



Durham County Council

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# LOCAL CYCLING AND WALKING INFRASTRUCTURE PLAN

Shildon





Durham County Council

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Shildon

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# LOCAL CYCLING AND WALKING INFRASTRUCTURE PLAN

Shildon

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# EXECUTIVE SUMMARY

The Shildon Local Cycling and Walking Infrastructure Plan (LCWIP) is an evidence-based strategic approach to identifying cycling and walking improvements required in the town to facilitate increased active travel for everyday journeys. It is one of twelve LCWIPs to be produced for each of the main settlements in County Durham, as identified in the County Council's Strategic Cycling and Walking Delivery Plan (SCWDP).

The LCWIPs are being developed in support of the Government's Cycling and Walking Investment Strategy (2017) which aims to achieve the following targets by 2025:

- Double cycling from 0.8 billion to 1.6 billion stages;
- Increase walking to 300 stages per person per year;
- Reduce the number of cyclists killed or injured each year; and
- Increase the percentage of school children (5-10 years) that walk to school from 49% to 55%.

The LCWIP has been developed in accordance with the six-stage process outlined by the Department for Transport (DfT) in their Technical Guidance. The key outputs of the LCWIP include local walking and cycling network plans; a prioritised programme of improvements and underpinning technical report.

The LCWIP represents a robust approach for prioritising investment in walking and cycling infrastructure in the short, medium, and long term, and it will support the County Council with making the case for future funding. The LCWIP will be embedded across the County Council's departments supporting transport, environment, health, leisure, and planning agendas.

# 1 INTRODUCTION

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## 1.1 BACKGROUND

- 1.1.1. Durham County Council (DCC) are committed to developing Local Cycling and Walking Infrastructure Plans (LCWIPs) for the twelve main settlements in the county, as set out in their Strategic Cycling and Walking Delivery Plan (SCWDP 2019-2029).
- 1.1.2. LCWIPs are identified in the Government's Cycling and Walking Investment Strategy (CWIS) as a strategic approach to identifying cycling and walking improvements required at the local level. They enable a long-term approach to developing high-quality local cycling and walking networks and form a vital part of the Government's strategy to increase the number of trips made on foot or by cycle.
- 1.1.3. The key outputs of LCWIPs are:
- Network plans for walking and cycling which identify key routes and core zones for development;
  - A prioritised programme of infrastructure improvements for future investment; and
  - A report which sets out the underlying analysis carried out and provides a narrative which supports the identified improvements and network.

## 1.2 DOCUMENT OVERVIEW

- 1.2.1. This is a summary of the Shildon LCWIP, outlining the approach and proposals for the town, following the recommended DfT LCWIP development process as outlined in Table 1-1.

**Table 1-1 - The LCWIP Process**

Stage	Name	Description
1	Determining Scope	Establish the geographical extent of the LCWIP, and arrangements for governing and preparing the plan.
2	Gathering Information	Identify existing patterns of walking and cycling and potential new journeys. Review existing conditions and identify barriers to cycling and walking. Review related transport and land use policies and programmes.
3	Network Planning for Cycling	Identify origin and destination points and cycle flows. Convert flows into a network of routes and determine the type of improvements required.
4	Network Planning for Walking	Identify key trip generators, core walking zones and routes, audit existing provision and determine the type of improvements required.
5	Prioritising Improvements	Prioritise improvements to develop a phased programme for future investment.
6	Integration and Application	Integrate outputs into local planning and transport policies, strategies, and delivery plans.

- 1.2.2. A technical report which provides detailed information about the methodology implemented to develop the Durham LCWIPs is available on request from DCC.

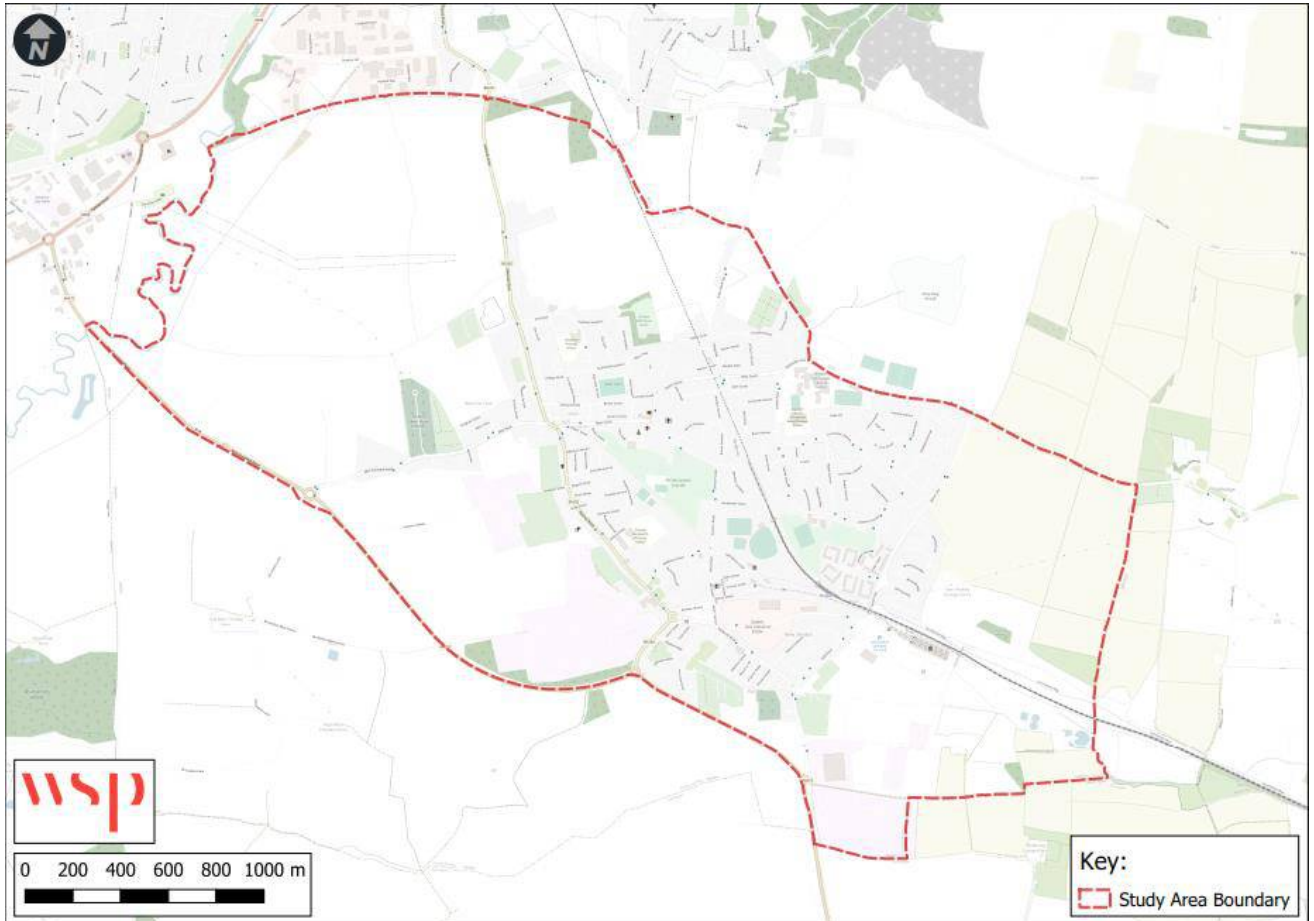


## 2 STAGE 1: DETERMINING SCOPE

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- 2.1.1. The LCWIP for Shildon covers the continuous urban area of the town. Consideration has been given to existing and potential inter-urban connections in developing the networks to ensure a cohesive county-wide active travel network.
- 2.1.2. The area covered by the Shildon LCWIP is shown in Figure 2-1 below.

**Figure 2-1 - Geographic scope of the Shildon LCWIP**



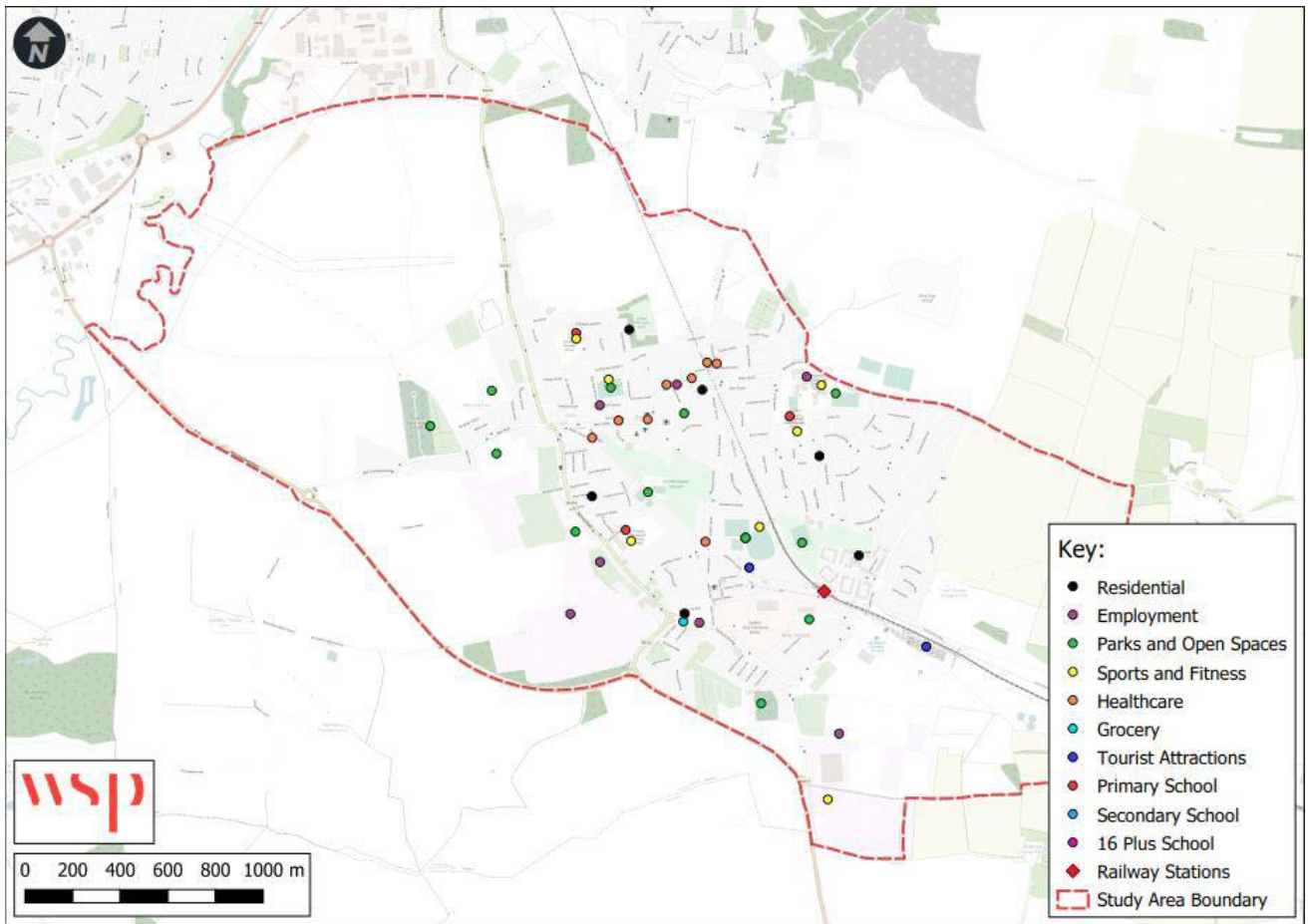
- 2.1.3. Further information about the other aspects of Stage 1 is covered within the accompanying County Durham LCWIP Programme Report.

### 3 STAGE 2: INFORMATION GATHERING

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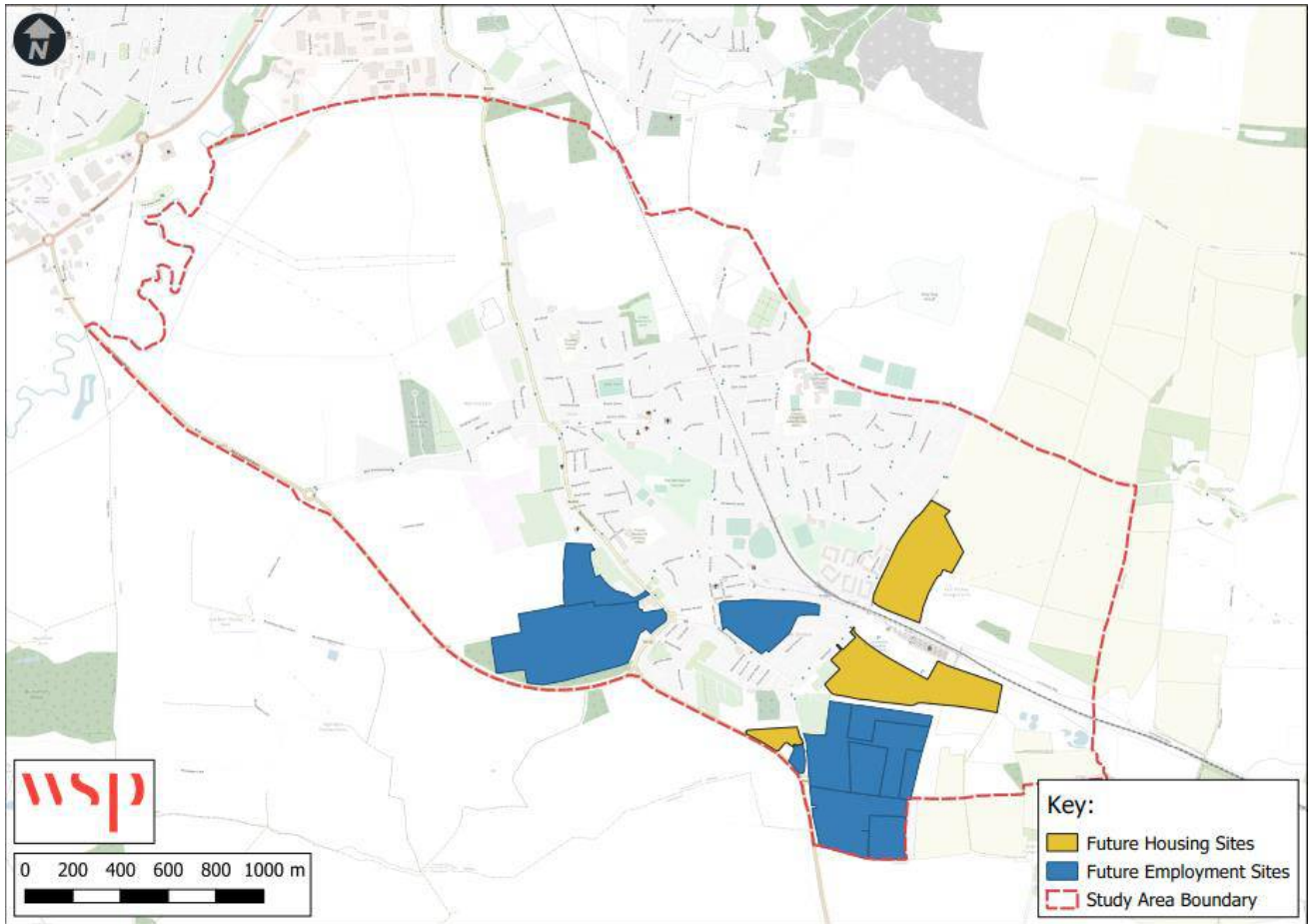
- 3.1.1. The LCWIP has been developed following a robust, evidence-based approach. An extensive collection of information has been analysed and reviewed to inform the development of network plans for cycling and walking in Stages 3 and 4 respectively and subsequently inform the prioritisation in Stage 5.
- 3.1.2. Key datasets that have been used include:
- Rights of Way information and maps existing cycle routes;
  - Existing trip origins and destinations as well as allocated development sites;
  - Regional and local policies, plans and strategies;
  - Census Journey to Work data;
  - Local pedestrian and cycle counts;
  - Propensity to Cycle Tool;
  - Collision data for cyclists and pedestrians;
  - Air Quality Management areas; and
  - Index of Multiple Deprivation.
- 3.1.3. The study has also analysed key policy and strategic documents, as well as planned and aspirational infrastructure schemes that could influence priorities for early funding opportunities.
- 3.1.4. This stage allows for the development of a comprehensive profile of the study area, understanding the potential for existing and future trips by active modes and the barriers that might prevent people from making these journeys. The information gathering process also allows prioritisation of routes to take place, which is discussed in Stages 3, 4 and 5.
- 3.1.5. The existing trip origins and destinations in Shildon have been mapped as part of this process to establish travel patterns within the town and provide the basis for network development (see Figure 3-1).
- 3.1.6. Stakeholder engagement has been invaluable through the Stage 2 process, with numerous discussion and workshops held with various officers and key stakeholders in order to ensure an accurate and bespoke picture of the study area is developed.

**Figure 3-1 - Existing trip origins and destinations in Shildon**



3.1.7. Planned future developments were also mapped in collaboration with stakeholders to identify potential new journeys (see Figure 3-2).

**Figure 3-2 - Future trip origins and destinations in Shildon**



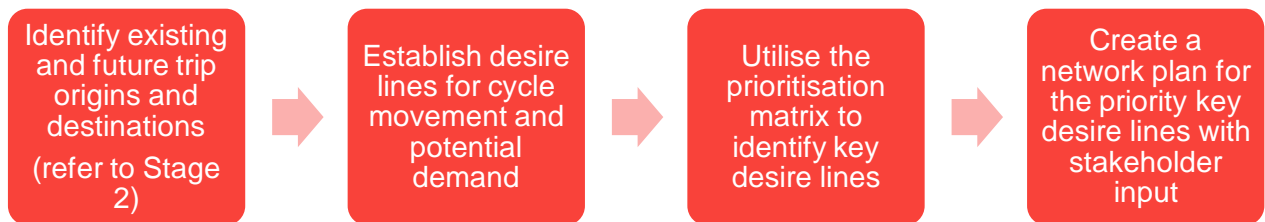
3.1.8. Together, the origin and destination plans show the locations people travel between and therefore the key locations that need to be connected by the walking and cycling networks.

## 4 STAGE 3: NETWORK PLANNING FOR CYCLING

### 4.1 OVERVIEW

- 4.1.1. Stage 3 of the LCWIP process encompasses the production of a cycle network map for Shildon and identification of required improvements to achieve an aspirational standard of infrastructure for any routes chosen as a priority scheme.
- 4.1.2. The Shildon Cycle Network was produced following the steps below (in accordance with the LCWIP Technical Guidance), identifying priorities at each step as the network develops in order to ensure that investment is focussed on the right places.

**Figure 4-1 - Network Planning for Cycling**



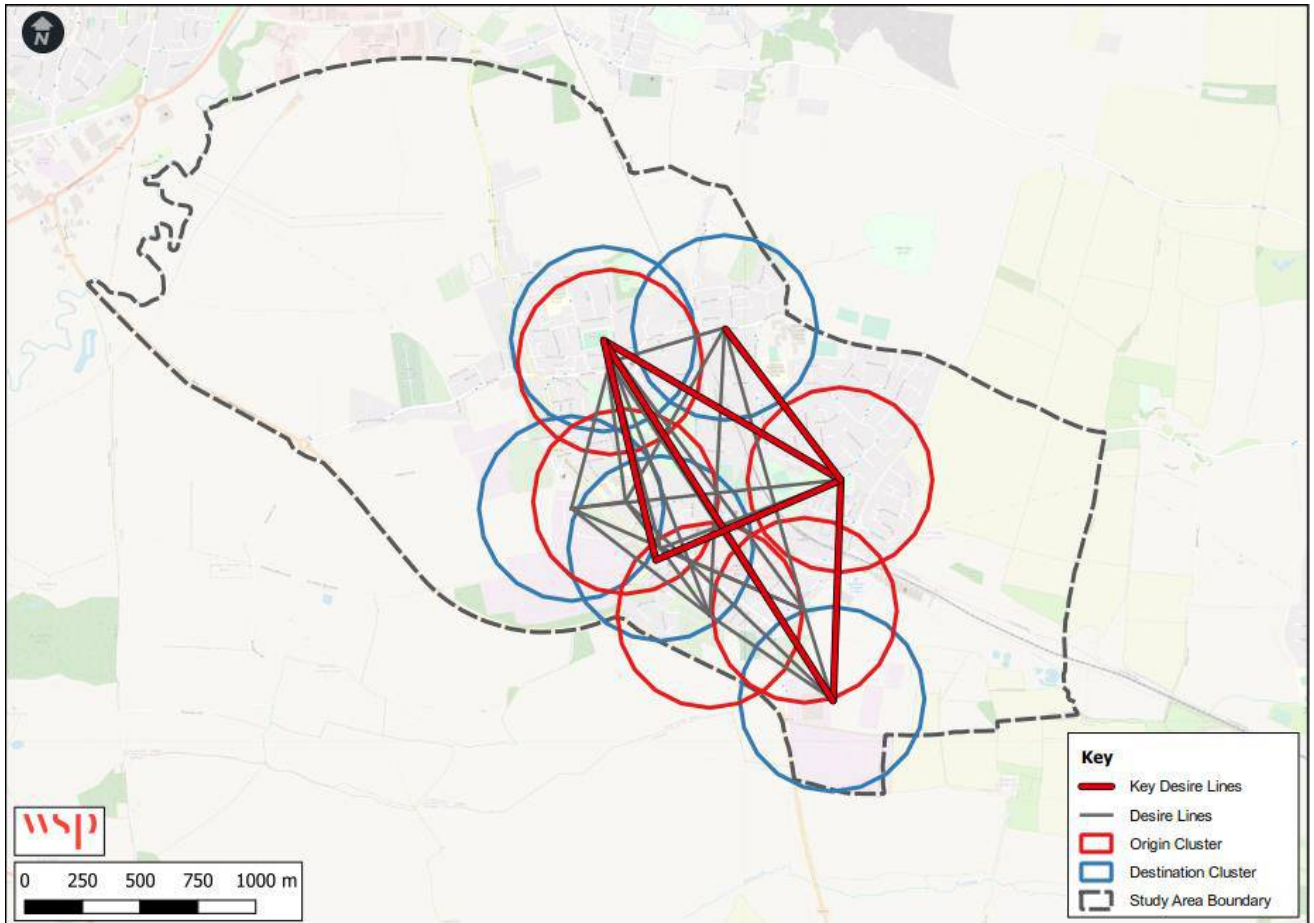
- 4.1.3. More detail on each step in the process is provided in the following subsections.

### 4.2 CLUSTERING & DESIRE LINES

- 4.2.1. The existing and future trip origins and destinations identified as part of Stage 2 were reviewed and those in close proximity to each other were clustered to simplify the analysis of desire lines. This agglomeration provides an indication of particularly significant trip generating locations which will be the focus for a large number of trips.
- 4.2.2. The clusters were rationalised, with those that have a large overlap being replaced and represented by a single cluster. An Ordnance Survey base map was used to inform the selection so that any destinations which are separated by a physical barrier (e.g., busy road, river, railway) were not clustered because they are likely to be served by different routes. Furthermore, the consolidated clusters were sense-checked to ensure that they are representative of a group of destinations that could be served by the same route.
- 4.2.3. The guidance recommends that desire lines between trip origins and destinations are mapped, representing the most direct route between points, irrespective of the existing network and barriers.
- 4.2.4. The desire lines were weighted based on the relative strengths of the actual OD points within them; this allowed for the identification of those with the greatest desire to travel. The process identified six key desire lines as potential priorities.
- 4.2.5. All of the desire lines and clusters can be seen in Figure 4-2, along with the top scoring key desire lines.



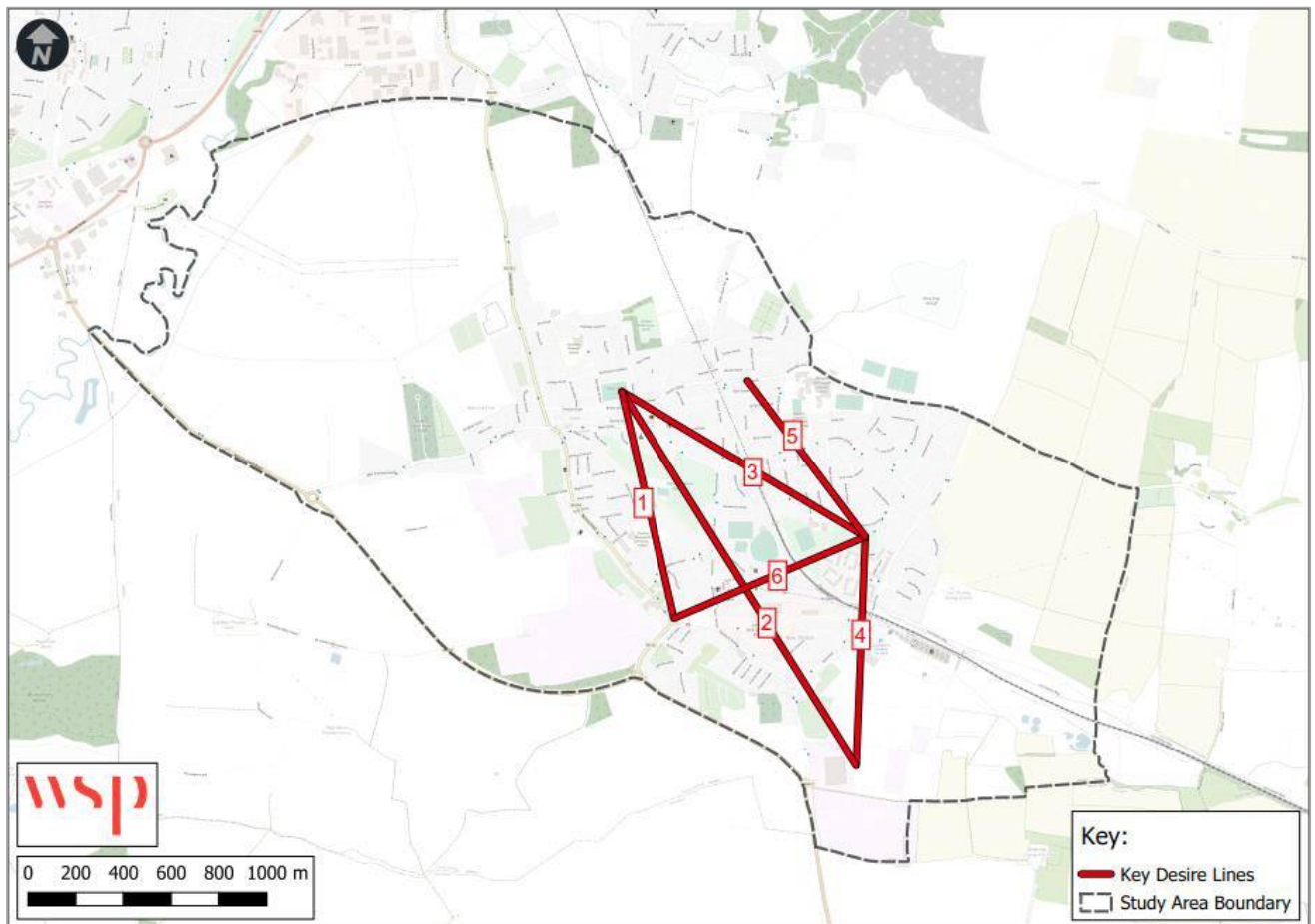
**Figure 4-2 - Clusters and Initial Desire Lines**



### 4.3 VALIDATION OF THE KEY DESIRE LINES

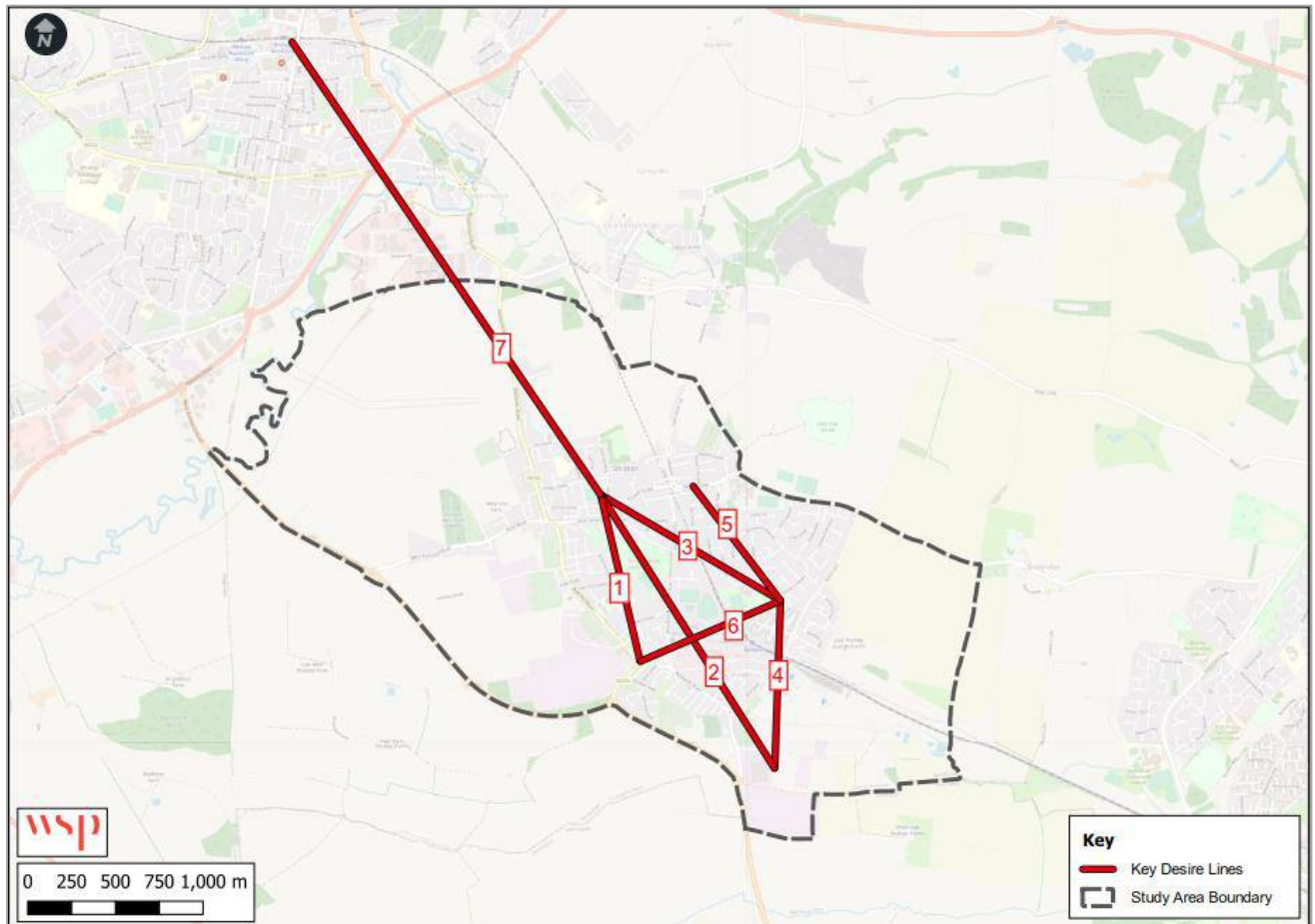
- 4.3.1. Initially, six key desire lines were identified by considering the relative desire to travel between them and comparing against existing data relating to desire to travel, such as the PCT and Strava; these key desire lines are illustrated in Figure 4-3. The desire lines were validated through engagement with internal officers and stakeholders prior to external engagement.
- 4.3.2. After initial key desire lines were identified, external consultation was undertaken with invited stakeholders to identify any potential amendments due to local conditions.

**Figure 4-3 - Initial Key Desire Lines**



- 4.3.3. External consultation was undertaken with the invited stakeholders at Shildon Civic Hall on Thursday 19th May from 1.30-3.30pm. During this consultation the desire line map and draft aspirational network plans were presented, allowing the stakeholders to raise any key issues and suggest any potential changes to be made to the initial priority desire lines. Stakeholders were also asked to prioritise the lines, helping identify potential future schemes.
- 4.3.4. Members of invited organisations included: DCC, Shildon Town Council, County Durham Sport, and AAP.
- 4.3.5. The main change made to the initial key desire lines after internal and external stakeholder feedback was to include a connection to the north west to Bishop Auckland.
- 4.3.6. This results in seven key desire lines – these are shown in Figure 4-4.

**Figure 4-4 - Final Key Design Lines**



## 4.4 PRIORITY DESIRE LINE ASSESSMENT

- 4.4.1. Once the final seven key desire lines had been identified a prioritisation process was undertaken to determine which desire lines should be considered for immediate route and scheme identification.
- 4.4.2. Initially, each key desire line was assessed using the Durham LCWIP Prioritisation Matrix, as shown in Table 4-1. The Matrix assesses schemes against the following criteria:
- **Effectiveness** - based on the potential number of walking or cycling trips that might use the route.
  - **Alignment with policy objectives** – considering the Strategic Cycling and Walking Delivery Plan (SCWDP), local 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.
- 4.4.3. At this stage of the process, routing and schemes have not yet been determined, and so key desire lines are only assessed against Effectiveness and Policy Objectives criteria.
- 4.4.4. The framework includes a range of criteria that either provide an indication of the propensity for walking and cycling or relate to the key policy areas identified in the Strategic Cycling and Walking Delivery Plan (SCWDP).





**Table 4-1 - Durham LCWIP Prioritisation Framework**

	Ref	Criteria	Definition	Source	Low (0)	Intermediate (1)	High (2)
<b>EFFECTIVENESS</b>	1	<b>Catchment population</b>	Population within the route (a 500m radius)	Route Reports (2011 Census)	< 4,000 people	4,000 - 8,000 people	> 8,000+ people
	2	<b>Propensity to Cycle</b>	Forecast number of journeys to work using the corridor in the Government Target Near Market scenario (LSOA)	PCT (2011 Census)	< 20 cyclists	20 - 50 cyclists	> 50 cyclists
	3	<b>Existing employment</b>	Number of workplace zone centroids within the corridor (a 500m radius)	WSP OD mapping	< 5 Workplace Zone Centroids	5 - 10 Workplace Zone Centroids	> 10 Workplace Zone Centroids
	4	<b>Attractor score</b>	Attractors within the corridor (excluding airports / train stations, hospitals, industrial estates, education establishments)	Route Reports	< 10 attractors	10 - 100 attractors	> 100 attractors
	5	<b>Schools</b>	Number of schools within the corridor (a 500m radius)	WSP OD mapping	No schools	1 - 4 schools	5 or more schools
	6	<b>Exclusively post-16 education sites</b>	Number of colleges, university sites or further/higher education facilities within the corridor (a 500m radius)	WSP OD mapping	No post-16 education sites	1 post-16 education site	> 1 post-16 education sites
	7	<b>Transport interchanges</b>	Proximity to a transport interchange (train stations, bus stations or park and ride sites)	WSP OD mapping	> 1km from a transport interchange	500m - 1km from a transport interchange	< 500m from a transport interchange
<b>POLICY ALIGNMENT</b>	8	<b>Scheme overlap</b>	Does the route include a TCF scheme or other planned transport improvement?	DCC	No	-----	Yes
	9	<b>Safety</b>	Number of accidents involving pedestrians or cyclists in the previous 5 years along the route (500m radius)	Dft (STATS19)	< 5 accidents	5 - 10 accidents	> 10 accidents
	10	<b>Car ownership</b>	Percentage of households with no car / van	2011 Census	< 25% of households	25% - 40% of households	> 40% of households
	11	<b>Schools excess weight levels</b>	Lowest excess weight quintile of the schools along the route (a 500m radius)	DCC	Includes a school in the 40%-60% or 60%-80% quintiles that is over 250m from the network Or Includes a school in the 80%-100% quintile Or Does not include a school	Includes a school in the 0-20% or 20%-40% quintiles that is between 250m and 500m from the network Or Includes a school in the 40%-60% or 60%-80% quintiles that is within 250m of the network	Includes a school in the 0-20% or 20-40% quintiles that is within 250m of the network



	12	<b>Deprivation</b>	Highest IMD (i.e., most deprived ward) along the route	DCLG	>= 6 IMD Decile	>3 & <6 IMD Decile	< = 3 IMD Decile
	13	<b>Air quality</b>	Does the route travel through an Air Quality Management Area?	DCC	No (or no route option will travel through the AQMA)	-----	Yes
	14	<b>Cross boundary</b>	Does the corridor connect to a super route, an NCN route or a cross-boundary route?	DCC / WSP mapping	> 500m	< 500m	Direct connection to route option(s)
<b>ECONOMIC</b>	15	<b>Development sites</b>	Scale & proximity of sites with planning permission and/or sites allocated in the County Durham Plan	WSP OD mapping	No site with planning permission or CDP 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
	16	<b>Cost of construction</b>	Total scheme cost estimates for package of interventions	Cost estimates	> £5 million	£2 - 5 million	< £2 million
	17	<b>Value for money</b>	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+)
<b>DELIVERABILITY</b>	18	<b>Scheme feasibility</b>	Known land ownership issues or scheme dependencies	DCC	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
	19	<b>Political and public acceptability</b>	Likelihood of support or opposition for the scheme	DCC	Likely to be opposition	Neutral / unknown	Likely to be supported
	20	<b>Timescales</b>	Timescales for delivery	DCC	Long (deliverable within 10 years)	Medium-term (deliverable within 5 years, where there is a clear intention to act, but delivery is dependent on identifying funding or other issues)	Short-term (deliverable within 3 years and funding identified)

- 4.4.5. A scoring range was developed for each of the criteria with three levels (Low, 0 points; Intermediate, 1 point; and High, 2 points) and the key desire lines were scored against the criteria. For example, a desire line that strongly supports a given criterion (e.g. high propensity for cycling) would score higher (i.e. 2 points). This ensured that the desire lines taken forward for development were likely to benefit a greater number of users and wider agendas or developments, thereby having a stronger case for intervention.
- 4.4.6. The desire lines were assessed against the criteria and assigned a score for each. This was reviewed by the DCC project team to ensure a robust and validated assessment. The rankings are provided in Table 4-2 and the full scoring assessment is provided in Appendix A.

**Table 4-2 – Prioritisation Results**

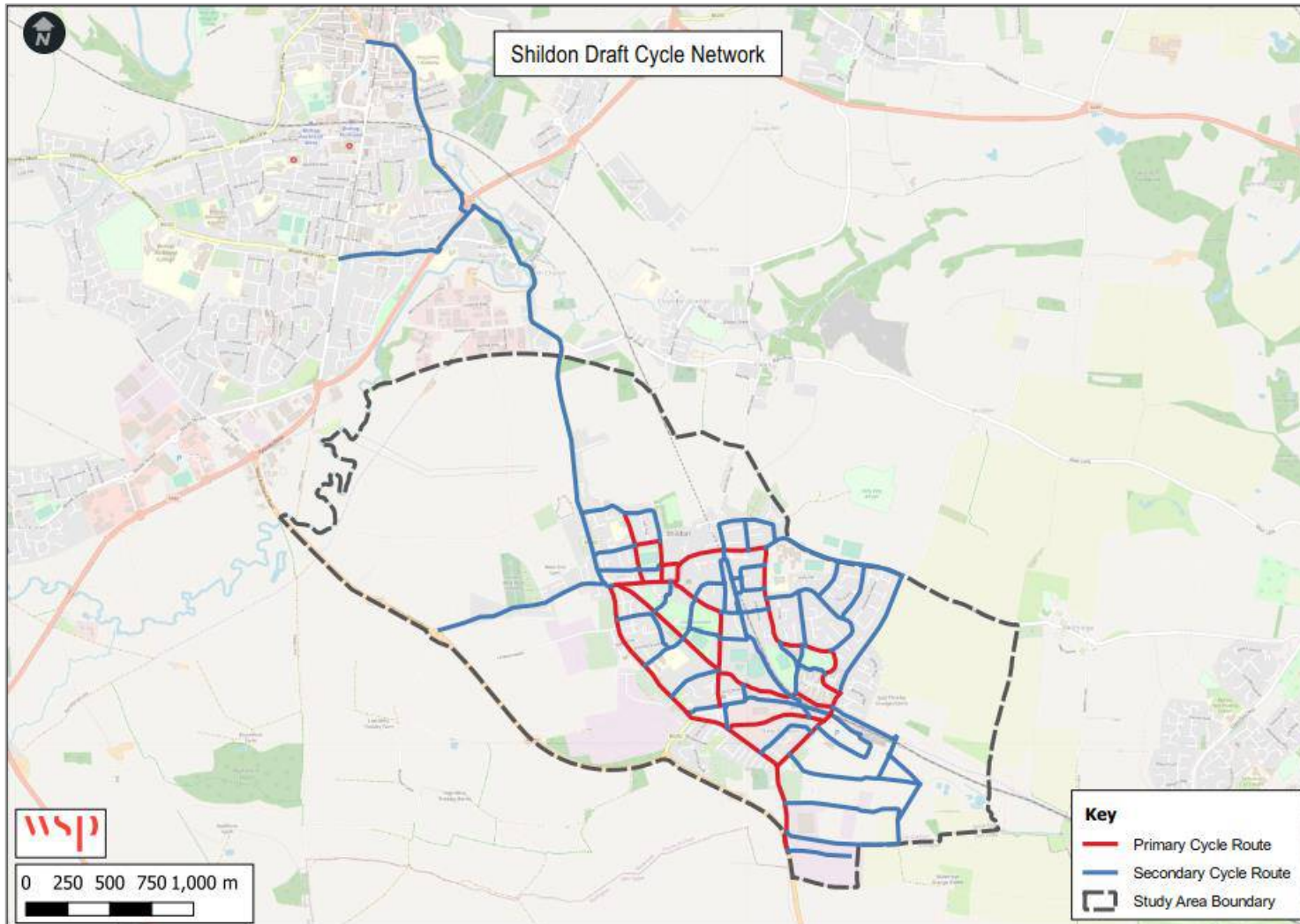
Ranking	Key Desire Line Number	Total Score
6	1	12
2	2	16
3	3	15
6	4	12
5	5	14
3	6	15
1	7	19

- 4.4.7. The initial prioritisation results identified that the top priority key desire lines are seven, two, and three / six.
- 4.4.8. Note that the prioritisation matrix has limitations. Priorities need to work synergistically with each other and existing / planned infrastructure schemes to produce a coherent network. Relying solely on the matrix could result in disparate pieces of a network being prioritised. The results are therefore considered against the wider strategic priorities and opportunities in the town and validated through stakeholder engagement.
- 4.4.9. Following this validation exercise, the final priority desire lines were therefore identified as:
- Three;
  - One; and
  - Five.

## 4.5 ASPIRATIONAL CYCLE MAP

- 4.5.1. Having determined the key desire lines, the next stage of the process is to identify real on the ground 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.
- 4.5.2. 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.
- 4.5.3. 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; and
  - 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.
- 4.5.4. This network is referred to as the ‘Aspirational Cycle Network’ and is the basis of any further route identification work, with these routes likely being the most desirable option in terms of directness.
- 4.5.5. Figure 4-5 illustrates the Shildon Aspirational Cycle Network Map, while a full size image can be found in Appendix B.

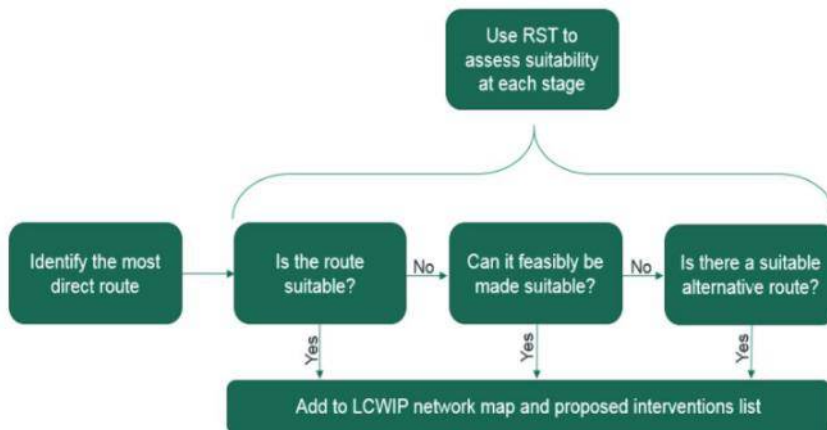
Figure 4-5 - Shildon Aspirational Cycle Network Map



## 4.6 DETERMINE ROUTES AND HIGH-LEVEL INTERVENTIONS

- 4.6.1. The next stage in the process is to identify routes and potential schemes to serve the top priority desire lines. In most cases, there is a clear preferred cycle route within the corridor, which is typically the most direct. This is generally shown on the aspirational cycle network map. However, in some cases there is more than one potential route between origin and destination points, or there are constraints on the most direct route that might limit its potential as a cycling route.
- 4.6.2. 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 4-6.

**Figure 4-6 – Route Selection Process**



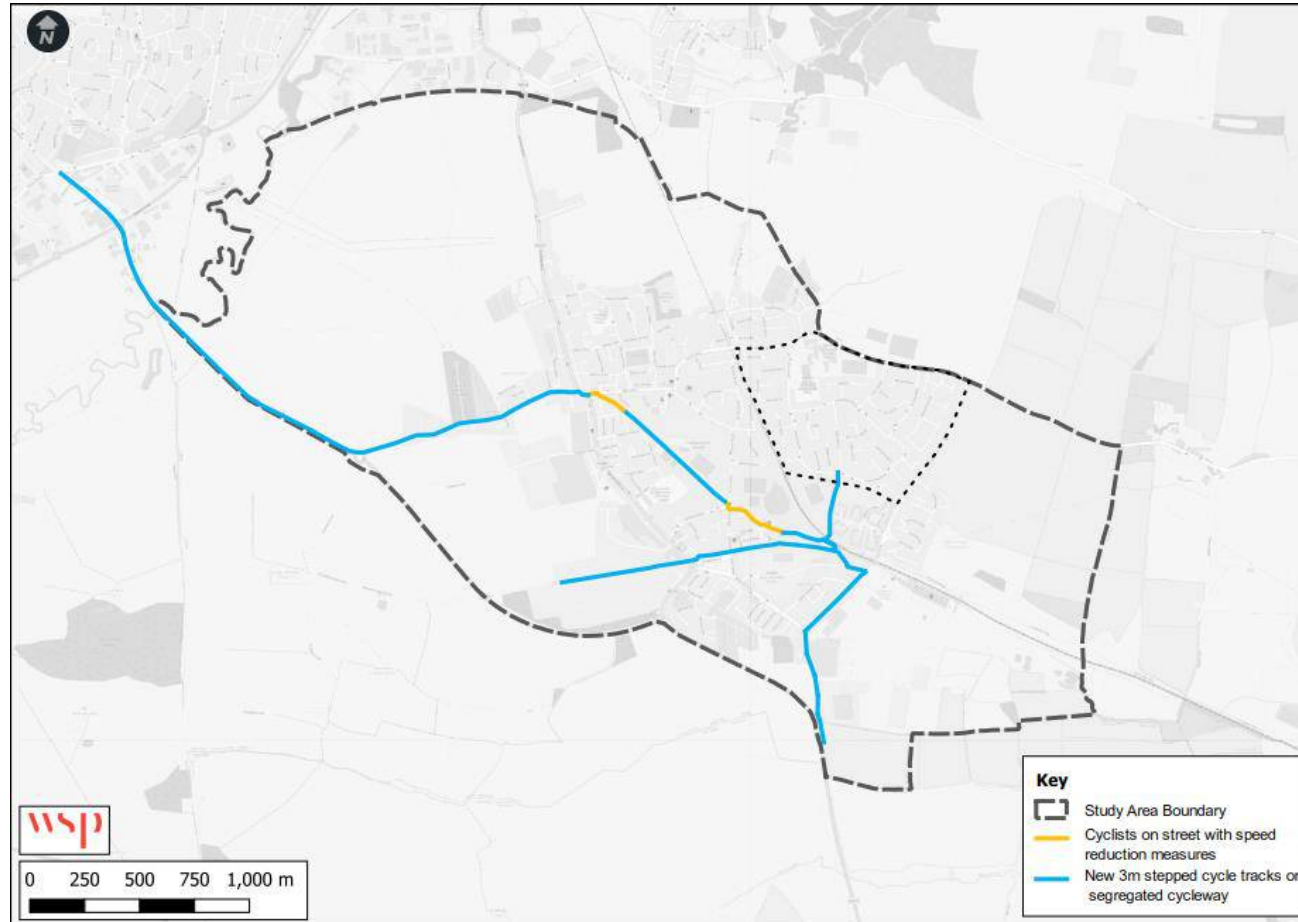
- 4.6.3. A process of early feasibility assessment and engagement with key internal stakeholders was undertaken in order to agree a consensus on which routes may or may not be feasible. This engagement has been aligned with the approach outlined in the DfT’s Early Assessment and Sifting Tool (EAST), considering factors such as:
- Identified problems and objectives of the option;
  - Degree of consensus over outcomes;
  - Expected Value for Money (VfM) Category;
  - Implementation timetable;
  - Public acceptability;
  - Practical feasibility;
  - Affordability; and
  - Where is funding coming from?
- 4.6.4. 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.

4.6.5. This initial sifting process resulted in the identification of a preferred routing alignment and an acceptance of the principles of a potential Local Transport Note 1/20: Cycle Infrastructure Design (LTN 1/20) compliant scheme to serve each of the priority desire lines; The preferred routing alignment is presented in Figure 4-7 as the Shildon Priority Cycling Network Map (a full size image can be found in Appendix C).



Figure 4-7 - Shildon Priority Cycle Network Map





4.6.1. DCC’s aspiration for the LCWIP cycle network is for transformational change and therefore ambitious cycling infrastructure proposals were developed for the prioritised routes to address issues identified through condition audits. The schemes were determined following the latest design standards.

A description of the proposals for each route and an indicative level of cost is presented in Table 4-3.

**Table 4-3 - Overview of cycling interventions and indicative cost estimates**

Scheme	Description	Cost*
Town Centre to Mill Road	<ul style="list-style-type: none"> <li>■ Adding traffic calming measures to Harker Street, Park View, and Hackworth Close to improve conditions for on-street cycling.</li> <li>■ Developing a new bi-directional path adjacent to the existing Surtees Rail Trail which requires localised resurfacing.</li> <li>■ Widen and resurface the existing segregated path between Hackworth Close and the railway station.</li> <li>■ Installing a new stretch of two-way track in the verge alongside the road which passes through Dabble Duck Industrial Estate to connect to the existing segregated path between Hackworth Close and the railway station.</li> <li>■ Quiet streets treatment (including advisory cycle lanes, centre line removal and traffic calming measures) along Dale Road.</li> <li>■ Improve the crossing facilities for pedestrians and cyclists at the Dale Road / Sprout Lane junction.</li> <li>■ Transition to off-road track on the east side of Redworth Road with a toucan crossing.</li> <li>■ Installing pedestrian crossing facilities at the Redworth Road / Dale Road roundabout.</li> </ul>	£
Byron Place Shopping Centre to Westlea Road	<ul style="list-style-type: none"> <li>■ Widen the existing footway in the verge adjacent to the road passing through Hackworth Industrial Park to create a 3-3.5m shared use path.</li> <li>■ Make access improvements to the current path configuration in the vicinity of Shildon Railway Station.</li> <li>■ Widen the existing footpath between the railway station and Jubilee Road to create a 3-3.5m shared use path.</li> <li>■ Introduce a low traffic neighbourhood, to include Cedar Grove, Jubilee Road, Coronation Avenue, Jasmine Avenue, Magnolia Way, Firtree, Maple Avenue, Hazeldale Avenue, Lime Grove, Rosedale Crescent, Rowan Avenue, Pine Tree Crescent, Tynedale Walk, Weardale Walk, Teesdale Walk, Glaisdale Gardens, Farndale Gardens, Queensway, and Birch Avenue.</li> </ul>	£
Town Centre to	<ul style="list-style-type: none"> <li>■ Reallocate road space to provide an off-road 3.0m stepped cycle track on the east side of Tindale Crescent.</li> </ul>	££

Dalton Park	<ul style="list-style-type: none"> <li>■ Upgrade the existing crossing provision at the A688 / Tindale Crescent, W Auckland Road roundabout to provide toucan crossings.</li> <li>■ Widen the existing footway in the verge to create a 3.0-3.5m shared use path on the east side of W Auckland Road.</li> <li>■ Widen the existing footway in the verge to create a 3.0m-3.5m shared use path on the south side of Main Street and West Road.</li> <li>■ Install a toucan crossing with modifications to the geometry of the junction between West Road, Main Street, Byerley Road, and B6282 Auckland Terrace.</li> </ul>	
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\* Where the indicative cost levels are: <£2 million (£), £2-5 million (££) and >£5 million

- 4.6.2. Concept plans have been developed in PowerPoint to illustrate how these proposals could look. These can be found in Appendix D.
- 4.6.3. However, it should be noted that the concepts only 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.
- 4.6.4. While broad agreement has been reached over the type of infrastructure that is likely to be required to deliver the Priority Cycle Network, the network is considered to be in the earliest stages of concept design and it is acknowledged that significantly more design, assessment, and engagement work is likely to be required to bring forward any of the proposed schemes.
- 4.6.5. The continuation of the design process will also include refinement of the associated costs, giving a much greater and detailed understanding of the overall cost of delivery of the network, as well as the likely future operational and maintenance costs.
- 4.6.6. The implementation of improvements are also subject to the securing of sufficient funding.

## 5 STAGE 4: NETWORK PLANNING FOR WALKING

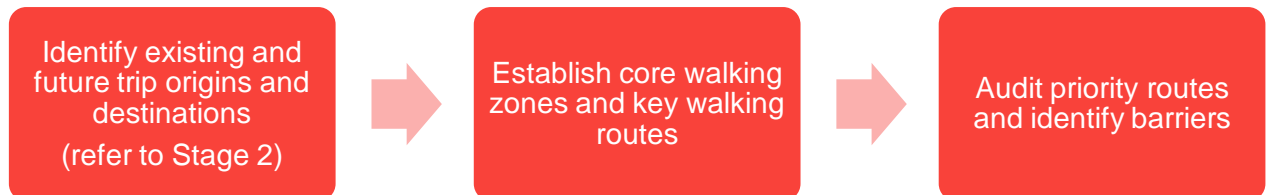
### 5.1 OVERVIEW

5.1.1. Stage 4 of the LCWIP process involves the production of a walking network map for Shildon and the identification of required improvements to achieve the aspirational standard of infrastructure for any routes chosen as priority schemes.

### 5.2 SHILDON WALKING NETWORK MAP

5.2.1. The walking network map was developed in accordance with the LCWIP Technical Guidance and included the steps outlined in Figure 5-1.

**Figure 5-1 - Network Planning for Walking**



5.2.2. The walking network map was reviewed by key stakeholders and this engagement was crucial in the validation and review of the network as well as identification of priorities for intervention.

5.2.3. More detail on each step in the process is provided in the following subsections.

### 5.3 CURRENT & FUTURE ORIGINS AND DESTINATIONS

5.3.1. The LCWIP Technical Guidance notes that identifying demand for a planned walking network should start by mapping the main origin and destination points. These are the same as those used in the production of the Cycling Network Map and shown in Figure 3-1 and Figure 3-2.

### 5.4 IDENTIFYING CORE WALKING ZONES

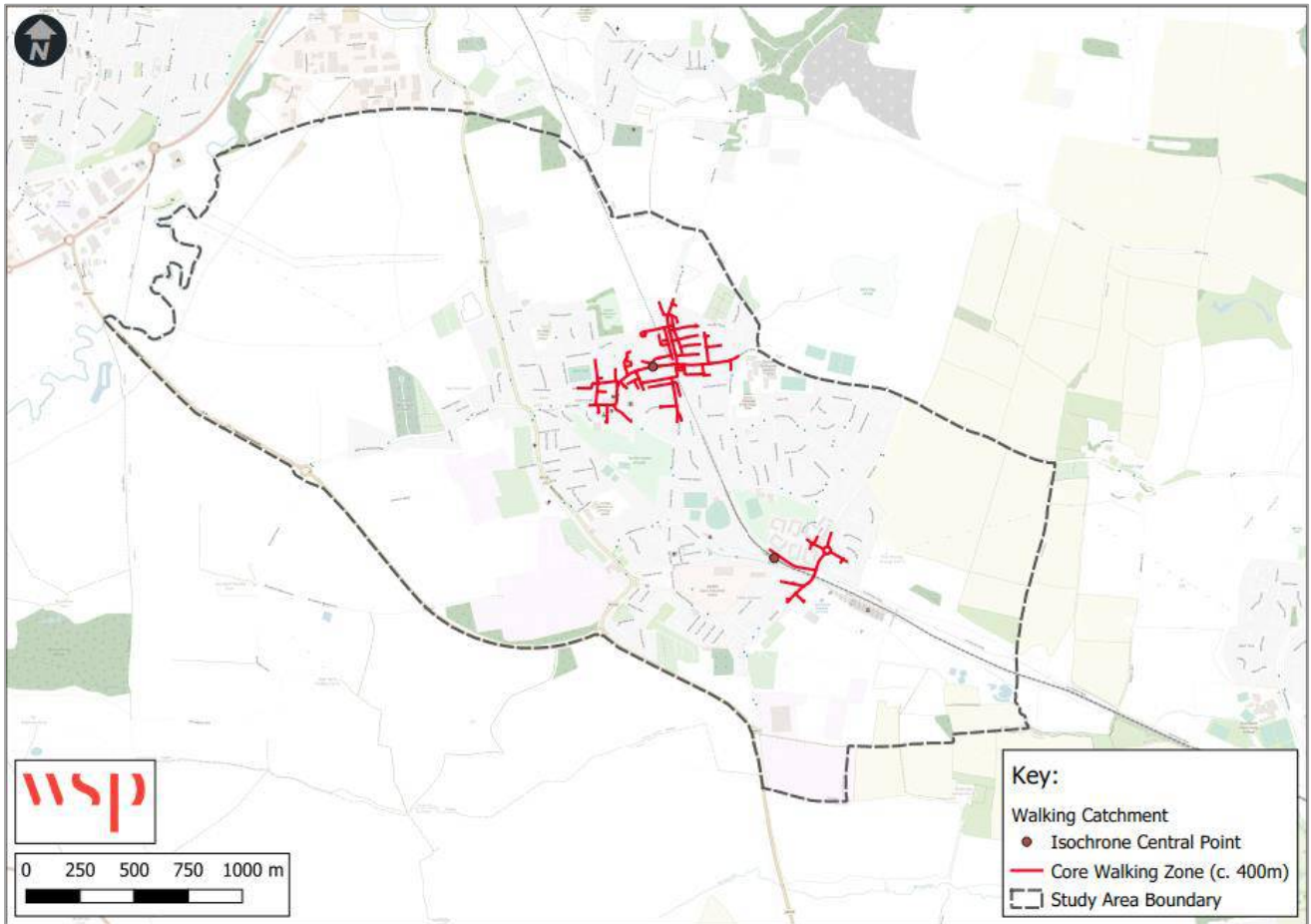
5.4.1. The next stage of the LCWIP process is to identify Core Walking Zones (CWZs), normally consisting of walking trip generators that are located close together – such as town centres or business parks. An approximate five minute walking distance of 400m is used as a guide to the minimum extents of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

5.4.2. In Shildon, two distinct Core Walking Zones were identified; these are:

- Shildon Town Centre; and
- the area surrounding the railway station.

5.4.3. The CWZs are illustrated in Figure 5-2.

Figure 5-2 - Shildon Core Walking Zones



5.4.4. 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. The main routes from the CWZs form the basis of the Aspirational Walking Network Map.

## 5.5 ASPIRATIONAL WALKING NETWORK PLAN

5.5.1. The next step is to identify 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.

5.5.2. Additional links were therefore identified using the information gathered during the Stakeholder Workshop. Stakeholders identified schools, transport interchanges and large workplaces as some of the most important destinations which should be included within the walking network. The **Aspirational Walking Network** was refined and then agreed with the Project Delivery Group.

5.5.3. 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:

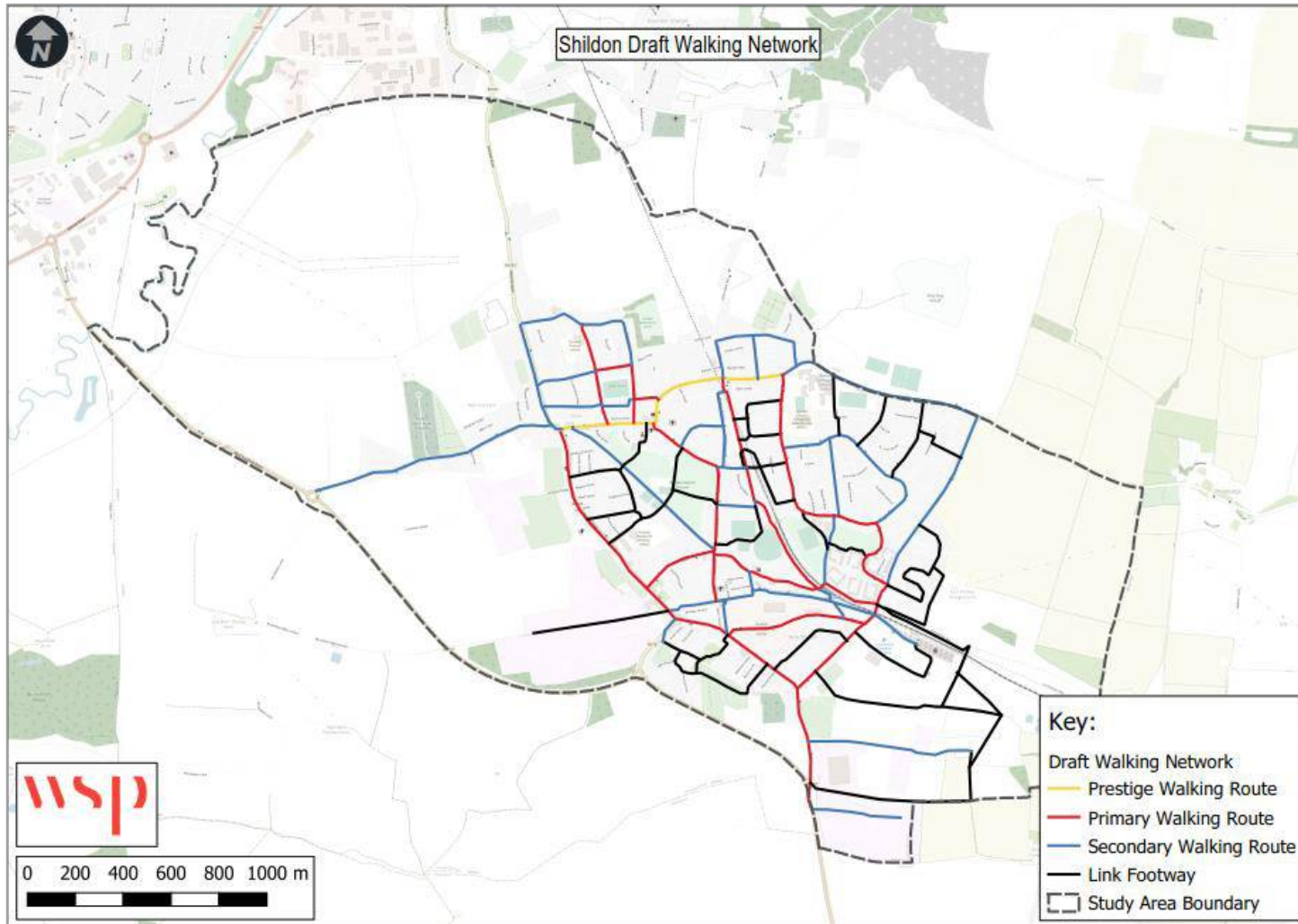
- Prestige Walking Routes: Very busy areas of towns and cities, with high public space and street scene contribution;

- Primary Walking Routes: Busy urban shopping and business areas, and main pedestrian routes;
- Secondary Walking 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.

5.5.4. The resultant Aspirational Walking Network Map is shown in Figure 5-3, with a high resolution image included in Appendix E.

5.5.5. In a similar manner to the Aspirational Cycle Network Map, this map should form the basis of any future route identification work, with these routes likely being the most desirable option in terms of directness.

Figure 5-3 - Shildon Walking Network Map





## 5.6 IDENTIFYING PRIORITY ROUTES

- 5.6.1. While the routes identified in the Aspirational Walking Network Map are much more likely to have some walking infrastructure than those routes identified in the Cycling Network Map are to have cycle infrastructure, there is no certainty that this meets modern standards and provides a good level of pedestrian service.
- 5.6.2. Whilst DCC's long-term aspiration is to deliver improvements to the entire walking network, the authority recognises that in the short-term this will not be financially viable.
- 5.6.3. A stakeholder engagement exercise was undertaken to review the evidence and identify which areas of the network should be prioritised for improvement. Walking network improvements are often smaller changes at discrete locations, as opposed to long corridor based interventions for cycle infrastructure. Four different potential options were presented in order to identify immediate priorities for scheme development:
- Core Walking Zones (5 min walking time around major clusters);
  - Corridors (linear routes between main attractors);
  - Areas (interventions like Low Traffic Neighbourhoods and School Streets); and
  - Active Travel Corridors (walking and cycling on the same routes).
- 5.6.4. In Shildon, it was determined that walking schemes would not be pursued as an immediate priority. However, it should be noted that the priority cycle schemes described in Table 4-3 also include a number of improvements to the pedestrian environment and should be promoted as 'active travel corridors'.

## 6 STAGE 5: PRIORITISING IMPROVEMENTS

### 6.1 OVERVIEW

6.1.1. Stage 5 of the LCWIP involves prioritisation of improvements in order to create a programme of cycling and walking interventions for Shildon.

### 6.2 TIMESCALES

6.2.1. To produce a prioritised programme of infrastructure improvements for the LCWIP period, the timescales for scheme delivery are categorised as:

- Short term (typically <3 years) – improvements which can be implemented quickly or are under development;
- Medium term (typically <5 years) – improvements where there is a clear intention to act, but delivery is dependent on further funding availability or other issues; and
- Long term (typically >5 years) – more aspirational improvements or those awaiting a defined solution.

### 6.3 PRIORITISATION

6.3.1. The schemes were prioritised using a scoring mechanism based on the following key drivers:

- Effectiveness, based on the potential number of walking or cycling trips that might use the route.
- Alignment with policy objectives, in particular the SCWDP.
- Economic factors, including as scheme cost, value for money and likelihood of attracting funding.
- Deliverability issues, including engineering constraints, land ownerships and level of stakeholder support.

6.3.2. Definitions of the prioritisation criteria and the appraisal of scheme value for money are provided in the appendices of the LCWIP Technical Report which is available on request from DCC.

6.3.3. A summary of the scores for the three routes in Shildon and their ranking is provided in Table 6-1.

**Table 6-1 - LCWIP Prioritisation Table**

	Effectiveness	Policy alignment	Economic	Deliverability		
Routes	14	12	6	6	Total	Rank
Town Centre to Mill Road	6	8	2	5	21	3
Byron Place Shopping Centre to Westlea Road	6	7	6	4	23	2
Town Centre to Dalton Park	10	8	5	4	27	1

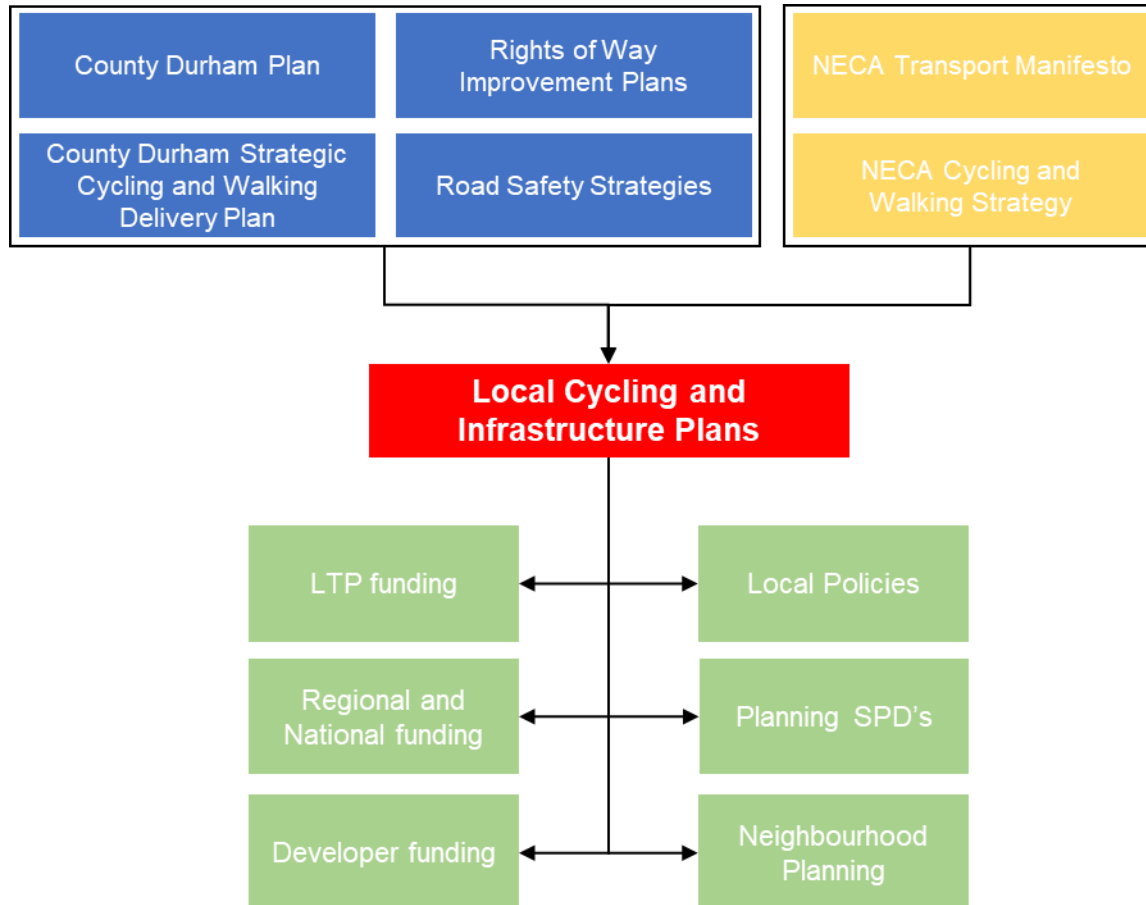


## 7 STAGE 6: INTEGRATION AND APPLICATION

### 7.1 INTEGRATION OF THE LCWIP

7.1.1. Local and regional policy provides a firm strategic framework for the development and intended application of the LCWIPs. This is outlined in Figure 7-1 below.

**Figure 7-1 - Integration of the County Durham LCWIPs in strategy and policy**



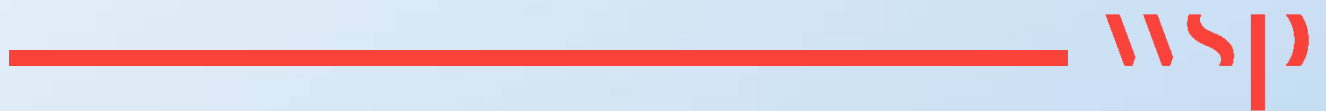
7.1.2. Further information about the integration and application of the LCWIP is provided in the accompanying County Durham LCWIP Programme Report.

### 7.2 NEXT STEPS

7.2.1. An action plan should be produced covering the timeframe of the LCWIP for the development and delivery of improvements to the walking and cycling networks. This should also identify a wider package of supporting interventions, such as installation of secure cycle parking, awareness-raising campaigns and behaviour change programmes.

# Appendix A

## LCWIP SCORING MATRIX



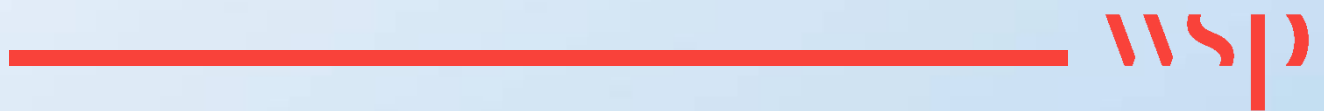
**DURHAM LCWIP PRIORITISATION FRAMEWORK**

	Ref	Criteria	Definition	Source	Low (0)	Intermediate (1)	High (2)
EFFECTIVENESS	1	Catchment population	Population within the route (a 500m radius)	Route Reports (2011 Census)	< 4,000 people	4,000 - 8,000 people	> 8,000+ people
	2	Propensity to Cycle	Forecast number of journeys to work using the corridor in the Government Target Near Market scenario (LSOA)	PCT (2011 Census)	< 20 cyclists	20 - 50 cyclists	> 50 cyclists
	3	Existing employment	Number of workplace zone centroids within the corridor (a 500m radius)	WSP OD mapping	< 5 Workplace Zone Centroids	5 - 10 Workplace Zone Centroids	> 10 Workplace Zone Centroids
	4	Attractor score	Attractors within the corridor (excluding airports / train stations, hospitals, industrial estates, education establishments)	Route Reports	< 10 attractors	10 - 100 attractors	> 100 attractors
	5	Schools	Number of schools within the corridor (a 500m radius)	WSP OD mapping	No schools	1 - 4 schools	5 or more schools
	6	Exclusively post-16 education sites	Number of colleges, university sites or further/higher education facilities within the corridor (a 500m radius)	WSP OD mapping	No post-16 education sites	1 post-16 education site	> 1 post-16 education sites
	7	Transport interchanges	Proximity to a transport interchange (train stations, bus stations or park and ride sites)	WSP OD mapping	> 1km from a transport interchange	500m - 1km from a transport interchange	< 500m from a transport interchange
POLICY ALIGNMENT	8	Scheme overlap	Does the route include a TCF scheme or other planned transport improvement?	DCC	No	-----	Yes
	9	Safety	Number of accidents involving pedestrians or cyclists in the previous 5 years along the route (500m radius)	DfT (STATS19)	< 5 accidents	5 - 10 accidents	> 10 accidents
	10	Car ownership	Percentage of households with no car / van	2011 Census	< 25% of households	25% - 40% of households	> 40% of households
	11	Schools excess weight levels	Lowest excess weight quintile of the schools along the route (a 500m radius)	DCC	Includes a school in the 40%-60% or 60%-80% quintiles that is over 250m from the network Or Includes a school in the 80%-100% quintile Or Does not include a school	Includes a school in the 0-20% or 20%-40% quintiles that is between 250m and 500m from the network Or Includes a school in the 40%-60% or 60%-80% quintiles that is within 250m of the network	Includes a school in the 0-20% or 20-40% quintiles that is within 250m of the network
	12	Deprivation	Highest IMD (i.e. most deprived ward) along the route	DCLG	>= 6 IMD Decile	>3 & <6 IMD Decile	<= 3 IMD Decile
	13	Air quality	Does the route travel through an Air Quality Management Area?	DCC	No (or no route option will travel through the AQMA)	-----	Yes
	14	Cross boundary	Does the corridor connect to a super route, an NCN route or a cross-boundary route?	DCC / WSP mapping	> 500m	< 500m	Direct connection to route option(s)
ECONOMIC	15	Development sites	Scale & proximity of sites with planning permission and/or sites allocated in the County Durham Plan	WSP OD mapping	No site with planning permission or CDP 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
	16	Cost of construction	Total scheme cost estimates for package of interventions	Cost estimates	> £5 million	£2 - 5 million	< £2 million
	17	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+)
DELIVERABILITY	18	Scheme feasibility	Known land ownership issues or scheme dependencies	DCC	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
	19	Political and public acceptability	Likelihood of support or opposition for the scheme	DCC	Likely to be opposition	Neutral / unknown	Likely to be supported
	20	Timescales	Timescales for delivery	DCC	Long (deliverable within 10 years)	Medium-term (deliverable within 5 years, where there is a clear intention to act, but delivery is dependent on identifying funding or other issues)	Short-term (deliverable within 3 years and funding identified)



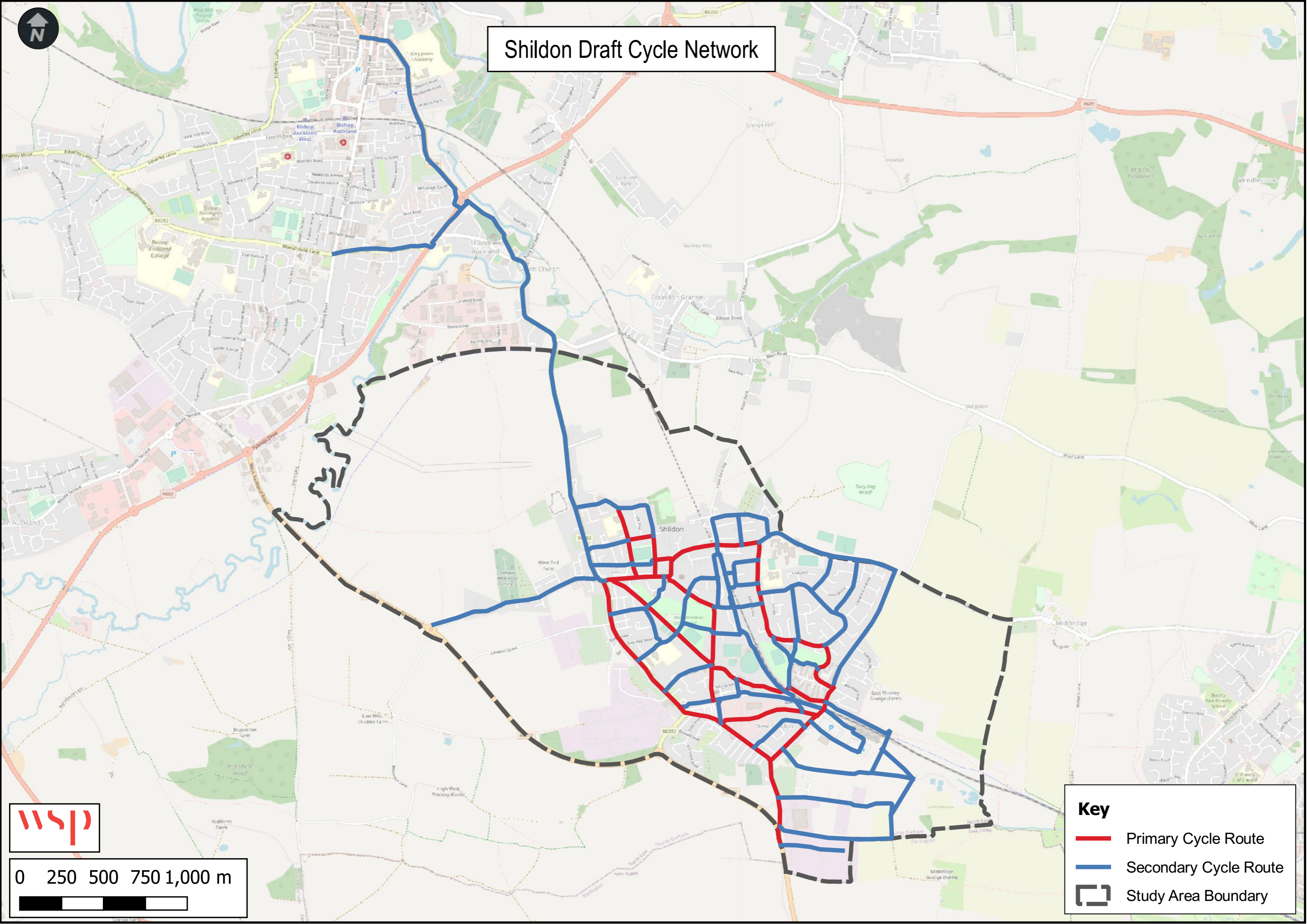
# Appendix B

## **ASPIRATIONAL CYCLE NETWORK**






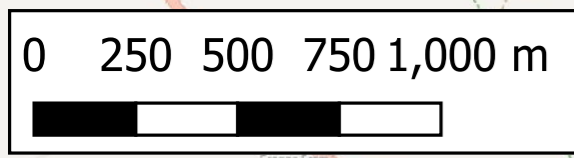


# Shildon Draft Cycle Network



**Key**

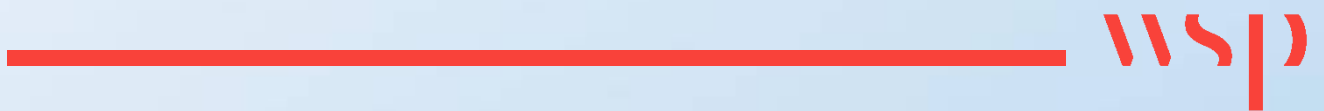
-  Primary Cycle Route
-  Secondary Cycle Route
-  Study Area Boundary





# Appendix C

## **PRIORITY CYCLE NETWORK**






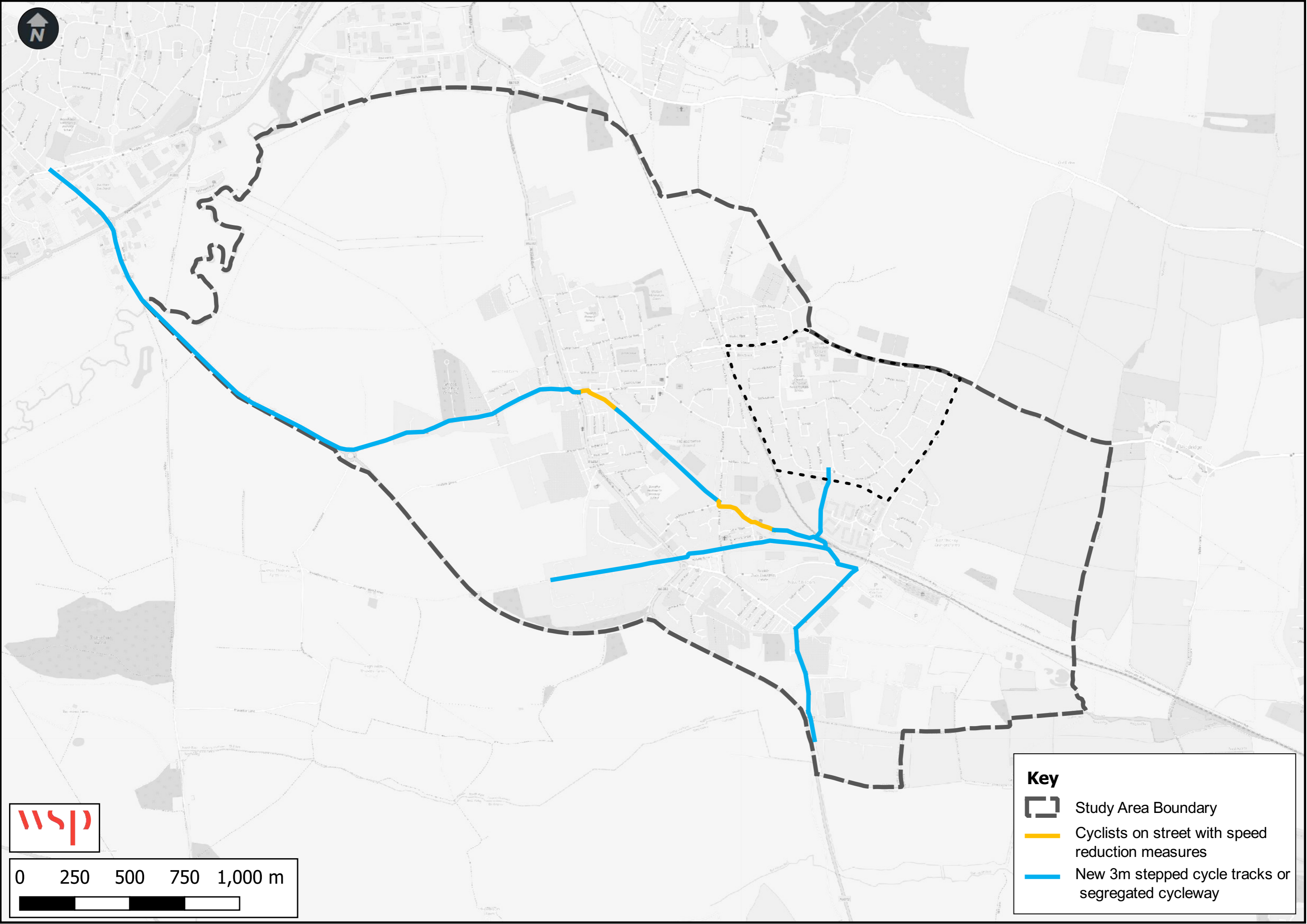


0 250 500 750 1,000 m



**Key**

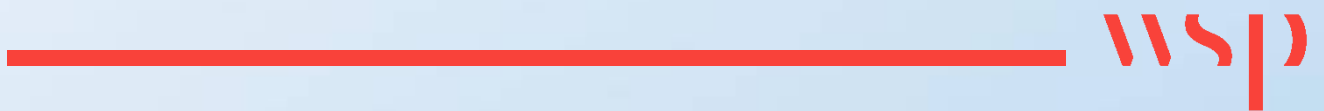
-  Study Area Boundary
-  Cyclists on street with speed reduction measures
-  New 3m stepped cycle tracks or segregated cycleway

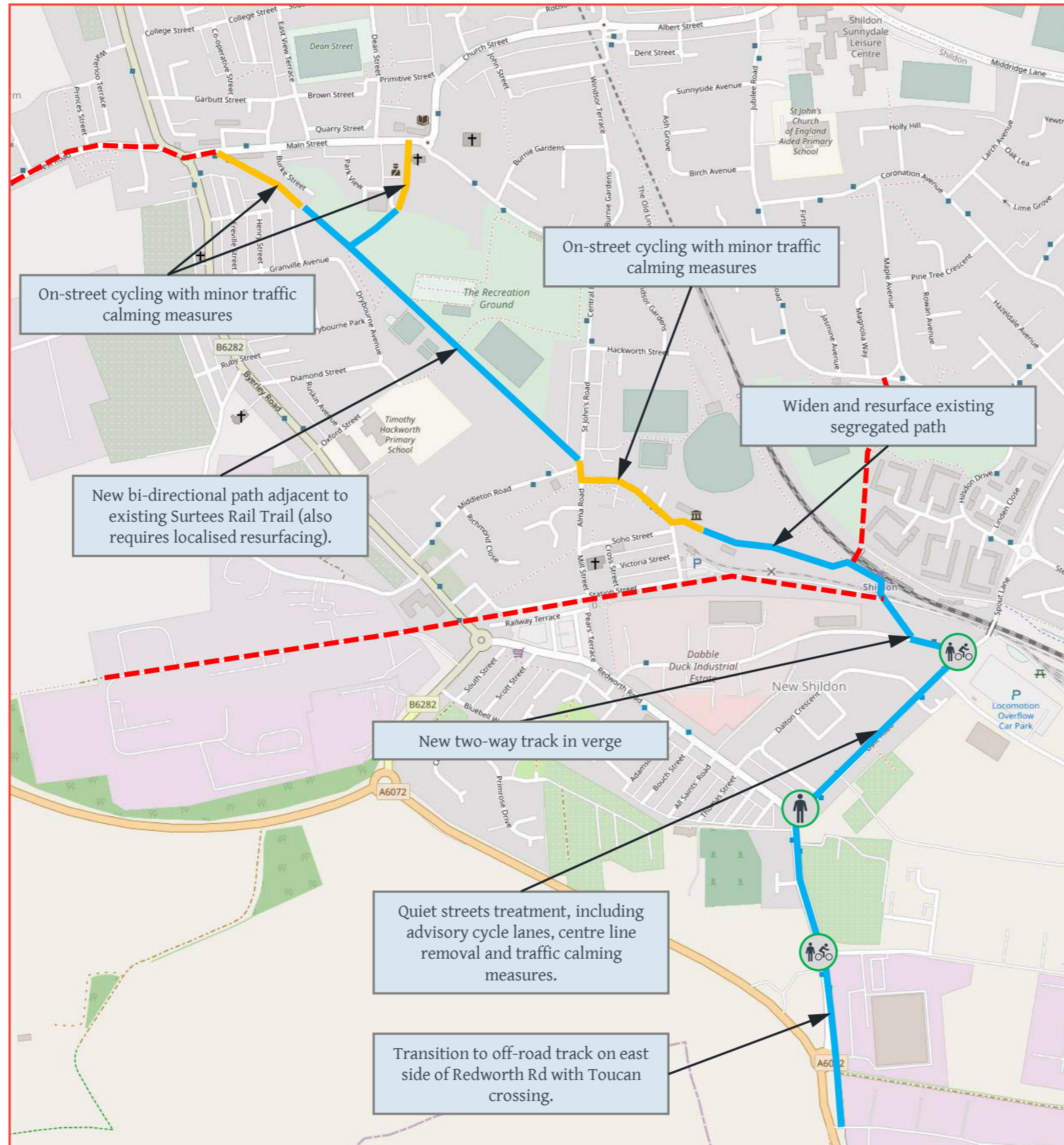




# Appendix D

## **PRIORITY ROUTE CONCEPTS**





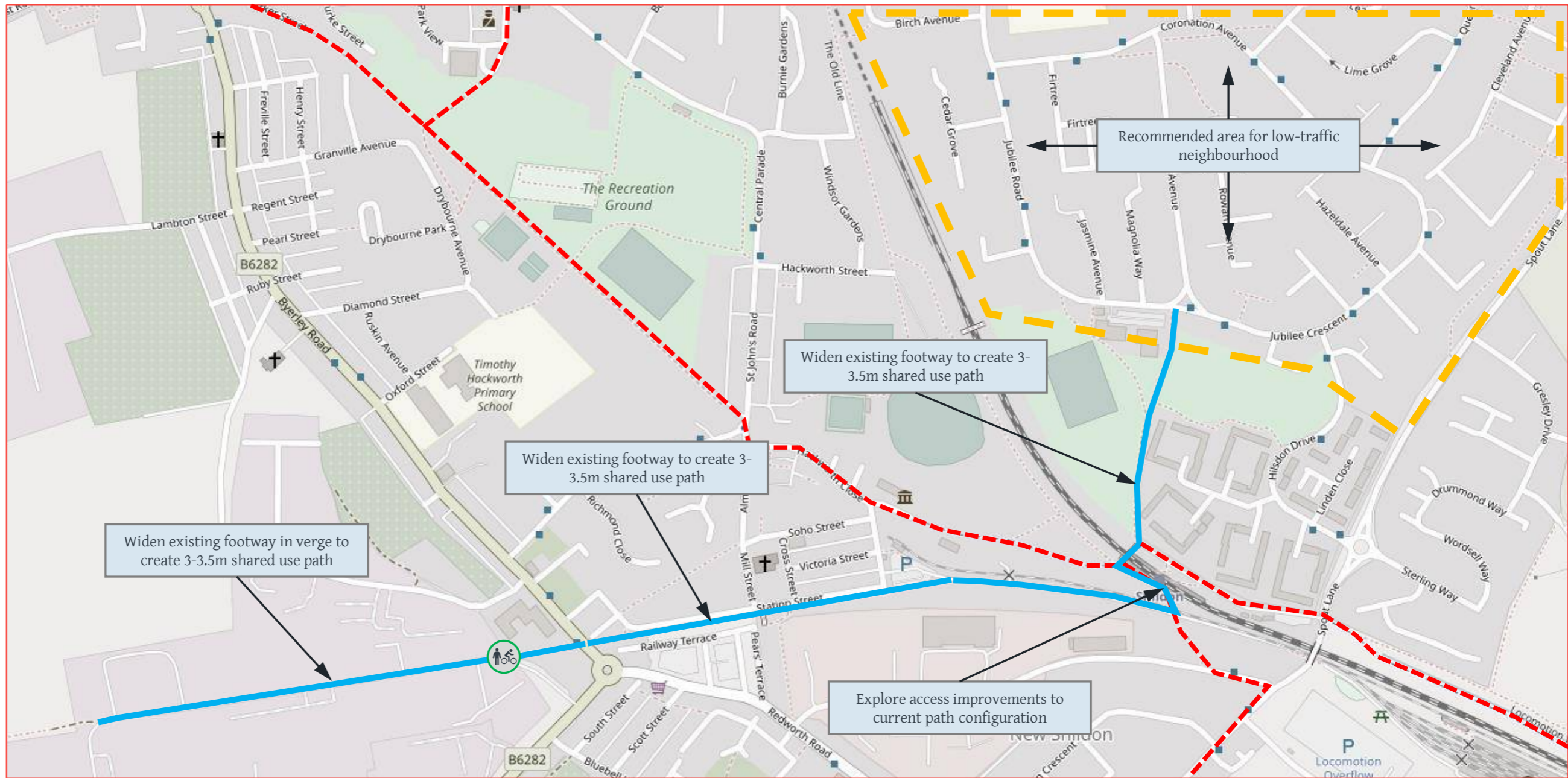
## Shildon: Desire Line 2

- New 3m stepped cycle tracks or segregated cycleway
- Cyclists on street with speed reduction measures
- Adjoining route proposal or existing NCN
- Pedestrian and cyclist crossing improvement#
- Pedestrian crossing improvement





### Key issues:

- Pavement parking on Dale Rd and Redworth Rd inhibit safe pedestrian use.
- Alternative alignment to the south should be identified as part of Locomotion and Locomotion Way improvements. Integration with cross-boundary network aspirations should also be considered.





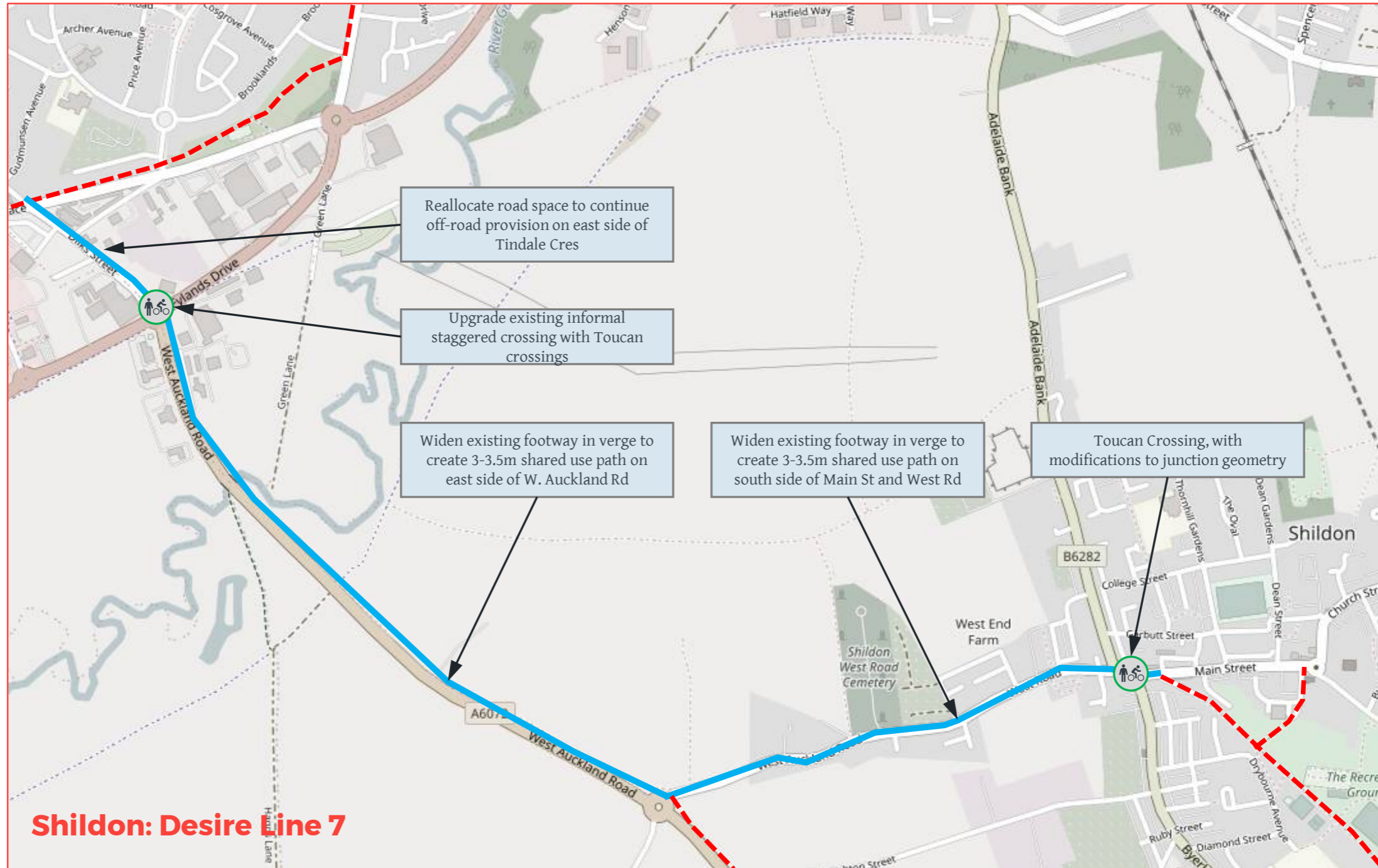
## Shildon: Desire Line 6

-  New 3m stepped cycle track
-  Cyclists on road with speed reduction measures
-  Adjoining route proposal or existing NCN
-  Pedestrian and cyclist crossing improvement





### Key issues:

1. Existing footbridge at Shildon Station is not of sufficient width and a long-term improvements should be identified to replace with a wider and more

# Scheme Concepts



**Shildon: Desire Line 7**

-  New 3m stepped cycle track
-  Cyclists on road with speed reduction measures
-  Adjoining route proposal or existing NCN
-  Pedestrian and cyclist crossing improvement

**Key issues:**

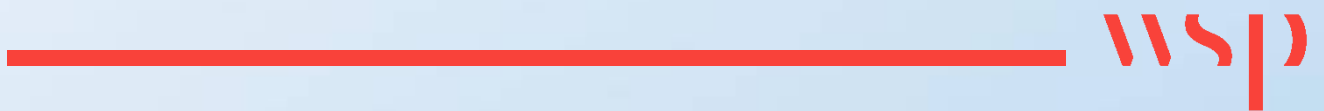
- Numerous pinch points along route may affect continuity of provision.



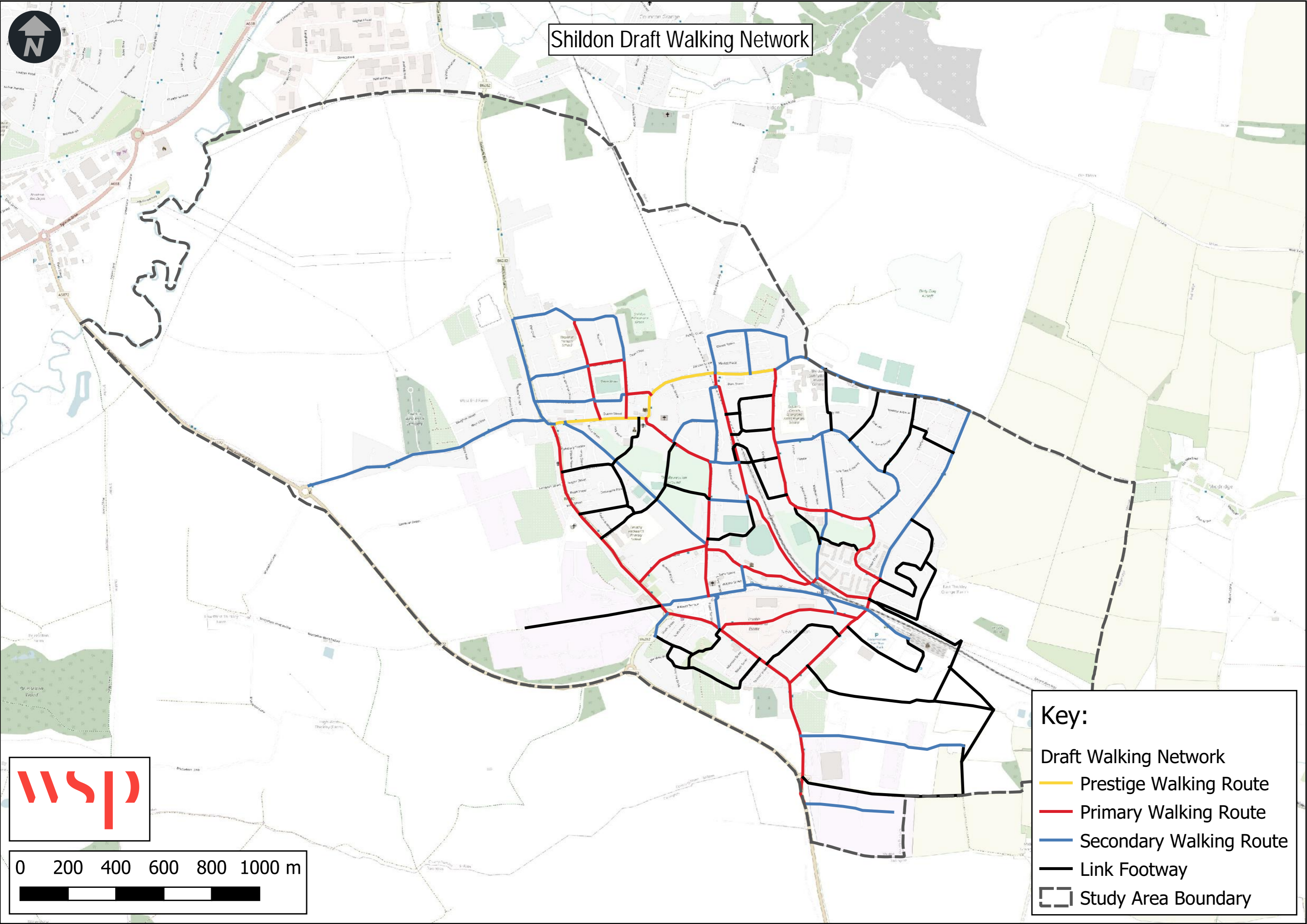


# Appendix E

## ASPIRATIONAL WALKING NETWORK

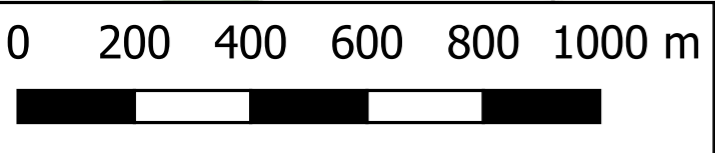


# Shildon Draft Walking Network



**Key:**

- Draft Walking Network
- Prestige Walking Route
- Primary Walking Route
- Secondary Walking Route
- Link Footway
- Study Area Boundary







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