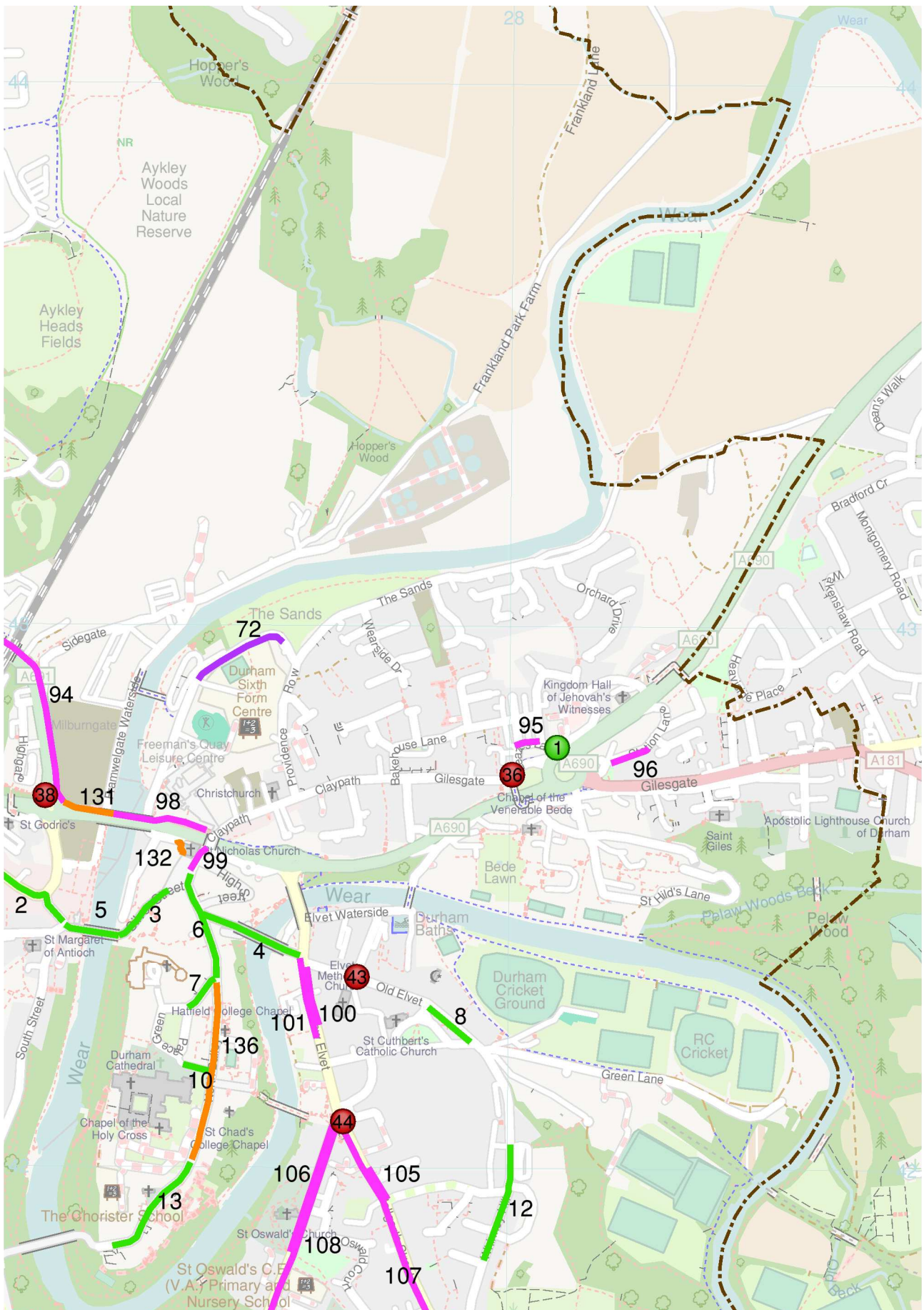
surfaces are too muddy in wet weather, which discourages use.

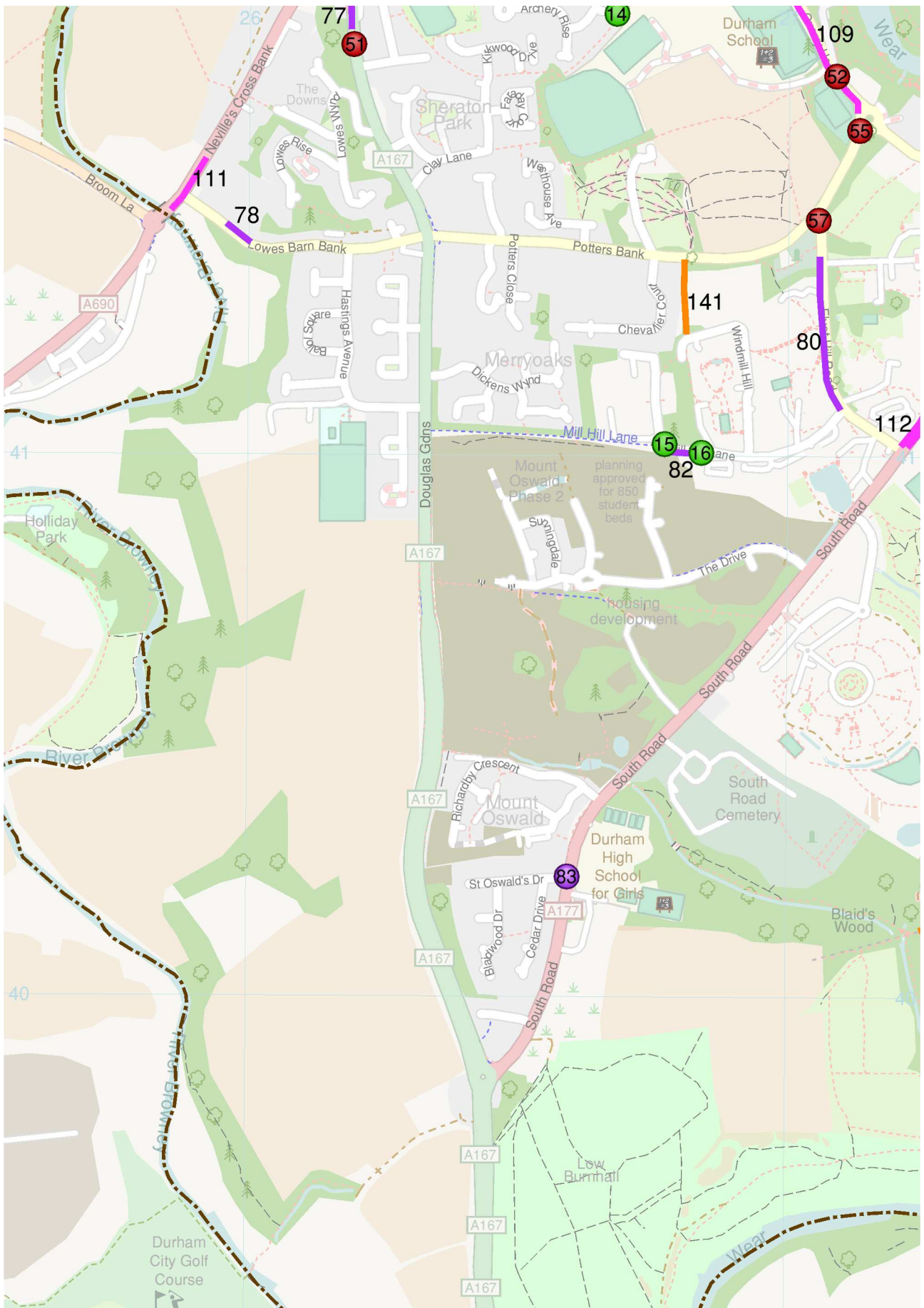
	Grid reference	Name	Description
130	NZ25974383	A167 (west side) south of Sniperley roundabout	Poor footway surface, possibly because of tree roots
131	NZ27214266	Milburngate Bridge, north side	Puddles and poor surfaces on the north side of Milburngate Bridge by Milburngate House
132	NZ27394258	Steps from market place to Fleshergate	Steps behind St Nicholas' Church from the market place down to Fleshergate need renewing
133	NZ26684257	Flass Street steps	Steps down from Flass Street in poor condition, and rest of path overgrown or muddy
134	NZ26434248	Grays Terrace	Potholes on Grays Terrace
135	NZ26524243	Redhills Lane	Steep slope on Redhills Lane needs to be gritted in the winter. Drainage also poor and footway narrow.
136	NZ27454215	North Bailey	Poor surfaces resulting from heavy vehicles mounting the pavement, making surfaces difficult for pedestrians and wheelchair users.
137	NZ26664209	Path to Nevilledale Terrace	Path often muddy, but might have a decent surface underneath?
138	NZ27004190	Footpath from Pimlico	Often muddy or deep with leaves.
139	NZ27334165	Footpath by Chorister School playing field	Steep footpath from corner of playing field at New Inn junction down to river is difficult when muddy
140	NZ28434165	Maiden Castle	Can be very muddy round the bottom of Maiden Castle
141	NZ26804129	Footpath from St Aidan's College to Potters Bank	Footpath often too muddy. Would otherwise be a useful link, for example for journeys to the primary school at St Margaret's to avoid walking along the busy

			A167.
142	NZ27294014	Footpath 31 by sewage works	Very muddy by the sewage works at the south end of Hollingside Lane (footpath 31)

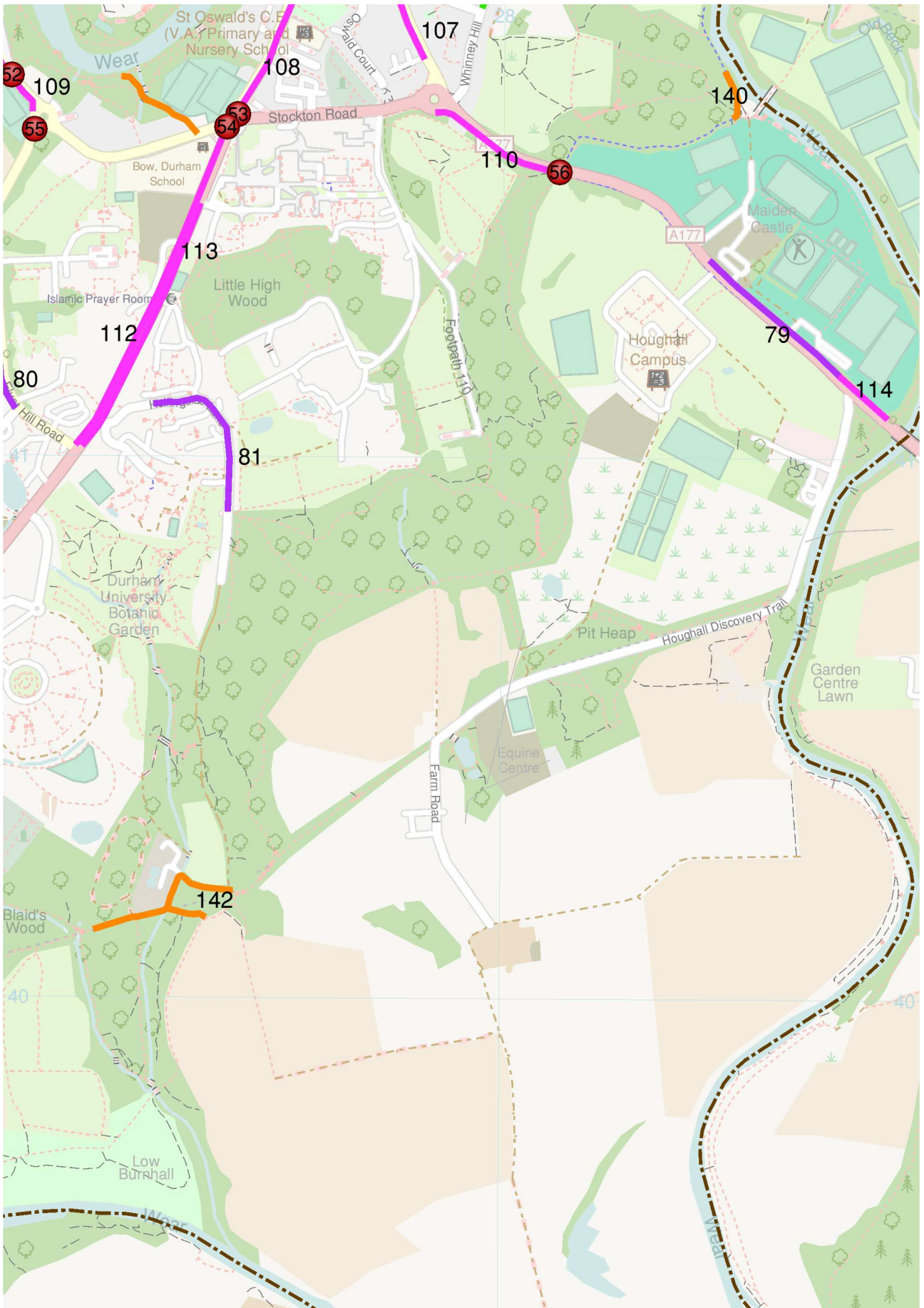












### 3 Map of cycling issues

Online map available at <http://npf.durhamcity.org.uk/the-plan/maps>

#### 3.1 Categorisation of routes

The purpose of the cycling issues map is to give an assessment of routes which people might seek to use for cycle journeys within Our Neighbourhood. Some routes extending beyond the parish are included, because when considering the accessibility of a site proposed for development it is not realistic to ignore journeys across the parish boundary. Each route has been assigned to one of six simple categories, so that it is easy to identify routes which are currently adequate, those that have some provision for cycling but need improvement, and those routes where there is currently no provision for people who wish to cycle.

The presence of a route on the map does not indicate that it would definitely be possible to upgrade it for cycle access, but in order to enable people to cycle safely throughout Our Neighbourhood a network of this density will be required. A route on a parallel alignment would be acceptable, providing it is not significantly less direct and is not much steeper. Upgrading or redesignation of any routes would be subject to the usual consultative processes.

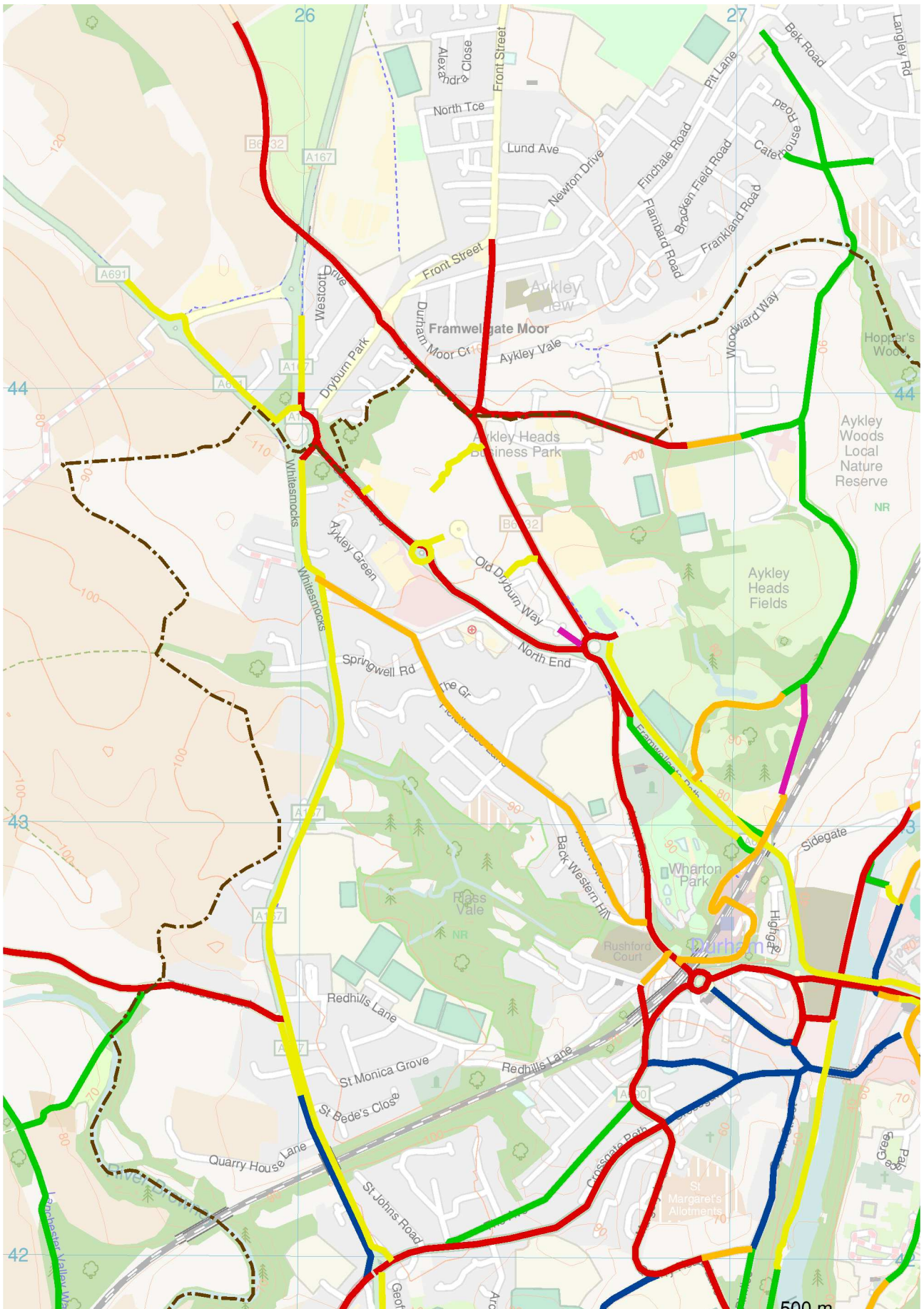
Currently adequate		
Needs improvement	Off-road routes	
	On-road routes (quiet streets)	
Lacks provision	No current provision (busy roads)	
	Permission restricted (e.g. footpaths, one-way streets)	
	No route exists	

It is important to note that green routes may not remain adequate: if a substantial development is proposed then a green route serving it may not have adequate capacity for cycle journeys generated, or may become congested with pedestrians and require widening.

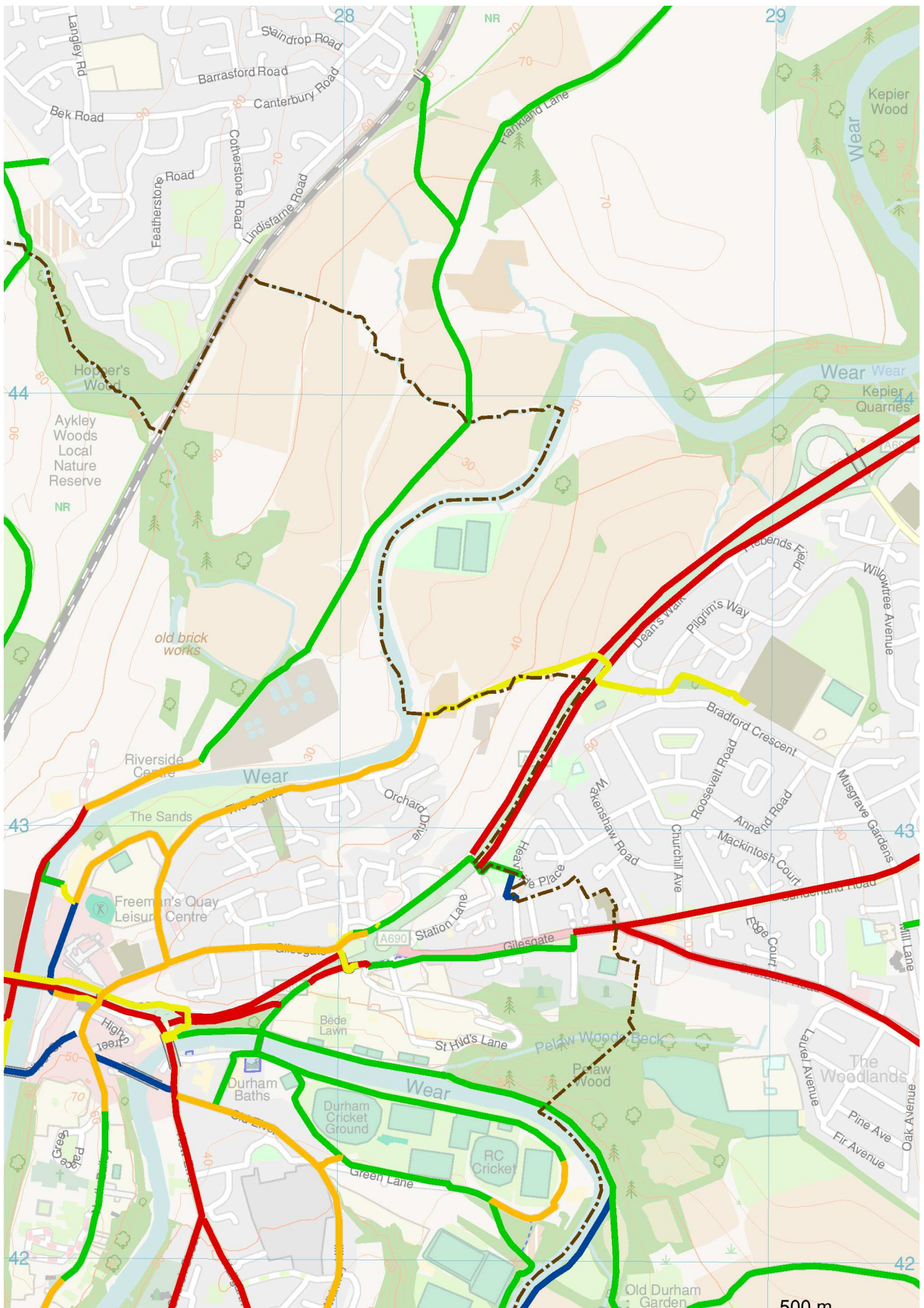
The red routes are generally the most serious gaps in the network, often being the main routes people use to travel around the city. There may not be space on these main roads to provide a safe level of service for cycling, and so parallel routes may need to be identified to provide an adequate network. Some such routes have been tackled in the past by permitting people to cycle on the footway (“shared use”) but it should be noted that most of the shared use footways in Our Neighbourhood are categorised as needing improvement, often because of the difficulties associated with mixing pedestrians and cyclists where the widths are inadequate, the gradient is steep, or the volumes of pedestrian or cycle flow are high.

The blue routes can currently all be used by pedestrians or by people pushing bicycles, but are restricted in one or both directions for those riding a cycle. Some of these routes could easily be opened up to cycling by providing exemptions, but others would be more contentious. The purple categorisation is for routes which people have suggested as being potentially useful, but where there is not even a footpath at present. These are much more speculative, but are included because they may become pressing if certain developments go ahead.

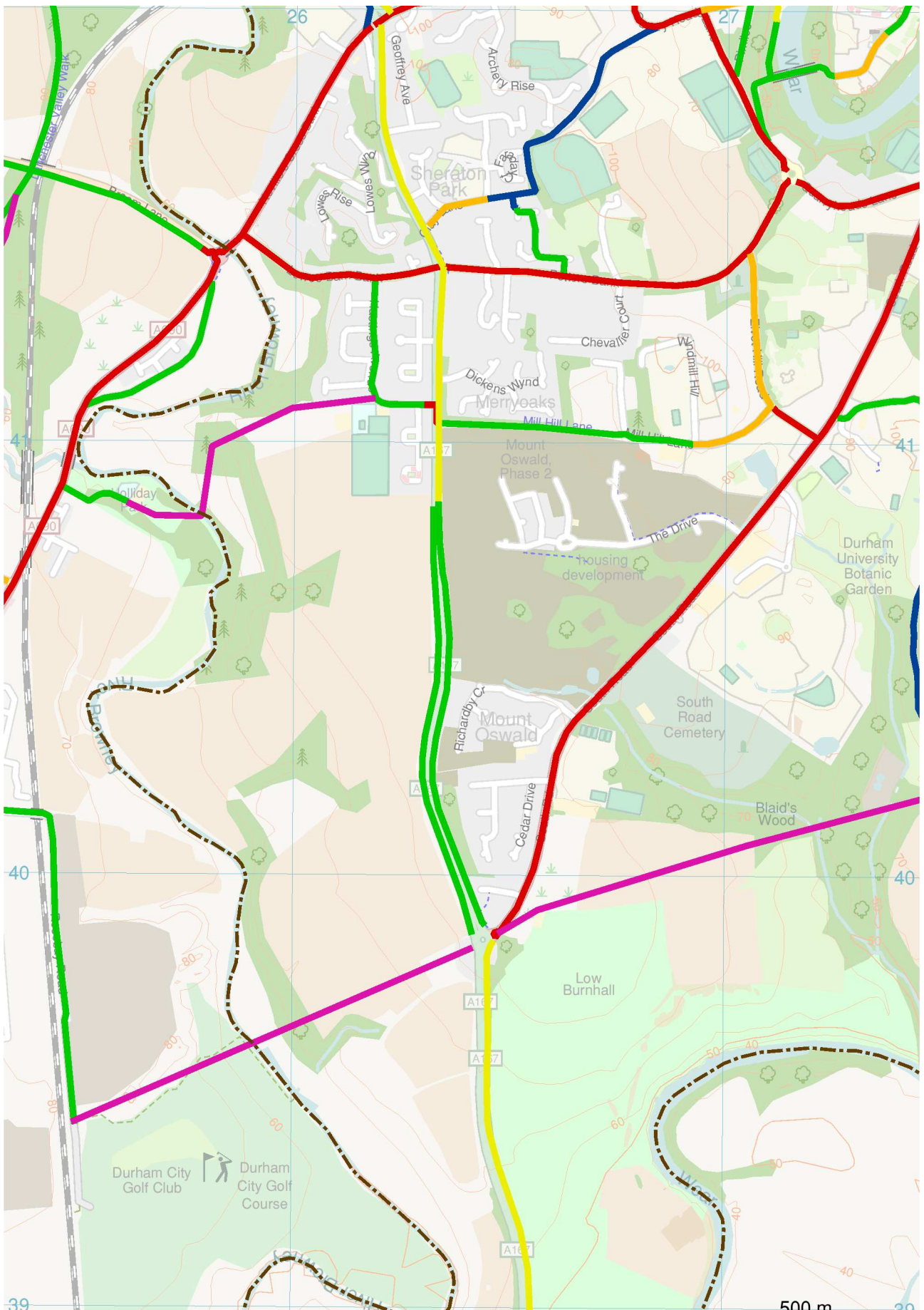


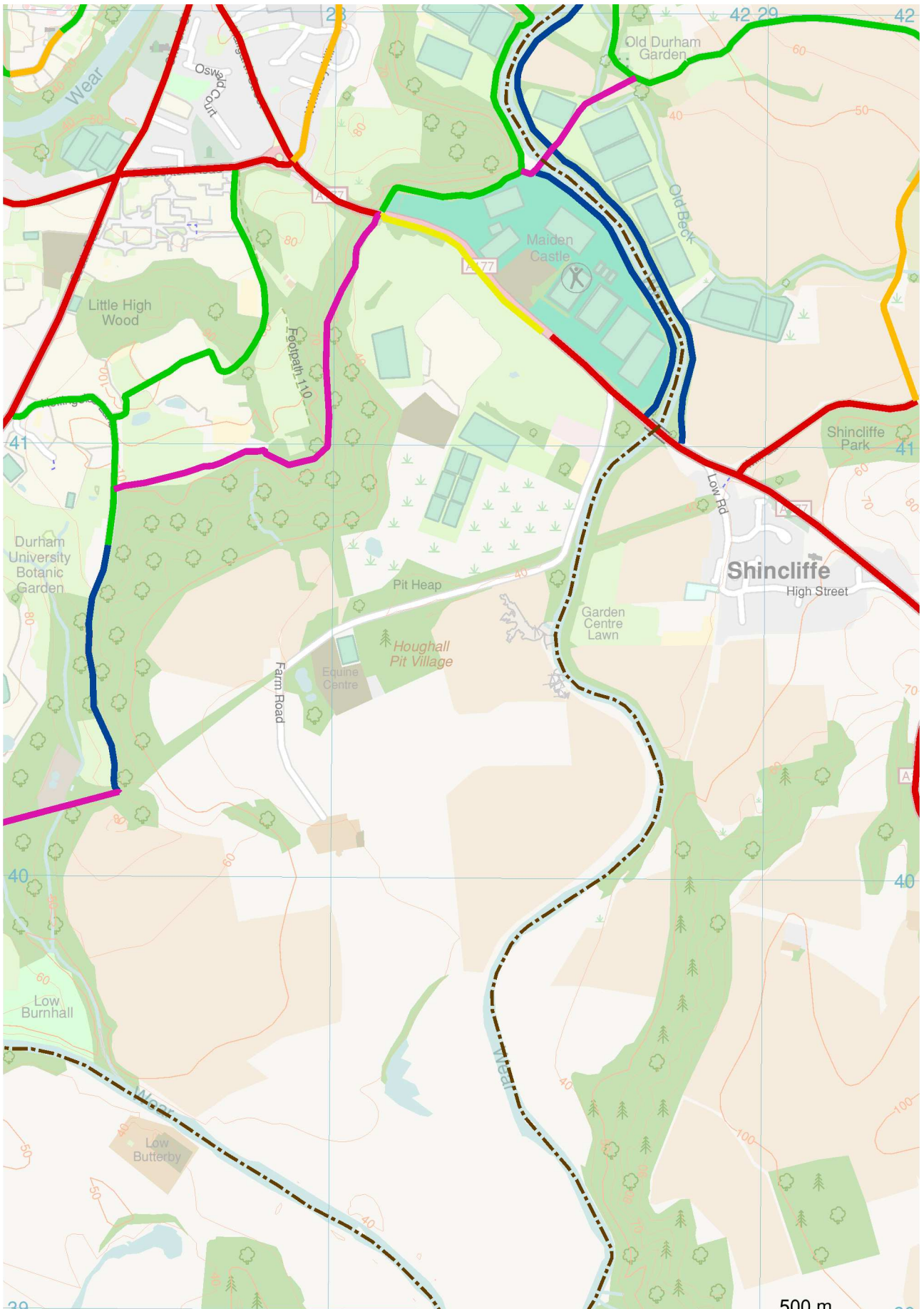






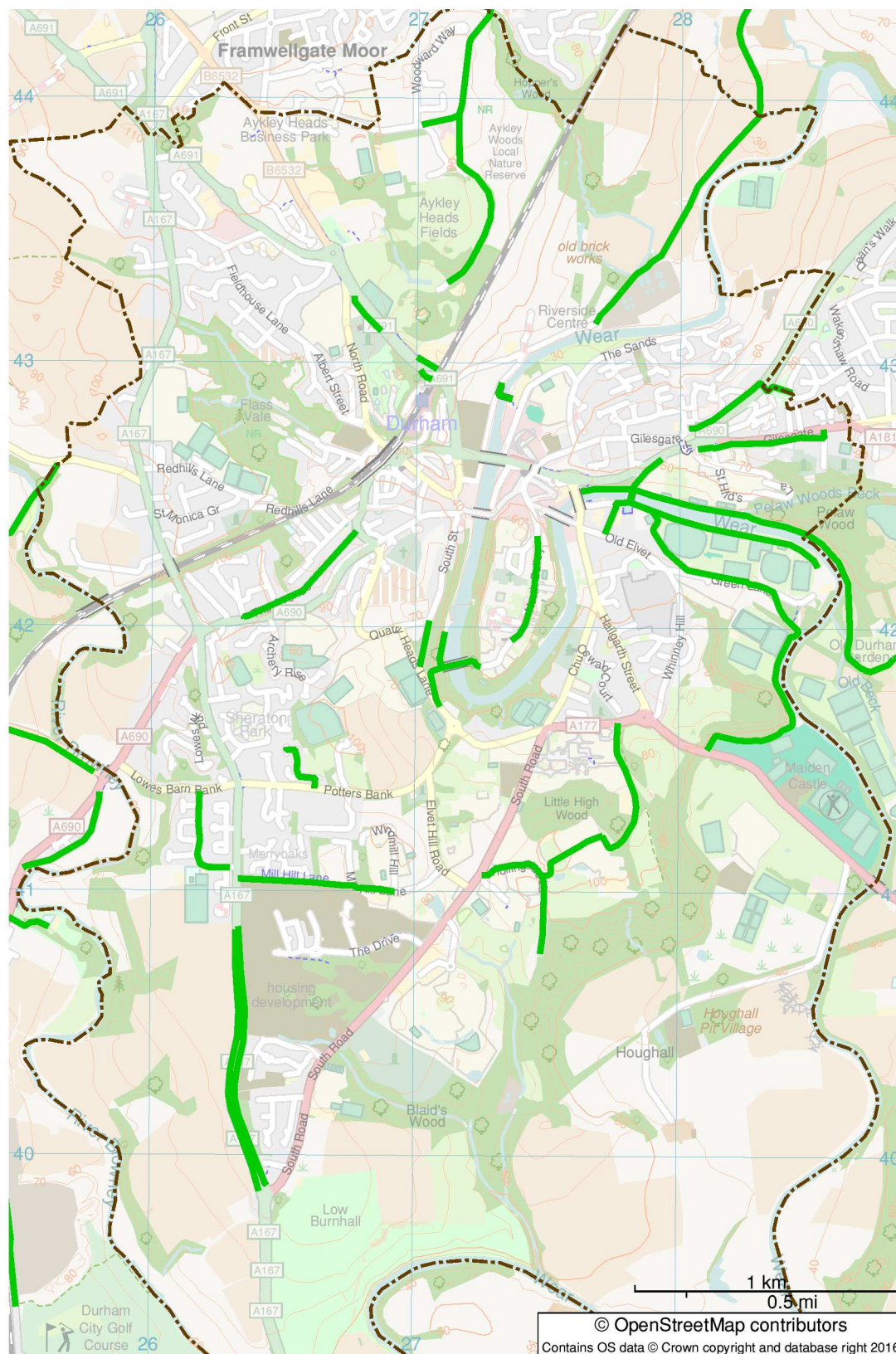








On the interactive version of the map, it is easy to turn the different categorisations on and off. As an illustration, here is the whole map at a smaller scale, showing just the routes which are currently adequate and need no improvement. It demonstrates how one cannot really talk about a cycling **network** at present in Our Neighbourhood.



## **4 Background and outline of method**

The Priority Survey conducted by the Neighbourhood Planning Forum identified a number of transport issues of concern, including poor walking and cycling facilities in the context of everyday transport, not just as leisure or sports activities. Being travel modes generally suited to shorter journeys, it is appropriate to consider walking and cycling in a Neighbourhood Plan as the infrastructure required is of a scale which requires greater attention to detail than is likely to be possible in the forthcoming County Plan.

Few specific issues were raised via the Priority Survey, so we therefore sought further engagement with pedestrians and cyclists via two separate events to record the issues that affect people locally. The information gathered via these events was then refined and expanded to produce the maps.

The issues that were raised through the engagement activity pointed to the need for stronger design guidance for walking and cycling facilities, and so reference to best practice such as the 'Design Guidance: Active Travel (Wales) Act 2013' (Welsh Government, 2014) was included in the plan. The design guidance was used to help identify and assess the issues included in the maps.

Both maps were included within the Transport Theme section as part of the Consultation Draft of November 2017. As well as the A4 version of each map included in the main plan document, the version mounted for consultation on the web site included zoomable maps with further detail of each issue being available by hovering or clicking on features. At the drop-in consultation events, larger scale versions of all maps contained in the plan were available to view. There was, in addition, an enlarged version of the pedestrian map split over four pages, with each issue numbered and related to an explanatory key, similar to that in [Section 2](#) of this document. Responses to the Regulation 14 consultation conducted by the Durham City Neighbourhood Planning Forum included a number of comments relating to pedestrian and cycle infrastructure and issues, as well as direct comments about the maps themselves. These were picked up following the consultation in order to revise the maps.

Full details of the stages in development of the maps are given in subsequent sections of this document.

## **5 Development of the map of pedestrian issues**

### ***5.1 Initial engagement***

On 19 June 2016 the Working Group took a stall at the Neville's Cross Eco-Festival, a popular annual event held in the grounds of St John's Church. People visiting the stall were offered an individual response sheet which included a map of Our Neighbourhood showing the roads and footpaths. They were invited to mark locations and streets which presented difficulties for pedestrians, including wheelchair users. Details of the problems were captured underneath the map or on the back of each sheet. Participants included parents with young children, a carer for a person who used a wheelchair, those of working age and those who were retired.

The evidence gathered was written up as an earlier paper, 'Consultation on improvements to the walking environment' (Durham City Neighbourhood Planning Forum, 2016).

### ***5.2 Expanding the coverage of the map***

Although the engagement event had attracted people from across Our Neighbourhood there were gaps in the coverage. To address this, similar issues were identified using the local knowledge of the theme co-ordinators and other members of the working group, along with exploration via



Google Street View followed up by site visits.

### **5.3 *Revision following the 2017 consultation***

Some of the responses to the autumn 2017 Regulation 14 consultation, conducted by the Forum, made reference to the pedestrian issues map, providing comments, corrections, and additional issues. It was also necessary to make some updates because of changes to the infrastructure resulting from work by the County Council or developers.

More generally, a number of issues were added or amended to record routes where there is danger from pedestrians and cyclists sharing space which is not adequate or properly designed for the purpose.

A full list of changes made following the 2017 consultation is given below.

B6532: path through to hospital from north end

- cycle designation causes difficulty for some users, e.g. those with visual impairments.

Blind Lane

- removed from map as the surface has been improved

County Hall roundabout

- several arms of the roundabout are hard to cross on foot or necessitate a long detour to a signalised crossing

Dun Cow Lane

- recent relaying did not provide for wheelchair users

Elvet Bridge

- added poor surface for wheelchair users (but may now be suitable?)

Framwellgate Bridge

- added poor surface for wheelchair users

Framwellgate Peth

- danger from cyclists speeding down the east side pavement

George Street

- pavement leading from George Street to the A167 is narrow and designated shared-use

Hallgarth Street

- footway extremely narrow at north end on west side
- footways both sides narrow in places and congested

Milburngate Bridge

- north side footway not wide enough for shared use with cyclists

New Elvet

- congested pavements

North Bailey

- poor surfaces resulting from heavy vehicles mounting pavements

North Road, by St Leonard's School

- pavement now improved at north end of North Road.

North Road, under viaduct

- narrow pavement on south-west side

North Road

- pavements obstructed by A-boards.
- hard to cross safely across the bus exit from the bus station

#### Old Elvet

- pavement on south side by County Court often impassible by wheelchair because of overhanging parked cars.
- crossing from Territorial Lane requires pedestrians to wait in the road to get a clear view of approaching traffic.

#### Quarry House Lane

- would benefit from designation as a Home Zone or Quiet Lane.

#### Saddler Street

- lack of kerbs here and in Market Place causes difficulty for users with guide dogs
- obstruction of pavements with A-boards
- danger from heavy vehicles

#### Silver Street

- uneven paving difficult for wheelchair users
- smoother paving at the edge of the street often obstructed by A-boards, tables and chairs.

#### South Bailey

- poor surface, narrow pavements, lack of dropped kerbs

#### Whinney Hill

- narrow pavement with poor surface and occupied by parked cars
- exacerbated by cyclists using pavement to keep off busy road

## 6 Development of the map of cycling issues

### 6.1 *Initial cycling network map*

The first step we took in assessing the existing network, and identifying a potential network, was to draw up a map showing the routes through Our Neighbourhood that people need to use to make everyday journeys to work, to places of education, and to shops and leisure facilities. The aim was not just to improve the network for existing cyclists, but to make a network which is safe enough that people will feel able to choose cycling as a viable mode of transport for more of their journeys.

On 28 April 2016 the Transport Theme co-ordinators, Karen Elliott and Matthew Phillips, organised a meeting of the Trust Pathways, a group of local people recently formed to campaign for safer cycling routes in and around Durham. We asked those attending the meeting to colour in the desired routes on a large printed map of Our Neighbourhood. Different colours were used to indicate how dangerous the routes were perceived to be. Routes which did not exist on the ground or which had restrictions on cycling access were also highlighted where participants felt they would form useful links or would serve key destinations.

All those attending the meeting were experienced at cycling in Durham city, but they brought an awareness of the needs of less experienced users in the form of family and friends who were not prepared to cycle in current conditions. Some of those in attendance lived outside Our Neighbourhood but worked within it. This meant that the perspective of those needing to travel to or from locations outside the plan area was included.

The map which was produced formed the basis of the evidence for the map of cycling routes for the Neighbourhood Plan, but it was then refined and adjusted further in the light of various reports and studies produced by or on behalf of the County Council, and subjected to a sense checking exercise by comparing the assessments with formal audits undertaken by the County Council's Sustainable Transport team. The map has also been adjusted when relevant responses have come in during the

rounds of formal and informal consultation on the plan, and has been reviewed to ensure that the main destinations are fully covered.

## **6.2 Routes proposed for safeguarding in the withdrawn County Plan**

The County Durham Plan, withdrawn in 2015, included safeguarding of cycling super routes and secondary routes. Although the plan was withdrawn there has been no suggestion that the County Council no longer seeks to develop these routes. The online proposals map provided the clearest view of the routes, but fixed-scale maps were shown in the main plan document and on page 20 of the supplementary document Durham City Integrated Transport Approach (DITA, Durham County Council, 2013) which was document T41 in the 2014 EiP evidence library.

Paragraph 9.44 of the withdrawn County Durham Plan explains that routes were to be safeguarded rather than allocated because of uncertainties over funding the entire network. Bearing in mind the purpose and limitations of the Proposals Map, these safeguarded routes were compared with the routes drawn on our initial map, paying attention particularly to any routes which only appeared on one of the two maps.

The following routes appear on the Proposals Map and did not appear on the map produced at the Trust Pathways meeting. A justification and note of any action is given.

### **6.2.1 Dryburn Road and B6532 towards Sacriston**



Proposed as a secondary route, becoming a super route as it leaves the city after the turning to New College.

Beyond boundary of Our Neighbourhood.

Shows an important connection to the neighbouring village of Spennymoor and a potential major housing area included in the draft County Plan.

**Action:** include on network map.

### 6.2.2 North from Aykley Heads to Caterhouse Road, Farnham Road and Pit Lane



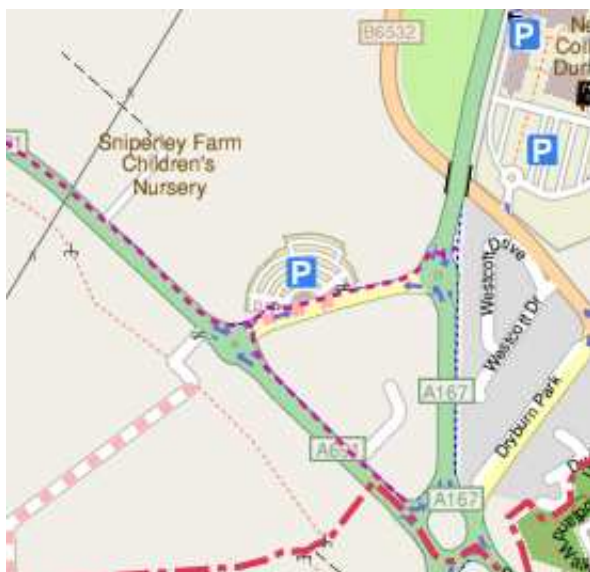
Proposed as super routes.

Beyond the boundary of Our Neighbourhood.

Route identified by participants, but only as far as junction of the paths. Would form part of a route from new housing on Aykley Heads to local schools and shops.

**Action:** include on network map.

### 6.2.3 A691 from Sniperley roundabout towards Witton Gilbert, and link to A167



Witton Gilbert link proposed as super route; link between A167 and A691 proposed as secondary route.

Both beyond the boundary of Our Neighbourhood.

Witton Gilbert link is an important connection to a neighbouring village.

**Action:** include A691 route on network map, but not the link to the A167 as it is not directly relevant to sites in Our Neighbourhood.

#### 6.2.4 Routes from Tollhouse Road



Route through Baxter Wood Farm proposed as super route; route through Arbour House Farm and Club Lane from A167 noted as existing cycle infrastructure as they are bridleways.

Partly outside Our Neighbourhood.

Baxter Wood Farm route is a useful link to the railway path. The bridleways do not serve major destinations and include unmade paths along the edges of fields.

**Action:** add Baxter Wood Farm to network map.

#### 6.2.5 Bridleway from A177 to Great High Wood



Noted on Proposals Map as existing cycling infrastructure because it is a bridleway.

Wholly within Our Neighbourhood.

Does not serve any obvious destination, though the lower (northern) part parallels the access road to University campus.

**Action:** do not add to network map, but consider adding route through the campus to Hollingside Lane as a useful connection.



### 6.2.6 West bank of River Wear from Shincliffe Bridge to Maiden Castle footbridge



Proposed as secondary route.

Within Our Neighbourhood.

Would form part of a useful route from Shincliffe to the town centre via Green Lane. Path is good quality already but junction with the A177 road is unsuitable for cycling.

**Action:** include on network map.

### 6.2.7 Bridleway from A690 to Kepier Farm and towards former Gilesgate school

Noted on Proposals map as existing cycle infrastructure as it is a bridleway.



Runs along boundary of Our Neighbourhood, or just outside.

Crossing of A690 is dangerous and route is steep in parts, but could provide useful alternative access from The Sands.

**Action:** include on network map.

### 6.2.8 Framwellgate Waterside and Freemans Reach



Proposed cycle super routes (part of National Cycle Network route 14)

Within Our Neighbourhood.

The Freemans Reach section provides part of a useful link from Sidegate and Newton Hall to the town centre, but suffers from a one-way restriction. The link to Framwellgate Waterside from Milburngate gives useful connections.

**Action:** add to network map.

That completes the additions made through review of the County Durham Plan (withdrawn) Proposals Map, as all other routes on the Proposals Map were also suggested by the participants at the Trust Pathways meeting.

It is worth listing here the main routes which were suggested by the meeting which were not included by the County Council in the Proposals Map:

- Albert Street and Fieldhouse Lane
- Crossgate Peth, The Avenue, Crossgate and Allergate
- Pimlico, South Street, North Road, Silver Street, Elvet Bridge
- Sutton Street, Alexandria Crescent, Margery Lane, Quarryheads Lane to roundabout
- Clay Lane and Westhouse Avenue
- South Road, Church Street, New Elvet
- West bank of River Wear from Prebends Bridge to Framwellgate Waterside
- Hallgarth Street, Whinney Hill and Old Elvet
- Maiden Castle footbridge to Old Durham
- East bank of River Wear from Shincliffe Bridge to Pelaw Woods
- Sherburn Road
- A690 beyond Chapel Heights
- Southfield Way
- A690 down Neville's Cross Bank and on to Langley Moor
- Cock o'the North to Langley Moor via the golf course
- Hollingside Lane; Cock o'the North to Shincliffe via former railway line
- Chapel Heights via Kepier Farm, across the Wear to Aykley Heads
- Northern access road to Aykley Heads
- Providence Row through The Sands to Kepier Farm

As these routes have not been evaluated by the County Council they required additional scrutiny to check whether they were appropriate to include.

### ***6.3 Durham City Strategic Cycle Routes review by Transport Initiatives LLP***

This report was commissioned by the County Council and produced in October 2014. The remit was to review and update the County Council's proposals in the County Plan and to provide engineering and design solutions with indicative costings. As part of the review the consultants suggested three categorisations of routes: super, primary and secondary and so some of the document was taken up with a rationale for the recategorisation of specific routes which had already been safeguarded.

The document proposed several additional routes for safeguarding. The report acknowledged that as the County Plan was then undergoing Examination in Public, the changes would have to be introduced via a revision of the Cycling Strategy for the county. The County Plan was subsequently withdrawn, and the successor to the Cycling Strategy, the Strategic Cycling and Walking Delivery Plan, does not include any route allocations.

Some of the above routes suggested for the Neighbourhood Plan which were not safeguarded in the withdrawn County Plan do, however, appear as recommendations in the Transport Initiatives report. These are:

- Crossgate Peth, The Avenue, Crossgate
- Framwellgate Bridge, Silver Street, Elvet Bridge
- New Elvet Bridge and slip road to Saddler Street / Claypath
- Whinney Hill and Old Elvet
- A690 beyond Chapel Heights
- Southfield Way
- A690 down Neville's Cross Bank

A remark was made that the inclusion of Framwellgate Bridge might be controversial, but this was justified on the basis that it, and Elvet Bridge, are a significant missing link which would offer alternatives to the highly unsatisfactory Milburngate Bridge. The report suggested limiting cycle access to before 10am and after 4pm (the hours that deliveries are permitted). Given the relatively small danger posed to pedestrians by cycles, compared to the motor vehicles which are permitted at those times, this arrangement merits careful consideration.

Church Street and New Elvet was noted as a logical route with very challenging road conditions which made it difficult to envisage development of a sufficient level of service for cycling.

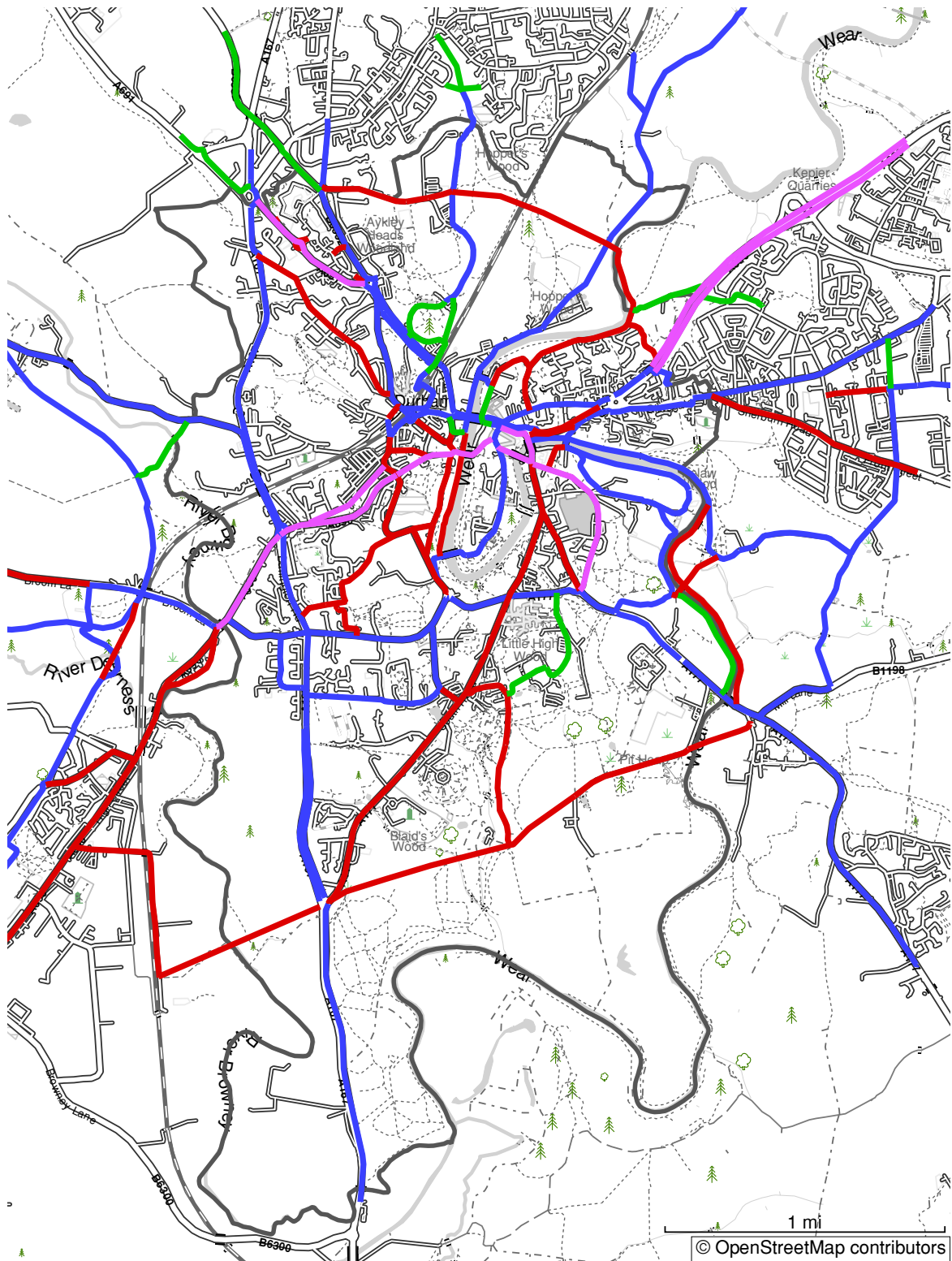
The report recommended safeguarding a number of additional routes in Framwellgate Moor and Newton Hall which are outside Our Neighbourhood. It also recommended that a review of existing footpaths be conducted with the object of seeking to convert these to shared-use where there is adequate width to accommodate pedestrians and cyclists in comfort.

There were no other cycle routes within Our Neighbourhood proposed in the report which had not already been identified in our process by the participants.

#### ***6.4 Map of routes at this stage of the analysis***

At this stage it is helpful to present a map of the identified routes colour-coded according to which studies they appear in.





- Blue: Identified at meeting and proposed for safeguarding in withdrawn County Plan
- Purple: Identified at meeting and proposed for safeguarding by Transport Initiatives report
- Green: Not identified at meeting but proposed for safeguarding in withdrawn County Plan
- Red: Identified at meeting but **not** proposed by withdrawn County Plan or Transport Initiatives.

The routes marked in red, being those which were not proposed either in the withdrawn County Plan or in the Transport Initiatives review, were then checked carefully to see if they are deliverable and justified.

### **6.5     *Grid density***

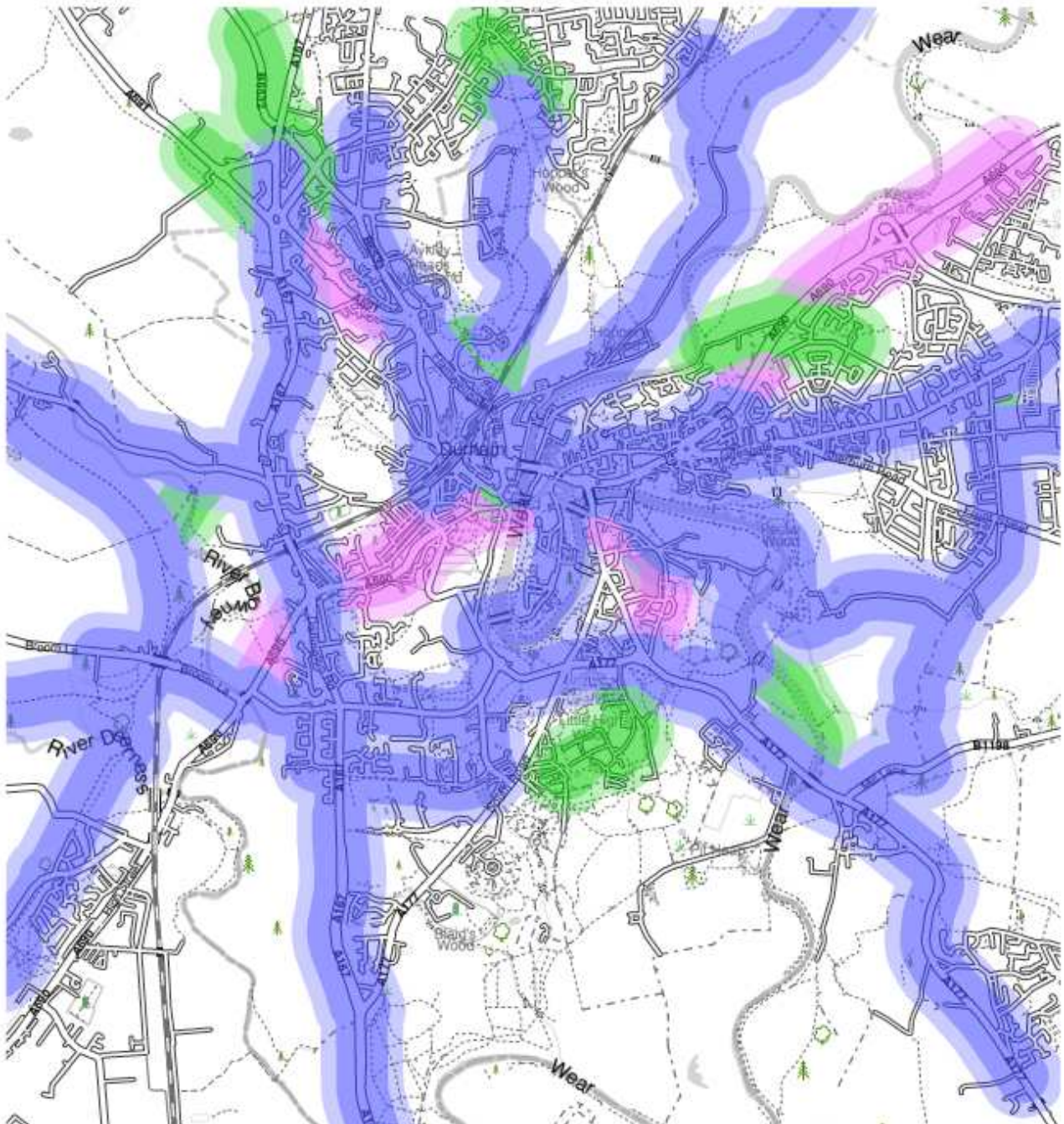
The Design Guidance for the Active Travel (Wales) Act requires authorities in Wales to assess how well the cycle routes contribute to a coherent network with a dense grid. The principle is that origins and destinations should be close enough to high-quality routes that people are enabled to choose cycling, if they wish, for all journeys. A very similar principle has been adopted by many English authorities in measuring accessibility by public transport, and transport assessments often state the distance to the nearest bus stops to demonstrate accessibility.

In the case of the Welsh guidance, the distance between parallel routes should be no more than 400m, and preferably should be 250m or less. This means that no point of origin or destination should be more than 200m from the nearest high-quality route, and a 125m limit is preferable.

In the next map we include just the routes identified in the Transport Initiatives review and the withdrawn County Plan, enlarged to show the areas within 125m and 200m of the routes. The darker band of colour shows the area within 125m of the centre line of the route, and the paler colour shows the 200m distance. The blue and green areas were identified in the withdrawn County Plan. These are plotted on top. Underneath are the purple areas depicting the additional coverage gained by adding the routes identified by the Transport Initiatives review. These areas would not have been covered by the routes safeguarded in the County Plan.

Any areas of the map which are still white would not be served by the routes thus far identified. This will not matter if a white area is not a likely origin or destination for a journey. The following gaps would need dealing with, if the network is to be comprehensive across Our Neighbourhood:

- Fieldhouse Lane
- The northern access to Aykley Heads
- The Sands
- South Street, part of Margery Lane and parts of Archery Rise, Faraday Court and Kirkwood Drive
- South Road, including Mount Oswald and areas round Josephine Butler College
- Church Street, New Elvet and part of Hallgarth Street
- The hamlet of Houghall



We can now proceed to examine the other proposals which arose from the Trust Pathways meeting, and see whether any of these fill gaps in the grid or provide other important links.



## 6.6 Additional routes suggested by Trust Pathways group

### 6.6.1 Albert Street and Fieldhouse Lane



This route gives access to a significant residential area in the north of Our Neighbourhood and to the city's Roman Catholic secondary school, St Leonard's.

It passes through an area which is a notable gap on the grid density map, and it has good levels of cycling predicted in the Propensity for Cycling Tool. It has recently been designated a 20mph zone.

At the north end it links to the existing A167 cycle route. An alternative option would be to link via Springwell Road.

**Action:** include route on network map.

### 6.6.2 North Road

Cycle access across the city via Framwellgate Bridge and Silver Street is proposed before 10am and after 4pm in both the Transport Initiatives review and in Figure 4.2 of the *Durham City Sustainable Transport Delivery Plan* (DCC, 2018a, p. 42). An earlier draft of the report suggested the preferred



approach to Framwellgate Bridge would be via North Road, though this was dropped from the final version, which instead shows a possible route via Milburngate and St Godric's Road.

North Road is not particularly busy with traffic, as access is already restricted to buses, taxis and deliveries. The main concern would be a means of allowing cycling against the flow in the one-way section from the junctions with Neville Street and Milburngate. This is the stretch of road where the main taxi rank is situated. It is understood that the difficulty in accommodating cycling led to the North Road route being omitted from the delivery

plan, though the alternative via Milburngate is at least as challenging. It should be noted that there is dissatisfaction with the impact that the taxi rank has on North Road, including the air quality, as was evident from responses to the 2017 Regulation 14 consultation on the plan, and from responses to the sustainable transport strategy (DCC, 2018b, page 7).

**Action:** include route on network map, so that cycling is considered if circumstances change, and to highlight to developers the gap in the network.

### 6.6.3 Pimlico and South Street

#### *Riverbank from Framwellgate Waterside to Prebends Bridge*

Anyone cycling from Newton Hall via Frankland Lane can reach the city centre at Framwellgate Waterside via a largely traffic-free route. Continuing from here to the University campus at Mountjoy, for example, the best route is very far from clear.



part of transport consultants. It is important to include the route, with its restrictions, on the map in order to avert mistakes like this.

The only reasonably direct alternative route, along the riverbank, appears to be a permissive cycle route to judge by the inconspicuous signs placed by the landowner, the Dean and Chapter. It is, however, quite narrow in places, making it hard to pass pedestrians comfortably.

These routes would each close a gap in the grid density map, and make useful connections to the rest of the network.

**Action:** include each of the routes on the network map, to ensure that they are not assumed to be suitable existing routes, and are evaluated for possible improvement should a relevant planning application arise.

South Street and Pimlico are quiet residential streets, but South Street is currently one-way with no exemption for cyclists. The width of the street is mostly sufficient, and the traffic levels are low enough, to satisfy the criteria of the Active Travel (Wales) Act Design Guidance (Welsh Government, 2014, p. 294–5), but dealing with the pinch points would entail removing a small number of car parking spaces, which are in high demand for residents.

South Street has been cited in Transport Assessments accompanying planning applications (for example CE/13/01696/FPA) as forming part of a good route to Durham University's Mountjoy campus, but this betrays lack of local knowledge on the



#### 6.6.4 Sutton Street, Alexandria Crescent, Margery Lane, Quarryheads Lane



This is currently one of the more heavily used routes for cycling in the city centre, and is very heavily used by pedestrians too, as it links the student houses in the Viaduct area with Durham University's Mountjoy campus. It is also the most direct cycling route from the railway station to the University given that North Road and South Street are not available in both directions.

This route is frequently identified as needing walking and cycling improvements. Practical options are hard to identify, but it should be included on the network map in view of its significant current use.

It is included on pages 49 and 50 of the *Durham City Sustainable Transport Delivery Plan* (DCC, 2018a) as a key route requiring cycling safety improvements.

**Action:** include on network map.

#### 6.6.5 Clay Lane and Westhouse Avenue



Clay Lane is a public footpath, which at one end serves as the access road to Durham Archery Tennis Club, and at the other end links to the A167 as a residential street. It gives convenient access away from the main roads to houses in Sheraton Park and on Archery Rise, and fills a gap in the grid density map.

It is already used quite often by people cycling unofficially. It has a good surface, and is wider than many footways elsewhere in the city which have been designated as shared use. It would be appropriate to consider whether cycling should be permitted formally. Reviewing public footpaths for shared use was an action recommended in the Transport Initiatives report (2014, section 3.5, p. 10).

There is concern about whether there would be pressure to provide lighting for Clay Lane, with the local community being divided on the desirability of lighting. This is a matter which is independent of designation as a cycling route.

The link to Westhouse Avenue gives residents at Ustinov College a route towards the University via Potters Bank. The parallel footpath behind Observatory Hill has recently been upgraded, but Westhouse Avenue would be preferable for cycling to avoid conflict with pedestrians.

**Action:** any change in designation should entail full consultation with residents and users, but it would be appropriate to include this route on the network map as it provides excellent access to a large area of housing.

#### 6.6.6 South Road, Church Street, New Elvet, Hallgarth Street

The Transport Initiatives report considered Church Street and New Elvet but noted the “very



challenging road conditions which made it difficult to envisage development of a sufficient level of service for cycling”. The *Durham City Sustainable Transport Delivery Plan* (DCC, 2018a, p. 49, 50) proposes measures to improve cycling on Church Street and Hallgarth Street, which, being close to the University, are recognised as important routes for cycling and pedestrian use.

South Road, Church Street and New Elvet are identified in the University masterplan as being a key route for travel through the estate, and a “super route” for walking and cycling is proposed. The Propensity to Cycle Tool predicts fairly high usage of Hallgarth Street, Church Street and New Elvet. The University’s student travel survey (Durham University, 2013b, p. 10–11) supported provision of a route from the hill colleges to the science site.

South of Elvet Hill Road, South Road would serve the colleges and new housing estates

on Mount Oswald (which would generate new flows not measured in the 2011 census) as well as the Girls’ High School.

Notwithstanding the reservations in the Transport Initiatives report, it is clear that improvements could be made, though it may not be possible to reach the highest standards. For example, on New Elvet reconfiguring the car parking by the shops would allow for a protected uphill cycle track which would greatly assist the use of this street by cyclists, and the traffic light phasing could be modified to assist cyclists turning into Church Street. Between the New Inn junction and Elvet Hill Road it might be possible to create a route parallel to South Road, as envisaged in the University’s masterplan.



**Action:** include on the network map.

### 6.6.7 Providence Row through The Sands to Kepier Farm



Providence Row is very steep, but it is the main access to the residential streets in the area known as The Sands. At the bottom of the hill, the road changes its name to The Sands and continues to Kepier Farm where it joins the public bridleway considered earlier.

Aside from Providence Row, the other access to the area is via Pennyferry Bridge from Framwellgate Waterside, or from Fleshergate under the A690.

The Durham Sixth Form Centre is a significant educational site on Providence Row, and The Sands fills a gap on the grid density map: without this route a residential

area would not be served effectively by the cycling network.

**Action:** include on network map

### 6.6.8 Northern access road to Aykley Heads

This road forms part of the northern boundary of the Neighbourhood Plan area, and leads from the



B6532 into the Aykley Heads estate, including areas of new housing development, some within and some beyond the boundary. It also leads to various employment sites.

This route fills a large gap in the grid density map, and links the main road past County Hall into the city to the cycle route which leads from the railway station towards Newton Hall.

The road and associated public space is sufficiently wide to allow for a good quality

of service for cycling if separated cycle tracks were provided, and it is important to ensure that as the development of Aykley heads proceeds the infrastructure is there to encourage sustainable transport into the employment site.

The roundabout at the west end will need safety improvements for cycling. It was identified as requiring improvement in the *Durham City Sustainable Transport Delivery Plan* (DCC, 2018a, p. 51, 52).

**Action:** include on network map.



### 6.6.9 Hollingside Lane; Cock o'the North to Shincliffe

This suggestion, made at the Trust Pathways meeting, is rather more speculative, as part of it crosses land with no public right of way at present. Hollingside Lane has public access as far as the Botanic Gardens, and this section would be useful to link to the path to upper Mountjoy from the Stockton Road identified earlier. Beyond the Botanic Gardens the lane is private, but suitable for motor vehicles as it is used to access a sewage works. There is no public right of way, but at the end of the lane it meets public footpaths leading through Blaid's Wood to the A177, to Low Burnhall, and to Houghall via a disused railway embankment. The route suggested at the meeting leads from the Cock o'the North roundabout across farmland, taking up the route of the former colliery



railway, to the end of Hollingside Lane and then via Houghall, crossing the Wear to continue to Shincliffe via the embankment. Reinstating the bridge here would be costly, and offers little advantage over a route via the road from Houghall to the A177. While Houghall village is far from the rest of the network as shown on the route density map, there is only a small volume of traffic to the settlement, so the road is considered suitable for cycling.

While this route might prove popular for leisure, it is less obvious how useful it would be for utility cycling. The farmland south of Blaid's Wood was mentioned in a

presentation by the University to the Neighbourhood Planning Forum as being a possibility for housing development, though at present it is located in the green belt. If this land were released for development, then an off-road connection from the A177 to Hollingside Lane for walking and cycling would offer a small measure of mitigation. Therefore it would make sense to include this part of the route on the network map to cover this eventuality.

The route from Shincliffe to the end of Hollingside Lane would provide access to the upper part of

the University's Mountjoy campus, as an alternative to the narrow cutting of Shincliffe Peth. The



footway on Shincliffe Peth can be congested, and alternative routes had to be upgraded as a condition of the planning application for additional facilities at the Maiden Castle sports centre. But a more direct way to allieviate this pinch-point would be to create a route ascending steadily through Great High Wood from the foot of Shincliffe Peth, opposite the existing cycle route that circles the foot of Maiden Castle. This option would open up a lot more off-road travel opportunities and would provide a direct connection from the upper hill colleges to the sports fields at Maiden Castle, as well as access to the employment on the upper Mountjoy site, which is expected to be developed further as part of the University's estates masterplan. Whether this route is really feasible would depend on further evaluation of the gradients and the impact on

trees and wildlife.

**Action:** include Hollingside Lane and the route west to the Cock o'the North roundabout on the network map. Instead of the route to Shincliffe via Houghall, include a route via Great High Wood, though it is acknowledged this is rather more speculative.

#### ***6.6.10 Maiden Castle footbridge to Old Durham***

This suggestion links the existing cycle route and footpath which circles the foot of Maiden Castle hill fort, crosses the River Wear by the footbridge, and crosses the Old Durham Beck at the site of a footbridge which was removed in around 2013, to join to the National Cycle Network route which leads past Old Durham farm to Dragonville. This short link would create a continuous and direct cycle route which could be used by people living in Belmont, parts of Gilesgate Moor and Carrville

to reach the major employment site of Durham University's Mountjoy campus. As it would be shorter than the road alternative, this link could have the potential of encouraging a modal shift away from the private car.



To create the route, the bridge would need reinstating and an agreement would be required with the landowners, which include Durham University. The link is just beyond the Neighbourhood Plan area so the plan has no power to allocate or safeguard the route, but inclusion on the network map would highlight the possibilities and encourage the consideration of the route when assessing transport connectivity in relation to further development of the University campus.

**Action:** include on network map



### 6.6.11 Allergate

While Crossgate was proposed for safeguarding in the Transport Initiatives report, Allergate was not, yet it serves an important function as it links the large area of housing accessed from Hawthorn Terrace to the city centre. At present the road is one-way to all traffic, mainly to discourage use by cars and to accommodate on-street parking. The road is very quiet, and wide enough to allow for cycling in both directions (see Welsh Government, 2014, p. 294–295).



**Action:** include on network map

### 6.6.12 East bank of River Wear from Shincliffe Bridge to Pelaw Woods

The west bank of the River Wear from Shincliffe Bridge to Maiden Castle footbridge was identified for safeguarding as a cycle route in the withdrawn County Durham Plan, but was not identified at the Trust Pathways meeting, where participants instead identified the route on the east side of the Wear, linking to the National Cycle Network at Pelaw Woods. The route on the west bank suffers from a considerable disadvantage, because it is very hard to see how safe access onto the route could be arranged at Shincliffe Bridge, because the path joins the road so close to the bridge. The path on the east side would be much easier to access safely, and already is of a suitable width for much of its length, the main pinch point being Kingfisher Bridge which crosses the Old Durham Beck.



The route, however, falls just beyond the Neighbourhood Plan area. We can include it on the route map only to highlight it for consideration as a means of access to city centre developments from Shincliffe.

**Action:** include on network map.

### 6.6.13 Sherburn Road

The housing estates on Sherburn Road fall into a gap in the route density map, and to provide



access the obvious action is to include Sherburn Road itself in the cycle network map. This falls outside the Neighbourhood Plan area, however, so including this route can only be indicative that the route needs to be considered when assessing relevant planning applications within the plan area. For example, an application for an employment site on Gilesgate might need to consider the suitability of access via walking and cycling from neighbouring residential areas, including Sherburn Road. Including the route on the network map indicates to

developers the need to include the route in their analysis and a provisional assessment of its suitability can be provided via the map.

**Action:** include on network map

### 6.6.14 A690 towards Langley Moor

The map drawn up at the engagement event included the A690 out via Crossgate Peth, Neville's Cross Bank and on towards Langley Moor. The part of this route as far as the Stonebridge



roundabout was proposed for safeguarding in the Transport Initiatives report. Beyond the Stonebridge roundabout the road includes a bus lane for some distance. On the uphill approach to the railway viaduct, cyclists feel quite vulnerable, but the carriageway appears to be wide enough to allow for some reallocation to create protected space.

After the railway overbridge the route via Sleetburn Lane and Brandon Lane makes a connection to the railway path which serves Brandon and extends to Bishop Auckland. If you travel into Durham, it is not practical to continue on the railway path as far as the Broom Park picnic area because of the steep gradients resulting from the removal of the railway bridge over the River Deerness. This route is therefore an important connection for longer distance journeys.

Continuing on the main road through to

Meadowfield would be a natural route to reach the shops, housing and employment areas.

These routes are beyond the Neighbourhood Plan area and thus the plan cannot safeguard them for future cycling facilities, but by including them on the network map we can flag that these routes would need to be evaluated when assessing the cycling accessibility of development sites within

Our Neighbourhood, such as sites in Neville's Cross, Crossgate Moor or Merryoaks.

**Action:** include on network map

#### ***6.6.15 Cock o'the North to Langley Moor via the golf course***

This suggestion, made at the engagement event, is speculative, as it involves upgrading a public footpath, including the provision of a new footbridge to replace the stepping stones across the River



Browney. The footpath leaves the A167 close to the Cock o'the North roundabout, passing downhill through Farewellhall Wood, and after crossing the Browney goes through the golf course to meet the access road close to the railway line. There it would be possible to turn north along Rosebay Road and thence via Mill Road to the High Street (A690). The public footpath turns south a short distance to a bridge across the railway line and then north via a track that meets Littleburn Road.

This route was suggested for a couple of reasons. For travel from Brandon to the University, it would give a slightly more

direct route via South Road, and would avoid Lowes Barn Bank which is currently far from ideal for cycling owing to the steep gradient and the heavy use by motor vehicles. The route would also connect the new housing currently under construction with potential employment in the Littleburn and Meadowfield industrial estates.

The section beyond the River Browney is outside Our Neighbourhood, so cannot be formally safeguarded via the plan, but it makes sense to indicate the complete route so that the context is clear. This route could be a useful alternative if it does not prove possible to improve the safety of the Lowes Barn Bank route for cycling, as well as opening up new journey possibilities which would give an advantage to sustainable travel modes.

**Action:** include on network map

#### ***6.6.16 Magdalen Chapel via Kepier Farm and across the Wear to Aykley Heads***

Again this is a route which is not currently available, although parts of the route exist as public



footpaths. The proposal starts at the ruined Magdalen Chapel and follows the footpath round the edge of the Orchard Drive estate down to the river bank. This route might be too steep to be practical, and a more realistic option might use the farm track further along the A690 which connects with the bridleway down to Kepier Farm. An additional bridge over the Wear would be required. The route would then proceed to Aykley Heads across farmland, another obstacle being the crossing of the railway line.



There has previously been a need identified for better connections between the Gilesgate / Belmont areas and Aykley Heads / Newton Hall, with a proposal for a cycling and walking route via the Belmont Viaduct, a former railway route which lies outside Our Neighbourhood. The current Milburngate Bridge is not well suited for cycle traffic. Making a journey from Gilesgate to Aykley Heads would be possible via Pennyferry Bridge and Sidegate, but it is quite indirect.

In principle, a new connection for active travel modes (cycling and walking) would be appropriate within the green belt, as openness could be preserved and it would make the green belt more accessible, but cutting through woodland and a local nature reserve would be contentious. It is doubtful, based on past funding priorities, whether the route could be delivered within the time-frame of the plan, and the engineering work required to pass beneath the railway line would be very costly.

**Action:** This route was included in the Regulation 14 consultation held in 2017, but in view of the difficulties, it will be removed from the map.

#### ***6.6.17 Routes close to the University Hospital of North Durham***

There are a number of short links close to the hospital which are currently marked as shared pedestrian/cycle routes, and there was also a proposal for a new link made at the engagement event.

The new proposal is to link the south end of Old Dryburn Way to the County Hall roundabout.



There is foot access through here already, and by adapting it for use by people cycling it would enable employees and people visiting the hospital to avoid having to cycle along the main roads (A691 and B6532) which are the only other options currently available.

The existing routes are also shown on the map excerpt. Short links at the northern end of the site give cycle access to Southfield Way and to the B6532 close to the bus stop near Aykley Heads roundabout. In each case the means of accessing the main carriageway is poorly designed or non-existent. Further south there is a link from Old Dryburn Way east to the B6532. This is of generous width, but there is no dropped kerb at the B6532 end and that on Old Dryburn Way is poorly aligned. The route is unlikely to be spotted by a cyclist proceeding north on the B6532.

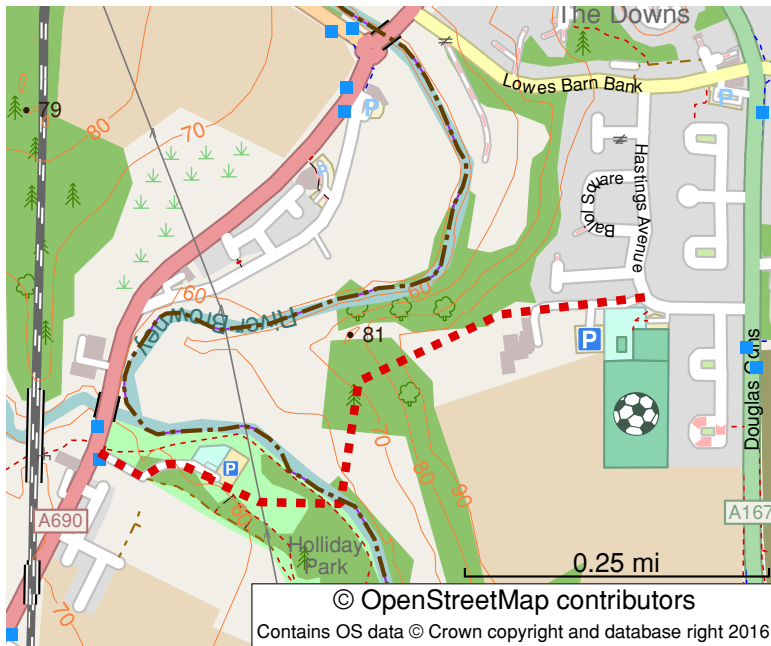
There are also shared use signs round the periphery of the roundabout on Southfield Way by the Land Registry entrance, but these are not obviously useful as they do not form part of a longer route.

**Action:** As the hospital is an important destination and a large trip generator, it is important to ensure cycling is catered for. Therefore these routes should be included with an assessment on the network map.

### **6.7 Additional route suggested prior to the 2017 consultation**

On 8 August 2016 a member of the public posted a comment on the Neighbourhood Planning

Forum's website at <http://npf.durhamcity.org.uk/your-views/> making a number of suggestions for cycling and walking routes.



One suggestion was to reopen an 'old bridleway' connecting Park House (St Cuthbert's Hospice) to Holliday Park at Langley Moor to give a badly-needed walking/cycling access route to the west and south-west of the city. There used to be a footbridge across the Browney at the end of Holliday Park but it had gone by 1961 according to information supplied by the Chair of the Friends of Langley Moor. It seems likely that the bridge was taken out before 1949 when the National Parks and Access to the

Countryside Act first required local authorities to produce definitive maps of public rights of way. This route's legal status prior to that date is not clear, and the footbridge may have been of private construction to link land under the Holliday family ownership either side of the river.

If it were possible to reopen this route it would offer a very welcome alternative to Lowes Barn Bank which is busy with motor traffic. The Friends of Langley Moor are supportive of the idea.

**Action:** In view of the potential benefits, it was decided to include the route on the network map, though the possibility of reopening it is more remote than most of the other propositions. If further land south of Merryoaks were developed for housing there would be a strong case for developing a new cycling and walking route along this or a similar alignment.

## 6.8 *Justification of the assignment of categories*

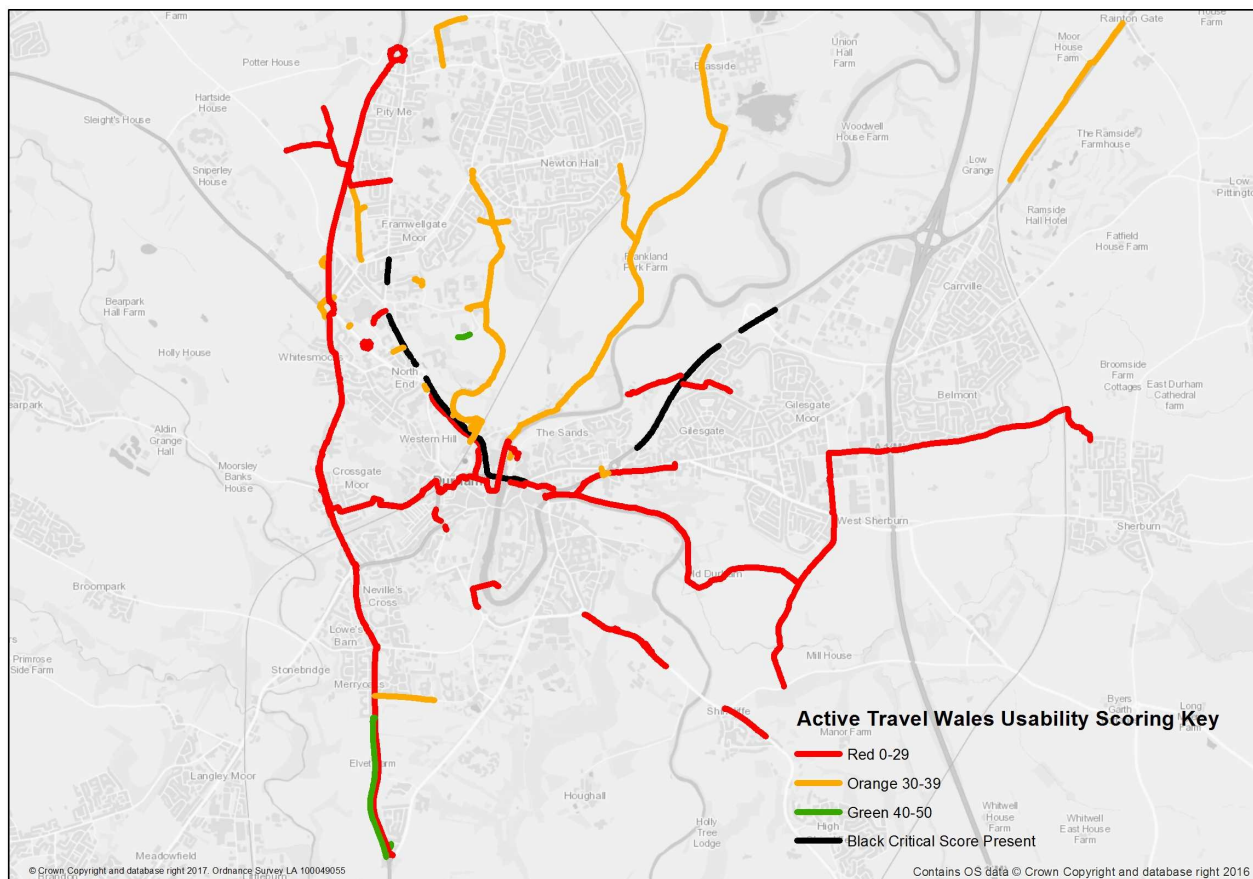
In this subsection we look at how the categorisation for existing cycle provision matches up to the audit methodology employed by Durham County Council to verify whether any adjustments need to be made.

The three categories grouped as "needs provision" do not involve any subjective assessment: the assignment to these categories is indisputable. The distinctions that need justification are between the "currently adequate" category and the two which are grouped as "needs improvement".

The categorisation has not used an objective methodology, but was more a rule of thumb assessment based on the experiences of the cyclists attending the consultation meeting, subsequently revised for consistency by the Transport Theme convenors. We can, however, perform a sense check of these categorisations using scores provided by Durham County Council's Sustainable Travel section. As part of the programme of work associated with the County Durham Cycling Strategy, audits have been carried out to identify all cycle infrastructure and to score it according to the Active Travel (Wales) Act assessment method (Welsh Government, 2014). This gives a score out of 50, where 35 or more is considered adequate. Certain criteria in the scoring can result in a 'critical' option, which means that, however well the route scores under the other criteria, the route cannot be deemed suitable for inclusion on the network map.

The following map shows the routes assessed and the scores resulting from the recent audit in 2016/17. Note that the County Council has used a different banding of scores from the Active Travel (Wales) Act guidance, so there is an orange colouring with scores ranging from 30 to 39, with green being routes with a score of 40 or more.

Note that the routes assessed are, in the main, those which have signage or road marking for cycling, including on-road parts of the National Cycle Network routes, such as Redhills Lane. Bus lanes are also included, which explains the two sections of the A690 scored as 'critical'. Any off-road routes which are red on the following map, we would expect to be coloured yellow or orange on the cycling issues map. Routes which are green in the DCC assessment we would expect to be green also in our categorisation. Routes with scores in the range 30–39 might have been identified as currently adequate on the cycling issues map, or needing improvement.



We will take a look at what appear to be discrepancies in the assessment to see if there is a reasonable explanation, and whether the assessment on Map 12 should be adjusted.

### 6.8.1 A167 from Cock o'the North to Pity Me (east side)

This route, numbered XC-DuC5 in the scoring spreadsheet provided by DCC, received a score of 27/50, and therefore appears red. In our categorisation, parts of the route are shown in green. The explanation is that the Council's audit assessed the whole route and gave it a single score. Our categorisation judges two sections of the route to be of good quality. One is the section from Neville's Cross northwards over the railway bridge, which is reasonably wide and is demarcated between pedestrians and cyclists. The other is the 1930s section of high-quality cycle lane by the side of the dual carriageway, approaching Cock o'the North. The DCC assessment of the equivalent section of route on the western side of the dual carriageway has placed it into the top scoring



category.

**Verdict:** our assessment is consistent with the DCC audit results

#### ***6.8.2 A691 from County Hall to Claypath via Milburngate Bridge***

This route, numbered XC-DuC11 on the scoring spreadsheet, has a score of 20/50 but includes at least one critical component, resulting in it being shown in black on the map. We categorised it as an off-road route needing improvement. The difference is again explained by the DCC audit having assessed a longer route, which includes sections of bus lane north of County Hall and on High Carr. The critical criterion concerns the volumes of motor traffic, and so does not apply to the off-road section. Other low-scoring criteria include difficulty of leaving/joining the route, gaps in the route, delays at junctions, and risk of collision at junctions. There are still various aspects of the low scoring in the audit that apply to the section from County Hall south and over Millburngate Bridge, but as we have categorised it as needing improvement that is acceptable.

**Verdict:** our assessment is consistent with the DCC audit results

#### ***6.8.3 Cycle lanes on Margery Lane and Alexandra Crescent approaching Crossgate junction***

The DCC audit shows two short stretches of red-coloured cycling provision either side of the Crossgate signalised junction where the A690 meets Margery Lane. The cycling issues map, however, shows this as having no provision currently. The infrastructure assessed by DCC consists of on-road painted advisory cycle lanes approaching the lights, with a cycle box or advanced stop line. The total length is no more than 180m. We could perhaps amend Map 12 to show this short section as needing improvement, rather than no provision, but it would probably make little practical difference when assessing transport statements against the plan policies. Besides, the on-road “needs improvement” category has the qualification “quiet streets” and this section of road has very high traffic volumes.

**Verdict:** our assessment is consistent with the DCC audit results

#### ***6.8.4 Leazes Bowl to Sherburn Road via river banks and Old Durham***

This section is shown in green on Map 12 but is red on the DCC assessment map. It forms part of a longer assessed route, XC-DuC12, which extends to Sherburn and includes part of Dragon Lane. It scores poorly on the criteria relating to interaction with motor traffic, and these do not apply to the section shown on the cycling issues map. However, it also scores poorly for the criteria relating to lighting and whether the route is socially safe. These criteria were not considered when we assigned it to the ‘currently adequate’ category.

**Verdict:** consider changing the categorisation to the orange ‘off-road – needs improvement’ category.

#### ***6.8.5 Millhill Lane path from A167 to Business School***

This is shown in green on the cycling issues map but the DCC audit gives it a score of 33/50, resulting in a yellow colour on the DCC map. This score is very close to the Active Travel (Wales) Act threshold of 35/50. One of the criteria on which the route is scored badly is the fact that it is not part of a dense network of routes. That criterion does not apply to our map, which is looking towards a possible future network. The route also drops a few marks because of its width, which is a little narrow in places, but the assessment of cyclists using that path who attended the consultation is that the path is adequate for the current traffic volumes of cyclists and pedestrians. It may well be

that further expansion of the University and the development of the housing estates on Mount Oswald would lead to a need to revise this assessment.

**Verdict:** our assessment is consistent with the DCC audit results

#### ***6.8.6 Prebends Bridge***

This is another route which is shown in green on the cycling issues map but is red on the DCC audit map. In this case, route XC-DuC34 scores 29/50, which is only six points short of the threshold of 35/50. Criteria where this route drops marks include not being able to join/leave the route easily, lack of network density in the area, minor surface defects, steep gradients, poor signage and deficiencies in social safety. On the whole our categorisations have not considered all these criteria, and this explains the difference in the result.

**Verdict:** our categorisation is broadly consistent with the DCC audit findings and there is no need to change it.

#### ***6.8.7 Frankland Lane, from Crook Hall to Brasside***

This route, part of XC-DuC1, was assessed with a score of 31/50. This is only four points short of the threshold of 35/50. The lower score is partly explained by criteria such as lighting and social safety.

**Verdict:** our categorisation is broadly consistent with the DCC audit findings and there is no need to change it.

#### ***6.8.8 Conclusion of categorisation review***

Aside from the routes considered above, there are several routes which appear in the DCC audit where our categorisation is entirely consistent with the audit results.

We conclude that the assessments made by the cyclists attending the consultation event are, with minor exceptions, consistent with the DCC route audit results in the cases where routes appear on both maps. This gives us a good degree of confidence that the other routes appearing on the cycling issues map have been assessed appropriately.

### ***6.9 Revision following the 2017 consultation***

Some of the responses to the autumn 2017 Regulation 14 consultation, conducted by the Forum, made reference to the cycling issues map, and these have been accommodated where it is considered appropriate. Changes have also been made because of alterations to the infrastructure carried out since 2017.

The full list of changes made follows:

- Added short on-road link from racecourse to Old Elvet.
- Added link from B6532 to hospital as needing improvement.
- Corrected category of St Leonard's Road to green from orange (street next to A691, north of Wharton Park, grid reference NZ268431).
- Added newly-built link to station on east side of Framwellgate Peth (categorised green). Removed route via station car park from the map.
- Added the newly upgraded link to station on west side of Framwellgate Peth, though it is



not clearly signed as a cycle route.

- Reviewed the improvements to the route from County Hall roundabout south alongside the A691. Maintained the categorisation as yellow (needs improvement) because of the poor junction treatments and difficulty in joining/leaving the facility at the north end, but it is acknowledged that the surface has been improved and that signage poles no longer obstruct route.
- Removed purple route from Gilesgate to Aykley Heads as it is speculative and probably hard to engineer.
- Removed purple route from Shincliffe to Hollingside Lane as it would be costly to reinstate and would have limited use except for leisure.
- Corrected categorisation of Leazes Road and A690 to red from purple.
- Changed the category of the path from Heaviside Place over the A690 footbridge by the ruined Magdalene chapel from blue to green, following path upgrade work.
- Corrected the category of the footway on the west side of the A167 (Neville's Cross junction northwards to the footbridge) from purple to blue.

### **6.10 Conclusion**

This concludes the review of the routes suggested at the engagement, taken together with the routes proposed for safeguarding in the withdrawn County Plan and the Transport Initiatives report. It will be possible to make further adjustments to the map after receiving the feedback from the public and the local authority during the City of Durham Parish Council's formal Regulation 14 consultation.

## **7 Policy context: national**

Various national and local policy documents have been studied and their provisions for cycling are summarised below. Policies on walking and public transport were also noted during the review and have influenced the formulation of the Neighbourhood Plan's transport policies. Where appropriate, these documents will be drawn on in the justification which accompanies the policies in the plan.

### **7.1 National Planning Policy Framework**

Transport in general, and walking and cycling in particular, are referred to in the National Planning Policy Framework (Department for Communities and Local Government, 2018) section 9, paragraphs 102 to 111. Paragraph 102 requires that the opportunities to promote walking, cycling and public transport are identified and pursued at the earliest stages of plan-making and development proposals. Paragraph 104 requires planning policies to provide for high quality walking and cycling networks and supporting facilities such as cycle parking. Paragraph 110 covers the assessment of development proposals, and the need to give priority first to pedestrian and cycle movements, both within the scheme and into neighbouring areas.

The Neighbourhood Plan policy T1 seeks to give local detail which will implement the NPPF's requirements in relation to sustainable transport. The walking and cycling issues maps and this evidence paper assist with identifying the opportunities to promote walking and cycling (paragraph 102) and the provision of high-quality networks (paragraph 104).

## 7.2 *Cycling and Walking Investment Strategy*

The main national policy on walking and cycling is contained in the Cycling and Walking Investment Strategy (CWIS, Department for Transport, 2017a), which was produced under the auspices of the Infrastructure Act 2015 and covers England only. This was finally published in April 2017 but a previous version had been out for consultation in 2016. One of a small number of launch events was held in Durham Town Hall in the autumn of 2015, and was attended by Matthew Phillips, one of the coordinators of the transport theme for the Neighbourhood Plan.

The subtitle of the strategy is the bold statement “We want to make cycling and walking the natural choices for shorter journeys, or as part of a longer journey”. The CWIS sets as an aspiration the target of doubling cycling journeys by 2025. The strategy recognises that insufficient investment has been put into cycling and walking and notes that “walking and cycling should be seen as transport modes in their own right and an integral part of the transport network, rather than as niche interests or town-planning afterthoughts”.

The strategy is accompanied by *Local Cycling and Walking Infrastructure Plans: technical guidance for local authorities* (DfT, 2017b). This includes a section on integration with land use planning (paragraphs 2.26 to 2.30) which make several mentions of Neighbourhood Plans, encouraging the use of Local Cycling and Walking Infrastructure Plans (LCWIP) as part of the evidence base for planning policies. Paragraph 2.28 encourages neighbourhood forum involvement in the LCWIP process. There is no LCWIP currently in preparation by Durham County Council, although some audit activities have been taking place as part of the County Durham Cycling Strategy. It would be appropriate for the consultation findings of the Neighbourhood Plan to be fed into the creation of a LCWIP in the future. Paragraph 2.29 encourages authorities to seek contributions to cycling and walking infrastructure through CIL, Section 106 obligations and Section 278 highway agreements, and the Neighbourhood Plan supports this through policy T1.

The technical guidance recommends gathering people’s concerns about making journeys on foot or by cycle (para. 4.4) and their perception of existing facilities. The surveys for cycling and walking needs conducted by the Neighbourhood Planning Forum fit in with this recommendation. Neighbourhood plans are among the sources of information listed in paragraph 4.7 of the guidance. Thus Maps 11 and 12 of the Neighbourhood Plan should also be used by the local authority to assist in developing an LCWIP.

Use of the DfT-funded Propensity to Cycle Tool is strongly recommended for the assessment of the potential for cycling. This is important in an area like Durham where cycling is very much a minority mode of transport and it can be hard for anyone to envisage it becoming a mainstream transport mode. But in fact, in all parts of the country the proportion of journeys carried out by bicycle is still very much less than the levels seen at cycling’s peak in the early 1950s. Even in the Netherlands, the proportion cycling has not yet matched the historic peak: there was decline in the 1950s and 60s in a very similar pattern to the UK. The difference is that with sustained investment in infrastructure since the mid 1970s, the Netherlands has stopped the decline and experienced considerable growth in cycling, to the extent that in some towns it is the main mode of transport.

Paragraph 5.19 of the technical guidance suggests a network density (or ‘mesh density’) of 400m, which can be expressed as the maximum distance a person should have to travel to get between two high quality routes.

## **8 Policy context: Durham County Council**

### **8.1 Local Plan saved policies**

The saved policies of the former Durham City Council Local Plan were tested for consistency with the NPPF and Planning Policy Guidance by the County Council (Durham County Council, 2015b).

Saved policy T19 seeks to ensure development of a safe and attractive network of cycle routes. It is notable that this policy does not appear to have delivered during the period of operation of the Local Plan. Indeed the policy appears only to be applied by planning officers if a developer is proposing cycle infrastructure in conjunction with a planning application. A recent example is the case of the Lower Mountjoy Teaching Block (on St Mary's Field), DM/17/01682/FPA. While cycle parking was considered in conjunction with the application, saved policy T19 was not referred to in the officer's report to the planning committee. This policy is ineffective in delivering improvements even when there is a clear need for access by cycle to a development.

Saved policy T20 encourages the provision of cycle parking in the city centre and other appropriate locations which are secure, protected from weather, and signed, but does not stipulate requirements as regards quantity of provision.

Saved policy T21 seeks to safeguard the needs of walkers by protecting footpaths and public rights of way, and establishing a footpath network which is safe, attractive, direct, and appropriately signed. Footpaths should be capable of use by those with mobility difficulties. It is not clear from the policy wording whether it is intended to apply also to footways (commonly known as pavements) or just to routes away from streets and roads.

### **8.2 Local Transport Plan 3 (Durham County Council, 2011)**

This document makes several references to walking and cycling, and to matters of road space allocation and car use. The more relevant ones for the Neighbourhood Plan are:

- Need to improve walking/cycling routes, alleviating congestion on the road network and improving health and wellbeing (para. 6.4.5)
- In Durham City, congestion will be addressed through the expansion/extension of the Park & Ride scheme (para. 6.4.6)
- The need of radical change in people's attitudes to transport, given the entrenched reliance on the private car (para. 7.4.3)
- The possibility of change if backed up by infrastructure and promotional measures, as evidenced by the Darlington Cycling Demonstration Town project (para. 7.4.3)
- Walking and cycling identified as preferable to the use of the car for short journeys (para. 7.4.8)
- Paragraph 8.4.18 notes that adoption of healthier travel is vital to help meet obesity and carbon reduction targets. Paragraph 8.4.19 stresses that development of walking and cycling routes can give economic returns of 13:1 which is highly cost-effective.
- Policy 29 covers the management of on-street and public car parking, providing short-term visitor parking, cycle and motorcycle parking and discouraging commuter parking in areas adequately served by public transport.

### **8.3 *Rights of Way Improvement Plan***

The current ROWIP is entitled *Walk, Cycle, Ride: Rights of Way Improvement Plan for County Durham 2015–2018* (Durham County Council, 2015a).

The Countryside and Rights of Way Act 2000 placed an obligation on local authorities to produce and maintain a Rights of Way Improvement Plan (ROWIP). This is the third ROWIP for County Durham. The ‘opportunities’ (essentially the policies) identified in the plan include protecting and maintaining the network, modernising by improving existing routes, and influencing travel and lifestyle choices by creating and promoting well-designed, high-quality active travel routes. In relation to development there is an aim that paths are provided and improved as part of development, and to improve gateway sites to public green spaces. Enhancements to the natural environment and biodiversity should be progressed wherever possible as part of improvement schemes.

### **8.4 *Air Quality Action Plan for Durham City***

Following consultation in the autumn of 2015, this plan was adopted in June 2016.

Action 5 in the plan is the development of cycle-ways / modal shift across Durham city that link into national and county cycle routes.

No particular actions were identified in relation to walking.

### **8.5 *Durham City Sustainable Transport Delivery Plan, 2019–2035***

An early draft of this document was circulated to stakeholders, including the Neighbourhood Planning Forum, for comment in January 2016. It was published for public consultation in the summer of 2016, and again in the summer of 2018 alongside the Preferred Options version of the emerging County Durham Plan. A version dated December 2018 is now included on the county council’s transport policies web page.

#### **8.5.1 *Vision and principles***

The vision is to: “Enhance the transport networks and services within Durham City to help make the city a world class place where people can move around for work, for education, to access healthcare and other services that will help improve quality of life, and to access the social and cultural opportunities that Durham City offers, while protecting and enhancing its unique historic and natural environment.” The delivery plan is underpinned by a hierarchy of users framework to develop the focus of interventions within the delivery plan (section 3.2, page 31). This hierarchy (from users to consider first to those to consider last) is: pedestrians, cyclists, public transport users, specialist service vehicles (e.g. emergency services, waste etc.), other motor traffic. When designing development, those with mobility impairments are to be given prime consideration.

The document notes that there are substantial levels of walking in the city, and that the compact nature of the city also provides significant potential for cycling for many journeys within the city (p.7). It notes, in relation to the city centre, issues of conflict between pedestrians, cyclists and motor vehicles in shared spaces and on shared paths, especially when these areas are busy (p. 20).

#### **8.5.2 *Opportunities for walking and cycling***

On pages 19–22 of the delivery plan, the current environment for walking and the possibilities for improvement are discussed. Despite the compact nature of the city centre, where vehicular access has been actively discouraged, there are still many trips undertaken by private car, some of which



could switch to active modes. Some particular problems are noted, such as the confusing layout of the city centre, footpath congestion, safety on main roads, and the severance effect of the A690, particularly as it affects the pedestrian route from the railway station to the World Heritage Site. Outside the centre, the lack of pedestrian crossing facilities is a problem on roads adjacent to the hospital and employment areas. The delivery plan recommends improving pedestrian priority at key junctions and improving footways between key locations, which would also help wheelchair users and other disabled people.

Pages 22–23 of the delivery plan go into the opportunities for cycling in depth. There is speculation on the reasons for the low cycling modal share in the city, the various reasons suggested including (i) the already high levels of walking; (ii) the hilly nature of the city; (iii) the cobbled streets. The most plausible of these would be the hilly nature of the city. There are relatively few cobbled streets in Durham: South Street, part of Crossgate, Neville Street and part of South Bailey are the main ones: these alone are not sufficient to account for low levels of cycling. Attributing the low levels of cycling to the high levels of walking is also unconvincing without evidence. No doubt if a good cycling network were provided, some journeys would switch from walking to cycling, but there would also be switching from car to cycling, including more complex journeys where public transport struggles to compete. See [section 10](#) for evidence from the Propensity to Cycle Tool.

The delivery plan nevertheless recognises significant opportunities to increase cycling participation, noting that “the challenge is to provide continuous, safe routes”. A number of detailed issues are listed, including the following which relate to Our Neighbourhood:

- Limited provision of coherent and continuous cycling infrastructure;
- The cycle routes through the city centre are complex and incoherent. NCN route 14 through the city centre takes a circuitous route and requires the cyclist to frequently dismount;
- The one-way system on North Road limits cycle accessibility from east to west;
- The absence of a north-south cycle link or quality cycle link to Durham University from the city centre and areas with a high proportion of student rental properties around Hawthorn Terrace, Atherton Street, and Sutton Street;
- Saddler Street, along the Peninsula, is unattractive for cyclists due to the contra-flow in operation and cobbled surfaces, which also impact on disabled users;
- There are many heavily trafficked junctions on the outskirts of the city which have no provision for cyclists;
- The hilly topography is off-putting to potential cyclists;
- Cycle parking is inadequate in certain city centre locations. There are issues for example with the quality and security of cycle parking at the bus station.

### **8.5.3 Relation to planning policy**

Pages 32–33 relate the delivery plan to land use planning, and mention the emerging County Plan and Neighbourhood Plan as vehicles for ensuring improved transport outcomes. The document recommends that individual site designs should ensure high quality access on foot, by cycle and by public transport. The 2014 County Durham Parking and Accessibility Guidelines are noted, but the delivery plan suggests that these and other current standards do not go far enough and that the highest possible design standards should be adopted.

A key point is the recommendation to ensure “developments are ‘permeable’ for walkers and cyclists. A grid system is preferable to cul-de-sacs as these allow for more direct routes. Large developments should include walking and cycling routes that are direct and which reflect desire lines. To encourage this, maximum distances from developments to bus stops and designated cycle routes could be specified for new developments, and the design of buildings should reflect access to sustainable modes” (p. 32–33). Car parking in central areas of the city should be kept to a minimum (p. 33) but higher provision of cycle parking is required within developments, including in residential development within the city.

#### **8.5.4 Infrastructure, design, and other supporting measures**

Section 4 introduces infrastructure measures, to reallocate space to sustainable modes, starting on page 37. It proposes short term and longer term measures to enable and encourage uptake of sustainable transport modes. In the longer term the delivery plan proposes reallocation of space on the Milburngate Bridge, which it judges will only be possible following the building of a Northern Relief Road. There might also be scope to pedestrianise North Road and lower Claypath.

In the shorter term the delivery plan recognises a need to provide routes crossing the city-centre for utility cyclists. It focuses overly on the National Cycle Network Route 14, which would be rerouted via Silver Street and the Market Place and thence to Leazes Bowl, but for utility journeys from Western Hill or the Crossgate area to Elvet this would be of no assistance. Earlier versions of the document proposed allowing cycling via Framwellgate Bridge and Silver Street before 10am and after 4pm, allowing commuting journeys and avoiding the peak times for shopping, but the current delivery plan is not explicit, only hinting at this solution in Figure 4.2 on page 42.

The remainder of section 4 makes suggestions for other areas of the city, noting particularly the lack of cycling provision on routes to the University, and the inadequate footways (section 4.4, p. 49). Few definite proposals are made, and the related map at Figure 4.4 identifies a number of stretches of road and junctions to be improved, but little more than generic suggestions for action. A number of streets, junctions and roundabouts which did not feature in the withdrawn County Plan are identified for attention, such as Margery Lane, Quarryheads Lane, Church Street, Hallgarth Street, New Elvet and South Road. Some of these streets have subsequently been picked up in documents associated with Durham University’s masterplan.

Section 4.5 tackles the north-western corridor, part of which lies outside Our Neighbourhood. It notes the potential to reallocate space to sustainable modes because of the wide roads. Key destinations in the area include the hospital and Aykley Heads. The large roundabout junctions are noted as particularly hazardous for walking and cycling, including the Sniperley roundabout, County Hall roundabout and the B6532 roundabout at the northern access to Aykley Heads.

City-wide supporting measures are proposed in section 6 starting on page 69. For walking, the main recommendations are to reduce traffic speeds and improve pedestrian priority and signal timings at crossings. The need for enforcement action against illegal parking is noted, along with a complete review of route signing. Regarding cycling, the delivery plan draws on the 2008 DfT publication *Cycle infrastructure design*. Such is the pace of change in the accepted design standards for cycling in the last decade that it is generally recognised that this design guide does not go far enough, although most of the underlying principles which are drawn out in the delivery plan are sound. For example, the delivery plan makes valid points about the need to prioritise traffic reduction, speed reduction, and redesigning junctions to make cycling safer, and discourages converting footways (pavements) to shared use for cyclists and pedestrians. It suggests segregating cycles from motor traffic along main roads, but also dealing with barriers such as busy junctions and roundabouts. A scheme for public bike hire, including e-bikes, should be explored.

## **8.6 County Durham Strategic Cycling and Walking Delivery Plan, 2019–2029**

This strategic delivery plan was adopted in January 2019 and sets out the County Council’s vision to “make cycling and walking part of Durham’s culture and to make them safe, affordable, enjoyable, everyday modes of transport for everyone”.

The overall aims are to plan and provide high quality cycling and walking networks, to manage and protect these networks, and to encourage and enable greater participation across all demographic groups. The action plan lists a number of objectives, specific actions towards achieving these objectives, and performance indicators to assess the outcomes. Timeframes for delivery, the relative priorities and costs are given. The following points have particular relevance for neighbourhood plans:

**Objective 1, Action 1:** The Council will audit and assess routes using DfT’s LCWIP, TfL and the Welsh Active Travel guidance and the Living Streets School Route and Community Street Audits. The Neighbourhood Plan supports this objective by requiring developers to use audit tools to assess the quality of walking and cycling access to developments in Transport Statements and Transport Assessments.

**Objective 3:** A number of actions support the planning of cycling and walking infrastructure and the interaction with the planning process, including producing LCWIPs (Local Cycling and Walking Infrastructure Plans), embedding these in the County Durham Plan, securing funding via Section 106 contributions, and requiring new developments to accord with best practice on cycling and pedestrian routes. The Neighbourhood Plan supports this objective through Policy T1, and through the evidence gathering on the deficiencies in the current networks.

**Objective 4, Action 1:** The Council will use best practice design guidelines (TfL, Active Travel Wales) to attract users of all ages and abilities and ensure a good quality and consistent experience. The Neighbourhood Plan supports this action through Policy T1.

**Objective 8, Action 4:** This seeks to maximise opportunities to implement LCWIPs through development contributions (Section 106). This action is supported by policy T1 of the Neighbourhood Plan.

## **8.7 Policy context: summary**

Summing up the above review of the policy context, we can see that there is strong support from national and local policy documents for the approach taken by the Neighbourhood Plan in respect of walking and cycling. The big gap is the LCWIPs (or area action plans) which are to be developed as part of the delivery plans. The walking and cycling issues gathered as part of the community engagement work should be a useful contribution to these plans.

## **9 Evidence from travel surveys**

Durham University conducts annual staff and student travel surveys as part of the institution’s sustainable travel plan. The reports of the results from 2013 and 2014 have been shared with the Neighbourhood Planning Forum. These surveys are interesting because the University is a major employer and trip generator at the heart of Our Neighbourhood, and the surveys include useful questions asking respondents about what would encourage them to change their mode of travel.

The surveys cover Queen’s Campus in Stockton as well as the Durham campus, but as the size of the Stockton campus is much smaller it is possible to take the combined results as fairly typical of the situation in Durham. For example, the 2013 student survey had 1209 respondents, of which 1096 (90.7%) were studying in Durham.

Students were asked to indicate which of several measures would encourage them to cycle to the University. Exact figures are not given in the report, but reading from the bar chart (p. 10, figure 7) we can get a rough idea. The six most popular measures are shown in the following table, bearing in mind that respondents were allowed to pick multiple reasons.

Cycleway improvements in the local area	43%
Provision of traffic-free bicycle routes	40%
A guaranteed storage space for my bicycle	34%
Road safety improvements in the local area	33%
A readily available pool of University bicycles	30%
Increase in secured/covered bicycle storage	26%

These results show strong support for infrastructure improvements, as well as for better cycle parking. A bike hire scheme, also suggested in the Durham City Sustainable Transport Delivery Plan (DCC 2018a, p. 70), might have support from students.

The report elaborates on other suggestions and comments made by respondents. Regarding cycle parking there were comments on “the lack of cycle parking on Palace Green, limited facilities in their college, and nowhere to keep it safely in their rented accommodation”. Some respondents particularly said that a cycle lane from the hill colleges to the science site is required. There were comments criticising cycling provision mixed with pedestrians.

The staff travel survey of 2013 had a higher response rate, with 1385 members of staff responding, of whom 1240 (89.5%) worked exclusively on the Durham campus and a further 46 (3.3%) worked at both Durham and Stockton. The numbers currently cycling amounted to 4.9% of respondents.

Tables 4 and 5 on page 7 of the report analyse the mode of transport according to the type of staff. It comes as no surprise that the data appear to show that the better-paid staff live closer to the University and are more likely to walk or cycle.

Unlike for the student survey, most staff respondents said that nothing would encourage them to cycle to work (54%) but this is a reflection again of the distance of travel, as many more students live close to the University. The most popular measures for encouraging cycling are shown in the table below.

Cycleway improvements in the local area	22%
Provision of traffic-free bicycle routes	22%
Road safety improvements in the local area	20%

Again, there is strong support for infrastructure improvements, and on the face of it the potential for a large number of journeys to switch to cycling, though there would clearly need to be a lot of different routes covered to cater for all respondents, and an indication in a survey does not necessarily result in a change of transport mode in reality.



## 10 Evidence from the Propensity to Cycle Tool

### 10.1 Background to the tool

A major piece of evidence regarding the potential contribution of cycling to future transport needs is the Propensity to Cycle Tool project (see <http://pct.bike/>). This is an academic research project with funding from the Department for Transport (DfT), the Economic and Social Research Council (ESRC), and the Engineering and Physical Science Research Council (EPSRC). The project includes teams from the University of Cambridge, the UKCRC Centre for Diet and Activity Research (CEDAR), the University of Leeds and the University of Westminster.

The Propensity to Cycle Tool is recommended in paragraphs 3.34 and 3.35 of the Department for Transport's *Cycling and Walking Investment Strategy* (DfT, 2017a) in the context of preparing Local Cycling and Walking Investment Plans (LCWIPs) to identify the most promising routes and areas for investment. The DfT's *Local Cycling and Walking Infrastructure Plans: technical guidance for local authorities* (DfT, 2017b) strongly recommends the use of the tool (para. 4.8), though it is pointed out that routes to sites of education will need to be identified separately as the tool is based on travel to work data from the census.

The project uses 2011 census information about current commuter journeys, and applies a number of different scenarios to estimate the potential for these journeys to switch to cycling. The tool models the distance and the hilliness of journeys to determine which journeys are likely to switch, and makes the information available in regional summaries, by local authority, and also via an interactive map that can be applied to smaller areas such as Durham city. The fact that the tool takes account of hills makes it especially useful in the Durham context. There have been differing views as to the extent that the hilly nature of the city explains the low cycling modal share, or whether suppressed demand results from poor infrastructure.

A briefing document aimed at local authorities and planners was published by the UKCRC Centre for Diet and Activity Research in February 2017 and gives a useful summary of the scenarios considered:

- **Government Target**, which assumes that cycling levels double nationally, and uses trip distance and hilliness to predict which trips would switch.
- **Gender Equality**, in which women have the same propensity to cycle a given trip as men.
- **Go Dutch** draws on Dutch Travel Survey data to estimate what cycling levels one would observe if England acquired Dutch cycling infrastructure and Dutch cycling culture, but kept its current trip distances and hilliness.
- **E-bikes** takes Go Dutch even further, and uses additional data on how ebike ownership encourages longer trips and overcomes hilliness.

In general across England the Go Dutch scenario predicts a six-fold increase in cycling over current levels, with 18% of people cycling to work.

### 10.2 Propensity to Cycle in County Durham

Here is a summary of the results of applying the tool at the level of County Durham, obtained from <http://www.pct.bike/la-map.html>

Scenario	% cycling to work
2011 Census (actual figure)	1.1%
Government target	3.1%
Gender equality	2.0%
Go Dutch	12.5%
E-bikes	21.2%

The Government Target scenario tests what would happen locally if cycling doubled nationally from the 2011 Census levels. The fact that the estimate for County Durham is more than twice as high as the 2011 Census figure shows that currently fewer journeys are done by bike in County Durham than you would expect based on the length and hilliness of the journeys. The estimate under the Gender Equality scenario almost doubles, which shows that currently hardly any women commute by bike in County Durham. The reason that women cycle less than men in England, whereas in the Netherlands slightly more women cycle than men, is not fully understood, but it is thought to be because women tend to be more risk-averse and are also more likely to be accompanying children to school as part of their journey to work (see the *National travel survey 2014: travel to school* factsheet (DfT, 2014) page 7). A lack of women cycling is therefore a strong indicator of dangerous road conditions.

The Go Dutch scenario sees cycling in County Durham increase almost twelve-fold, compared to a predicted six-fold increase nationally, and with use of electrically-assisted bikes to overcome the hills, a 21.2% cycle share is predicted for commuting journeys.

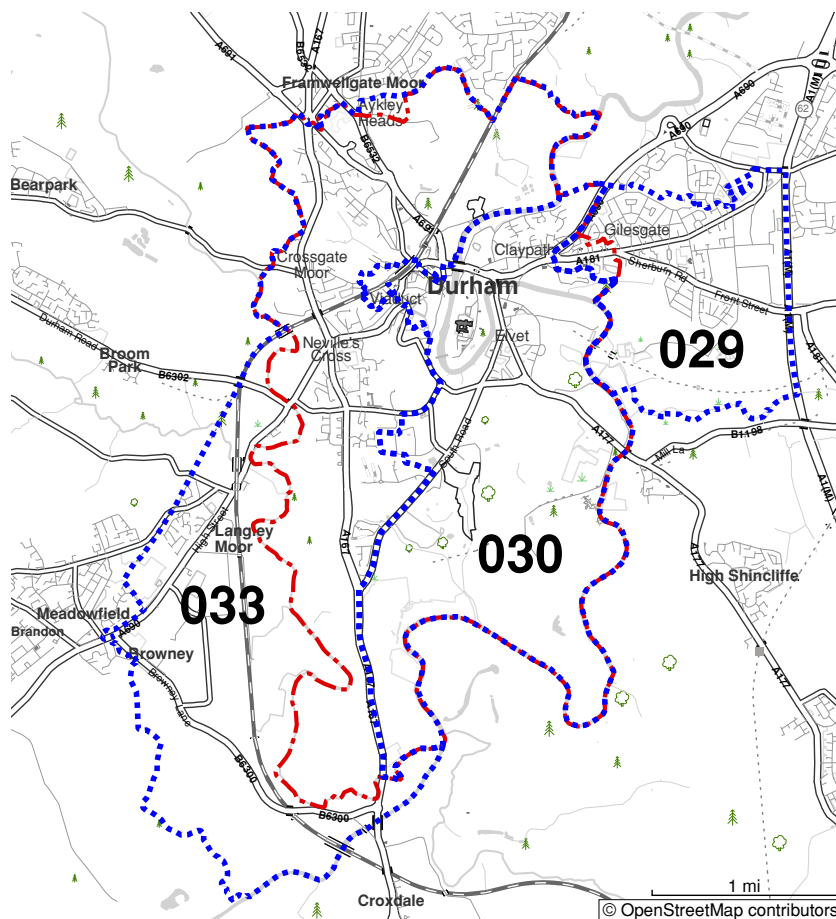
These estimates show that the quality of the infrastructure is particularly poor in County Durham, as under all of the scenarios except e-bikes the predicted increase in cycling far exceeds the national average prediction. The e-bikes scenario shows that, while the hilliness of the region has a large effect on suppressing cycling share, over a fifth of commuting journeys could be completed by cycling. The rural nature of the county has been cited as an unavoidable factor in car-dependence, but these figures show this aspect has been over-played.

The census data are only concerned with travel to work, but according to the 2015 National Travel Survey (DfT, 2016) commuting accounts for only 16% of trips by number and 20% by distance. Personal business, shopping and education (including escort) account for 50% of trips by number and yet only 29% by distance. Being shorter, these types of journey are therefore even more susceptible to a switch to cycling, given favourable conditions.

It might be argued that achieving the government target of doubling cycling nationally will not have much impact on congestion, air quality, and health in Durham city, if only 2% of journeys in County Durham switch to cycling. The government target has been widely criticised as unambitious, and over the lifetime of the Neighbourhood Plan it would be possible to achieve more, given that starting from scratch in the 1970s the Dutch built comprehensive networks in many towns over the same timescale. Also, it is no argument against starting the process of providing safe infrastructure: there is no point putting off making this investment.

### 10.3 Propensity to Cycle in Our Neighbourhood

We also need to look at Durham city in detail. The following map shows the Neighbourhood Plan area in red, and the relevant census areas in blue. Round the north and east of the area, the boundaries of areas 030 and 033 match precisely apart from small differences at Aykley Heads and Gilesgate, where a small part of Our Neighbourhood falls into census area 029. Census area 033, however, covers in addition a large area to the south-west including Langley Moor and Browney.



Here are the census data and predictions from the tool corresponding, as far as possible, to the Neighbourhood Plan Area:

Scenario		County Durham 033	County Durham 030	Total
Census 2011	Cyclists	104 (3%)	58 (3%)	162 (3%)
	Drivers	2454 (60%)	634 (29%)	3088 (49%)
Government target	Cyclists	168 (4%)	90 (4%)	258 (4%)
	Change in cyclists	64	32	96
	Change in drivers	-37	-7	-44

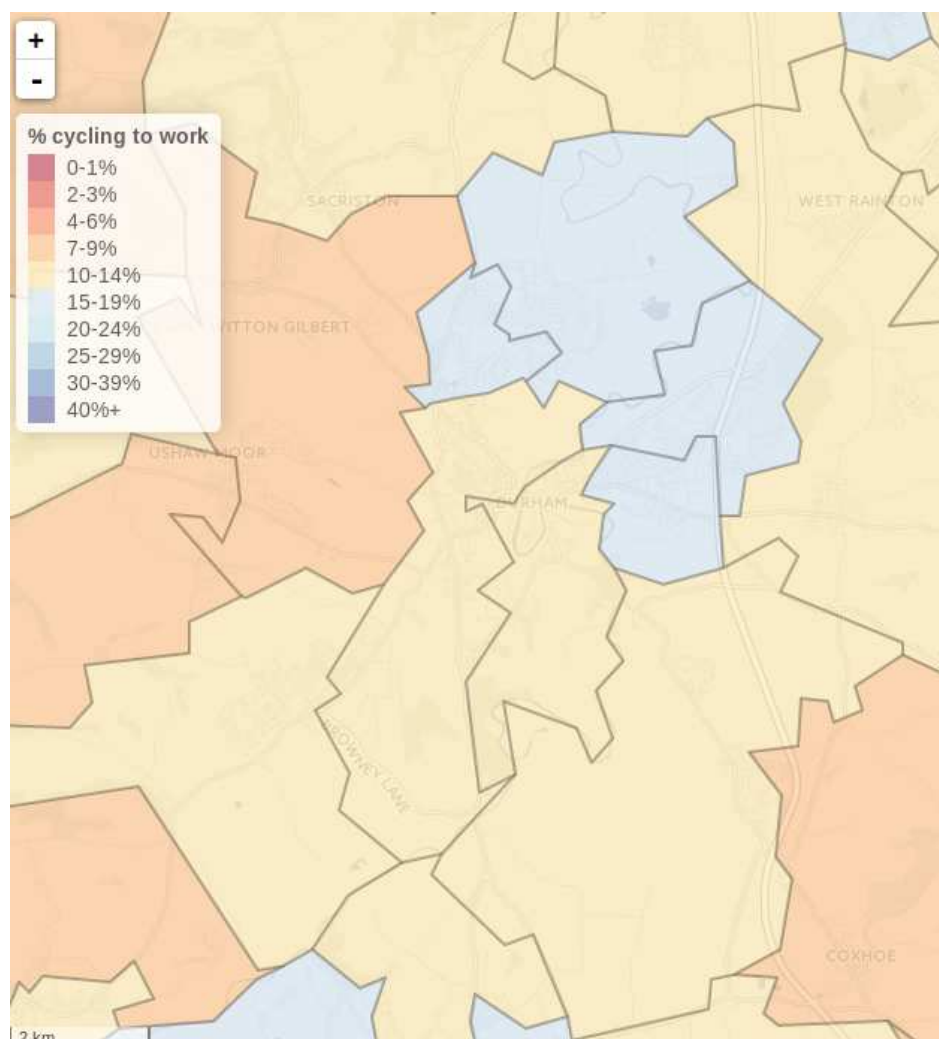
Gender equality	Cyclists	157 (4%)	85 (4%)	242 (4%)
	Change in cyclists	53	27	80
	Change in drivers	-26	-4	-30
Go Dutch	Cyclists	474 (12%)	296 (13%)	770 (12%)
	Change in cyclists	370	238	608
	Change in drivers	-211	-45	-256
E-bikes	Cyclists	904 (22%)	520 (23%)	1424 (23%)
	Change in cyclists	800	462	1262
	Change in drivers	-446	-95	-541

By comparison with County Durham as a whole, the less ambitious scenarios do not show such a big difference in cycling share, as around the Neighbourhood Plan area there are currently more people cycling already than the national average. This will not necessarily indicate the presence of good infrastructure as other factors may be in play such as the fact that a higher proportion of people will live close to their workplace.

#### ***10.4 Propensity to Cycle from neighbouring areas***

When we look at neighbouring census areas, an interesting picture emerges. To the north and east of the Neighbourhood Plan area, four census areas are predicted a cycling share of 15% to 17% in the Go Dutch scenario, quite a bit higher than the census areas for the Neighbourhood Plan. These areas, shown in blue on the tool, cover Framwellgate Moor, Newton Hall, Gilesgate, Carrville and Belmont. As many people living in these areas will be working in the city centre, we need to take care that routes we suggest in the Neighbourhood Plan connect to these areas of the city, and that any barriers to cycling are dealt with.

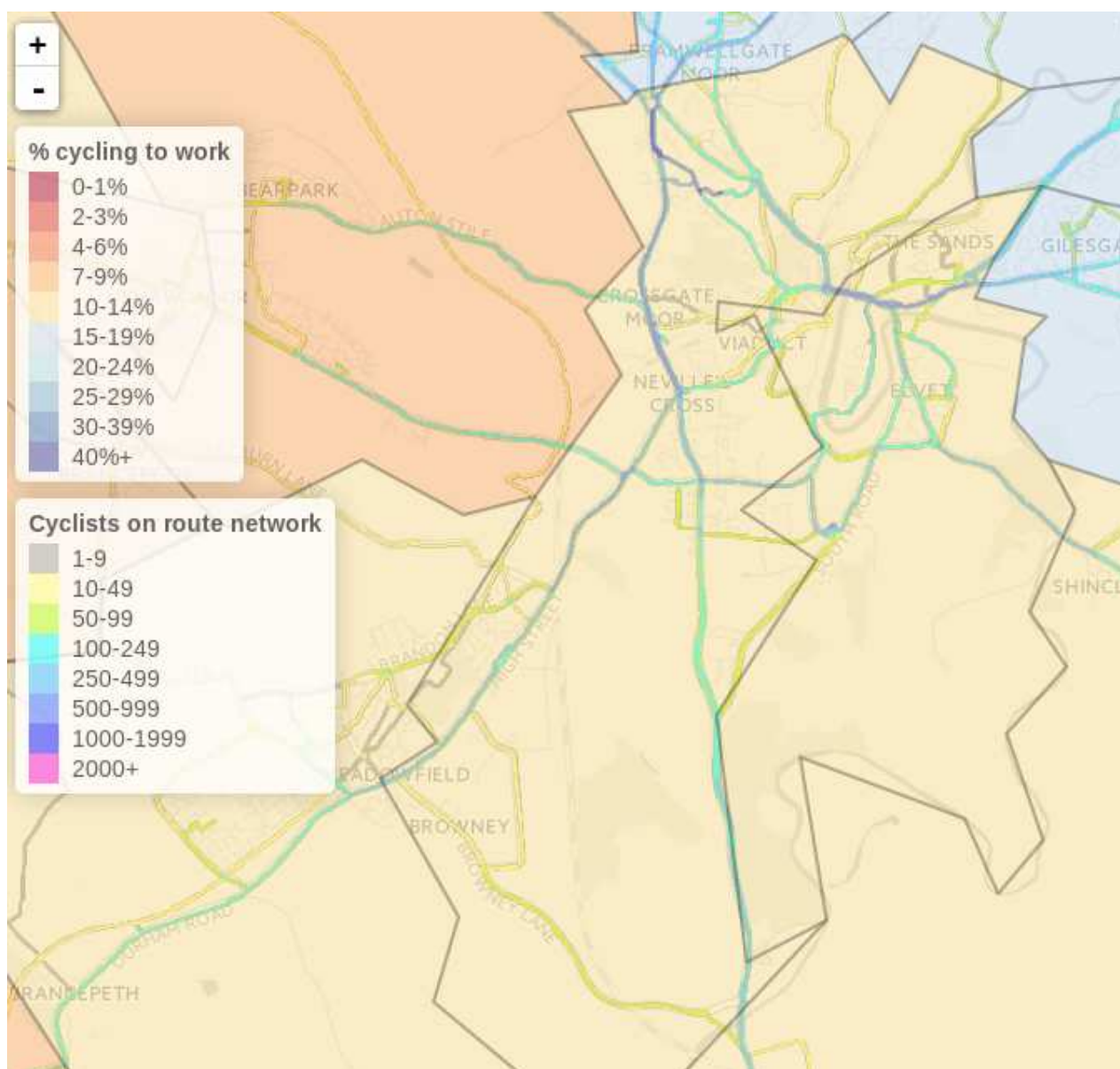




### 10.5 *Modelling likely routes*

The Propensity to Cycle Tool can also show which routes it is predicted will be most used under each scenario for increasing cycling. The data which have been released have to be grouped to protect individual privacy. There are two options available in the tool: the Middle Layer Super Output Areas (MSOA) and the Lower Layer Super Output Areas (LSOA). The output areas are geared towards equalising population, and so are not entirely suitable for visualising routes to workplace destinations. When applied to Durham city the tool produces strange predictions for routes because of the unusually constrained geography of the city centre. For example, MSOA County Durham 030, which includes the city centre and the main University campus at Mountjoy, has its centroid in the Peninsula, with the consequence that the predicted routes mostly avoid the University.

The LSOA map is a little more helpful in predicting the routes which would be most heavily used in the 'Go Dutch' scenario. It is more useful for identifying the routes rather than their relative weighting because of difficulty of using the census data at this scale.



## 11 Bibliography

The following documents were referred to in producing this report, and many of them are directly cited in the text.

CROW (2007) *Design manual for bicycle traffic*. ISBN 978-90-6628-494-4.

Department for Communities and Local Government (2018) *National planning policy framework*. July 2018. ISBN 978-1-4098-5302-2.

Department for Transport (2008) *Cycle infrastructure design*. October 2008. (Local Transport Note; 2/08)

Accessed at <https://www.gov.uk/government/publications/cycle-infrastructure-design-ltn-208>

Department for Transport (2014) *National travel survey 2014: travel to school*.

Accessed at [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/476635/travel-to-school.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/476635/travel-to-school.pdf)

Department for Transport (2016) *National Travel Survey: England 2015. Statistical Release*. 8 September 2016

Accessed at <https://www.gov.uk/government/statistics/national-travel-survey-2015>

Department for Transport (2017a) *Cycling and Walking Investment Strategy*.

Accessed at [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/603527/cycling-walking-investment-strategy.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/603527/cycling-walking-investment-strategy.pdf)

Department for Transport (2017b) *Local cycling and walking infrastructure plans: technical guidance for local authorities*.

Accessed at [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/607016/cycling-walking-infrastructure-technical-guidance.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/607016/cycling-walking-infrastructure-technical-guidance.pdf)

Durham City Neighbourhood Planning Forum (2016) *Consultation on improvements to the walking environment*.

Durham City Neighbourhood Plan Working Party (2019) *Looking forwards: Durham as a creative and sustainable city*.

Durham County Council (2011) *Local transport plan 3*.

Accessed at <https://www.durham.gov.uk/article/3706/LTP-transport-library>

Durham County Council (2013) *Durham city integrated transport approach*. October 2013 (Document T41 in the 2014 Examination in Public evidence library.)

Accessed at <http://durhamcc-consult.limehouse.co.uk/file/2909057>

Durham County Council (2015a) *Walk, Cycle, Ride: Rights of Way Improvement Plan for County Durham 2015–2018*.

Accessed at <https://www.durham.gov.uk/media/8367/Rights-of-Way-Improvement-Plan/pdf/RightsOfWayImprovementPlan.pdf>

Durham County Council (2015b) *City of Durham local plan: consistency assessment of saved policies with National Planning Policy Framework and Guidance*. July 2015.

Durham County Council and JMP (2016a) *Durham city sustainable transport strategy 2016–2033: strategy report*. May 2016.

Durham County Council (2016b) *Air quality action plan for Durham city*. Approved June 2016.

Accessed at [https://www.durham.gov.uk/media/10257/Air-Quality-Action-Plan-for-Durham-City/pdf/Air\\_Quality\\_Action\\_Plan\\_for\\_Durham\\_City.pdf](https://www.durham.gov.uk/media/10257/Air-Quality-Action-Plan-for-Durham-City/pdf/Air_Quality_Action_Plan_for_Durham_City.pdf)

Durham County Council and Systra (2018a) *Durham City sustainable transport delivery plan, 2019–2035*.

Accessed at <https://www.durham.gov.uk/media/26914/Durham-Sustainable-Transport-Delivery-Plan-2019-2035/pdf/DurhamSustainableTransportDeliveryPlan20192035.pdf>

Durham County Council (2018b) *Durham City transport delivery plan statement of consultation*.

Durham County Council (2019) *County Durham strategic cycling and walking delivery plan, 2019–2029: action plan, 2019–2024*.

Accessed at <https://www.durham.gov.uk/media/27052/Action-Plan/pdf/SCWDP-ActionPlan.pdf>

Durham University (2013a) *Green travel plan survey 2013: staff report*. July 2013.

Durham University (2013b) *Student green travel plan survey report*. July 2013.

Highways England (2016) *Cycle traffic and the strategic road network*. October 2016. (Interim advice note; 195/16).

Accessed at <http://www.standardsforhighways.co.uk/ha/standards/ians/pdfs/ian195.pdf>

Transport for London (2014) *London cycling design standards*.

Accessed at <https://tfl.gov.uk/corporate/publications-and-reports/streets-toolkit>

Transport Initiatives LLP (2014) *Review: Durham city strategic cycle routes*. October 2014

Accessed at [https://www.whatdotheyknow.com/request/strategic\\_cycle\\_routes\\_study](https://www.whatdotheyknow.com/request/strategic_cycle_routes_study)

UKCRC Centre for Diet and Activity Research (CEDAR) (2017) *Evidence Brief special (14) – England's Cycling Potential – Results from the Department for Transport-funded Propensity to Cycle Tool project*. February 2017.

<http://www.cedar.iph.cam.ac.uk/resources/evidence/eb-14-englands-cycling-potential>

University of Cambridge, and others. *Propensity to Cycle Tool*.

Accessed at <http://pct.bike/>

Welsh Government (2014) *Design guidance: Active Travel (Wales) Act 2013*. Version 1, December 2014. (Welsh Government Procedure & Advice Guidance; 102/14)

Accessed at <https://gov.wales/sites/default/files/publications/2017-09/active-travel-design-guidance.pdf>