North Yorkshire Council

LOCAL CYCLING AND WALKING INFRASTRUCTURE PLAN

Catterick

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Catterick

CONFIDENTIAL

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WSP

Amber Court
William Armstrong Drive
Newcastle upon Tyne
NE4 7YQ

Phone: +44 191 226 2000

WSP.com

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APPENDICES

1 STAGE 1: DETERMINING SCOPE

1.1 BACKGROUND

1.1.1. It is the ambition of North Yorkshire Council to get more people cycling and walking across the County and that active travel should be the natural choice for everyday short journeys. Cycling and walking more often is good for our health and wellbeing, the environment, and the local economy.

1.1.2. During the Covid-19 pandemic, less traffic on our roads resulted in cleaner air and quieter streets, transforming the environment in our towns and city. Because of this, lots of people discovered, or rediscovered, cycling and walking as a means for exercise and travel. We now have an opportunity to help maintain this interest and ensure people have the choice to take short journeys on foot or by bike, rather than use their cars. The proven way of encouraging more of us to walk and cycle is by providing routes that are coherent, direct, safe, comfortable, and attractive.

1.1.3. To encourage active travel, the Council has established a cycling and walking programme to identify, develop and secure funding to deliver infrastructure improvements. A key component of this programme is the development of Local Cycling and Walking Infrastructure Plans (LCWIPs) which will identify and prioritise future improvements to the local cycling and walking network over the next ten years. LCWIPs have been developed for Harrogate, Scarborough, Selby district, Skipton, Malton & Norton, Northallerton, Ripon and Catterick.

1.2 LCWIP PROCESS

1.2.1. LCWIPs offer a strategic method of identifying cycling and walking improvements required at a local level. They enable a long-term approach to developing networks and routes and form a vital part of the Government's strategy to increase the number of trips made on foot or by cycle. LCWIPs will be instrumental in leveraging funding from national and local streams.

THE LCWIP WILL PROVIDE:

- Plans of the proposed priority networks showing the most important routes and zones for further development, targeting short journeys (to school, work etc).
- A prioritised programme of infrastructure improvements for future development.
- This LCWIP report, setting out the evidence and work completed to support the development of the Plan.
- A basis for securing government funding or developer contributions.

THE LCWIP WILL NOT PROVIDE:

- Exact details of the improvements on each route (these details will be developed as funding comes forward and will be subject to further consultation).
- Guaranteed funding for delivery, although it will put us in the best possible position to secure funding.
- Network planning for long distance routes.

1.2.2. For Catterick, this process and the resulting outputs will represent an evidence-based approach to focus future investment over where the most benefit can be realised, over a ten-year period to 2032.

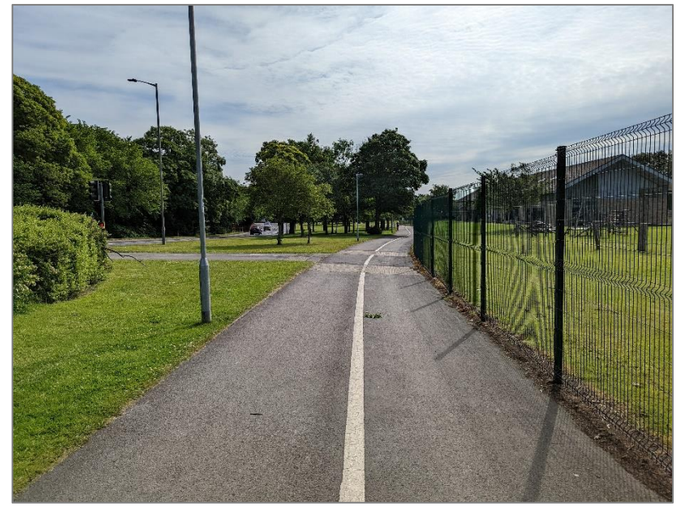
1.2.3. The geographical extent of this LCWIP includes Catterick, Catterick Garrison, Richmond and Scotch Corner.

1.2.4. The Catterick LCWIP will focus on everyday journeys to work and school, as well as unlocking the potential of more people visiting the area for recreational cycling and walking.

1.2.5. The Government has published guidance on the preparation of LCWIPs, setting out the following six stage process:

- **Stage 1: Determine the scope** – establish the geographical context and arrangements for governing and preparing the plan.
- **Stage 2: Gathering information** – identify existing walking and cycling patterns and potential new journeys. Review existing conditions and identify barriers to walking and cycling. Review related transport and land use policies and programme.
- **Stage 3: Network planning for cycling** – identify origin and destination points and cycle flows. Convert flows into a network of routes and determine the improvements required.
- **Stage 4: Network planning for walking** – identify key trip generators, core walking zones and routes, audit existing provision and determine the improvements required.
- **Stage 5: Prioritising improvements** – prioritise improvements to develop a phased programme for future investment.
- **Stage 6: Integration and application** – integrate outputs into local planning and transport policies, strategies, and delivery plans.

1.2.6. The remainder of this document details how the LCWIP has been developed and sets out a prioritised programme for its delivery.



2 STAGE 2: GATHERING EVIDENCE

2.1 ACTIVE TRAVEL CONTEXT

THE CASE FOR WALKING AND CYCLING

2.1.1. The Department for Transport (DfT) announced their Cycling and Walking Investment Strategy (CWIS) in April 2017, outlining the Government's ambition to make walking and cycling the natural choice for shorter journeys or as part of a longer journey, including the aim to double cycling activity by 2025.. The benefits of achieving this outcome would be substantial, supporting public health and wellbeing, more vibrant towns and public spaces, and low carbon travel patterns becoming commonplace. CWIS2 provided an update to this strategy in 2022, including an outline of the investment strategy that would realise these ambitious goals.

2.1.2. In order to help local bodies that are interested in increasing cycling and walking in their local areas, the DfT published guidance on the preparation of Local Cycling and Walking Infrastructure Plans (LCWIPs) in April 2017.

2.1.3. In early 2020 the Government launched Gear Change: A Bold Vision for Cycling and Walking, announcing a £2 billion plan to make England a great walking and cycling nation. Gear Change identified four key themes central to achieving this:

- Better streets for cycling and people;
- Putting cycling and walking at the heart of decision making (transport, place-making, and health policy);
- Empowering and encouraging Local Authorities - £2bn of dedicated new investment funding only schemes that meet the new standards; and
- Enabling people to cycle and protecting them when they do through changes to the highway code.

2.1.4. This was supported by New Design Guidance - Cycle Infrastructure Design (Local Transport Note 1/20) (July 2020) which set out the framework for cycling to play a far bigger part in our transport system with the quality of cycle infrastructure to sharply improve to be consistent with national guidance. Routes should be:

- Coherent - part of a wider strategic network that provides access to key destinations;
- Direct - reach their destination as directly as possible;
- Safe - of a high quality and designed to standards that meet safety requirements;
- Comfortable - accessible and attractive for all abilities; and
- Attractive - contribute to good urban design by integrating with and complementing their surroundings.

2.1.5. The Government has a plan to accelerate the decarbonisation of transport. The Transport Decarbonisation Plan (TDP) sets out what will need to be done in order to deliver the significant emissions reduction needed across all modes of transport, putting us on a pathway to achieving carbon budgets and net zero emissions across every single mode of transport.

2.1.6. Within Catterick there are clear opportunities to better connect people and places with targeted investment in active travel infrastructure. North Yorkshire Council shares the CWIS ambition to provide more direct, convenient, safe, and attractive options for more local journeys.

2.1.7. Catterick and Catterick Garrison present some unique characteristics, being the largest British Army Garrison in the world, with plans to expand further in the coming years. Furthermore, the large population is relatively transient, as it is characterised by Army employees who can reside here for shorter periods, as part of their service in the forces.

CREATING ATTRACTIVE PLACES TO LIVE AND WORK

2.1.8. Prior to the transition to a unitary authority, Richmondshire District Council's emerging Local Plan (2018-2039) recognised the potential of active travel to enhance not only the tourist economy but also in creating attractive places to live and work. One of the preferred local objectives sets out a need for access to jobs and key services to be improved by sustainable forms of transport, such as walking and cycling.

2.1.9. The population of Richmondshire (2020) is estimated to be 53,700, of which 26,200 (aged 16-64) are economically active. The total number of jobs is approximately 34,000 which comprises 17,000 employee jobs, self-employed, government-supported trainees, and HM Forces. There are 2,735 businesses within the borough[1]. Richmondshire accounts for 10% of all employment in North Yorkshire and is a key part of the county's economy. The main economic sectors employing the greatest proportion of people in Richmondshire are 'accommodation and food services' (17.5%), 'agriculture, forestry and fishing' (12.5%) and 'retail' (9%) (ONS Business Register and Employment Survey, 2018). This demonstrates the service and land-based nature of the local economy and its reliance on tourism[2].

2.1.10. The resident workforce occupies about 70% of local jobs[3] which creates the ideal conditions to link employers and employees with targeted infrastructure for active travel. Investment in the streets where people live and work could also enable more attractive places for people to work and live in, reducing traffic and emissions and increasing health and wellbeing.

SUPPORTING HEALTH, WELLBEING AND ACCESS FOR ALL

2.1.11. Active travel can play a crucial role in supporting public health and wellbeing. It is one of the simplest and most effective ways to enable adults and children to meet recommended levels of physical activity. A lack of physical activity is the cause of one in six deaths in the UK and costs the country an estimated £7.4bn per year.

2.1.12. Data published by Public Health England covering the period 2019-2020 reported that 19.5% of adults in Richmondshire are physically inactive. Only 0.7% of adults cycle for travel at least three days per week while 8% walk – below the national averages of 2.3% and 15.1% respectively[4]. North Yorkshire Council are encouraging more people to be active as well as using sport and physical activity to help address health

[1] Nomis
[2] Richmondshire.gov
[3] Richmondshire.gov
[4] Fingertips Public Health England

inequalities, contribute positively to the economy, and raise the profile of the area.

2.1.13. Promoting healthier travel is one of the objectives included in the North Yorkshire Local Transport Plan 2016-2045. The importance of regular exercise for achieving and maintaining a healthy lifestyle is emphasised. It is recognised that the best and easiest opportunity for incorporating activity into people's daily routine is through active travel which has additional benefits such as reducing carbon emissions and contributing towards air quality improvements.

2.1.14. Focussing on inclusive design and ensuring North Yorkshire's active travel networks are accessible for all will be important when developing and delivering schemes through the LCWIP process.

2.1.15. The LCWIP also has a vital role to play in creating longer term behaviour change well beyond its ten-year deliver plan. European countries such as the Netherlands have only been able to facilitate mass cycling (27% of all trips are undertaken by bike) though long-term investment (The Dutch 'cycling revolution' can be traced back to a targeted political response in the 1970s). This has engendered generational change to the point where the bicycle is the clear mode of choice for journeys between 2km to 7km.

2.1.16. The Catterick LCWIP, supported by local and national policy, guidance, and funding, presents an opportunity to start the process of creating real change for generations to come.

RESPONDING TO THE CLIMATE CRISIS

2.1.17. North Yorkshire Council declared a climate emergency in 2023 (rolled over from NYCC's declaration in 2022). One of the ambitions is to be a carbon negative region by 2040. In 2022 the previous eight local authorities, along with the National Park Authorities, City of York Council and many other partners worked collaboratively with the York and North Yorkshire Local Enterprise Partnership (LEP) to create 'York and North Yorkshire's Routemap to Carbon Negative'. This is an ambitious co-owned plan to deliver net zero by 2034 and reach the carbon negative ambition by 2040.

2.1.18. In terms of Transport, the Routemap outlines a series of goals or ambitions and in particular, to increase active travel for short journeys, ensuring walking and cycling accounts for 17% of distance travelled by 2038[5].

IMPROVING ACCESSIBILITY AND SOCIAL INCLUSION

2.1.19. At local authority level, North Yorkshire is among the least deprived in England. The 2019 Index of Multiple Deprivation (IMD) identifies no Lower Super Output Areas which are amongst the 20% most deprived in England. However, Gilling West, Swaledale and Colburn wards have higher levels of deprivation than the district average.

2.1.20. 13% of households in Richmondshire are without access to a car (Census 2011) and these households can suffer from social exclusion and transport poverty, struggling to access employment and education opportunities, key services, and facilities, as well as being isolated from support networks.

2.1.21. Cycling, and walking in particular, are generally affordable and natural modes of transport that can be made accessible to the vast majority of people. Enabling a greater number of people to walk and cycle to the locations they need to travel to can have significant benefits not just in regard to health, wellbeing, and for the environment, but also in enabling social inclusion, helping connect people to jobs, education, and each other when other modes of transport aren't feasible options.

2.1.22. There is community support for improving accessibility throughout the district. For example, a petition was set up in the spring of 2020 to create a safe route between Gilling West and Richmond[6]. It received 786 signatures and was presented to the Richmond (Yorks) Area Constituency Committee on 14th October 2020. Members expressed their support, and the scheme was added to North Yorkshire Council's long list of schemes. A further petition was created by Councillor Rowe to gather support for a safe cycle and pedestrian route between Richmond, Scorton and Brompton-on-Swale[7]. There are very clear and strong opportunities to promote social inclusivity through improved active travel connections.

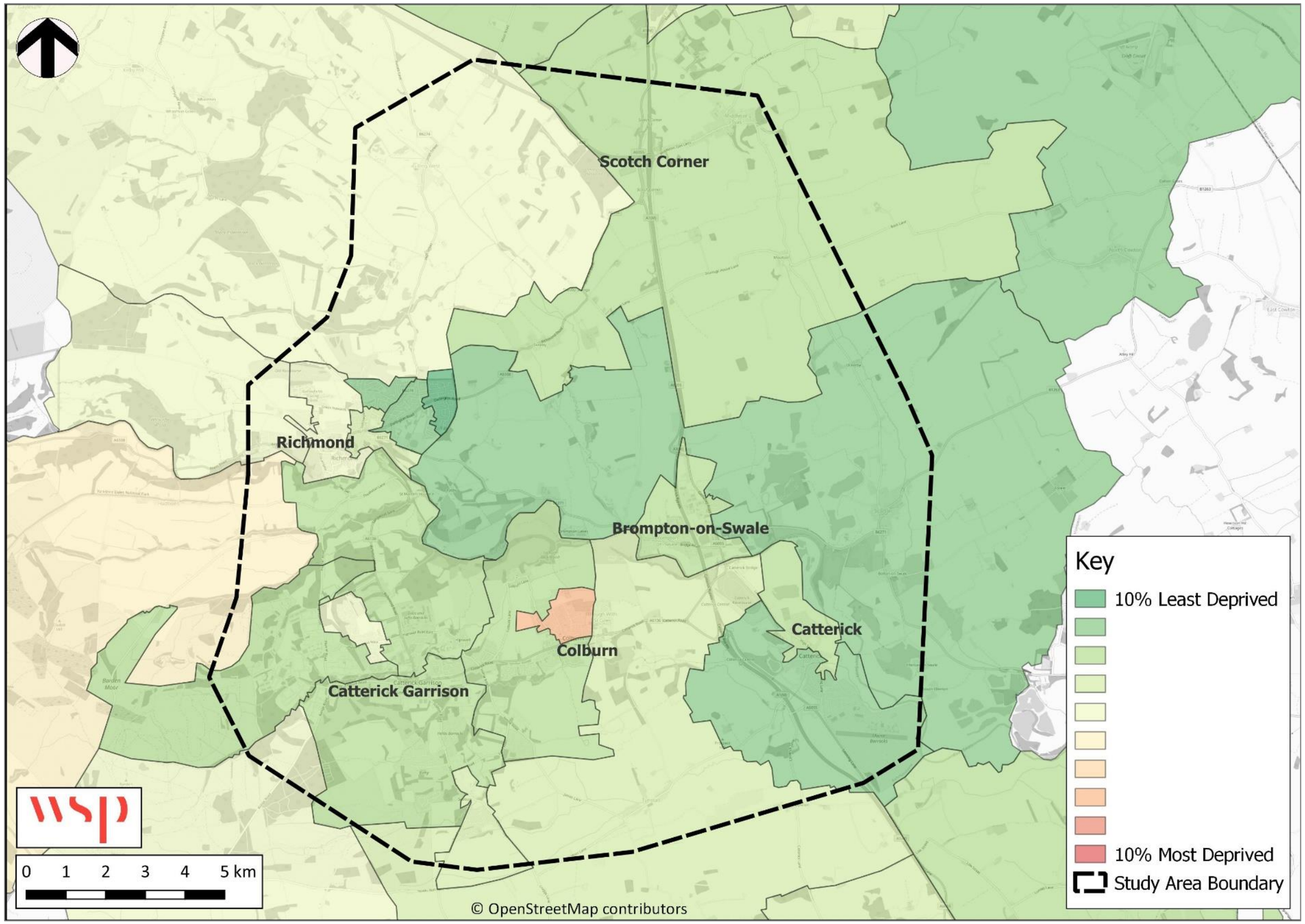
IMPROVING THE TOURISM OFFER

2.1.23. Tourism plays a key role in North Yorkshire's economy. Domestic tourism alone generates approximately thirty million day visitors and three million staying visitors who spend £1.54 billion in the county each year. On this basis, and estimate would suggest that domestic tourism accounts for 11% of the overall economy of North Yorkshire. Tourism in North Yorkshire supports an estimated 41,200 jobs or 14% of all employment[8].

2.1.24. Cycling and walking investment can play a key role in enhancing the tourism offer. It can increase the number of visitors for travel around the borough and improved connections to existing networks can provide enhanced cycling and walking experiences.

[5] North Yorkshire Council Climate Change Strategy 2023-2030
[6] Change.org
[7] Change.org
[8] North Yorkshire County Council

Figure 2.1. Indices of Multiple Deprivation (IMD)



2.2 POLICY CONTEXT

2.2.1. There are clear opportunities to support environmental, health, social, economic, and sustainable mobility goals that better connect people and places with targeted investment in active travel infrastructure. This is evident in both national and local policy that has guided and shaped the Catterick LCWIP process. A summary overview is provided below.

NATIONAL CONTEXT

Gear Change: A bold vision for cycling and walking (DfT 2020)

2.2.2. Sets out Government's vision for delivery of far higher quality cycling infrastructure, focusing on segregated cycle routes with local authorities being expected to deliver a step change in the Level of Service for cycling and walking. It establishes "Active Travel England" that will assess local authorities' performance on active travel, with findings influencing the funding authorities receive across all transport modes. The accompanying Local Transport Note 1/20 Cycle Infrastructure Design sets out new ambitious cycle design standards.

Cycling and Walking Investment Strategy 2 (DfT 2022)

2.2.3. Aims to make active modes a natural choice by 2040, by doubling cycling levels and increasing walking levels. Locally targeted investment via LCWIPs assist to connect people with places – creating vibrant, healthier, and productive places and communities.

Future of Mobility: Urban Strategy (DfT 2019)

2.2.4. Nine principles to address the challenge of transforming towns and cities to meet current and future transport demands. Includes the principle that 'walking, cycling and active travel must remain the best option for short urban journeys.

UK Net Zero Target 2020

2.2.5. This national target, set by the Government in 2019, will require the UK to bring all greenhouse gas emissions to net zero by 2050, compared with the previous target of at least 80% reduction from 1990 levels. Reducing emissions from transport will be carried out by investing in walking and cycling in order to transform towns and cities to enable walking and cycling.

Everybody Active, Every Day (Public Health England 2014)

2.2.6. Indicates how the built and natural environment impact on the travel choices people make and highlights the necessity for effective urban design and transport systems which create 'active environments' to promote walking, cycling and more liveable communities.

Clean Air Strategy (DEFRA 2018)

2.2.7. Outlines how achieving modal shift is key to delivering emissions reduction. LCWIPs have a part to play in tackling the climate emergency by reducing emissions through the delivery of walking and cycling options for journeys.

Inclusive Transport Strategy (DfT 2019)

2.2.8. An inclusive transport system must provide inclusive infrastructure, with streetscapes designed to accommodate the needs of all travellers. LCWIPs identify improvements to build active travel networks and key routes fit for all users.

LOCAL CONTEXT

2.2.9. Local policy relating to walking and cycling is contained in a range of documents, outlined below. These policy documents show a strong level of support for cycling and walking. Several documents, including the Local Plan, are currently being reviewed, making this an ideal time to bring forward and integrate further cycling and walking proposals.

2.2.10. Key local policy documents include:

- North Yorkshire Local Transport Plan (2016-2045)
- A Local Industrial Strategy for York and North Yorkshire (2020)
- North Yorkshire Plan for Economic Growth (2021-2024)
- Richmondshire Local Plan (2012-28)

2.2.11. Key relevant themes emerging from local policy are set out on the following pages.

Policy support for cycling and walking

2.2.12. Since becoming a unitary authority, North Yorkshire is redeveloping its Local Plan. Prior to this, the Richmondshire District Council were preparing a revised Local Plan to cover the period from 2018 to 2035. There are strong levels of support for walking and cycling in the preferred options consultation documents. *Policy SD3 - Access* seeks to ensure that new development can be adequately and appropriately accessed, minimising the need to travel, and actively encouraging and adopting more sustainable modes. *Policy CR1 - Existing Open Space, Community, Sport and Recreation Facilities* states that backing will be given to proposals that improve access to assets by non-car modes of transport. In a similar manner, *Policy D1 - Design* specifies that developments which facilitate access through sustainable forms of transport will be supported.

2.2.13. The North Yorkshire Local Transport Plan includes an objective which aims to address the health aspects linked to transport, by encouraging healthier travel such as walking and cycling, and by reducing some of the negative effects of transport, such as air pollution. It is recognised that one of the best ways of achieving regular exercise is to incorporate it into the daily routine, such as by travelling by active modes.

Growth areas and local plan designations

2.2.14. The Local Plan sets out housing and employment growth areas in Richmondshire which should be considered when developing active travel networks to ensure their sustainability. Key housing sites exceeding 5ha include:

- Colburn Park Phase 2 / 5.7ha;
- Land East of Walkerville / 11.34ha;
- Land North of Haig Road / 5.2ha;
- West Scotton Road / 7.26ha;
- Harley Hills / 43.64ha;
- Land Opposite Haig Road / 8.32ha;
- Duchess of Kent Hospital / 5.82ha;
- West Scotton Road / 8.51ha;
- Land North of Le Cateau School / 8.93ha;
- Land North East of Somme Barracks / 9.04ha; and
- Land South of Loos Road / 9.39ha.

2.2.15. There are also plans for a mixed-use development on former recreation land off Shute Road in Hipswell as well as extensions to Colburn Business Park.

2.2.16. Three military sites are proposed which include Munster Barracks as well as extensions to Somme Barracks and Marne Barracks.

Transport and placemaking schemes

2.2.17. Considerable transport and planning activity is currently underway within the LCWIP study area aimed at bolstering the region's offer as a place to live, work, study, visit and invest, The Ministry of Defence (MoD) is also carrying out an Assessment Study to look into their specific infrastructure requirements.

A Connected Garrison, Green Links (June 2021)

2.2.18. Integrated Transport Planning Ltd. produced a report which documented a study undertaken to improve green transport routes in and around Catterick Garrison. The purpose was to:

- Identify existing and future corridors of movement;
- Consider enhancements to existing links;
- Recommend a core network of coherent routes;
- Indicate priority routes where improvements should be focused;
- Detail the level and type of improvements as well as their costs; and
- Develop a wayfinding strategy.

2.2.19. The recommendations regarding the future movement network (see Figure 2.2) included developing highly segregated 'superhighways' on Leyburn Road, Catterick Road and Gough Road. Ten 'quietway' routes are proposed and it is suggested that the package of options for Richmond Road (QW1) be prioritised as it is '*central to improving connectivity within the town centre, linking together the superhighways and other quietways*'. Quietway 11 also scores highly and would involve the creation of a segregated path through Risedale College.

2.2.20. In terms of leisure routes (see Figure 2.3), P2 which passes through Coronation and Jubilee Parks and along Leadmill Beck before linking to Shute Road is high scoring, as well as P6 which connects Scotton Road with Catterick Road, Cambrai Primary School, and houses around Church Road. All permissive routes, except P3, P4 and P9, were categorised as high priority. Right of Way 2 was the only PRoW to be classified as high priority, mainly due to its eastern section parring through a future growth areas and its proximity to key destinations such as Helles and Vimy Barracks.

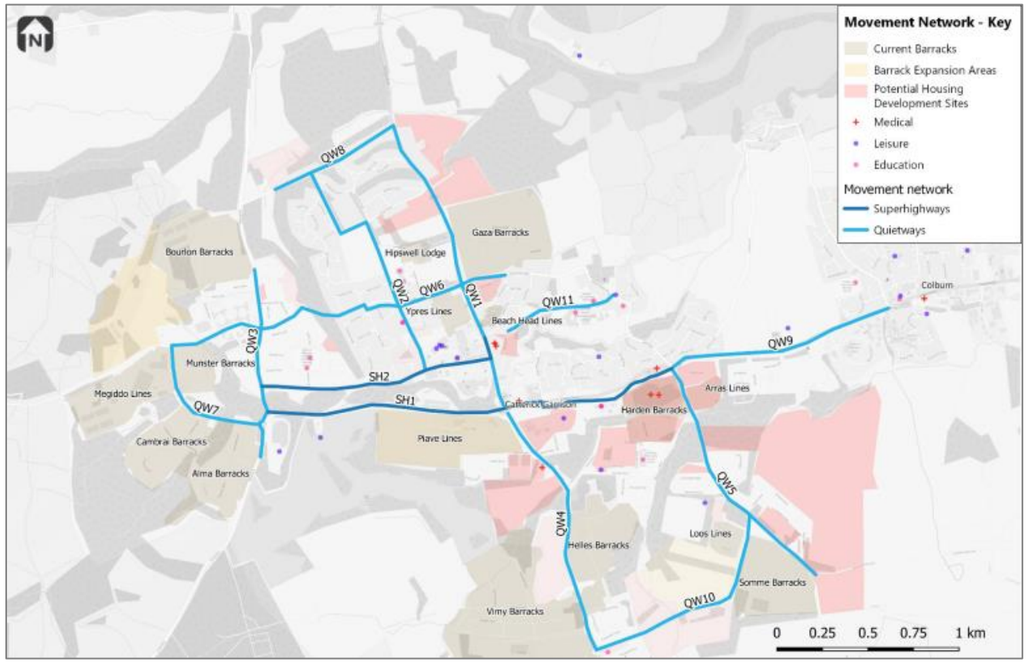


Figure 2.3. Leisure Network

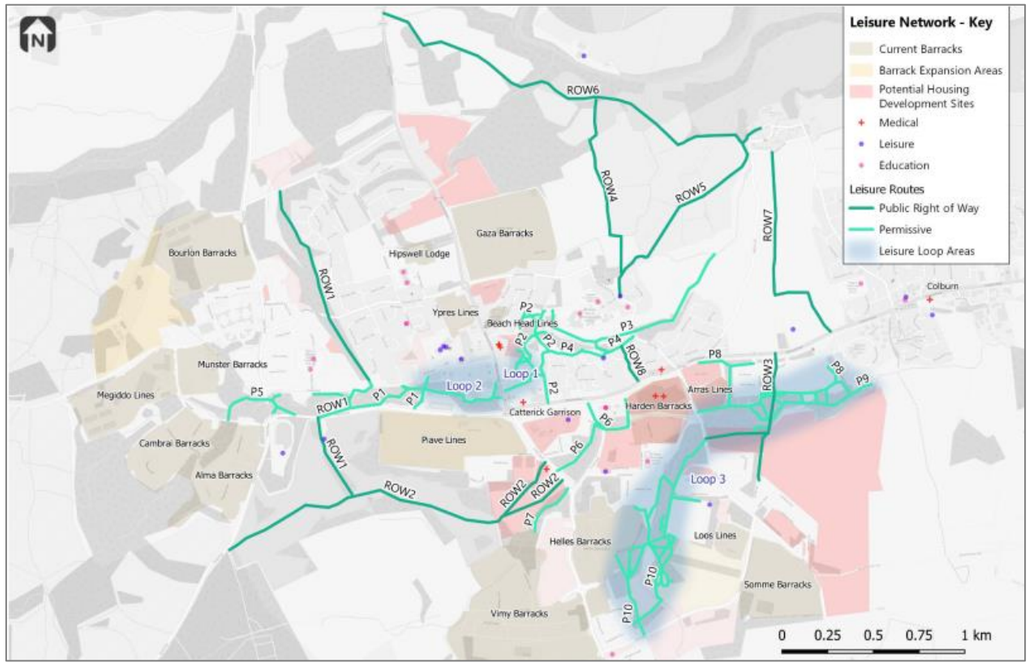


Figure 2.2. Movement Network

Levelling Up Fund Bid

2.2.21. North Yorkshire Council was successful in their bid for Levelling-Up Fund Tranche 2, focussing on the regeneration of Shute Road and Coronation Park in the centre of Catterick Garrison. Proposals include a new pedestrian friendly plaza and active travel connections and spaces through the Park to link to local estates.

The A66 Northern Trans-Pennine Project

2.2.22. National Highways are improving a fifty mile stretch of the A66 between the M6 at Penrith and the A1 at Scotch Corner. It is classed as a Nationally Significant Infrastructure Project and permission to develop it has been obtained. A final DCO decision was confirmed in March 2024, allowing construction to begin later in the year.

2.2.23. The proposals associated with A1(M) junction 53 Scotch Corner (shown in Figure 2.4) are of particular relevance to the Catterick LCWIP. They include:

- Widening the Middleton Tyas Lane approach to the A1(M) junction 53 at Scotch Corner roundabout from one lane to two lanes;
- Relocating an existing footway, bus stop, signage, and lighting columns onto the southern verge of Middleton Tyas Lane to accommodate the additional carriageway lane; and

2.2.24. Also of relevance to the Catterick LCWIP is the section between Stephen Bank and Carkin Moor. A shared bridle/footway has been proposed in the verge adjacent to the old de-trunked A66 which will connect several existing bridleways and footpaths in the area. It will allow circular routes and onward journeys by users, including grade separated crossings of the dual carriageway. This road will become a local route only, with significantly less traffic once the new dual carriageway is open.

Catterick and Catterick Garrison Traffic Management Strategy (2007)

2.2.25. The strategy identified, costed, and prioritised a programme of schemes for implementation. The aims were to:

- Secure long-lasting improvements, especially for vulnerable road users;
- Maximise economic and environmental wellbeing; and
- Minimise existing or potential sources of detrimental impact.

2.2.26. The strategy was developed:

- Within the framework provided by the North Yorkshire Local Transport Plan 2001-2006 (dated July 2000) and the Richmondshire Local Plan (dated January 1999);
- In liaison with the MOD Catterick Garrison and with particular reference to both the Catterick Garrison Travel Plan, and the Catterick Garrison Long Term Development Plan; and
- Following consultation with the local community and stakeholders.

2.2.27. A Pedestrian Action Plan (PAP) was published as a separate document which took into account NYCC's PRoW Improvement Plan and accidents recorded between 2001-04. The PAP identified the following eleven routes for improvement:

- A6136 Richmond Road, including access to the Richmondshire Way Retail Park, and the parallel Shute Road also linking to Risedale Community College;
- A6136 Catterick Road serving the Business Park and Industrial Estate at Colburn and linking to Brompton-on-Swale and Catterick Village;
- Links within the Colburn Residential Estate;
- Byng Road and Hipswell Road including access to Risedale Community College;
- Links surrounding Carnagill and Wavell Schools;
- Gough Road, serving the Richmondshire Way Retail Park and Library
- Richmond Road, Bridge Road and Station Road in Brompton-on-Swale;
- A6136 Gatherley Road, providing access to the Gatherley Road Industrial Estate;
- Scotton Road, Bedale Road and Hunton Road, linking Scotton, Vimy and Helles to Camp Centre;
- Catterick Bridge, forming the main access across the River Swale; and,
- Leeming Lane, the main axis of Catterick Village.

2.2.28. A Cycle Plan was also produced which included a review of existing cycling activity, facilities and accidents involving cyclists. Seven improvements / extensions were proposed:

- Brompton on Swale to Catterick Village Route, via Catterick Bridge;
- Catterick Garrison to Catterick Bridge;
- Catterick Garrison East-West Route: Richmond Road to Plumer Road via Gough Road;
- Catterick Garrison Central Area;
- Le Cateau School Route between Scotton Road and Horne Road;
- Extension of Plumer Road Route towards Richmond; and
- Extension of Southern Routes to Scotton and Tunstall.

Richmond Traffic Management Strategy (2004)

2.2.29. The PAP took into account traffic count data collected in March-April 2000 and accidents recorded between 1998-2001. It identified the following nine routes for improvement:

- Reeth Road to the Market Place, including Nuns Close Car Park, Newbiggin, Rosemary Lane and Finkle Street;
- The Market Place;
- Queens Road and King Street to the Market Place;
- Quakers Lane to Darlington Road;
- Gallowgate, Frenchgate and the Channel to the Market Place;
- Station Road;
- Leisure routes between the Market Place and River Swale;
- Darlington Road to Gallowfields Trading Estate; and
- Gilling Road.

2.2.30. The Cycle Plan proposed:

- Advisory cycle lanes on Station Road between the swimming pool and Frenchgate;
- Creation of a continuous joint-use pedestrian and cycle track across The Batts; and
- Provision of additional secure cycle parking in the Market Place and new cycle parking provision at Richmond Castle;
- The Cross Town Route; and
- The Gallowfields Link.

2.3 EXISTING CYCLING AND WALKING TRAVEL PATTERNS

2.3.1. Levels of walking and cycling increased in Richmondshire during the COVID-19 lockdown in Spring 2020. This was in part because roads were less busy, offering more desirable conditions for active travel. A related reduction in traffic emissions led to improvements in air quality.

2.3.2. Whilst levels of cycling and walking have since fallen back to pre-covid levels, the experience demonstrates that demand for active travel exists, and people will choose these modes if the conditions are favourable. The improvements to infrastructure proposed in the Catterick LCWIP could therefore help increase walking and cycling back to the levels observed during March and April 2020.

2.3.3. Pre-Covid Census Journey to Work data (2011) shows that approximately 71% of the residents within the LCWIP study area work within Richmondshire itself (10,513 workers). There is, therefore, potential to encourage greater levels of commuting by bicycle. Only 29% of workers travel outside of Richmondshire for employment, with neighbouring Hambleton being a work destination for the majority (9%). The LCWIP study area also attracts a number of employment trips from outside the borough, with 5,556 additional trips per day into the area; the majority of these arriving from Darlington.

2.3.4. Over 45% of people in the study area travel less than 5km to work (on average twenty minutes on a bike), demonstrating a high potential for active mode travel choices. This is further demonstrated in that 30% of workers live less than 2km from their place of work (on average twenty-five minutes on foot), highlighting that walking in particular could be a more viable and attractive mode for residents. Despite these short commuting journeys, 45% of residents travel to work by car, whilst 16% walk and 2% cycle (2011 Census).

2.3.5. Figure 2.4 illustrates that existing levels of cycling are greatest in Richmondshire 004G which includes Allenby Road estate, Jutland Recreation Ground and Wavell Junior School. A bridleway (20.35/18/1) passes through Carnagill Plantation, connecting Haig Road and Hipswell Road West. In the areas to the north and east, commuting by bike is much lower, estimated to be only 0-1% between LSOA origin-destination pairs.

2.3.6. Despite these short commuting journeys, 45% of residents travel to work by car, whilst 16% walk and 2% cycle.

2.3.7. Figure 2.5 shows that existing levels of walking are greatest in Richmondshire 003C, Richmondshire 004E and Richmondshire 004H. LSOA 004E contains Piave Lines, Vimy and Helles Barracks while 003C encompasses Marne Barracks and the village of Catterick. Richmondshire 006B, 003B and 003D have the lowest percentage of residents that walk to work. LSOA 006B comprises the villages of Brough with St Giles, Tunstall, Hornby and Hunton while 003B is home to Brompton-on-Swale and the Gatherley Road Industrial Estate. 003D includes dwellings to the north of Catterick.

2.3.8. Topography in Catterick is generally flat in the areas of greatest population, and there remains clear potential to build upon current levels of active travel to make cycling and walking more viable and attractive modes in the area for everyday journeys.

2.3.9. This is reflected in local policy and strategy, recognising the need to provide high quality safe active travel infrastructure to encourage a shift to healthy and greener modes, and to also ensure that future developments are sustainable and connected to these networks.

Figure 2.4. Residents that cycle to work (2011 census)

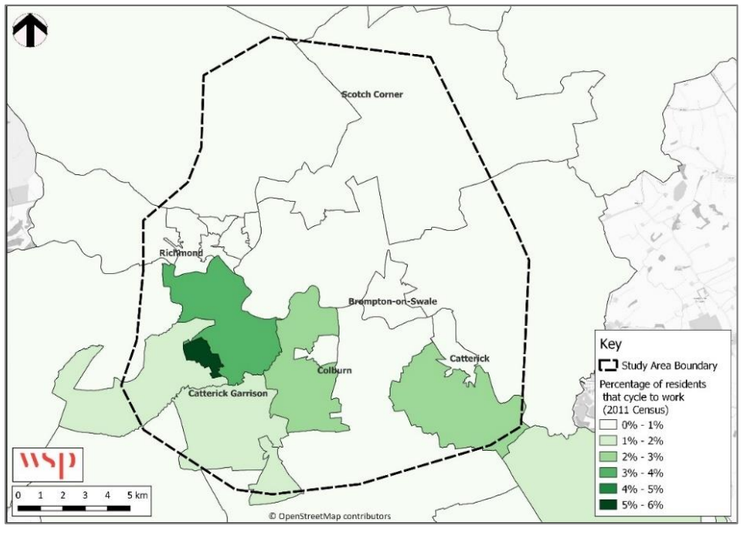
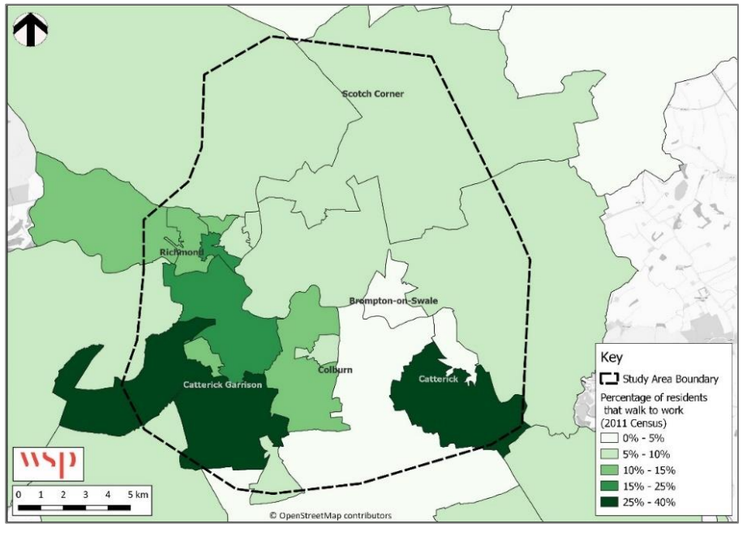


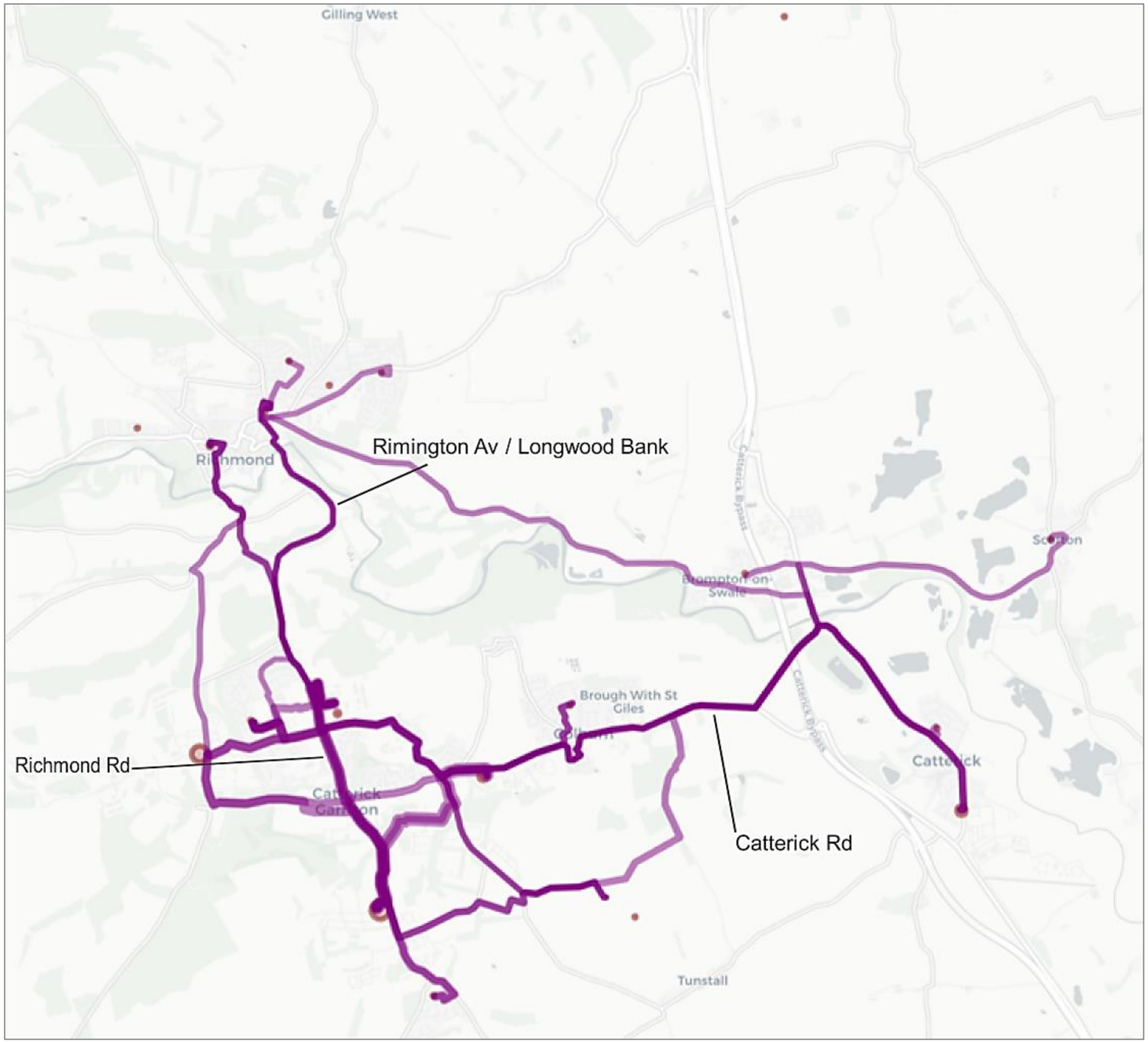
Figure 2.5. Residents that walk to work (2011 census)



Propensity to Cycle: Commuting

2.3.10. Figure 2.6 shows the top 30 most cycled routes taken by people cycling to work in the LCWIP study area in 2011. The data visualises the 'fastest route' scenarios of current users (Census 2011), thereby simulating the most heavily used routes within the study area. Routes into and around Catterick Garrison appears to be the most popular routes in all current and future scenarios in the Propensity to Cycle Tool (PCT) (see www.pct.bike for further information on the PCT). This route records 671 cyclists per day, reflecting the potential growth for cycling within the study area. 351 cyclists per day are using the section of Scotton Road to Plumer Rd via Leyburn Rd. 146 cyclists travel between Catterick and Catterick Garrison daily.

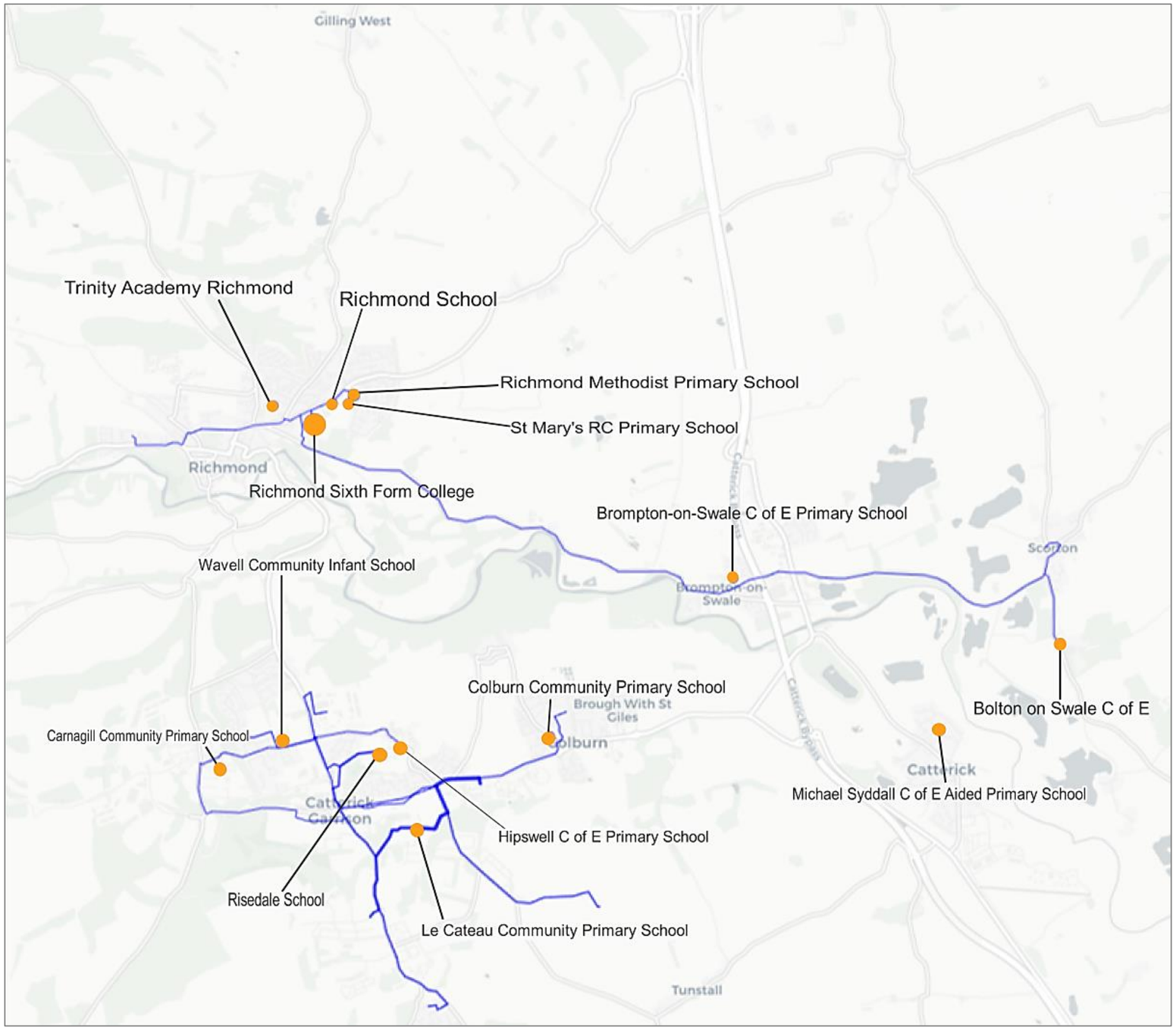
Figure 2.6. 2011 Commuter cycle flows. Increased width = increased usage (Source: Propensity to Cycle Tool)



Propensity to Cycle: School Journeys

2.3.11. Figure 2.7, right, shows the most appropriate cycle network to support cycling to school in the study area, based on the 2011 school census data. Cycling levels are slightly lower than the national average, but nonetheless demonstrate similar clusters and corridors to the commuting routes on the previous page.

Figure 2.7. School cycle flows. Increased width = increased usage (Source: Propensity to Cycle Tool)



Strava Heatmap

2.3.12. Imager from the Strava global heatmap (www.strava.com/heatmap) show existing cycle demand collected from people cycling using the Strava mobile app. While the results are typically more representative of more confident sports/leisure cyclists, the results highlight the importance of the key radial routes of the B6271, Catterick Road, and Scotton Road but also leisure routes such as off-road links through Coronation Park.

Figure 2.8. Strava cycle flows. Brighter colours = increased usage (Source: Strava)

ROAD SAFETY

2.3.13. Collisions involving pedestrians and cycle users can be seen as a barrier to taking up or continuing the activity, as they have a negative effect on both perceived and actual safety.

2.3.14. Figure 2.9 shows pedestrian and cyclist across the LCWIP area, for the period 2019-2021. For every injury shown on the map, there will be additional injuries and near misses not reported. Table 2.1 presents this data numerically.

Table 2.1. Pedestrian and cyclist accidents by severity: 2019 to 2021

Severity	2019		2020		2021	
	Cycle	Walk	Cycle	Walk	Cycle	Walk
Slight	4	6	2	2	2	5
Serious	0	2	0	0	3	3
Fatal	0	0	0	0	0	0
Total	4	8	2	2	5	8

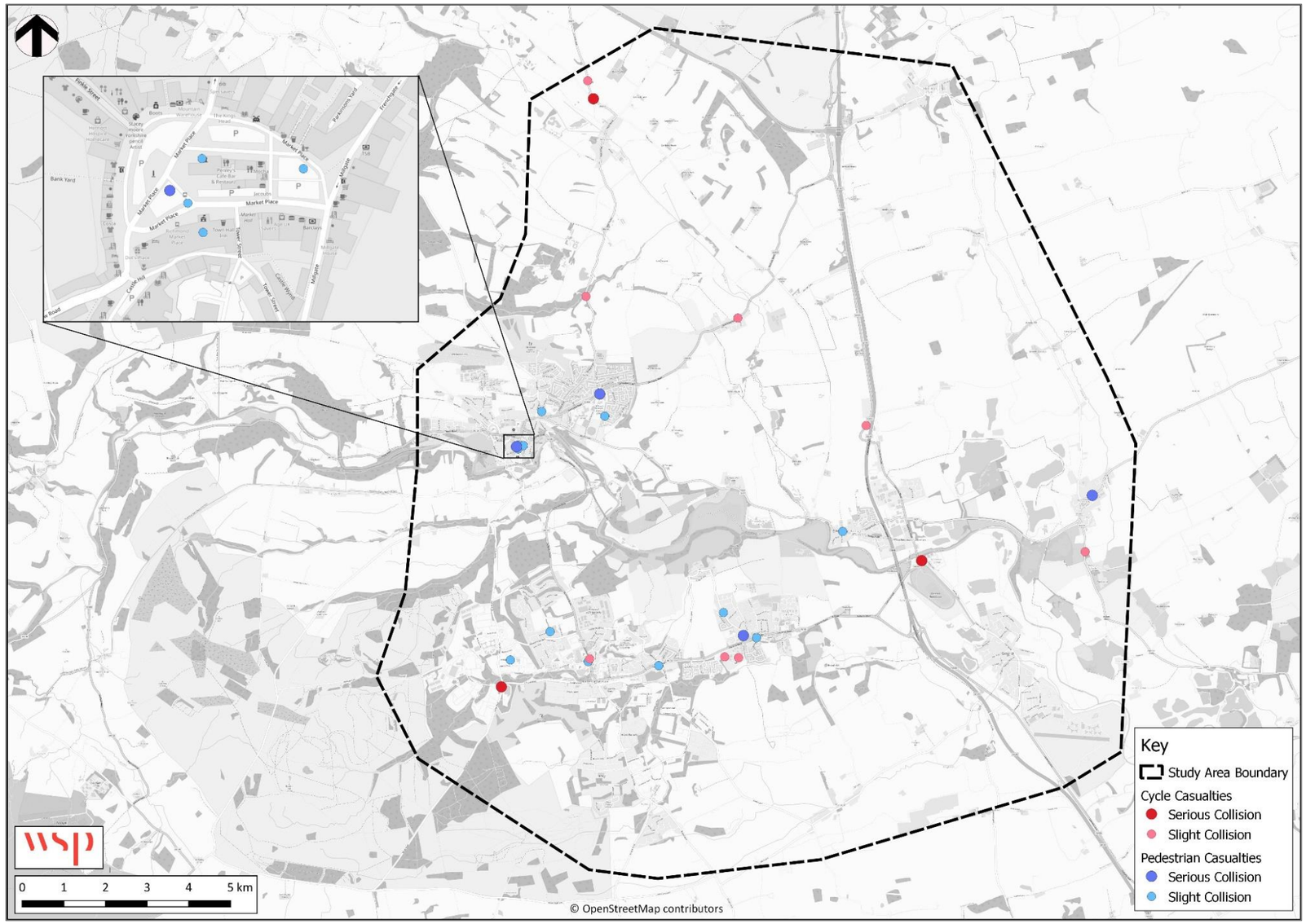
2.3.15. The data shows that over the three-year period there were no fatal collisions involving pedestrians or cyclists.

2.3.16. Plotting the location of collisions can help us to identify 'hotspots', where several incidents have been recorded in a small geographic area. This can help to identify those areas of the network where safety may need to be improved for pedestrians and cyclists.

2.3.17. Accident 'hotspots' are also evident, with some clustering of collisions located along arterial roads or at junctions where there is a higher number of pedestrians and cyclists, namely Catterick Road, Richmond Road, the A6108, the B6274 and Market Place.

2.3.18. Improving infrastructure for cycling and walking within the study area could further reduce collisions in future.

Figure 2.9. Pedestrian & cyclist traffic casualties: 2019-21



EXISTING PROVISION

2.3.19. Figure 2.10 shows existing Rights of Way, including local and regional cycle routes within the study area. The map shows the fragmented nature of the cycle network and public rights of way, which is fairly typical.

2.3.20. There is local cycle route between Richmond and Catterick Garrison follows the disused railway line from the former Richmond Railway Station before joining a section of purpose-built cycle track adjacent to Longwood Bank. A shared footway / cycleway is provided along Richmond Road to the roundabout with Hipswell Road. The infrastructure was constructed in 2009 with funding provided by the regional development agency.

2.3.21. The area benefits from the presence of Wainwright's Coast to Coast Route which is a 182-mile unofficial long-distance footpath between St Bees on the west coast and Robin Hood's Bay on the east coast. In 2022 Natural England sent a proposal to the secretary of state recommending the trail was given National Trail status and work is ongoing to bring the trail up to standard.

2.3.22. Despite this, there is very limited existing off-road or fully segregated provision meaning that sections of these routes fall below the level of provision recommended in latest national guidance.

2.3.23. An assessment of the current provision was carried out to identify the condition and provision of the existing network. Figure 2.11, overleaf, highlights the various levels of provision around the study area.

Figure 2.10. Public rights of Way and cycling routes

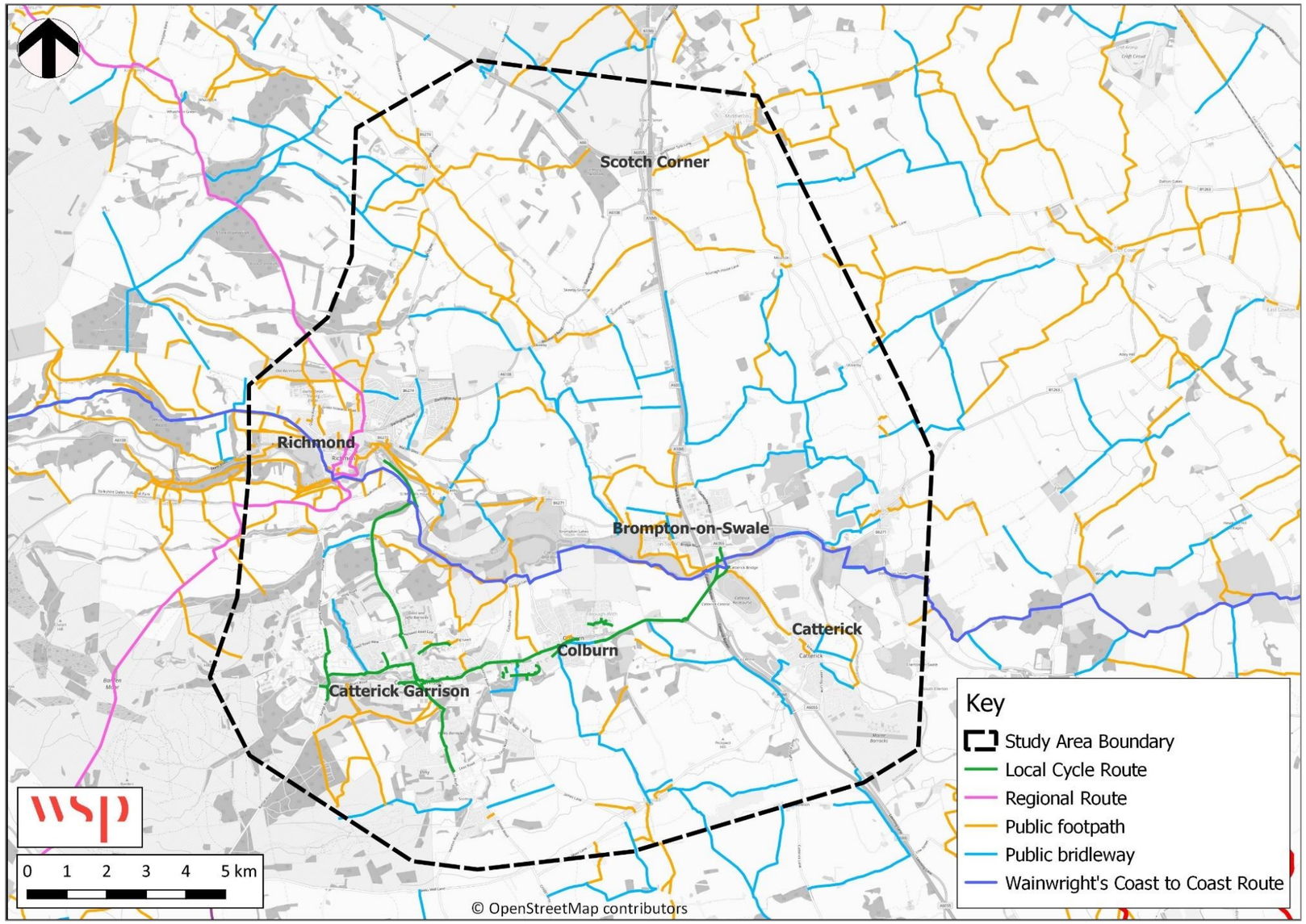
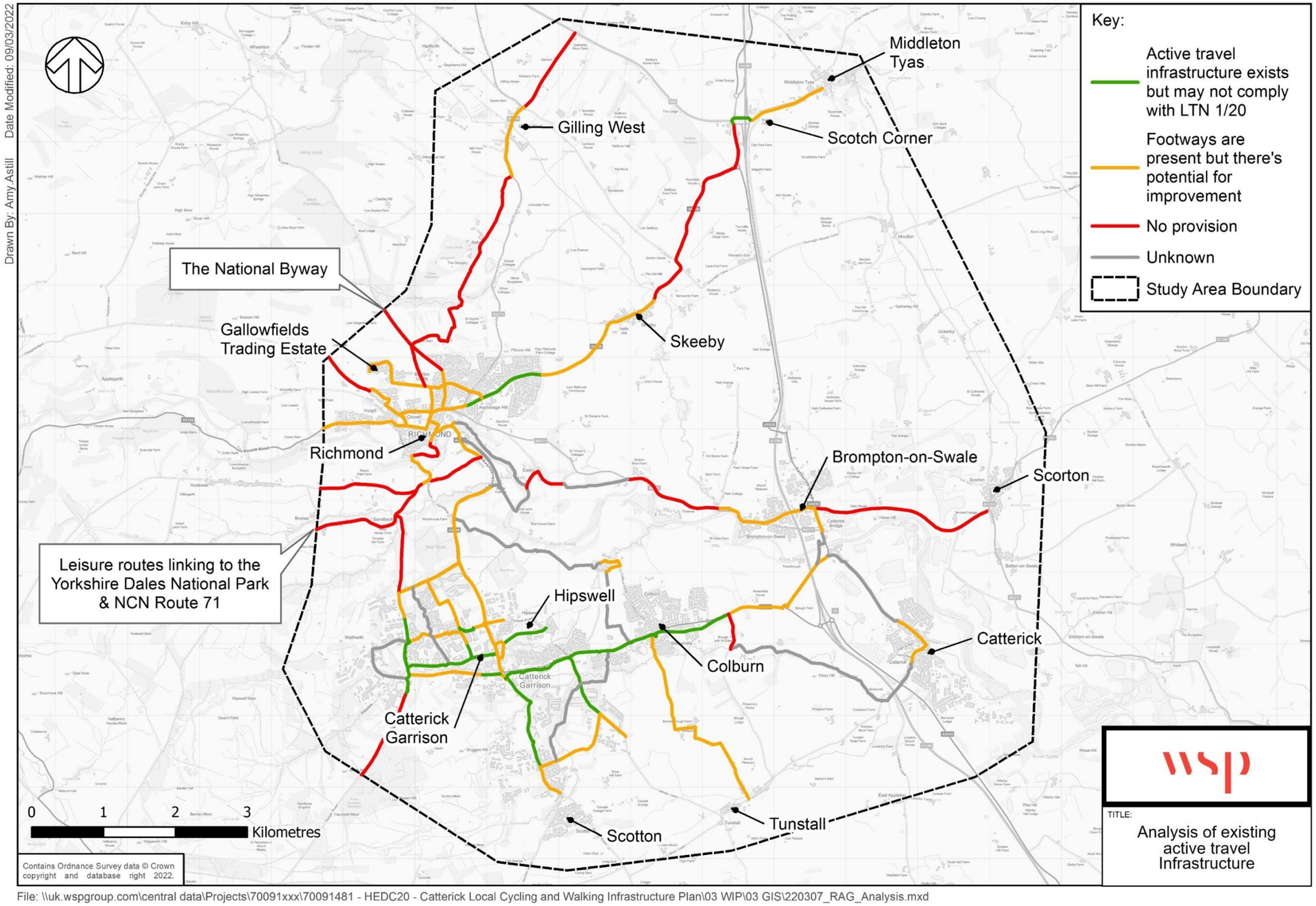


Figure 2.11. Analysis of existing active travel Infrastructure



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3 STAGE 3: NETWORK PLANNING FOR CYCLING

3.1 CURRENT & FUTURE ORIGINS & DESTINATIONS

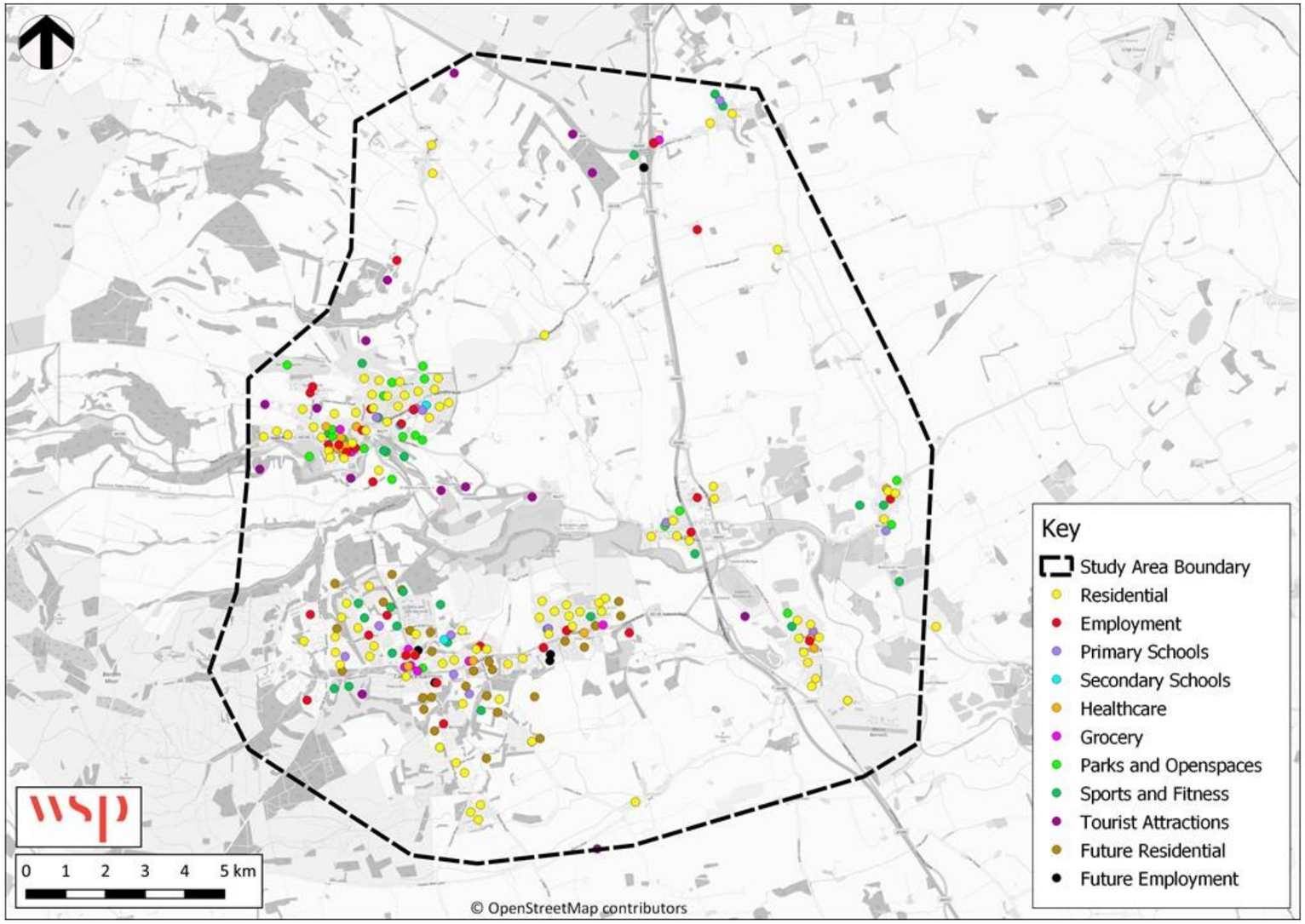
3.1.1. The LCWIP Technical Guidance for Local Authorities (DfT, 2017) notes that identifying demand for a planned cycle network should start by mapping the main trip origin and destination points (ODs).

3.1.2. In line with the guidance, census output areas were chosen to represent journey origins from existing residential areas. Additional origins and destinations were identified as shown in Figure 3.1, including:

- Future housing and employment sites adopted in the Richmondshire Local Plan
- Principal retail areas;
- Employment concentrations;
- Large grocery shops;
- Hospitals;
- Tourist attractions; and
- Educational institutions.

3.1.3. The resultant OD Map is shown in Figure 3.1, opposite.

Figure 3.1. Origin & Destination Points



3.2 CLUSTERING & DESIRE LINES

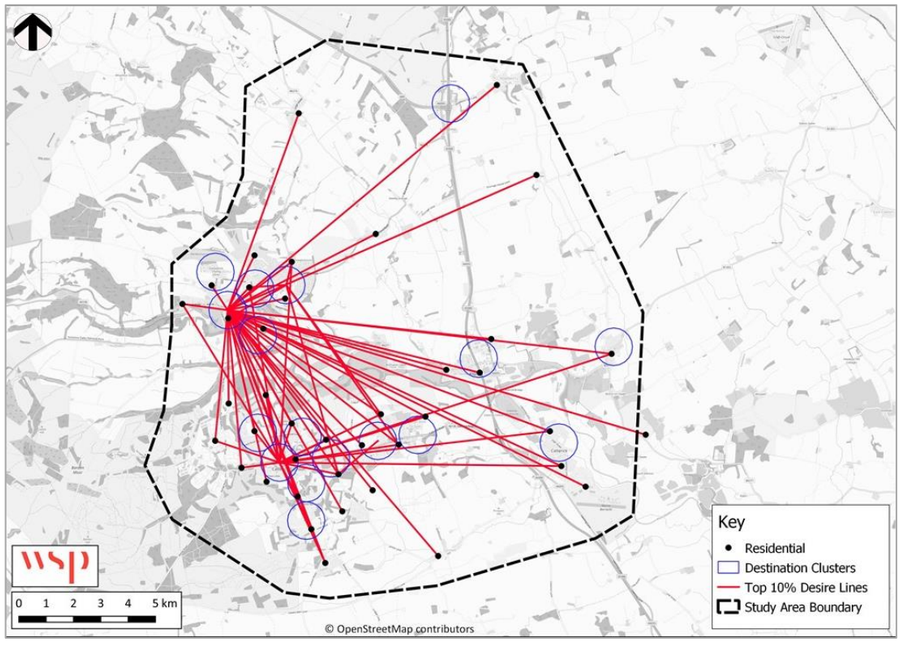
3.2.1. The guidance recommends that trip ODs in close proximity to each other are clustered together, providing an indication of significant OD areas which will be the focus for many trips.

3.2.2. Once OD clusters were determined, desire lines between every LSOA or allocated housing site and identified cluster were mapped; the lines represent the most direct route between these points, irrespective of the existing network and barriers.

3.2.3. For ease of interpretation, desire lines were aggregated to present the top 10% desire lines. These are used as the basis to inform a schematic network, referred to as the 'Suggested Cycle Network'.

3.2.4. The OD clusters and top 10% desire lines are shown in Figure 3.2.

Figure 3.2. OD Clusters and Top Desire Lines



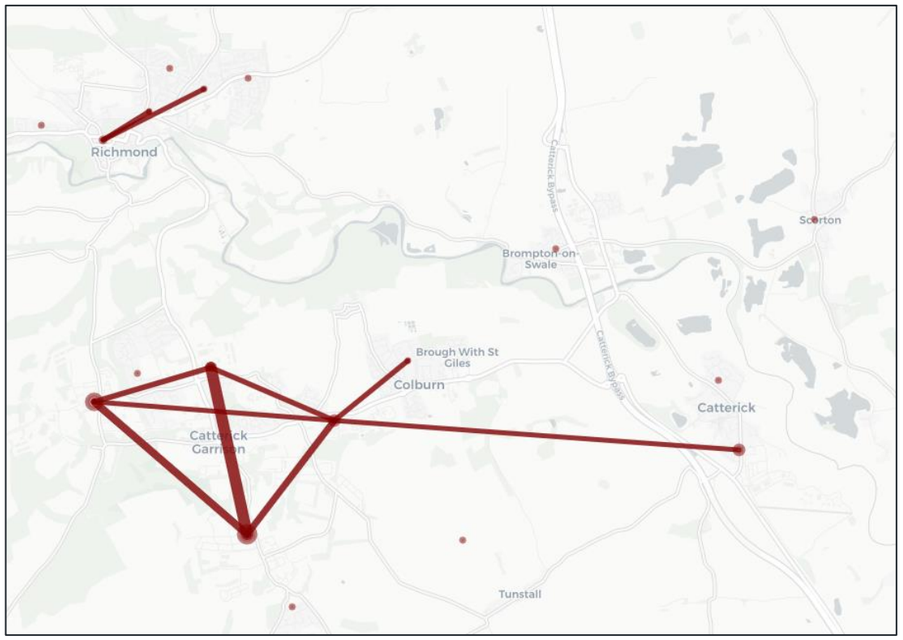
3.3 VALIDATION OF DESIRE LINES

3.3.1. The desire lines were validated through the use of existing data, such as the PCT and Strava, as well as through engagement with key stakeholders.

PCT: E-BIKE SCENARIO

3.3.2. The desire lines were compared against the PCT Ebikes scenario outputs, which models the additional increase in cycling that would be achieved through the widespread uptake of electric cycles. The top ten PCT outputs support the identified desire lines within the study area but suggest there is much lower cycling potential in Richmond, Scorton and Brompton-on-Swale.

Figure 3.3. PCT E-Bike Scenario



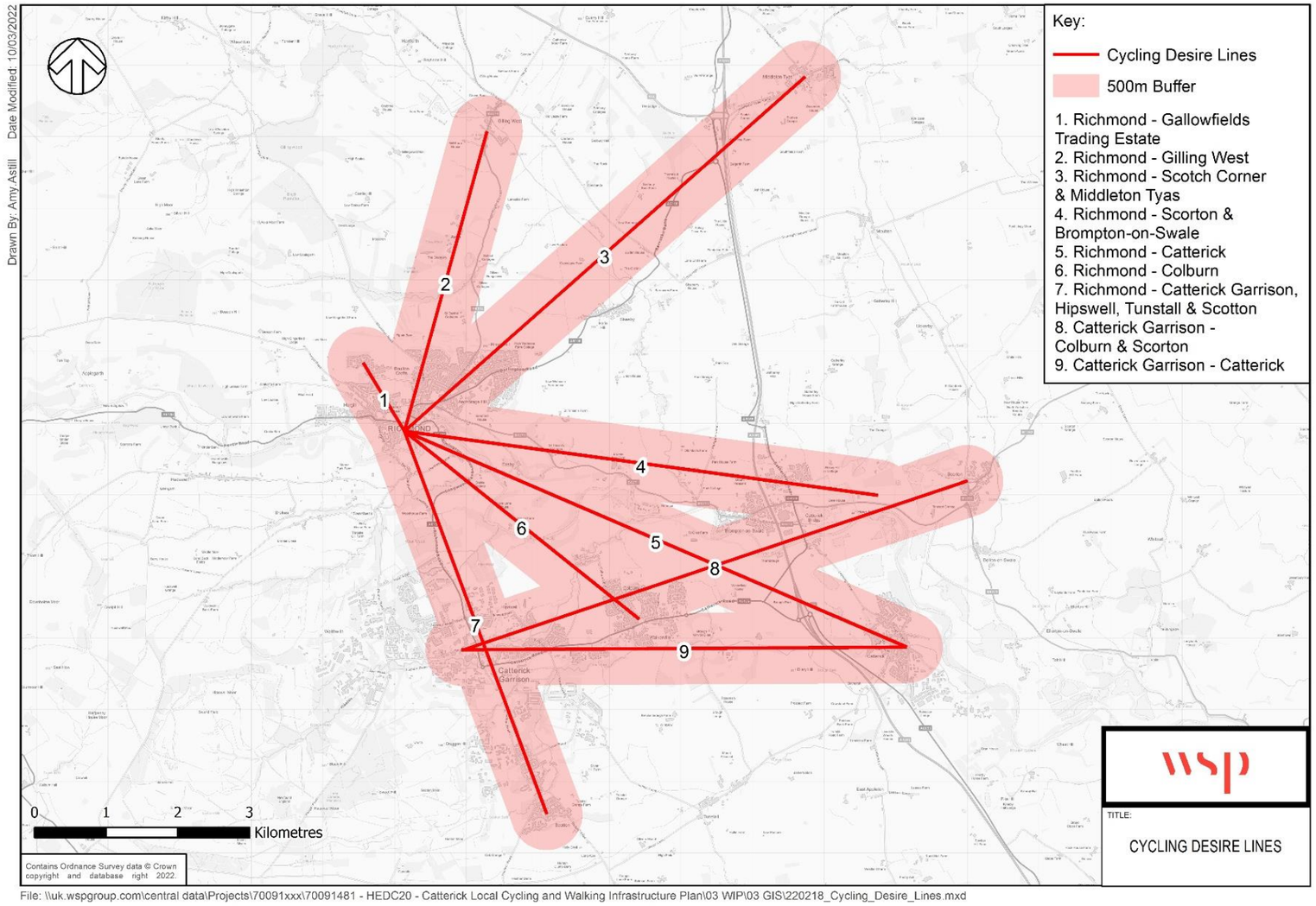
STAKEHOLDER FEEDBACK

3.3.3. A stakeholder workshop was undertaken on 15th March 2022 to review and discuss the identified desire lines. The stakeholders were supportive of the desire lines identified; however, some additional desire lines were put forward for consideration:

- Richmond to Gilling West;
- Catterick to Catterick Racecourse;
- Catterick Bridge to Richmond via Colburn and Catterick Garrison;
- Richmond to Skeeby;
- Scorton to Richmond via Brompton-on-Swale;
- Richmond to the Yorkshire Dales National Park; and
- Colburn to Easby.

3.3.4. Nine desire lines were ultimately agreed upon to represent the most important connections between people and places. These are illustrated in Figure 3.4.

Figure 3.4. Desire Lines



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3.4 ROUTE DEVELOPMENT PROCESS

3.4.1. Having determined the desire lines, the next stage of the process is to identify real world routes that can accommodate these desire lines. This could be through appropriate schemes to upgrade existing roads or paths to the latest standards or identifying opportunities to create new routes.

3.4.2. The first step in the process is to identify the potential routes that might support the cycling desire lines. Potential route alignments were plotted, following the desire lines as closely as possible. The routes selected take into account existing roads, paths, and structures where these are available, but do not consider the type of infrastructure that might be required to bring these up to the required standard, nor the existing constraints that might preclude this.

3.4.3. Additional links were identified using the information gathered during the stakeholder workshop. Stakeholders identified a number of outlying communities and key sites, particularly Barracks sites, as some of the most important destinations which should be included within the cycle network. The draft network was refined and then agreed with the Project Delivery Group.

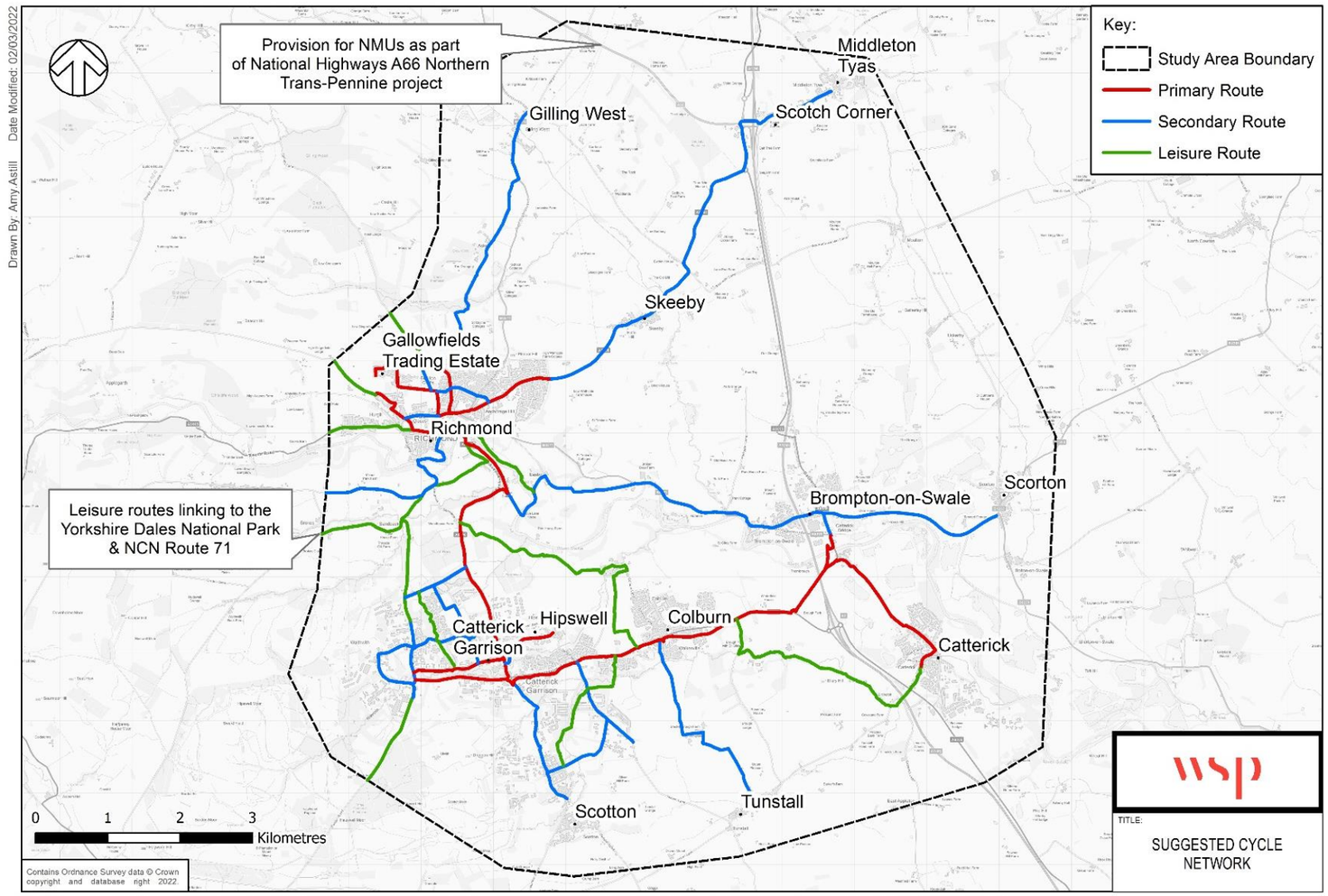
3.4.4. The importance of each link and route needs to be understood in terms of their overall significance in the network – this will largely relate to the numbers of cyclists that each will cater for in the future. The following hierarchy was therefore applied to the links in the network:

- Primary: The primary routes are generally those which align with the agreed desire lines and are therefore most likely to attract the highest number of cyclists. These are supplemented by forecast flows from the PCT and Strava, as well as local knowledge;
- Secondary: Secondary routes are those with lower expected flows of cyclists, generally those links that connect to specific attractors such as schools, colleges, and employment sites, or which add to the 'mesh density' of the overall network;
- Leisure: these are routes that do not align specifically with specific destinations but are important routes in their own right for leisure purposes, which is a vital part of the North Yorkshire economy.

3.4.5. This network is referred to as the 'Suggested Cycle Network' and is the basis of any further route identification work – both that presented here, and any carried out as the LCWIP evolves. The routes displayed in the Suggested Cycle Network are those that cyclists would likely wish to use if the right infrastructure for the conditions could be provided and should always be considered as the first option for any route alignment, with other options identified using the DfT's Route Selection Tool (RST) or similar.

3.4.6. The resultant Suggested Cycle Network is shown in Figure 3.5, with a high-resolution image included in Appendix A.

Figure 3.5. Catterick Suggested Cycle Network Map



3.5 PRODUCING THE PRIORITY CYCLE NETWORK

3.5.1. Whilst the Suggested Cycle Network presents the basis for a network were money and acceptability of the associated proposals required no object, there is no surety that any of the routes can be delivered without additional consideration of the feasibility of each route.

3.5.2. The LCWIP guidance sets out the process that should be followed in order to determine whether a route can feasibly be made suitable for cycling (i.e., complies with the latest design standards) and therefore should be included in the final cycling network plan and prioritised programme of infrastructure improvements for future investment. This process is illustrated in Figure 3.6.

3.5.3. Ideally, the DfT's Route Selection Tool (RST) should be used to assess the suitability of each route, identify the potential interventions required to make the route suitable, and consider alternative route choices where the route cannot be made suitable. However, this is a time-consuming process, and to undertake this process fully for each route is not considered feasible.

3.5.4. Alternatively, North Yorkshire Council have initially engaged with key internal and external stakeholders to agree a consensus on which routes may or may not be feasible. This engagement has broadly taken the approach outlined in the DfT's Early Assessment and Sifting Tool (EAST), considering factors such as:

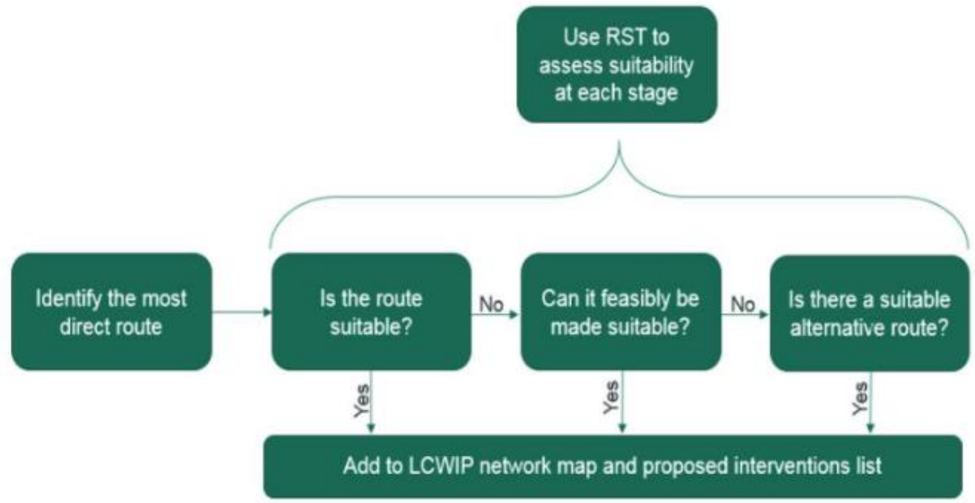
- Identified problems and objectives of the option;
- Degree of consensus over outcomes;
- Expected VfM Category;
- Implementation timetable;
- Public acceptability;
- Practical feasibility;
- Affordability; and
- Where is funding coming from?

3.5.5. Each targeted stakeholder engagement session also considered whether a route could adequately meet the five core design principles: Coherent; Direct; Safe; Comfortable and Attractive. This high-level consideration is based on the criteria for each core design principle given in the RST, which include:

- Directness compared to likely alternative;
- Gradient of the route;
- Traffic volume and speed and the need to segregate;
- Connectivity of the route
- The potential of the route to support high quality infrastructure; and
- The number of changes required to junctions along a route.

3.5.6. This initial sifting process resulted in the production of the Catterick Priority Cycling Network.

Figure 3.6. Route Selection Process



3.6 STAKEHOLDER ENGAGEMENT: CYCLING

3.6.1. As part of the development of the Catterick LCWIP, a stakeholder engagement exercise was undertaken to seek opinions on the emerging cycling network and draft priorities.

WORKSHOP 1 – ISSUES AND OPPORTUNITIES

3.6.2. The first took place on 10th December 2021 and focused on identifying existing issues & opportunities for cycling within the study area. The stakeholders were asked to consider the following questions:

Discussion A

- What is the condition of the current cycling provision?
- What are the barriers to cycling?
- Has there been any feedback from the public?
- Are there any known accident hot spots?

Discussion B

- Are there any existing schemes that the LCWIP should be aware of?

Discussion C

- Do you have any emerging ideas for cycling schemes?

3.6.3. In relation to the condition of the current cycling provision, stakeholders advised that there are off-road cycle links between Colburn and Catterick Garrison. Insight was shared regarding routes surfaced in green which were funded through the Millennium Fund and are on land owned by the Ministry of Defence.

3.6.4. With regards to barriers, the attendees focused on the rural nature of the area, topography, and the level of traffic on the road network.

3.6.5. On the subject of feedback from the public, attention was drawn to the community of Gilling West and surrounding villages who have campaigned for a safe route into Richmond for a number of years. Their campaigning is supported by a petition which was set up in May 2020 and has 803 signatures. The team also became aware of a petition to develop active travel infrastructure between Scorton, Brompton-on-Swale and Richmond which has 673 signatures.

3.6.6. In discussing accident hotspots, stakeholders highlighted issues with the B6274 between Gilling West and Richmond due to pinch points, and reduced visibility. They also cited the B6271 between Scorton and Richmond which is a narrow single carriageway route described as having limited fast straight sections and blind bends which leads to dangerous overtaking situations on occasion.

3.6.7. A number of existing and previous schemes / studies were mentioned, including:

- the A66 Northern Trans-Pennine Project;
- A Connected Garrison;
- the development of a Levelling Up Fund bid centred on Shute Road;
- the new Catterick Integrated Care Campus;
- Catterick 52; and
- the proposed solar farm on land south east of the A6108 near Skeeby.

3.6.8. Emerging ideas for cycling schemes centred on connecting Richmond to Brompton-on-Swale and Gilling West. There was a suggestion of providing infrastructure between the study area and the A66.

WORKSHOP 2 - REVIEWING THE DRAFT LCWIP NETWORK PLANS

3.6.9. The second workshop was held on 15th March 2022 and provided an opportunity to present the draft cycling network, taking into account key trip origins and destinations. Attendees included representatives from Richmondshire District Council, North Yorkshire County Council and the British Horse Society.

3.6.10. Following the session, stakeholders were asked to provide their answers to the following questions by 25th July:

- Have we connected the correct parts of the study area?
- Would you suggest any alternative routing options?
- Are there any cycling issues that we should be aware of?
- What routes or areas would you like to prioritise?

3.6.11. The comments were collated in a spreadsheet and used to update the network plan. Recommendations included:

- recategorising the routes between Richmond, Brompton-on-Swale, Scorton, and Gilling West as primary;
- taking into account topography while accounting for the rise of e-bikes;
- creating links to mitigate the additional traffic expected to be generated by Local Plan sites;
- investing in Leyburn Road and Horne Road;
- enabling cycling between Richmond, Scotch Corner, and Middleton Tyas where new development will create employment;
- providing a connection between Richmond and Skeeby with a reference to leveraging S106 funds associated with the solar farm scheme (21/00931/FULL);
- surfacing the former railway line between the sewage works and The Station to create a route which connects to Longwood Bank;
- widening pavements between settlements to create shared-use paths;
- linking Catterick to Catterick Racecourse via a cycle track alongside the local access road with developer contributions related to Catterick 52 (22/00189/OUT);
- resurfacing existing routes and ensuring signage is adequate;
- downgrading the primary status of the proposed route between Richmond and Gallowfields Trading Estate;
- developing the bridleway along the side of Scots Dike into a properly surfaced cycle track / footpath to give access to schools in Richmond and the nearby housing estates;
- the installation of a shared-use path along Slee Gill;
- focusing on the A6108 Darlington Road to improve the school drop-off and pick-up experience;
- allowing cyclists to pass through the junction between the A6108 and Quakers Lane;
- formalising the overgrown routes along Sour Beck to create an alternative to the existing path along Catterick Road;
- adding a crossing to link Catterick Garrison town centre to the proposed Integrated Care Campus;
- extending the secondary route from Hipswell Road to Byng Road;
- including a route from the proposed Integrated Care Campus to Horne Road; and
- looking into the speed limits and signage on the A6108 between Richmond and Swaledale.

3.7 LIST OF IMPROVEMENTS: CYCLING

3.7.1. The Priority Network Plan has been subdivided into six distinct improvements. While it is the intention of the LCWIP to deliver the entirety of the network, this will be subject to the availability of suitable funding opportunities. This may result in phasing or combining the delivery of improvements where necessary.

3.7.2. Table 3.1 lists each of the priority improvements identified, detailing:

- Route description – explanation of the proposal;
- Route type – infrastructure type proposed;
- Total Cost – estimated costs including indirect costs; and
- Delivery Timescales – split into short, medium, and longer term phases.

IMPROVEMENT TYPES

3.7.3. It should be noted that the improvement descriptions and type provide an indication of the type of improvement that it may be possible to deliver on each route based on the opportunities and constraints present. However, this is subject to further design work, engagement, and consultation to determine the best improvement that can be delivered in each location.

3.7.4. The implementation of improvements is also subject to the securing of sufficient funding.

IMPROVEMENT COSTS

3.7.5. The cost estimates presented here are ‘total costs’. These are developed through ‘direct’ and ‘indirect’ costs’.

3.7.6. Indicative cost estimates for each improvement have been developed based on individual unit and per metre costs. These are referred to as ‘direct costs’ (i.e. the actual cost of construction materials).

3.7.7. The improvements are currently at a very early stage of development and may change as the designs are developed further; this is recognised through the application of ‘uplift costs’, which are typical percentages applied to the base cost to represent unknowns and less tangible costs.

3.7.8. Key costing assumptions applied include:

- Work by Statutory undertakers and others: 20%;
- Preliminary work, traffic management, overheads, and profits: 45%;
- Surveys, investigations, design, procurement, supervision, management, and liaison: 20%;
- Risk and contingency: 30%; and
- Inflation: Costs are presented as 2022 Q1 prices and should be adjusted for inflation once the delivery timescales are confirmed, nominally 0.5%.

Table 3.1. Priority Active Travel Improvements (Cycling)

ID	Improvement Name	Suggested Improvements	Improvement Type	Indicative Cost
1	**Richmond to Gilling West**	A well-constructed shared-use facility designed to meet the needs of cycle traffic with raised entries over side roads and altered priority at the junction between the B6274 High Street and Hargill to enable through traffic.	New shared-use path and upgrades to junctions & crossings (permanent)	£4.1M
2	**Richmond to Scorton via Brompton-on-Swale**	Approx. 7.5km stretch of 3.0m wide shared-use path in highway verge and circa. 850m on-road advisory cycle lane. Implementation of speed reduction measures on Maison Dieu; installation of tactile paving across The Avenue; improvement of signage at the B6271 end of the 20.57/34/1 bridleway; and raised entries over side roads. Remodelling of the Gatherley Road / B6271 junction to provide simpler crossings for pedestrians and cyclists.	New shared-use path, advisory cycle lane, traffic calming and upgrades to junctions & crossings (permanent)	£8.3M
3	**Catterick Garrison to Catterick (Munster Barracks to Marne Barracks)**	Extension of the existing segregated two-way cycle track along the length of Leyburn Road and reduction of the speed limit from 40mph to 30mph. Installation of a parallel crossing in the vicinity of the golf club. Remodel the Camp Centre roundabout to provide protected space for cycling with suitable crossings of each arm. Widen the existing active travel infrastructure along Catterick Road and add a trapezoidal strip to the shared-use path. Install tactile paving across Heatherdene Road, Belton Park Drive, Colburn Lane, and Foss Lane. Remodel the Horne Road / A6136 / Byng Road junction to provide unstaggered toucan facilities. Upgrade the crossing to the east of Premier Meats to a toucan. Extend the shared-use path along the length of Catterick Road. Resurface and widen bridleway 20.12/8/1 and extend to the A6055. Add dedicated cycle signals or cycle priority at the junction between the A6055 and the bridge over the A1(M).	New off-road cycleway, shared-use path, and parallel crossing; upgrades to existing infrastructure (permanent)	£7.5M
4	**Richmond to Scotton via Catterick Garrison**	Widen the existing off-carriageway cycle track and add a trapezoidal strip. Widen existing shared-use path to 4.0m and add a trapezoidal strip. Widen the existing off-carriageway cycle track between Catterick Road and Loos Road to 2.0m and resurface where necessary. Add a parallel crossing over Loos Road and Scotton Road. Install a buffer strip to allow cyclists to transition from off carriageway cycle path to on carriageway. 1km stretch of mandatory or advisory cycle lane from the Loos Road junction to the Meanee Road junction.	New advisory or mandatory cycle lane and parallel crossings; upgrades to existing infrastructure (permanent)	£4.9M
5	**A6108 Corridor: Richmond Town Centre to Schools**	Widening of the existing shared-use path to 4.0m with the addition of a trapezoidal strip. Creation of turning space for cyclists on the northern side of the toucan crossing between The Avenue and Linden Gardens by removing the brick wall and guard railing. Tightening of the kerb radii at the Linden Gardens / Darlington Road junction as well as the B6271 / A6108 junction. Installation of tactile paving across Roper Court, Quakers Lane, and all arms of the Gilling Road / A6108 roundabout. The addition of dropped kerbs and tactile paving to the Cross Lanes junction.	Upgrades to existing infrastructure (permanent)	£7.5M
6	**Richmond - Easby Hall**	Bidirectional shared-use path along former railway line with trapezoidal strip to segregate pedestrians and cyclists, as well as provision of a sealed surface and lighting. Provision of cycle parking in Easby Abbey Car Park, and designation of Love Lane as a quiet lane. Junction improvements where Love Lane joins B6271 to accommodate the transition between off-road shared-use path and on-carriageway provision.	New shared-use path, junction upgrades, quiet lane designation and cycle parking (permanent)	£1.9M
7	**Hipswell Rd**	Widen and extend the existing shared-use path along Hipswell Road and add a trapezoidal strip. Add an advisory or mandatory cycle lane with a new zebra crossing in the vicinity of Elm Close. Remodel the Horne Road / A6136 / Byng Road junction to provide unstaggered toucan facilities.	New advisory or mandatory cycle lane and zebra crossing; upgrades to existing infrastructure (permanent)	£0.6M

3.8 ESTABLISHING CYCLING INFRASTRUCTURE IMPROVEMENT

3.8.1. The Priority Cycle Network broadly identifies the types of improvements that could be implemented. These have been considered in accordance with Local Transport Note (LTN) 1/20: Cycle Infrastructure Design, which represents a significant national shift in how cyclists are perceived and provided for.

3.8.2. LTN 1/20 is based around five overarching design principles and 22 summary principles that encompass the essential requirements to achieve more people travelling by foot or cycle for more of their trips.

3.8.3. The five core design principles are that cycle routes and networks must be:

- Coherent;
- Direct;
- Safe;
- Comfortable; and
- Attractive.

3.8.4. The principles are based on international and UK best practice and address the factors that determine whether people choose to cycle for a range of trip purposes.

3.8.5. LTN 1/20 sets out an overarching preference for segregation for cyclists from other users, recognising that bicycles have very different requirements from both motor vehicles and pedestrians. The determination of how this segregation is achieved considers factors such as traffic volume and speed, as well as the character of the street.

3.8.6. The improvements included within the LCWIP could include:

ON-HIGHWAY SEGREGATED CYCLEWAY

Segregated Cycle Tracks

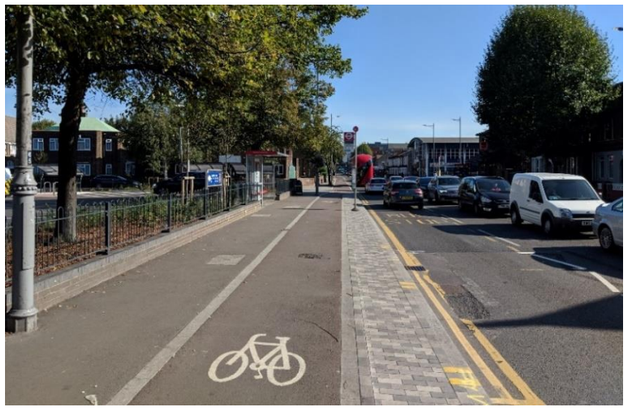
3.8.7. A fully segregated cycle track usually runs at carriageway level, with a buffer between the track and the carriageway as well as the footway. The route may be next to, or sometimes completely away from the carriageway. A fully segregated track will generally offer the greatest level of service for cyclists, although they are also the most expensive option and can require significant changes to the highway to incorporate.

Figure 3.7. Segregated cycleway (carriageway height)

Stepped Cycle Tracks

3.8.8. Stepped cycle tracks run at an intermediate height between the carriageway and the footway, directly adjacent to the carriageway. Although more space efficient than a fully segregated cycleway, a stepped cycle track does not offer the same level of safety and are therefore unsuitable for high speed roads.

Figure 3.8. Stepped cycle track (intermediate height)



OFF-ROAD CYCLEWAY (GREENWAYS AND RURAL ROUTES)

Shared use path

3.8.9. A footway converted to legally permit cycling. Can also refer to other places where cyclists and pedestrians are unsegregated, such as a bridleway or Vehicle Restricted Area. Shared use paths are generally unsuitable except where pedestrian flows are very low, as they can result in actual and perceived safety issues for both users. They are therefore most suitable for greenways, PRoWs which permit cycling, or rural connections with few people on foot.

Figure 3.9. Greenway (segregated cycle / pedestrian facilities)

UPGRADES TO EXISTING FACILITIES

Light segregation

3.8.10. Vertical infrastructure that can be placed within existing traffic lanes (including cycle lanes) to convert them to protected space. They are easy to install and comparatively cheap and can be used to trial a new cycle path. Cyclists can leave the path easily, but vehicles are prevented from entering. However, light segregation provides only limited protection from motor traffic, with other solutions providing a greater feeling of safety.

Contraflow cycle route

3.8.11. Contraflow cycle lanes are an easy and low-cost way of increasing an areas permeability to cycles, by permitting cycling on one-way streets. Contraflow lanes can take the form of physical segregation such as stepped cycle tracks, wands, planters or parking protected, or can be unsegregated.

Modal filter / Low Traffic Neighbourhood

3.8.12. Removing through traffic can enable cycling in mixed traffic streets by lowering traffic volumes. Encouraging traffic to use main roads can provide benefits for pedestrians and residents as well as enabling cycling. A modal filter typically consists of a bollard, planter, or other barrier that allows pedestrians,

cyclists, and occasionally public transport to pass, but not other motor traffic. Low traffic neighbourhoods (LTNs) often deploy modal filters to reduce the volume of motor traffic through an area.

Figure 3.10. Modal filter / LTN

20mph limits/zones and traffic calming

3.8.13. Traffic calming includes features that physically or psychologically slow traffic. 20mph limits refers to 20mph areas enforced by signs only. 20mph zones refers to 20mph enforced by signs and traffic calming.

NEW ROAD CROSSINGS

Continuous footway/cycleway crossing

3.8.14. In a continuous footway and / or cycleway material continues across the junction, giving a strong visual priority and are an effective method of giving people walking and cycling priority over motor vehicle movements at side junctions. This reinforces changes in the Highway Code that were introduced in 2022, that states that drivers should give way to pedestrians crossing or waiting to cross a road into which or from which you are turning (Rule 170).

Parallel / Tiger crossing

3.8.15. A parallel crossing is similar to a traditional zebra crossing, but with a cycle crossing provided alongside. Drivers must give way to cyclists and pedestrians using the crossing. As with traditional zebra crossings, parallel crossings can be divided into two parts with a central refuge to improve the ease of use.

Figure 3.11. Parallel/'Tiger' crossing

Signalised Parallel / Toucan Crossing

3.8.16. Signal controlled cycle facilities hold the flow of general traffic to allow cyclists to cross the carriageway. These are usually appropriate where vehicle flows, and speeds are higher. Toucan crossings should be avoided and only used where it is necessary to provide a shared facility. Instead dedicated cycle crossings should be used, and a pedestrian crossing used alongside if necessary

NEW JUNCTIONS

3.8.17. Providing separation between conflicting streams of traffic (including pedestrians and cyclists) is essential to improve road safety as junctions are where most conflicts occur. Junctions are often the most hazardous and intimidating parts of a journey for cyclists, and a junction that does not provide safe facilities may be the reason people will not use the remainder of the route.

Cyclops Junction

3.8.18. The best UK example of segregated junctions are Manchester's CYCLOPS junctions (Cycle Optimised Protected Signals). CYCLOPS junctions are equipped with cycle tracks on each arm of the junction, with signalised pedestrian crossings provided inside the cycle track.

Figure 3.12. CYCLOPS signalised junction

'Dutch' Roundabout

3.8.19. Segregated roundabouts use parallel crossings on each arm of the roundabout to separate pedestrians, cyclists, and vehicles. On entering the roundabout vehicles must give way to cyclists that are circulating the roundabout, or pedestrians at the crossing points on the roundabout arms. These roundabouts can take two forms: 'Dutch style' roundabouts with a tight junction geometry lowering vehicle entry/exit speeds and improving their line of sight, and parallel crossing points on traditional roundabouts.

Figure 3.13. 'Dutch' Roundabout (Cambridge)

PROVISION OF SECURE CYCLE PARKING FACILITIES

Cycle Stands and Hubs

Cycle parking should be carefully considered against the type of expected user, the duration of their stay, and the need for enhanced security. While Sheffield stands can be sufficient for short stay parking needs, such as local shops or in the town centre, it will seldom meet the needs of longer stay commuters, who will require facilities that are at least covered and well overlooked, if not fully secure lockable facilities. High quality cycle hubs should be considered at strategic locations, such as schools or transport interchanges.

Figure 3.14. Secure cycle hub (Manchester)

4 STAGE 4: NETWORK PLANNING FOR WALKING & WHEELING

4.1 INTRODUCTION

4.1.1. Active travel involves a wide range of mobilities other than cycling, broadly described as walking and wheeling. In the context of walking, this includes and foot/pedestrian-based mobility that may incorporate the support of aids to mobility. Wheeling can include wheeled mobilities such powered wheelchairs and mobility scooters.

4.1.2. Most roads in Catterick have footways for people walking and wheeling, with minimum footway provision having been a core part of design guidance and scheme delivery for many decades. However, there is a still a need to continuously improve conditions for walking and wheeling, including footway provision where it does not currently exist, helping to unlock increased walking rates within Catterick.

4.1.3. As set out in this section, key improvements for walking and wheeling have been identified within the core town centre areas, which are recognised to be in need of investment and regeneration.

4.2 CURRENT & FUTURE ORIGINS AND DESTINATIONS

4.2.1. The LCWIP technical guidance notes that identifying demand for a planned walking network should start by mapping the main origin and destination points. Origins and destinations were identified are shown in Figure 3.1.

4.3 IDENTIFYING CORE WALKING ZONES

4.3.1. The next stage of the LCWIP process is to identify Core Walking Zones (CWZs), normally consisting of walking trip generators that are located close together – such as town centres or business parks. An approximate five minute walking distance of 400m is used as a guide to the minimum extents of the Core Walking Zones.

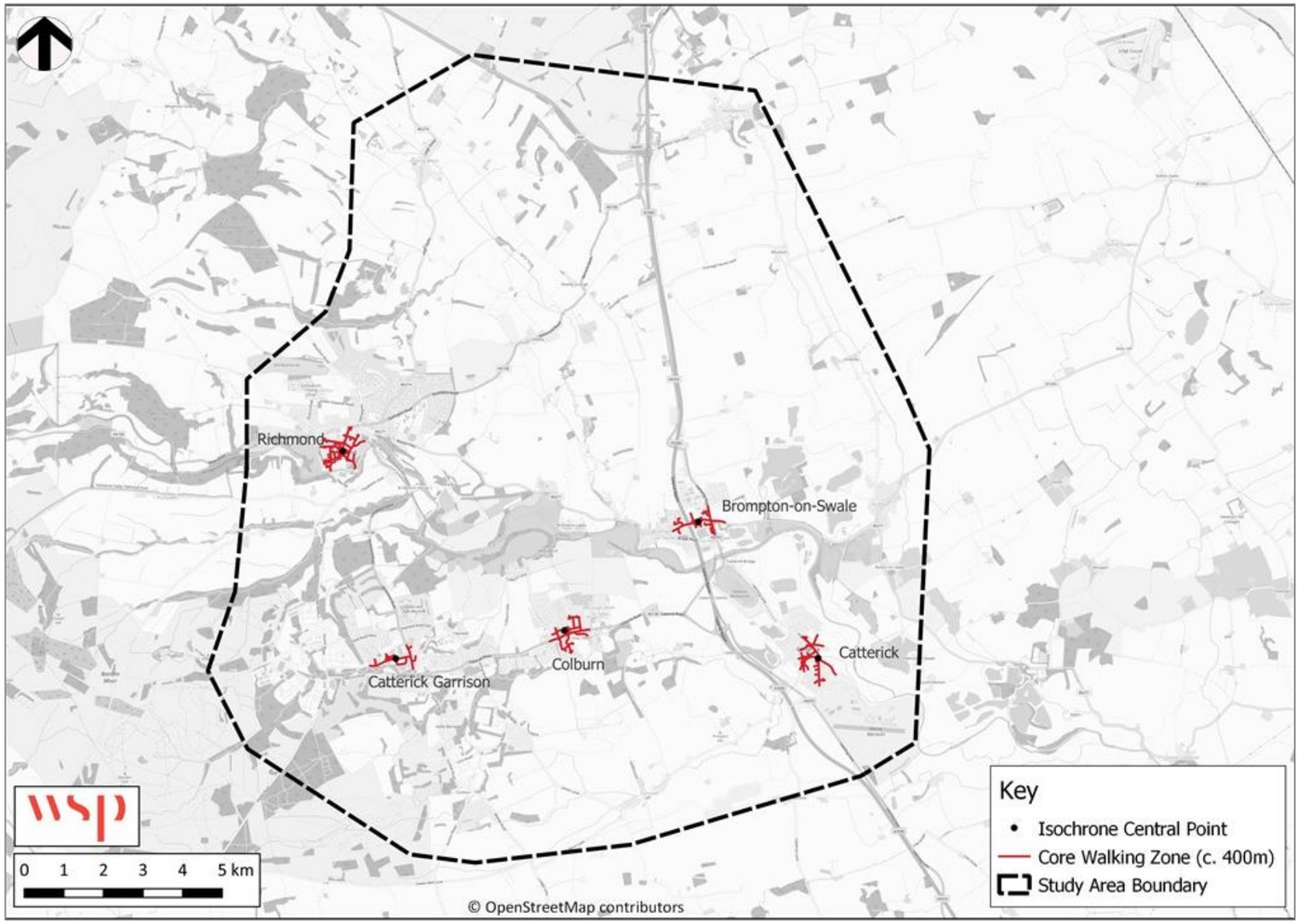
Table 4.1. Catterick CWZs

ID	Name
1	Richmond
2	Catterick Garrison
3	Colburn
4	Catterick
5	Brompton-on-Swale

4.3.2. Five CWZs were identified in the study area through a process of GIS analysis and stakeholder engagement. These are shown in Table 4.1 and displayed spatially in Figure 4.1.

4.3.3. Following the identification of the CWZs, key walking routes to each zone were then identified by mapping a 2km isochrone from the centroid of each CWZ, considered to be the maximum desirable walking distance from the CWZs.

Figure 4.1. Catterick CWZ Map



4.4 PRODUCING THE DRAFT WALKING & WHEELING NETWORK

4.4.1. The routes that could serve the CWZs, as identified by the 2km walking isochrones, must then be rationalised to produce a walking & wheeling network map.

4.4.2. The first step to doing so is to map out the main walking & wheeling routes, which are those routes identified by the 2km isochrones that most closely follow the desire lines identified through the development of the cycling network, as presented in Section 3. These routes often overlap as a single street can serve multiple CWZs, creating longer corridors used for multiple trip purposes.

4.4.3. The next step is to identify those additional routes that can support the main routes and provide a comprehensive network. Given the subtle choices that lead to people determining where to walk and the freedom offered to pedestrians in comparison with vehicles, the determination of these lesser-used routes is done in conjunction with stakeholders and supplemented by local knowledge.

4.4.4. Additional links were therefore identified using the information gathered during the Stakeholder Workshop. Stakeholders identified schools, workplaces, leisure, and retail sites as some of the most important destinations which should be included within the walking & wheeling network. The **Draft Walking & Wheeling Network** was refined and then agreed with the Project Delivery Group.

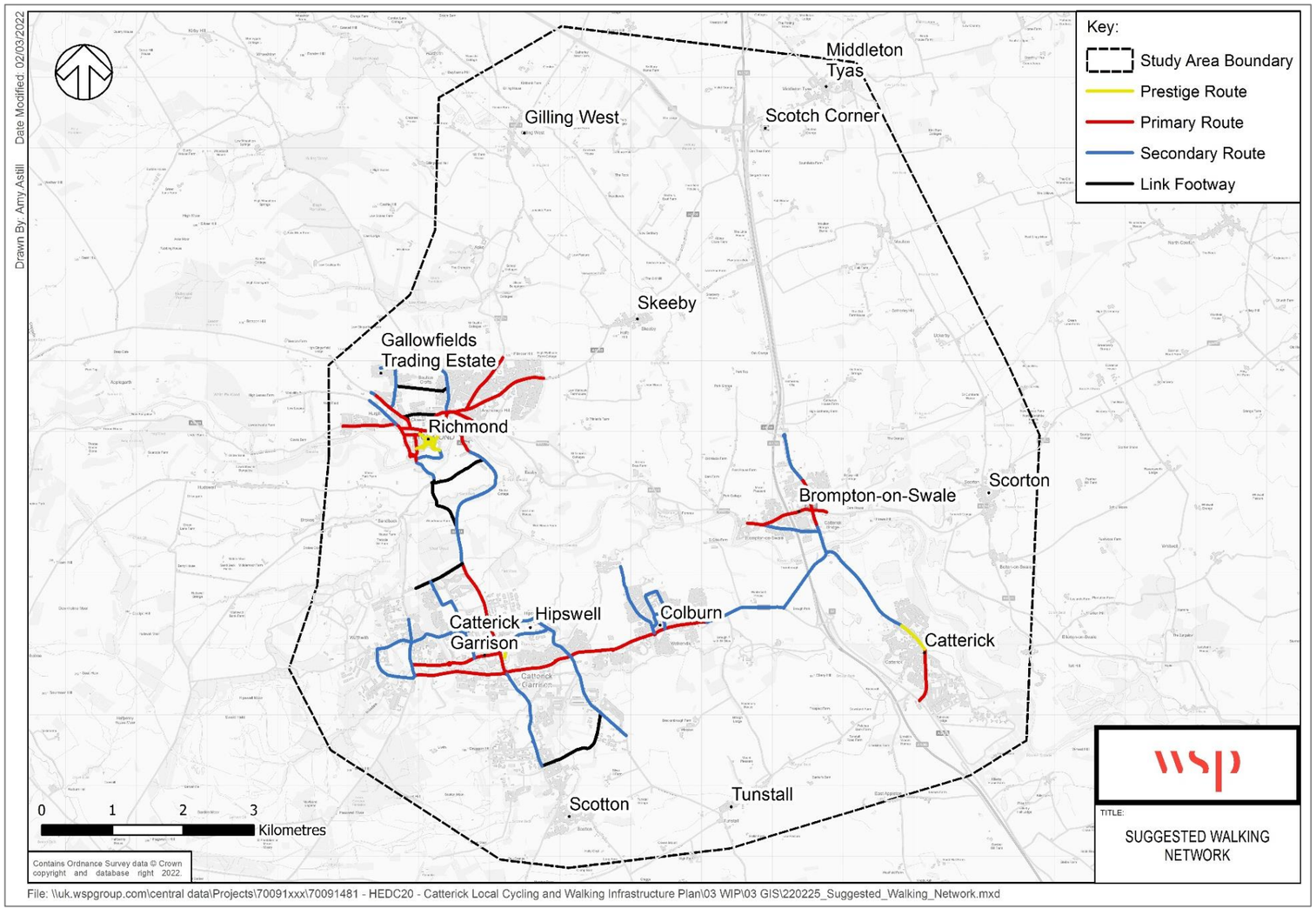
4.4.5. The importance of each link and route needs to be understood in terms of their overall significance in the network – this will largely relate to the numbers of pedestrians that each will cater for in the future. The following hierarchy was therefore applied to the links in the network:

- Prestige walking & wheeling routes: Very busy areas of towns and cities, with high public space and street scene contribution;
- Primary Walking & Wheeling Routes: Busy urban shopping and business areas, and main pedestrian routes;
- Secondary Walking & Wheeling Routes: Medium usage routes through local areas feeding into primary routes, local shopping centres, etc;
- Link Footways: Linking local access footways through urban areas and busy rural footways.

4.4.6. Additionally, a 'town centre core is identified'; this is defined as a broad area where the number of existing and aspirational ODs indicate a requirement for such a level of permeability that identifying a single route is not practicable.

4.4.7. The resultant draft Walking & Wheeling Network Map is shown in Figure 4.2, with a high resolution image included in Appendix A.

Figure 4.2. Draft Walking Network Map



4.5 AUDITING KEY WALKING & WHEELING ROUTES AND CORE WALKING ZONES

4.5.1. The next step in the process is to audit the existing walking infrastructure to determine where improvements are needed. Route audits were carried out using the principles of the DfT Walking Route Audit Tool (WRAT). The auditing methodology focuses on five core design outcomes for walking & wheeling infrastructure:

- Attractiveness;
- Comfort;
- Directness;
- Safety; and
- Coherence.

4.5.2. The assessment particularly considers the needs of vulnerable users who may be elderly, visually impaired, mobility impaired, hearing impaired, with learning difficulties, buggy users, or children in order to ensure that any proposed schemes comply with the Equality Act 2010.

4.5.3. The audit process assigned a 'Red, Amber, Green' (RAG) rating to each of the five core design outcomes, identifying where issues were present, and therefore what intervention might be required to overcome these.

4.5.4. At this early stage in the design process, the proposals identified sit within a package of 13 typical improvements. Where necessary, some bespoke additions have been made, particularly where audited routes fall within other committed or aspirational schemes (e.g. the 'Brilliant Barrow' Town Deal).

4.5.5. These typical interventions are:

- Attractiveness:
  - Maintenance;
  - Increase surveillance; and
  - Place-based interventions (greening, streetscape, seating etc).
- Comfort
  - Footway widening; and
  - Parking controls.
- Directness
  - New crossing point on desire line;
  - Improve Junction (widen refuge, improved timings, fewer refuges); and
  - New access point to buildings / car parks.
- Safety
  - Speed reduction scheme.
- Coherence
  - Drop kerb;
  - Reduced radii;
  - Blended footway; and
  - Wayfinding.

4.5.6. The results of the audits have been mapped out on a route by route basis (including the Core Walking Zone). A summary of the overall package of interventions (the 'scheme') for each route is provided for the purpose of engagement with key stakeholders and the general public.

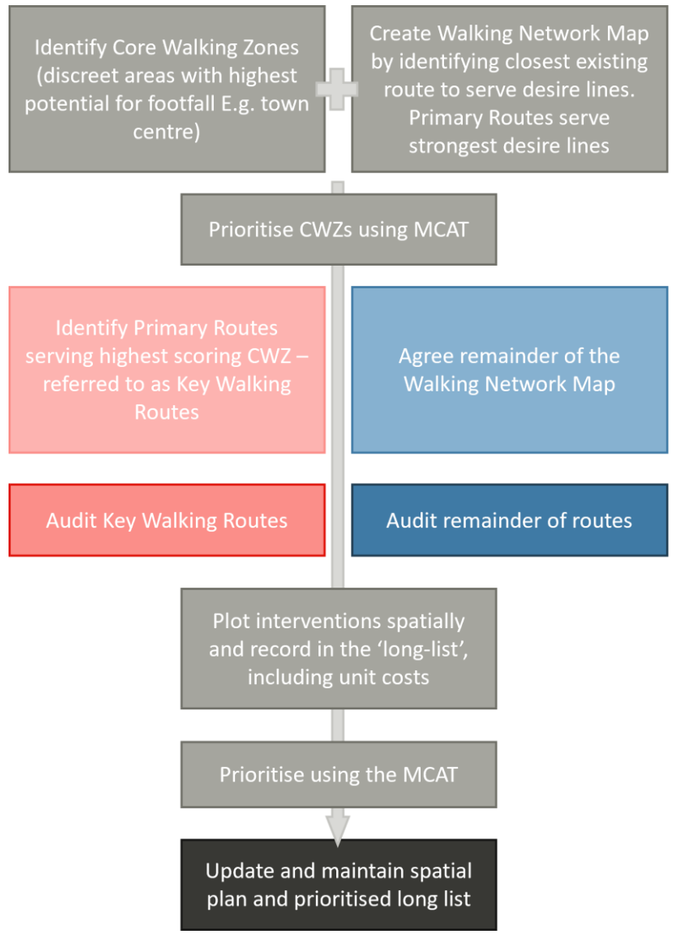
4.5.7. It should be noted that at this stage in the design process (early Concept), these are very high level recommendations which require significantly more detail in order to determine the feasibility of the various discreet elements.

4.6 AUDITING OF ADDITIONAL ROUTES

4.6.1. At this stage in the LCWIP process the Priority Walking & Wheeling Network is considerably reduced in comparison with the draft Walking & Wheeling Network. Going forward, a more comprehensive long term audit process is anticipated to occur in conjunction with additional stakeholder input which will cover significantly more of the wider draft Walking & Wheeling Network Map.

4.6.2. Figure 4.3 illustrates the proposed process that will be followed in order to cover the entirety of the Walking & Wheeling Network. The stages highlighted in red are those presented in this LCWIP document, covering the Primary Walking & Wheeling Routes associated with the highest priority Core Walking & Wheeling Zone. The stages highlighted in blue are those that will need to be undertaken throughout the lifetime of the LCWIP, auditing and determining appropriate improvements for the remainder of the routes identified in the Walking & Wheeling Network Map.

Figure 4.3. Walking & Wheeling Network Map Audit Process



4.7 LIST OF IMPROVEMENTS: WALKING & WHEELING

4.7.1. Following the audits of the priority Core Walking Zone and Primary Walking & Wheeling Routes, high level summaries of the scheme packages proposed for each zone / route were prepared for stage 2 of the public consultation. The outputs of Stage 2 have then refined these scheme packages.

4.7.2. The summary of improvements determined for each Primary Walking & Wheeling Route and for the Core Walking Zone is presented in Table 4.1. The table also includes the associated RAG rating determined through the audit process which has led to the identification of the improvements, as well as estimated costs (including indirect costs).

SCHEME DESCRIPTIONS

4.7.3. It should be noted that the scheme descriptions provide an indication of the type of improvement that it may be possible to deliver on each route based on the opportunities and constraints present. However, this is subject to further design work, engagement, and consultation to determine the best improvement that can be delivered in each location.

4.7.4. The implementation of improvements are also subject to the securing of sufficient funding

IMPROVEMENT COSTS

4.7.5. The cost estimates presented here are ‘total costs’. These are developed through ‘direct’ and ‘uplift’ costs’.

4.7.6. Indicative cost estimates for each improvement have been initially developed based on individual unit and per metre costs. These are referred to as the ‘direct costs’ (i.e. the actual cost of construction materials).

4.7.7. The improvements are currently at a very early stage of development and may change as the designs are developed further; this is recognised through the application of ‘uplift costs’, which are typical percentages applied to the base cost to represent unknowns and less tangible costs

4.7.8. Key costing assumptions applied include:

- Work by Statutory undertakers and others: 20%;
- Preliminary work, traffic management, overheads, and profits: 45%;
- Surveys, investigations, design, procurement, supervision, management, and liaison: 20%;
- Risk and contingency: 30%; and
- Inflation: 0.5%

4.7.9. Costs are presented as 2021 Q1 prices and will need to be adjusted for inflation once the delivery timescales are confirmed.

Table 4.2. Priority Active Travel Improvements (Walking & Wheeling)

ID	Improvement Name	Suggested Improvements	Improvement Type	Indicative cost
5	**A6108 Corridor: Richmond Town Centre to Schools**	Widening of the existing shared-use path to 4.0m with the addition of a trapezoidal strip. Creation of turning space for cyclists on the northern side of the toucan crossing between The Avenue and Linden Gardens by removing the brick wall and guard railing. Tightening of the kerb radii at the Linden Gardens / Darlington Road junction as well as the B6271 / A6108 junction. Installation of tactile paving across Roper Court, Quakers Lane, and all arms of the Gilling Road / A6108 roundabout. The addition of dropped kerbs and tactile paving to the Cross Lanes junction.	Upgrades to existing infrastructure (permanent)	£7.5M
6	**Richmond - Easby Hall**	Bidirectional shared-use path along former railway line with trapezoidal strip to segregate pedestrians and cyclists, as well as provision of a sealed surface and lighting. Provision of cycle parking in Easby Abbey Car Park, and designation of Love Lane as a quiet lane. Junction improvements where Love Lane joins B6271 to accommodate the transition between off-road shared-use path and on-carriageway provision.	New shared-use path, junction upgrades, quiet lane designation and cycle parking (permanent)	£1.9M
7	**Hipswell Rd**	Widen and extend the existing shared-use path along Hipswell Road and add a trapezoidal strip. Add an advisory or mandatory cycle lane with a new zebra crossing in the vicinity of Elm Close. Remodel the Horne Road / A6136 / Byng Road junction to provide unstaggered toucan facilities.	New advisory or mandatory cycle lane and zebra crossing; upgrades to existing infrastructure (permanent)	£0.6M
8	**Richmond - Gallowfields Trading Estate via Hurgill Rd**	Permanent footway widening (2m width) on Hurgill Rd.	Footway widening (permanent)	£0.8
9a	**Richmond Town Centre: Do Min**	New and improved crossing points across side roads; a possible reduction in parking provision to create more public realm, such as around the periphery of the Market Place. Enhanced cycle storage facilities at key destinations.	Improved crossing points, parking reduction and cycle storage	£1.25M
9b	**Richmond Town Centre: Do Some**	'Do Min' scenario, including upgrades to key access and gateways into the Market Place area	Improved crossing points, parking reduction and cycle storage	£2.20M
9c	**Richmond Town Centre: Do Max**	Major public realm enhancements across the Market Place area, including full carriageway reconstruction and landscaping.	Public realm	£8.0M

4.8 TYPES OF IMPROVEMENTS

4.8.1. Improvements were developed according to the latest design standards, with key improvement types shown below.

MAINTENANCE

4.8.2. Where this is highlighted as an issue, the route likely requires immediate maintenance to bring it to standard, and it may be that a longer term programme of maintenance needs to be developed in order to ensure that this route is maintained to a standard commensurate with its importance in the active travel network.

INCREASE SURVEILLANCE

4.8.3. Increased surveillance can increase both the perception of and actual level of safety for users. This can be through technology, such as CCTV or 'help' points, or natural surveillance such as that afforded by good sightlines (which could be linked to maintenance), higher levels of activity, additional access points and permeability, or police patrols where deemed necessary.

PLACE-BASED INTERVENTIONS (GREENING, STREETSCAPE, SEATING ETC)

4.8.4. These are measures that enhance the look and feel of an area, including tree planting, street art, paving, seating, and other features to make public spaces more attractive. This is likely to be very bespoke to each area where required, but can be as simple as planting, such as trees or rain gardens (perhaps as part of Sustainable Urban Drainage Systems), or could be significant changes involving use of materials, sculpture, art installations, or water features.

Figure 4.4. Public Realm

FOOTWAY WIDENING

4.8.5. While minimum footway width guidance has changed over the decades, Transport for London's Pedestrian Comfort Guidance is based on the level of comfort that width provides to users, rather than generic recommendations and considered to best practice throughout England and Wales. However, widening the footway can be problematic, particularly where superfluous carriageway doesn't exist. Where this is recommended, it may be most feasible where undertaken alongside cycle schemes which also require significant changes to the highway. It should be noted that ATE are currently reviewing best practice for active travel in a rural setting.

PARKING CONTROLS

4.8.6. Where indiscriminate parking creates an issue for pedestrians, this could be due to various issues and a bespoke solution is likely to be required. This could be though provision of dedicated bays on carriageway, appropriate parking permit schemes, or perhaps greater enforcement of existing restrictions.

Figure 4.5. Buildouts with SUDs

NEW CROSSING POINT ON DESIRE LINE

4.8.7. Where across a major road, this is likely to be a new dedicated crossing point. A more detailed study would be required to determine the exact type and what additional changes may be required in order to implement it.

IMPROVE SIGNALS (WIDEN REFUGE, IMPROVED TIMINGS, FEWER REFUGES)

4.8.8. This category also includes changes to other junction types, such as roundabouts, that may not offer facilities for other road users at all. Altering any junction is likely to incur significant costs, and additional feasibility work including a traffic impact assessment is likely to be required.

Figure 4.6. Improved signalised junction (Enfield)

NEW ACCESS POINT TO BUILDINGS / CAR PARKS

4.8.9. This is likely to include new access points on desire lines where these have not been provided as part of the development. These may require third party agreement.

SPEED REDUCTION SCHEME

4.8.10. Any speed reduction scheme needs to be self-enforcing, and the methods employed to do so effectively will be bespoke to the specific location. This could be through enforcement cameras (including average speed limit zones), or through physical traffic calming measures, but could also be through a wider scheme which changes the fundamental purpose and feel of a street, including public realm, parking controls, and reduced kerb radii.

Figure 4.7. Raised table junction

DROP KERB / TACTILE PAVING

4.8.11. Dropped kerbs provide level access for pedestrians between the footway and carriageway. They are essential for the majority of wheelchair users to provide them with an accessible means of crossing a road safely and coherently. Tactile paving helps people with sight impairments understand the street and crossing points.

4.8.12. It is very important for visually impaired people that tactile paving is present, correct and adheres to standards as it can communicate to visually impaired pedestrian information about the environment that they are in.

4.8.13. These should now be provided as standard, but many locations still lack them where these need to be retro-fitted.

REDUCED RADII

4.8.14. Manual for the Streets highlights the importance of kerb radii in inducing vehicle speeds and affecting pedestrians' ability to cross minor roads on their desire line. Where it is safe to do so, a reduced kerb radii can be carried out in conjunction with other interventions (such as a speed reduction scheme or blended footway) to create a low speed environment where pedestrians are afforded priority over vehicles.

BLENDED FOOTWAY

4.8.15. 'Blended footways' describe a footway which continues over the minor arm of a priority junction, enforcing the highway code (rule 170) through good design. These can be implemented through various techniques, including at carriageway level, raised tables (footway level), use of materials, and the positioning of road markings. The appropriate design solution will need to be determined in each instance.

Figure 4.8. Blended Footway

WAYFINDING

4.8.16. This intervention encompasses all of the ways in which people orient themselves and navigate from place to place. Wayfinding improvements could be as simple as directional and distance signage at key junctions but could also be larger maps or even interactive screens where appropriate (such as a town centre).

Figure 4.9. Information and wayfinding (Sheffield)

5 STAGE 5: PRIORITISATION

5.1 OVERVIEW

5.1.1. Stage 5 of the LCWIP process involves prioritisation of improvements to create a programme of cycling and walking & Wheeling schemes and provide high level costings.

5.1.2. The guidance states that priority should be given to improvements that are most likely to have the greatest impact on increasing the number of people who choose to walk and cycle, and therefore the greatest return on investment. Other factors may also influence the prioritisation of improvements such as the deliverability of the proposed works or opportunities to link with other schemes.

5.2 PRIORITISING SCHEMES

5.2.1. A prioritisation framework has been produced to ensure consistency when prioritising walking & wheeling and cycling infrastructure improvements. The framework includes the following criteria:

- **Effectiveness** - based on the potential number of walking & wheeling or cycling trips that might use the route.
- **Alignment with policy objectives** – considering the emerging North Yorkshire Local Plan, priorities and alignment with ongoing workstreams
- **Economic factors** - including scheme cost, value for money and likelihood of attracting funding.
- **Deliverability issues** - including engineering constraints, land ownerships and level of stakeholder support.

5.2.2. The full assessment criteria and scoring methodology applied is provided in Table 5.2.

5.3 PRIORITISED LIST OF CYCLING INTERVENTIONS

5.3.1. The results of the prioritisation exercise for cycling schemes are summarised in Table 5.3.

5.4 PRIORITISED LIST OF WALKING & WHEELING IMPROVEMENTS

5.4.1. The results of the prioritisation exercise for walking & wheeling are also summarised in Table 5.3 alongside cycling schemes.

5.4.2. The routes have been divided into the same four distinct categories as the cycle improvements presented in Table 5.3.

5.4.3. Whilst the walking & wheeling improvements could be delivered in isolation, where these overlap with the Priority Cycle Network it is expected that the improvements would be delivered together (assuming funding is available), with any scheme delivering high quality active travel routes.

5.4.4. Where routes do not align with priority cycle improvements, these could be delivered on an entirely separate basis, potentially on a street or area basis or through small, localised improvements depending on complexity and funding availability.

Table 5.1. Priority Active Travel Improvements

ID	Improvement Name	Suggested Improvements	Improvement Type	Indicative cost
1	**Richmond to Gilling West**	A well-constructed shared-use facility designed to meet the needs of cycle traffic with raised entries over side roads and altered priority at the junction between the B6274 High Street and Hargill to enable through traffic.	New shared-use path and upgrades to junctions & crossings (permanent)	£4.1M
2	**A6108 Corridor: Richmond Town Centre to Schools**	Widening of the existing shared-use path to 4.0m where possible with the addition of a trapezoidal strip. Creation of turning space for cyclists on the northern side of the toucan crossing between The Avenue and Linden Gardens by removing the brick wall and guard railing. Tightening of the kerb radii at the Linden Gardens / Darlington Road junction as well as the B6271 / A6108 junction. Installation of tactile paving across Roper Court, Quakers Lane, and all arms of the Gilling Road / A6108 roundabout. The addition of dropped kerbs and tactile paving to the Cross Lanes junction.	Upgrades to existing infrastructure (permanent)	£7.5M
3	**Richmond to Scorton via Brompton-on-Swale**	Approx. 7.5km stretch of 3.0m wide shared-use path in highway verge and circa. 850m on-road advisory cycle lane. Implementation of speed reduction measures on Maison Dieu; installation of tactile paving across The Avenue; improvement of signage at the B6271 end of the 20.57/34/1 bridleway; and raised entries over side roads. Remodelling of the Gatherley Road / B6271 junction to provide simpler crossings for pedestrians and cyclists.	New shared-use path, advisory cycle lane, traffic calming and upgrades to junctions & crossings (permanent)	£8.3M
4	**Catterick Garrison to Catterick (Munster Barracks to Marne Barracks)**	Extension of the existing segregated two-way cycle track along the length of Leyburn Road and reduction of the speed limit from 40mph to 30mph. Installation of a parallel crossing in the vicinity of the golf club. Remodel the Camp Centre roundabout to provide protected space for cycling with suitable crossings of each arm. Widen the existing active travel infrastructure along Catterick Road. Install tactile paving across Heatherdene Road, Belton Park Drive, Colburn Lane, and Foss Lane. Remodel the Horne Road / A6136 / Byng Road junction to provide unstaggered toucan facilities. Upgrade the crossing to the east of Premier Meats to a toucan. Extend the shared-use path along the length of Catterick Road. Resurface and widen bridleway 20.12/8/1 and extend to the A6055. Add dedicated cycle signals or cycle priority at the junction between the A6055 and the bridge over the A1(M).	New off-road cycleway, shared-use path, and parallel crossing; upgrades to existing infrastructure (permanent)	£7.5M
5	**Hipswell Rd**	Widen and extend the existing shared-use path along Hipswell Road. Add an advisory or mandatory cycle lane with a new zebra crossing in the vicinity of Elm Close. Remodel the Horne Road / A6136 / Byng Road junction to provide unstaggered toucan facilities.	New advisory or mandatory cycle lane and zebra crossing; upgrades to existing infrastructure (permanent)	£0.6M
6	**Richmond to Scotton via Catterick Garrison**	Widen the existing off-carriageway cycle track and add a trapezoidal strip. Widen existing shared-use path to 4.0m and add a trapezoidal strip. Widen the existing off-carriageway cycle track between Catterick Road and Loos Road to 2.0m and resurface where necessary. Add a parallel crossing over Loos Road and Scotton Road. Install a buffer strip to allow cyclists to transition from off carriageway cycle path to on carriageway. 1km stretch of mandatory or advisory cycle lane from the Loos Road junction to the Meanee Road junction.	New advisory or mandatory cycle lane and parallel crossings; upgrades to existing infrastructure (permanent)	£4.9M
7	**Richmond - Easby Hall**	Bidirectional shared-use path along former railway line with trapezoidal strip to segregate pedestrians and cyclists, as well as provision of a sealed surface and lighting. Provision of cycle parking in Easby Abbey Car Park, and designation of Love Lane as a quiet lane. Junction improvements where Love Lane joins B6271 to accommodate the transition between off-road shared-use path and on-carriageway provision.	New shared-use path, junction upgrades, quiet lane designation and cycle parking (permanent)	£1.9M

8	**Richmond - Gallowfields Trading Estate via Hurgill Rd**	Permanent footway widening (2m width) on Hurgill Rd.	Footway widening (permanent)	£0.9M
9a	**Richmond Town Centre: Do Min**	New and improved crossing points across side roads; a possible reduction in parking provision to create more public realm, such as around the periphery of the Market Place. Enhanced cycle storage facilities at key destinations.	Improved crossing points, parking reduction and cycle storage	£1.25M
9b	**Richmond Town Centre: Do Some**	'Do Min' scenario, including upgrades to key access and gateways into the Market Place area	Improved crossing points, parking reduction and cycle storage	£2.20M
9c	**Richmond Town Centre: Do Max**	Major public realm enhancements across the Market Place area, including full carriageway reconstruction and landscaping.	Public realm	£8.0M

Table 5.2 – LCWIP Prioritisation criteria and scoring

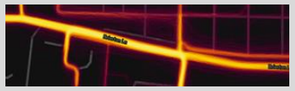
Ref	Category	Criteria	Description	Source	Low (0)	Intermediate (1)	High (2)
1	**Effectiveness**	**Increase in cycling**	Forecast number of journeys to work using the corridor in the Government Target Near Market scenario (LSOA)	PCT (2011 Census)	<10	10-50	> 50
2	**Effectiveness**	**Average daily pedestrian demand**	Method of travel to work (Datashine) LQ is the Location Quotient and describes how far from the national average (LQ =1) the measure is.	Datashine (2011 Census)	LQ <=1	LQ 2-3	LQ 4 +
3	**Effectiveness**	**Strava**	Existing active travel demand based on Strava datasets	Strava			
4	**Policy Alignment**	**Schools**	Number of schools within the corridor (a 500m radius)	WSP OD mapping	No schools	1 school	1+ or more schools
5	**Policy Alignment**	**Scheme alignment**	Does the route connect with any parallel schemes or other planned transport improvement?	NYC	No	Connects to or overlaps with one other planned scheme / project	Connects to or overlaps with more than one other planned scheme / project
6	**Policy Alignment**	**Safety**	Number of accidents involving pedestrians or cyclists in the previous 5 years within the corridor (500m radius)	DfT (STATS19)	< 5 accidents	5 - 10 accidents	> 10 accidents
7	**Policy Alignment**	**Visitor attractions**	Does the route improve connections to key visitor attractions?	NYC	0 visitor attractions	1 visitor attractions	1+ visitor attractions
8	**Policy Alignment**	**Carbon / Air Quality**	Does the route travel through an Air Quality Management Area?	DEFRA/ NYC AQ Action Plan	No (or no route option will travel through the AQMA)	----------	Yes
9	**Policy Alignment**	**Development sites**	Scale & proximity of sites with planning permission and/or allocated development sites	WSP OD mapping	No site with planning permission or allocated sites	Includes a housing site with 50-100 units that is < 500m from the network Or Includes an employment site that is between 250m & 500m from the network	Includes a housing site with 100+ units that is <500m from the network Or Includes an employment site that is <250m from the network
10	**Economic**	**Cost of construction**	Total scheme cost estimates for package of interventions	Cost estimates	> £5 million	£1 - 5 million	< £1 million
11	**Economic**	**Value for money**	Assessment of scheme benefits vs costs	AMAT	Low value for money (BCR of <1.5)	Medium or high value for money (BCR between 1.5 and 4)	Very high value for money (BCR of 4+)
12	**Economic**	**Scheme feasibility**	Known land ownership issues or scheme dependencies	NYC	Land ownership, environmental or other issue unlikely to be overcome	Dependent on another scheme or third-party land, or environmental constraints, likely to be overcome	No issues, scheme feasible to be undertaken
13	**Deliverability**	**Stakeholder acceptability**	Likelihood of support or opposition for the scheme	NYC	Likely to be opposition	Neutral / unknown	Likely to be supported
14	**Deliverability**	**Funding opportunities**	Likelihood of the corridor to receive funding (including private sector funding)	NYC	No funding opportunities currently identified	Potential funding opportunities identified	Funding secured

Table 5.3. LCWIP Prioritisation Summary

Rank	ID	Scheme Type	Name	Effectiveness	Policy	Economic	Deliverability	Total Score	Indicative Cost
1	7	Walking & wheeling	Hipswell Rd	4	7	1	2	17	£0.6M
2	4	Cycling	Richmond - Scotton via Catterick Garrison	5	7	1	2	15	£4.9M
3	3	Cycling	Catterick Garrison - Catterick/ Marne Barracks - Munster Barracks	5	6	0	2	13	£7.5M
4	5	Walking, wheeling and cycling	Richmond Town Centre to Schools via Darlington Rd	4	6	0	2	12	£7.5M
4	8	Walking & wheeling	Richmond - Gallowfields Trading Estate via Nuns Close CP	4	3	3	2	12	£0.9M
6	2	Cycling	Richmond - Scorton via Brompton-on-Swale	2	7	0	2	11	£8.3M
6	6	Walking, wheeling and cycling	Richmond - Easby Hall	4	5	1	1	11	£1.9M
8	9a	Walking & wheeling	Richmond Town Centre - Do min	4	7	3	3	11	£1.2M
8	9b	Walking & wheeling	Richmond Town Centre - Do min inc. access routes	4	3	3	2	10	£2.2M
8	9c	Walking & wheeling	Richmond Town Centre - Major public realm enhancements	3	4	1	2	10	£8.14M
8	1	Cycling	Richmond - Gilling West	3	4	1	2	10	£4.1M

5.5 PRIORITY CYCLING NETWORK PLAN

5.5.1. Following the stakeholder engagement programme, a Priority Cycling Network Plan was agreed and approved by the Catterick LCWIP Project Delivery Group. This plan is presented in Figure 5.1, with a high-resolution image included in Appendix A.

5.5.2. The Priority Cycling Network has been designed to prioritise connectivity for commuting and leisure, with the aim of increasing active travel in order to reduce car journeys. The network presented provides key connections in and around the Catterick LCWIP study area, recognising that it is not possible to connect everywhere, but focusing on the routes with the greatest potential volumes of pedestrians and cyclists.

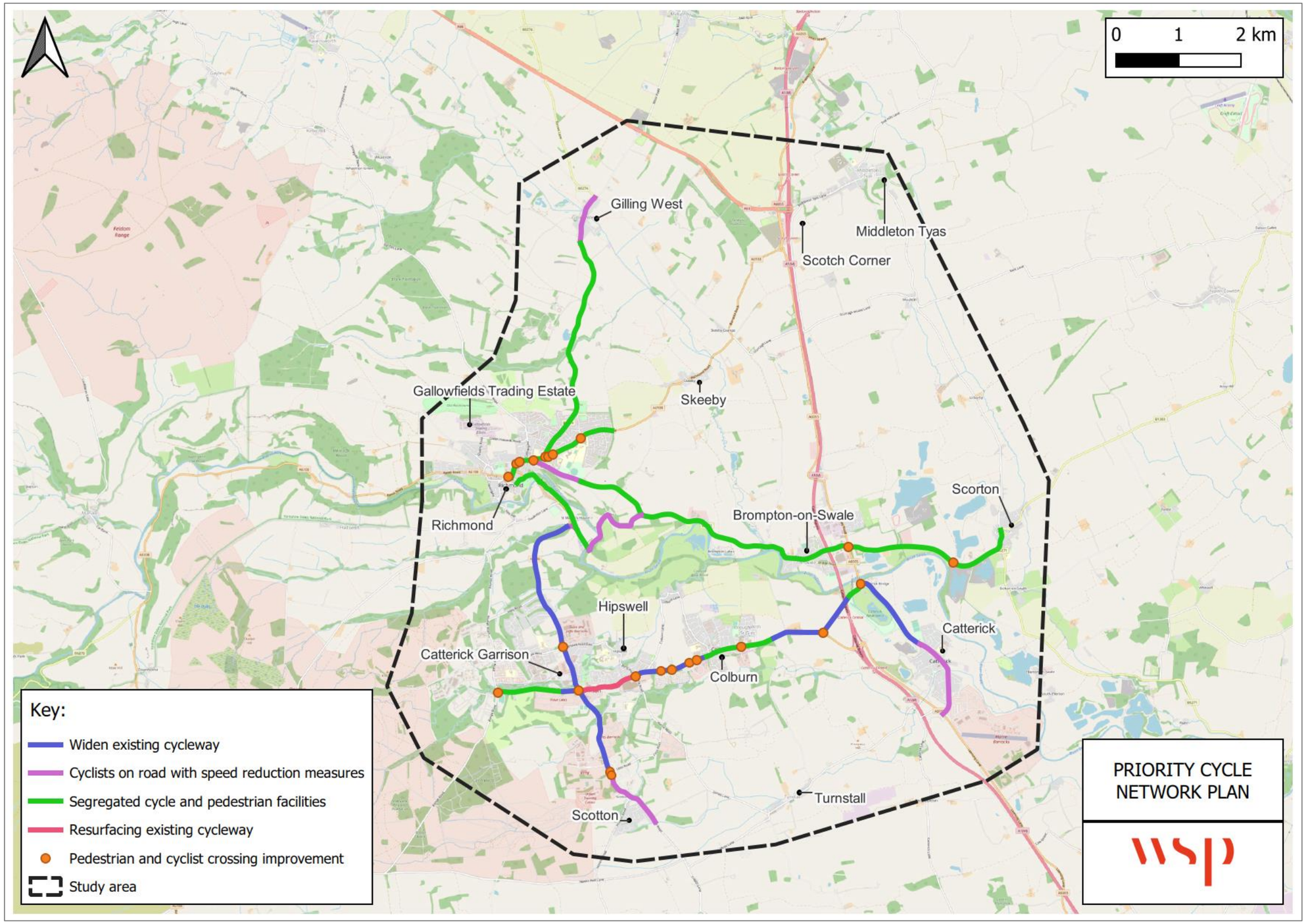
5.5.3. The priority cycling network provides connectivity between settlements with a focus on educational establishments and workplaces.

5.5.4. The proposed improvements include junction and crossing enhancements for pedestrians and cyclists; the development of traffic-free shared-use and segregated paths; and upgrades to footways.

5.5.5. The combination of new cycling routes and improvements to existing routes, alongside existing provision, will provide a coherent, direct, safe, comfortable, and attractive cycle network for the Catterick area.

5.5.6. The routes have been developed taking into account updated guidance on Cycle Infrastructure Design. The new standards of design are much higher than in the past and look to include cycle provision that is physically protected from traffic, as well as the separation of pedestrians and cyclists on main routes.

Figure 5.1. Priority Cycling Network Plan



5.6 PRIORITY WALKING & WHEELING NETWORK PLAN

5.6.1. The entirety of the draft Walking & Wheeling Network Map should ideally be audited to identify where improvements might be required in order to enable more people to walk to where they want to go. However, given the size and complexity of the draft network, this would be a significant undertaking and therefore priority routes need to be identified in the first instance.

5.6.2. Initially, a prioritisation exercise has been undertaken in order to identify which routes should be immediately considered for potential improvements. The five CWZs were assessed against a number of criteria, under the headings of:

- Effectiveness;
- Policy;
- Economic; and
- Deliverability.

5.6.3. The CWZs were ranked as:

- 1: Richmond CWZ
- 2: Catterick Garrison CWZ
- 2: Catterick CWZ
- 4: Colburn CWZ
- 4: Brompton-on-Swale CWZ

5.6.4. The Primary Walking & Wheeling Routes leading to Richmond CWZ were then identified from the draft Walking & Wheeling Network Map. These routes are identified as:

Ref	Corridor
1	Richmond Town Centre to Schools via Darlington Rd
2	Richmond - Easby Hall
3	Hipswell Rd
4	Richmond - Gallowfields Trading Estate via Nuns Close CP
5	Richmond Town Centre

5.6.5. The Catterick Priority Walking & Wheeling Network Map therefore consists of routes that connect to schools, as well as Richmond town centre, illustrated in Figure 5.2, (a high-resolution image is included in in Appendix A.)

5.6.6. All of the walking, wheeling and cycling priorities have been summarised in Figure 5.3, below.

Figure 5.2. Priority Walking and Wheeling Network Plan

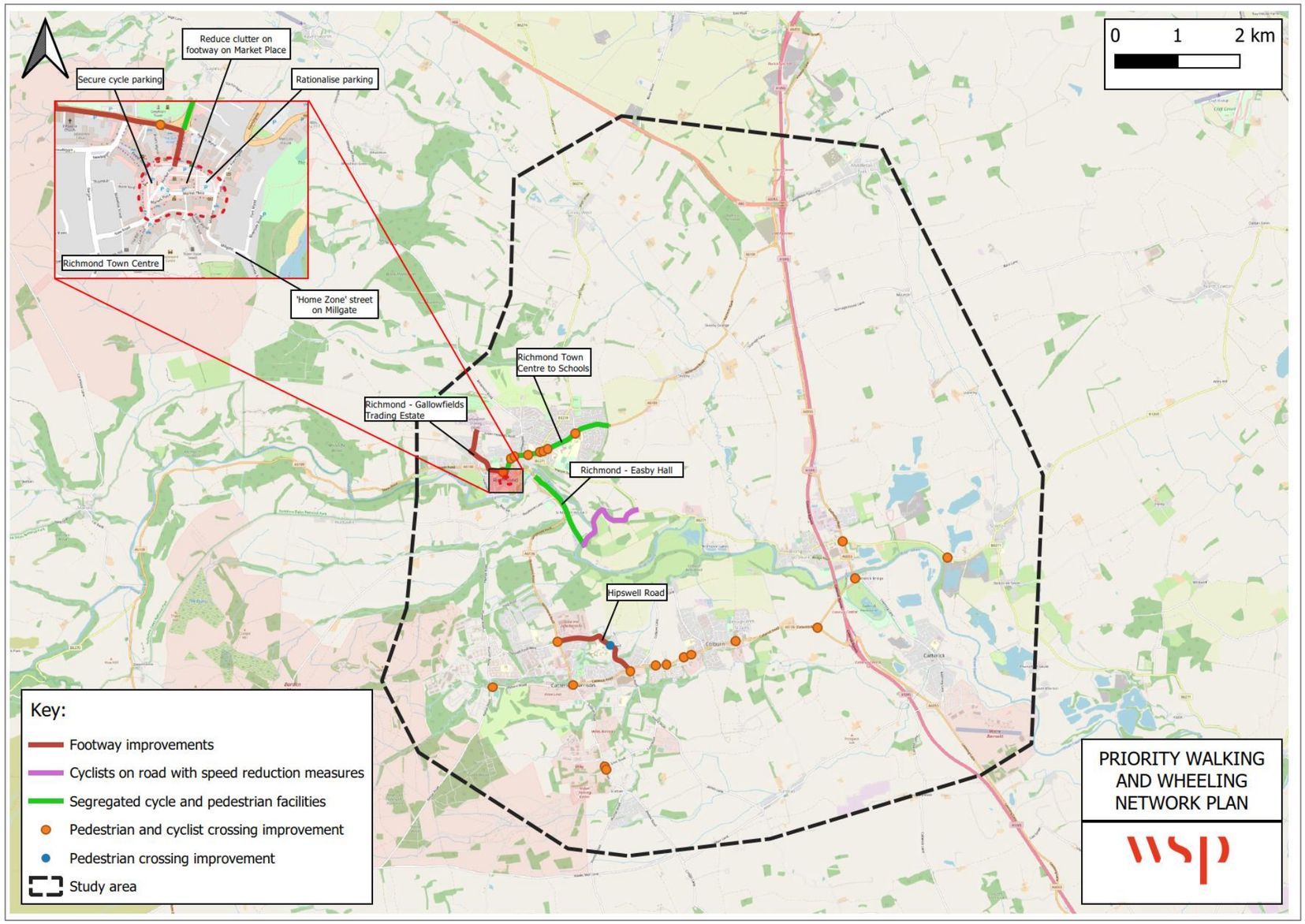
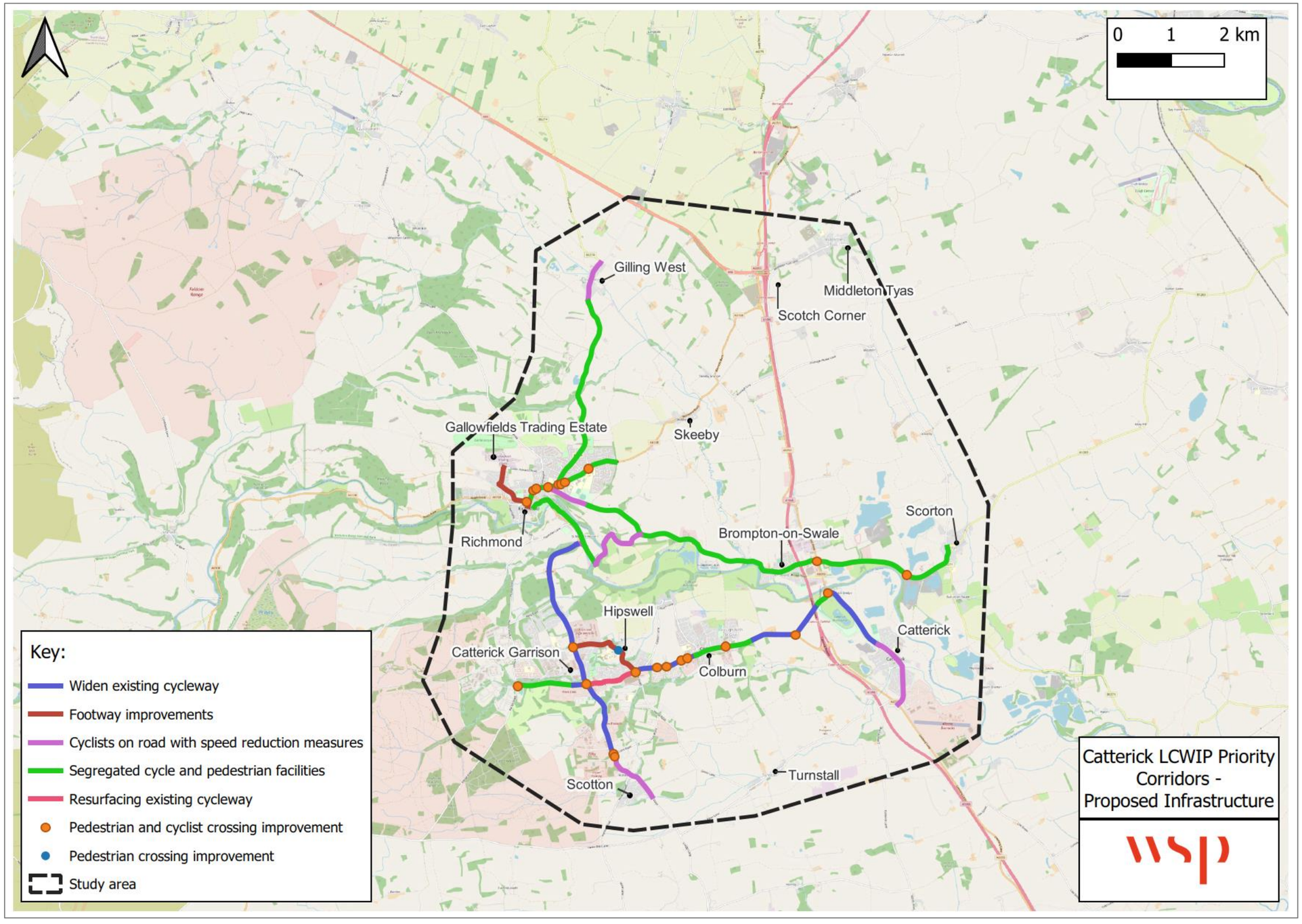


Figure 5.3. Priority Active Travel Improvements Plan



6 STAGE 6: INTEGRATION & APPLICATION

6.1 INTEGRATING THE LCWIP

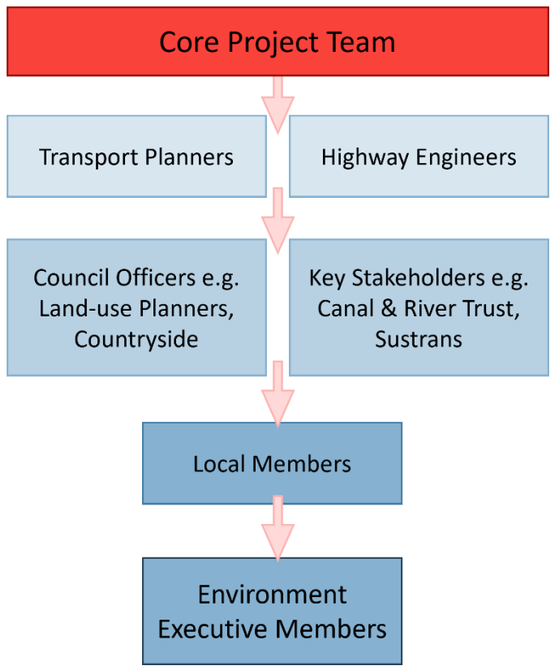
6.1.1. The final stage of the LCWIP process considers how the LCWIP should be integrated into local policy, strategies and plans, as well as practical applications of the outputs of the LCWIPs.

GOVERNANCE

6.1.2. A Core LCWIP Project Team has been established to produce the LCWIPs, consisting of officers from North Yorkshire Council's Transport Planning team and the Highways Area Team. Technical assistance was provided by WSP in the development of the Catterick LCWIP between 2022 and 2023.

6.1.3. The governance structure for the Catterick LCWIP is presented in Figure 6.1.

Figure 6.1. Catterick LCWIP Governance Structure



6.2 STAKEHOLDER ENGAGEMENT:

6.2.1. Effective engagement with stakeholders is integral throughout the development and delivery of an LCWIP to provide the opportunity for local people to express their views and input to the proposals. It is also imperative to engage with more vulnerable user groups, in particular those with protected characteristics as defined in the Equalities Act 2010. This will ensure that all relevant issues are considered when identifying interventions and it should increase support for the LCWIPs.

6.2.2. As part of the development of the Catterick LCWIP, a stakeholder engagement exercise was undertaken to seek opinions on the emerging walking & wheeling network.

6.2.3. A workshop took place on 15th March 2022 which provided an opportunity to share the draft walking & wheeling network map (Figure 4.2) with stakeholders.

6.2.4. Key consultees include:

- County Councillors;
- North Yorkshire Council Officers;
- Town Councils;
- Parish Councils;
- Local businesses
- Education providers;
- Police;
- Cycle and walking clubs and organisations; and
- Disability groups.

6.2.5. These groups will be engaged as priority schemes are developed following identification of appropriate funding opportunities. Community input will be central to the development of LCWIP proposals.

INTEGRATION

6.2.6. The LCWIP Core Project Team are responsible for the integration of the LCWIP into local policy. This will help ensure that emphasis is given to cycling and walking within both local planning and transport policies, strategies, and delivery plans. Reflecting the LCWIP in local policy will also help to make the case for central Government funding.

6.3 SECURING FUNDING & SCHEME DELIVERY

6.3.1. The LCWIP sets out the case for future funding for cycling and walking & wheeling infrastructure. As set out in the section above there are several compelling reasons for central Government to invest in active travel infrastructure in Catterick.

6.3.2. The LCWIP Core Project Team will seek to identify appropriate funding sources to deliver the aspirations of the LCWIP. This will include local contributions, developer contributions, central Government funding opportunities and other innovative funding mechanisms as appropriate to the scale of improvements.

6.3.3. There are a number of factors which strengthen the likelihood of increased central Government funding for active travel across North Yorkshire:

- Increased overall funding for active travel, with £2bn for cycling announced and further spending announcements likely over the lifetime of this LCWIP.
- Recognition of the need for increased funding and regeneration outside London and core cities to "level up" the country, especially to regenerate town centres and seaside towns.
- The need to tackle the climate crisis.

6.3.4. The priority improvements identified will deliver a range of benefits to public health, local economy and tourism, land value uplift, decongestion, road safety and carbon savings – all of which are expected to be significant.

6.3.5. These schemes will help to deliver significant local benefit and align with wider investment in strategic routes across the North Yorkshire.

6.4 REVIEWING & UPDATING THE LCWIP

6.4.1. It is anticipated that LCWIPs will be reviewed every 3 to 5 years to reflect progress made. LCWIPs may also be updated if there are significant changes in local circumstances, such as the publication of new policies or strategies, major new development sites, or new sources of funding.

6.5 PROMOTION AND BRANDING

6.5.1. Opportunities to support the North Yorkshire LCWIP programme via a package of marketing and promotional activities will be sought to maximise awareness and usage of our active travel networks.

6.6 SCHEME MAINTENANCE, MONITORING AND EVALUATION

6.6.1. Existing walking and cycling networks, as well as any extensions to these, need to be maintained and looked after appropriately to ensure continued use and accessibility throughout the year.

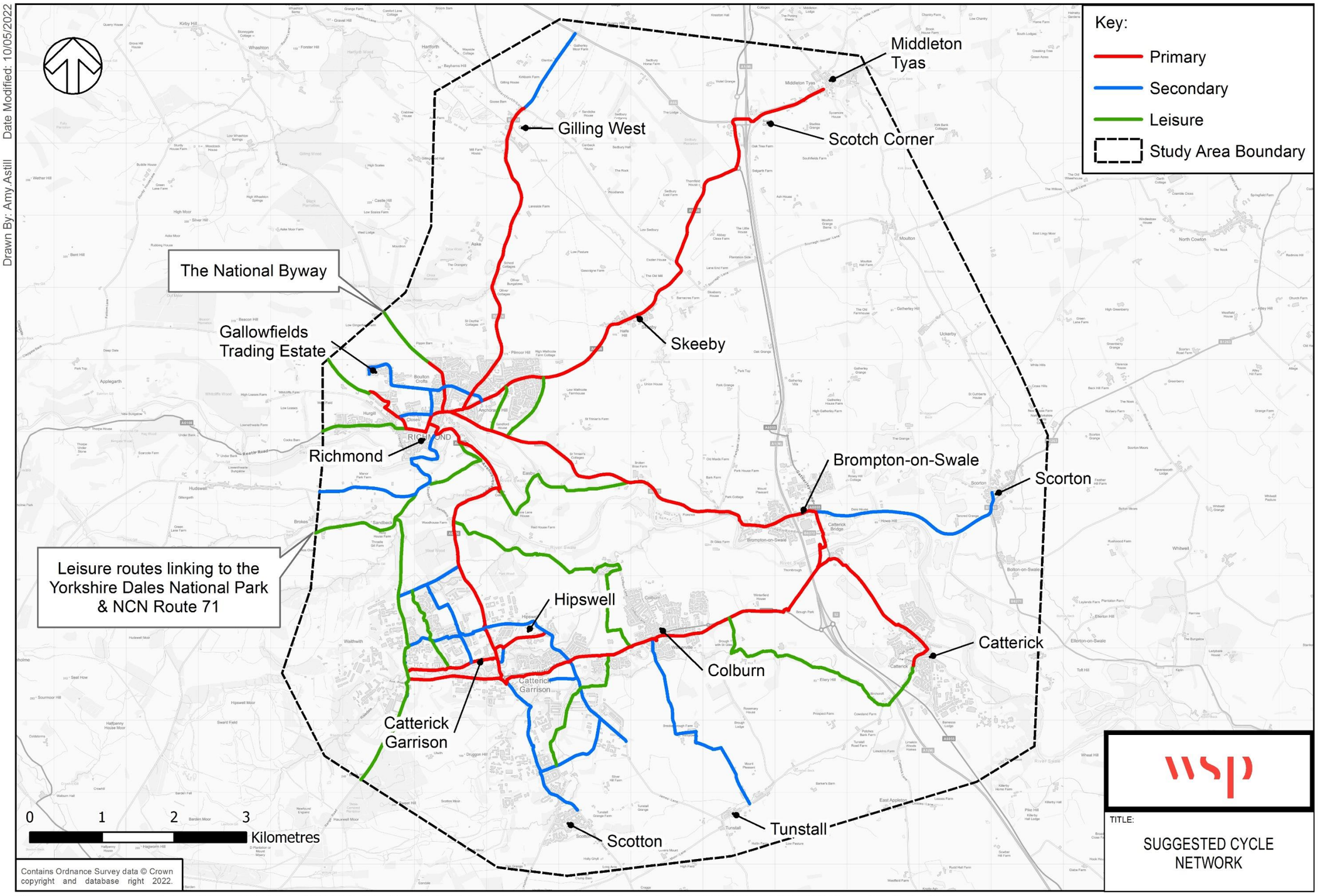
6.6.2. With an expected rise in the number of people wishing to walk and cycle, arrangements should be put into place to ensure that there is an ongoing and enhanced programme of maintenance activities for footways, cycle routes and the Public Rights of Way. This will include regular removal of undergrowth and maintenance of hedges sweeping, surface repairs, gritting in cold weather, drain clearance and lighting repairs.

6.6.3. Monitoring and evaluating the benefits of investment in delivering the LCWIP schemes will be critical and will enable NYC to develop a business case for future investment in its streets. A monitoring and evaluation plan will be developed for each route as it is progressed, and for the wider programme of network improvements as a whole to help gauge and assess their value and success.

Appendix A

LCWIP NETWORK PLANS

Drawn By: Amy Astill Date Modified: 10/05/2022



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Drawn By: Amy.Astill Date Modified: 06/06/2022

Key:
- Prestige Route
- Primary Route
- Secondary Route
- Link Footway
- Study Area Boundary

Middleton Tyas
Gilling West
Scotch Corner
Gallowfields Trading Estate
Skeeby
Richmond
Brompton-on-Swale
Scorton
Hipswell
Catterick
Colburn
Catterick Garrison
Tunstall
Scotton

0 1 2 3 Kilometres

TITLE:
SUGGESTED WALKING NETWORK

File: \\uk.wspgroup.com\central data\Projects\70091xxx\70091481 - HEDC20 - Catterick Local Cycling and Walking Infrastructure Plan\03 WIP\03 GIS\220225_Suggested_Walking_Network.mxd

Amber Court
William Armstrong Drive
Newcastle upon Tyne
NE4 7YQ

wsp.com