



Durham County Council

LOCAL CYCLING AND WALKING INFRASTRUCTURE PLAN

Peterlee





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EXECUTIVE SUMMARY

The Peterlee 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

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 Peterlee 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

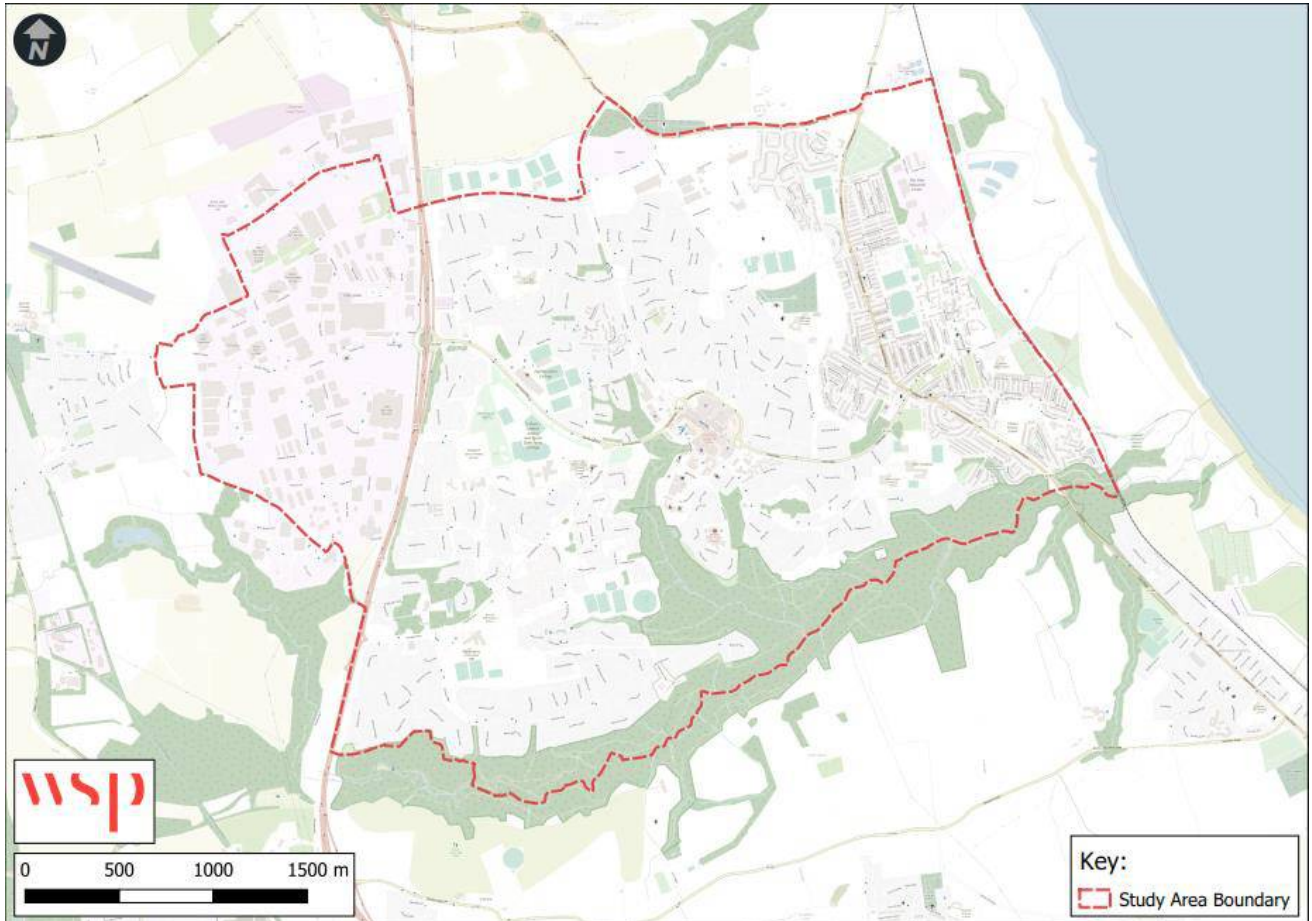
Stage	Name	Description
1	Determining Scope	Establish the geographical extent of the LCWIP, and arrangements for governing and preparing the plan.
2	Gathering Information	Identify existing patterns of walking and cycling and potential new journeys. Review existing conditions and identify barriers to cycling 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

- 2.1.1. The LCWIP for Peterlee 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 Peterlee LCWIP is shown in Figure 2-1 below.

Figure 2-1 - Geographic scope of the Peterlee LCWIP

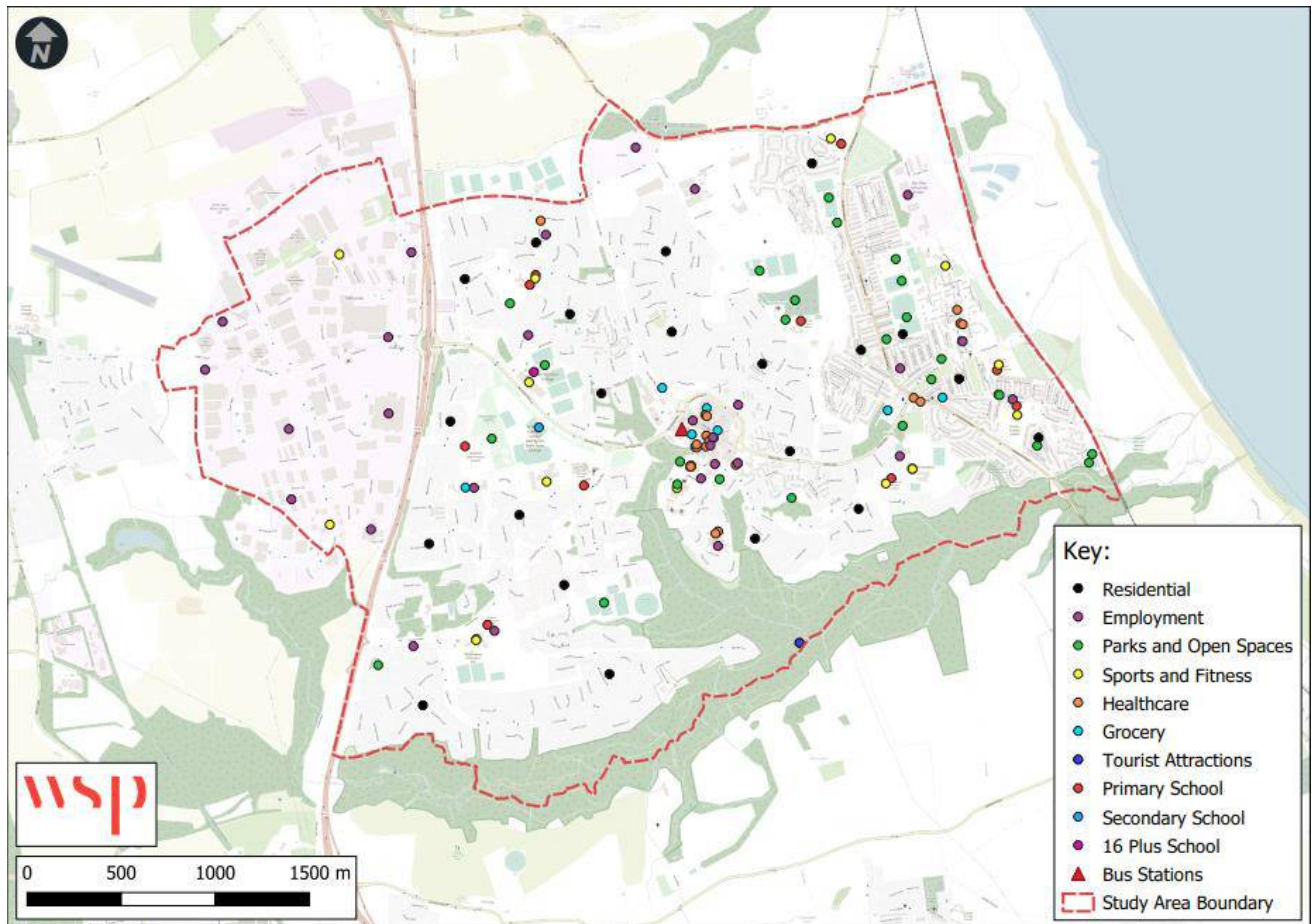


- 2.1.3. Further information about the other aspects of Stage 1 is covered within the accompanying County Durham LCWIP Programme Report.

3 STAGE 2: INFORMATION GATHERING

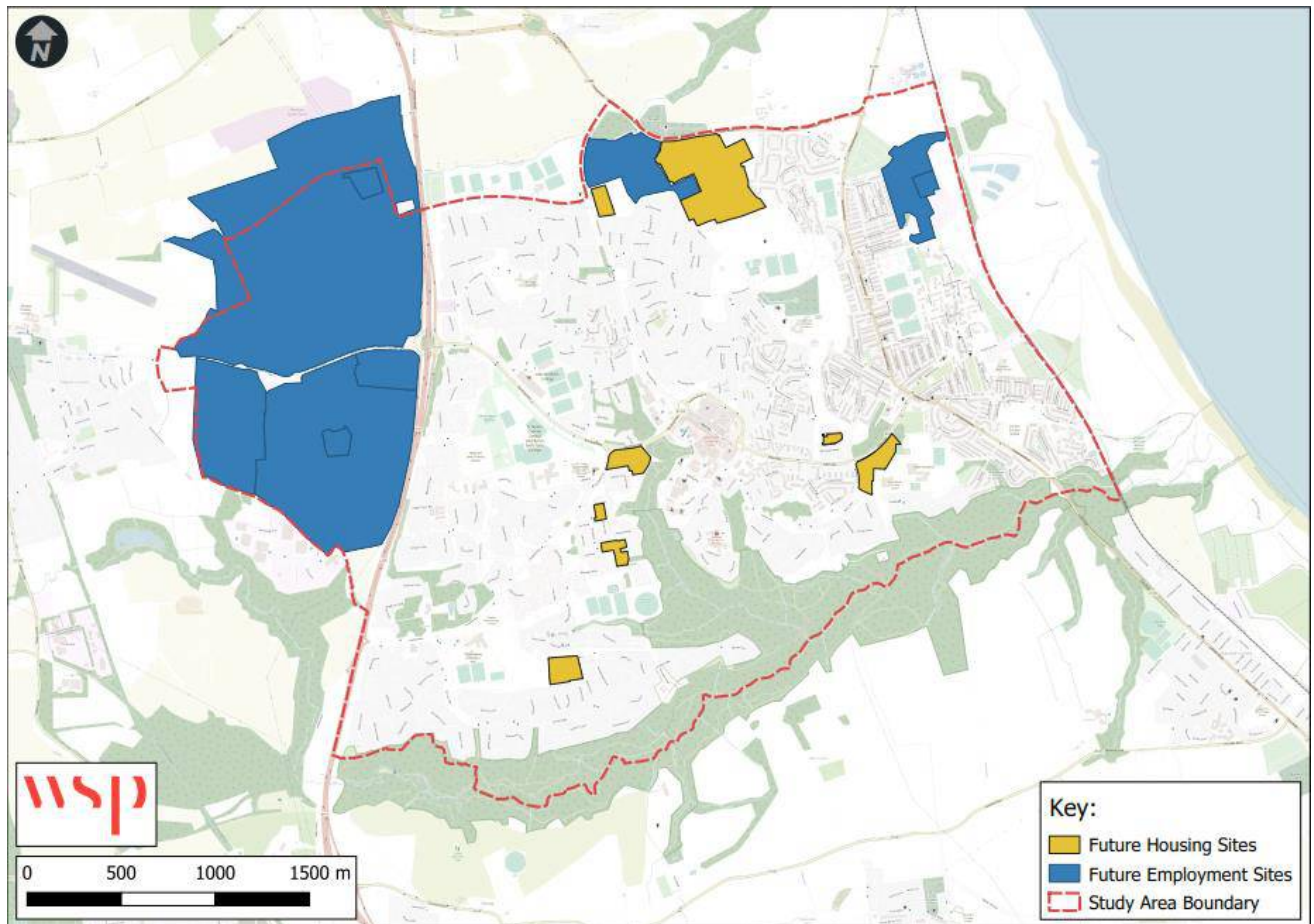
- 3.1.1. The LCWIP has been developed following a robust, evidence-based approach. An extensive collection of information has been analysed and reviewed to inform the development of network plans for cycling and walking in Stages 3 and 4 respectively and subsequently inform the prioritisation in Stage 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 Peterlee 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 Peterlee



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 Peterlee



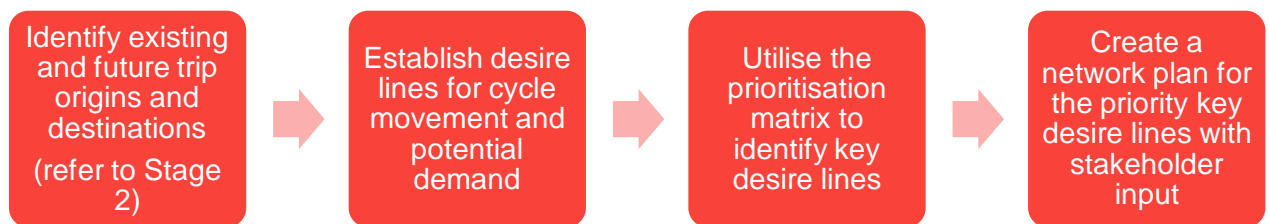
- 3.1.8. Together, the origin and destination plans show the locations people travel between and therefore the key locations that need to be connected by the walking and cycling networks.

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 Peterlee and identification of required improvements to achieve an aspirational standard of infrastructure for any routes chosen as a priority scheme.
- 4.1.2. The Peterlee 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

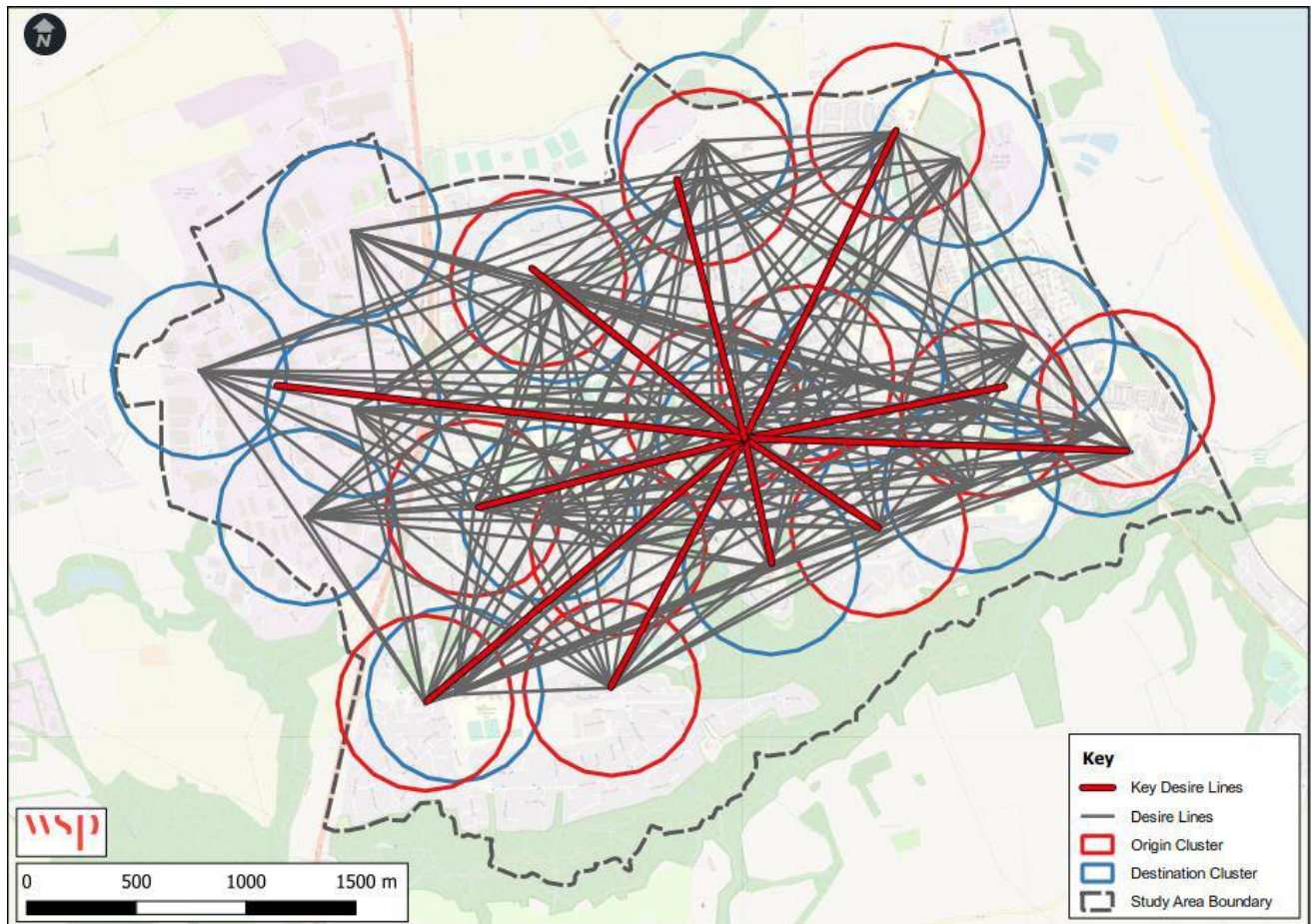


- 4.1.3. More detail on each step in the process is provided in the following subsections.

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 eleven 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.

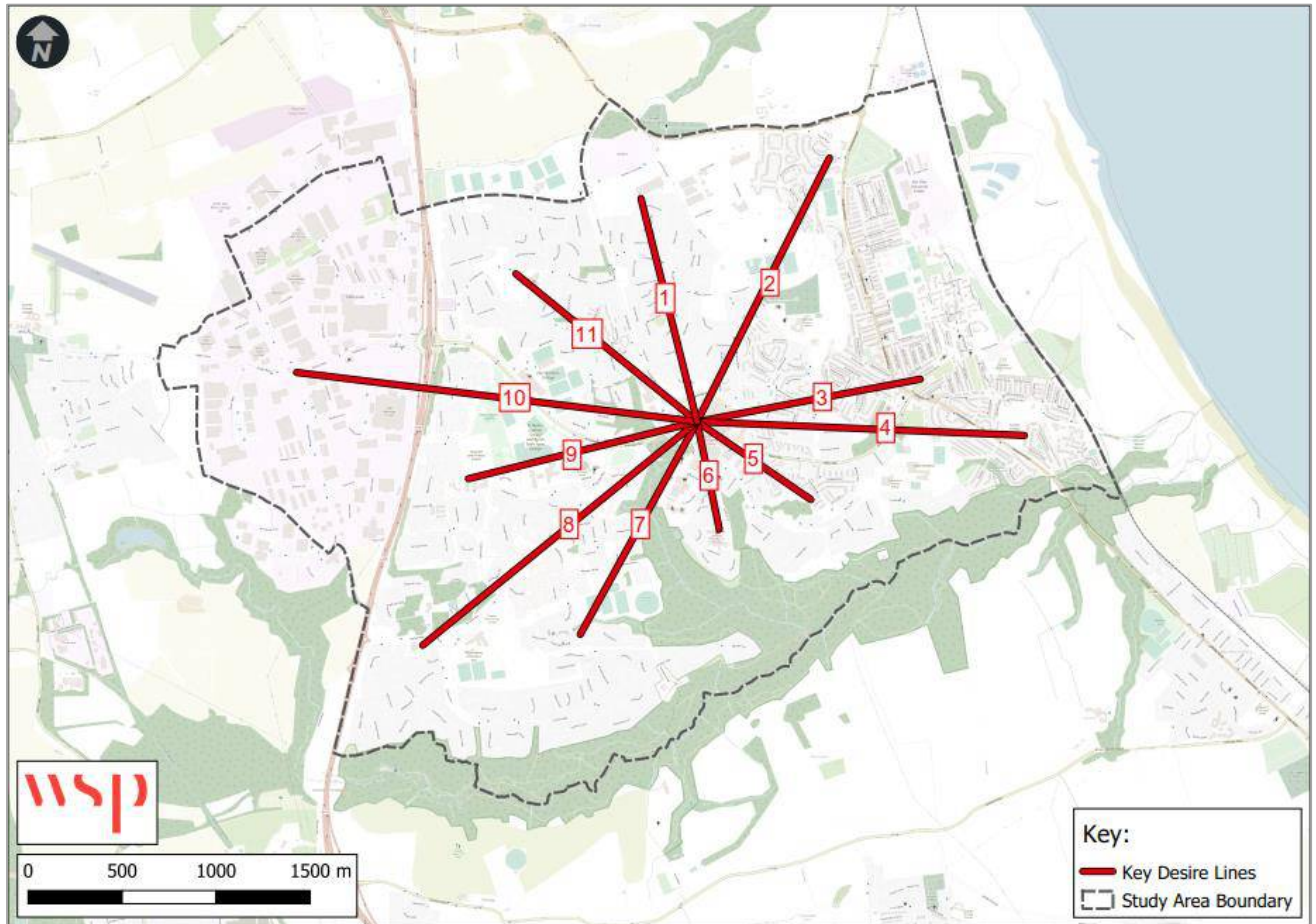
Figure 4-2 - Clusters and Initial Desire Lines



4.3 VALIDATION OF THE KEY DESIRE LINES

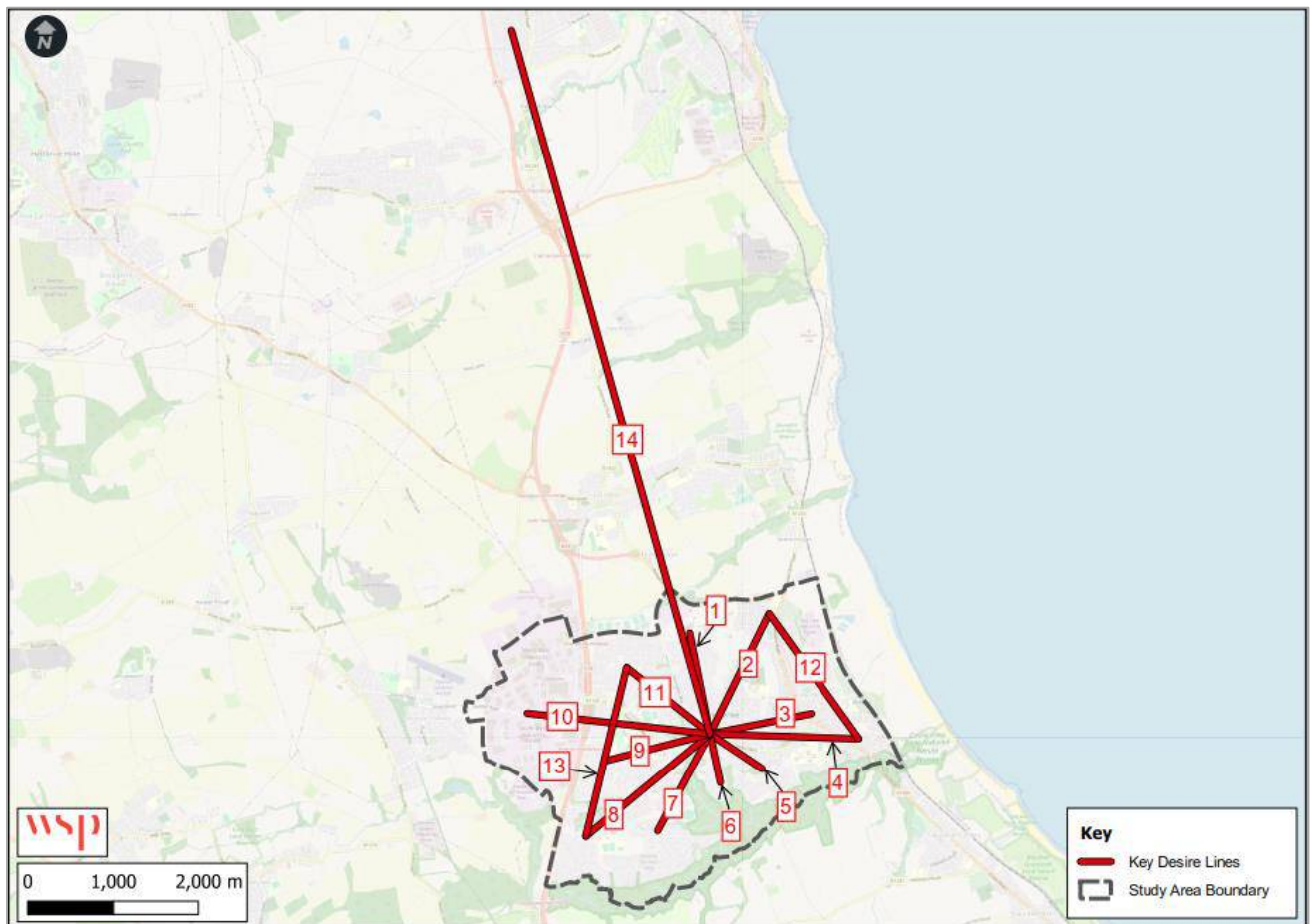
- 4.3.1. Initially, eleven key desire lines were identified by considering the relative desire to travel between them and comparing against existing data relating to desire to travel, such as the PCT and Strava; these key desire lines are illustrated in Figure 4-3. The desire lines were validated through 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 Shotton Hall on Wednesday 11th May from 10am-12pm. 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, Community Development Project Officer, AAP, Thornley Parish Council, and Peterlee Town Council.
- 4.3.5. The main changes made to the initial key desire lines after internal and external stakeholder feedback were as follows:
- Add a new desire line between 2 and 4;
 - Add a new desire line between 11 and 8; and
 - Add a new desire line running broadly parallel to the A19 to the north, through Easington and ending to the east of Seaham.
- 4.3.6. These changes account for emerging LUF proposals which have also been mapped and considered when determining required changes.
- 4.3.7. This results in fourteen 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 fourteen 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 assess 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)
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)

- 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
4	1	16
4	2	16
2	3	17
2	4	17
10	5	15
14	6	10
12	7	13
4	8	16
4	9	16
1	10	18
4	11	16
10	12	15
12	13	13
4	14	16

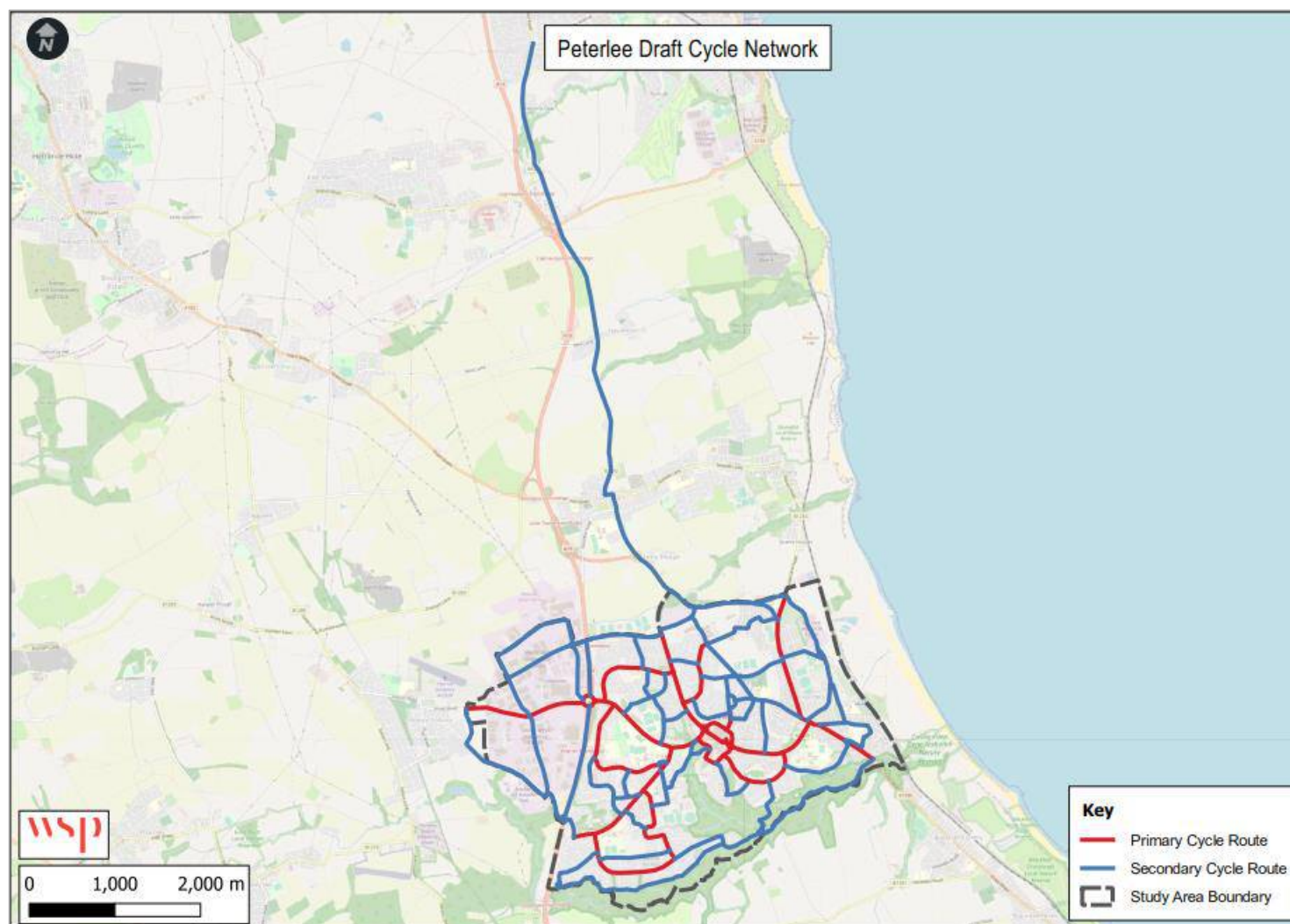
- 4.4.7. The initial prioritisation results identified that the top priority key desire lines are ten, three / four, and one.
- 4.4.8. Note that the prioritisation matrix has limitations. Priorities need to work synergistically with each other and existing / planned infrastructure schemes to produce 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. In Peterlee, early design work on active travel schemes has been undertaken alongside the LCWIP to inform current funding opportunities; this design work identified routes and schemes which could broadly serve desire line three, as well as the town centre.
- 4.4.10. It was also determined that Peterlee would include the Grampian Estate as an area-based walking priority (see Stage 4 for more details).
- 4.4.11. Following this validation exercise, the final priority desire lines were therefore identified as:
 - Ten;
 - One; and
 - Grampian Estate CWZ.

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.
- 4.5.1. Figure 4-5 illustrates the Peterlee Aspirational Cycle Network Map, while a full size image can be found in Appendix B.

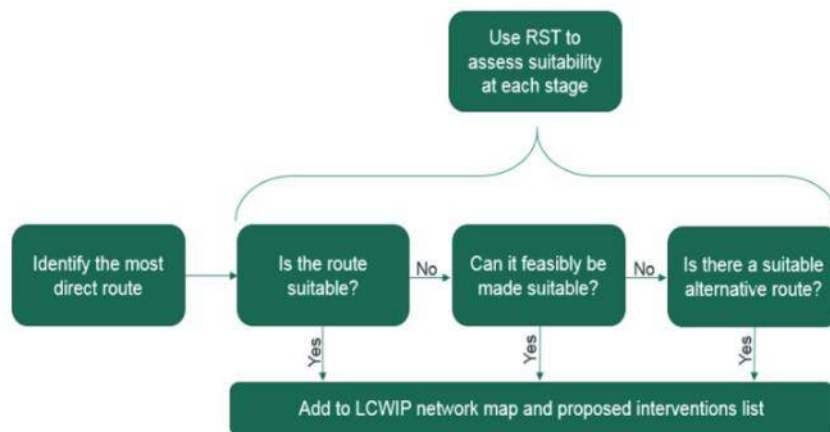
Figure 4-5 - Peterlee Aspirational Cycle Network Map



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

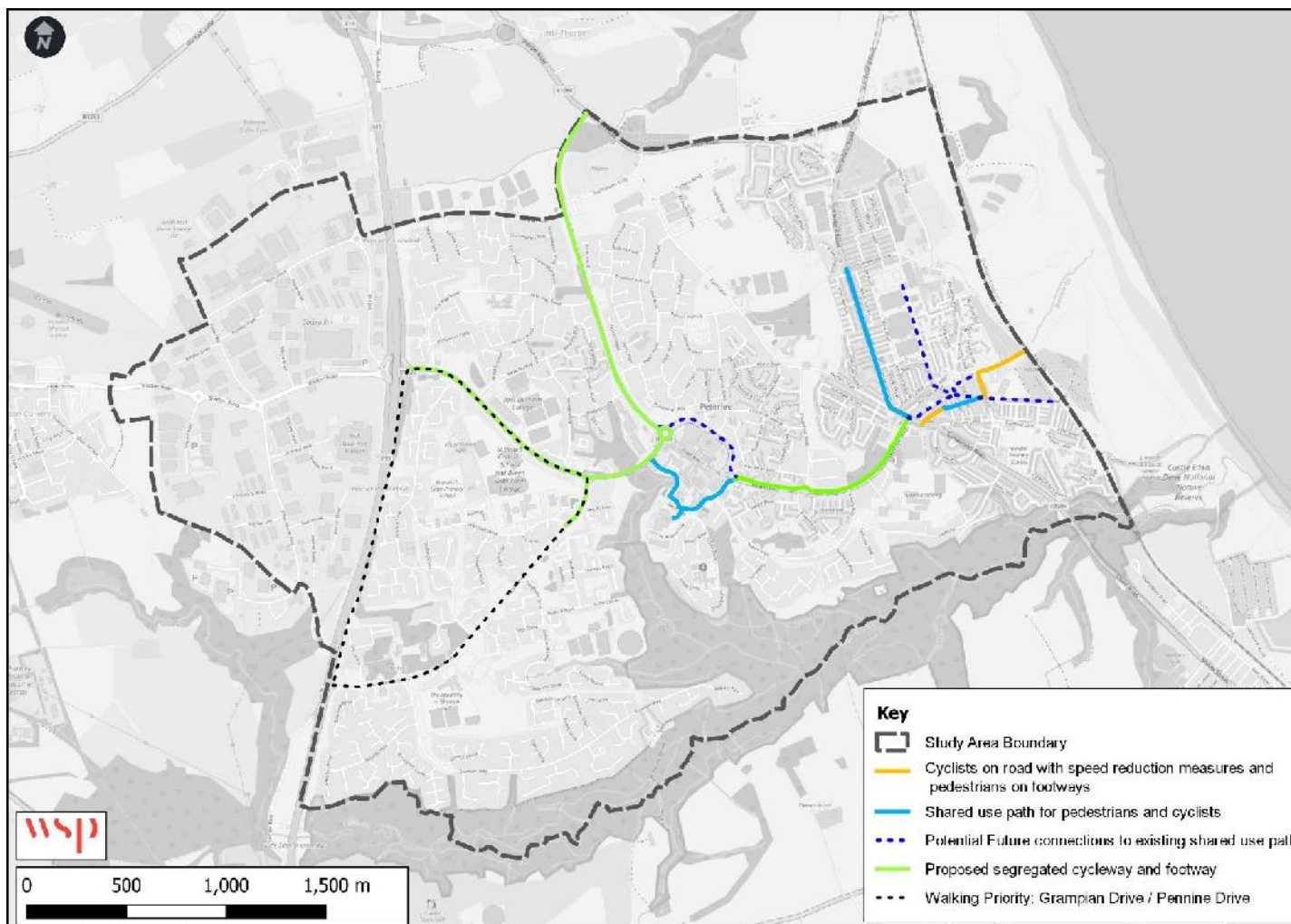


- 4.6.3. A process of early feasibility assessment and engagement with key internal stakeholders was undertaken in order to agree a consensus on which routes may or may not be feasible. This engagement has been aligned with the approach outlined in the DfT's Early Assessment and Sifting Tool (EAST), 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 Peterlee Priority Cycling Network Map (a full size image can be found in Appendix C).
- 4.6.6. As discussed in Section 4.4, the Priority Cycle Network Map also includes the additional routes determined early in the process to aid early funding opportunities.

Figure 4-7 - Peterlee Priority Cycle Network Map



- 4.6.7. 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*
Peterlee Town Centre to A19	<ul style="list-style-type: none"> Installation of uni-directional segregated cycle tracks on either side of the carriageway along Burnhope Way, Essington Way, and Passfield Way. Set back priority over side arms and add new crossing points (Pennine Drive, Willerby Grove, Neville Road, Howlatch Lane, and Yoden Road). Develop a mobility hub at East Durham College. Improve the Burnhope Way / Passfield Way roundabout with Dutch style priority over side arms. Add elevated walkways to the Burnhope Way / Essington Way / Surtees Road roundabout or rebuild the junction with new pedestrian and cyclist facilities. 	£££
Peterlee Town Centre to Thorpe Road	<ul style="list-style-type: none"> Installation of a new 3m stepped cycle track or shared use path along Essington Way. Set back priority over side arms and add new crossing points (Acre Rigg Road and Crawford Avenue). Add a mid-link priority crossing point between Lowhills Road and Stephenson Road. 	££
Peterlee Town Centre to Horden	<ul style="list-style-type: none"> New shared-use path along Bede Way. At-grade crossing to replace subway access to leisure centre. New segregated cycle path along Yoden Way, with new crossing points for pedestrians. Improvements to the junction between Yoden Way and Coast Road. A new route through the 'Numbered Streets' to extend to Horden rail station. A new shared-use path along Sunderland Road. 	££

* Where the indicative cost levels are: <£2 million (£), £2-5 million (££) and >£5 million

- 4.6.8. Concept plans have been developed in PowerPoint to illustrate how these proposals could look. These can be found in Appendix D.
- 4.6.9. 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.

- 4.6.10. 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.
- 4.6.11. 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.
- 4.6.12. The implementation of improvements are also subject to the securing of sufficient funding.

5 STAGE 4: NETWORK PLANNING FOR WALKING

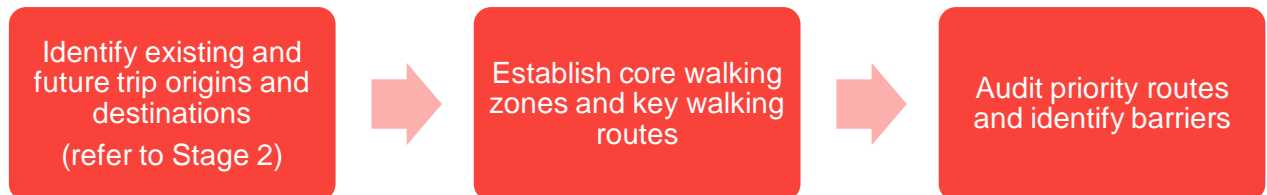
5.1 OVERVIEW

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

5.2 PETERLEE 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.

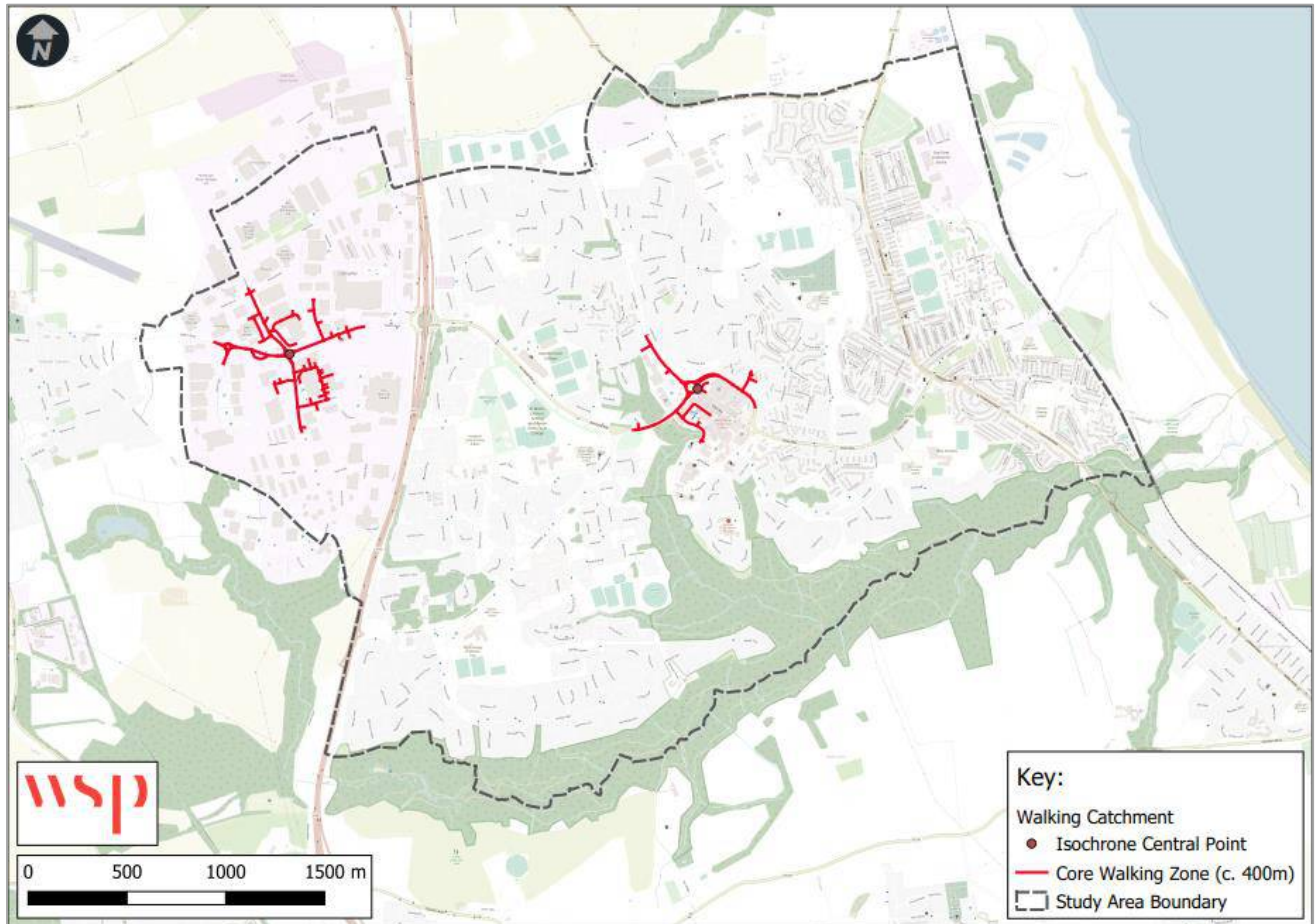
5.3 CURRENT & FUTURE ORIGINS AND DESTINATIONS

- 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 Peterlee, two distinct Core Walking Zones were identified; these are:
- the area around Castle Dene Shopping Centre; and
 - the area between North West Industrial Estate and South West Industrial Estate.
- 5.4.3. The CWZs are illustrated in Figure 5-2.

Figure 5-2 - Peterlee 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.

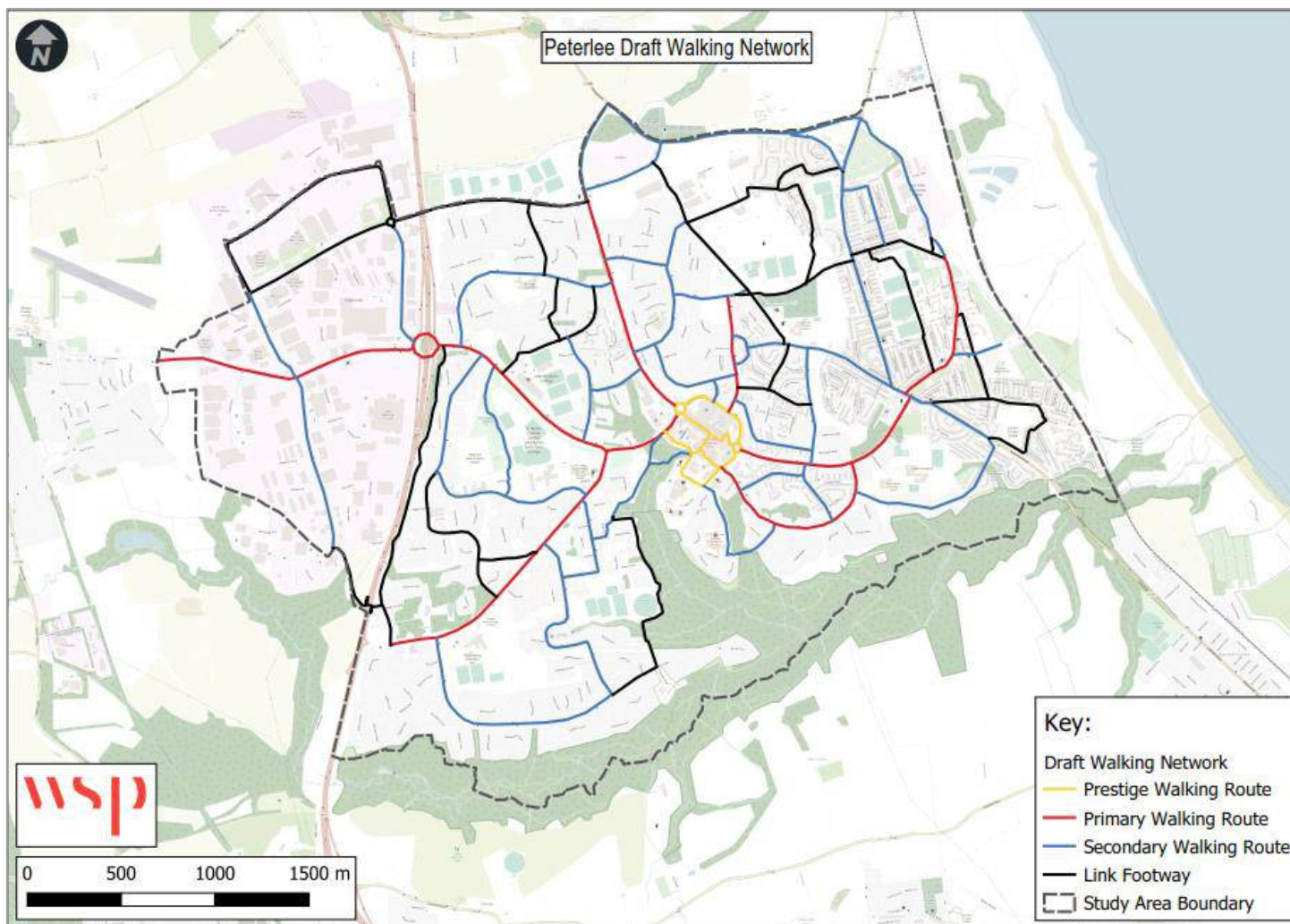
5.5 ASPIRATIONAL WALKING NETWORK PLAN

- 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 - Peterlee 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. It was determined that the Grampian Estate Area would be pursued as a distinct walking priority alongside cycling desire lines One and Ten.

5.7 ESTABLISHING INTERVENTIONS

- 5.7.1. DCC's aspiration for the LCWIP routes is for transformational change and therefore the highest quality walking infrastructure is to be provided.
- 5.7.2. 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 infrastructure:
 - Attractiveness;
 - Comfort;
 - Directness;
 - Safety; and
 - Coherence.
- 5.7.3. 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.
- 5.7.4. 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.
- 5.7.5. At this early stage in the design process, the proposals identified sit within a package of 13 typical improvements.
- 5.7.6. 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.

- 5.7.7. 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 in Table 5-1 for the purpose of engagement with key stakeholders and the general public.
- 5.7.8. 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.

Table 5-1 - Overview of walking interventions and indicative cost estimates

Scheme	Description	Cost*
Grampian Drive / Pennine Drive	<ul style="list-style-type: none"> ■ Add new footways where provision is lacking along Pennine Drive and Grampian Drive. ■ Ensure dwellings have desire line access to new footways. ■ Improve crossings for pedestrians and cyclists (Pennine Drive / Grampian Drive, Pennine Drive / Blackdown Close, Pennine Drive / Snowdon Place, Grampian Drive / Cherwell Road). ■ Retrofit side streets with pedestrian priority crossings. ■ Install high quality cycle parking at key destinations i.e. schools and local shops. ■ Ensure bus stops are integrated with footway access and desire line crossings. 	££

* Where the indicative cost levels are: <£2 million (£), £2-5 million (££) and >£5 million (£££).

- 5.7.9. Concept plans have been developed in PowerPoint to illustrate how these proposals could look. These can be found in Appendix D.

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 Peterlee.

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 Peterlee and their ranking is provided in Table 6-1.

Table 6-1 - LCWIP Prioritisation Table

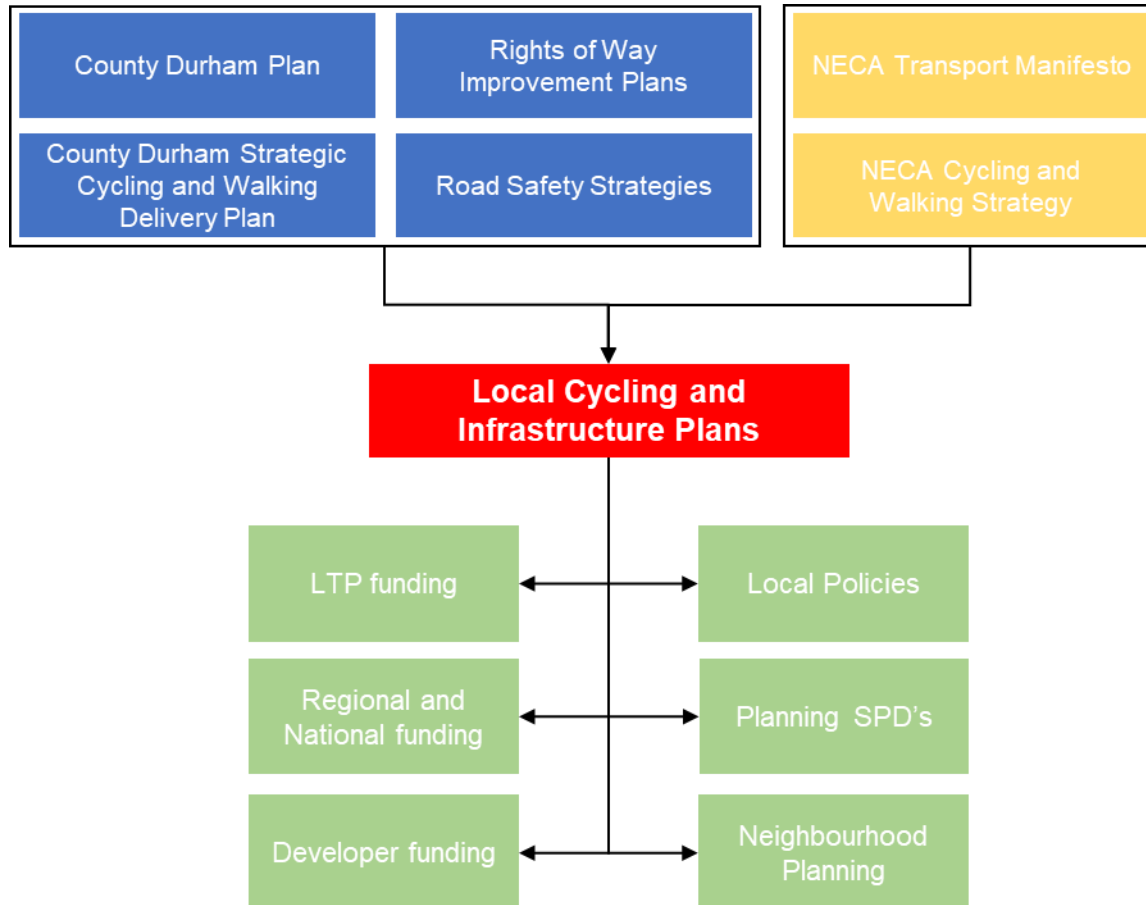
	Effectiveness	Policy alignment	Economic	Deliverability		
Routes	14	12	6	6	Total	Rank
Peterlee Town Centre to A19	10	8	3	4	25	2
Peterlee Town Centre to Thorpe Road	6	10	4	4	24	3
Peterlee Town Centre to Horden	9	9	3	6	27	1

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



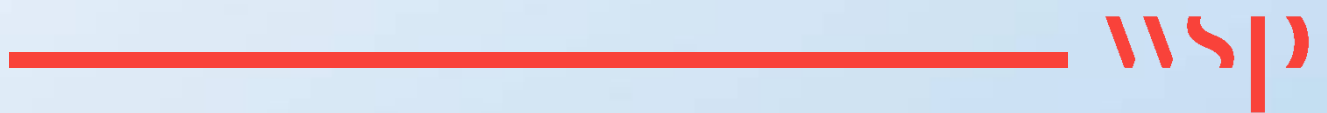
- 7.1.2. Further information about the integration and application of the LCWIP is provided in the accompanying County Durham LCWIP Programme Report.

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 PRIORITISATION 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)

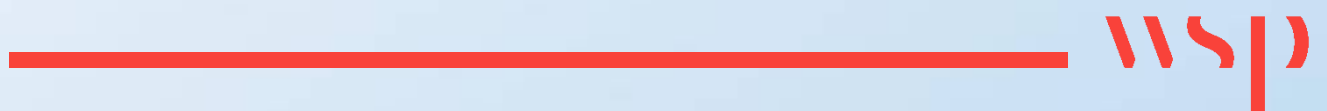
Ref Scheme		Town	Identified by...	Corridor length (to the nearest 0.25km)	Walking, cycling or both?	Effectiveness							Policy Alignment						Economic		Deliverability			Total score	Ranking	Distance weighted	Distance weighted rank	
						Catchment population	Propensity to Cycle	Existing employment	Attractor score	Schools	Post-16 education sites	Transport interchanges	Scheme overlap	Safety	Car ownership	Deprivation	Air quality	Cross boundary	Development sites	Cost of construction	Value for money	Scheme feasibility	Political and public acceptability					Timescales
						10%	7%	5%	2%	2%	2%	2%	3%	3%	3%	2%	1%	1%	5%	10%	15%	10%	10%	5%	40			
1	Peterlee Town Centre to Thorpe Road	Peterlee	WSP	1.5	Both	1	1	1	1	0	0	2	2	2	2	2	0	2	2	1	1	2	1	1	24	3	16.0	1
2		Peterlee	WSP		Both	1	0	1	1	1	0	2	2	2	2	2	0	2	2						18	5		
3	Peterlee Town Centre to Horden	Peterlee	WSP	1.75	Both	2	1	1	1	2	0	2	2	2	2	2	0	1	1	1	1	2	2	2	27	1	15.4	2
4		Peterlee	WSP		Both	2	0	2	1	2	0	2	2	2	2	2	0	1	1						19	4		
5		Peterlee	WSP		Both	1	1	1	1	1	0	2	2	2	2	2	0	1	1						17	9		
6		Peterlee	WSP		Both	0	1	1	0	0	0	2	2	1	1	2	0	1	1						12	14		
7		Peterlee	WSP		Both	1	1	1	0	1	0	2	2	2	1	2	0	1	1						15	12		
8		Peterlee	WSP		Both	2	1	1	1	1	0	2	2	2	1	2	0	2	1						18	5		
9		Peterlee	WSP		Both	1	1	1	1	1	1	2	2	2	2	1	2	0	2	1					18	5		
10	Peterlee Town Centre to A19	Peterlee	WSP	1.75	Both	1	2	2	1	1	1	2	2	2	2	0	2	2	2	0	1	2	1	1	25	2	14.3	3
11		Peterlee	WSP		Both	2	0	1	1	1	1	2	2	2	1	2	0	2	1						18	5		
12		Peterlee	Stakeholders		Both	1	0	1	1	2	0	2	2	2	2	2	0	1	1						17	9		
13		Peterlee	Stakeholders		Both	0	1	2	1	2	1	0	2	1	1	2	0	2	0						15	12		
14		Peterlee	Stakeholders		Both	2	0	1	1	1	0	2	2	2	0	1	0	2	2						16	11		

The definitions for each scoring level are detailed in the 'Scoring criteria' tab.

Totals	Effectiveness	Policy alignmer	Economic	Deliverability	Total	Rank
Peterlee Town Centre to A19	10	8	3	4	25	2
Peterlee Town Centre to Thorpe Road	6	10	4	4	24	3
Peterlee Town Centre to Horden	9	9	3	6	27	1

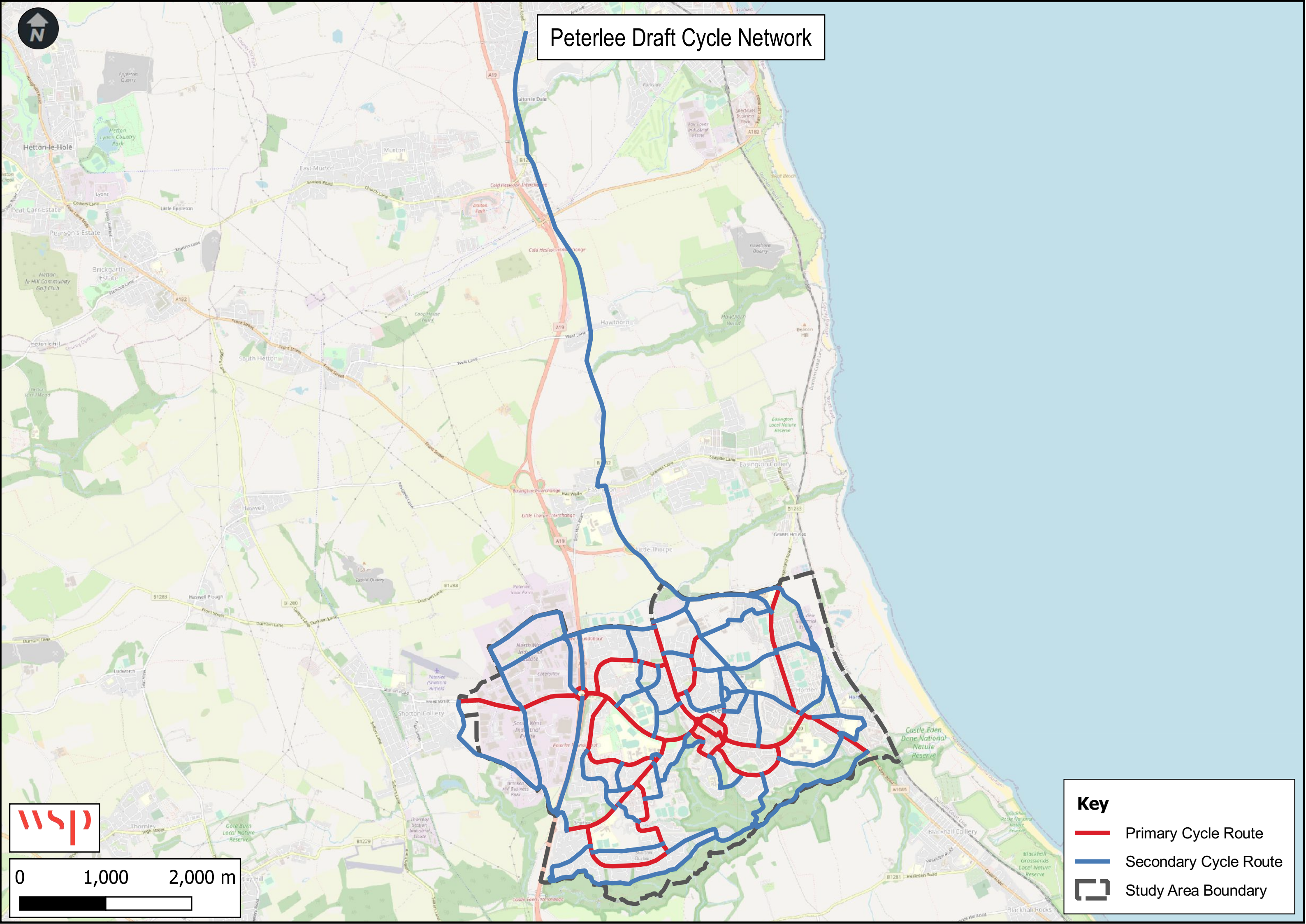
Appendix B

ASPIRATIONAL CYCLE NETWORK





Peterlee Draft Cycle Network

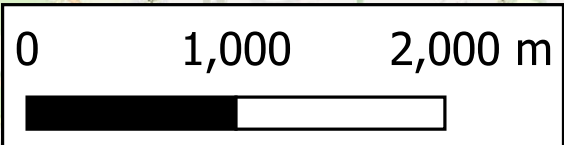


Key

Primary Cycle Route

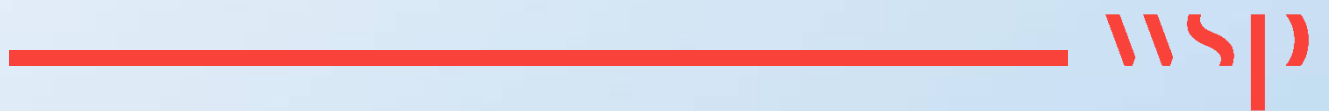
Secondary Cycle Route

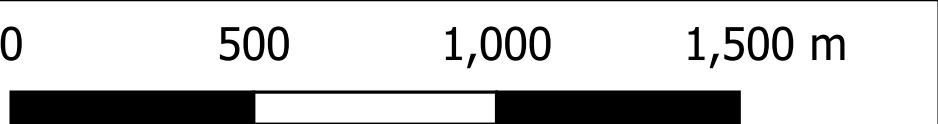
Study Area Boundary



Appendix C

PRIORITY CYCLE NETWORK





Key

Study Area Boundary

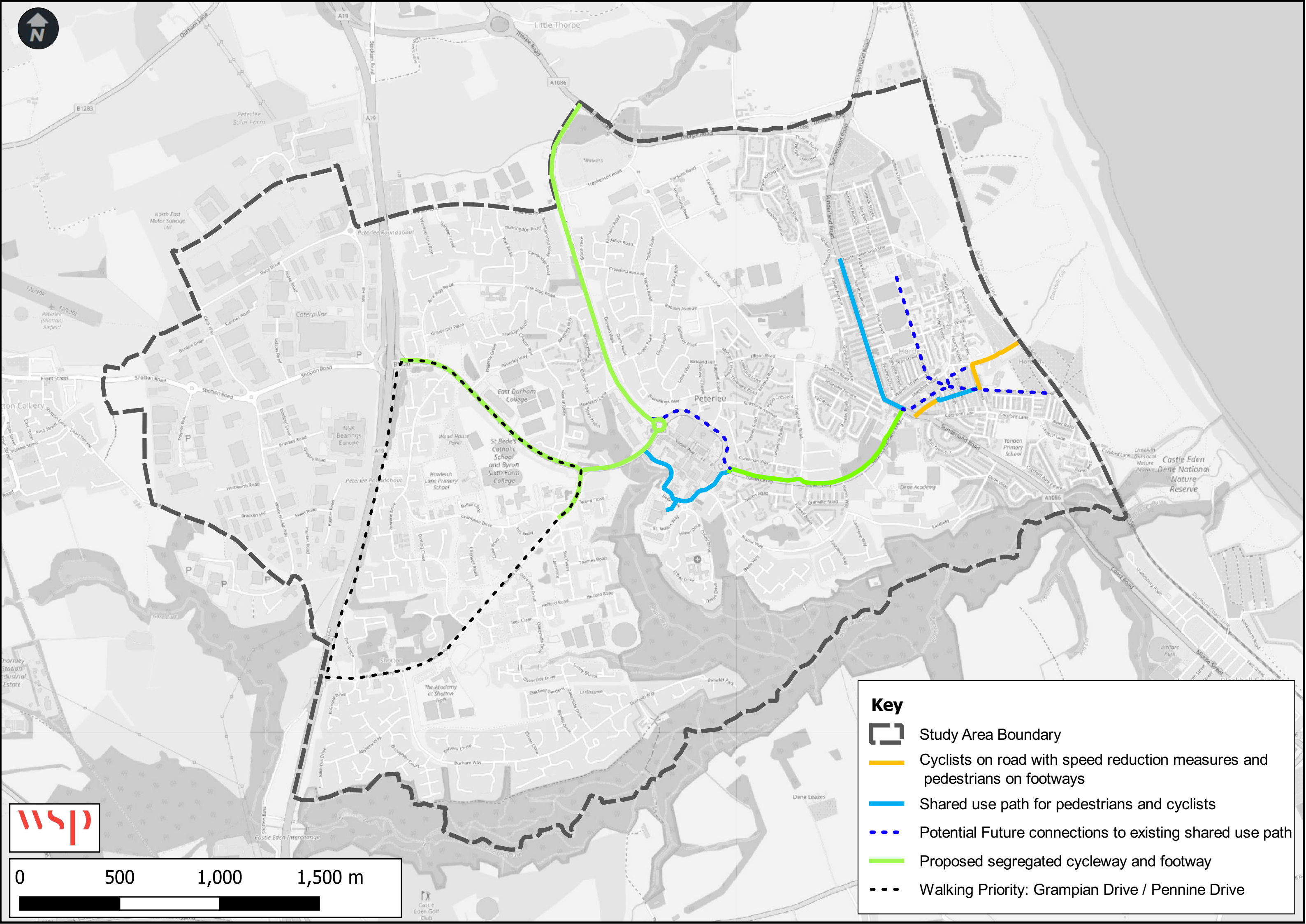
Cyclists on road with speed reduction measures and pedestrians on footways

Shared use path for pedestrians and cyclists

Potential Future connections to existing shared use path

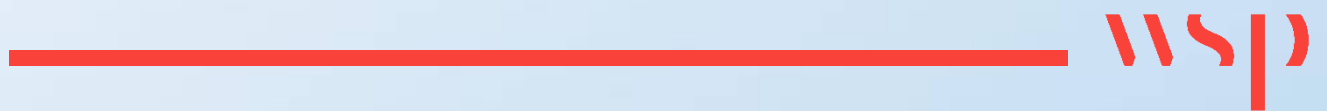
Proposed segregated cycleway and footway

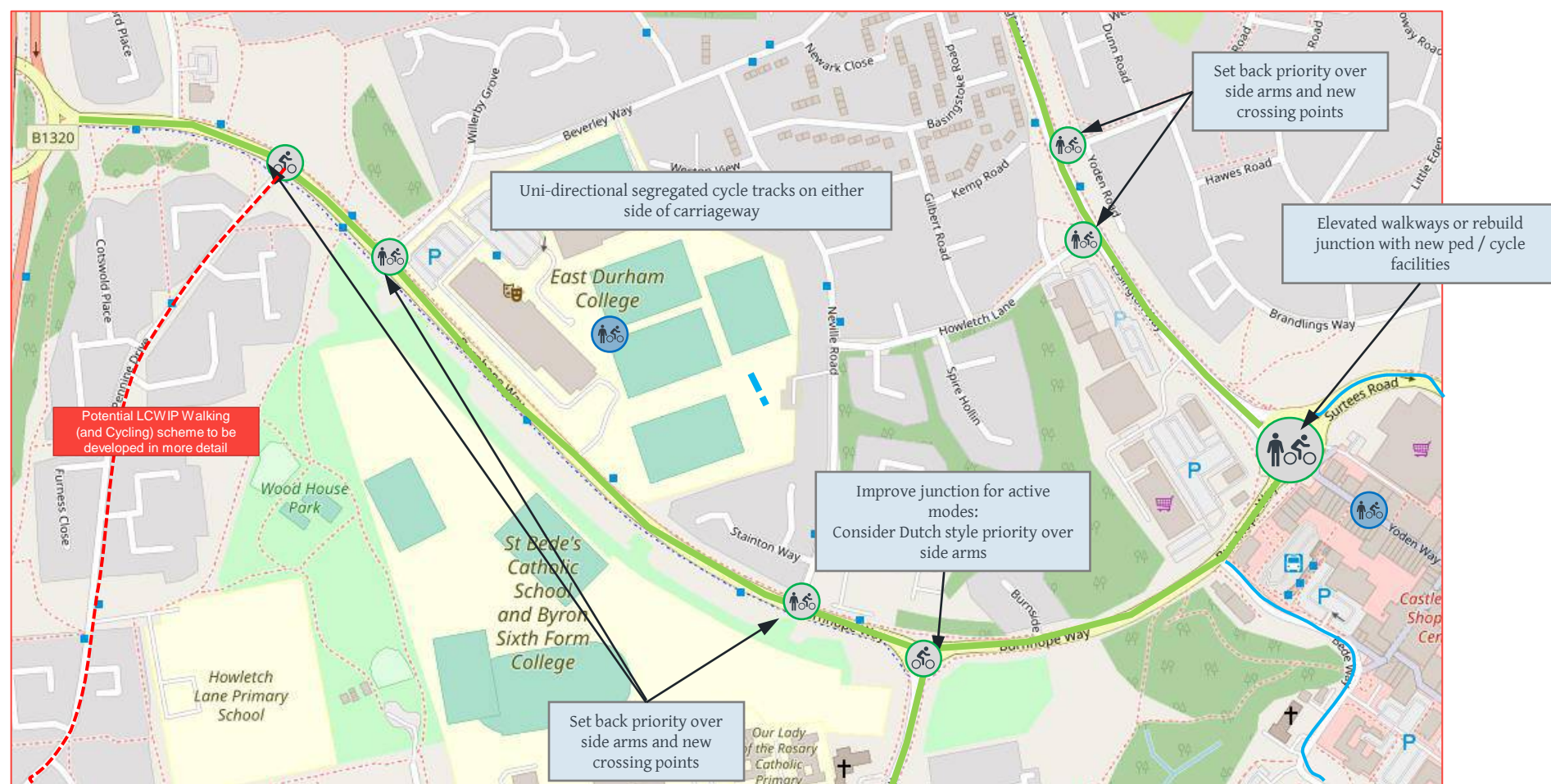
Walking Priority: Grampian Drive / Pennine Drive



Appendix D

PRIORITY ROUTE CONCEPTS



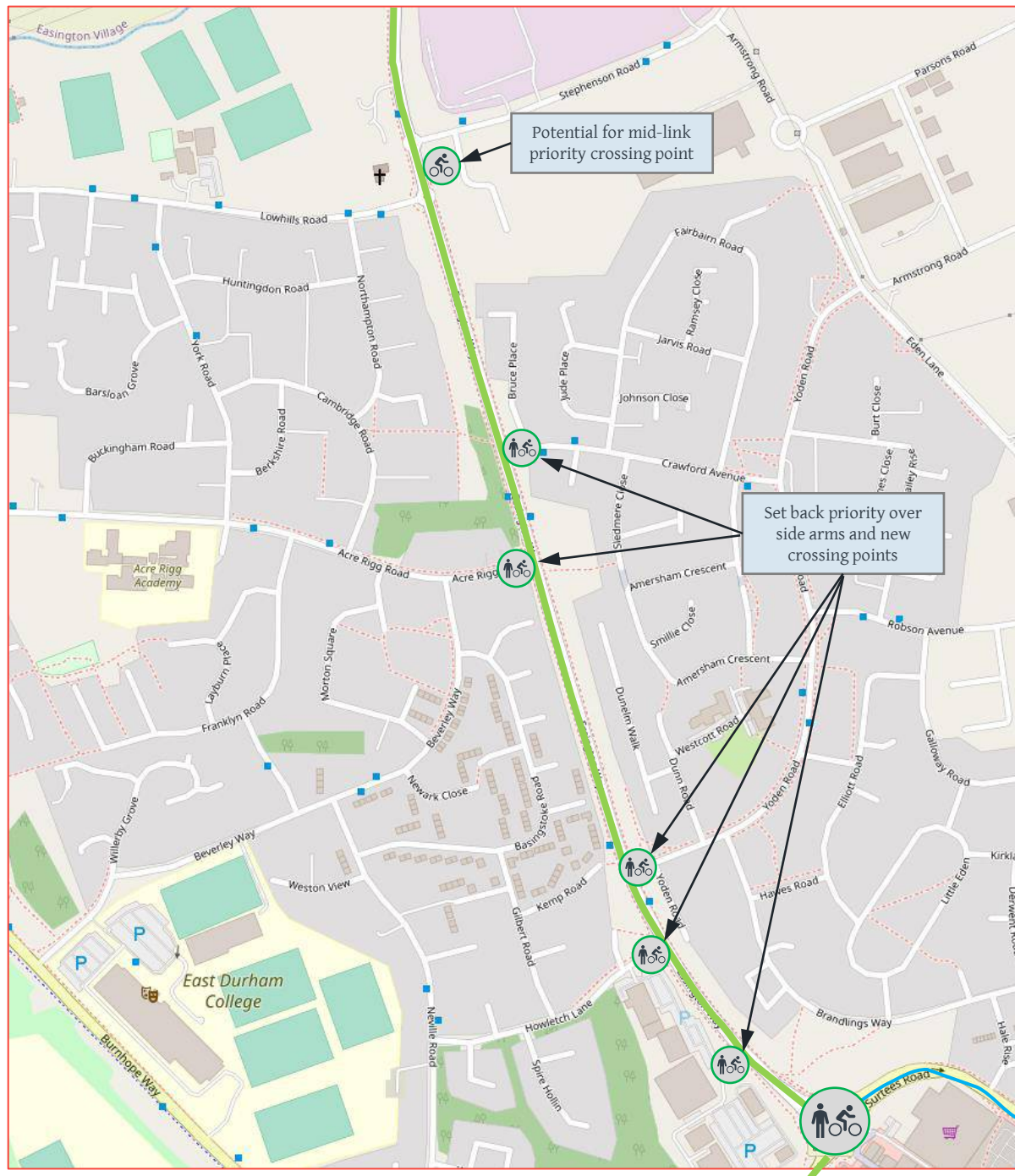


Peterlee Town Centre to A19







Key issues:

1. Wide verges offer potential for exemplar segregated cycle infrastructure. Junctions across the town will require significant changes to reduce the dominance of motor vehicles.
2. Passfield Way offers similar conditions, and junction with Burnhope Way should be altered to accommodate for all future movements.
3. Roundabout junction offers very poor facilities for active modes and is an unwelcoming approach to town centre. Consider significant changes, recognising that these will be high cost.
4. Essington Way offers similar conditions to other arterial routes.
5. Surtees Way is dominated by a wide carriageway. Consider reallocating carriageway space to create better conditions for active modes that are conducive to the sense of place.

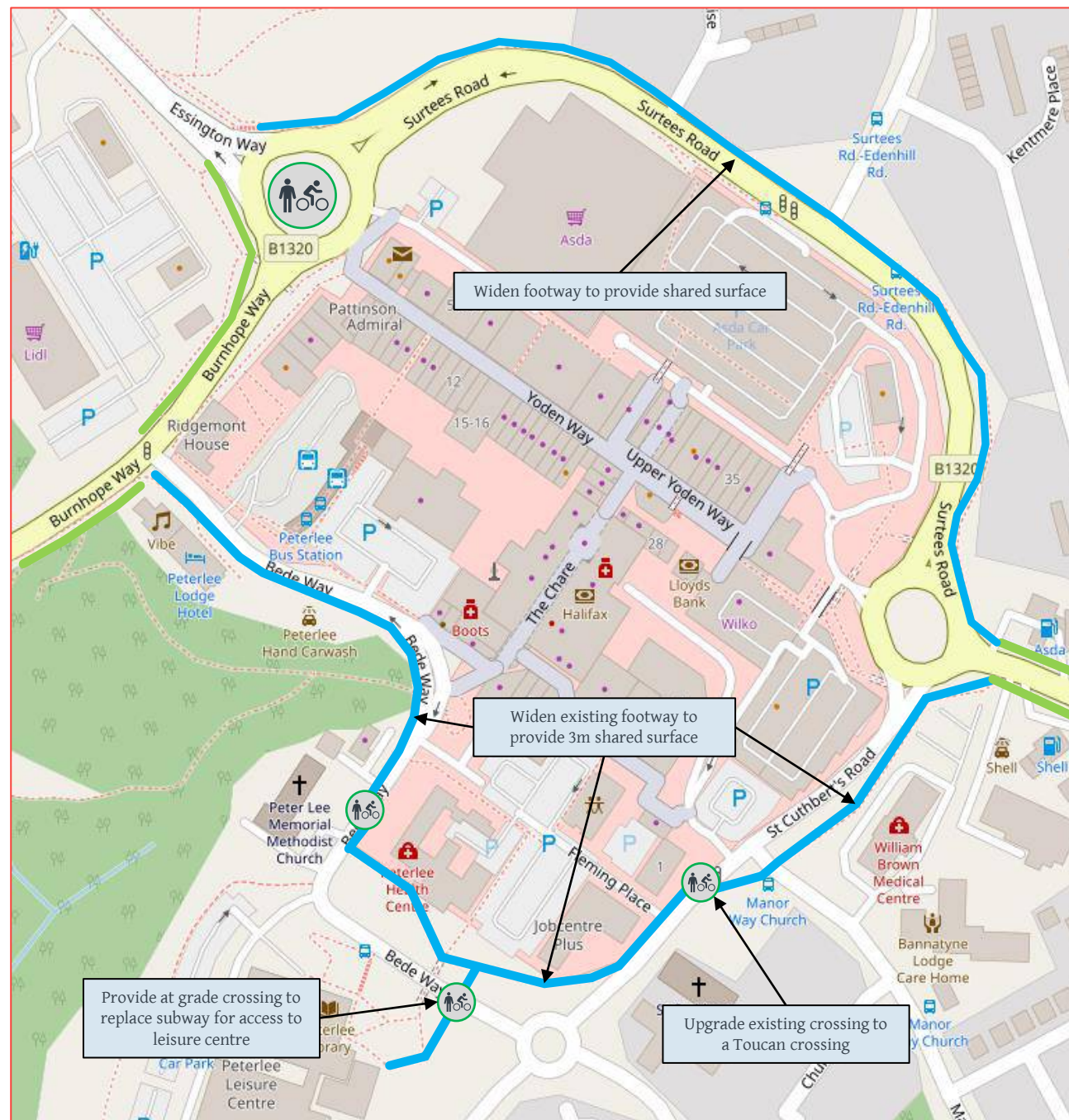


Peterlee Town Centre to Thorpe Road

-  Segregated Cycle Facilities
-  Shared use path for pedestrians and cyclists
-  Adjoining route proposal or existing NCN
-  Pedestrian and cyclist crossing improvement

Key issues:

1. Wide verges offer potential for exemplar segregated cycle infrastructure. Junctions across the town will require significant changes to reduce the dominance of motor vehicles
2. TIA & JAT required to determine type of intervention required – assume fully segregated, requiring mid-link controlled crossing.



Peterlee to Horden

Peterlee Town Centre

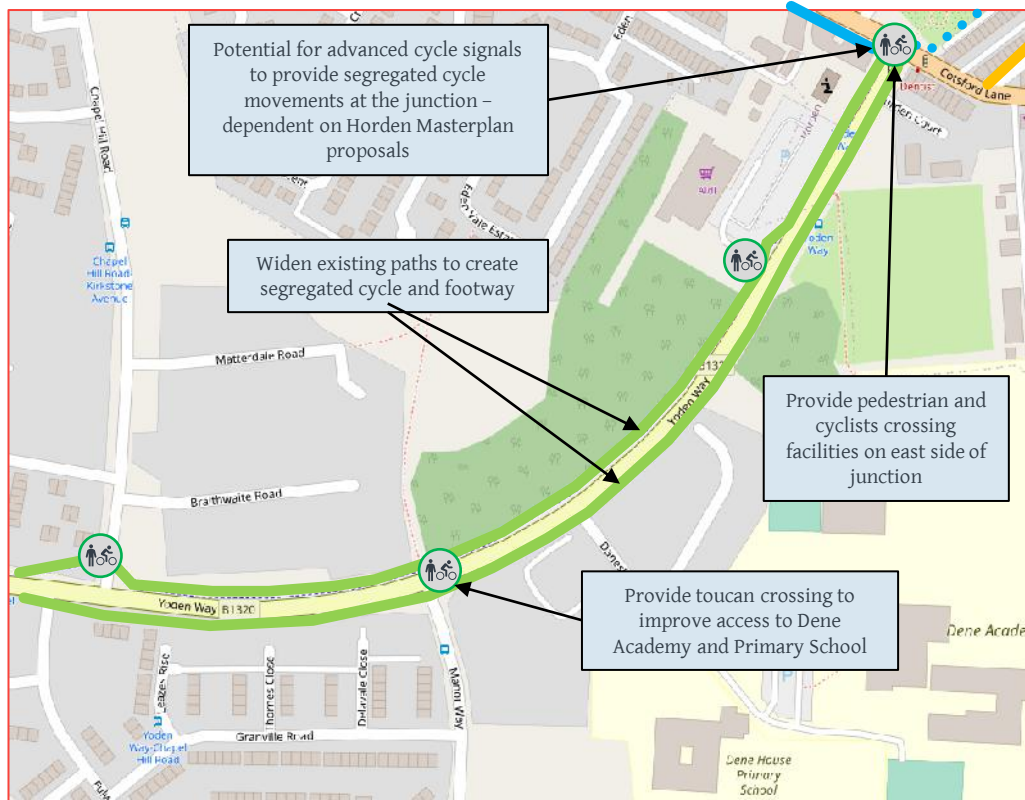
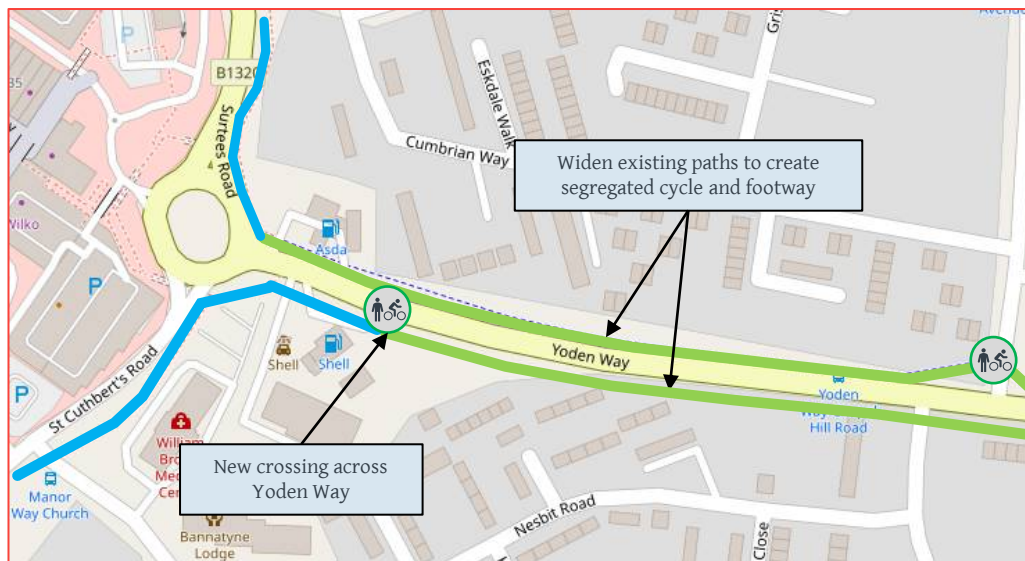
	Shared use path for pedestrians and cyclists
	Cyclists on road with speed reduction measures and pedestrians on footways
	Segregated cycle facilities
	Potential future connections to existing shared use path for pedestrians and cyclists
	Pedestrian and cyclist crossing improvement

Key issues:

1. The St Cuthbert's Road/Yoden Way roundabout is a barrier to cycle and pedestrian movement into Peterlee town centre, as existing subway underpasses are unsuitable.

Key considerations:

1. Path widths at the roundabout adjacent to underpasses are a pinch point.
2. The proposed improvement to the path around the south of the town centre links a number of key attractors (leisure centre, bus station) and links to the existing route along Burnhope Way.



Peterlee to Horden

B1320 Yoden Way

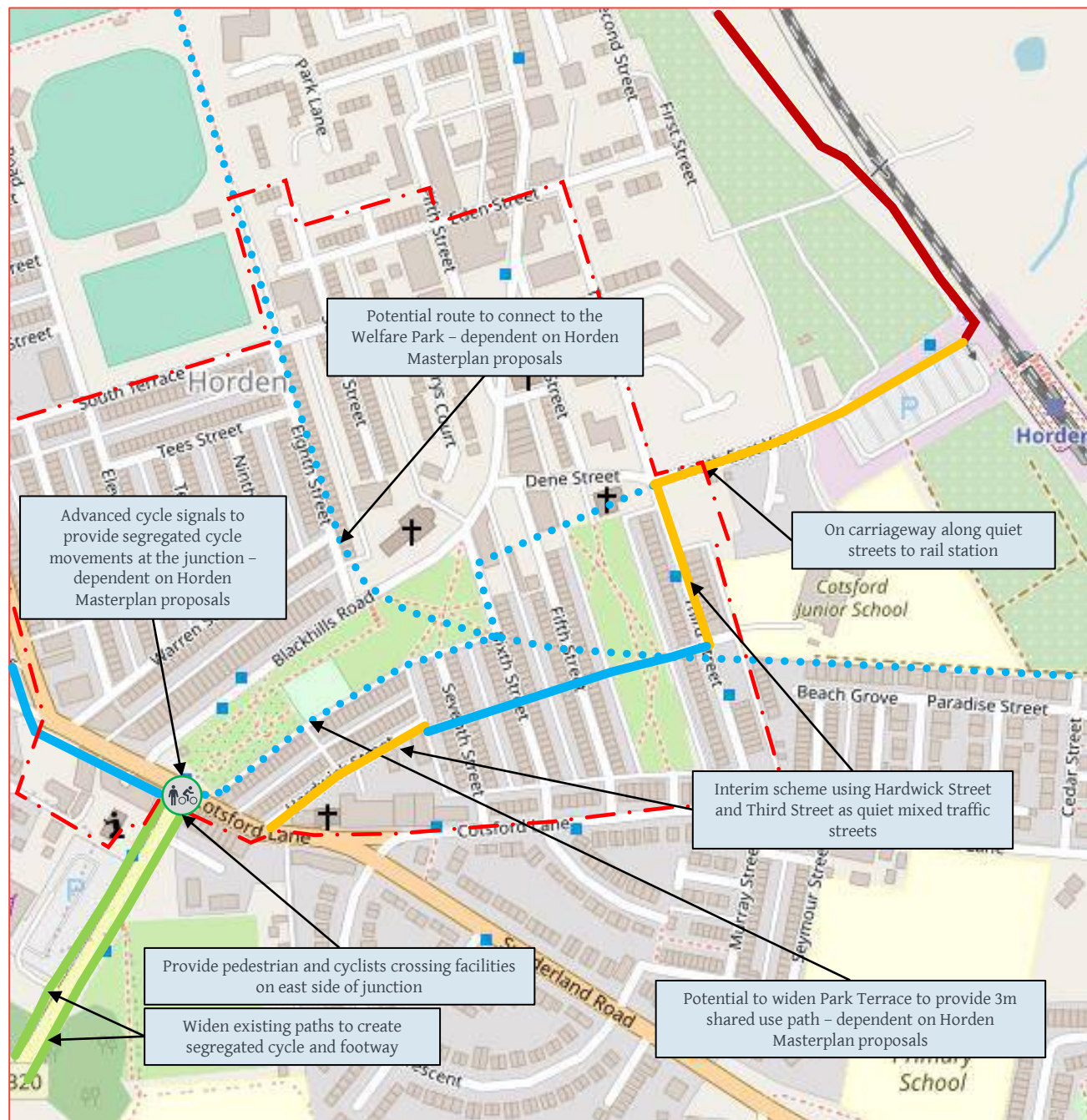
	Shared use path for pedestrians and cyclists
	Cyclists on road with speed reduction measures and pedestrians on footways
	Segregated cycle facilities
	Potential future connections to existing shared use path for pedestrians and cyclists
	Pedestrian and cyclist crossing improvement

Key issues:

1. Junction of Yoden Way with A1068 Coast Road is a key location in providing a connected route between Peterlee and Horden. It is also a key location for Horden Masterplan proposals.
2. Garage / Car wash premises at the Yoden Way / A1086 junction are a constraint to junction improvements.
3. Existing underpasses at the St Cuthbert's Road roundabout are not in accordance with LTN 1/20 standards.

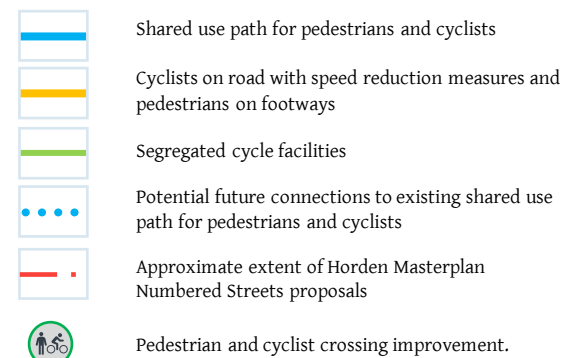
Key considerations:

1. Provide a segregated cycle track alongside the existing footway on both sides of Yoden Way.
2. Upgrade the existing crossing point at Manor Way to a toucan crossing to provide improved access to/from Dene Academy.
3. There is no crossing of Yoden Way near to the roundabout. All other arms have underpasses. Location for a crossing is slightly distant from the roundabout due to petrol filling station accesses.



Peterlee to Horden

Yoden Way to Horden rail station

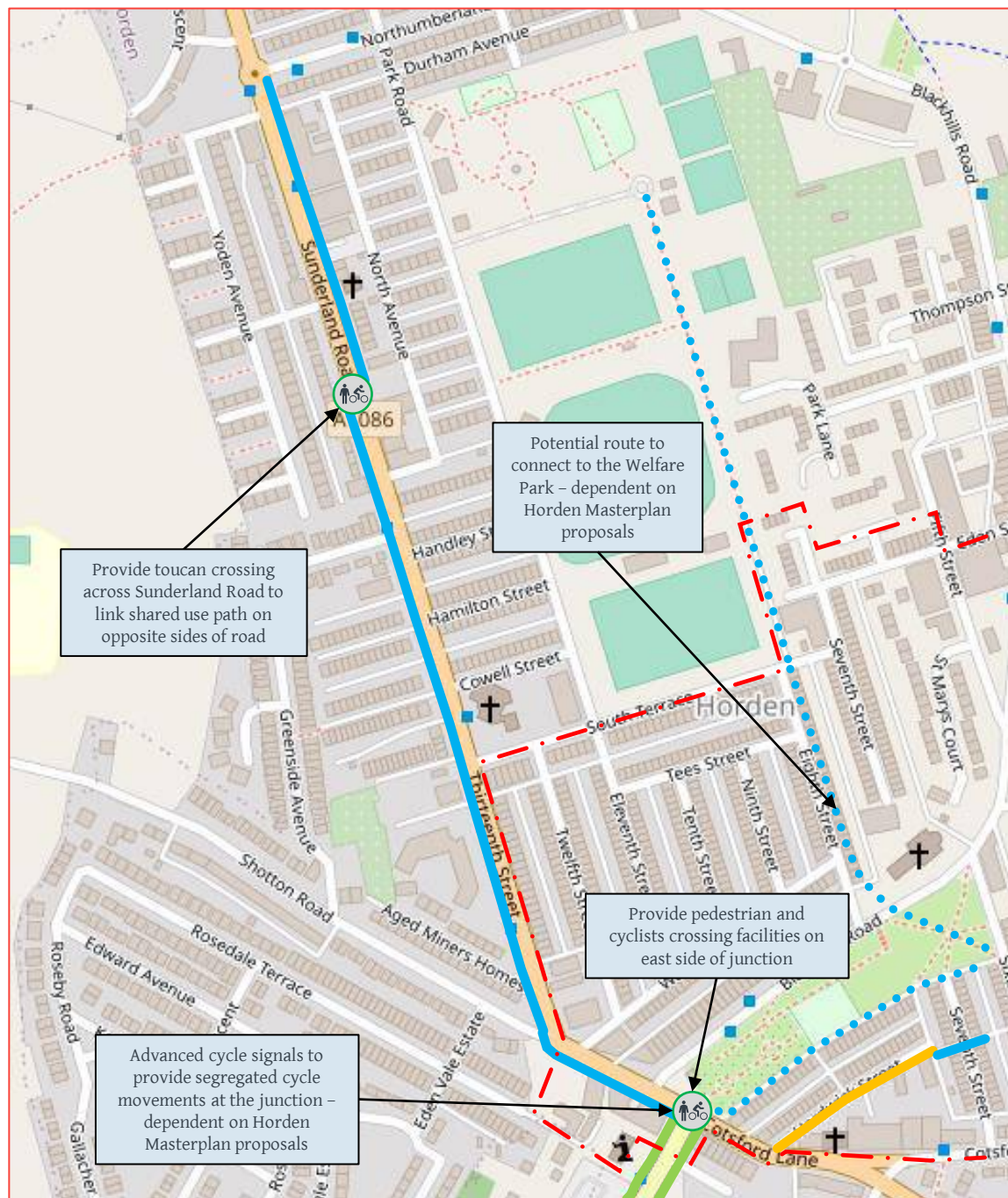


Key issues:

1. Junction of Yoden Way with A1068 Coast Road is a key location in providing a connected route between Peterlee and Horden. It is also a key location for Horden Masterplan proposals.
2. The A1086/Yoden Way junction will require improvement to provide segregated cycle movements to provide a connected cycle network that is LTN 1/20 compliant. This is likely to affect junction capacity and the garage premises at the junction.

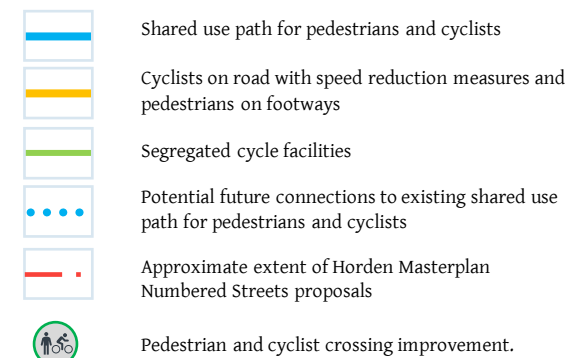
Key considerations:

1. Horden Masterplan Numbered Streets proposals offers the potential to create an attractive route linking the Welfare Park, rail station and the coastal path.
2. Blackhills Road offers a more direct route between the rail station and Yoden Way but a less attractive route than using a potential route along an improved Park Terrace.
3. Horden Masterplan proposals offer potential for improvement to the A1086 junction but would not be deliverable within the LUF proposals period. Interim scheme using Hardwick Street will leave a break along the A1086 for a fully connected route.



Peterlee to Horden

Yoden Way to Northumberland Street

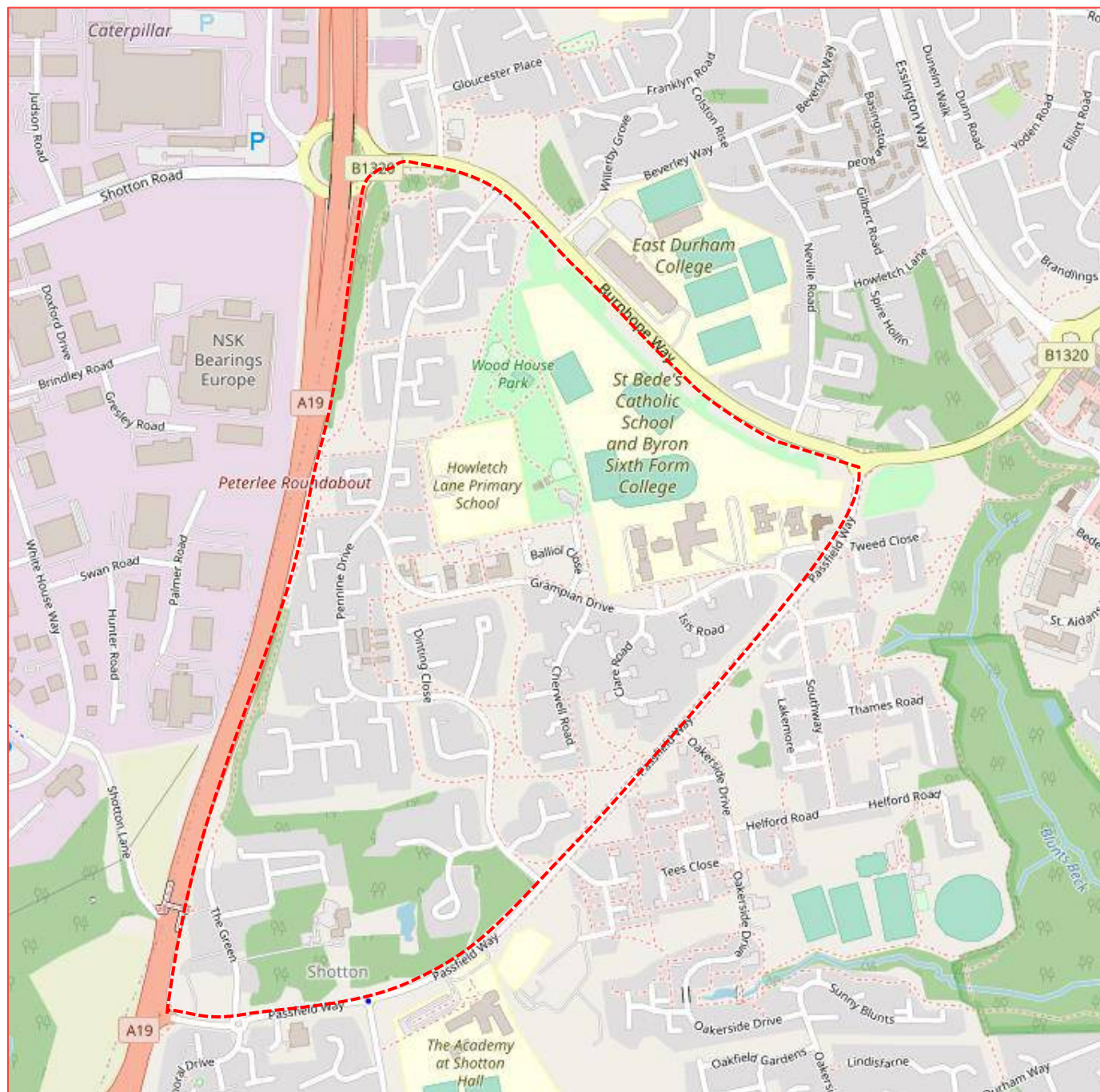


Key issues:

1. Junction of Yoden Way with A1068 Coast Road is a key location in providing a connected route between Peterlee and Horden. It is also a key location for Horden Masterplan proposals.
2. Horden Masterplan proposals offer potential for improvement to the A0186 junction but would not be deliverable within the LUF proposals period. Interim scheme using Hardwick Street will leave a break along the A1086 for a fully connected route.

Key considerations:

1. Existing path on the west side of Sunderland Road narrows at the northern end. Best provision can be made on the eastern side of the road.
2. Parking along Sunderland Road is likely to be affected, especially on the western side of the road where parking takes place on the footway.

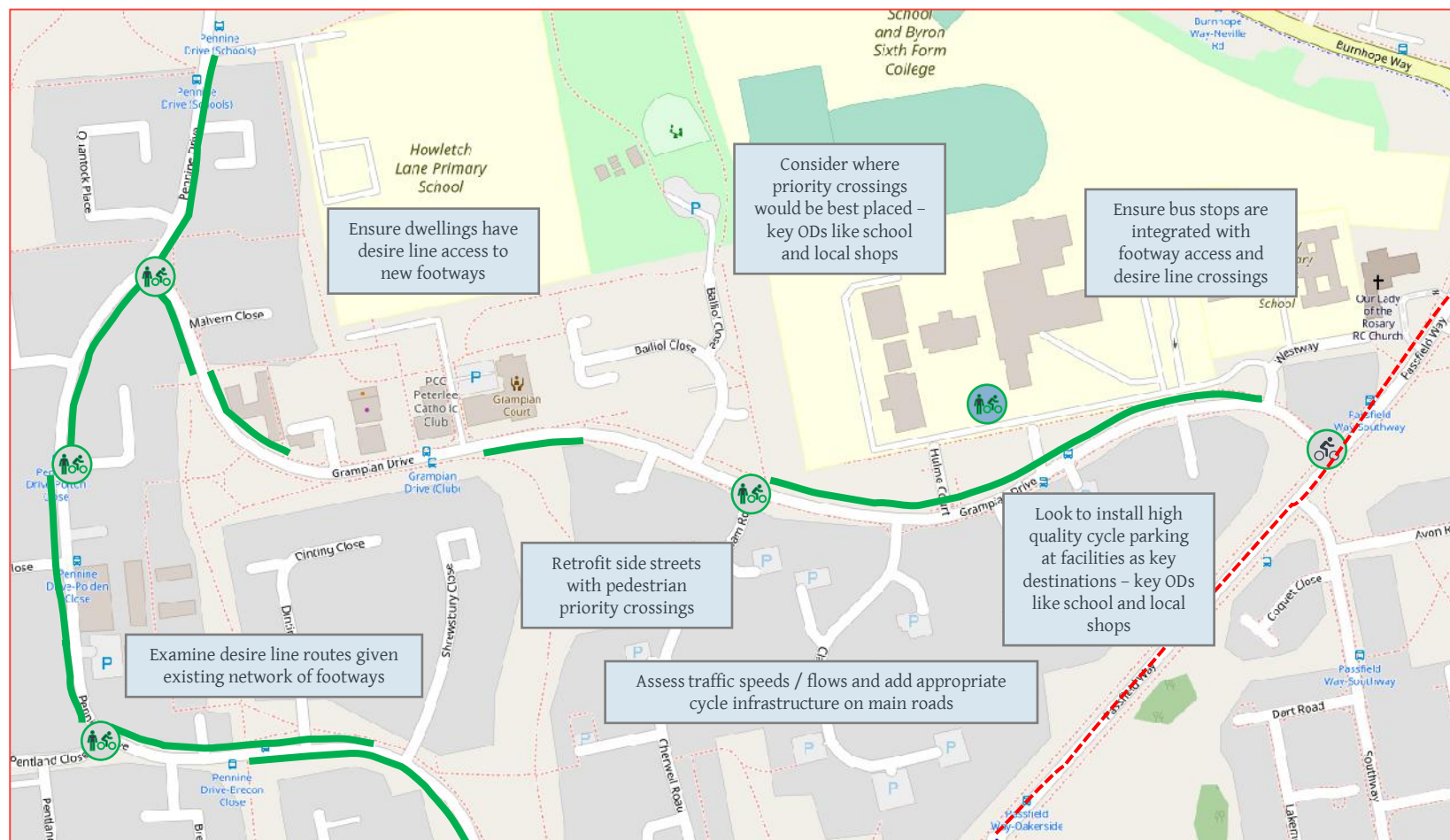


Walking Priority: Grampian / Pennine Drive

Key issues:

1. Lack of footways in the estate around Grampian Drive / Pennine Drive and linkages to nearby estates was raised as a key issue in the external stakeholder workshop.
2. Footways adjacent to the main road are inconsistent, with no priority crossings of main road to link together.
3. Houses have rear access points but many have no connections.
4. Bust stops are sometimes isolated and likely to be difficult to reach for those with mobility impairments.
5. Area needs a more detailed study due to the complexities of movement around the estate between trip origins and destinations across existing footways
6. Should consider wider external engagement to ensure interventions meet the needs of local people
7. Scheme would likely be delivered alongside more comprehensive cycle infrastructure

Scheme Concepts



Walking Priority: Grampian Drive / Pennine Drive



New footways



Adjoining route proposal or existing NCN



Changes to junction to improve for active modes



Pedestrian and cyclist crossing improvement



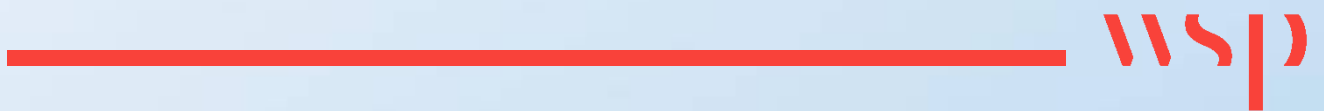
Mobility hub

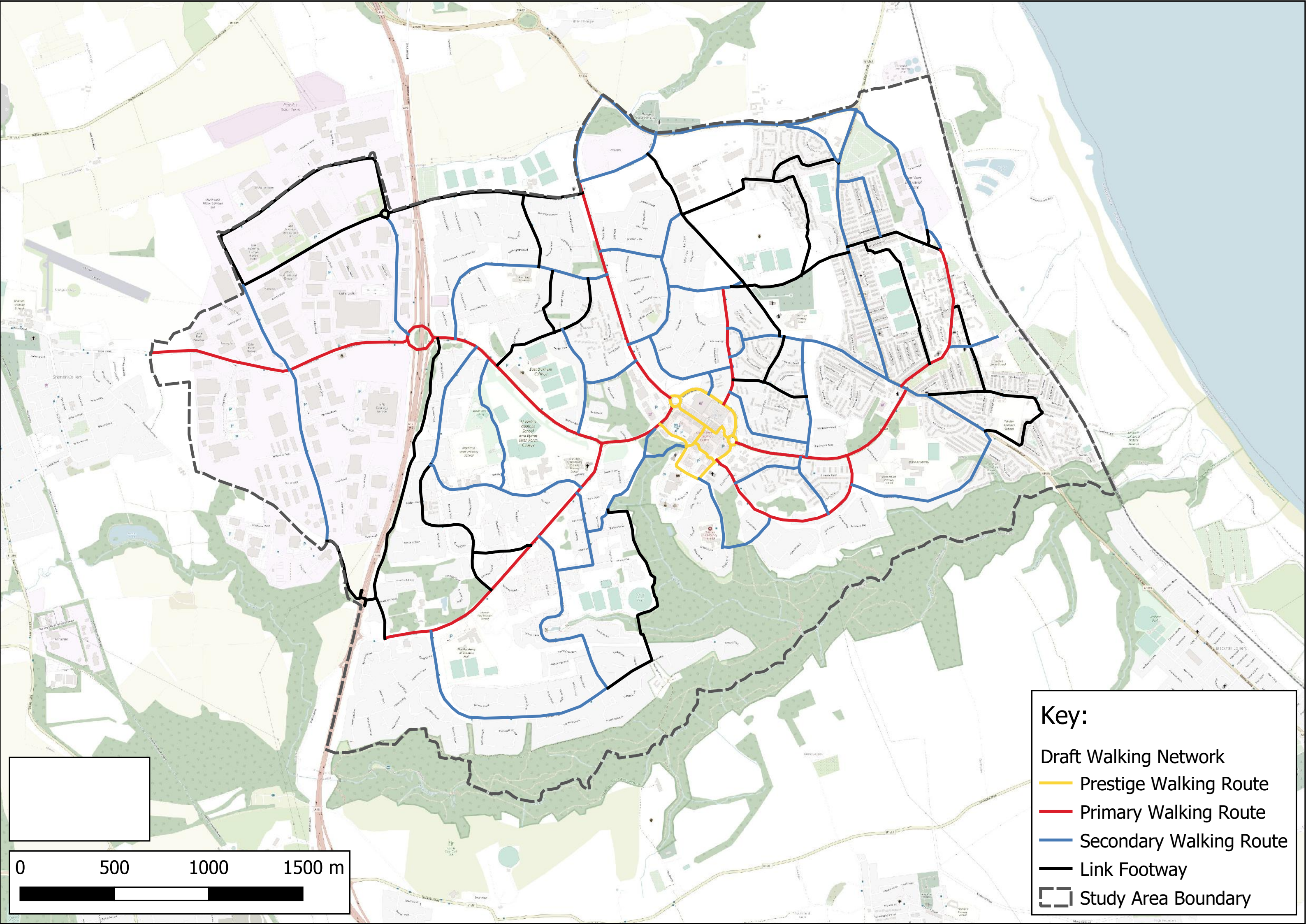
Key issues:

1. New footways and crossing points can be costly – scheme should form part of a wider combined active travel scheme for cycling and wheeling
2. Segregation is likely to be the preferred standard of cycling infrastructure
3. Land ownership – it's difficult to distinguish between verge and potential private space
4. A lot of land is low value grass – could be used for public realm with associated benefits

Appendix E

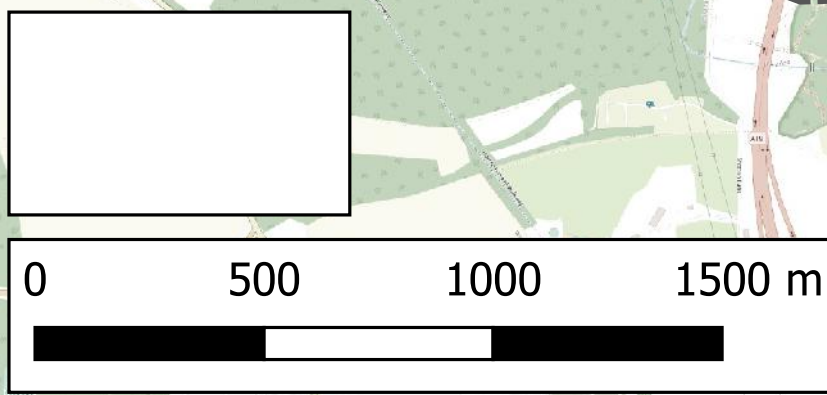
ASPIRATIONAL WALKING NETWORK





Key:

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





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