

North Yorkshire County Council
Business and Environmental Services
Executive Members

26 July 2019

Harrogate Cycle Infrastructure Plan

Report of the Assistant Director - Highways and Transportation

1.0 Purpose of the report

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| 1.1 To seek approval for the phase one report of the Harrogate cycle infrastructure plan. |
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2.0 Background

- 2.1 In 2017 North Yorkshire County Council (NYCC) commissioned WSP to prepare a cycle infrastructure plan for the Harrogate area. This piece of work is being carried out in broad accordance with the Governments suggested Local Walking and Cycling Infrastructure Plan (LWCIP) guidance though at this stage the Walking element has yet to be investigated.
- 2.2 The completed cycle infrastructure plan is intended to be used as a basis for future bids for funding from Government, and to enable NYCC to have more leverage when seeking funding from developers towards providing cycle infrastructure in the Harrogate area.

3.0 Phase one

- 3.1 Work on developing the Harrogate cycle infrastructure plan has been completed in two phases. The first phase saw the production of a cycle infrastructure plan. The aim of the infrastructure plan is to identify a series of priority corridors recommended to take forward for further development and draft design work in phase 2. The draft designs produced in phase two of the project are intended to form the basis of any future funding bids and at that stage will be subject to further detailed development and public / stakeholder engagement.
- 3.2 The work in phase one has been informed primarily by existing data, best practice and stakeholder input. A copy of the phase one report and draft cycle network is contained in Appendix A and B.
- 3.3 As part of the work carried out in phase one officers from WSP and NYCC hosted two stakeholder workshops. The first workshop was an internal workshop held with officers from Harrogate Borough Council, this workshop scoped out the challenges and opportunities in the study area.
- 3.4 The second workshop hosted external attendees from a range of organisations including representation from the following Harrogate Bus Company, Harrogate Hospital, the Cycle Forum, Harrogate College and the University of Leeds. The second workshop focuses on gaining input from stakeholders on the draft network, and what they saw as priorities for intervention.

- 3.5 The project team from WSP attended a meeting of the Harrogate Cycle Forum as part of the early engagement for the project. This allowed members of the cycle forum to input on issues and opportunities from existing cycle users, and allow WSP to explain the wider aims of the project.
- 3.6 Phase one identified five priority corridors that could potentially be taken forward for further feasibility development. The priority corridors have been identified on the basis of those most likely to attract Government or developer funding along with their likely usage. The five identified corridors are:
- Bilton to Starbeck
 - Bilton to Hornbeam Park
 - Jennyfield to Harrogate town centre
 - Hornbeam Park to Starbeck
 - Harrogate to Knaresborough
- 3.7 It should be noted that the Harrogate to Knaresborough route will not be progressed to feasibility design by NYCC as Harrogate Borough Council have confirmed they will progress this route independently.

4.0 Phase one Members Consultation and Comments

- 4.1 Following the completion of the phase one report, the report was issued to all members of the Harrogate and Knaresborough Area Constituency Committee with a request to note the content of the report and provide any feedback on the report, and five identified priority corridors. Members were given six weeks to respond with any queries or comments.
- 4.2 Feedback was received from two members of the Area Constituency Committee. These comments together with officer comments, have been included in appendix C.

5.0 Next Steps

- 5.1 Once Executive Members have approved the Phase one report, and agree the recommended priority corridors, Phase two will be completed with a series of draft designs generated and held by the County Council until suitable bidding opportunities arise to develop the design into a format suitable to submit for funding.
- 5.2 It is worth noting that although yet to be formally approved the cycle infrastructure plan is and has already been used to inform funding bids for new infrastructure including the Otley Road cycle route included in the successful National Productivity Investment Fund bid for the West of Harrogate and in the emerging Transforming Cities Fund bid that NYCC and HBC officers are working with West Yorkshire Combined Authority to develop.

6.0 Financial Implications

- 6.1 Once the draft designs have been completed funding for delivery of the routes will come from bidding to central government or from developers in the Harrogate area through arrangements such as Section 106 agreements.

7.0 Equalities implications

- 7.1 Consideration has been given to the potential for any adverse equalities impacts arising from the recommendations of this report. It is the view of officers that the recommendations included in this report do not have any adverse impacts on any of the protected characteristics identified in the Equalities Act 2010. However, it is worth noting that fully developed schemes will require a full Equalities Impact Assessment. See Appendix D.

8.0 Legal Implications

- 8.1 At present no legal implications have been identified.

9.0 Recommendations

- 9.1 It is recommended that the Corporate Director, BES, in consultation with the BES Executive Members;
- i) Note the content of the report and approve the phase one report for the Harrogate cycle infrastructure plan.

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Background documents: None



North Yorkshire County Council

HARROGATE CYCLE INFRASTRUCTURE PLAN

Project Report





North Yorkshire County Council

HARROGATE CYCLE INFRASTRUCTURE PLAN

Project Report

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North Yorkshire **County Council**

HARROGATE CYCLE INFRASTRUCTURE PLAN

Project Report

WSP

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QUALITY CONTROL

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1. INTRODUCTION

1.1. BACKGROUND

WSP were commissioned by North Yorkshire County Council (NYCC) to develop a Cycling Infrastructure Plan for Harrogate (HCIP). The plan is intended to operate as the basis for future bid work, influence junction design and highway schemes, and guide new development and developer contributions in creating a cohesive and efficient cycle network.

Previously, the Local Sustainable Transport Fund (LSTF) was utilised to improve cycle routes in the Harrogate area as well as promoting cycling through a range of soft measures. NYCC has received an Access Fund contribution to deliver soft transport measures in the Harrogate area through to 2020. The development of the HCIP will build on the previous work completed through the LSTF and support the aims of the ongoing Access Fund.

The objectives of the project are to:

- Produce an evidence-based cycle network plan;
- Identify early network investment priorities and potential interventions;
- Secure stakeholder “buy-in” for the network and the investment priorities; and
- Provide an indicative delivery programme for investment in cycle infrastructure up to 2027.

The resultant Harrogate Cycling Infrastructure Plan will work toward a vision of Harrogate as a premier cycling town, creating a great place for people to live, work, visit, and enjoy.

DEFINING THE STUDY AREA

The towns of Harrogate and Knaresborough are located in the Harrogate district of North Yorkshire, separated by an area of green belt land. The city of Leeds lies directly south, the district of Craven to the west, and York to the east.

North Yorkshire sits within the Northern Powerhouse area and is within the boundaries of the York, North Yorkshire and East Riding Local Enterprise Partnership (LEP). North Yorkshire County Council (NYCC) and the North Yorkshire districts of Craven, Harrogate and Selby also form part of the Leeds City Region (LCR) (alongside the West Yorkshire metropolitan authorities, Barnsley Metropolitan Borough and the City of York councils) and are therefore also considered part of the LCR LEP.

Harrogate is a spa town and has a number of well-known visitor attractions. The town is a popular conference and events location, centred around the Harrogate Convention Centre (HCC), and is home to the annual Great Yorkshire Show. It is also the location of the Nidderdale Area of Outstanding Natural Beauty (AONB) and the Stray, a 200 acre area of green space which is protected by an Act of Parliament.

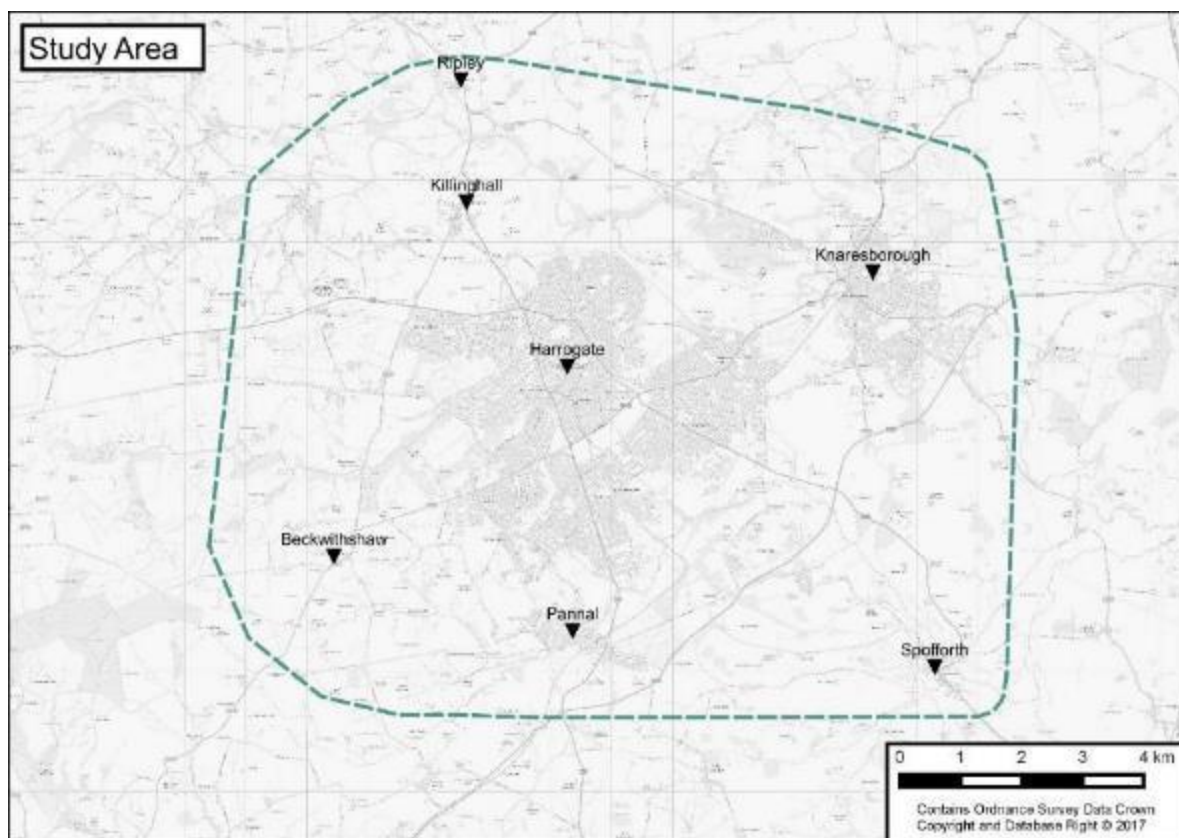
The towns are strategically well-placed geographically, with the A1 (M) offering excellent north-south connections for the movement of people and goods across the UK. A number of other key strategic routes operate in the vicinity of the two towns, including the A59 and A61.

The Study Area for the Harrogate Cycling Plan does not encompass the entirety of the district, and instead focuses predominantly on the urban areas of Harrogate and Knaresborough as the largest settlements in the district; the extent of the Study area is defined in Figure 1, overleaf. The Study

Area also extends beyond the urban areas into the surrounding villages that rely on the services provided by the two major towns, including:

- Spofforth;
- Beckwithshaw;
- Killinghall; and
- Ripley.

Figure 1 – Study Area Boundary



REPORT STRUCTURE

This Project Report presents the work undertaken to develop the HCIP and is structured as follows:

- Section 2 – Evidence Base
- Section 3 – Best Practice
- Section 4 – Developing the Cycle Network
- Section 5 – Stakeholder Engagement
- Section 6 – Recommended Network
- Section 7 – Recommended Next Steps

2. EVIDENCE BASE

2.1. INTRODUCTION

This chapter identifies and establishes the existing geographic, demographic and cycling situation in the study area, as well as an overview of the existing policy framework. This evidence base incorporates engagement with stakeholders to take account of local knowledge and points of view. The culmination of this work is an evidence base that supports and further informs development of the Harrogate Cycling Infrastructure Plan. The evidence is a mixture of general trends within the study area and data that can be used to define particular network connections and priorities.

The structure of this section is as follows:

- Informing the evidence base
- Policy review
- Local geography
- Demographics
- Travel patterns
- Cycling
- Wider transport
- Future situation

2.2. INFORMING THE EVIDENCE BASE

To produce an informed evidence base the project team undertook a range of data collection and stakeholder consultation exercises.

SITE VISITS

Site visits were undertaken to appreciate the study area at ground level. The site visits were undertaken on foot and cycle to understand travelling around the study area as vulnerable road users.

STAKEHOLDER WORKSHOP

An internal stakeholder workshop took place with officers of North Yorkshire County Council and Harrogate Borough Council to gain their input on the challenges and opportunities related to cycling in the study area. The summary of this workshop is provided in a separate note.

MEETINGS

As well as the stakeholder workshop, the project team have met with key internal stakeholders from Harrogate Borough Council separately to gain a detailed insight to the work the Borough has done related to cycle network planning. Meeting with HBC (as planning authority) also provided an opportunity to understand proposed and committed developments in the study area that may impact and influence the final network in particular large residential and employment sites.

CYCLE FORUM

As part of the early engagement, the project team attended a meeting of the Harrogate Cycle Forum in order to gain input on issues and opportunities from existing cycle users. The meeting also allowed the Cycle Forum to understand the wider aims of the project.

2.3. POLICY REVIEW

INTRODUCTION

The current cycling and sustainable transport policy situation across Harrogate and the wider region has been reviewed to ensure proposals align with local, regional, and national policy. The following list provides a summary of the policy and strategy documents reviewed.

- National Planning Policy Framework (NPPF)
- White Paper: Creating Growth, Cutting Carbon (2011)
- DfT Cycling and Walking Investment Strategy
- DfT Local Cycling and Walking Infrastructure Plan Guidance
- NYCC Local Transport Plan 4 (LTP4) 2016-2045
- York, North Yorkshire & East Riding LEP Strategic Economic Plan
- LSTF Access Fund Bid 2016
- Harrogate and Knaresborough Service Centre Strategy
- Harrogate District Local Plan (current)
- Harrogate District Local Plan (emerging)
- Harrogate District sites & Policies DPD - Cycling Implementation Plan 2013
- Harrogate Town Centre Strategy and Masterplan

NATIONAL POLICY

National Planning Policy Framework (NPPF)

The Government's National Planning Policy Framework (NPPF) was published on 27th March 2012 and replaces all previous planning policy in England with immediate effect. The framework states that local planning authorities should support a pattern of development which, where reasonable to do so, facilitates the use of sustainable modes of transport.

The NPPF sets out a clear approach to promoting sustainable transport through the planning system. One of the 12 Core Planning Principles set out in paragraph 17 states that planning should:

“actively manage patterns of growth to make the fullest possible use of public transport, walking and cycling, and focus significant development in locations which are or can be made sustainable locations”.

Chapter 4 of the NPPF addresses the promotion of sustainable transport, and states in paragraph 34 that local planning authorities should ensure, through both Local Plans and planning decisions, that developments that generate significant movement are located where the need to travel will be minimised and the use of sustainable transport modes can be maximised

Paragraph 35 further states that Local Plans, prepared in consultation with local communities, should protect and exploit opportunities for the use of sustainable transport modes for the movement of goods or people. Developments should be located and designed where practical to:

- give priority to pedestrian and cycle movements, and have access to high quality public transport facilities;
- create safe and secure layouts which minimise conflicts between traffic and cycle users or pedestrians; and

- site key facilities such as primary schools and local shops within walking distance of most properties, particularly within large-scale developments

White Paper: Creating Growth, Cutting Carbon (2011)

The White Paper was published in January 2011 alongside the launch of the Local Sustainable Transport Fund (LSTF), and presents an ambitious vision for sustainable and active travel:

“Our vision is for a transport system that is an engine for economic growth, but one that is also greener and safer and improves quality of life in our communities.”

The White Paper recognises the potential for a significant proportion of shorter local journeys made by car to instead be undertaken via sustainable and active modes: primarily walking, cycling, and public bus. In order to facilitate this behaviour change, the White Paper sets out the role of Localism and how Local Authorities are best placed to instigate change.

DfT Cycling and Walking Investment Strategy

The Government published its first Cycling and Walking Investment Strategy (CWIS) in 2017.

The strategy sets out the Government’s ambition to make walking and cycling the natural choices for shorter journeys or as part of a longer journey, and includes targets for increasing the number of people cycling whilst also reducing the number of cycle user casualties. The CWIS states that the benefits to doing this would be substantial, potentially leading to cheaper travel and better health, increased productivity for business and increased footfall in shops, and lower congestion, better air quality, and vibrant, attractive places and communities for society as a whole.

In regards to spending, the CWIS outlines a £300 million investment in cycle training and infrastructure during the current Parliament and sets out ambitious targets for the period up to 2025, including a doubling of cycling trip stages each year (from 0.8 billion in 2013 to 1.6 billion by 2025), whilst also reversing the current year-over-year decline in walking trip stages. The CWIS also identifies a need to decrease the number of cycle user fatalities and serious injuries each year.

Local Cycling and Walking Infrastructure Plans Guidance (2017)

The Local Cycling and Walking Infrastructure Plans (LCWIP) Guidance was published alongside the DfT CWIS. Local Cycling and Walking Infrastructure Plans are set out in the CWIS as a new strategic approach to identifying cycling and walking improvements required at a local level.

The LCWIP guidance sets out a recommended approach to planning networks of walking and cycling routes that connect places that people need to get to, whether for work, education, shopping, or for other reasons. The guidance brings together national and international guidance on best practice, and explains how a range of tools, such as the Propensity to Cycle Tool (PCT), can be used to help develop robust plans and schemes.

The Harrogate Cycling Infrastructure Plan will broadly follow the guidance set out in the LCWIP guidance.

REGIONAL POLICY

North Yorkshire Local Transport Plan (LTP4) 2016 – 2045

NYCC LTP4 is a four tier document which covers the local transport strategy, objectives, transport improvements by modes/theme, and policies adopted by the County Council.

In 2012, legislation governing Local Transport Plans changed and as a result councils / local government no longer need to be fixed to a five year timespan. NYCC subsequently produced a 30 year plan in accordance with this change, extending until around 2045.

NYCC, through consultation with stakeholders, has identified 5 key objectives regarding transport in the county:

- Economic Growth – Contributing to economic growth by delivering reliable and efficient transport networks;
- Road Safety- Improving road and transport safety;
- Access to Services- Improving equality of opportunity by facilitating access to services;
- Environment and Climate Change- Managing the adverse impact of transport on the environment; and
- Healthier Travel- Promoting healthier travel opportunities.

Harrogate and Knaresborough are identified as having current and increasing congestion problems, leading to unpredictable journey times and delays resulting in economic losses, roads operating at and above capacity, and an increase in danger to vulnerable road users (e.g. cycle users), which can in turn discourage healthier travel options. Congestion can also exacerbate rural isolation issues with detrimental impacts on public transport.

The LTP4 states that the County Council will promote sustainable travel and encourage staff to travel to work by walking, cycling, bus, rail and car sharing. It also highlights that, where possible, NYCC will provide additional infrastructure to support sustainable travel, with improvements provided through transport grants such as the LSTF fund. The County Council will also seek to ensure that provision of suitable facilities to encourage healthier travel choices is made within any new development.

The LTP identifies that over 40% of the population of North Yorkshire live in communities with a population of over 10,000 people, while almost 25% of the population live in the two largest urban areas, these being Scarborough and Harrogate / Knaresborough. As a result, many trips in these areas are relatively short, making walking and cycling a viable form of transport for these trips.

While the LTP recognises a recent growth in cycling for leisure purposes, the document sets out the council's commitment to providing for and promoting walking and cycling as a mode of travel for 'utility' purposes.

However, the LTP also acknowledges the lack of funding available for significant additional infrastructure. This commitment to walking and cycling therefore primarily revolves around the continued maintenance of the highway network, which is considered "eminently suitable for most cycle users". Despite this, the LTP states that NYCC will continue to seek additional funding where available, and proactively plan and develop cycling infrastructure where there is a realistic chance of funding being available to deliver the improvements.

York, North Yorkshire & East Riding LEP Strategic Economic Plan

The York, North Yorkshire & East Riding Local Enterprise Partnership (LEP) Strategic Economic Plan (SEP) was released in 2014, and is a single strategy for the area that serves three identified purposes:

- It sets out the key economic issues, opportunities and priorities for the area;
- It is the EU Strategic and Investment Funds Strategy required for EU funding purposes (supported by the EU Strategic Investment Fund Implementation Plan); and
- It is the Strategic Economic Plan that Central Government require for Local Growth Deal funding purposes (supported by a more detailed Local Growth Deal Implementation Plan)

Priority 5: *A Well-connected Economy* addresses transport in the area, stating an overarching goal to provide businesses with strong connections to their customers and markets. In order to achieve this aim, the SEP presents three objectives:

- Fast, reliable journeys between key centres;
- Transport that underpins both growth and low-carbon goals; and
- Access to UK and international markets

The SEP identifies that the key growth towns of Harrogate and York suffer from significant congestion, hindering their growth ambitions, and that major investment in sustainable transport solutions (as well as long-term infrastructure) is critical to delivering the growth potential for these key centres.

Access Fund Bid - Open North Yorkshire (2016)

Open North Yorkshire was a bid for funding support to deliver a £1.089m package of schemes to promote sustainable travel initiatives in three of North Yorkshire's key growth centres: Harrogate, Scarborough and Skipton. The bid aims to achieve sustainable modal shift towards sustainable travel (including cycling and walking), whilst supporting economic growth.

The objectives set within the document aim to reduce congestion by: doubling cycle and walking trips for adults and school children; facilitating access to bicycles and improving confidence of new cycle users through innovative training and route information; reducing the number of cycle user casualties by implementing a safe systems approach; and targeted travel and journey planning linked to economic growth (employment and housing). Up to 2020, the following schemes / objectives have been identified:

- Travel behaviour & training – Cycle safety, training and travel planning in schools and for employees at key business sites;
- Sustainable travel promotion/ marketing – Journey planning via website/app;
- Sustainable access to public transport & Wheels 2 Work – Promoting cycling to/from bus/rail stations and moped hire for access to employment/education; and
- Cycle Infrastructure – Bid ready cycle scheme development

These objectives are considered to support the County Council's long term vision for increasing sustainable transport across North Yorkshire.

LOCAL POLICY

Harrogate and Knaresborough Service Centre Transport Strategy (SCTS)

The SCTS for Harrogate and Knaresborough supersedes the Harrogate and Knaresborough Integrated Transport Strategy (HAKITS).

The strategy draws on 8 schemes with an expected total of approximately £1.1m. The implementation of this programme is on-going and consists of the following schemes:

- Pennypot Puffin Crossing;
- Pegasus Crossing, South of Ripley;
- The Stray Cycle Route (complete);
- Signalised Junctions in Harrogate – Health Checks;
- West Park/Albert Street – Pedestrian Crossing (complete);
- Cornwall Road – Pedestrian Improvement Scheme (complete);
- King Georges Field Knaresborough, Cycle Route; and
- York Road – Pedestrian Crossing (complete).

Harrogate District Local Plan (current)

The current Harrogate Local Plan consists of the Local Plan 2001 and selective alteration 2004 and its policies map, as well as the Core Strategy (2009). The plan was adopted in February 2001, with “saved” selective alterations in 2004 and 2007.

The Core Strategy presents three key objectives:

- To retain and improve access for all, particularly those disadvantaged groups, to key services of health, education, employment, food shopping, community facilities and recreation;
- To integrate development and transport provision and locate development where it is accessible to key services and facilities and a range of transport modes; and
- To improve the provision of bus and rail services and facilities, pedestrian and cycle networks, community transport schemes, park and ride and traffic management measures to reduce traffic congestion, with priority given to Harrogate and Knaresborough.

The Core Strategy highlights the need to reduce travel and improve accessibility to workplaces, shops and services. In order to achieve this, the document states that the planning authority will ensure that future developments are well related to existing or extended key bus / rail networks, and that all new development that is likely to have significant transport implications will complete a Transport Assessment.

The Core Strategy also states in Policy TRA2: *Transport and Infrastructure* that existing and new routes for transport infrastructure will be safeguarded from development; the policy details that sites and routes with the potential to contribute towards the provision of an efficient and sustainable transport network will be protected where there is a reasonable prospect them accommodating new transport infrastructure before 2021. This policy is considered to apply to cycle / pedestrian routes identified in a Highway Authority plan or strategy, in addition to whether they are a strategic road link, adjacent to the key bus / rail network, included within the LTP five year programme or along a former rail way line.

Harrogate District Local Plan (emerging)

The Council is working towards a new Local Plan for the Harrogate district, which is anticipated to be adopted by spring 2019. A draft of the Local Plan was consulted on during November / December 2016. The draft included:

- policies to guide development;
- sites for new homes and jobs;
- options for a new settlement for the district;
- allocations for Local Green Space; and
- development limits for settlement.

Chapter 6 of the emerging Local Plan specifically addresses Transport and Infrastructure. The plan identifies that the proportion of the district's residents who cycle to work/school is substantially lower than the proportion nationally.

Policy TI1: *Sustainable Transport* states that the Council will work in partnership with other authorities, transport providers and local groups to promote a sustainable and improved transport system which is safe, reliable, and convenient and will promote the creation of walking and cycling routes (in addition to other measures).

The policy also affirms the Council's intent to produce its own Strategic Transport Priorities Study to inform the Council's response on transport matters.

Policy TI2: *Protection of Transport Sites and Routes* states that:

"New sites and routes which have the potential to contribute towards the provision of a sustainable and improved transport system will be safeguarded where there is a reasonable prospect of them accommodating new transport infrastructure before 2035".

This requirement will apply when a scheme meets a various criteria:

- Included within the investment strategies or plans produced by Highways England, North Yorkshire County Council, or by another body or organisation contributing towards the creation of a sustainable and improved transport system for the district, and for which there is an agreed preferred route or site;
- Along the route of a former railway line; in particular the sections of the Harrogate-Ripon-Northallerton line and the Harrogate to Wetherby line that lie within Harrogate district; and / or
- A cycle or pedestrian route identified by the local highway authority or the district council and included within an approved plan or strategy.

Harrogate District Sites & Policies DPD Cycling Implementation Plan 2013

The Cycling Implementation Plan was first adopted by Harrogate Borough Council in July 2000, identifying a proposed network of radial and orbital cycle routes in the urban areas of Harrogate and Knaresborough. This network became the basis for the allocation of funding through the NYCC Local Transport Plan from 2001 to 2006.

The network was subsequently updated in 2009 and 2011, and is considered to play a key role in the continuing improvement of measures to encourage sustainable access to jobs, shops and services. The network was also designed to link the draft site allocations at the time into the wider network.

The plan highlights measures and initiatives included within the Harrogate and Knaresborough Local Sustainable Transport Package (as described in the LSTF bid document) and the Infrastructure Delivery Plan (IDP) to support the continued economic development of Harrogate through a reduction in traffic congestion and the promotion and implementation of sustainable travel options.

Links to the National Cycle Network (NCN) are a key focus within the document. One of the objectives endorsed in the plan is to promote and progress the delivery of off road cycle routes to Spofforth and Ripley, providing connections from Harrogate and Knaresborough to the National Cycle Network and onward links to the remainder of the District; The DPD considers that significant progress has been made towards this objective.

The DPD also includes additional measures for awareness raising and the promotion of cycling. These include a new cycle route map, further work on signage, and further work to build on the 2014 Tour de France cycling legacy.

Harrogate Town Centre Strategy and Masterplan (May 2016)

The Harrogate Town Centre Strategy and Master Plan was adopted in May 2016 as a Supplementary Planning Document (SPD), and sets out Harrogate Borough Council's strategy for the development of the town centre up to 2025. The document presents an ambitious vision, stating:

“By 2025 Harrogate town centre will be a leading UK destination for culture, shopping, leisure and business tourism. The unique qualities of the town centre will be enhanced to provide a distinctive visitor offer that differentiates Harrogate from its regional and national competitors. This distinctiveness will be characterised by an exceptional town centre environment, the key components of which will be:

- public realm of an outstanding quality;
- a special blend of retail, leisure and cultural uses;
- unique facilities for conferences and events; and
- integrated and sustainable transport infrastructure”.

It is therefore considered important that the Harrogate Cycling Strategy aligns with this vision.

The Masterplan also addresses infrastructure and public realm as part of the overall strategy, which helps to inform the contents of this chapter.

Interconnectivity can be vital in maximising use of sustainable and active modes, and ensuring key transport hubs are easy to access is a key element of this. The Masterplan discusses the main transport interchanges in Harrogate, stating:

“The railway and bus stations are well located to serve the town centre although pedestrian links to and from these facilities are unattractive and poorly signed. The town centre is served by frequent bus services with the A61 serving as the main bus corridor, and regular rail services to Leeds and York are available throughout the week. On-road cycling routes pass through the town centre and there has been recent investment in cycle parking facilities”.

The Masterplan also identifies certain constraints and barriers to active travel:

“There is a considerable amount of on-street parking throughout the town centre with a maximum stay of 3 hours. This can act as a barrier to walking and cycling. Occupancy data for town centre car

parks shows that they are generally well used and comfortably meet demand (except for 15 to 20 days a year). However, the three largest multi-storey car parks are often significantly below capacity and could accommodate additional demand associated with any reduction in on-street parking”.

While this SPD only briefly discusses cycling, the points raised are of key importance; as a tourist attractor, the town economy relies on parking for town centre uses. However, as identified the largest MSCPs are significantly below capacity, indicating there may be an overprovision of on-street parking.

Furthermore, the lack of signage could be quickly addressed through a cohesive wayfinding strategy.

The SPD also identifies a number of opportunities that have the potential to align with the Harrogate Cycling Infrastructure Plan:

- “the redevelopment of the transport hub on Station Parade to greatly enhance this gateway to the town centre and provide improved transport facilities; and
- significant improvements to the public realm to reduce the dominance of traffic and parking, and improve the town centre environment”.

SUMMARY

From the review of policy above it is evident that development of a HCIP can contribute and support a range of policy objectives in many ways.

At a national level, the HCIP will support the Government objectives of supporting sustainable development, by contributing to economic growth in a way sustainable manner. The Government recently released the Cycling and Walking Investment Strategy (CWIS) and Local Cycling and Walking Infrastructure Plan (LCWIP) guidance. The HCIP represents part of North Yorkshire’s contribution to support the CWIS and the process undertaken is broadly the same as in the LCWIP guidance.

Regionally, the HCIP support and contributes to all five objectives of the North Yorkshire Local Transport Plan due to the wide-ranging way that cycling, as a mode of transport, can deliver benefits to individuals and wider society. At a local level, the HCIP can support the emerging Local Plan for Harrogate District by identifying routes for potential safe-guarding as sites come forward for development. The HCIP will also reference previously identified schemes and connections, such as those in the Cycling Implementation Plan, to ensure local connections are achieved or improved where possible. The HCIP will also contribute towards the vision for Harrogate and the wider area in terms of place where people want to live, work and visit through quality public realm and high levels of sustainable connectivity.

2.4. LOCAL GEOGRAPHY

OVERVIEW

North Yorkshire is the largest county in England, covering an area of around 865,400 hectares, and has a resident population of just over 600,000¹ (mid-2015 estimate). Harrogate district, although only the fourth largest in North Yorkshire in terms of area, is home to the largest proportion of the county's population with approximately 157,000 residents.

The resident population of the district grew by 4% between the 2001 and 2011 Census¹ and, based on the 2014 population projections by the Office of National Statistics (ONS), by 2027 the district population is expected to have exceeded 160,000. The Harrogate ward itself, as one of the principal urban areas in the county, has a resident population of just over 75,000, almost half of the district population as a whole.

Approximately 60% of the resident population of Harrogate district is of working age; of these, 56% are employed in professional and managerial roles, while less than 20% work in the leisure and service sectors. Despite this, the economic make-up of the district is significantly more orientated toward the leisure and service industries. The data suggests significant volumes of cross-boundary commuting for higher value employment:

The average age of residents in the district is 42 and the population is ageing rapidly. In 2014, 22% (34,500) of the district's residents were over 65 years of age, significantly higher than the national average of 17%, and an additional 17,800 over 65s are forecast by 2035; this equates to a decrease in working-age residents of 9%, or 8,000 people. There is also a significant trend of outward migration of those aged between 20 and 30, driven by the availability of employment opportunities in desirable sectors, a lack of unaffordable housing, constrained local transport networks and an absence of any higher education offer after age 18.

The high rate of inward migration, coupled with the existing age structure and outward migration of the younger demographic, is predicted to constrain the labour market, impacting on the potential for sustainable economic development.

The district of Harrogate covers a large and geographically diverse area; the environment is of exceptionally high quality—something that is reflected in the number and geographical scale of areas that are formally subject to environmental designations designed to protect the natural and built environment.

The study area is located at a point of transition between two National Character Areas (NCAs). The western extents of the study area, comprising Harrogate, falls within NCA 22 *Pennine Dales Fringe*, while the eastern extent comprising Knaresborough falls within NCA 30 *Southern Magnesian Limestone*.

¹ <http://www.northyorks.gov.uk/article/23704/North-Yorkshire-population-information>

Land use in the surrounding areas is predominantly agricultural; other notable uses in the area include tourism and a complex network of Public Rights of Way (PRoWs), trails and cycle paths which run in various direction across both towns, linking communities and settlements.

The emerging Harrogate Local Plan sets out a number of key facts underpinning the Growth Strategy, providing context to the Local Geography and Demographics study. In particular, the following facts are noted:

- Household projections show household growth across the district of 11% between 2004–2035, which is a lower level of growth than the region (15%) and England (20%)
- Three main urban areas of Harrogate, Knaresborough and Ripon support the largest concentrations of the district's population. Since the Harrogate District Local Plan in 2001 these three settlements, together with the market towns of Boroughbridge, Masham and Pateley Bridge have accommodated the majority of new growth.
- The district has a large rural area containing villages and hamlets ranging from larger villages with local services and facilities down to small clusters of houses; need to ensure these rural settlements can continue to support local village services.
- High levels of employment and the highest business start-up rates within the Leeds City Region with the district's residents some of the most qualified in the north of England.
- The local economy has a number of prominent high value sectors (including wholesale, professional services and media) alongside a thriving visitor economy.
- Despite high resident skill levels and average earnings, workplace wages in the district are considerably lower than the regional and national average, with a disproportionate skew in local employment towards low value sectors.
- To the west of the district lies the Nidderdale Area of Outstanding Natural Beauty (AONB) covering some 233 sq miles; more generally the district has a high quality natural and built environment.
- Around 11% of the district is designated as Green Belt.
- A higher proportion of residents describe their general health as very good or good compared to national and regional averages. (2) Although the population is ageing, the life expectancy in the district is higher than nationally

The Study Area defined for the Cycling Infrastructure Plan significantly reduces the area of the district for consideration, concentrating on two of the largest settlements, Harrogate and Knaresborough. The Study Area also covers a predominantly urbanised area, and therefore covers the main housing and employment land uses in the district, excluding the rural and leisure focussed elements outside the towns.

The purpose of this section of the report is to identify in what areas the Study area is comparable to and differs from the characteristics of the entire district, with further comparisons made with the wider region of South Yorkshire and the Humber, and with national statistics. Nevertheless, this overview sets out a number of challenges and opportunities for consideration.

Challenges

- High levels of employment within the Leeds City Region could result in longer-distance commuting, limiting the number of journeys that could potentially be made by cycling, particularly where jobs are located outside of Harrogate;
- The aging population could restrict the number of people able to access cycle,

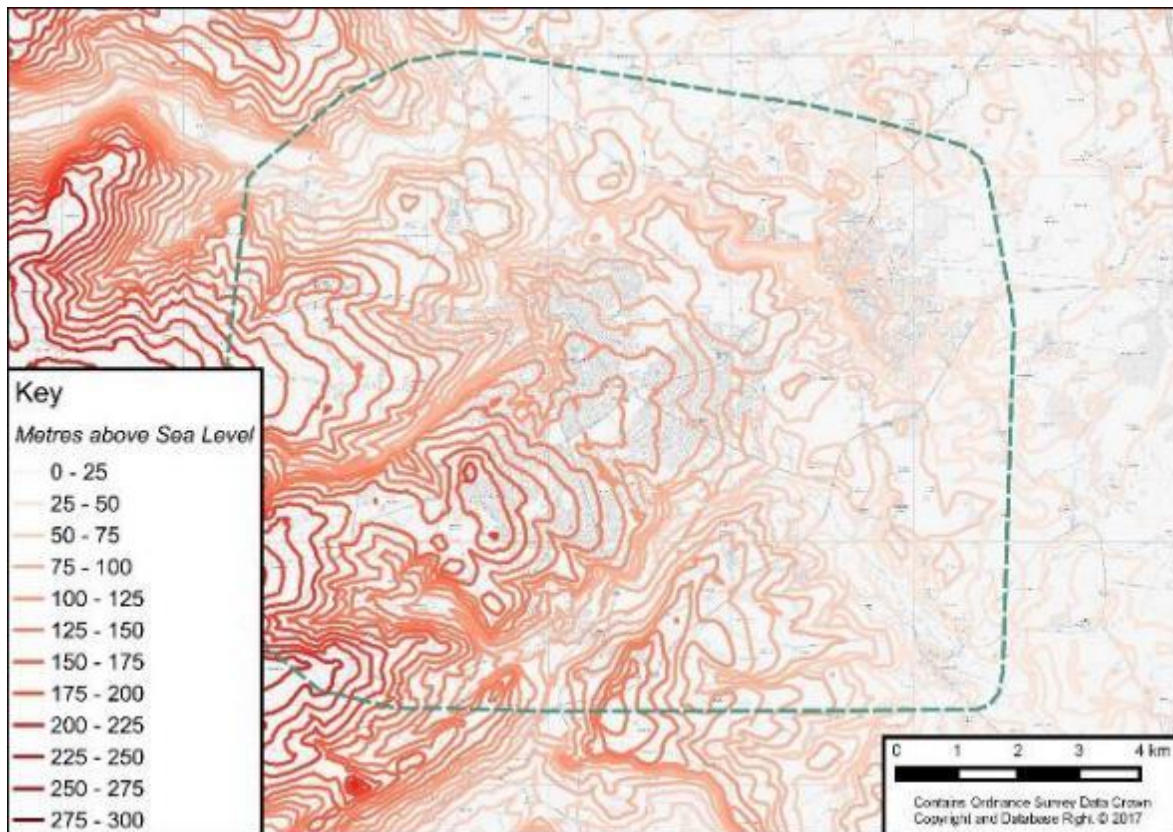
Opportunities

- A concentration of growth in Harrogate and Knaresborough presents opportunity to associate improvements with new development, creating a cohesive network connecting planned growth and providing funding opportunities;
- Lower-value local jobs may result in lower levels of car ownership (or multiple car ownership per household), increasing the propensity to travel by sustainable and active modes;
- A strong visitor economy presents opportunities for local trips within the Study Area to be made by bicycle, both within the town centre and connecting to leisure and tourist opportunities further afield; and
- Good levels of local health reduce this barrier to walking and cycling while

TOPOGRAPHY

Figure 2 - illustrates the topography within the study area. The topography of the Study Area Harrogate is varied with areas of higher elevation to the western extent, while the urban centre of Harrogate and Knaresborough is characterised by lower-lying areas and more gradual hills.

Figure 2 - Study Area Topography

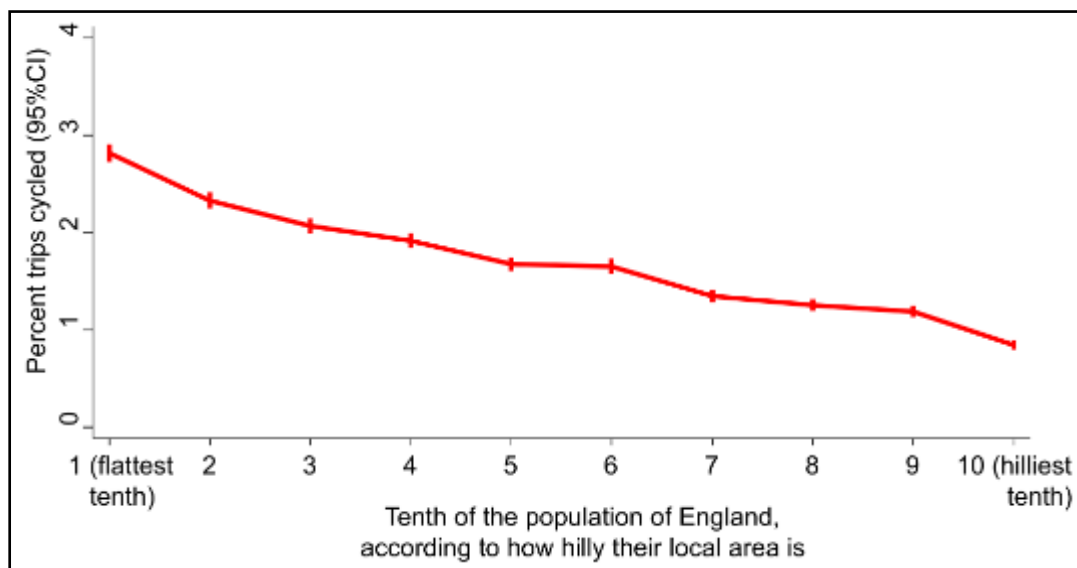


Hilliness is an important predictor of cycling levels in England, with the probability of cycling a trip falling steadily as the hilliness of the local area increases. Recent University of Leeds research showed that “hilliness was found to be, by far, the most significant determiner of the proportion that cycled to work in a district².” Furthermore, as demonstrated in Figure 3, overall, people in the tenth of the population in the flattest areas are three times more likely to cycle a trip than the tenth of people in the hilliest areas (2.8% trips cycled vs. 0.8%³). This makes the topography within the study area an important, influencing factor on the cycle network development. Certain areas within the study area may be too hilly and deter potential cycle user from using those routes.

² Estimation of the determinants of bicycle mode share for the journey to work using census data, 2007

³ Centre for Diet and Activity Research, 2016

Figure 3 - Proportion of trips cycled in England, according to hilliness of local area



Source: Centre for Diet and Activity Research

The 'hilliness' in the western and southern extents of the study area is therefore likely to have a bearing on the propensity of people to cycle to and from these areas, and must be taken into consideration when determining a potential cycle network, particularly when focused on utility cycle users.

Challenges

- The topography of the western and southern extents of the study area are likely to have an impact on the propensity of people to cycle in these areas, at

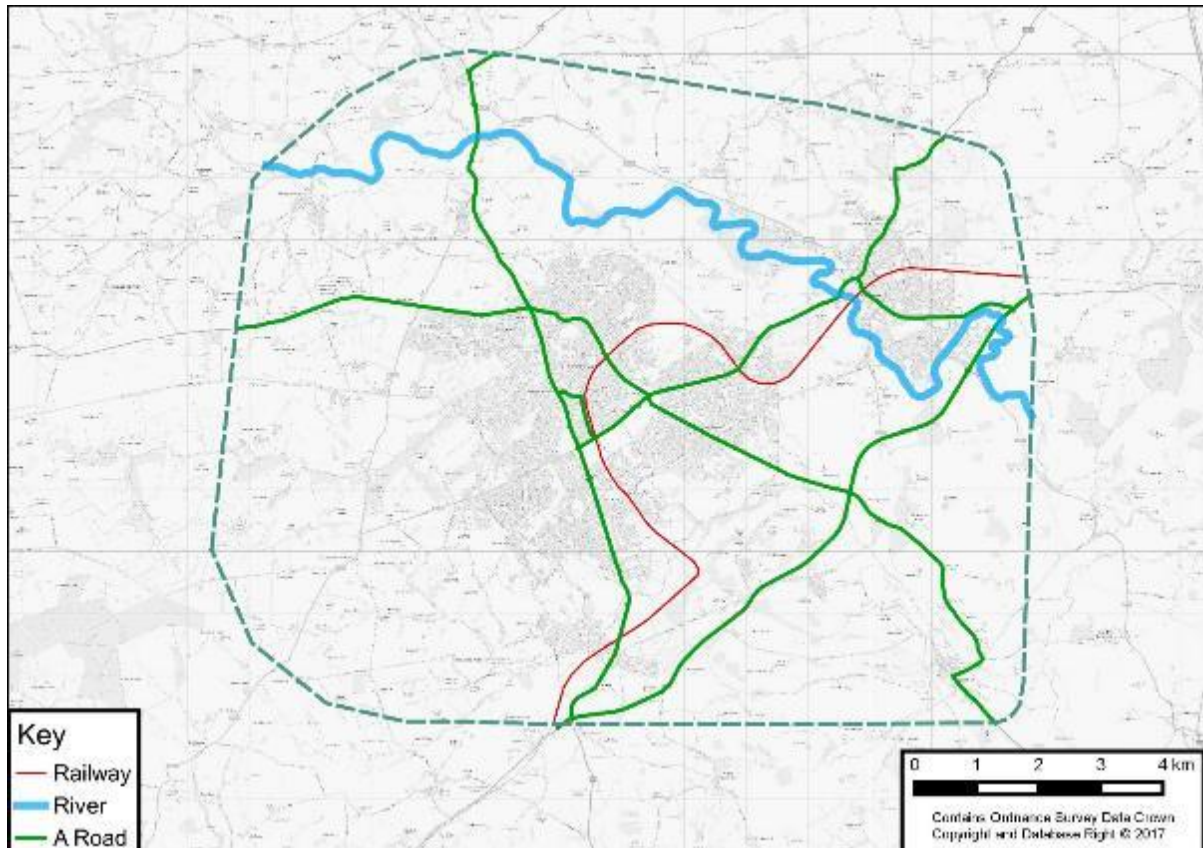
Opportunities

- The comparatively gentle topography characteristic of the urban centre of Harrogate and Knaresborough reduces the impact of topography, removing this potential barrier to cycling.
- Consideration should be given to implementing infrastructure in areas of limited 'hilliness' depending on other factors identified during this study

BARRIERS TO MOVEMENT

Within the study area there are other physical barriers which impede cycling movements. Figure 4 displays how natural features (River Nidd) and human-made features (A Roads and Railway) provide a number of barriers to movement in many directions through the study area.

Figure 4 – Barriers to movement

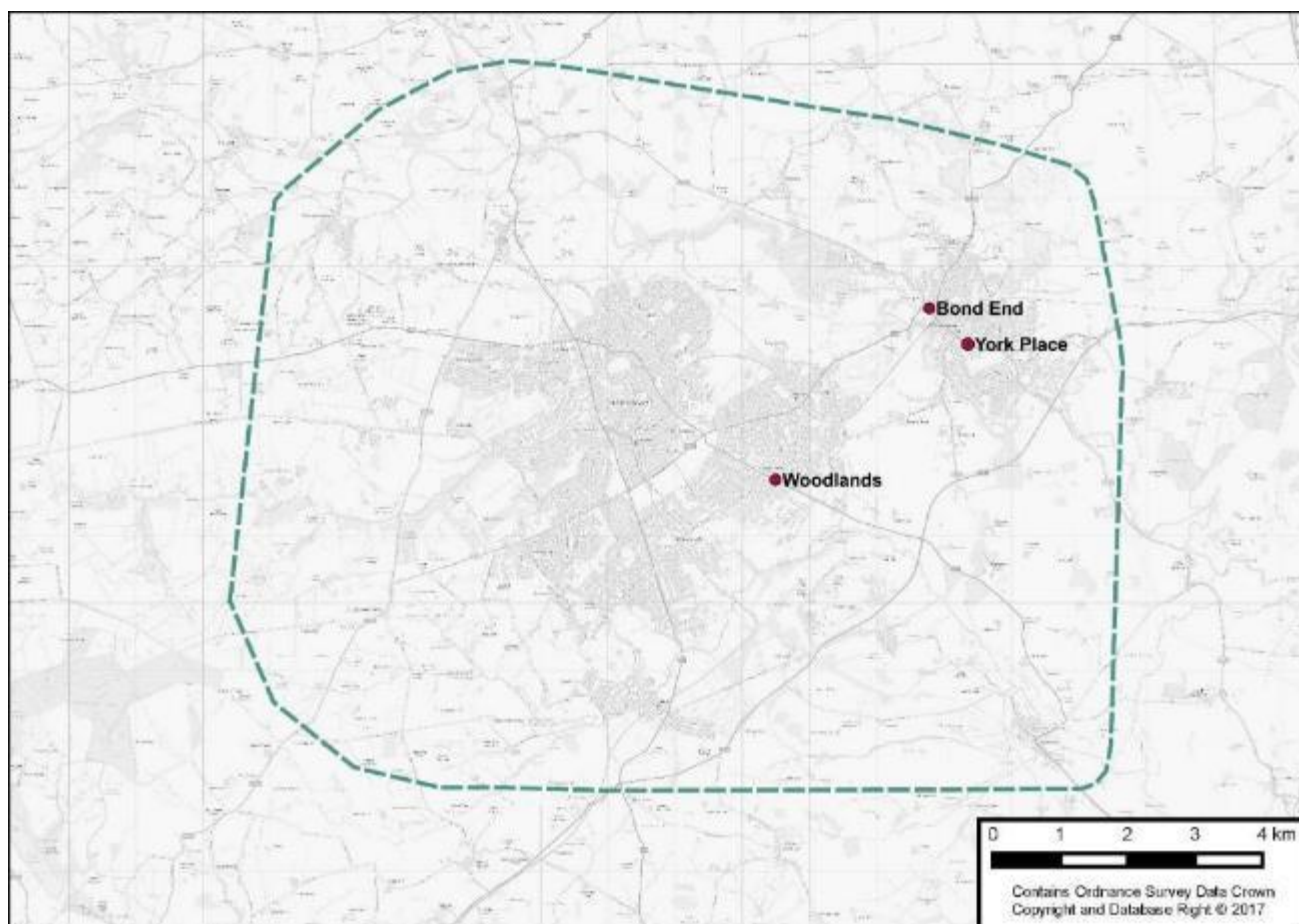


ENVIRONMENTAL CONSIDERATIONS

Air Quality Management Areas

Harrogate Borough Council (HBC) has developed an action plan to reduce carbon emissions by 40% by 2020 and 80% by 2050. One method used to help combat high emissions is by implementing air quality management area's (AQMA's). An AQMA targets specific locations where air quality may be insufficient to government targets and therefore the local authority will aim to improve the air quality at these locations. Improving cycling in an AQMA can help to achieve air quality targets by reducing motor vehicle usage, traffic flow and congestion; therefore reducing emissions.

Figure 5 - Location of AQMAs



As highlighted in Figure 5, there are currently three Air Quality Management Area's (AQMAs) within the study area. Until recently there was only one AQMA, located at Bond End in Knaresborough on the A59 but in October 2017 HBC declared two new AQMAs located at York Place (also on the A59 in Knaresborough) and at Woodlands junction in Harrogate (A661 Wetherby Road).

Each of these sites are located on key routes through the study area and have therefore been identified as carrying high traffic flows and suffering from significant levels of congestion. These locations are characterised by variable journey time reliability and average speeds. A reduction in traffic from these locations would contribute to air quality objectives through the reduction of emissions.

Environmentally sensitive sites

In the UK a greenbelt is an area of open land around an urban area where building is restricted. The green belt should be taken into account when looking to improving the potential for cycling in an area as it will limit the infrastructure that can be implemented. Hard infrastructure such as segregated routes may not be realistic proposals in a greenbelt area; however, softer alternative measures such as signed routes may be implemented.

Figure 6 - Environmental Considerations within the Study Area

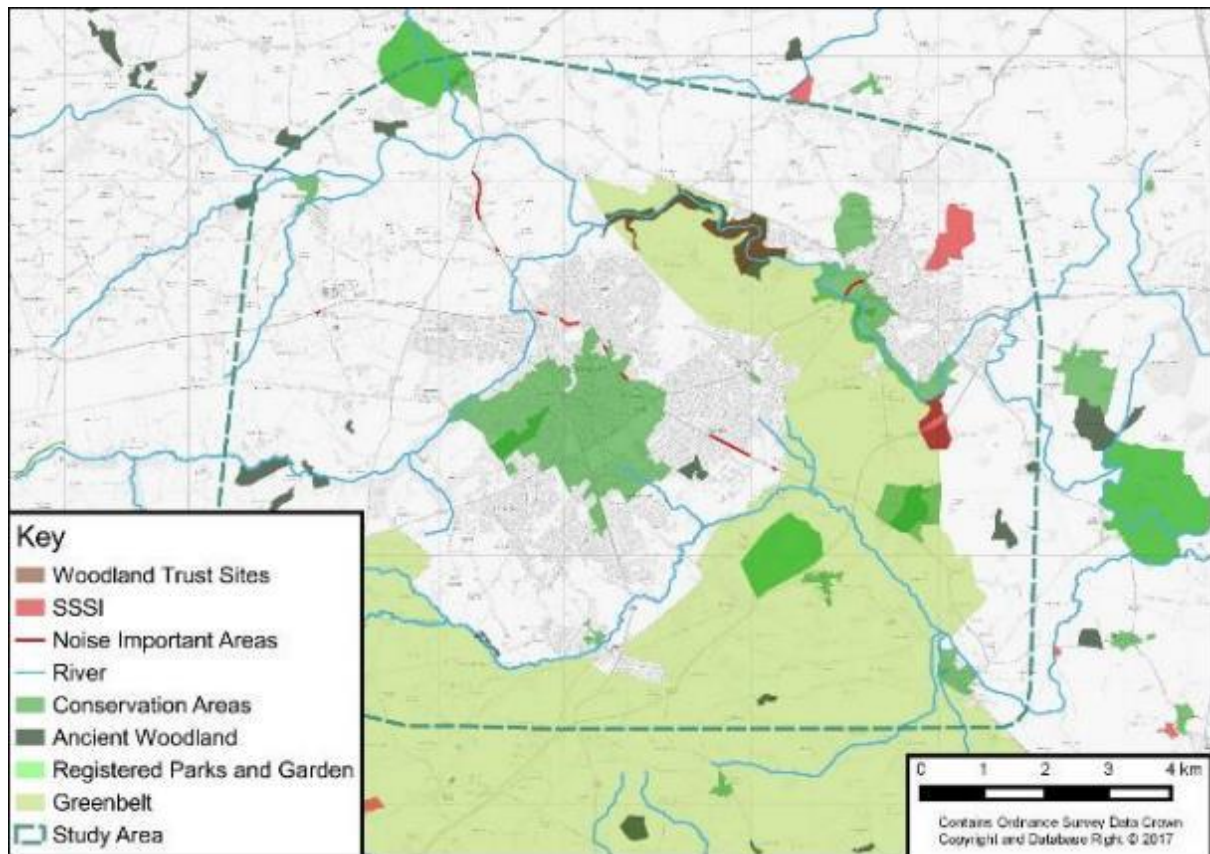


Figure 6 shows that the greenbelt covers a large proportion of our study area, particularly to the south and between the urban districts of Harrogate and Knaresborough. The figure above also highlights other environmental considerations in the area such as Conservation Areas and Noise Important areas.

The Stray

The Stray is a protected area of public space close to the main urban centre of Harrogate consisting of 200 acres of land and verges. The Stray is protected by an Act of Parliament, the Stray Act 1985, which determines how the land can be used and preserves the space.

Figure 7 illustrates the full extent of the Stray area. The land classified as the Stray is not only the open green space, but also consists of road verges heading away from the town centre. Parking is not allowed on any part of the Stray grassland or verges and cycling is not permitted on the footpaths that cross the Stray.

Key

- The Stray Boundary
- Study Area

0 0.5 1 km

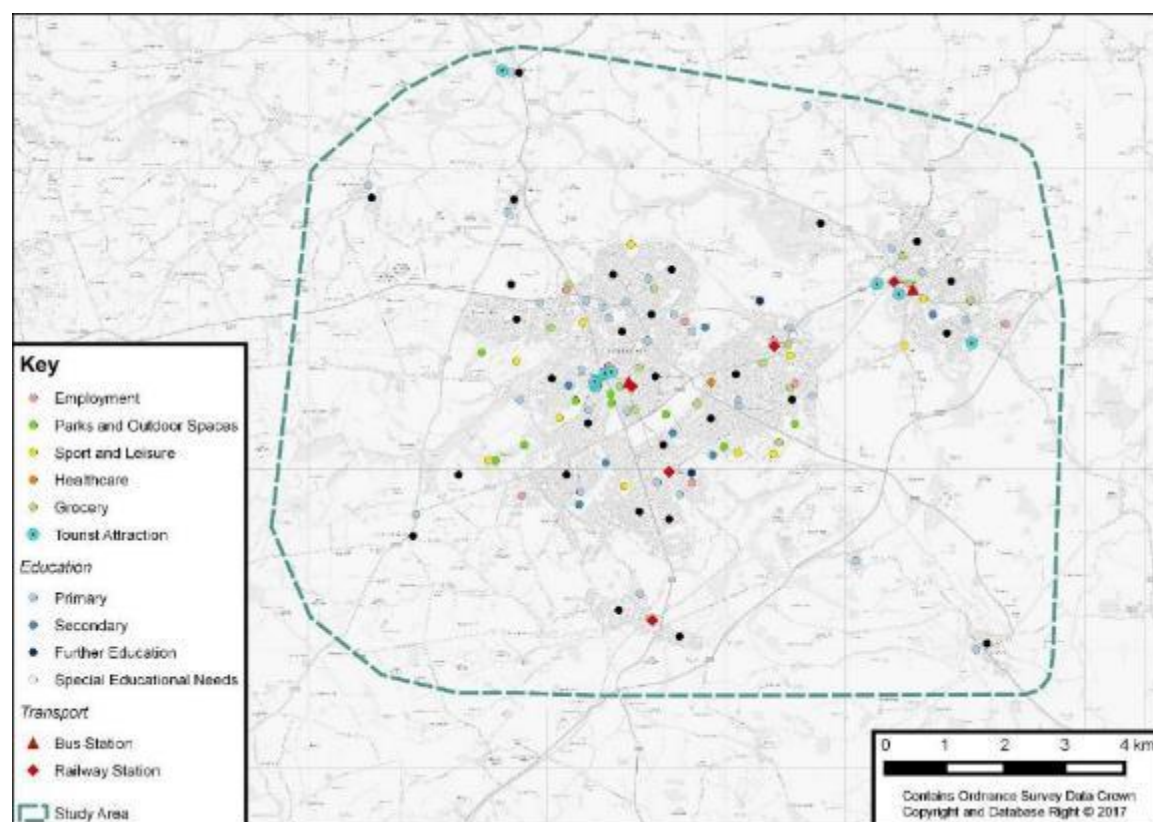
0 1 2 3 4 km

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A desktop study of key origins and destinations (ODs) was carried out in order to identify the locations within the study area boundary that are most likely to benefit from additional cycle access and connectivity.

Figure 8 illustrates that the destinations are largely within the urban areas of Harrogate and Knaresborough, particularly those associated with employment, sport and leisure, and grocery. To establish origins, proxy locations within residential areas have been used and are represented by black dots on the plan.

Figure 8 - Origin and Destination Locations



Challenges

- Given that most of the key origins and destinations lie within the urbanised areas of Harrogate and Knaresborough it is likely that any proposals for additional infrastructure will be constrained by the highway boundaries and built environment, limiting the potential for any significant interventions;
- Where there is potential for routes into the urban hinterland and rural areas surrounding Harrogate and Knaresborough, these routes are likely to have limited potential for significant interventions.

Opportunities

- The majority of the key origins and destinations lie within the urbanised areas of Harrogate and Knaresborough; there is likely to be opportunity for a single intervention to facilitate travel between a number of key areas;
- Routes to more isolated areas on the fringes of the study area may have potential to align with future development sites (and could form site specific requirements within a forthcoming Local Plan). and could present further

2.5. DEMOGRAPHICS

THE LOCAL POPULATION

In order to understand current travel behaviour and help to forecast future trends, data from the 2011 Census has been analysed to inform this report. The data shows that the population of Harrogate was 157,869 as of March 2011, comprising 80,832 female and 77,037 male residents⁴, which equates to 51% and 49% respectively of the total population. The data was also analysed in regards to the Study Area, which contained 99,297 residents at the time of the 2011 Census, approximately two-thirds of the resident Harrogate Borough population. There is also roughly the same proportion of males and females within the study area as in the wider borough, at 48% and 52% respectively.

Comparison with the corresponding figures from the 2001 Census shows that there has been a 4.3% (6,533⁵ people) increase in the borough's population over the 10 year period ending in 2011, while the population within the Study Area has risen at a slightly lower rate, with a 3.4% increase. This is a lesser increase than that of Yorkshire and the Humber and England overall, which have risen by 6.4% and 7.8%⁵ respectively over the same period.

Over the same 10 year period, the overall number of those aged 65+ in the borough has risen by 17% to 30,894⁴, while the working age population (those 16 to 64) has increased by only 2.5%, to 100,158⁴. The borough displays a clear trend of having an increasingly ageing population, as the number of children and young people (those 0 to 14) has fallen by 1.8%, to 26,817⁴.

The number of households in the Study Area between 2001 to 2011 increased by 5.7%, to 43,116. This is a smaller rise than that of England and Wales (7.9%) and of West Yorkshire (8.0%)⁶ over the same period.

⁴ Census, 2011

⁵ Census, 2001

⁶ Census, 2001 and 2011

Age Composition

Table 1 below shows the age breakdown for the Study Area and how the proportions compare to those of Yorkshire and the Humber and England. The data shows that the Study Area has a lower proportion of younger people than both the region and the country, with a significantly higher proportion of older adults in both the 45 – 64 and 65+ categories. The emerging Harrogate Local Plan recognises this ageing population, although it is also stated that the average life expectancy in the district is high, lessening the potential implications of an ageing population.

Table 1 – Age Breakdown

AGE GROUP	STUDY AREA	% OF POP.	YORKSHIRE & THE HUMBER	% OF POP.	ENGLAND	% OF POP.
0-15	17,941	18%	997,792	19%	10,022,836	19%
16-24	9,314	9%	665,550	13%	6,284,760	12%
25-44	25,662	26%	1,389,425	26%	14,595,152	28%
45-64	27,304	27%	1,356,395	26%	13,449,179	25%
65 +	19,076	19%	874,571	17%	8,660,529	16%

Source: Census, 2011

The data indicates a slower rate of growth in the population than in the wider region and the country in terms of both population and households, which is further pronounced in the Study Area than in Harrogate. Although Harrogate is identified as having an ageing population, this is less evident in the study area, with less of an increase in the over 65 category; the number of those aged 65+ has increased by 14.7%, while the number of children and young people fell by 2.1%, a greater decrease than that of the borough as a whole.

The analysis of Census data indicates that there is an older population within the study area and wider district. An older population may be characterised as having lower confidence in regards to cycling, with a need for more segregation to alleviate a perceived safety risk. The study area however shows fewer people over 65 than in the wider district, with a higher proportion of those of working age, indicating fewer potentially vulnerable users (children, young adults, and older people) and a larger proportion of those of working age, likely to be more influenced by improvements to utility routes.

Population Density

Population density is an important factor when considering an areas propensity to cycle and developing a cycle network. Population density can help to prioritise certain routes for cycling, focussing on linking more densely populated areas as part of a primary cycle network can mean that new cycle infrastructure could positively impact a greater number of people.

Figure 9 – Population density

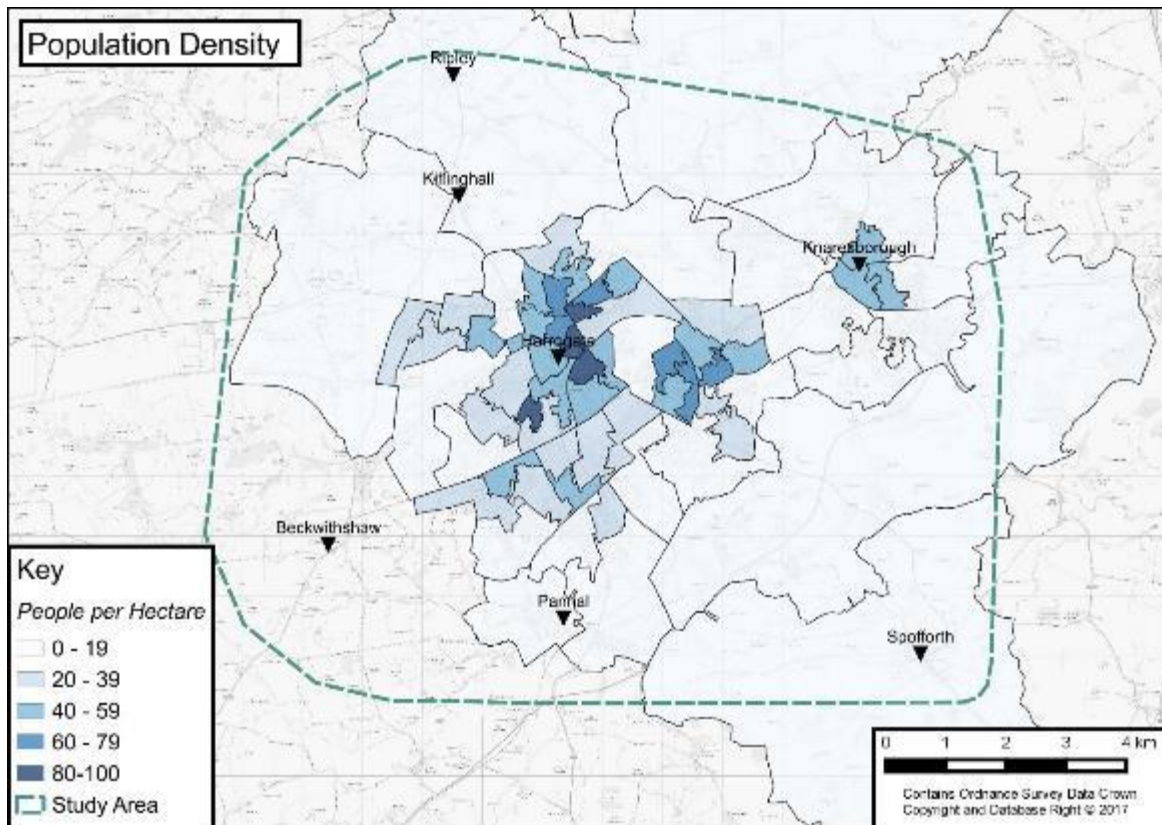


Figure 9 highlights which Census Lower Super Output Areas (LSOAs) within the study area boundary are most densely populated. In and around the centre of Harrogate is the most densely populated area with four of the LSOAs having between 80 and 100 people per hectare (pph) and other central LSOAs have between 40 and 79pph. Knaresborough is also densely populated, relative to the surrounding areas, with 60 to 79pph. The majority of the study area, is less densely populated than Harrogate centre with many of the LSOAs having as little as 0-19 people per hectare. The people per hectare reduces the farther out of Harrogate centre the LSOA is located.

As the cycle network is being produced predominantly aimed at commuters and utility cycling, the population density is integral to the network development. When considering the economic costs and benefits, infrastructure that affects the most people for minimum cost is preferable. Analysing population density allows connections to be made between the most densely populated, urban, areas within the study area.

Challenges

- The ageing population characterised by the study area may have a limiting effect on those able to access cycling as a form of travel;
- The urban fringes and rural sections of the study area are characterised by a lower population density, further limiting the percentage of the population likely to benefit from interventions in these areas, particularly those aimed at

Opportunities

- Conversely to the above, the aging population may present opportunities to align the Harrogate Cycling Infrastructure Plan with health and leisure benefits;
- The higher proportion of those of working age within the study area creates opportunities to align the strategy towards commuting and utility cycle users
- The higher population density within the urban centres of Harrogate and Knaresborough indicates that any potential interventions within the urban

DEPRIVATION

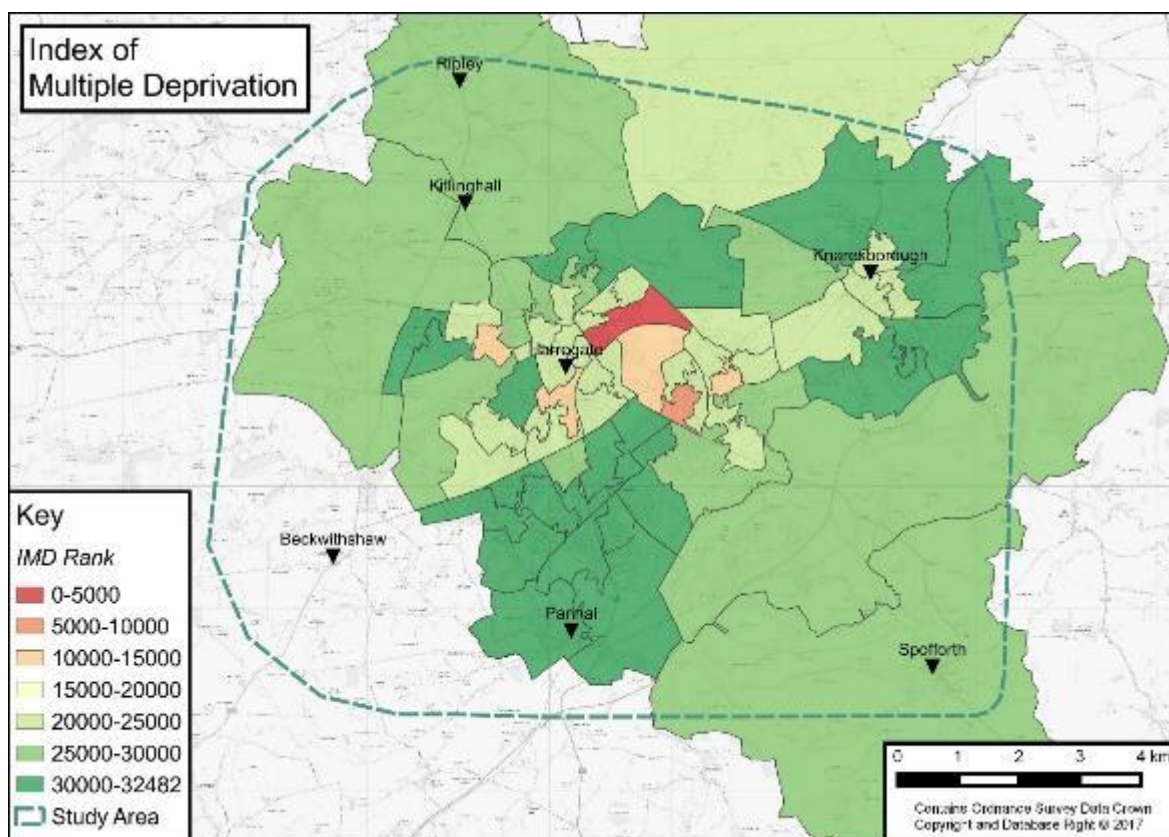
Another important set of demographic indicators when promoting cycling are those related to deprivation. This section will compare the 66 LSOAs within the study area to the 32,482 LSOAs nationwide. The English Indices of Multiple Deprivation (IMD) are usually released on a three-yearly basis by the Department for Communities and Local Government. However there were five years between the most recent release in 2015 and the previous release in 2010. Their purpose is to assess the concentration and degree of deprivation and poverty within all local authorities in England. The index ranks, at a highly localised scale, the degree to which the different locations could be considered to be in relative deprivation.

Indices of Multiple Deprivation

Indices of Multiple Deprivation (IMD) is a composite of many types of deprivation, including Income, Employment, Education Skills and Training, Health and Disability, Crime, Barriers to Housing and Services, and Living Environment.

Figure 10, in terms of those IMD indicators, 6 of the (LSOAs), within the Harrogate study area boundary, rank among the third most deprived of areas in the country, whilst 21 LSOAs rank among the least deprived areas in the UK.

Figure 10 - Indices of Multiple Deprivation (IMD)

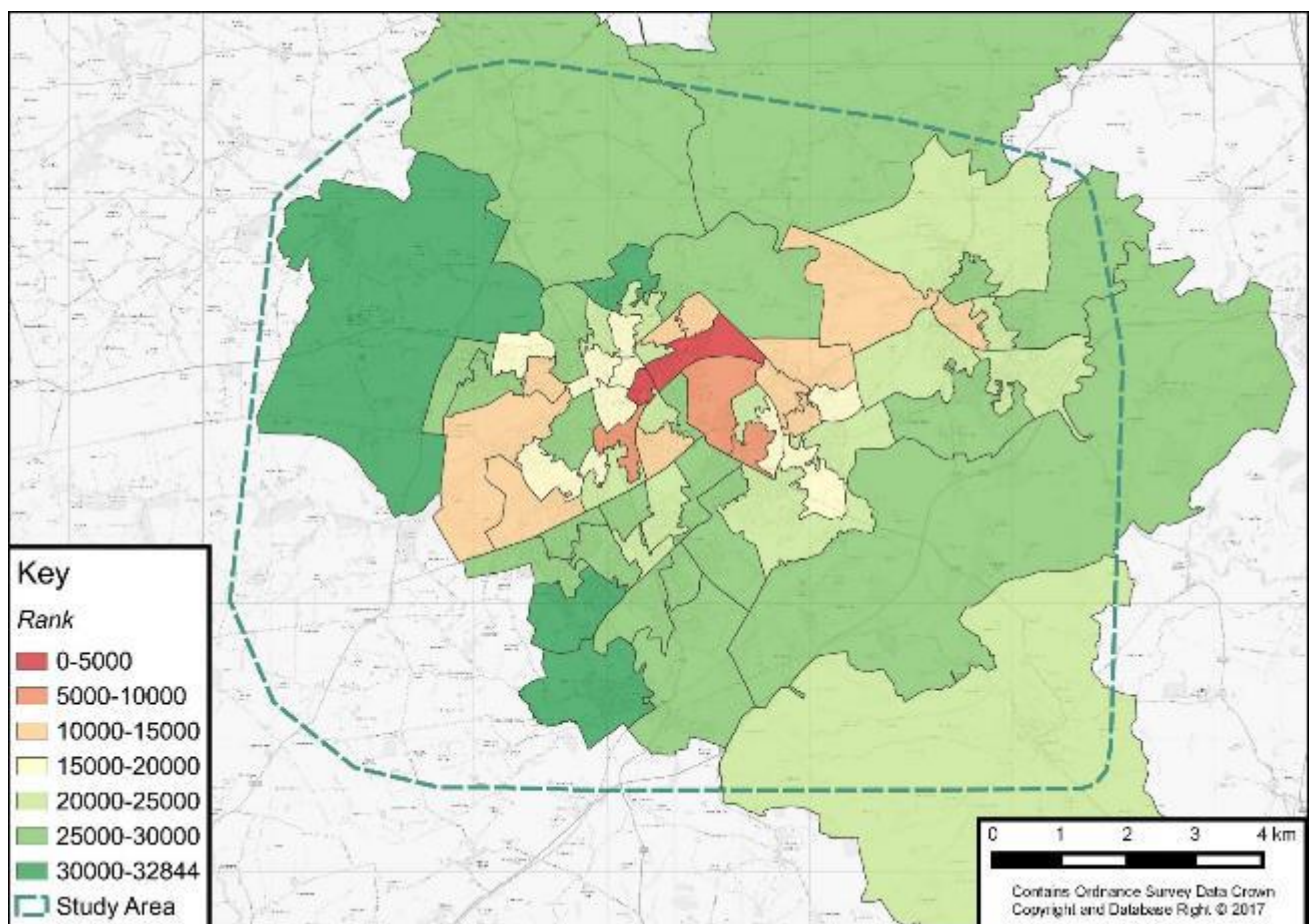


The IMD is designed to pull together different facets of deprivation, however, when carrying out small area analysis, it is often worth looking closely at what the domains, and even their subdomains, tell you about different aspects of deprivation.

Health Deprivation and Disability

An important indicator when promoting active transport modes is that related to the level of Health Deprivation and Disability in the area. Health Deprivation and Disability, with regards to the IMD, analyses those living in poor physical and mental health. Figure 11 shows that isolating this IMD factor from the other indicators allows us to see that 3% of the study areas LSOAs (2 of 66) rank among the 10% most deprived areas in the country, whilst 7.5% (5 of 66) rank among the 10% least deprived areas.

Figure 11 - Health Deprivation



Barriers to Housing and Services

Barriers to Housing and Services looks at the affordability and availability of housing, and closeness of such housing to key services. The indicators fall in to two sub-domains: 'geographical barriers' and 'wider barriers'. Geographical barriers relate to the physical proximity of local services measured by road distance to a post office, primary school, supermarket and GP surgery. Wider barriers include issues relating to the access to housing including household overcrowding, homelessness and housing affordability.

Figure 12 - Barriers to Housing and Services

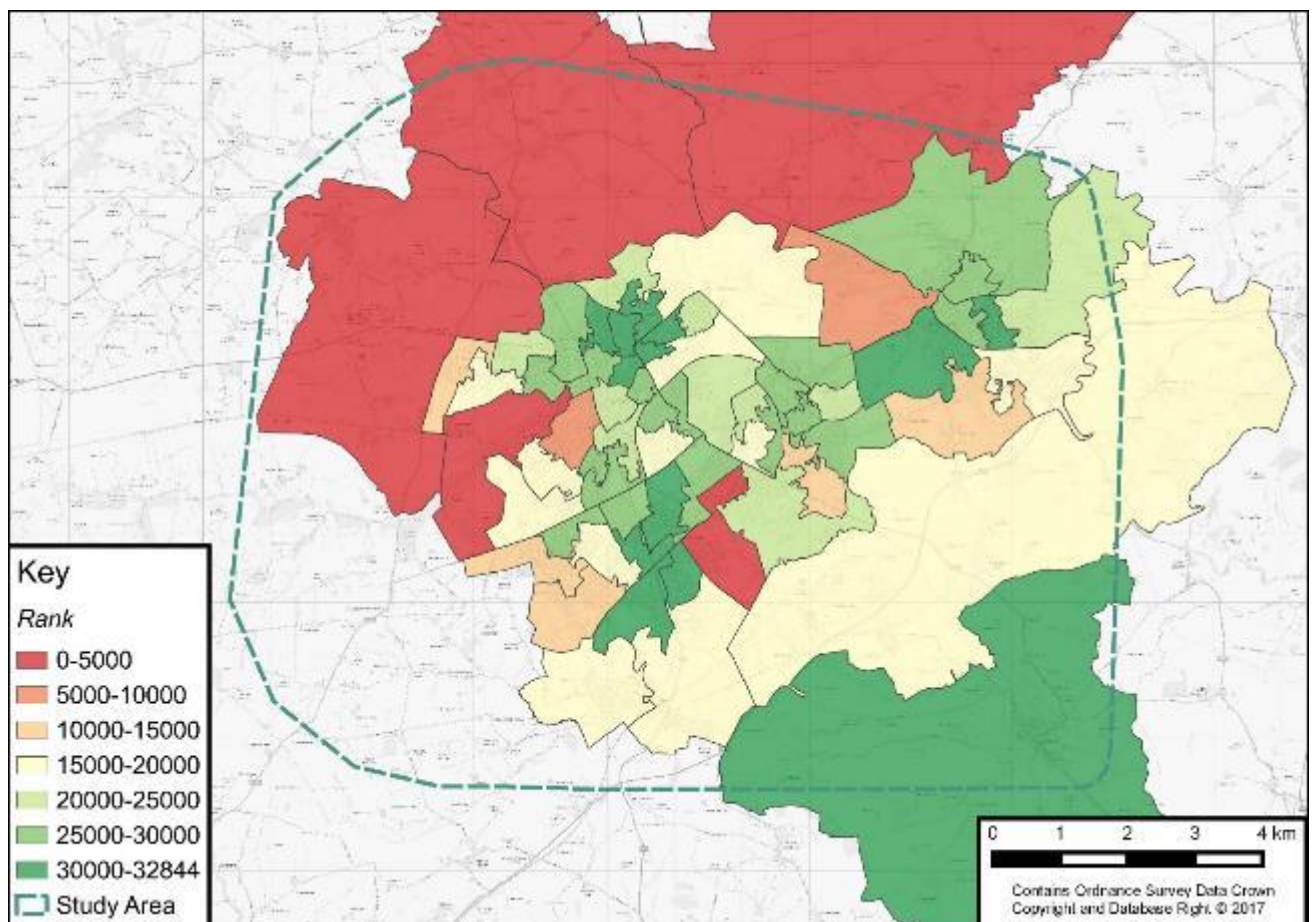


Figure 12 - indicates that, unlike other deprivation indicators, the centre of Harrogate urban district is less deprived than more peripheral areas of the study area. This is likely due to the higher house prices meaning less affordability in these areas. Also these areas are extremely rural and may have poorer access links to key services.

Living Environments

Living Environment Deprivation analyses the standards of people's indoor and outdoor living environment. The specific measures which contribute to this index are the quality of housing, the local air quality and number/severity of road traffic collisions in the area. The indicators fall into two

sub-domains: The 'indoors' and 'outdoors' living environment. The Indoors sub-domain measures the quality of housing based on whether a house has central heating and whether or not it fails to meet the decent homes standard. The Outdoors sub-domain contains measures of air quality and road traffic incidents involving injury to pedestrians and cycle users.

Figure 13 - Living Environments

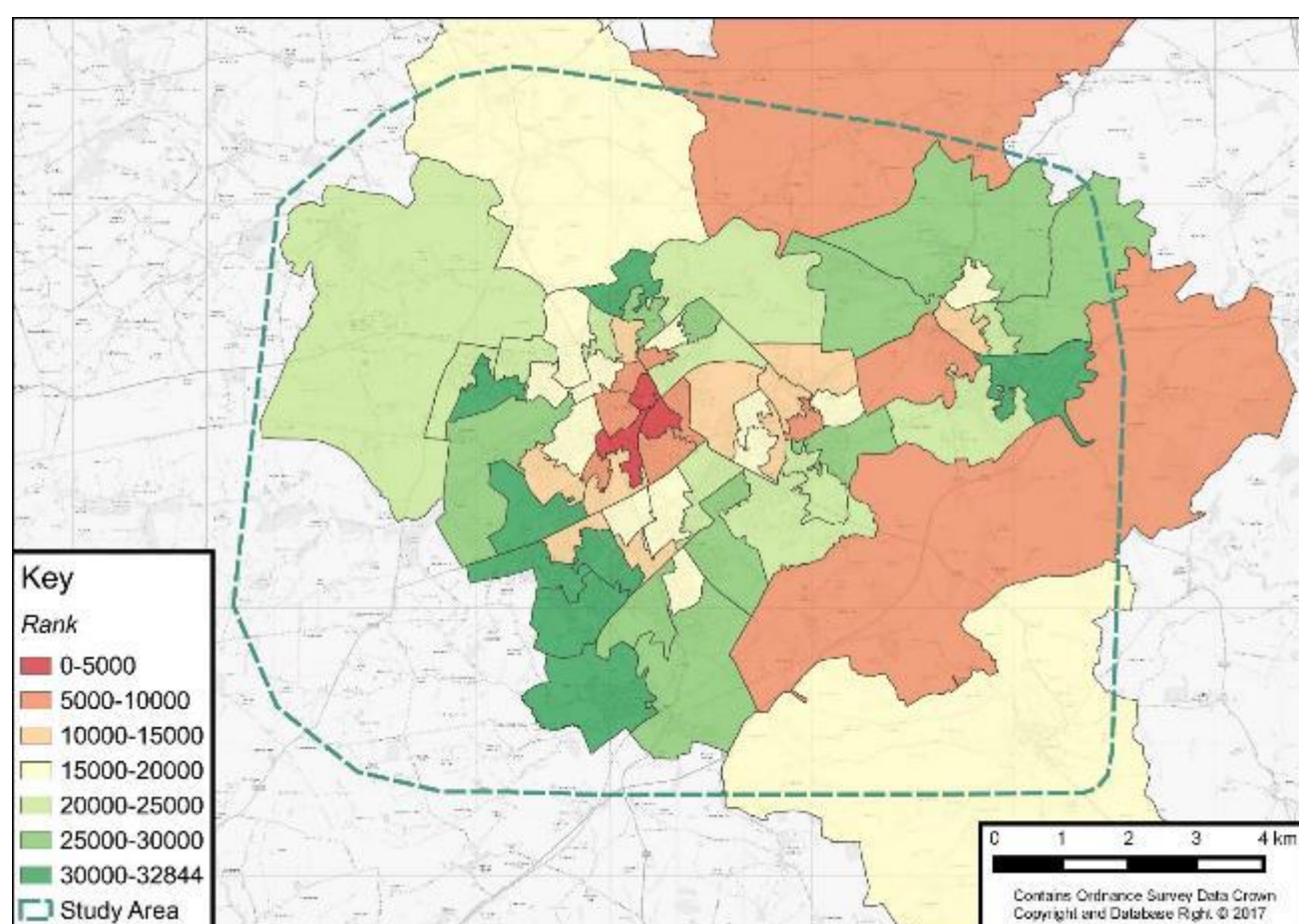


Figure 13 demonstrates that Harrogate centre ranks poorly in this particular domain when compared to the wider area. The centre of Knaresborough is also more deprived than surrounding areas which links with the presence of the AQMA.

The more deprived areas highlighted in Figure 13 - also correlate to areas with a relatively high number of road traffic collisions involving injury to cycle users. Notably, areas on the periphery of the study area also rank poorly.

Summary

Overall, there is some variation in the study area in terms of levels of deprivation. Some of the most deprived areas border some of the least deprived areas.

In terms of health the deprivation levels of each location within the study area are similar to that of the overall IMD ranking. However when looking at the more transport specific indicators, barriers to housing and services and living environments, there are much more varied levels of deprivation across the study area.

Challenges

- The indices of multiple deprivation characterise the study area as having a lower level of deprivation than many other areas in the country, potentially suggesting that residents are more likely to own and travel by car

Opportunities

- The urban fringes and rural sections of the study area are characterised by a higher level of deprivation in regards to barriers to housing and services, particularly to the north. Cycling interventions in these areas could help reduce these barriers.
- The centre of Harrogate is characterised by a low Living Environment Index, potentially correlating with air quality and accidents involving non-motorised

VEHICLE OWNERSHIP

Overall, 83.6% of households in Harrogate have access to a car or van, a considerably greater proportion to those figures for Yorkshire and the Humber and England, at 72.4% and 74.2%, respectively⁷. As detailed in Table 2, Harrogate has a higher proportion of car ownership at every level than the regional or national averages.

However, statistics for the Study Area have also been analysed, which indicate a slightly lower level of vehicle ownership than in Harrogate as whole, particularly in regard to the numbers of vehicles per household; there are fewer households with multiple vehicles, and more with a single vehicle or

⁷ Census, 2011

no car / van. Despite this, there is still a considerably higher proportion of households in the study area with access to a car than in the wider region or country.

Table 2 - Vehicle Ownership (% of Population)

CAR AVAILABILITY	STUDY AREA	HARROGATE	YORKSHIRE & THE HUMBER	ENGLAND
No Cars/Vans	19.3%	16.4%	27.6%	25.8%
1 Car/Van	44.4%	42.6%	42.9%	42.2%
2 Cars/Vans	29.1%	31.7%	23.5%	24.7%
3 Cars/Vans	5.5%	6.8%	4.6%	5.5%
4+ Cars/Vans	1.7%	2.5%	1.5%	1.9%

Source: Census, 2011

Challenges

- The study area (and the wider Harrogate area) are characterised by a high level of car ownership, with almost a third of the population having access to two or more cars. High car ownership may limit the propensity of residents to undertake journeys by cycle.

Opportunities

- Those with no car or van are a key demographic to make trips by cycle;
- Single car families are also able to use bikes as a second vehicle;
- Those with vehicles may be able to more easily access remote leisure cycling locations

TOURISM

As of 2012, around 4% of all overseas visits to the UK included a stay in Yorkshire and Humber, which totalled approximately 1.1 million visits. Approximately 25% of those visits were for leisure pursuits, including cycling. The average holiday taken by an overseas visitor to the region is seven nights, whilst the average spend per night of an overseas visitor is £54. Meanwhile, in 2013 the region attracted 10 million domestic tourism trips, totalling or 27.8 million nights. Of this volume of tourism-related overnight stays, 26% were made by residents of Yorkshire and Humber; 14% by residents of the North East and 13% by residents of the North West

Tourism is a significant contributor to the Harrogate district economy. During 2015 the district attracted a total of 5.4 million visitors, 4.7m of which were day trips, generating in the region of £300m and supporting in excess of 8,000 jobs.

Across the district there are a wide variety of tourist attractions that draw both national and international visitors to the area. These include Nidderdale Area of Outstanding Natural Beauty (AONB), Nidd Gorge,

Fountains Abbey World Heritage Site, Royal Horticultural Society (RHS) Harlow Carr Gardens, Mother Shipton's Cave, Lightwater Valley, Ripley Castle and Gardens and Betty's Tea Rooms.

In addition to these permanent attractions there is also a significant calendar of events that take place throughout the year. One significant event is the Great-Yorkshire Show, which takes place annually in July, on the designated showground located on the A661 Wetherby Road. In 2016 the event attracted over 135,000 visitors. The Harrogate Flower Show, held twice a year in spring and autumn, is also housed on the showground and consistently attracts almost 100,000 visitors and 1,000 exhibitors.

Other annual events that take place across the district include Ripon International Festival, Harrogate Comedy Festival and Harrogate Christmas Market. The additional trips into the area, generated by these events (the Great Yorkshire Show is estimated to bring 45,000 car trips into the town over the three days), has an inevitable impact upon the local transport network with road closures and diversion routes commonplace.

The town also has an enduring reputation as a leading European destination for conferences and exhibitions, with much direct and indirect employment stemming from this.

Harrogate Convention Centre (previously Harrogate International Centre) is located in the town centre. The facility is one of the country's leading events venues and in 2016 brought in 300,000 visitors and contributed £60m to the local economy.

Challenges

- It is acknowledged that, in order to maximise Harrogate's economic potential, there is a need to plan, not only for the expansion of existing businesses, but also to attract the inward investment required to generate new, high value jobs. Transport connectivity is key to achieving this.
- Growth of the events industry is also a key target; it will be necessary to address issues of congestion and queuing if the attractiveness of the area for investment is to be maximised, and the targeted growth achieved in a sustainable manner.
- If the number of visitors to the area increases, without complementary infrastructure improvements designed to facilitate this growth, this will place

Opportunities

- HBC has a number of aspirations for growth, including making Harrogate town centre a leading UK destination. Existing traffic and congestion is a threat to this aspiration; the removal of traffic would help to achieve the quality public realm that is a distinct part of this vision.

2.6. TRAVEL PATTERNS

INTRODUCTION

This section of the report focuses on the movement patterns within the study area looking at how people travel and where they travel to and from. The purpose of the section is to provide an understanding of the demand for movement within the study area and how cycling can offer potential for addressing some of this demand.

A range of data sources have been utilised to understand the travel patterns within the study area, such as Census and National Travel Survey. It is understood that these sources have their limitations, such as the age of the data and the geographical disaggregation. However, it is acknowledged that there are no comparative alternatives to use without commissioning data collection for a specific purpose.

MODE SHARE

One of the questions asked in the 2011 Census was regarding method of travel to work; the question asked: *“How do you usually travel to work? Tick the box for the longest part, by distance, of your usual journey to work.”*⁸

Table 3 - Method of Travel to Work – Not in Employment Removed (% of Trips)

METHOD OF TRAVEL	STUDY AREA	HARROGATE DISTRICT	YORKSHIRE & THE HUMBER	ENGLAND
Work Mainly at or From Home	12.3%	14.9%	9.3%	10.3%
Underground, Metro, Light Rail, Tram	0.2%	0.1%	0.4%	4.0%
Train	3.0%	2.3%	2.3%	5.2%
Bus, Minibus or Coach	4.9%	3.8%	8.4%	7.3%
Taxi	0.3%	0.3%	0.6%	0.5%
Motorcycle, Scooter or Moped	0.6%	0.5%	0.7%	0.8%
Driving a Car or Van	56.4%	57.8%	58.2%	54.0%
Passenger in a Car or Van	5.0%	4.8%	6.3%	4.9%

⁸ ONS, 2013 via National Archives (<http://webarchive.nationalarchives.gov.uk/20160105160709/http://www.ons.gov.uk/ons/rel/mro/news-release/travel-to-work/census-reveals-details-of-how-we-travel-to-work-in-england-and-wales.html>)

Bicycle	2.3%	2.1%	2.5%	2.9%
On Foot	14.6%	12.9%	10.9%	9.8%
Other Method	0.4%	0.5%	0.5%	0.5%

Source: Census, 2011

The table shows that the proportion of working residents in Harrogate who travel to work as a driver or passenger in work by car or van is 61.4%, broadly in line with the regional and national average. While the proportion cycling to work is marginally lower than the national and regional averages, the proportion walking remains high.

Mode share – Harrogate & Knaresborough Urban Area Internal Trips

Further analysis was undertaken to isolate those trips considered internal to the Harrogate urban area (including Knaresborough) using census Origin – Destination data⁹ at the MSOA level, identifying journey to work modes for these internal trips.

The full internal Journey to Work data for the Harrogate and Knaresborough urban area is displayed in Table 4, and shows a cycling mode share of 4.2%, while 31% of journeys to work are made on foot. The data also shows that approximately half of all these internal trips are made by car or van, with an additional 6.4% as a passenger in a car or van. Given these trips are wholly internal and therefore over short distances, it is likely potential exists for them to be shifted towards sustainable modes, in particular cycling.

Table 4 – Mode share for trips within the study area

METHOD OF TRAVEL	HARROGATE & KNARESBOROUGH URBAN AREA (NO.)	HARROGATE & KNARESBOROUGH URBAN AREA (%)
Underground, Metro, Light Rail, Tram	9	0.0%
Train	198	1.0%
Bus, Minibus or Coach	1,328	6.7%
Taxi	100	0.5%

⁹ Census 2011 – Dataset WU03EW

Motorcycle, Scooter or Moped	137	0.7%
Driving a Car or Van	9,740	49.2%
Passenger in a Car or Van	1,269	6.4%
Bicycle	827	4.2%
On Foot	6,137	31.0%
Other Method	41	0.2%

Commuting Trends 2001–2011

A comparison between the Census method of travel to work data within the study area available for 2001 with the 2011 data shows a broadly similar modal split, with only small changes in the percentages.

In 2001, the percentage modal split for travelling by bike and on foot was 2.2% and 15% respectively, while the 2011 data recorded 2.3% and 14.6%, a very slight increase in walking levels and a decrease in cycling. Over the same period, the modal split for active travel across the region and nationally also remained relatively similar. At a regional level (Yorkshire and the Humber), there was no change in the modal split for walking (at 10.9%), while the modal share for cycling fell by 0.4%, from 2.9% to 2.5%. Nationally, the modal share for cycling to work decreased slightly from 10.0% to 9.8%, while the modal share for walking increased marginally, from 2.8% to 2.9%.

However, the percentage of people commuting by car (either driving or as a passenger) within the study area over the same 10-year period has decreased from 63.5% to 61.4%. The national average for England also decreased, from 61.0% to 58.9%. In contrast, the modal share for commuting via car or van in Yorkshire and the Humber increased slightly, from 63.5% to 64.4%.

Challenges

- The data indicates that the modal split for Harrogate and the study area is broadly in line with the regional and national averages. However, considering the study area's compact urban environment, the reliance on single occupancy vehicles is considered greater than that of comparable towns or cities, such as York;
- The challenge is to engender modal shift toward active travel that is comparable to similar urbanised areas;
- The data for the urban area of Harrogate and Knaresborough indicates the prevalence of car travel to the western areas, with a greater proportion of trips by active and sustainable modes into the centre and eastern areas (including Knaresborough):

Opportunities

- A culture of active travel already exists in the urban areas of Harrogate, indicating a desire to travel by more sustainable modes. Through the enhancement of the existing provision and replication across the urban area, particularly in the western areas, there is potential to increase cycling across Harrogate;
- There are a number of committed and anticipated development sites to the western extent of the study area, potentially further increasing the proportion of origins and destinations in western Harrogate. There is potential to align

COMMUTING ORIGIN / DESTINATION

Introduction

This sub-section uses Census 2011 data and traffic model outputs from a SATURN model utilised for the ongoing Harrogate Relief Road study. Although the data looked at is not specifically related to cycle movements, it is very useful in terms of understanding movement demand around the study area which has potential to be met by cycling should barriers to this mode be reduced or removed.

As the population of Harrogate District is concentrated within the urban areas of Harrogate and Knaresborough, these areas have been separated from the wider district in the analysis. Harrogate Town refers to the urban area of Harrogate while Harrogate District is the rest of the district, excluding the town. As such, Harrogate District is predominantly rural.

Travel Patterns

There is a perception of congestion across Harrogate and Knaresborough, both on internal roads and on the main radial routes; as the periods of greatest demand are experienced in the AM and PM peak hours, this suggests that these periods of congestion are a direct impact of commuting trips.

Table 5 sets out commuting patterns for residents of Harrogate district; this data shows that almost 18,500 residents travel outside of the district for work, an increase of 2,500 (16%) in the decade since analysis was undertaken as part of the Local Transport Plan 2 (LTP2), although the proportion travelling to a destination in Leeds or Bradford has decreased (from 69% to 53%) over the same time period.

Table 5 – Commuting Patterns for Harrogate District Residents

PLACE OF WORK	TOTAL WORKERS	% OF ALL WORKERS
Harrogate Town	25,456	40%
Harrogate District	16,459	26%

Knaresborough	3,493	5%
Leeds	8,481	13%
York	1,837	3%
Hambleton	1,920	3%
Bradford	1,202	2%
Other	4,902	8%

Source: Census 2011

Levels of outward commuting to Leeds and Bradford has remained constant since LTP3 analysis undertaken in 2011, with 15% of Harrogate residents leaving the district to access employment in the Leeds City Region (LCR).

Table 6 shows the corresponding commuter trips into Harrogate district from other local authority areas. Since the LTP2 work was undertaken commuter trips originating in Leeds or Bradford have increased by approximately 1,500 to total 7,504. Overall, there is a net loss of workers to the Leeds authority area from the Harrogate district, with around 2,500 more workers travelling from Harrogate to Leeds for employment than in the opposite direction.

Table 6 - Commuting Patterns for Harrogate District Workers

ORIGINATING LOCAL AUTHORITY	TOTAL WORKERS	% OF ALL WORKERS
Leeds	6,019	31%
York	2,194	11%
Hambleton	2,377	12%
Bradford	1,485	8%
Other	7,291	38%

Source: Census 2011

These movements to Leeds and to Bradford, in addition to the 4,000 two-way trips to and from York, are facilitated primarily by the A61 and the A59; the high demand for these routes results in significant levels of congestion, causing unreliable journey times with long queues and delay.

Table 7 looks specifically at the commuting patterns of resident workers in the Harrogate urban area, showing that 59% both live and work in the urban area itself, resulting in purely internal trips. A further 4% travel the short distance to Knaresborough for work and 24% leave the Harrogate district completely to access employment; of those who leave the district, the majority (13%) travel to Leeds, likely utilising the A61.

Table 7 - Commuting Patterns for Harrogate Urban Area Residents

PLACE OF WORK	TOTAL WORKERS	% OF ALL WORKERS
Harrogate Town	17,820	59%
Harrogate District	3,684	12%
Knaresborough	1,326	4%
Leeds	4,077	13%
York	647	2%
Hambleton	424	1%
Bradford	553	2%
Other	1,884	6%

Source: Census 2011

Looking at the same data for Knaresborough residents, while the majority work in Harrogate town (35%), a significant proportion (23%) also work within Knaresborough, resulting in over 1,000 internal work related trips in the town. When also accounting for jobs in the wider Harrogate area (15%), only 28% (1,471) of Knaresborough residents leave the district for work, with half of these travelling to Leeds.

When considering Harrogate urban area's worker population, the travel to work data shows similar patterns and proportions of movements, as set out in Table 8. Of those that work in the town, more than half (52%) also reside in the town; a further 5% travel in to the urban area from Knaresborough and 17% travel from the remaining wider district. Mirroring the travel patterns of the resident population, the largest proportion of employment related trips for people who live outside the district are from the Leeds and Bradford areas (15%).

Table 8 - Commuting Patterns for Harrogate Urban Area Workers

PLACE OF RESIDENCE	TOTAL WORKERS	% OF ALL WORKERS
Harrogate Town	17,820	52%
Harrogate District	5,832	17%
Knaresborough	1,804	5%
Leeds	3,952	12%
York	799	2%
Hambleton	549	2%
Bradford	872	3%
Other	2,562	7%

Source: Census 2011

The travel patterns of Knaresborough's worker population also mirror that of its residents; 27% of workers live in Harrogate town, 24% in Knaresborough itself and 29% travel in from outside the district – primarily from Leeds and York (10% and 6%, respectively).

Table 9 shows that, conversely to the pattern in the wider Harrogate district, there is a net flow of commuting into the Harrogate urban area with almost 4,000 more workers travelling into the town to access employment than in the opposite direction.

Table 9 - Commuting Flows in to / out of Harrogate Urban Area

LOCAL AUTHORITY	WORKERS TRAVELLING INTO HARROGATE TOWN	WORKERS TRAVELLING OUT FROM HARROGATE TOWN	NET
Harrogate District	7,636	5,010	2,626
Leeds	3,952	4,077	-125
York	799	647	152
Hambleton	549	424	125
Bradford	872	553	319
Other	25,62	1,884	678
Total	34,190	30,415	3,775

Further analysis on existing and future traffic flows in and around Harrogate and Knaresborough was undertaken as part of the Harrogate Relief Road study. The following figures illustrate the results of SATURN modelling undertaken as part of the study, showing those traffic flows identified as being wholly internal within the Harrogate and Knaresborough urban areas, as well as showing the movements between the two towns.

Figure 14 - 2015 AM Peak Traffic Movement

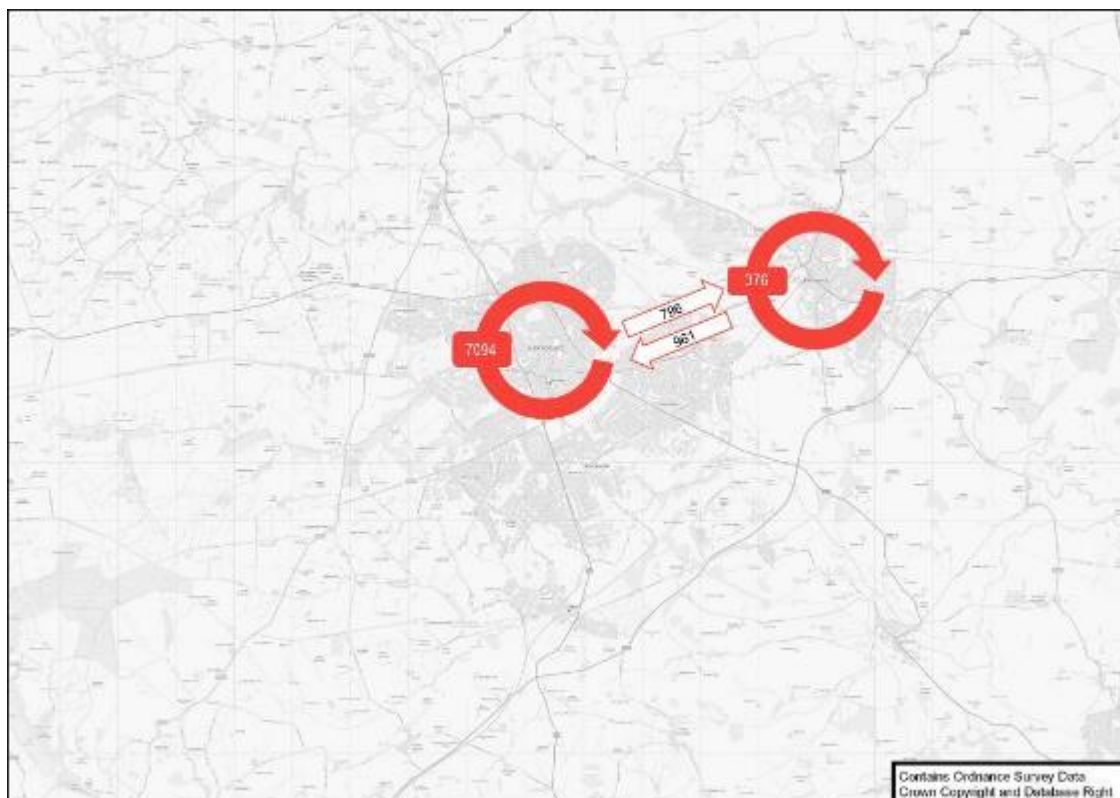
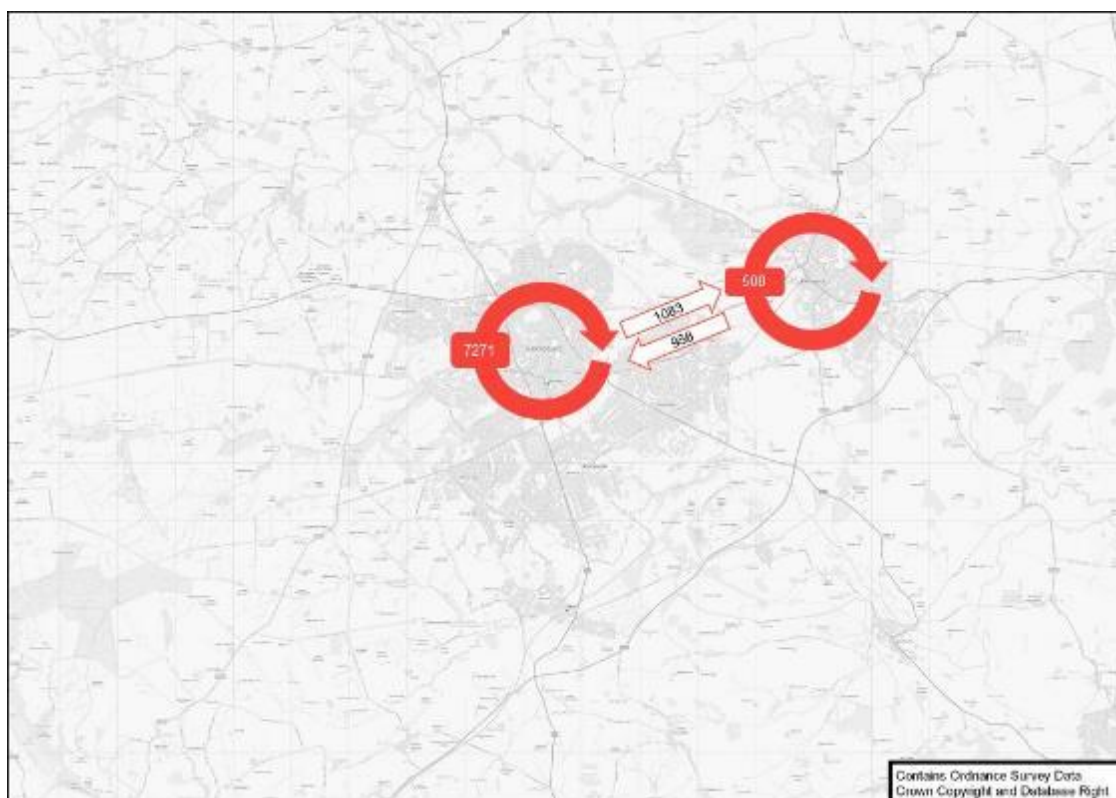


Figure 15 - 2015 PM Peak Traffic Movement



Of particular note is the significant movements wholly internal to the Harrogate urban area, with over 7,000 vehicular trips, while there are almost 2,000 one-way trips between Harrogate and Knaresborough in either peak period.

The modelling undertaken also considered a future scenario of 2035, taking into account future growth in the area. The results are show in Figure 16 and Figure 17 below and overleaf.

Figure 16 - 2035 AM Peak Traffic Movement

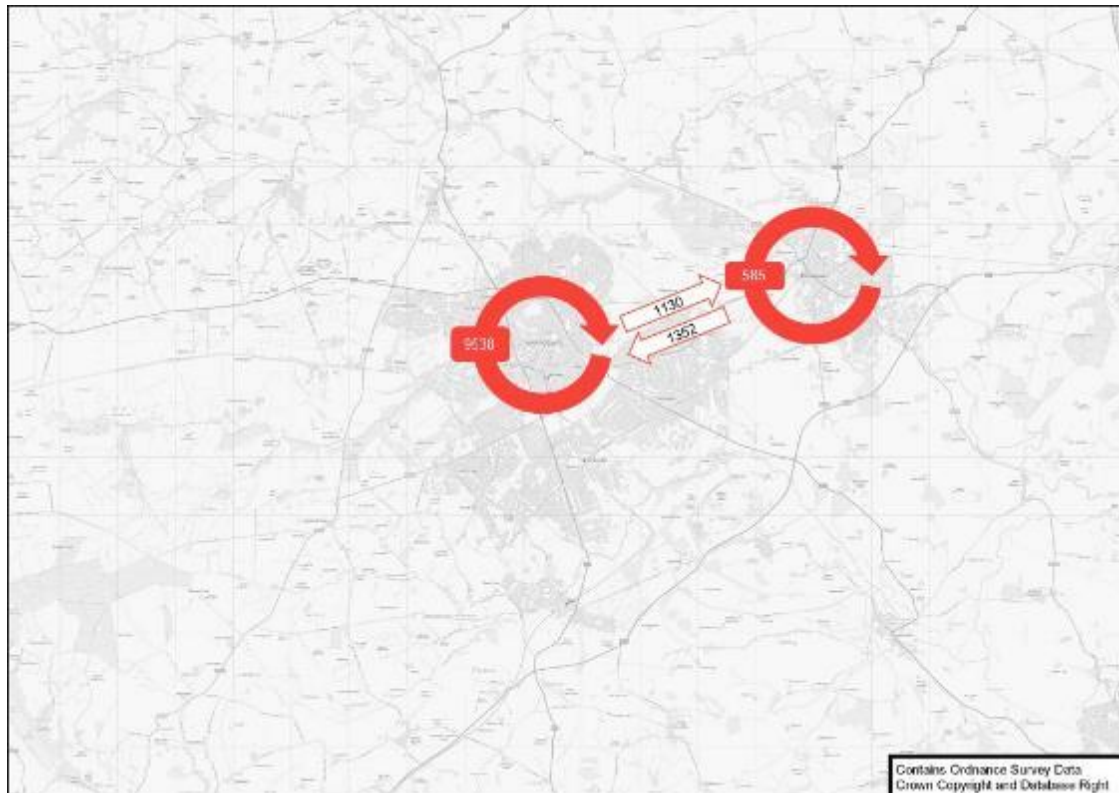
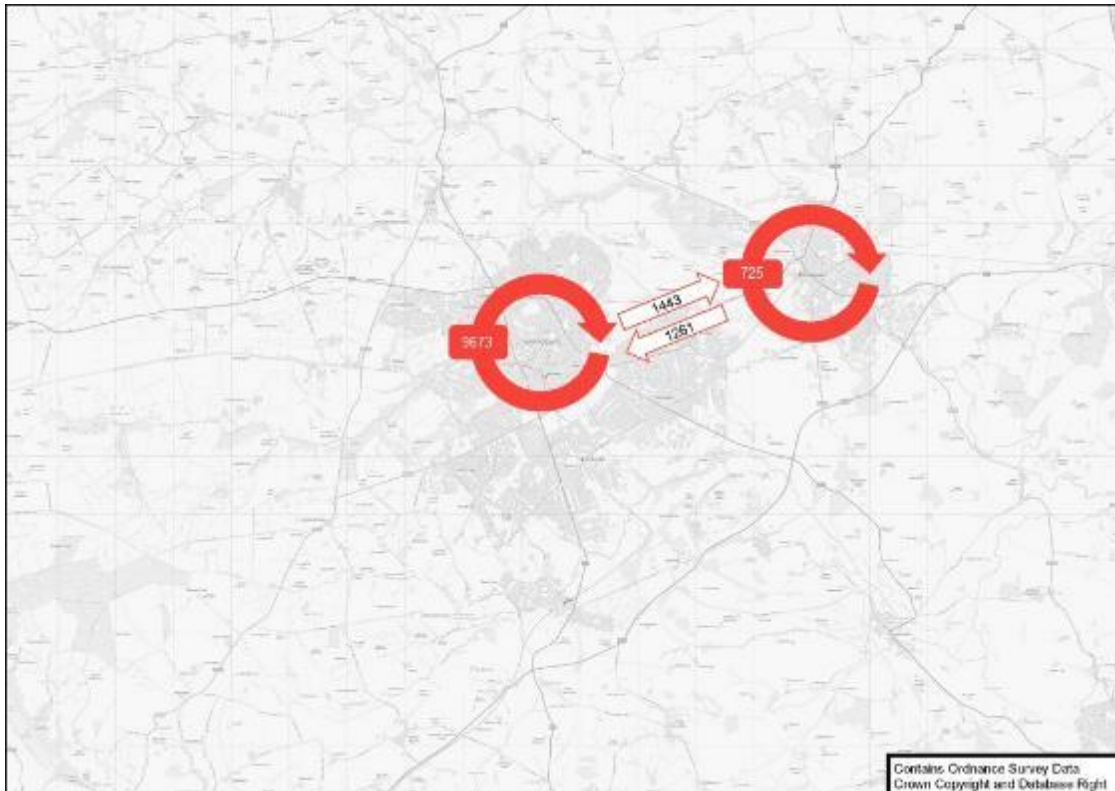


Figure 17 - 2035 PM Peak Traffic Movement



These figures show a significant increase in vehicular trips in 2035, with over 9,500 vehicular trips wholly internal to Harrogate in either peak period, and approximately 2,500 trips between Harrogate and Knaresborough. Considering the significant congestion already perceived within the study area, it is clear that such increases in vehicular demand are likely to create further delays and congestion, limit network resilience, and have a negative impact on air quality.

Challenges

- The data indicates significant movements between the study area and the Leeds City Region, particularly in regards to Harrogate;
- Harrogate relies on net inward commuting, with almost 4,000 more workers travelling in than out. The nature of the journey and distance travelled significantly limits the potential for travel by active or sustainable modes.
- The Cycling Infrastructure Plan is likely to rely on alignment with various other plans, policies and strategies. In particular, the provision of on-street parking within Harrogate has been considered a complimentary element to restrict journeys by private car. However, the negative impacts of this on

Opportunities

- Approximately two thirds of journeys to work made by Harrogate and Knaresborough residents are internal, suggesting significant potential for modal shift to active and sustainable modes.
- In particular, the link between Harrogate and Knaresborough along the A59 represents a strong desire line between the towns, and the compact urban environment of central Harrogate and Knaresborough are ideally suited to cycling with some infrastructure and complementary behaviour change initiatives;

TRIP PURPOSE

National Travel survey

The National Travel Survey, published yearly by the DfT, is a household survey designed to monitor long-term trends in personal travel and to inform the development of policy. It is the primary source of data on personal travel patterns by residents of England within Great Britain.

We are able to assess the data at the national and regional level, as well as by different types of rural-urban residence classification. However, as the data cannot be obtained at any further level of disaggregation, the applicability of the analysis is limited. Table 10 compares the percentages of trip rates by trip purpose for Yorkshire and the Humber to those of England overall.

Table 10 - Average Proportion of Trips per Person by Trip Purpose

TRIP PURPOSE	YORKSHIRE AND THE HUMBER	ENGLAND
Commuting	15%	16%
Business	3%	3%
Education (including escort)	12%	12%
Shopping	19%	19%
Other escort and Personal business	19%	19%
Visit friends	15%	15%
Other leisure	17%	16%

Source: DfT, 2016

From this information, we can see that for residents of Yorkshire and the Humber the breakdown of purposes for making trips is nearly identical to that of England overall. It shows that trips are being made for a wide variety of reasons, and that if we adopt a strategy that only addresses a particular purpose (or a small number of purposes), we will only be reaching a relatively small portion of trips.

Road Side Interview Survey Data

Trip purpose analysis was undertaken as part of the Harrogate Relief Road Study (HRR) which had a similar study area to this work. The study undertook a number of Road Side Interviews (RSI). Table 11 sets out trip purpose by time period obtained through these RSIs, as recorded for cars with an origin and / or destination in the Harrogate urban area.

Table 11 - RSI Trip Purpose for Trips with Origin / Destination in Harrogate Urban Area

TRIP PURPOSE	AM	IP	PM
Education	6.0%	4.4%	5.2%
Employers Business	10.8%	11.3%	7.4%
Holiday Home/Hotel	1.3%	1.9%	2.4%
Other	2.0%	2.3%	1.6%
Personal Business	9.4%	15.8%	9.2%
Shopping	8.9%	28.4%	12.8%
Social/Recreational	4.9%	11.6%	11.8%
Visiting family/friends	3.9%	9.6%	11.9%
Work	53.0%	14.8%	37.7%
Total	100.0%	100.0%	100.0%

The data shows that the highest proportion of trips in the AM and PM peak are commuting trips, although the proportion of commuting trips in the PM peak is lower than in the AM, with an increase in shopping, social / recreational and visiting trips. The highest proportion of Inter-peak trips are shopping related.

Education accounts for a slightly higher proportion of trips in the AM peak than in the IP or PM peak—6% compared to 4.4% and 5.2% respectively.

When considered against the definitions of utility and commuter cycle users, the RSI data indicates 88.1% of trips in the AM peak period could be considered utility or commuter, while 74.7% of trips in the inter-peak period and 72.3% of trips in the PM peak period fit into the same categories.

The trip purpose identified for these internal trips is shown in Table 12, and shows lower proportions of trips associated with commuting or employer's business in all peak periods when compared to trip purpose for those trips with an origin and / or destination in the Harrogate urban area; however, trips associated with commuting or employer's business remains the highest proportion overall. The proportion of other trips (holiday, personal business, shopping, social, visiting and other) increases by 14% in both AM and PM peaks for trips that are internal to the Harrogate urban area.

In regards to trip purpose and cycle user types, the data indicates that 81% of the internal trips fall into the category of 'Utility' or 'Commuting' cycle trips in the AM peak period, while 75.9% of trips in the inter-peak period and 69.9% of trips in the PM peak period fit into the same categories.

Table 12 - RSI Trip Purpose for Trips for Harrogate Urban Area Internal Trips

TRIP PURPOSE	AM	IP	PM
Education	8.0%	5.5%	7.6%
Employers Business	9.2%	8.4%	5.2%
Holiday Home/Hotel	2.1%	1.0%	2.6%
Other	4.5%	3.4%	3.2%
Personal Business	12.0%	16.4%	9.8%
Shopping	14.4%	32.5%	23.8%
Social/Recreational	7.7%	11.1%	12.6%
Visiting family/friends	4.5%	8.6%	11.8%
Work	37.7%	13.1%	23.5%
Total	100.0%	100.0%	100.0%

Caution should be used in drawing firm conclusions from RSI data, given the limitations on sample size. However, the patterns identified indicate that more than a third of trips in the Harrogate urban area in either peak period are wholly internal, and that approximately 80% of the internal trips in the AM peak period could be considered a 'utility' or 'commuter' trips for cycling purposes, while approximately 70% of trips in the PM peak period fit into the same categories.

The data analysed in Table 12 above shows that almost 50% (46.9%) of trips within the Harrogate internal areas are less than 5km, and therefore have significant propensity for modal shift to cycling.

TRIP LENGTH

2011 Census Data

Distance Travelled to Work data obtained from the 2011 Census was analysed to determine average trip lengths and evaluate the potential for shorter trips undertaken by other modes to be converted to cycling trips.

Table 13 below shows the percentage of usual residents in employment travelling certain distances to work under 10km, and compares the data for the study area, the wider Harrogate district, North Yorkshire, Yorkshire and the Humber, and England. The table also shows the average commute distance for all trips to work.

Table 13 – Distance Travelled to Work (% of Workers)

	STUDY AREA	HARROGATE DISTRICT	NORTH YORKSHIRE	YORKSHIRE & THE HUMBER	ENGLAND
Less than 2km	24.4%	21.7%	21.3%	17.9%	16.6%

2km to less than 5km	21.7%	15.8%	11.8%	20.8%	18.4%
5km to less than 10km	8.1%	9.5%	10.5%	18.3%	17.3%
Work mainly at/from home	3.1%	14.9%	15.2%	9.3%	10.3%
Other	6.9%	7.1%	7.5%	7.3%	8.5%
Total Under 5km*	46.2%	37.5%	33.1%	38.7%	35.0%
Total under 10km	54.3%	47.0%	43.7%	73.5%	71.0%
Average Distance (km)	15.4km	17.1km	19.2km	14.6km	14.9km

Source: Census, 2011. *Includes those working from home and those who answered "Other"

This data shows that the study area is characterised by greater proportions of the working population travelling shorter distances to work than the average for the wider Harrogate district, the county, region, or the nation.

Walking is often considered the most important mode of travel at a local level; Guidance on the preferred maximum walking distances to amenities is given in the Chartered Institute of Highways and Transportation [CIHT] document *Providing for Journeys on Foot (2000)*, which states a preferred maximum walking distance for commuting of 2km. While journeys under 2km are generally recognised as those with the potential to be undertaken on foot, it stands to reason that with a conducive environment these trips could also be undertaken by bicycle.

It is widely recognised that cycling can act as a substitute for short car journeys, particularly those up to 5km in length; A distance of 3 miles (5km) is referred to in the DfT's 'Cycle Infrastructure Design' (2008) guidance as being appropriate for many utility cycle journeys. More recent guidance within 'Creating Growth & Cutting Carbon' (2011) identifies a larger 5 mile distance.

The data identifies that almost a quarter of all journeys to work in the study area are less than 2km in length, while 46% are less than 5km, suggesting almost half the journeys to work made in the study area have the propensity to be made by cycle.

Despite these journeys being such short distances, the Census data analysed in section 2.6 showed that only 14.6% of journeys to work in the study area are made on foot and 2.3% by bicycle, while the internal trips data showed that 30.1% of all trips wholly internal to the Harrogate urban area are made on foot, while just 4.2% are made by bicycle.

Road Side Interview survey data

Distance travelled to work has also been reviewed as part of the RSI survey data analysis undertaken as part of the HRR Study. It is noted that RSI surveys do not collect information on routing, and therefore all distances quoted are Euclidean distances ('as the crow flies').

Average distance travelled by time period for wholly internal trips within the Harrogate urban area are shown in Table 14.

Table 14 – RSI Average Distance for Internal Trips within Harrogate Urban Area

TRIP PURPOSE	AM (KM)	IP (KM)	PM (KM)
Education	2.7	2.3	2.4
Employers Business	2.8	2.5	2.3
Holiday Home/Hotel	3.2	2.4	2.6
Other	2.3	2.9	2.6
Personal Business	2.6	2.6	2.2
Shopping	2.4	2.3	2.2
Social/Recreational	2.6	2.8	2.7
Visiting family/friends	2.9	3.0	2.7
Work	2.7	2.5	2.9
Overall Average	2.6	2.5	2.5

The analysis shows that, while maximum internal trip distances are between 7 and 10km, the average distance of internal trips within the Harrogate urban area is very short—at approximately 2.6km in any peak period. As internal trips account for a significant number of all vehicle trips in the AM and PM peak hours respectively, this suggests that a significant proportion of traffic within the Harrogate urban area is travelling very short distances and contributing heavily to the levels of congestion experienced on the local network.

As the average distances quoted are Euclidean distances the actual trip distance is likely to be longer. Also, some trips within Harrogate may be multi-purpose, with the origin and destination postcodes quoted in the survey representing the beginning and end of a circuitous trip. However, even accounting for this, the analysis shows that internal car trips in Harrogate are travelling very short distances, suggesting that there may be significant potential for modal shift to more sustainable modes, in particular active modes such as walking and cycling.

Opportunities

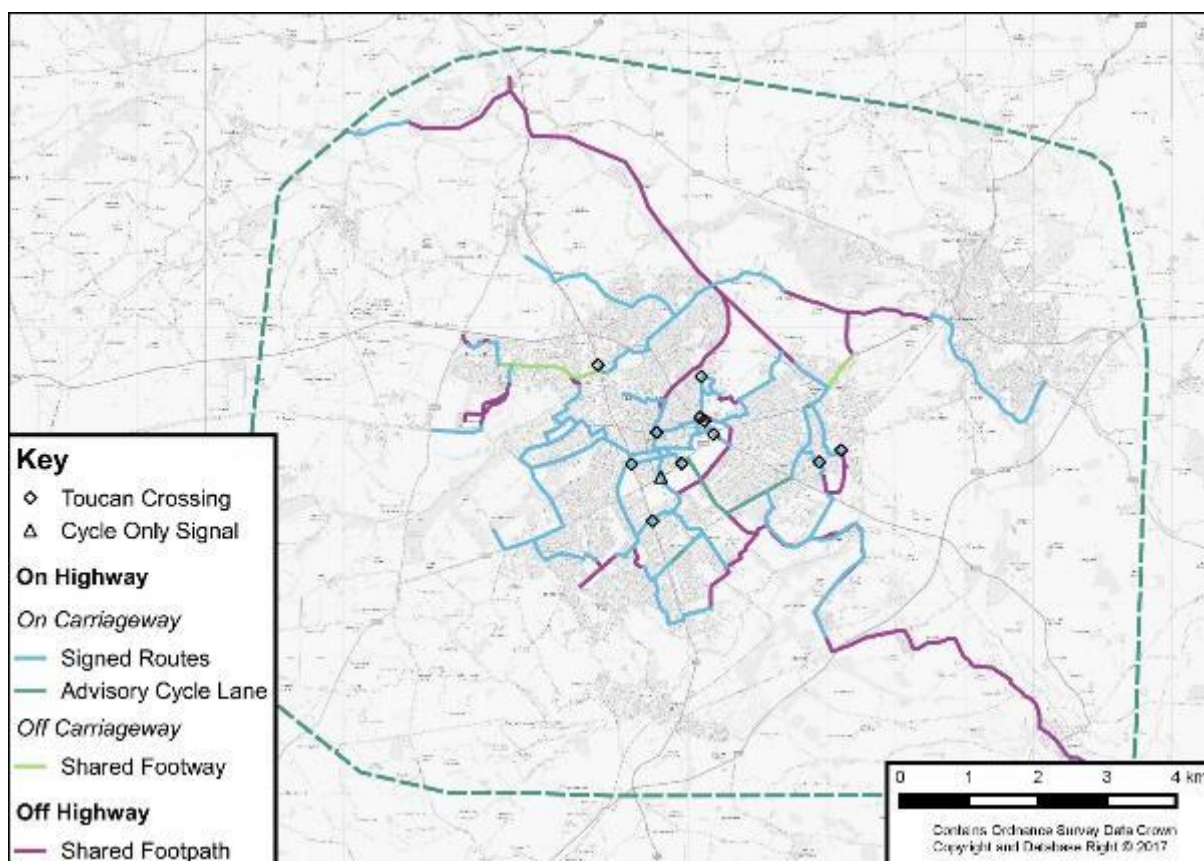
- NTS survey data indicates approximately 68% of trip purposes carried out in Yorkshire and the Humber could be considered 'Utility' or 'Commuter', while this percentage is marginally higher (69%) when considering trips within the urban city and town, which is likely representative of Harrogate.
- RSI data indicates that 81% of trips wholly within the Harrogate internal area fall into the category of 'Utility' or 'Commuting' cycle trips in the AM peak period, while 75.9% of trips in the inter-peak period and 69.9% of trips in the PM peak period fit into the same categories.

2.7. CYCLING

CYCLE NETWORK

There are a number of designated cycle routes in the main Harrogate and Knaresborough urban areas, shown in Figure 18 some of the routes are entirely off-highway while others are a mix of on and off-highway sections. Standard blue cycle route signage is prevalent throughout the town in order to direct cycle users towards key destinations.

Figure 18 - Cycle network within the study area



The majority of the existing cycle network is made up of on-carriageway sections that are predominantly on quieter roads; no specific cycle provision is provided on these routes over and above signage. Cycle routes on the main highway corridors (A61, A59 and A661) are limited but there are various points where cycle routes cross these corridors, and Toucan crossings are provided in some locations. Oatlands Drive has on-carriageway provision in the form of advisory cycle lanes between Knaresborough Road and Hookstone Drive.

The off-carriageway, but still on-highway, provision is mainly limited to small sections of shared footway/cycleway around junctions and roundabouts and leading to Toucan crossings. There is one continuous section of off-carriageway provision along Jennyfield Drive, which consists of a shared footway/cycleway between Crowberry Drive and The Hydro leisure centre.

Off-highway provision within the town consists of shared-use foot and cycle paths that cross parkland, such as the route along the southern edge of the Stray and the Luchon Way. On the edge of the town and beyond, off-highway cycle routes make use of former railway alignments such as the Nidderdale Greenway.

A number of the on-highway routes provide links across the town on roads that are lightly trafficked and feature lower average speeds. The main constraint of the quiet route network is that, in some cases, the routes are not the most direct way of reaching key destinations, such as the town centre, as the use of quiet roads has been prioritised above accommodating along desire lines.

It is considered that there is a lack of cycle routes on the main highway corridors in the area and, as such, limited cycle infrastructure. The busy nature of these roads and the lack of cycle infrastructure is likely to form a barrier to cycle use, and may be a contributory factor to incidents involving cycle users on these routes.

Cycle parking is available across the town centre and those nearest the main retail area have been observed as well used during the day. Sufficient cycle parking in close proximity to key destinations appears to be an issue and may be a barrier to encouraging higher rates of cycling.

These improvements incorporate a mixture of improved traffic signal management, promotion of bus services and cycling travel options and upgrading surfaces and signage.

As part of the LSTF programme that was implemented in the area, a range of scheme were completed, including the Nidderdale Greenway and Showground Greenway and an array of signage that focused on signposting people towards quiet routes.

DEFINING CYCLE USERS

From the outset, it is important to recognise that the term 'cycle users' encompasses as a wide range of individuals who use their bikes for a variety of different reasons. These users have varying needs and expectations, not only in regards to the infrastructure and facilities required, but also in terms of 'soft' measures such as information, publicity, safety and security.

Table 15 displays the range of cycle users that are expected to benefit from the measures proposed in the Harrogate cycling Infrastructure Plan; identification of user types helps to inform the development of the strategy in the consideration of all user types, and also recognises that users can change type during the course of their lives.

It is also important to note that non-users are specifically included in this list, as this group represents an important target audience in terms of the potential for a modal shift toward cycling. Furthermore, non-users are considered to require particular attention in terms of overcoming many of the traditional barriers to taking up cycling.

Table 15 - Cycle User types

TYPE	DESCRIPTION
Non-User	Existing walkers / drivers / public transport users including the young, elderly, infirm and disabled – those who do not cycle at present
Utility	Education / healthcare / shopping trips – using bikes as means to an end
Commuter	Fixed locations workers / hub workers / multi-modal workers – using bikes as an alternative to walking, the car or public transport for all or part of a trip – using bikes to travel to work
Leisure	Active individuals / active couples / active families / active groups – using bikes for leisure pursuits – using bikes to travel to fun
Sporty	Off-road enthusiasts / off-road informal / off-road groups & clubs / off-road commercial ventures / road enthusiasts / road groups & clubs – using bikes for sporting and/or health reasons, generally enthusiasts, participate in 'challenges' and 'sportives' – using bikes for sport / health
Competitive	Individuals / formal clubs – using bikes as part of a training regime for formal competition on and off-road ('pinning a number on') – using bikes for competition

ADULT CYCLING DATA

In 2012, the DfT published a new Official Statistics release for *Local Area Walking and Cycling in England*. This release presented data related to walking and cycling prevalence at the local authority level. Updates to these statistics have been released annually, including year-on-year comparative data to identify any changes in cycling prevalence. The latest dataset available is for the period 2014/15.

In addition to the active mode commuting data, this data is useful as it provides a picture of how the active mode transportation is changing (if at all) for adults in Harrogate who cycle for recreation and utility purposes, and allows us to compare those proportions and year-on-year changes with the county, regional, and national figures.

The tables overleaf present this data for the current and previous periods, also showing the year-on-year increase or decrease.

Table 16 - Percentage of Adults who Cycle for Any Length or Purpose

PERIOD	FREQUENCY	HARROGATE	NORTH YORKSHIRE	YORKSHIRE & THE HUMBER	ENGLAND
2013-14	1 x per month	21.1	17.2	12.9	15.0
	1 x per week	13.1	11.0	8.0	9.5
	3 x per week	4.0	4.2	3.9	4.4
	5 x per week	2.1	2.2	2.1	2.5
2014-15	1 x per month	16.8	16.3	13.7	14.7
	1 x per week	10.9	10.9	9.4	9.5
	3 x per week	4.0	4.3	4.2	4.4
	5 x per week	2.4	3.0	2.5	2.6
Change	1 x per month	-4.3	-4.8	+0.8	-0.3
	1 x per week	-2.2	-0.1	+1.4	-
	3 x per week	0	+0.1	+0.3	-
	5 x per week	+0.3	+0.8	+0.4	+0.1

Source: DfT, *Walking and cycling statistics*. * Possibility of statistical error due to insufficient sample size

Table 17 - Percentage of Adults who Cycle for Recreational Purposes

PERIOD	FREQUENCY	HARROGATE	NORTH YORKSHIRE	YORKSHIRE & THE HUMBER	ENGLAND
2013-14	1 x per month	17.2	13.5	9.1	10.3
	1 x per week	11.3	8.4	5.2	5.7
	3 x per week	3.8	2.7	1.7	1.7
	5 x per week	1.2	0.8	0.5	0.7
2014-15	1 x per month	12.6	12.7	10.1	10.0
	1 x per week	7.0	7.8	5.9	5.4
	3 x per week	2.1	1.9	1.9	1.6
	5 x per week	0.8	1.0	0.8	0.6
Change	1 x per month	-4.6	-0.8	+1.0	-0.3
	1 x per week	-4.3	-0.6	+0.7	-0.3
	3 x per week	-1.7	-0.8	+0.2	-0.1
	5 x per week	-0.4	+0.2	+0.3	-0.1

Source: DfT, Walking and cycling statistics. * Possibility of statistical error due to insufficient sample size

Table 18 - Percentage of Adults who Cycle for Utility Purposes

PERIOD	FREQUENCY	HARROGATE	NORTH YORKSHIRE	YORKSHIRE & THE HUMBER	ENGLAND
2013-14	1 x per month	5.6	5.5	5.4	6.5
	1 x per week	3.1	3.6	3.5	4.5
	3 x per week	0.1	1.6	2.2	2.6
	5 x per week	0	0.7	1.2	1.6
2014-15	1 x per month	5.7	5.1	5.4	6.5
	1 x per week	3.4	3.7	3.9	4.5
	3 x per week	1.3	2.2	2.2	2.6
	5 x per week	0.7	1.4	1.1	1.5
Change	1 x per month	+0.1	-0.4	-	-
	1 x per week	+0.3	+0.1	+0.4	-

	3 x per week	+1.2	+0.6	-	-
	5 x per week	+0.7	+0.7	-0.1	-0.1

Source: DfT, Walking and cycling statistics. * Possibility of statistical error due to insufficient sample size

Analysis of the above figures shows that the percentage of adults who cycle for recreational purposes has declined across both Harrogate and North Yorkshire, particularly in regards to those who only cycle once a month / week. Recreational cycling amongst adults in England overall has also declined over the previous year at all frequencies, although the difference is less pronounced, while recreational cycling in Yorkshire and the Humber has actually slightly increased.

Utility cycling has increased across all frequencies in Harrogate from 2013/14 to 2014/15, particularly in regards to cycling 3 / 5 x per week, which while still a low overall percentage, has increased from almost nothing. Over the same time period, the proportions for England overall have remained relatively unchanged from the previous year.

Data is also available for the most recent time period for adults' time spend cycling, both for any purpose and recreationally; Table 19 and Table 20 show this data.

Table 19 - Percentage of Adults usually cycling for Given Lengths of Time per Day for Any Purpose

PERIOD	FREQUENCY	HARROGATE	NORTH YORKSHIRE	YORKSHIRE & THE HUMBER	ENGLAND
2014-15	< Half hour	3.0	2.9	2.7	3.4
	Half to < 1 hour	5.1	4.3	3.5	4.1
	1 to < 2 hours	4.8	4.9	3.8	4.1
	2 hours +	3.8	3.8	3.2	2.7

Source: DfT, Walking and cycling statistics.

Table 20 - Percentage of Adults usually cycling recreationally for Given Lengths of Time per Day

PERIOD	FREQUENCY	HARROGATE	NORTH YORKSHIRE	YORKSHIRE & THE HUMBER	ENGLAND
2014-15	< Half hour	0.5	0.7	0.8	1.0
	Half to < 1 hour	4.1	3.6	2.1	2.4
	1 to < 2 hours	3.9	4.2	3.1	3.4
	2 hours +	3.4	3.7	3.4	2.8

Source: DfT, Walking and cycling statistics.

Analysis of the data indicates that Harrogate records broadly similar proportions to North Yorkshire, with more respondents cycling half an hour to less than 1 hour. While there are fewer respondents cycling less than half an hour than the average for England, there are more in every other category, suggesting that those in Harrogate that cycle for recreation and any purpose are more likely to do it for a longer period of time.

COLLISIONS

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

Table 21 shows the number of cycle user casualties in Harrogate from 2012 to 2016, as well the severity breakdown, the total number of road user casualties in the borough during that time, and how cycle user casualties compare to the total road user casualties for each year.

Table 21 - Harrogate Cycle User Casualties

Severity	2012	2013	2014	2015	2016	Total
FATAL	0	0	0	0	0	0
SERIOUS	2	10	11	6	13	42
SLIGHT	23	28	33	20	22	126
TOTAL CYCLE USER CASUALTIES	25	38	44	26	35	168
TOTAL ROAD USER CASUALTIES	237	236	258	224	250	1205
CYCLE USER % OF ROAD USER CASUALTIES	10.5	16.1	17.1	11.6	14.0	13.9

Source: NYCC

The data in Table 21 shows that over the five year period there were no fatal collisions that involved a cycle user. The data also shows that between 2012 and 2016 there was a relatively large increase in serious collisions from 2 in 2012 to 13 in 2016. The number of slight collisions has decreased minimally over the five years with natural annual fluctuations. However there was a peak of the slight collisions in 2014.

The data in the table above also shows that almost 14% of total road user collisions involved a cycle user casualty. Improving the cycle infrastructure within the study area will contribute towards reducing these collision rates.

Figure 19 - Cycle collisions by severity

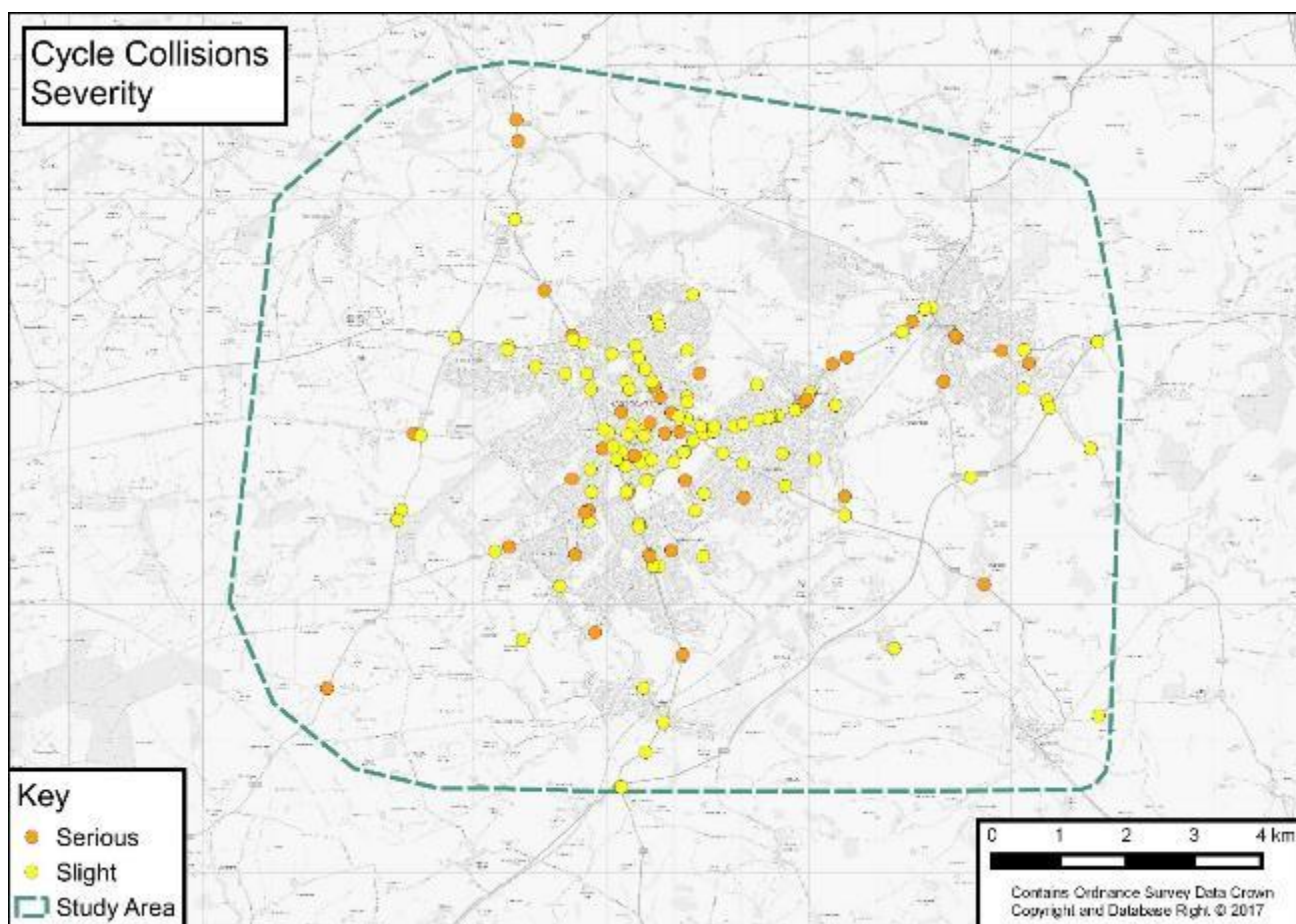


Figure 19 shows the cycle collisions over a period of 5 full years, 2012-2016. The two areas identified as key collision locations are the urban centre of Harrogate and along the A59 between Harrogate and Knaresborough. The collisions may have occurred in these areas due to lack of cycle infrastructure and/or driver behaviour. Collision data can be analysed to help inform the strategy however the data is caveated because the collisions shown in the figure are the reported collisions within the study area and not all of the collisions that occur will necessarily be reported. Also the collisions may cluster in these areas because there are more cycle users using these routes over surrounding routes that are perceived as less cycle friendly.

Further analysis into the collisions indicates that most collisions involving a cycle user casualty occurred due to driver behaviour of both the motorised vehicles and cycle users. Another factor that seemed to impact a number of the collisions was the visibility of cycle users to motor vehicles, particularly when exiting junctions.

CYCLE FLOWS

NYCC has a series of permanent cycle counters within the study area, which record the number of cycle trips on particular routes; the location of these sites is shown in Figure 20.

Figure 20 - Cycle tracking points

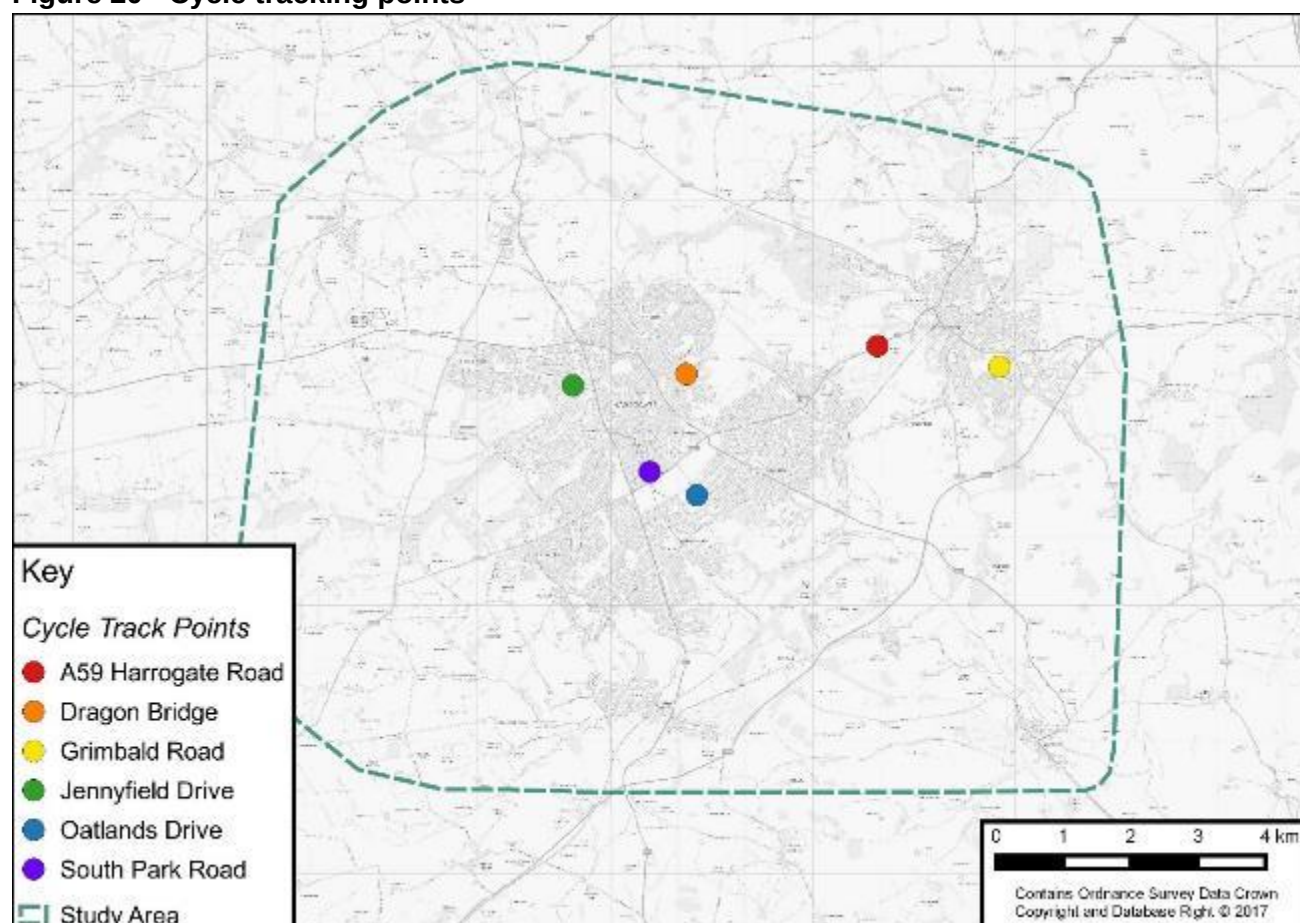


Table 22 overleaf presents count data from 2010 or 2011 onwards, showing the average number of cycles recorded in both directions per day Monday to Friday and Monday to Sunday. Where gaps in the data were found (such as where a full year had not been recorded) data has been excluded. The analysis has also excluded any data that appeared abnormally high or low compared to the average readings; this can be linked to one-off events, such as the Tour de France, which passed through Harrogate in July 2014.

Excluding Oatlands Drive where it appears there is an error with the counter, there is a general trend across all sites with Monday to Friday average figures higher than the Monday to Sunday equivalent, which potentially suggests that a notable proportion of these trips are employment related. The data shows year-on-year increases at all the sites with the exception of Grimbald Road, which has seen a decrease in average daily use between 2011 and 2016.

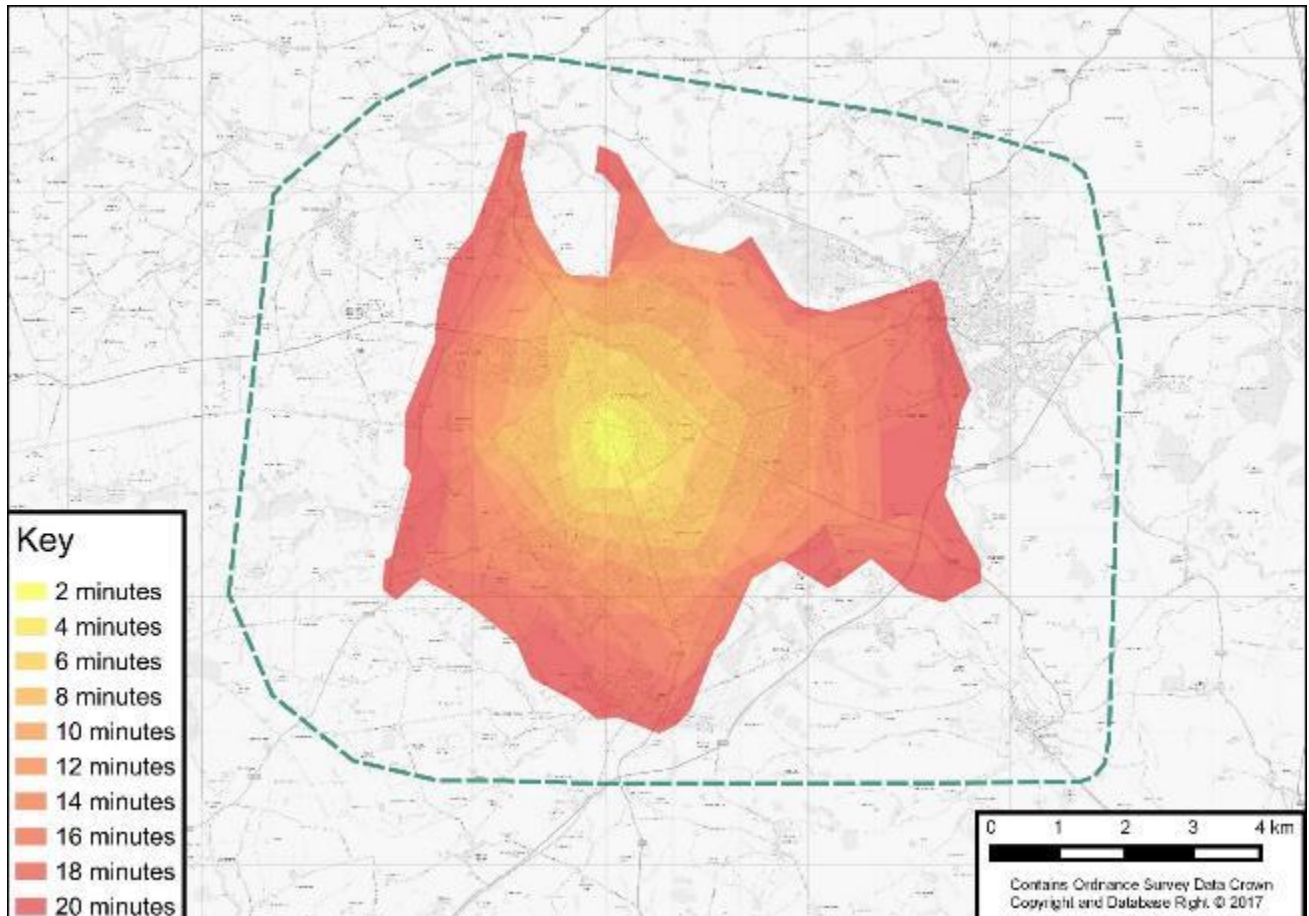
	A59 Harrogate Road		Dragon Bridge		Grimbald Road		Jennyfield Drive		Oatlands Drive		South Park Road	
	Mon-Fri	Mon-Sun	Mon-Fri	Mon-Sun	Mon-Fri	Mon-Sun	Mon-Fri	Mon-Sun	Mon-Fri	Mon-Sun	Mon-Fri	Mon-Sun
2010			188	189								
2011	38	35	231	215	25	24	58	54	8830	6917	30	26
2012					26	25	53	52	8448	7641		
2013	58	55	298	294	21	22	62	59	8652	7833	36	33
2014	58	57	312	310	21	20	65	61	9147	8252	36	35
2015	54	52			14	13	71	66	9041	8090	34	33
2016	52	51			11	11					37	35

Table 22 - Two-Way Average Daily Number of Cycles

CYCLE CATCHMENT

The figure below displays isochrones of two-minute intervals from the centre of Harrogate in terms of how long it takes to travel by bicycle. The figure displays that from this central location all of the urban area of Harrogate is within 20 minutes along with some of the outlying villages. Knaresborough is just beyond this threshold and would take approximately 25–30 minutes to reach by bicycle.

Figure 21 - Harrogate 20 minute Cycle Isochrones



This demonstrates potential for cycling to provide accessibility across the study area should suitable conditions be in place.

CYCLING ACTIVITIES AND INITIATIVES

Cycle Hire and Recycling Schemes

There are currently a number of behaviour change initiatives in place that aim to encourage and facilitate sustainable travel in Harrogate.

As part of the LSTF project (2012-15) the 'Open Harrogate' application was developed, with a view to making travel in and around Harrogate easy and enjoyable. The app is aimed at both residents and visitors, and works to encourage walking, cycling and public transport use by providing journey planning tools and navigation to areas within the town. Interactive maps are accessed via the mobile

app, logging and providing information on the distance the user has cycled or walked, as well as the calories burned and CO₂ produced.

NYCC has recently been awarded almost £1m, through the DfT's Access Fund, for projects to encourage walking and cycling; the Open Harrogate app is set to be developed further using this funding to help improve its function and increase awareness and usage.

A bike hire scheme 'Bike and Go' operates from Harrogate Railway Station; 10 bicycles are available for hire on a short term basis between 06:15 and 19:00 Monday to Saturday and 06:15 and 18:00 on Sundays. Users are charged an annual subscription fee and a daily charge for hiring the bicycles.

Opportunities

- Expand upon cycle share and hire initiatives for the benefit of those who currently do not have access to cycles

Bikeability Cycle Training

The Bikeability program is an initiative of the DfT to provide training to on and off-road cycle users under the age of 16, with the aim of helping them develop better and safer cycling habits. The program is available to all schools in the country and is provided in a series of three levels.

Bikeability is delivered by North Yorkshire County Council in Harrogate as the Local Highway Authority. The DfT release statistics relating to topics such as funding and delivery; the latest bikeability delivery statistics are for 2006 to 2016¹⁰, released in November 2016. These show NYCC were awarded £159,560 in funding in 2016, bidding for 3,989 places. NYCC actually delivered 4,295 places over 2016, approximately 300 more than were bid for.

Cycle Forum

Harrogate Borough Council facilitate an active cycle forum for the Harrogate and district area. The forum membership includes HBC officers from various disciplines, such as planning and sport, Cycle Yorkshire, Sustrans, NYCC highways and transport, local employers and cycle campaign representatives.

The forum has the following aims:

- Consult on the future development of cycling facilities, comment on and influence council policies;

¹⁰ <http://bikeability.org.uk/publications/>

- strategies and plans, including spending decisions that impact on cyclists and the cycle infrastructure;
- Monitor and review the condition of cycle routes and new cycle schemes;
- Promote and encourage responsible cycling in and around the district, working with all authorities and stakeholders; and
- Educate and advise on cycling issues, share information and support cycle training.

Given their aims, the Cycle Forum were engaged with during the baseline stage (see section 2.2) and during the network development process (see section 5).

Cycle Clubs

Harrogate and Knaresborough have a number of cycling clubs, predominantly focussed on cycling for leisure and recreational purposes:

- Wheel Easy were set up in 2006, and offer twice-weekly leisure rides around Harrogate, Knaresborough and North Yorkshire. The club caters for beginners and experienced cycle users, and welcome visitors.
- Cappuccino Cycling Club was formed in 2009, and focuses non-racing on road cycling, offering weekend rides typically covering 50 miles. The club asks that new members are not beginners to road cycling and have a reasonable level of fitness.
- CBAD (Cycle users Beating Anxiety and Depression) aims to help those with anxiety, stress, or depression by providing a cycling community to help bring people together. The group undertake a two hour ride every Wednesday evening, starting from the Stray.
- Harrogate Nova is Harrogate's oldest cycling club, and offer both competitive cycling (time trials, road racing, etc.), as well as non-competitive leisure rides.
- Knaresborough Cycling Club (The Spinners) started in 2014 in the wake of the Tour de France and offer a range of riders to cater for beginners through to experienced cycle users, meeting on Sundays and Thursdays.

Harrogate also has a number of cycling shops and organisations aimed at promoting cycling in Harrogate and the wider region.

- Harrogate-based Prologue Performance Cycling sell high-performance road bikes, offering a full workshop and fitting service and a cycling café. The shop run their own club, which offers physiotherapy, coaching, a range of cycling events, and weekly organised rides.
- Harrogate Cycle Action are a group of volunteers who work closely with and lobby local government (HBC, NYCC, etc.) to improve cycling infrastructure and promote cycling. The group was originally named the Harrogate Cycle Group, and began approximately 10 years ago as a response to a request from HBC for local cycle users to help create a cycle network in Harrogate.
- Hedgehog Cycling was also started in the build up to the 2014 Tour de France, and covers cycling in Yorkshire, including many detailed guides to various cycle routes across the region.

The high number of active cycle clubs that are operating within the study area suggests that there is a cycling culture within the study area. Currently the culture of cycling within the study area is focussed on leisure cycling but there is a potential to use the clubs influence to promote utility cycling within the study area.

Cycle Events

Harrogate and North Yorkshire host a great number of events over the year, from professional competition to amateur and beginner events. The list below is just a small sample of events from 2017:

- Harrogate is the starting place for the annual Struggle event, a gruelling 110-mile route over the Yorkshire countryside started in 2016. The Struggle took place on the 21st May in 2017, with pre-registration already available for the 2018 event.
- The Tour de Yorkshire is an annual three-day road cycling race, started in 2015 following the popularity of the first stages of the tour de France 2014, which were held in Yorkshire. Stage 2 of the 2017 tour finished in Harrogate, as well as hosting the women's race, won by Lizzie Deignan.
- Harrogate is to be the main competition town at the centre of the 2019 UCI World Championships in Yorkshire; Welcome to Yorkshire announced that Harrogate is to be the finish location of all the races, and will also be the start venue for two circuit races. The starts of the other races will be in towns and cities across Yorkshire, including Beverley, Doncaster, Leeds, Northallerton, Ripon, and York.
- British Cycling is the main national governing body for cycle sport in Great Britain, administering most competitive cycling, representing Britain at the world body, the UCI, and selecting national teams. British cycling organise various events for amateurs and beginners as well as professionals, and there are a number of cycle events and planned rides throughout the year in Harrogate and the vicinity.

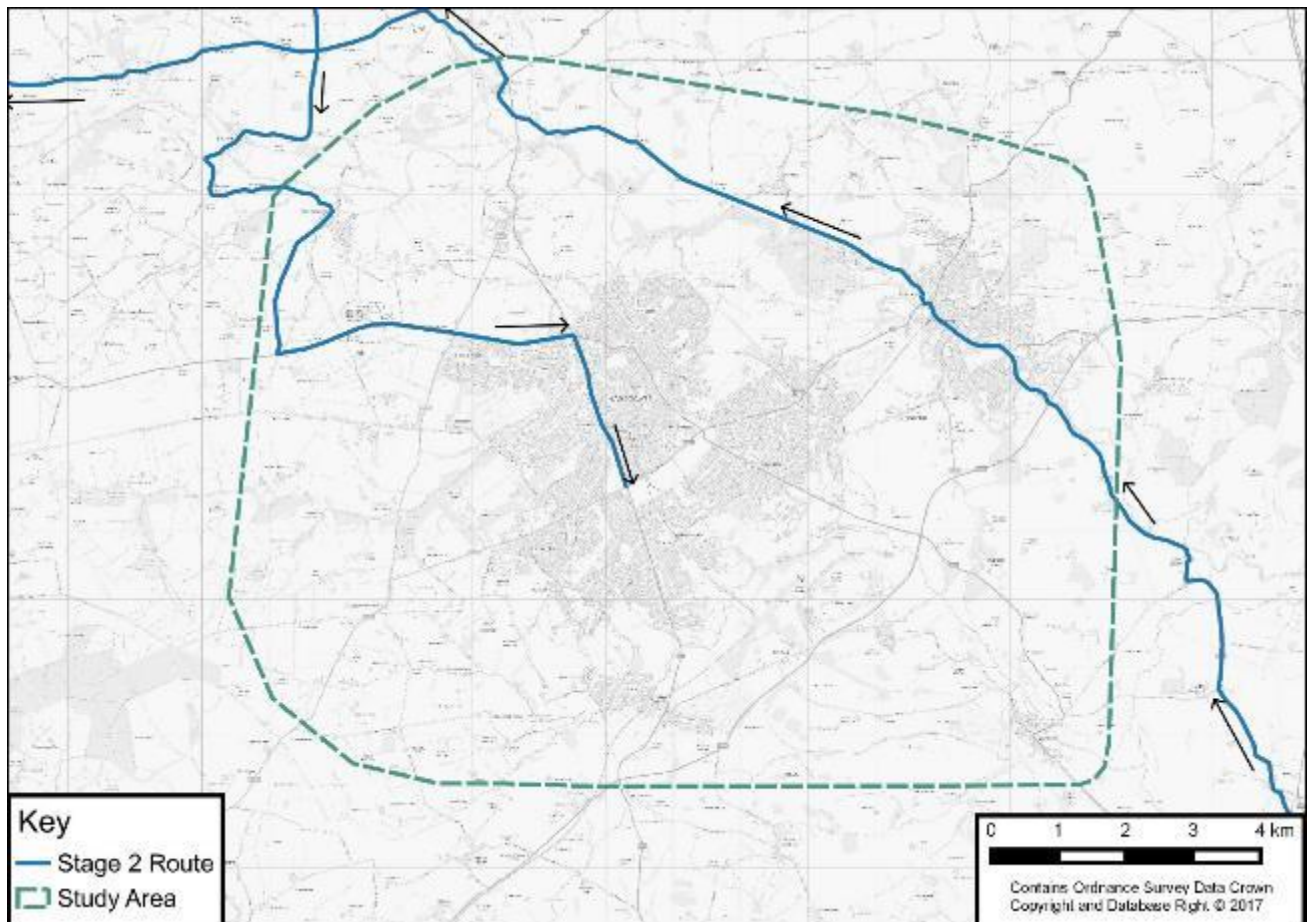
Tour de France Legacy

In 2014, Harrogate was one of the towns on the Tour de France route, significantly increasing its international profile and injecting an estimated £102m into the Yorkshire economy. Following the success of the Tour, the Tour de Yorkshire has become one of the biggest events in the international cycling calendar. Launched in 2015 it has become an annual event with Stage 2 of the April 2017 race finishing in Harrogate; this is expected to have attracted up to 150,000 visitors to the district bringing a local economy boost of between £5-7 million.

Subsequently, the idea for the Tour de Yorkshire arose as a legacy event following the success of the visit of the 2014 Tour de France to the county. The inaugural event was held in 2015, attracting 144 riders in the men's race, 98 riders in women's race, and 1.5 million roadside spectators. The 2016 edition was broadcast in 178 global territories with an estimated 11.4 million viewers – double that of the previous year. Most recently, the 2016 event generated more than £60 million for the Yorkshire economy, with over 2 million roadside spectators in attendance.¹¹ The Tour de Yorkshire is scheduled to take place in April 2017 with Stage 2 travelling through the study area (see Figure 22 -).

Figure 22 - Map of Tour de Yorkshire (2017 Stage 2)

¹¹ <http://letour.yorkshire.com/2016/tour-de-yorkshire-boosts-economy-by-%C2%A360-million>



Yorkshire has also been selected to host the UCI World Road Championships in 2019 which will see international elite cycle users in all road based disciplines competing on the roads of Yorkshire for the world championship rainbow jersey. This is the first time an area rather than a city has won the right to host and the event will inevitably bring cycling Yorkshire once again onto the world stage.

Opportunities

- Capitalise on existing initiatives, events, infrastructure and club structures in an effort to increase cycle participation across the community
- Tour de France has raised the cycling profile within the study area

2.8. WIDER TRANSPORT

SYNERGY WITH OTHER TRANSPORT MODES

The Harrogate district has strong links to the surrounding North Yorkshire area and beyond. The town of Harrogate itself is effectively located on the crossroads of two long distance routes (the A59

and A61) which locally carry a mix of through traffic, traffic with one local trip end, and also entirely local internal traffic.

In addition to local traffic, these routes and the rest of the local highway network are of considerable importance for the movement of recreational traffic; aside from the extensive tourist attractions within the Harrogate district itself, the area is also seen as one of the gateways to the Yorkshire Dales National Park, which attracted 3.62 million visitors in 2015.

The A59 passes along the northern edge of the main built up area of Harrogate, and continues through the centre of Knaresborough. Existing constraints on the A59—including significant congestion leading to delays and unreliable journey times—limit its potential; Transport for the North's (TfN) aim for a strong northern economy relies on improved east-west connectivity, something that will need to be significantly improved if this aspiration is to be realised.

The A61 in this area links Harrogate with Leeds, to the south and provides a connection to the A658, which links to Leeds Bradford Airport, affording opportunities for international travel, employment, and trade.

In regards to sustainable transport, the Leeds-Harrogate-York railway line serves Harrogate town, Knaresborough, and a number of the smaller villages in the south of the district. Good onward rail connections to the rest of the country are provided from Leeds and York, where many major UK cities including London and Edinburgh can be reached within 3 hours.

Public transport in the more rural areas to the north of Harrogate is restricted to the local bus network with some areas experiencing service levels that limit accessibility to essential services, and local service centres, by non-car modes.

Public transport

Figure 23 - Location of Bus and Rail Stations

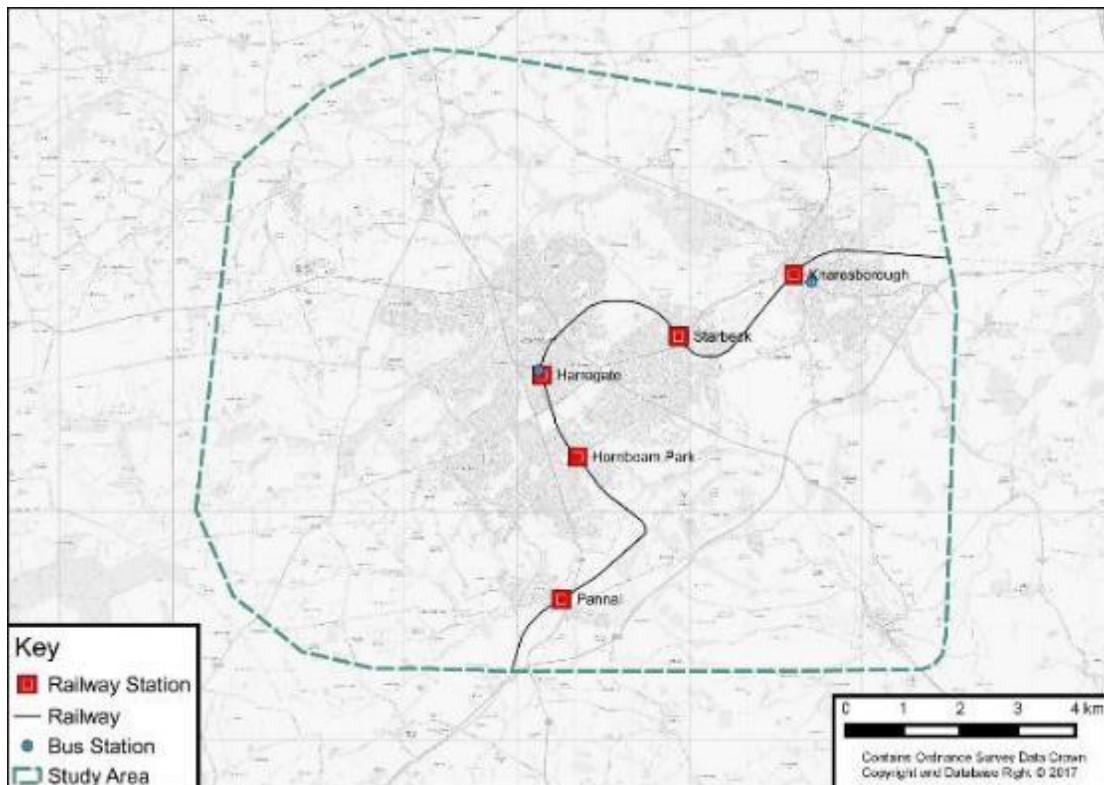
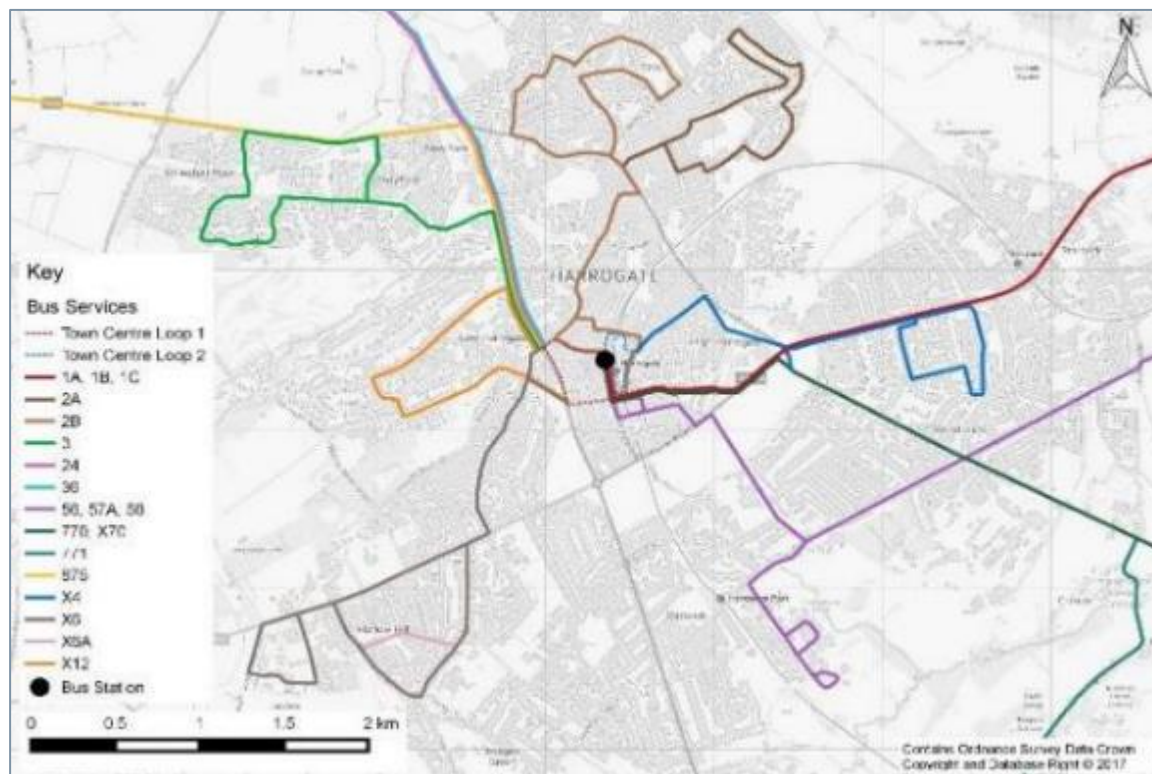


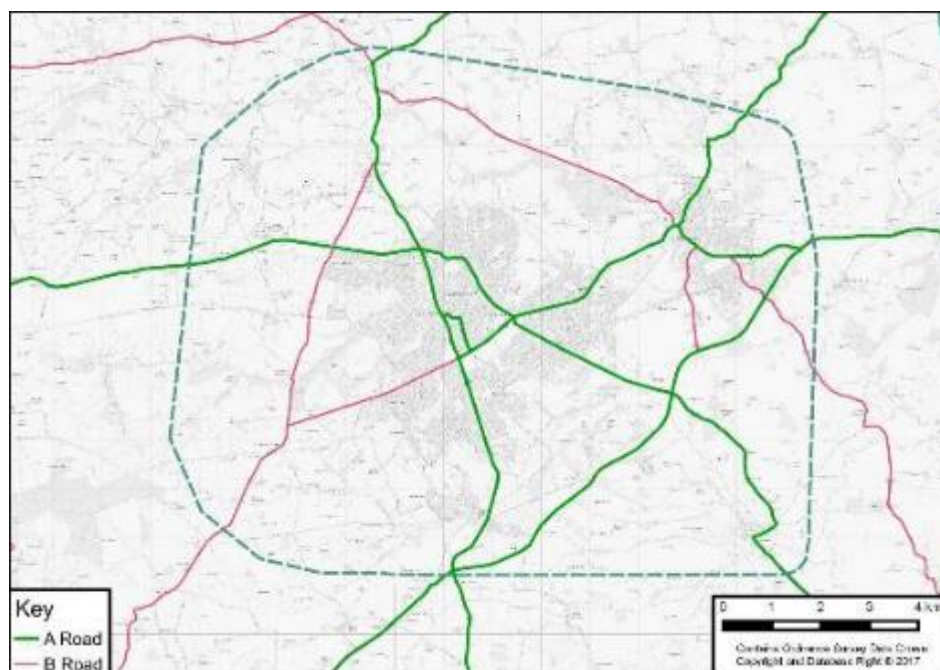
Figure 24 - Bus Network



Highway network

The highway network in the study area includes several A and B-roads that connect the area to wider locations such as Leeds and York, including the A59 and A61.

Figure 25 - Highway infrastructure



Traffic flows

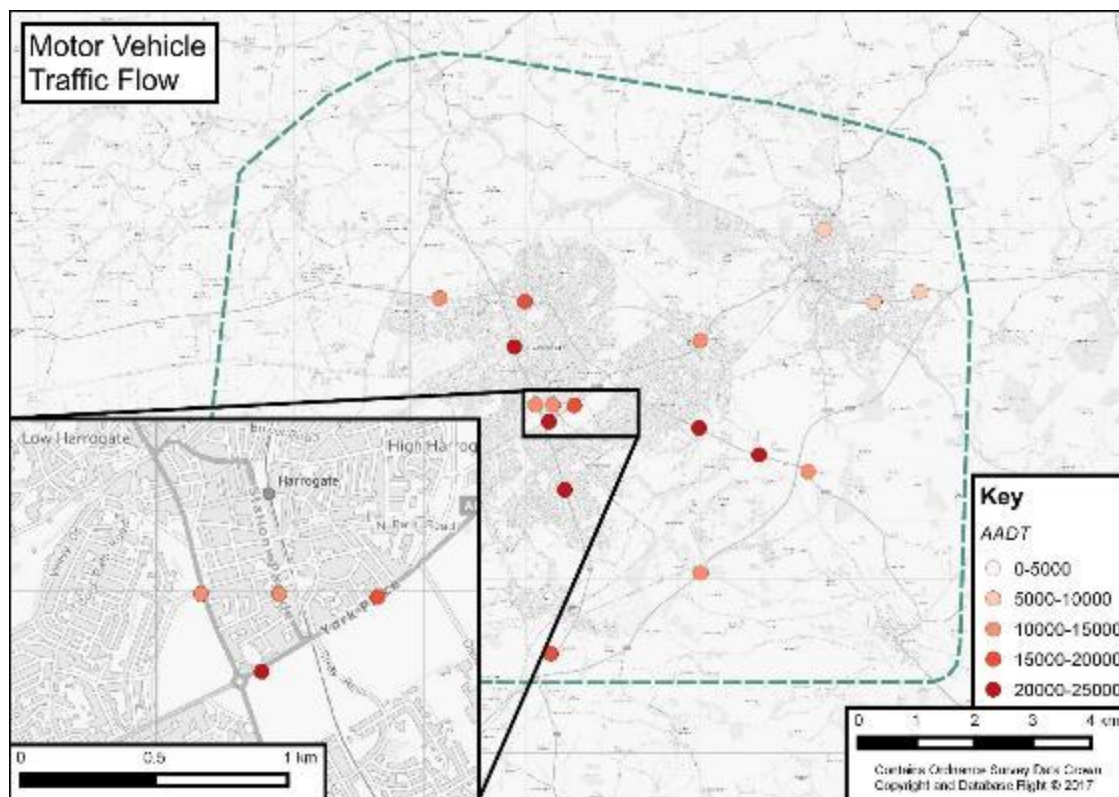
The A59 through Knaresborough carries approximately 9,000 two-way trips per day, although this figure increases significantly when moving toward the Harrogate urban area. A number of the main routes, some of which pass close to Harrogate town centre, carry very high traffic volumes considering the standard of the roads (generally single 7.3m carriageway), resulting in capacity issues that are considered characteristic of the town.

The A61 to the north of the town centre has a two-way AADT of almost 21,000, while the A661 Wetherby Road, to the south east of the town, carries almost 25,000 vehicles per day—the highest flow of all routes surveyed. The York Place approach to the Prince of Wales Roundabout has a similarly high AADT of 24,254; this approach is one of the main routes into the town centre, and is considered one of the most congested areas in the town. The significant congestion issues are expected to result in the declaration of a new AQMA in the vicinity.

The modelled hourly flow plots demonstrate that the busiest sections of the network are:

- A59 between Knaresborough and J47 A1(M);
- A658 between A59 and A661;
- A661 from A658 to Harrogate;
- A59 through Harrogate; and
- A61 north of Killinghall.

Figure 26 – Traffic flows



The plots show that the three routes linking Harrogate to Knaresborough (A59, Forest Moor Rd and A658) carry around 3,600 vehicles in each peak hour; the model also suggests that Forest Moor Road is being used to avoid delay due to the level crossing at Starbeck and congestion on the A661 Wetherby Road.

Given the classification of the roads, there are also what would be considered high flows on the B6165 Ripley Road, from Knaresborough to the A61 north of Harrogate, and on the B6161 Oaker Road/Otley Road, along the western edge of Harrogate town. This suggests that through traffic, as well as traffic travelling to Knaresborough from the north, are using these peripheral routes to avoid congestion on the internal network.

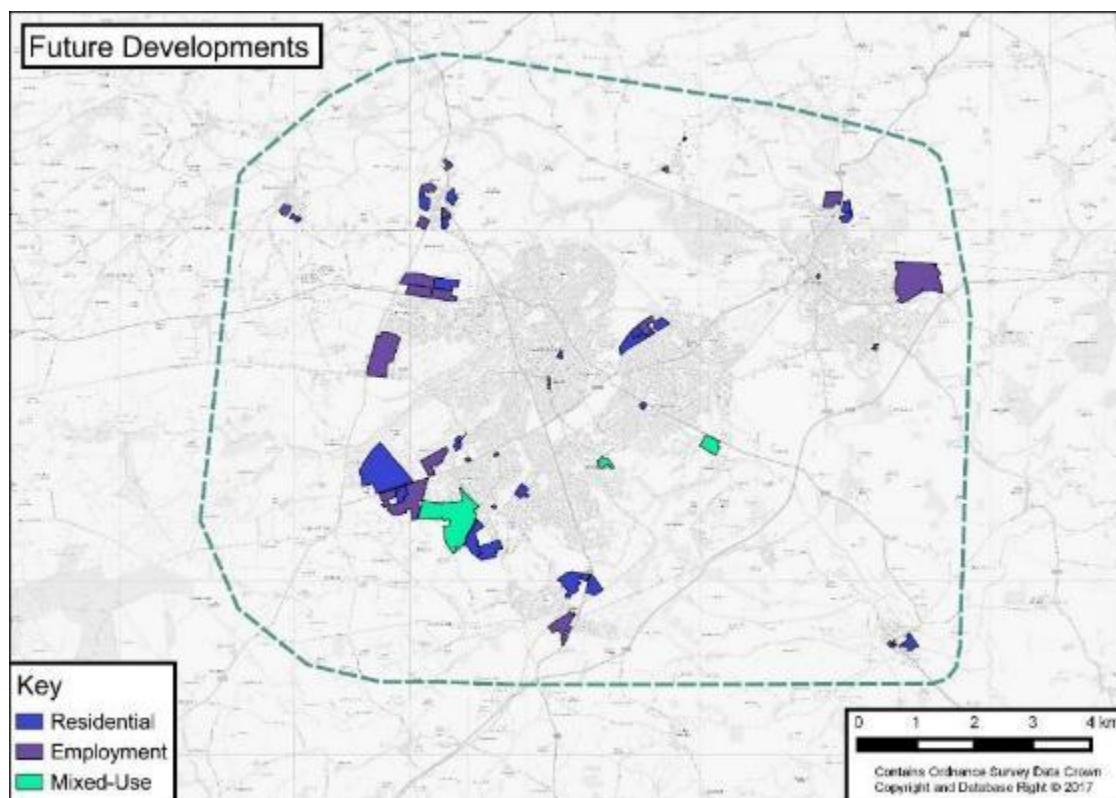
2.9. FUTURE SITUATION

PLANNED AND ASPIRATIONAL GROWTH

Planned and aspirational growth is an important consideration when implementing new cycle infrastructure. New developments may become significant origins and destinations due to size, capacity or influence and therefore a link to the cycle network would be necessary.

COMMITTED DEVELOPMENT SITES

Figure 27 - Committed Development Sites



There are currently 4,500 dwellings and 56,000sqm of employment space with existing planning permission across the Harrogate district, shown in Figure 27 -. Two of the largest sites are Manse Farm and Flaxby Green Park:

Manse Farm

Manse Farm, an urban extension to the east of Knaresborough and located on the A59, has planning permission for the provision of:

- 600 dwellings;
- 2.5ha employment land;
- 2,800sqm retail;
- Primary school; and
- Rail halt.

The site will be accessed via two roundabout junctions from the A59.

Flaxby Green Park

An outline planning application has been submitted for land adjacent to the proposed Flaxby site for development of a business park. Flaxby Green Park is promoted as having the potential to contribute to Harrogate's economic diversification targets over the 13ha site. It is also proposed that a new rail halt will be part of the development, which would provide more sustainable access to the site. Although the site is just outside the eastern boundary of the study area, the development has the potential to have impacts within Harrogate and particularly Knaresborough, and there may be opportunities for synergy with any cycle proposals in the vicinity.

Housing and Employment Growth

The York, North Yorkshire & East Riding SEP sets out a key ambition for doubling housebuilding across the LEP area, meaning that at least 5,000 new homes will be built each year up to 2021 and beyond; Harrogate is identified as one of the growth towns in the A1/A19 corridor and, as such, would be a focus for new development in the region. The Leeds City Region SEP also sets out priorities to deliver growth across the City Region, through an increase in housebuilding to deliver homes as well as supporting economic growth and employment opportunities.

The draft Harrogate Borough Council Local Plan sets out provision for approximately 11,700 new homes and 25 hectares of employment land across the district by 2035 (from a 2014 baseline). This is based on an assessed need for 557 dwellings per annum, and the Council's Employment Land Review, which forecast 7,930 additional jobs across all sectors over the same period.

The Strategic Housing and Economic Land Availability Assessment⁵ (SHELAA), carried out in 2016, states that approximately 5,500 dwellings and 7.8 hectares of employment land is expected to be delivered in Harrogate itself. Figure 27 - illustrates the locations identified for housing development in the Harrogate and Knaresborough area and the locations identified for employment related development.

New Settlement Options

The draft HBC Local Plan proposes the majority of new housing and employment growth in the main settlements, ensuring development is provided in locations considered most sustainable.

However, the draft Local Plan considers that there is insufficient available and suitable sites within these areas to meet development needs. As such, proposals are put forward for the development of a new residential settlement, which will help to meet growth needs within the Local Plan period and beyond; two options are currently being considered for this:

- Land at Flaxby; and
- Land at Hammerton (Green Hammerton / Kirk Hammerton / Cattal).

The Flaxby site is located adjacent to the A59 and A1(M) and is currently a golf course; the draft Local Plan proposes that this would be developed to provide a yield of 3,244 dwellings over 196ha.

The Hammerton site surrounds the village of Green Hammerton and is also located on the A59, 6km west of Junction 47 of the A1(M) approximately half way between Harrogate and York. The Draft Local Plan sets out that the site could accommodate around 2,800 dwellings together with community uses and local employment opportunities.

HBC has already undertaken a significant amount of work regarding infrastructure provision. This has indicated that development of a new settlement at either of the proposed locations would have an impact on Junction 47 of the A1(M).

While neither site lies within the study area, considering the commuting patterns in the near vicinity it is likely that significant growth in either location will result in increased demand for travel into Harrogate.

Wider Strategic Growth

In addition to growth within the Harrogate district itself, consideration has also been given to strategic growth in neighbouring authorities, particularly those that contribute significantly to trips on the highway network within the study area.

Housing and employment growth is set out in Local Plans for the neighbouring authorities of Craven, York, Leeds and Bradford. Planned growth across these areas, excluding Harrogate, includes in excess of 136,000 new houses and over 700ha of employment space. The high majority of new houses and employment space is planned south of Harrogate in Leeds and Bradford (112,100 houses and 635ha of employment space combined). There is also 17,000 houses and 27ha of employment space planned to the east of the study area in York.

Challenges

- The significant planned and aspirational growth intended for the Harrogate Borough has the potential to significantly exacerbate the existing congestion on the local highway network; this could have a number of implications for active modes: for example, by reducing the quality of the urban environment for active travel modes, potentially increasing severance, and decreasing air quality.
- While some of this development, in particular the new settlements at Flaxby and Kirk Hammerton, is outside of the study area, the intended growth is likely to have an impact on the study area through cross-boundary

Opportunities

- Well planned and located growth could significantly benefit sustainable and active travel; The Harrogate Cycling Network represents an opportunity to connect planned and aspirational development sites to existing trip attractors (town centre, employment locations, leisure opportunities, etc).
- Development sites can contribute to offsite sustainable highway improvements, in addition to incorporating the Harrogate Cycle Network within their boundaries.

TRANSPORT SCHEMES AND INITIATIVES

In addition to documented policy objectives, the Harrogate Cycling Infrastructure Plan should also consider existing transport, cycling and right-of-way proposals. There are a number of transport schemes and initiatives of note within the study area which are either programmed or are currently being investigated and option tested. This chapter presents an overview of a number of relevant proposals within the study area.

Highway Schemes

NYCC has submitted a business case to the York, North Yorkshire & East Riding LEP for improvement works at Junction 47 of the A1(M) where it meets the A59, east of Knaresborough. The existing junction suffers significant queuing, particularly on the slip roads, which can reach back to the mainline carriageway in the peak hours. The upgrade, which will include localised widening and signalisation of the junction, is being progressed as a Local Safety Scheme through an application to the Local Growth Fund. The scheme is programmed to be completed by April 2018; however, it is understood that the improvements are only forecast to allow for five years of traffic growth, and that a longer term solution is being investigated that would allow for growth to the end of the Local Plan period.

Although not within the immediate study area, work is currently being undertaken to investigate potential realignment of the A59 at Kex Gill, to the west of Harrogate. This stretch of road, which serves as a key east-west corridor, is vulnerable to landslips, which leads to closures and subsequent diversion routes that can often result in traffic re-routing via Harrogate. The planned improvements at Kex Gill will contribute to the aspiration of improved east-west connectivity in the North, and will result in a more reliable route for freight traffic. However, failure to address the issues currently experienced on the A59 in and around Harrogate and Knaresborough will continue to limit the route's potential.

In April 2017 NYCC submitted a bids for a share of the government's £490m National Productivity Investment Fund (NPIF) to reduce congestion and increase efficiency in West Harrogate. In relation to cycling the main elements of the package are the provision of an off road cycle route along Otley Road between Cardale Park and the Prince of Wales roundabout and the provision of sustainable transport facilities at Cardale Park. In October 2017, the DfT confirmed that the Otley Road scheme would receive £3.2million of government funding, which combined with local contributions would provide a total of £4.6million.

NYCC has commissioned a review of the potential case for a Harrogate Relief Road including previous studies and proposals which identified a range of alignments. A relief road could potential reduce traffic in the centre creating the opportunity to reallocate space, however, depending on route it could also form a potential barrier to movement.

Junction Improvements

NYCC is making numerous improvements to junctions across the study area, in an attempt to alleviate congestion issues at specific locations. Planned improvement locations include:

- Bond End, Knaresborough (part of the Manse Farm development);
- Chain Lane, Knaresborough (part of the Manse Farm development);
- Gracious Street, Knaresborough (part of the Manse Farm development);
- A61 / Kings Road / Crescent Road, Harrogate (Harrogate Convention Centre);
- Oaker Bank / Pennypot Lane, Harrogate;
- Otley Road / Pot Bank, Harrogate; and
- A61 Leeds Road / Burn Bridge Lane, Harrogate (Local Safety Scheme).

While these schemes are designed to improve junction operation at a local level, it is considered that the benefits are likely to be short term and that a more strategic and long term solution is required, as noted in various policy and strategy documents.

Public Transport Improvements

Significant improvements are planned for Harrogate's bus services with the Harrogate Bus Company unveiling a five year vision for public transport in the town, including the introduction of low emissions technology across their fleet.

Also set to be introduced are:

- Smoother integration with other bus and rail services;
- Stronger relationships with local authorities, key employers, schools, retailers, hotels and visitor attractions to encourage more people to switch mode; and
- Advanced ticketing systems including contactless payment, on-board wifi and next stop announcements.

The improvements are to be funded as part of a £2.25m investment by the operator's parent company Transdev, following a successful bid for Government funding.

Urban Realm Improvements

A regeneration project is planned for the Station Parade area, incorporating the railway and bus stations; the scheme will be funded through the YNYER LEP with monies received as part of the Local Growth Deal. Identified as a priority regeneration area, the aim of the scheme is to improve the passenger experience and to open up potential housing and employment opportunities, while improving the perception of the town.

At present, high traffic flows, congestion and slow moving traffic in this area are seen to be eroding the town's appeal; the removal of traffic from the centre of Harrogate would likely benefit this scheme.

CYCLE INFRASTRUCTURE PROPOSALS

Access Fund

In January 2017 NYCC was awarded approximately £1m in funding, through DfT's Access Fund, for its 'Open Yorkshire' project. The aim of this project is to support the implementation of targeted sustainable travel behaviour change strategies to help promote economic growth and reduce congestion, recognising that existing levels of congestion are a barrier to this growth.

One of only 25 schemes across the country to be funded (37 were unsuccessful), Open Yorkshire directly targets Harrogate's urban centre, alongside Scarborough and Skipton, and is based around four core elements:

- Travel behaviour and training;
- Sustainable travel promotion and marketing;
- Sustainable access to public transport and Wheels 2 Work; and
- Cycle infrastructure.

As part of the 'Travel Behaviour and Training' element, key employment sites within Harrogate will be provided with dedicated travel planning support.

Project Element 4 of the Access Fund bid is for cycle infrastructure, although this element will not be provided via the Access Fund, but rather through local sources. Despite this, infrastructure is considered intrinsically linked to the overall bid.

The intention is to develop 'bid-ready' cycle schemes, including feasibility design, assessment of impacts, cost estimating, and an assessment of economic impact. This work contributes directly to this intention by first developing an evidence-based network from which priority schemes will be specified to be taken forward for feasibility assessment.

Harrogate Cycling Delivery Plan

Harrogate Borough Council published a Cycling Delivery Plan for consultation in 2015; at that stage, the emerging plan consisted of a list of schemes (Appendix A) and a proposals map (Appendix B). The Plan was developed through collaborative working between HBC, the Harrogate District Cycle Action group, and the Harrogate Cycle Forum.

The schemes presented vary from aspirational and long term interventions to 'quick-wins', and are described as:

- Major schemes – long-term ambitions to link residential and employment centres to Harrogate town centre;
- High impact schemes – deliverable in the medium term, these schemes complete significant gaps in the existing network;
- Immediate impact schemes – deliverable in the short term, these schemes can make a small but significant difference straight away; and
- Aspirational schemes – for future consideration

The list of schemes presented were adopted by the council as the basis for a programme plan to propose to the DfT (subject to agreement by NYCC). Since 2015 a number of these schemes have been progressed. These schemes and the progression made are as follows:

Major Schemes—these four schemes are anticipated to be delivered as segregated cycle routes, provide free-flow cycle facilities, and include comprehensive signage on and in the vicinity of the route.

- A flagship Knaresborough-Harrogate route along the A59 corridor. Outline feasibility work on this scheme has been completed, and the scheme was proposed to the LEP as an outline expression of interest following rejection by NYCC for LIP funding;
- Cardale Park to Harrogate town centre, following Otley Road (B6162), but looking at alternatives on adjacent side streets. This scheme was accepted for NPIF funding by NYCC and was also proposed to the LEP as an expression of interest. Outline feasibility work was completed as part of the Knaresborough – Harrogate cycle route study;
- Pannal to Harrogate town centre, along the A61, with a possible direct route across the fields from Pannal church, and perhaps in conjunction with 'park and cycle' facilities. The route between Crimble Hall Garden Centre and Fulwith Mill Lane has been secured by NYCC as part of development to the south of Pannal, but the route remains incomplete, requiring a section to the north connecting to Harrogate town centre, and to the south, connecting to Pannal itself; and

- Extend the Nidderdale Greenway to Pateley Bridge. HBC has committed a small sum to assist local groups undertake the required feasibility work, who have raised the majority of the required funds.

High Impact Schemes

- High Bridge to Knaresborough Town Centre link, taking cycle users away from the congested Bond End area. This is considered to be a priority, and will contribute to alleviating the AQMA at this location. This is being considered as part of the Knaresborough - Harrogate cycle route;
- Cardale Park to Green Lane link, using the route of an existing PROW, crossing a number of fields, and on to Green Lane to join with the existing Rossett cycle path. This is also a high priority, but has not yet been progressed, although access to Cardale park is being raised with site promoters through the Local Plan process;
- Harrogate High School, improving access to the school and re-routing the existing path to the main entrance. Considered a priority, and could be undertaken in conjunction with anticipated development at the school. This has not yet been progressed, although is being considered through the Local Plan process in conjunction with various proposed sites in the vicinity;
- North of Jennyfield Link, providing a new link to Jennyfield Drive cycle path, utilising the existing PROW. Considered a priority, but has not yet been progressed;
- York Place Link, providing cycle facilities to link York Place to Coach Road and Park Parade. Considered a priority, but not yet progressed;
- Coppice Drive to Harrogate town centre. Linking from the end of a key off-road cycle route to connect with town centre facilities. Also considered a priority, but not yet progressed;
- Forest Lane Head junction improvements. Part of the Knaresborough to Harrogate flagship route, and considered through the associated Feasibility Study;
- A661 Sainsbury's junction improvements. This has not yet been progressed, but is anticipated to be considered through future development sites in the area;
- Morrison's to Starbeck link, mconsidered an important part of linking Strabeck employment locations to Bilton. This has not yet been progressed;
- Cheltenham Parade / Station Parade link. This is to be considered through Station Parade study work;
- Killinghall to Greenway link;
- Bilton – Ripley Greenway widening; and
- A658 underpass

Short Term / Immediate Impact Schemes—these are considered quick wins. A number of these schemes have already been completed, such as the upgraded signing and removal of 'Cycle users Dismount' signs.

- Harrogate, Knaresborough and surrounding area—cycle parking and storage improvements, as well as signage and information improvements. Considered a priority;
- 20mph zones at all schools, with particular focus on Oatlands Drive at St Aidan's School, and Hookstone Road at Oatlands Infant School and Grove Road School. Considered a priority;
- Beryl Burton Way, completing the sealed surface on Old Bilton Lane. Considered a priority;
- Hornbeam Park South Link and Crossing, providing a new sealed surface on the bridleway to Fulwith Mill, and an improved A61 crossing from Fulwith Mill Lane. Considered a priority, and provides access to the rail station and bus station;

- Yorkshire Showground cycle path improvements. These improvements would be delivered through the extension of the Nidderdale Greenway, but this element is considered a high priority;
- Surfacing Improvements of Bilton to Starbeck Path, resurfacing and ideally bringing the path up to an adoptable standard. Considered a priority;
- Harrogate rail station to Odeon link, creating a link from the station over Station Bridge, and on to the Odeon roundabout. Considered a priority;
- Stray cycle paths to Claro Road, developing a scheme to create a traffic-free route between the Stray and Claro Road and the Greenway. Also considered a priority;
- Queen Ethelburga's Estate to Jennyfield via Killinghall Moor, though a new sealed surface and comprehensive signing.
- North Park Road at the Old Police Station. This will require junction amendments to facilitate cycle users bound for the town centre to remain on the North Park Road cycle lane;
- Valley Gardens route review;
- Regent Parade / Park Parade, providing contra-flow lanes on the one-way sections;
- Greenway Link, from the Greenway to Tennyson Avenue adjacent to no 74;
- Dragon Bridge access improvements;
- Footbridge access improvements, adding ramps to the existing ASDA cycle path; and
- Improve cycle access links to Grove Road Community School, by improving the existing paths adjacent to Elmwood Street and Mayfield Terrace.

Aspirational Schemes—there are three aspirational schemes proposed:

- Other city / town studies, including drawing up a Cycling Delivery Plan for various other areas;
- Boroughbridge Centre to Roecliffe Village, developing a scheme to aid active travel to the employment area on Bar Lane; and
- NCN route 67 improvements from South Harrogate to Spofforth.

The schemes have been used in the development of the HCIP at a network level. The detail of the schemes will be looked at if they are taken forward for feasibility assessment.

3. BEST PRACTICE

3.1. OVERVIEW

This high level review of best practice is not intended to replace or serve as a design standards document, nor to repeat the numerous documents that are already available. Rather, it provides a collection of inspirational and innovative solutions, which, throughout the formulation of the Harrogate Cycling Infrastructure Plan have aided discussion and debate, and were considered for potential adoption.

The best practice review considers different levels of segregation and draws on experience within the consultancy team, as well as a wide range of literature, most notably the following documents:

- London Cycle Design Standards (TfL, 2014);
- Greater Manchester Cycling Design Guidance (TfGM, 2014);
- Handbook for Cycle-Friendly Design (Sustrans, 2014);
- Design Manual for Bicycle Traffic (CROW, 2007)¹²; and
- Cycling Infrastructure Design LTN 2/08 (DfT, 2008).

3.2. FULL SEGREGATION

Full segregation between cycle track, carriageway and footway provides the highest level of service for bicycle traffic and can be implemented as a one or two-way operation. A fully segregated cycle track includes a continuous or near-continuous physical buffer from separating cycle users from general traffic. This type of segregation is more applicable where general traffic flow and/or speeds are higher.

Figure 28 – Fully segregated two-way cycle track (Leeds)

¹² Dutch national design standards for cycle infrastructure



Source: WSP

3.3. HYBRID SEGREGATION

Hybrid segregation features a cycle track that is vertically segregated from the carriageway and footway, also known as a 'stepped track'. This provides less separation and protection than a fully segregated cycle track, however, they provide easier and more flexible access to the kerbside for pedestrians and may be more suitable on streets with higher pedestrian flow and more frontage activity.

Figure 29 – Hybrid segregation (Cambridge)



Source: Local Transport Note 1/12, DfT

3.4. CYCLE LANES AND LIGHT SEGREGATION

Cycle lanes are those that are segregated from pedestrians but not physically segregated from general traffic along the full length of the cycle lane. Where they have physical separation, this can take the form of intermittent objects, such as pre-formed rubber separators, wands or planters within a buffer strip between the general traffic lane.

Figure 30 – Cycle lane with light segregation



Source: WSP

3.5. SHARED SPACE AND PUBLIC REALM

There are a range of situations where cycle users have been provided for within shared space and public realm environments. Of note are the varying levels of definition between the cycle routes and pedestrian areas.

Shared space is designed from the point of view of equality for all users of the public space, giving therefore no preference to one group over another. If priority for cycle users is required, then the approach varies and clearly defined route or alternatives such as cycle streets should be considered.

Figure 31 – Cycle route through a public square (Copenhagen)



Source: www.realdania.dk

3.6. QUIET STREETS AND FILTERED PERMEABILITY

Quiet streets are characterised by more moderate interventions that are appreciated more by cycle users actually using the routes. For example, removal of road markings, formalisation of parking and changes in priorities.

Filtered permeability involves removing through-routes for motor traffic, whilst retaining connections for pedestrians and cycle users.

Figure 32 – Filtered permeability (London)



Source: WSP

3.7. CONTRA-FLOW ROUTES

Contra-flow routes may be introduced on existing or newly created one-way streets. The latter may be introduced to:

- Reduce traffic flows; and
- Enable space to be reallocated to other users.

Figure 33 – Contra-flow route (Odense)



Source: Danish Cycling Embassy

Contra-flow routes will require varying levels of formalisation, ranging from road markings only to light segregation or physical segregation, depending on variables such as traffic volumes, traffic speed, parking and loading activities, which require the need to maintain a clear cycle route, and for attractiveness to cycle users.

Filtered permeability and contra-flow interventions represent cost effective solutions for promoting cycling, and when delivered well can have a significant benefit on improving area porosity by cycle.

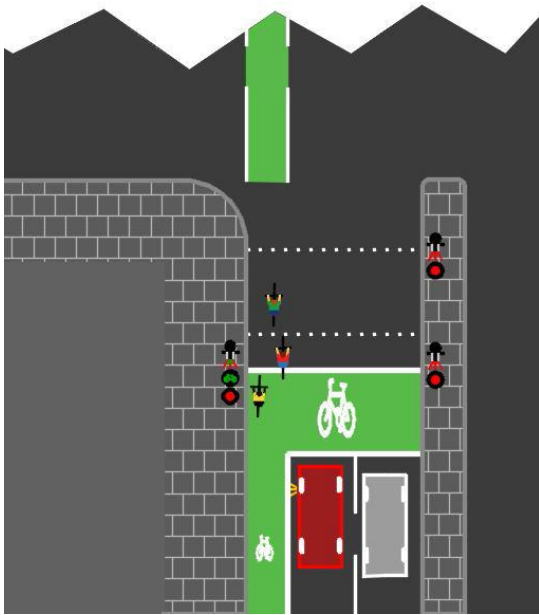
3.8. CRITICAL JUNCTIONS AND PINCH POINTS

A consistent cycle network includes provision for cycle users at junctions, which are often the locations where the greatest potential conflict with other highway users takes place.

Some options for the benefit of cycle users at junctions include:

- Advanced stop lines and cycle reservoirs;
- Early starts (early release) for cycle users;
- 2-stage right turns;
- 'Hold the left' arrangements;
- Cycle bypasses;
- Low level cycle signals;
- All green signal phase for cycle users, 'Scramble' phases; and
- Interventions at pinch points.

Figure 34 – Diagram of early release signal for cycle users



Source: WSP

Each of these options has specific complexities in implementation, often associated with the availability of space or junction capacity. There is no 'one size fits all' solution for junction improvements, but the list above represents an initial palette of options do be explored at urban junctions.

3.9. CYCLE PARKING

In terms of cycle parking, the level of intervention generally relates to either or both of the following aspects:

- Quantity – the number of parking locations, and number of parking spaces in each location; and / or
- Quality – the level of security provided, protection from the elements, and additional or related facilities (for example, cycle hubs)

Figure 35 – Cycle parking duration of stay



The type and nature of parking should be related to the anticipated duration of stay, as shown in Figure 35.

Trip purpose needs due consideration on a site-by-site basis and the need for a range of parking solutions for various land uses (For example, the use of 'bike hangers' in residential areas).

4. DEVELOPING THE CYCLE NETWORK

4.1. OVERVIEW

The development of the cycle network has adopted a 'Dutch style' network development methodology. This approach focused on connecting people to place to ensure that the cycle network responds to the routes people currently take and want to take both now and in the future. The method also helps to identify the long term vision for the network while ensuring investment is focused on the key routes and the needs of cycle users.

The method also aligns with the recently published DfT guidance on producing Local Cycling and Walking Infrastructure Plans (LCWIPs)¹³ in terms of producing a network that is evidence-based and to assist in strategic network development.

4.2. METHOD

The steps involved in the network development are presented below.

STEP 1 – DEFINE AND UNDERSTAND THE STUDY AREA

A process of 'baselining' of the study area was undertaken in order to understand travel movements and demographic variations, whilst a study area review was undertaken in order to understand the existing issues, physical constraints and topography.

This detailed understanding of the study area in Chapter 2 of this report.

STEP 2 – IDENTIFY KEY ORIGINS AND DESTINATIONS

Using data collected in the baselining exercise, the audit and local knowledge, key origins and destinations were plotted. These included:

- Residential areas – proxy locations were used for residential areas;
- Public transport interchanges – these are both origins in terms of people arriving in the study area and destinations people use to travel to wider locations.

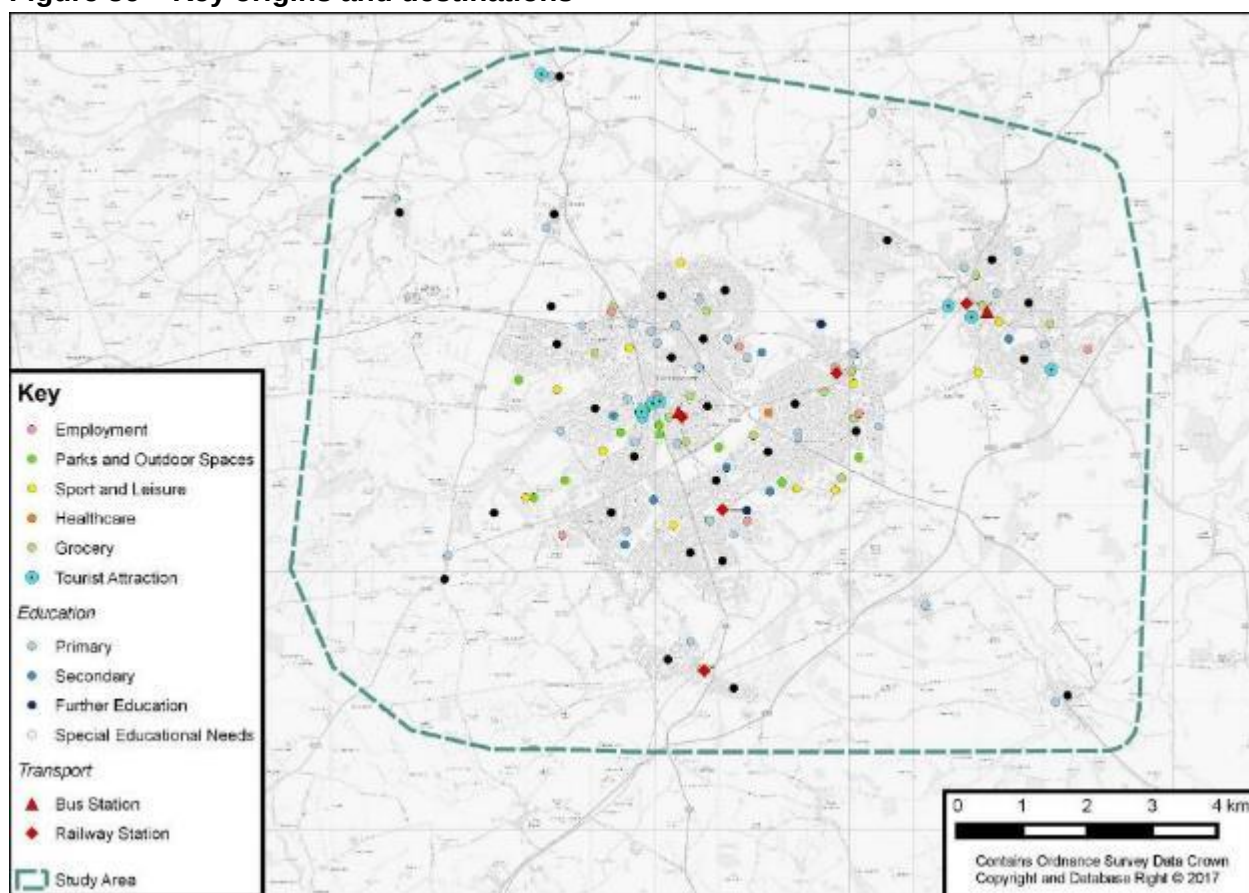
Again, using the evidence base, key destinations were plotted. These included:

- Public transport interchanges (as above);
- Principal retail areas;
- Employment concentrations;
- Large grocery shops;
- Hospitals;
- Tourist attractions; and

¹³https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/607016/cycling-walking-infrastructure-technical-guidance.pdf

- Educational institutions.

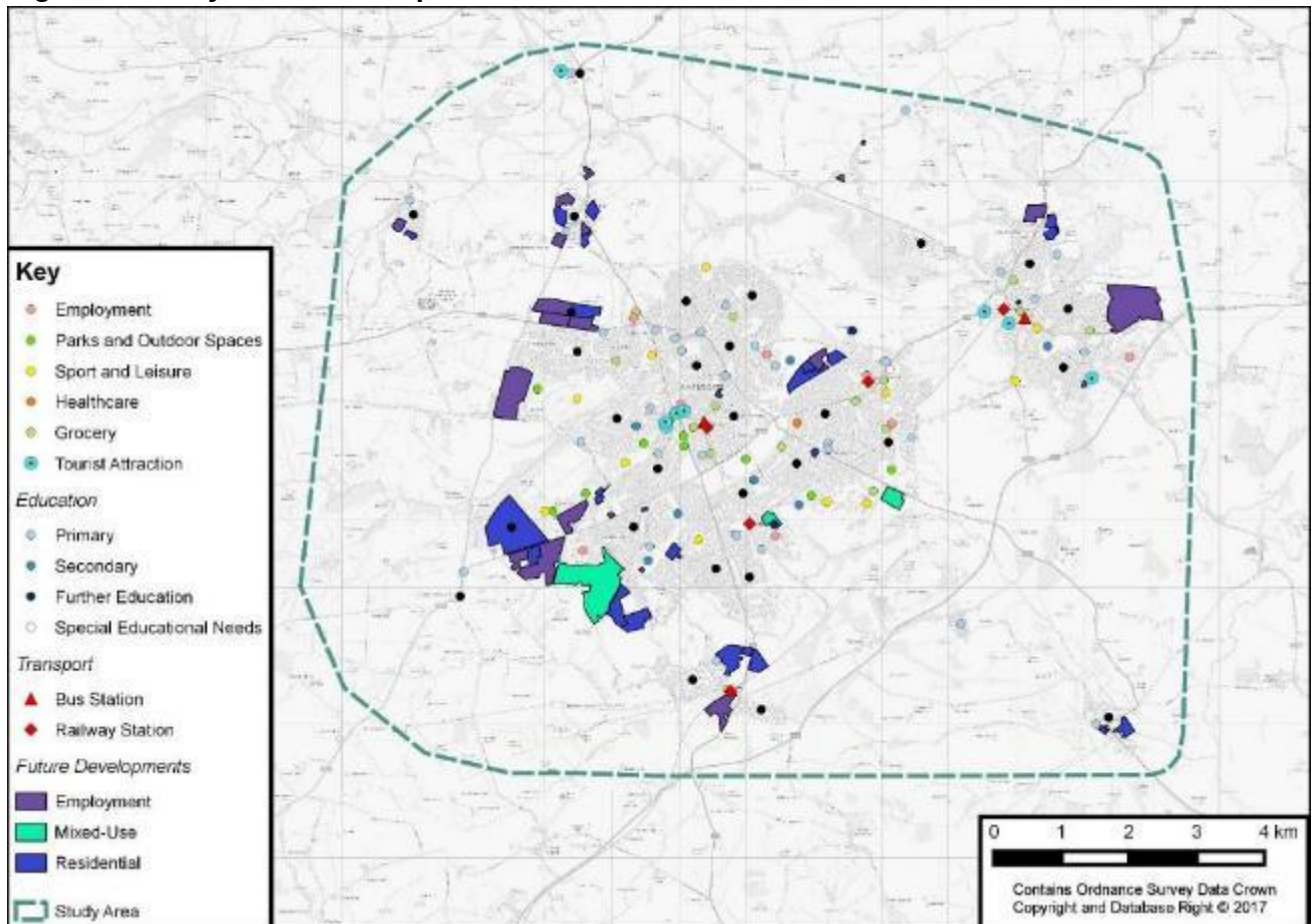
Figure 36 – Key origins and destinations



STEP 3 – IDENTIFY KEY FUTURE DEVELOPMENTS AND INFRASTRUCTURE

Identifying future land use development and infrastructure is important in terms of understanding where future origins and destinations may be. Understanding the location and proposals allows the network to be developed in a way that links these sites and makes the most of planned infrastructure.

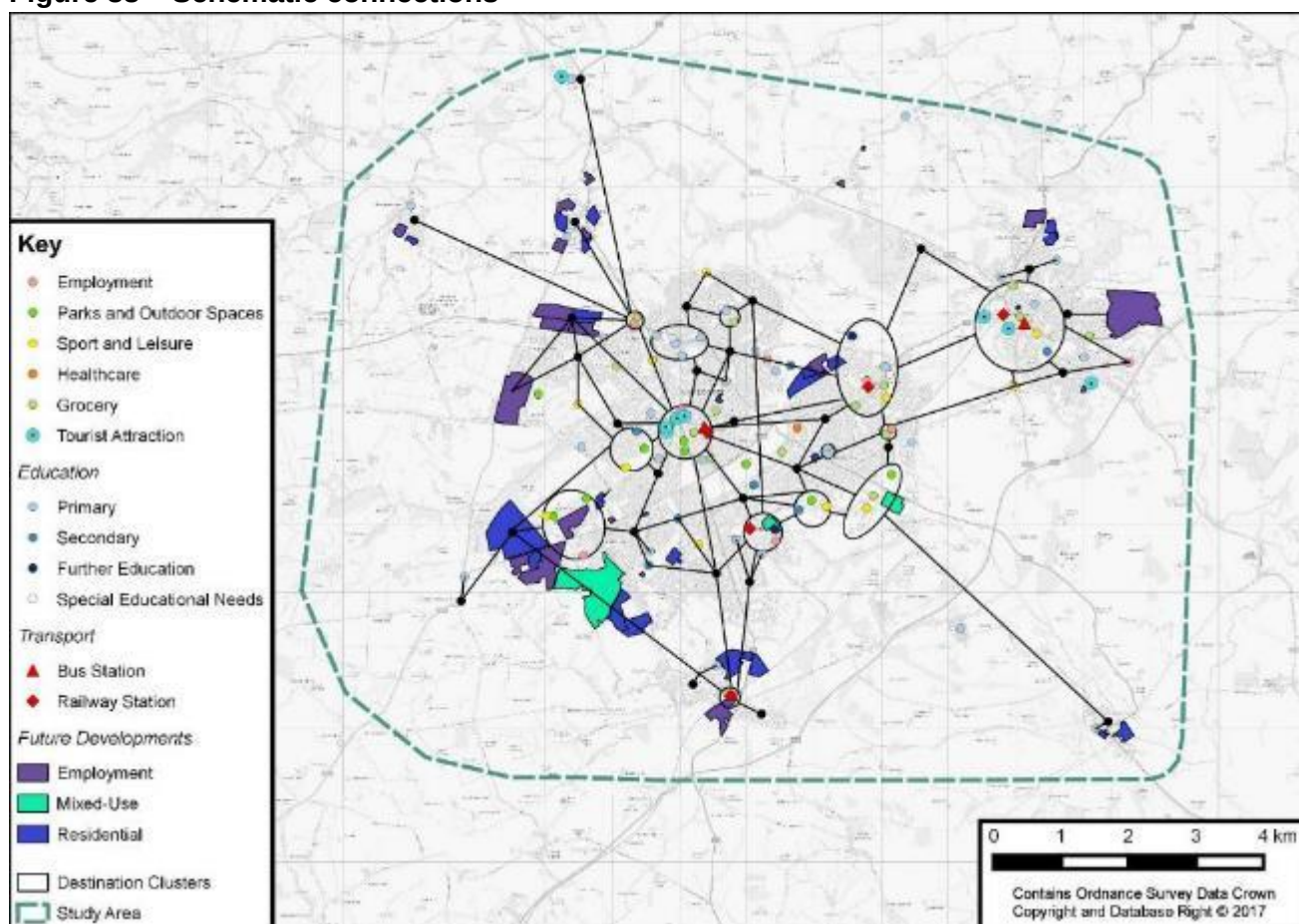
Figure 37 – Key future developments and infrastructure



STEP 4 – SCHEMATIC CONNECTIONS BETWEEN ORIGINS AND DESTINATIONS

As shown in Figure 38 straight lines between the key origins and destinations were drawn to create a schematic web network. These represent the most direct desire line paths for cycle users between points and are, at this stage, irrespective of existing transport networks or constraints. Parallel lines or lines in close proximity to each other were combined. Origins or destinations in close proximity were clustered to help simplify this approach.

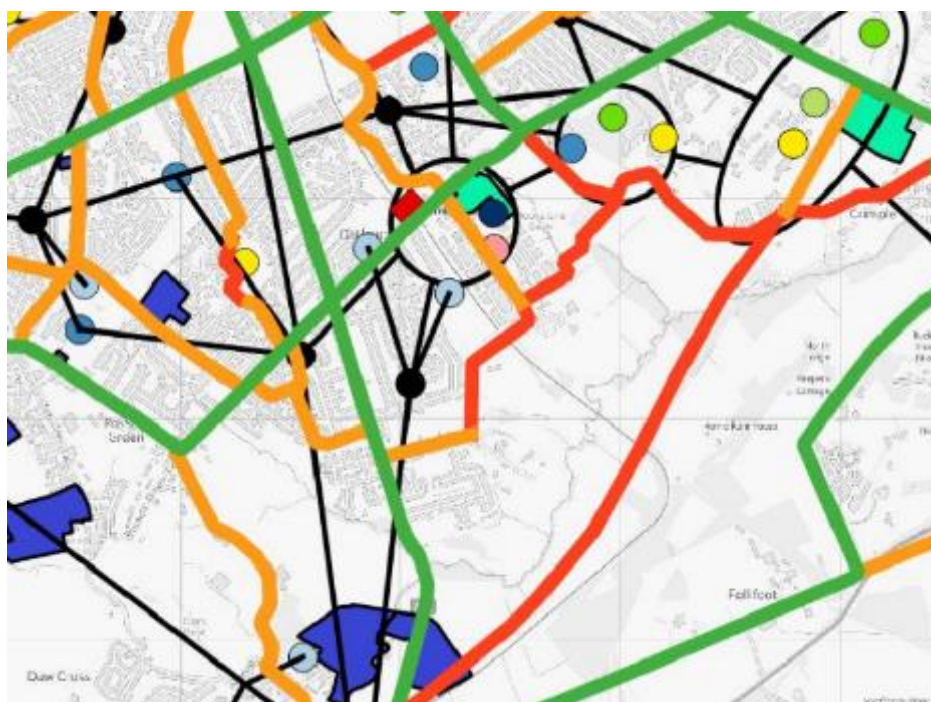
Figure 38 – Schematic connections



STEP 5 – IDENTIFY ROUTES SERVING THE SCHEMATIC NETWORK

Potential route alignments were plotted, following the schematic connections identified in Step 5 as closely as possible. The routes take into account existing roads, paths and structures but in some cases disregard existing traffic management restrictions such as one-way orders.

Figure 39 – Routes serving the schematic network



STEP 6 – CONSIDER A ROUTE HIERARCHY

From reviewing best practice and through knowledge and experience of established cycle networks it was recognised that a cycle network hierarchy may be appropriate. Within this hierarchy the type of infrastructure provided would vary both depending on the links' position in the network hierarchy, and on the type of link, where it connects to, and how it will be used. As a result, the network has been categorised in Table 23 below.

Table 23 – Draft network hierarchy

Network element	Characteristics
Primary	▪ Different cycle users, based on confidence level, experience, age, demographics, trip purpose ▪ Different types of bikes, including standard, recumbent, trailers, cargo bikes, disabled user cycles ▪ High volumes of bicycle traffic ▪ Through, internal and inbound-outbound traffic ▪ Cater for existing non-cycle users
Secondary	▪ Lower volumes of bicycle traffic than Primary ▪ Increase density of network ▪ Ensure local access to origins and destinations from the primary network ▪ Provide quieter routes for less confident cycle users

Town Centre Cores

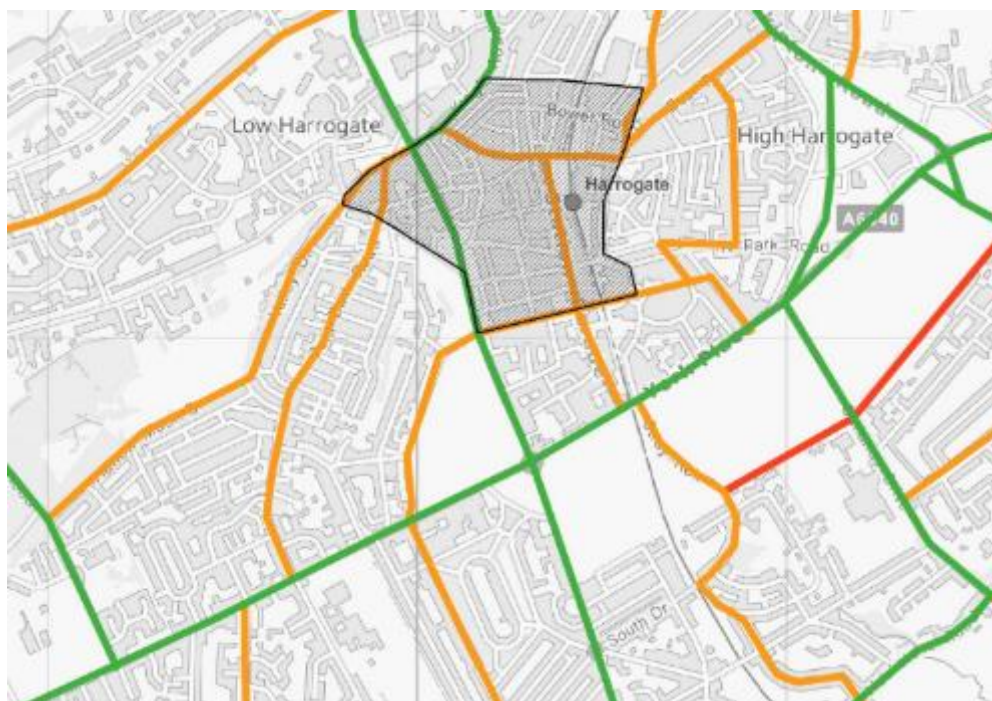
- High levels of permeability and priority for cycle users and pedestrians

STEP 7 – PRODUCE DRAFT CYCLE NETWORK

The draft cycle network is produced with links categorised based on the network hierarchy established in Step 6.

While producing the draft network it was decided to define the Secondary Network depending on whether it was within a highway corridor or not, to account for the range of off-highway connections within the area, such as the Greenway network. Although they have a primary leisure function, they are also used for utility trips.

Figure 40 – Excerpt of the Draft Cycle Network



STEP 8 – VALIDATION AND REVIEW

The emerging draft network plan was then reviewed against the existing cycle network and infrastructure provision. It was also reviewed against proposed cycle and other transport infrastructure proposals and strategies. This exercise allowed us to compare differences and make adjustments where appropriate.

The validation and review was based on the baseline work, site visits, local knowledge (through the Stakeholder Workshop – see Chapter 5), and a review of connectivity between key origins and destinations.

The Propensity to Cycle Tool (PCT)¹⁴, as recommended by the DfT guidance, was also used to validate the network. The PCT is intended to help plan and prioritise investment in cycling by demonstrating where cycling has the greatest potential to grow, and also to assist in calculating the resultant wider benefits to society. The PCT produces outputs for five scenarios:

- Census 2011: This represents the reported rates of cycle commuting as of March of that year.
- Government Target: This scenario represents a doubling of the level of cycling in England, as based on the UK government's proposed target.
- Gender Equality: This scenario illustrates the increase in cycling that would result if women were as likely as men to cycle for a given trip.
- Go Dutch: This scenario is considered to represent the results were English people as likely as Dutch people to cycle a trip of a given distance and level of hilliness.
- Ebikes: This scenario models the additional increase in cycling that would be achieved through the widespread uptake of electric bicycles.

The PCT also allows the user to similar where potential flows are likely to be allocated onto the existing highway network.

STEP 9 – PRODUCE FINAL NETWORK

The final step is the production of the final network which is covered in Chapter 6.

¹⁴ <http://pct.bike/>

5. STAKEHOLDER ENGAGEMENT

5.1. OVERVIEW

Stakeholder engagement has been a key part of this work and it was referenced in Chapter 2 how during the baseline process the project team engaged with key stakeholders, such as NYCC and HBC officers and the Cycle Forum. The input at the baseline stage allowed the project team to gain a detailed insight in terms of challenges and opportunities for developing a cycle network in the study area.

Following the development of the draft cycle network, an external workshop was organised with the following objectives:

- To gain stakeholder input on the draft cycle network; and
- To identify short term priorities.

The engagement formed part of Step 8 of the network development process in terms of stakeholders helping to validate and review the draft network developed by the project team. The stakeholders can contribute a range of local knowledge and experience to add a layer of detail to the network development process that would not be possible to achieve by the project team.

The attendees were invited stakeholders from NYCC and external organisations with some of them having been involved during the baseline engagement, such as officers of HBC and Cycle Forum members. Other stakeholders had not previously been engaged but were identified by NYCC and HBC as being important to the development and delivery of the cycle network.

The stakeholders were allocated onto one of three tables at which they would participate in group exercises and discussions around the draft network and priorities.

This section provides a summary of the key outputs of the workshop with a full summary note included within the appendices.

5.2. DRAFT NETWORK REVIEW

NETWORK HIERARCHY DEFINITIONS

The network hierarchy definitions that were presented at Step 6 of the Network Development Process were presented to stakeholders for their consideration.

There was broad agreement with the hierarchy with a number of additions also suggested:

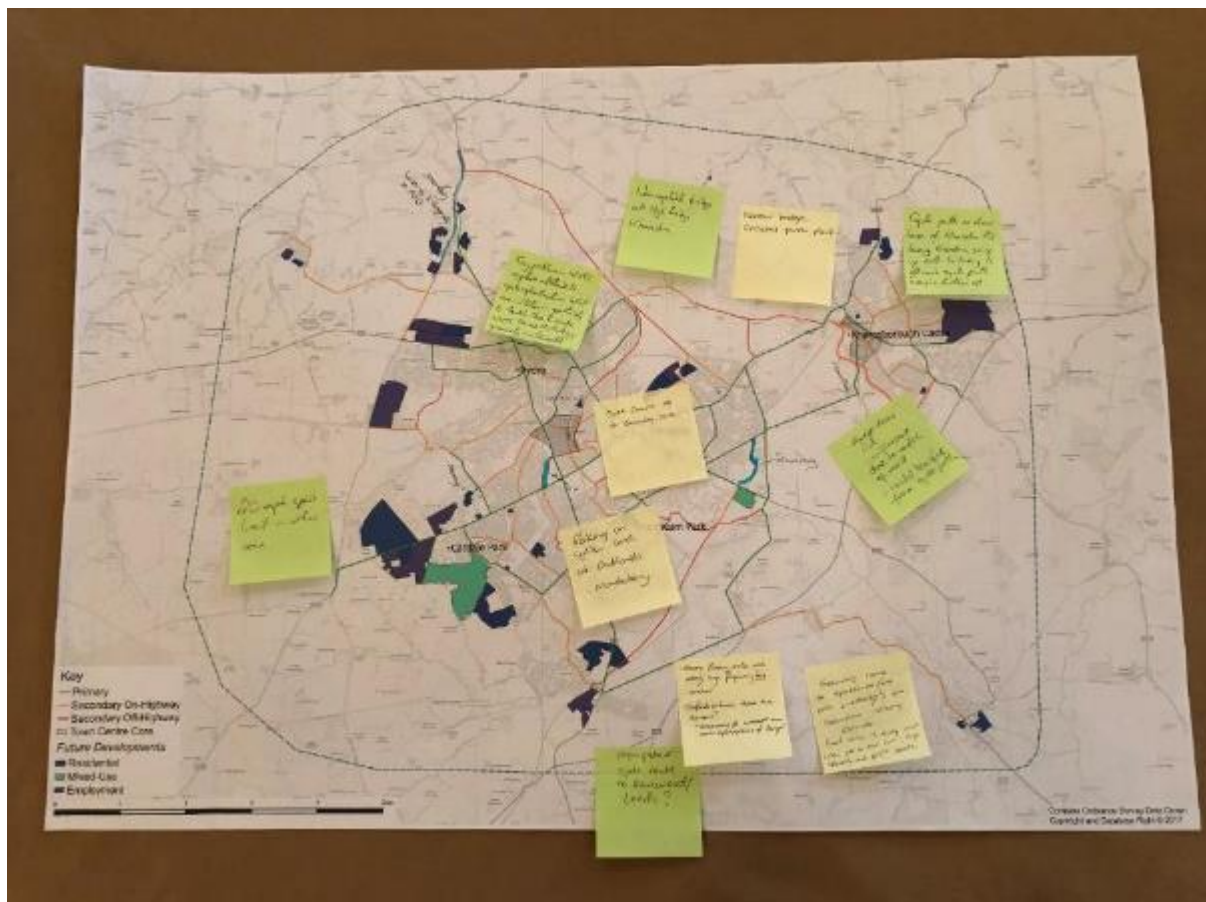
- Stakeholders emphasised how the primary network has to appeal to non-users.
- In particular, appealing to parents who would consider the network safe for them to use with their children.
- Linked to the above point, it was also highlighted how the network should cater for people aged '8-80'.
- Stakeholders also quoted how the network should be designed 'for a 12-year-old' or children in general to be able to cycle on their own with this being considered safe by parents.
- Examples of this principle being applied in the Netherlands were highlighted.

- The primary network should also be direct and not require unnecessary deviations away from the shortest route.
- The routes should also be reinforced by consistent signage.
- Connections to public transport hubs were viewed as a key element of the primary network.
- The primary network should aim to be on routes with a low gradient where possible to mitigate this barrier to cycling.
- Cycle parking was frequently noted by stakeholders as being an important part of the town centre core package.
- In terms of future-proofing the network, considerations such as e-bike charging points should also be included.
- A division of the primary network into primary: utility and primary: leisure was discussed.
- The importance of soft measures to support the hard, infrastructure was a theme that underpinned many of the discussions.

NETWORK

When reviewing the draft network, the stakeholders were asked to record on A1 plans any additions or amendments to the draft network. Figure 41 displays an example from one of the tables of draft network annotated directly onto the plan or with notes.

Figure 41 – Group network exercise



5.3. NETWORK PRIORITIES

For the second part of the workshop, stakeholders were asked how they would prioritise the draft cycle network. Stakeholder input was gained through two exercises, the first around priority themes and the second around specific links or junctions.

THEMATIC PRIORITIES

Firstly they were presented with four themes and asked which they would prioritise:

- Primary network;
- Secondary network;
- Key junctions; and
- Town centre cores.

Stakeholders were given five dots each and was asked to place them on which theme they would prioritise and they could weight them accordingly. Each stakeholder was also given the opportunity to add comments, using post-it notes, of why they chose to prioritise a particular theme and if they thought another key theme was missing.

Figure 42 – Priority Themes

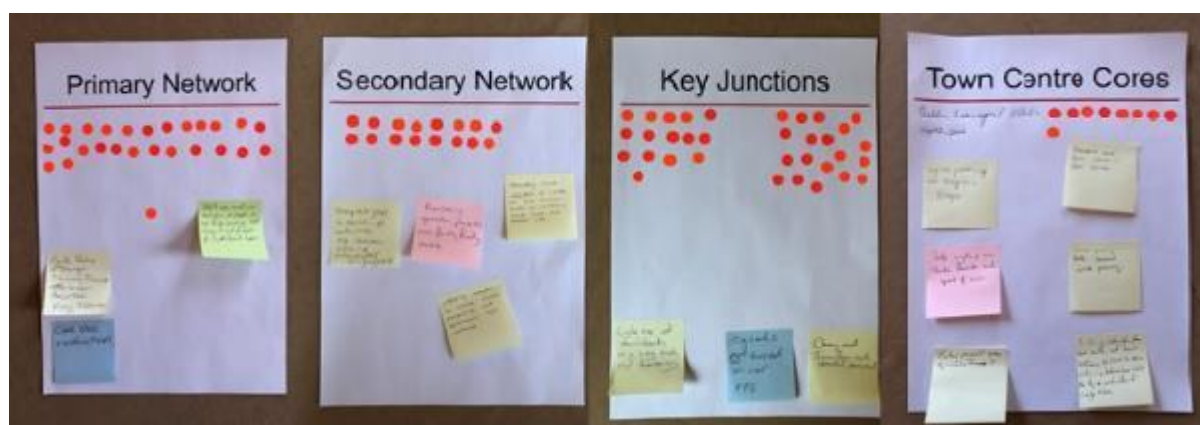


Table 24 – Priority Themes percentages

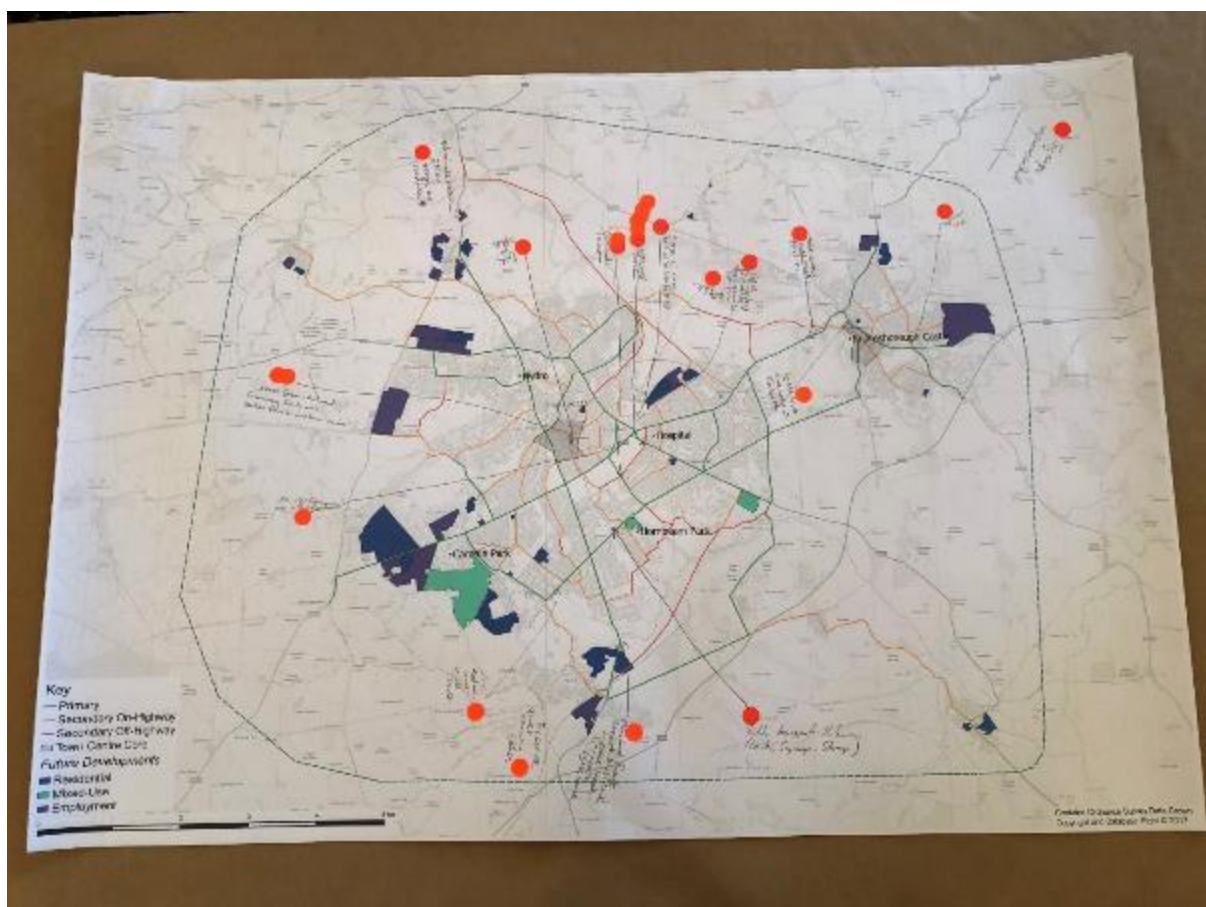
Theme	Percentage
Primary Network	31%
Secondary Network	19%
Key Junctions	40%
Town Centre Cores	10%

The figure and table above show that Key Junctions was seen as most important followed by the Primary Network.

SPATIAL PRIORITIES

The next stage in the priority exercise was for attendees to specify which particular links or junctions they felt should be prioritised in the short-term of the next 2–3 years if funding should become available. Again, each stakeholder was given five dots to place on the plans. They could either put them at different locations or add them to the same location. Figure 43 displays the plan from one of the groups showing a range of locations indicated as being priority, with some places given a clearer priority with clusters of dots. Stakeholders were also asked to annotate the plans to add any comments or specifics they felt should be included on the links or junctions they wanted to be prioritised.

Figure 43 – Network priorities



6. RECOMMENDED NETWORK

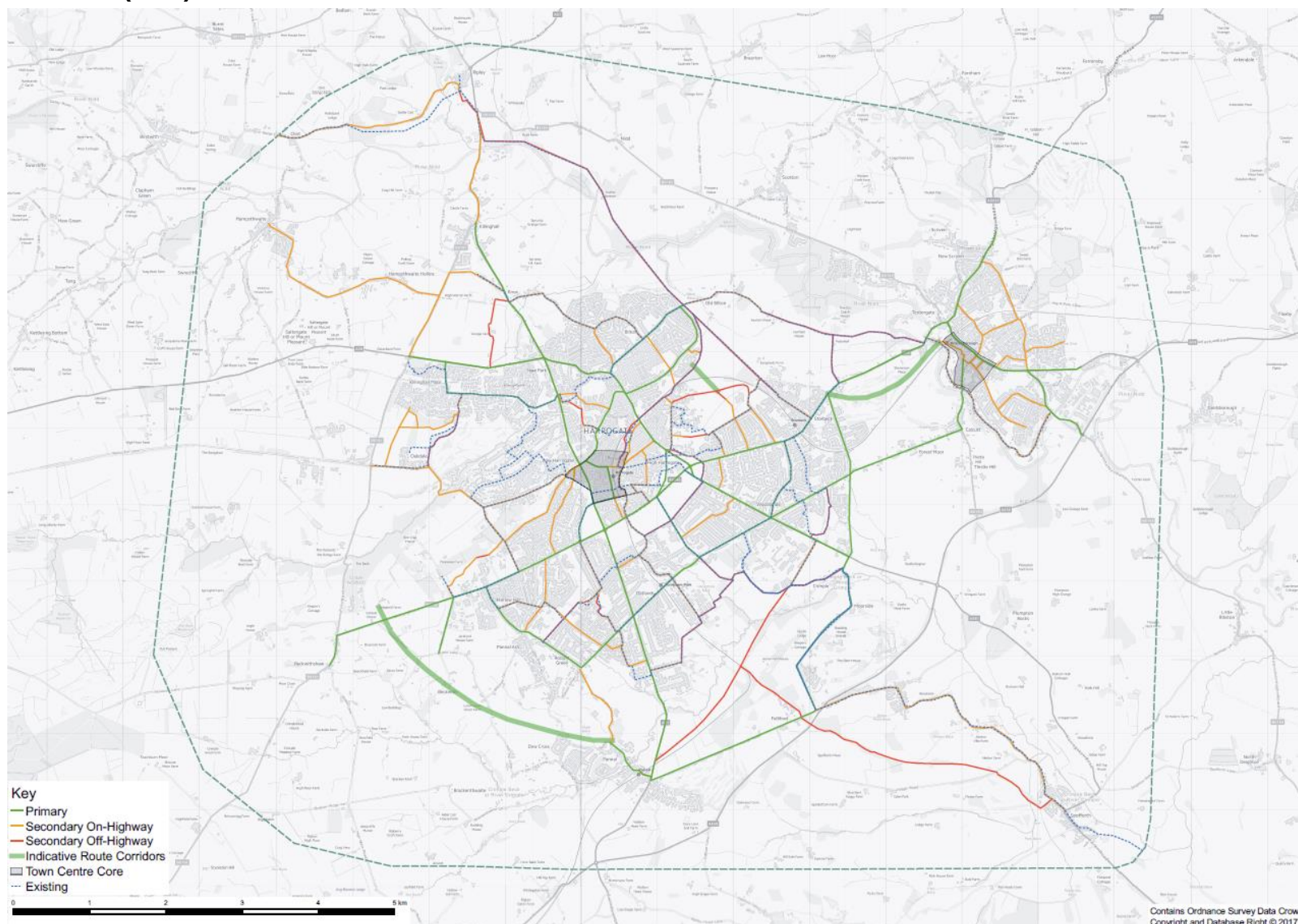
6.1. INTRODUCTION

All of the contents of the previous five chapters have influenced the contents of this chapter which presents the recommended cycle network, priorities for implementation and details of the network hierarchy and types of intervention.

6.2. FINAL NETWORK

The Final Network is shown on the following page.

Figure 44 – Final (draft) Network



6.3. NETWORK HIERARCHY

Taking into account the suggestions from the stakeholders, the draft network hierarchy that was presented in Step 6 has been amended with the additional characteristics shown below in italics.

Table 25 – Network hierarchy definitions

Network element	Characteristics
Primary	▪ Different cycle users, based on confidence level, experience, age, demographics, trip purpose ▪ Different types of bikes, including standard, recumbent, trailers, cargo bikes, disabled user cycles ▪ High volumes of bicycle traffic ▪ Through, internal and inbound-outbound traffic ▪ Cater for existing non-cycle users ▪ <i>Cater for people aged '8-80' to be able to cycle safely</i> ▪ <i>Direct, following the shortest possible route</i> ▪ <i>Low gradients where possible</i>
Secondary	▪ Lower volumes of bicycle traffic than Primary ▪ Increase density of network ▪ Ensure local access to origins and destinations from the primary network ▪ Provide quieter routes for less confident cycle users (<i>while primary network is being developed</i>)
Town Centre Cores	▪ High levels of permeability and priority for cycle users and pedestrians ▪ <i>High levels of cycle parking availability</i>

6.4. DIFFERENT TYPES OF INTERVENTION

In order to achieve the network based on the hierarchy defined in the previous section it is necessary to reference how different types of intervention will be required that take into account opportunities and constraints of different parts of the network.

For example, the primary network covers a range of different types of highway environment – from arterial A-roads to town streets – and the type of intervention required to achieve the characteristics of what the primary network should be will vary.

The best practice review brought together a range of techniques for developing and cycle network from the UK and beyond and this has fed into the types of intervention recommended.

Table 26 presents four types of intervention that are based around the level of segregation of cycle users from other modes, both vehicle and non-vehicle traffic. The details of what could be included under each type of intervention is also presented.

Table 26 – Types of intervention

Reference	Type of intervention	Details
-----------	----------------------	---------

A	Full segregation	Cycle track with continuous physical segregation from carriageway and footway
B	Hybrid segregation	Cycle track vertically segregated from the carriageway and footway
C	Dedicated lanes and light segregation	Mandatory or advisory cycle lanes Intermittent physical segregation Reduced general traffic speeds Centreline removal Parking removal Buffer lane at parking locations
D	Sharing with other modes	Reduced general traffic speeds Filtered permeability to restrict general traffic movements Cycle symbols Contraflow cycling permissions

Table 27 applies the types of interventions presented in Table 26 to the primary, secondary and town centre core parts of the network. At the same time, the different types of environment are referenced with the type of intervention relating to whether the environment has more of a place or movement function.

Table 27 – Network interventions

	Place						Movement	
	Town square	Town street	High street	Local street	Rural road	Off-highway path	Connector	Arterial road
Primary	D	C, D	B, C, D	C, D	—	—	B, C, D	A, B
Secondary (on highway)	D	C, D	B, C, D	C, D	C, D	—	B, C, D	—
Secondary (off highway)	—	—	—	—	—	C, D	—	—
Town centre core	D	D	D	—	—	—	—	—

The output of this table represents the desirable level of intervention for the primary, secondary and town centre core parts of the network within the range of environments that the network covers.

The network hierarchy and the types of intervention presented above will be used where possible to inform the development of ongoing or future schemes by NYCC. For example, developer schemes, the recently awarded NPIF funded scheme on Otley Road or the potential Harrogate Relief Road.

6.5. DRAFT PRIORITIES

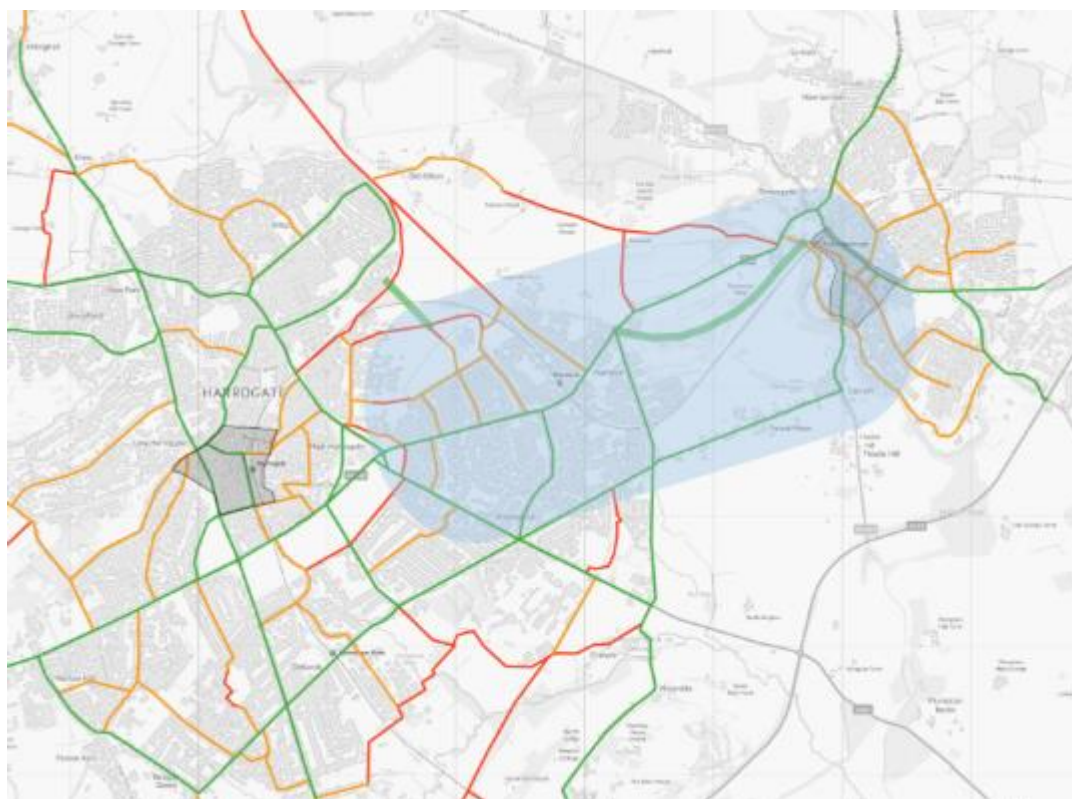
The following parts of the network were proposed as draft priorities for taking forward to feasibility assessments to feed into any bidding opportunities. The draft priorities were presented to NYCC for comment and discussion. The priorities are presented as corridors within which a range of route options could be considered. It is envisaged that the DfT Route Selection Tool¹⁵ would be utilised to determine the most suitable route within these corridors as part of the feasibility work.

The following tables and plans provide information on the priority corridors along with the rationale which links back to the evidence base collected through the project.

Corridor	Rationale
Harrogate to Knaresborough	- Stakeholder input - Future predicted increase in demand for movement between the two towns - Starbeck is at the centre of this connection and is both a key origin and destination, such as the railway station - Key destinations such as Harrogate Hospital, Betty's and Taylor's located along this corridor - Development sites in Knaresborough are likely to create demand for movement to/from Harrogate - Propensity for cycle trips along this link are some of the highest in the area based on current and future scenarios

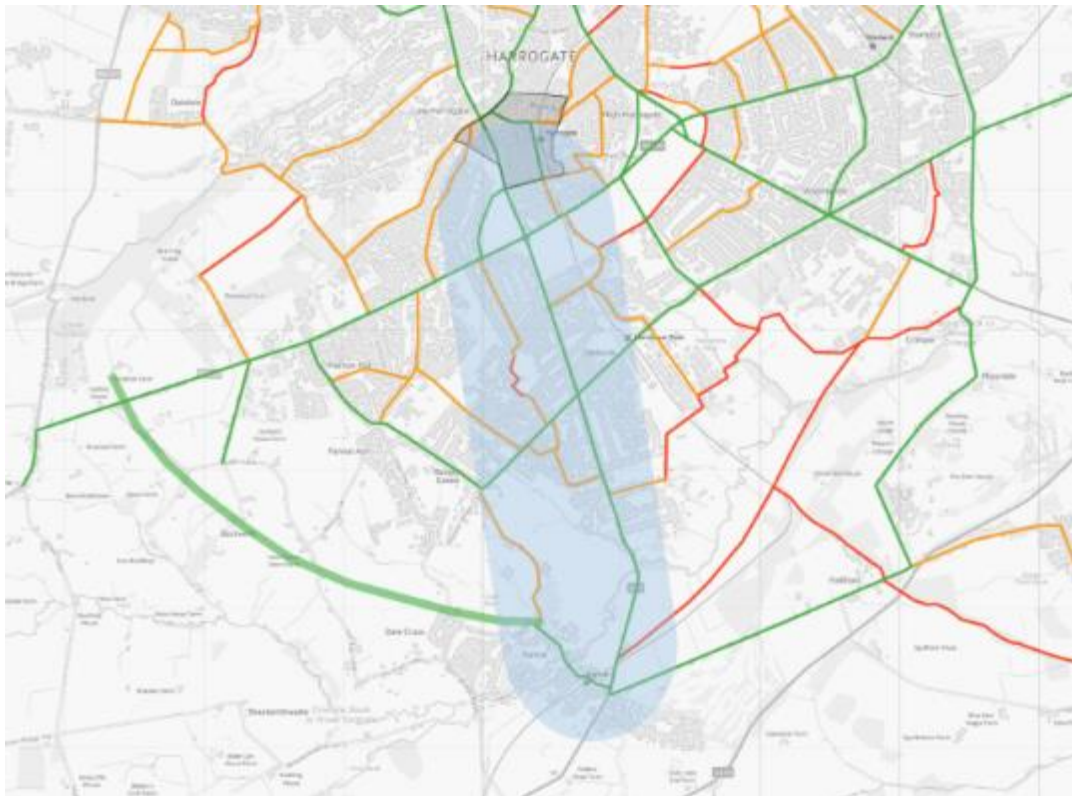
¹⁵<https://www.gov.uk/government/publications/local-cycling-and-walking-infrastructure-plans-technical-guidance-and-tools>

Figure 45 – Harrogate to Knaresborough



Corridor	Rationale
Pannal and south Harrogate to central Harrogate	- Stakeholder input - Pannal railway station is an important connection for people travelling south towards Leeds (an existing high flow of journey to work trips) - Development sites around Pannal are likely to create demand for movement on this corridor - The corridor would serve existing residential origin areas including some with a higher propensity for cycle trips than the wider area Key destinations, such as Hornbeam Park and several places of education, are located near to this corridor.

Figure 46 – Pannal and south Harrogate to central Harrogate

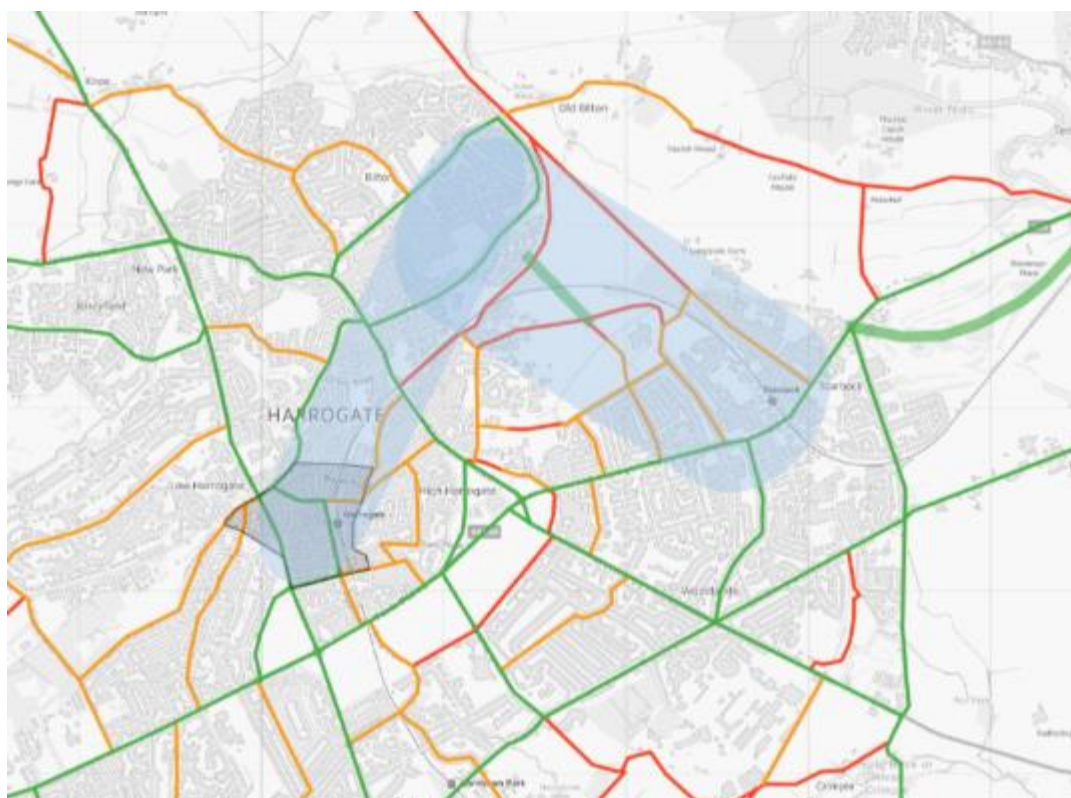


Corridor	Rationale
Bilton to Starbeck	- Stakeholder input - Bilton has the highest level of propensity to cycle in the study area - Higher levels of deprivation in this area, relating to lack of accessibility to key services, which cycle infrastructure improvements could assist in reducing - Desire lines from Bilton to key employment areas, such as Starbeck, are prominent - Connections to this area could improve access to wider routes, such as the Nidderdale Greenway

Corridor	Rationale
Bilton to central Harrogate	- Stakeholder input - Bilton has the highest level of propensity to cycle in the study area - Higher levels of deprivation in this area, relating to lack of accessibility

	to key services, which cycle infrastructure improvements could assist in reducing ▪ Desire lines from Bilton to central Harrogate are prominent ▪ Connections to this area could improve access to wider routes, such as the Nidderdale Greenway
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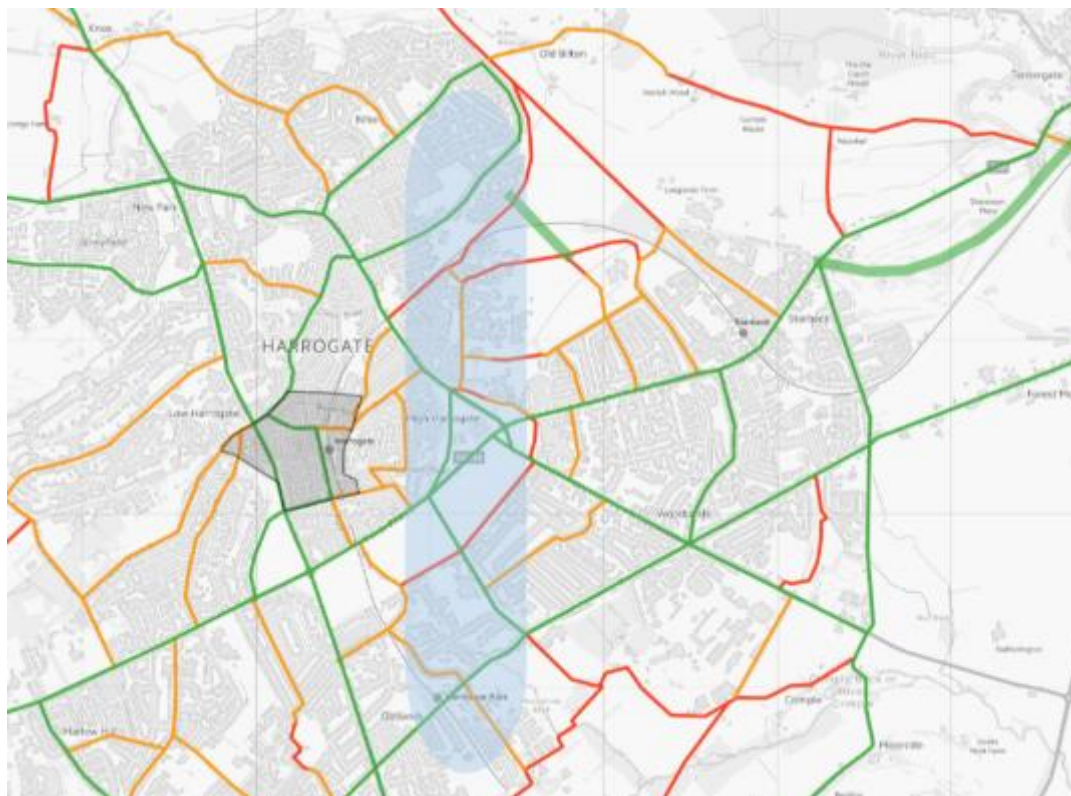
Figure 47 – Bilton to Starbeck and Bilton to central Harrogate



Corridor	Rationale
Bilton to Hornbeam Park and south Harrogate	▪ Stakeholder input ▪ Bilton has the highest level of propensity to cycle in the study area ▪ Higher levels of deprivation in this area, relating to lack of accessibility to key services, which cycle infrastructure improvements could assist in reducing ▪ Desire lines and movement patterns from Bilton to key employment and education areas, such as Hornbeam Park are understood

- Connections to this area could improve access to wider routes, such as the Nidderdale Greenway

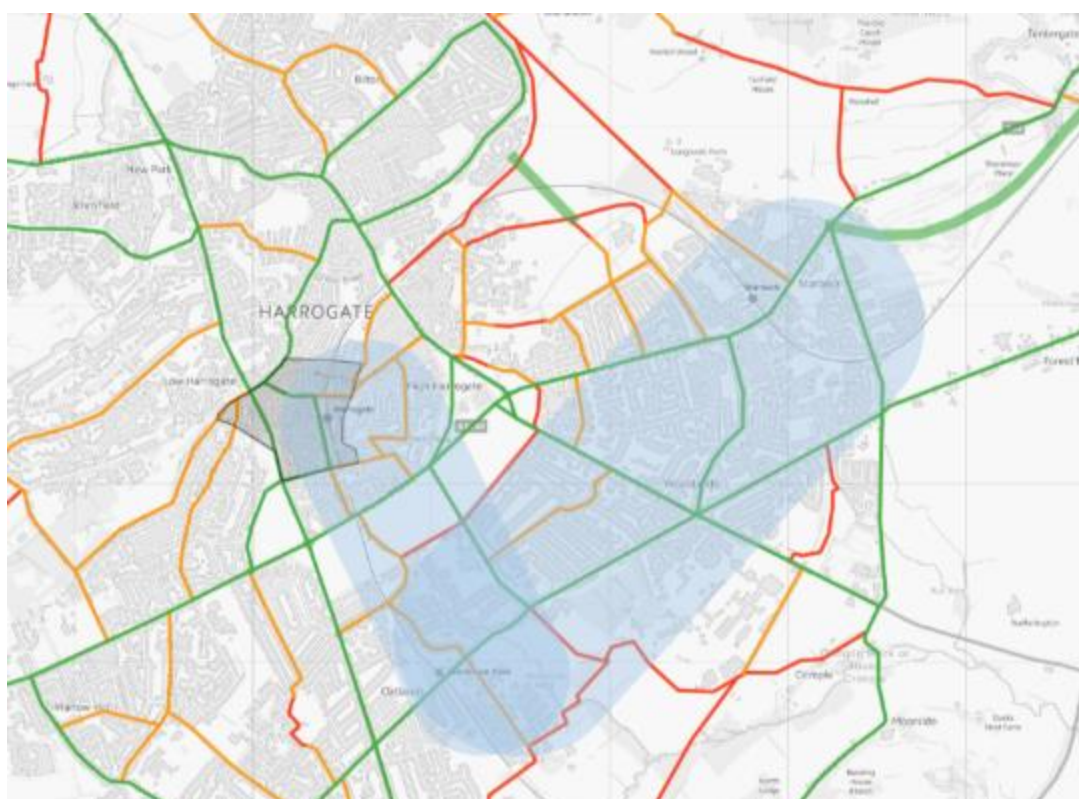
Figure 48 – Bilton to Hornbeam Park and south Harrogate



Corridor	Rationale
Hornbeam Park to central Harrogate	▪ Stakeholder input ▪ Hornbeam Park is a key employment destination in the area ▪ Harrogate College also have a campus at Hornbeam Park ▪ Hornbeam Park railway station is located adjacent to the Park itself for rail services towards Leeds ▪ Existing established cycle routes are in this area, such as Oatlands Drive ▪ This corridor provides links to wider routes, such as the Showground Greenway

Corridor	Rationale
Hornbeam Park to Starbeck	- Stakeholder input - Existing desire line and movement patterns between Starbeck and Hornbeam Park - Hornbeam Park is a key employment destination in the area - Harrogate College also have a campus at Hornbeam Park - Hornbeam Park railway station is located adjacent to the Park itself for rail services towards Leeds - Existing established cycle routes are in this area, such as Oatlands Drive - This corridor provides links to wider routes, such as the Showground Greenway

Figure 49 – Hornbeam Park to central Harrogate and Hornbeam Park to Starbeck

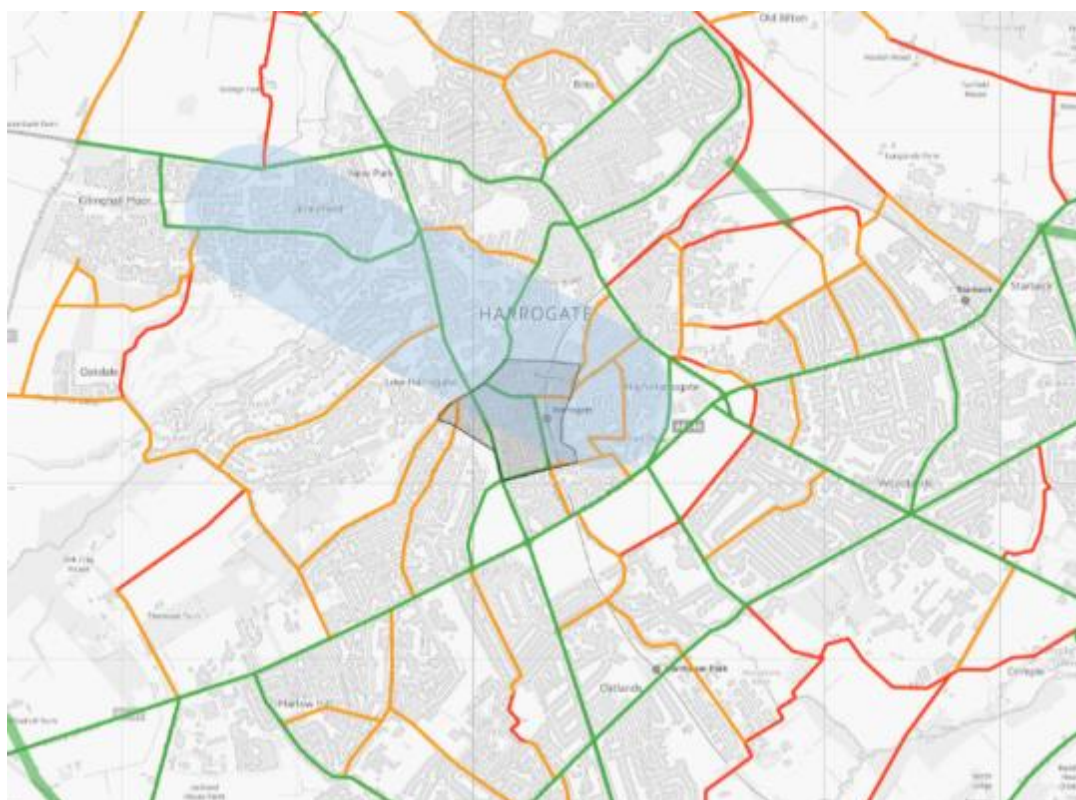


Corridor	Rationale
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Jennyfield to central Harrogate

- Jennyfield is an existing residential area that has an established cycle connection to it
- Development is planned in this area which will create demand for movement to/from this part of the study area
- Propensity for cycle trips is among the highest in the area

Figure 50 – Jennyfield to central Harrogate



7. RECOMMENDED NEXT STEPS

7.1. INTRODUCTION

While the long term aspiration of NYCC is to deliver the whole of the network that has been identified through this project, NYCC recognises that in the short term this will not be financially viable. As such, following the development of the network and a set of draft priority corridors, a decision was made to progress four priority corridors that will be taken forward for feasibility work with the intention of these being delivered when funding is available.

The two key recommendations influencing the choice of the corridors relate to how likely they are to receive government funding and if they address connections where a greater propensity to cycle has been identified. Most recent government funding for cycle infrastructure has been for schemes that target modal shift towards cycling in busy urban areas by improving bicycle access to education and employment locations. Corridors in the study area that could contribute towards these aims are therefore seen as priority. The data collection and analysis included in this report has established areas with a higher propensity for cycling and these areas are therefore considered a priority.

7.2. PRIORITIES

The following corridors have been identified as priorities to be taken forward for feasibility assessment:

- Corridor 1: Bilton to Starbeck;
- Corridor 2: Bilton to Hornbeam Park (via town centre);
- Corridor 3: Jennyfield to the town centre;
- Corridor 4: Hornbeam Park to Starbeck; and
- Corridor 5: Harrogate to Knaresborough.

Within each of these corridors a range of route options will be considered as part of the feasibility work with the DfT Route Selection Tool being utilised to assist in determining the most suitable route within these corridors. The feasibility work will also use the network principles and intervention types presented in this report along with stakeholder comments that were provided through the network development phase.

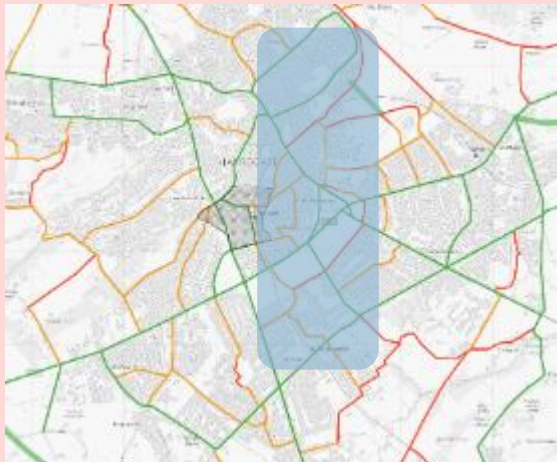
Corridors 1-4 will be taken forward for feasibility assessment by NYCC while Corridor 5 will be taken forward by Harrogate Borough Council who have already conducted previous work on options for this corridor.

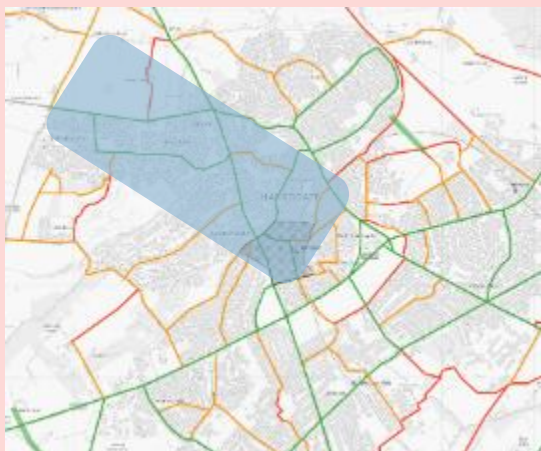
The rationale for each of the priority corridors is presented below.

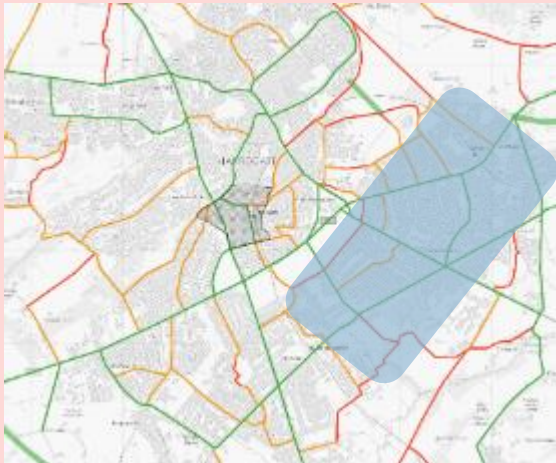
Corridor	Rationale
Corridor 1: Bilton to Starbeck	▪ Stakeholder input ▪ Bilton has the highest level of propensity to cycle in the study area ▪ Higher levels of deprivation in this area, relating to lack of accessibility to key services, which cycle infrastructure improvements could assist in reducing

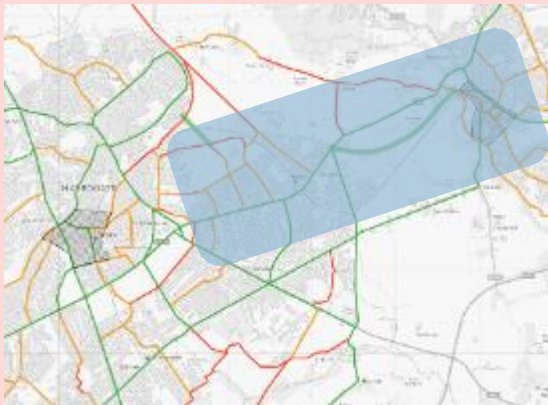


- Desire lines from Bilton to key employment areas, such as Starbeck, are prominent
- Connections to this area could improve access to wider routes, such as the Nidderdale Greenway

Corridor	Rationale
Corridor 2: Bilton to Hornbeam Park (via town centre) 	- Stakeholder input - Bilton has the highest level of propensity to cycle in the study area - Higher levels of deprivation in this area, relating to lack of accessibility to key services, which cycle infrastructure improvements could assist in reducing - Desire lines and movement patterns from Bilton to key employment and education areas, such as Hornbeam Park and the town centre are understood

Corridor	Rationale
Corridor 3: Jennyfield to town centre 	- Jennyfield is an existing residential area that has an established cycle connection to it - Development is planned in this area which will create demand for movement to/from this part of the study area - Propensity for cycle trips is among the highest in the area - Jennyfield is beyond a short walking distance from the town centre but within a distance that could be cycled

Corridor	Rationale
Corridor 4: Hornbeam Park to Starbeck 	- Stakeholder input - Existing desire line and movement patterns between Starbeck and Hornbeam Park - Hornbeam Park is a key employment destination in the area - Harrogate College also have a campus at Hornbeam Park - Hornbeam Park railway station is located adjacent to the Park itself for rail services towards Leeds - Existing established cycle routes are in this area, such as Oatlands Drive - This corridor provides links to wider routes, such as the Showground Greenway

Corridor	Rationale
Corridor 5: Harrogate to Knaresborough 	- Stakeholder input - Future predicted increase in demand for movement between the two towns - Starbeck is at the centre of this connection and is both a key origin and destination, such as the railway station - Key destinations such as Harrogate Hospital, Betty's and Taylor's located along this corridor - Development sites in Knaresborough are likely to create demand for movement to/from Harrogate - Propensity for cycle trips along this link are some of the highest in the area based on current and future scenarios

Appendix A



INTERNAL STAKEHOLDER WORKSHOP

INTERNAL STAKEHOLDER WORKSHOP

INTRODUCTION

This note summarises the Internal Stakeholder Workshop for the Harrogate Cycle Infrastructure Plan (HCIP) that took place on July 25, 2017 at County Hall, Northallerton.

The Internal Stakeholder Workshop formed part of Stage 3: Baseline of the HCIP project and sought to gain input from North Yorkshire County Council and Harrogate Borough Council officers with regards to challenges and opportunities and initial ideas on the cycle network.

The full minutes of the workshop are linked below:



20170725 Internal
Stakeholder Worksh

This note summarises the workshop and the outputs with the minutes providing more detail on particular elements of the workshop.

ATTENDEES

The table below presents the list of attendees at the workshop along with those who sent apologies.

Table 28 – Workshop attendees

North Yorkshire County Council	
Nick Preston	Maintenance Manger
Gordon Milne	Area 6
Abi Holt	Development Control/Local Plan
Mark Kibblewhite,	Economic Growth
James Smith	Traffic Engineering
Simon Bancroft	Traffic Signals/Traffic Engineering
Fiona Ancell	Road Safety
Brian Mullins	Public Rights of Way
Samantha Raine	Transport Planning
Andrew Bainbridge	Transport Planning
Honor Byford	
James Gilroy	
Harrogate Borough Council	
Andrew Norman	Transport Projects Officer
Thomas Horner	Transport Planner
WSP	
David Wildman	Technical Director
Andrew Binder	Senior Transport Planner

Adam Molyneux	Graduate Transport Planner
Apologies	
Liz Small (NYCC)	Heritage Services Manager
Rachel Richards (NYCC)	Public Health
John Laking (NYCC)	Passenger Transport

PART 1 – BASELINE, CHALLENGES & OPPORTUNITIES

WSP introduced the project in terms of aims and purpose and how it fits with wider strategy and opportunities.

This was followed by a presentation that provided a background of the baseline work that was being undertaken to inform the development of the HCIP. The full presentation is attached below:



Harrogate CIP -
Internal Stakeholder

A group discussion to place to identify and build on the issues/challenges and opportunities identified so far by the project team.

The group contributed a range of information around the following areas:

- Schools;
- S106 funding;
- AQMAS;
- Collisions;
- Congestion
- Deprivation
- Parking; and
- Further data to be sought.

PART 2 – INTERVENTIONS

The second part of the workshop focused on potential interventions in terms of type and location.

A key point that emerged that the provision of cycle infrastructure must meet the needs of existing and potential utility cycle users. An existing base of leisure cycling was present and a leisure routes existing but a consistent, safe and accessible utility network was needed to appeal to non-users.

The group split into two parts to discuss interventions spatially by drawing origins, destinations and network ideas on two large blank plans of the study area.

The demand for east-west connectivity within the study area was identified within the context of the current situation and where future development is planned. Key utility trip generators, such as schools and employment hubs, were also identified in terms of being key to where a cycle network will need to serve. The figure below displays an output of the group exercise with key O-Ds and draft network ideas added to the plan.

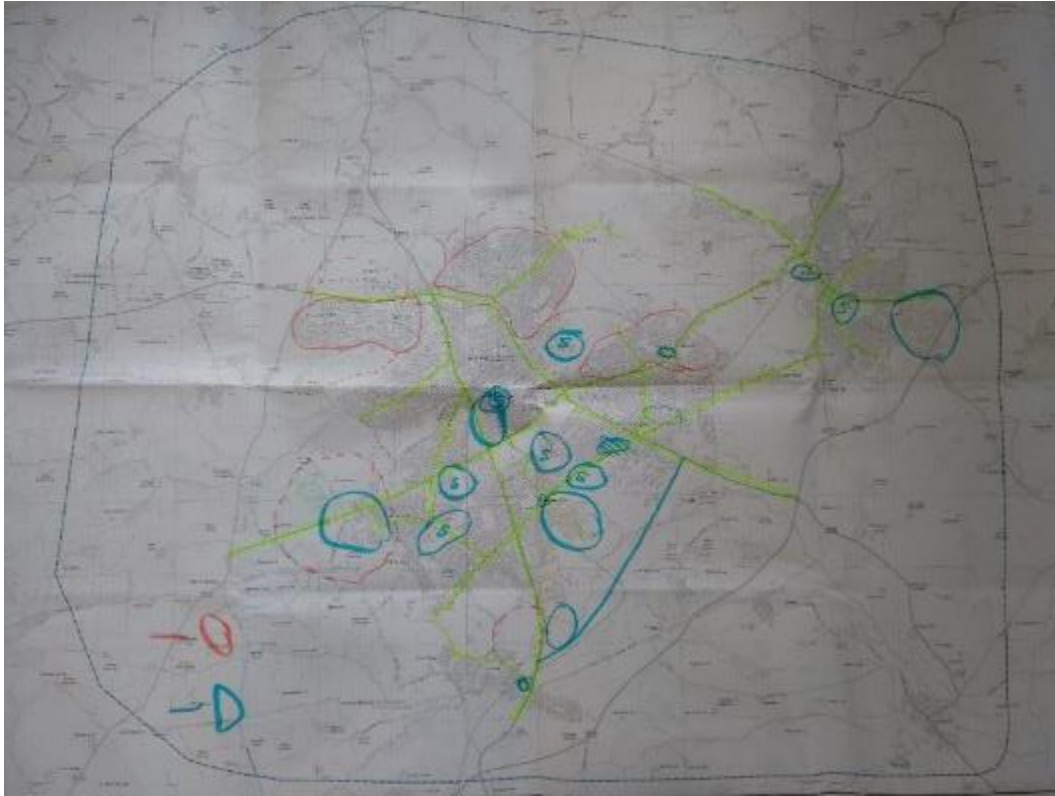


Figure 51 - Outputs of group exercise on draft network development

The workshop was concluded by WSP presenting the Network Development method that will be used to develop the HCIP. The method is based on the DfT LCWIP guidance and previous project experience.

OUTPUTS

The outputs of the workshop will feed into the baseline report which is being used to inform the development of the HCIP. The baseline report will also form part of the Final Project Report.

The outputs related to spatial interventions will be taken forward to inform the development of the draft network for presentation at the external workshop. They will be included within the network development process.

The next stage is for WSP to develop the draft cycle network based on all the evidence collected. This will then be presented at a workshop with internal and invited external attendees, such as transport operators, cycle forum members and large employers.

This workshop will focus on changes/additions to the draft network, priorities for investment and type of infrastructure.

Appendix B

**EXTERNAL STAKEHOLDER
WORKSHOP**

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EXTERNAL STAKEHOLDER WORKSHOP

INTRODUCTION

This note summarises the External Stakeholder Workshop for the Harrogate Cycle Infrastructure Plan (HCIP) that took place on October 3, 2017 at the Old Swan Hotel, Harrogate.

The Internal Stakeholder Workshop was Stage 6 of the HCIP project and sought to gain input from invited stakeholders on the draft network and the priorities for intervention.

ATTENDANCE LIST

Along with officers from North Yorkshire County Council (NYCC) and Harrogate Borough Council (HBC), a range of external stakeholders were invited to attend, with the invite list compiled by NYCC and HBC.

Table 29 – Attendance register

Name	Role
Councillor Don Mackenzie	NYCC Councillor
Andrew Bainbridge	NYCC Officer (Transport Planning)
Andrew Norman	HBC Officer (Transport Projects Officer)
Andrew Turnbull	Harrogate Bus Company
David Mitchell	Cycle Forum
Gia Margolis	Cycle Forum
Gordon Milne	NYCC Officer (Highways)
Ian Phillips	University of Leeds (Transport Researcher) & Cycle Forum
James Smith	NYCC Officer (Traffic Engineering)
Jeanette Wright	Harrogate College
Joanne Armstrong	HBC Officer (Sport and Active Lifestyles)
John Laking	NYCC Officer (Passenger Transport)
John Light	HBC Officer (Visit Harrogate)
Malcolm Margolis	Cycle Forum
Martin Weeks	Cycle Forum
Natalie Smith	NYCC Officer (Public Health)
Ross Mitchell	Harrogate Hospital (Deputy Director of Facilities)
Samantha Raine	NYCC Officer (Transport Planning)
Simon Bancroft	NYCC Officer (Traffic Signals/Traffic Engineering)
Thomas Horner	HBC Officer (Transport Planning)
Victoria Wild	Owner, Harrogate Fair Trade Shop
Adam Molyneux	WSP
Andrew Binder	WSP

Howard Kinneavy	WSP
Sean Ford	WSP
Apologies	
Rebecca Gibson	NYCC Officer
Brian Mullins	NYCC Officer (Public Rights of Way)
Pete Myers	Northern Rail
Dave Prince	Cycle Forum
Abi Holt	Development Control/Local Plan
Mark Kibblewhite	Economic Growth
Alex Hornby	TransDev
Debbie Forsyth-Conroy	Harrogate College

NETWORK VALIDATION AND REVIEW

One of the primary aims of the external workshop was to review the work WSP have already undertaken in terms of network development. To do this the first group activity was a validation exercise of both the route hierarchy definitions and the draft cycle network.

DEFINITIONS

The route hierarchy has been split into three sections; primary, secondary and town centre cores. At the external workshop the definitions in Table 30, below, were given to the stakeholders to discuss whether they agreed with them or they thought they should be amended when developing Harrogate's cycle network.

Table 30 – Route hierarchy definitions

Primary	Different cycle users, based on confidence level, experience, age, demographics, trip purpose Different types of bikes, including standard, recumbent, trailers, cargo bikes, disabled user cycles High volumes of bicycle traffic Through, internal and inbound-outbound traffic Cater for existing non-cycle users
Secondary	Lower volumes of bicycle traffic than Primary Increase density of network Ensure local access to origins and destinations from the primary network Provide quieter routes for less confident cycle users

Town Centre Cores	High levels of permeability and priority for cycle users and pedestrians
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Comments on these definitions were in general agreement. Conversations led on to what each definition would look like in practice more-so than if the definition is correct or incorrect. Some stakeholders did suggest implementing a tertiary network that would feed into the secondary network.

NETWORK

When validating the network, the stakeholders were asked to record whether they agree with what has been proposed by WSP or if they think the draft network needs amending. Amendments could include changing the status of a link in terms of its level on the hierarchy, adding to the route or removing links from the network. The figures show the outputs from this exercise.

Figure 52 – Table 1, network validations

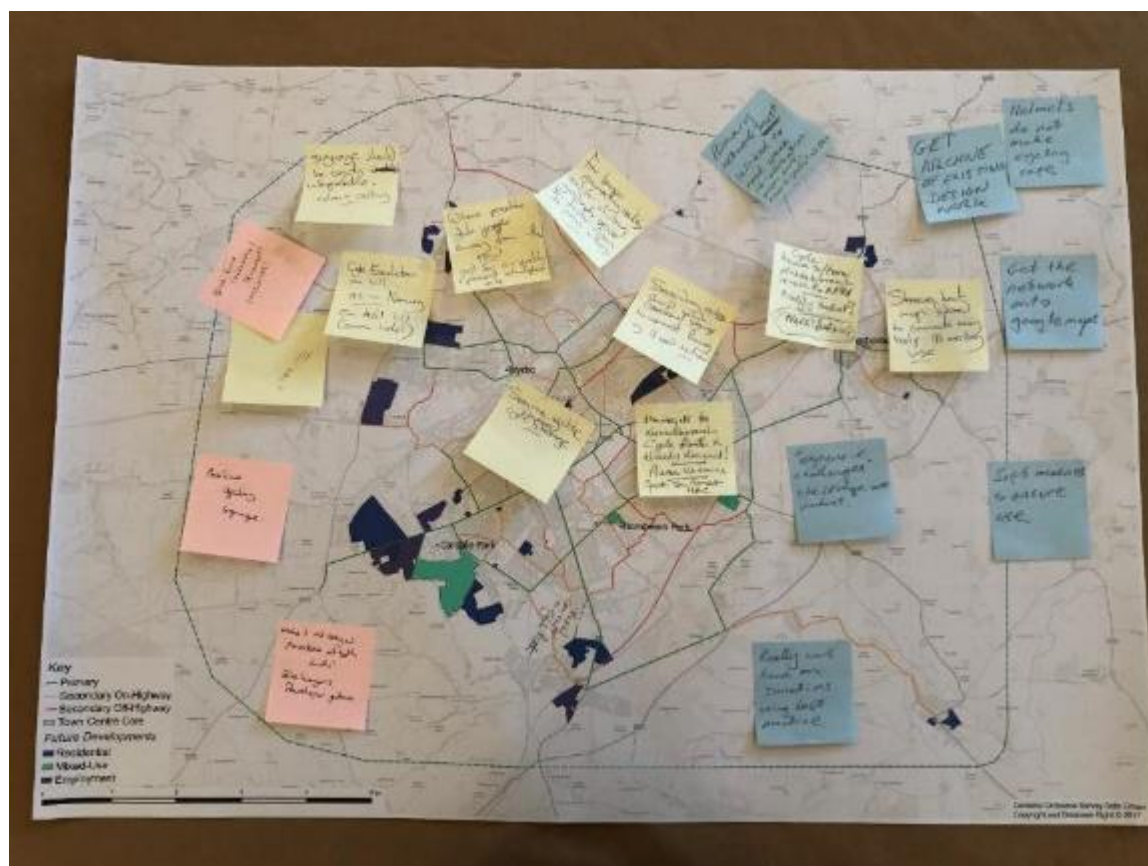


Figure 53 – Table 2, network validation

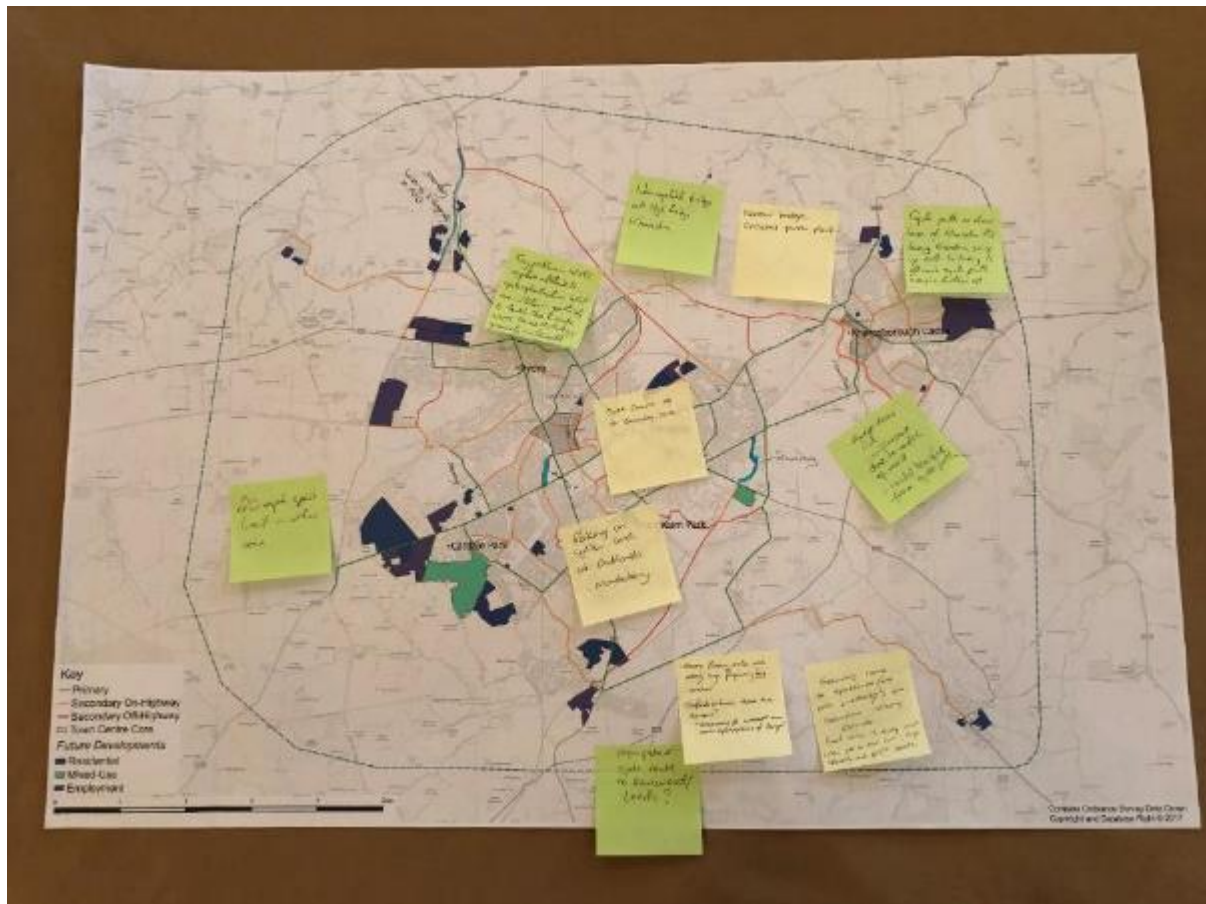
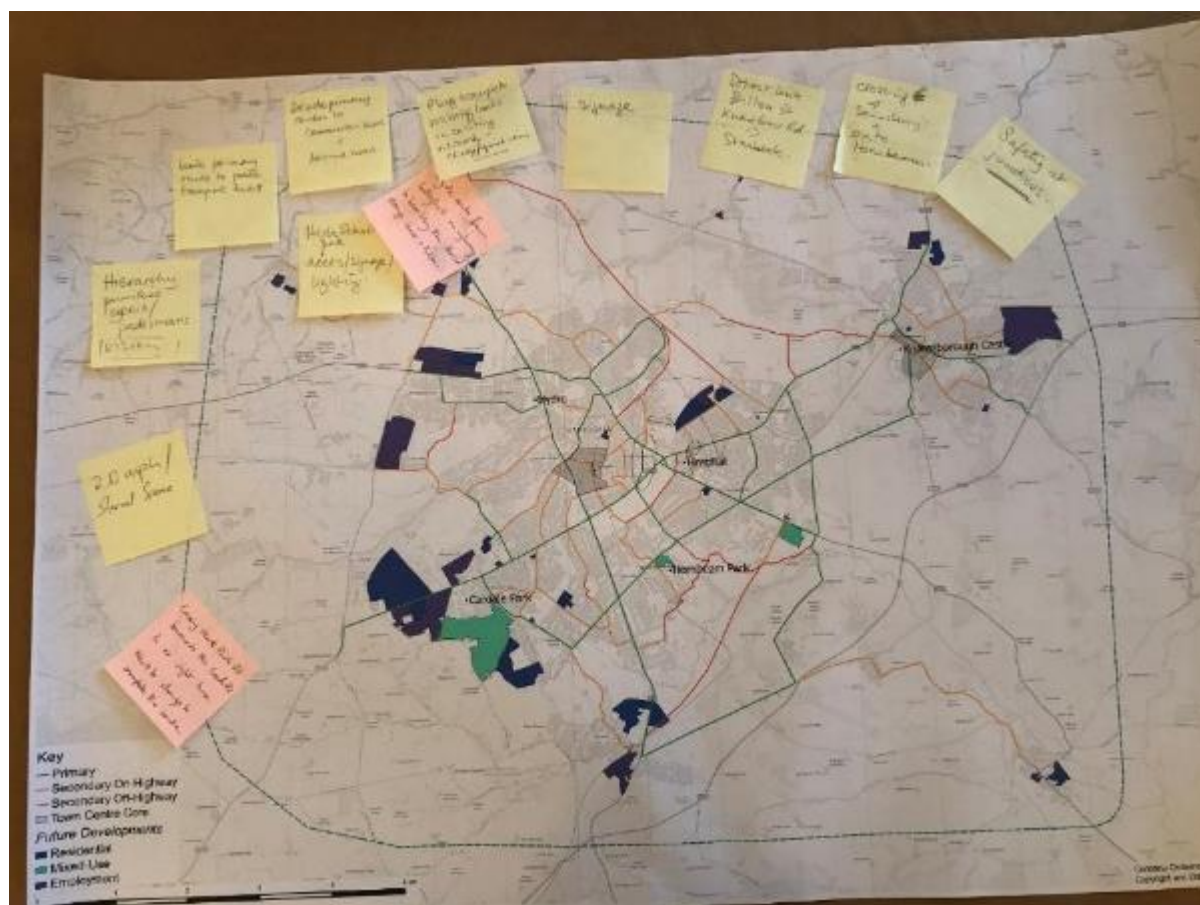


Figure 54 – Table 3, network validation



COMMENTS RECEIVED

The table below displays the comments that were received in relation to the draft network. The table presents each verbatim comment along with whether or not it was included in the final draft network plan and the rationale as to why it was or was not included in the final draft network plan.

Table 31 – Draft Network Comments

Ref.	Comment	Include in Final Draft Network plan	Rationale
2	New Cyclist Bridge at High Bridge Knaresborough.	Y	Existing highway alignments between Harrogate and Knaresborough are constrained, a new alignment would meet the desire line between the O-Ds in the two towns.
3	Narrow bridge between Harrogate and Knaresborough creates a pinch point.	Y	Covered by comment to reference 2.

5	Cycle lanes on Oatlands drive should become mandatory and cars should not be allowed to park in them.	Y	Designated as a primary route which has minimum intervention specification to meet this comment.
7	Add a cycle path on slow lane of Knaresborough Road, leaving Knaresborough going uphill. Link to off road cycle path 300yds further up.	Y	A59 Knaresborough Road is designated a primary network.
8	Forest Moor Road is unpleasant due to the width of the road so it could benefit from the introduction of a cycle path.	Y	Forest Moor Road designated as primary network.
9	Secondary route to Spofforth (and on to Wetherby) via redundant railway corridor. Road route is too busy and used as a rat run. Vehicles travel at high speeds and there are tight bends.	Y	Former railway alignment meets desire line to Spofforth. To be included as leisure link as would not be on the highway.
11	20mph speed limit in whole urban area.	Y	20mph included as part of town centre core packages. Considered out of scope to include urban area wide approach on routes not designated as part of the network.
12	20mph zones and shared spaces.	Y	Covered by comment to reference 11.
13	Otley Road should be part of the secondary network to connect Killinghall to Nidderdale Greenway.	Y	Network extended from Killinghall to connect to Nidderdale Greenway.
14	Abbey Road and Waterside could provide a secondary route connection in Knaresborough.	Y	This was discussed to be a quieter and less steep alternative to what we have already added to the draft network.
15	Current cycle route connecting Hookstone Chase to A661 should be part of the secondary network.	Y	Existing connection through Stonefall Park to be added as secondary network link.
16	Beech Grove should be upgraded to Primary.	Y	Agreed.
17	Harlow Moor Road could be downgraded to Secondary.	Y	Agreed.
18	Link Primary routes to public transport hubs.	Y	Some are already linked, others to be looked at in terms of if they are within a town centre core area.
24	Direct links between Bilton, Knaresborough Road and Starbeck.	Y	Link to be added to meet this desire line.
41	Create cycle access to/from Knaresborough across the Nidd. Modify Viaduct?	Y	Covered by comment to reference 2.

44	A cycle path or footpath along the B6161 between Lund Lane and the A59 would open up the top end of Jennyfields to Hampsthwaite, Killinghall and Ripley, it is only about quarter of a mile lone.	Y	Agreed, included as part of secondary network.
1	Key problem is NYCC negative attitude towards cycle infrastructure. WSP consultation is an opportunity to tackle this and make NYCC transport strategy genuinely sustainable.	N	General comment.
4	East Parade should be a secondary route.	N	Already designated a secondary route.
6	Segregated cycle route to Harewood/Leeds.	N	Outside of Study Area.
10	Many primary routes are along high frequency bus corridors which could cause conflict between current users and may deter potential cyclists as buses may add to a perception of danger.	N	General comment but relates to provision where network interacts with busy bus corridors.
19	Hierarchy should prioritise NMU over motorised vehicles.	N	General comment.
20	Crossing North Park Road towards Coach Road is no right turn. This will need to change to complete the route.	N	To be addressed in the detailed of design of scheme.
21	Divide primary routes to commuter routes and leisure routes.	N	General comment.
22	Plug and complete missing links in the existing network as cheap, quick wins.	N	General comment.
23	Improve signage on all routes.	N	General comment.
25	Improve safety at all junctions along the routes.	N	General comment.
26	Crossing at Sainsbury's and onto Hornbeam.	N	Detail not being looked at, at this stage.
27	Positive cycle signage.	N	General comment.
28	Add locations for potential Bike hire scheme.	N	General comment.
29	Colour coded signage for easy interpretation.	N	General comment.
30	Cycle escalator uphill on A61.	N	Unlikely to be feasible.
31	Secure, visible, covered cycle storage.	N	General comment.

32	Where possible take people off the main carriageway for better air quality and safety.	N	General comment.
33	For longer connecting routes and steeper routes create enough space for faster riders to pass others.	N	General comment.
34	Secondary routes should have signage linking to closest primary route.	N	General comment.
35	Primary network must be linked to road space re-allocation from cars.	N	General comment.
36	Bike bridge over viaduct.	N	Location not clear.
37	Work hard on junctions using examples of best practice.	N	General comment.
38	Safety measures on all routes to ensure usage.	N	General comment.
39	Add network to google maps for people to use when planning journey/ride.	N	General comment.
40	Cycle tourism.	N	General comment.
42	Helmets do not make cycling safe.	N	General comment.
43	Get archive of existing design work - H to K cycle route is already designed.	N	Related to design stage.

NETWORK PRIORITIES

For the second part of the workshop, stakeholders were asked how they would prioritise the draft cycle network within Harrogate. Firstly they were given four broad themes and asked which they would prioritise relative to the others. Then they were asked which links of the network they thought should be priority for investment if funding became available.

THEMATIC

The four themes being discussed were; primary network, secondary network, key junctions and town centre cores. Stakeholders were given five dots each and asked to place them on which theme they would prioritise and they could weight them accordingly. Each stakeholder was also given the opportunity to add comments of why they chose to prioritise a particular theme and if they thought another key theme was missing. Figure 55 shows the outcomes of this exercise.

Figure 55 – Priority Themes

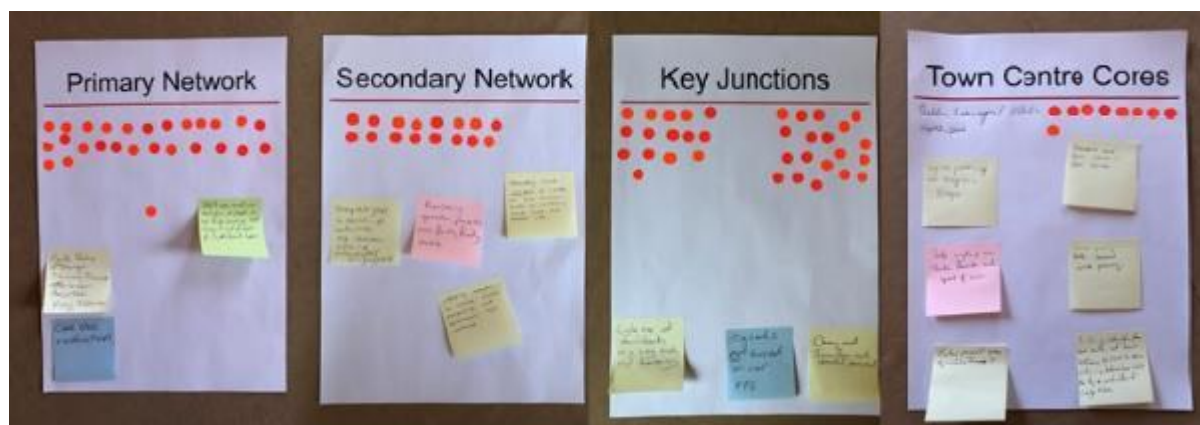


Table 32 – Theme Priority Percentage

Theme	Percentage
Primary Network	31%
Secondary Network	19%
Key Junctions	40%
Town Centre Cores	10%

Table 33 – Comments received

Ref.	Comment
Town Centre Cores	
84	Cycle parking at key bus stops.
85	Pedestrian and cycle zones in town centre.
86	Safe cycling on Station Parade including speed of cars.
87	Cycle parking hub.
88	General cycle parking.
89	Ban HGV's between 10:30am and 4pm.
90	Deliveries by EV's or cargo bikes.
Primary Network	
91	Secure and covered cycle parking and storage at major facilities.
92	Reduce car use.
93	Small wins each year so people can see that things are gradually improving.
Secondary Network	
94	Complete gaps in existing network including toucan crossings.

95	Prioritise quieter, pleasant, family friendly routes.
96	Tertiary network to include filtered permeability and quietway style measures.
97	Mandatory cycle lanes and shared usage.
Key Junctions	
98	Signals not based on cars.
99	Cycle use on roundabouts.
100	Carry out junction cycle assessments.

SPATIAL

When prioritising which links to improve or implement if funding became available, stakeholders were asked to place dots on specific geographical locations.

Figure 56 – Table 1, spatial priorities

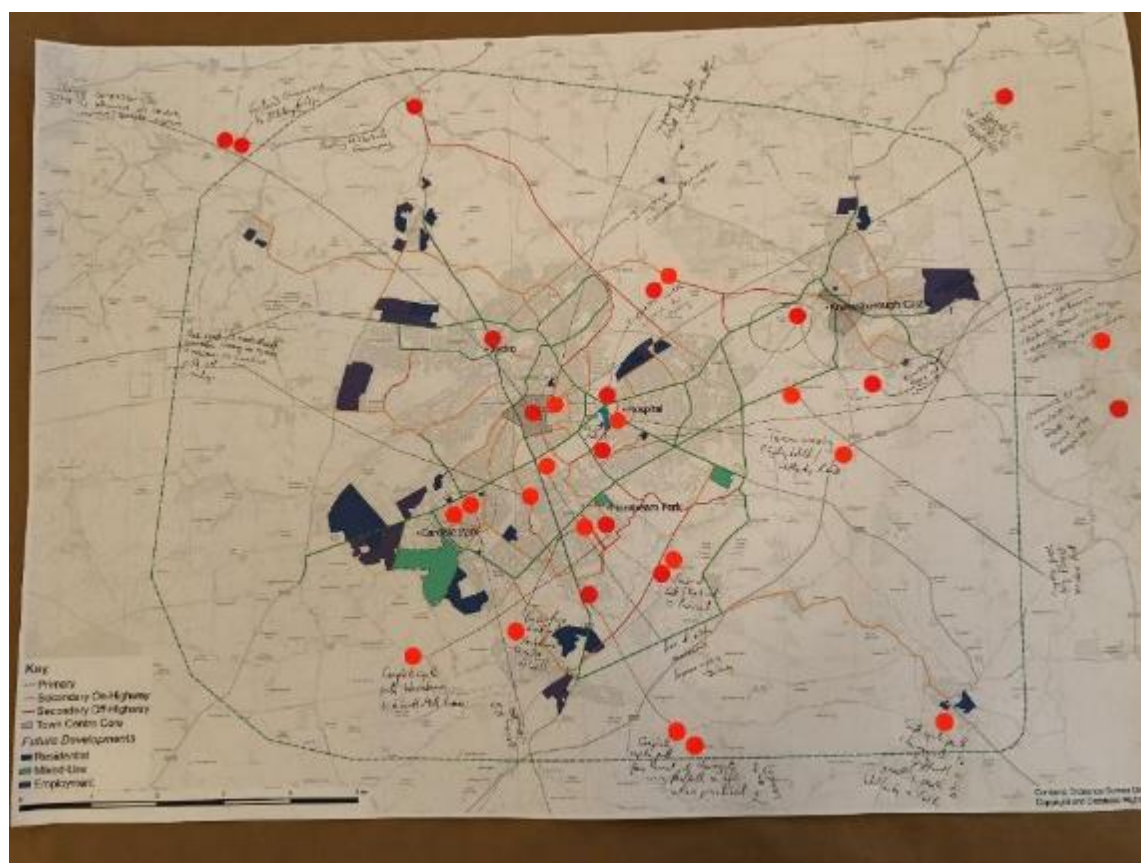


Figure 57 – Table 2, spatial priorities

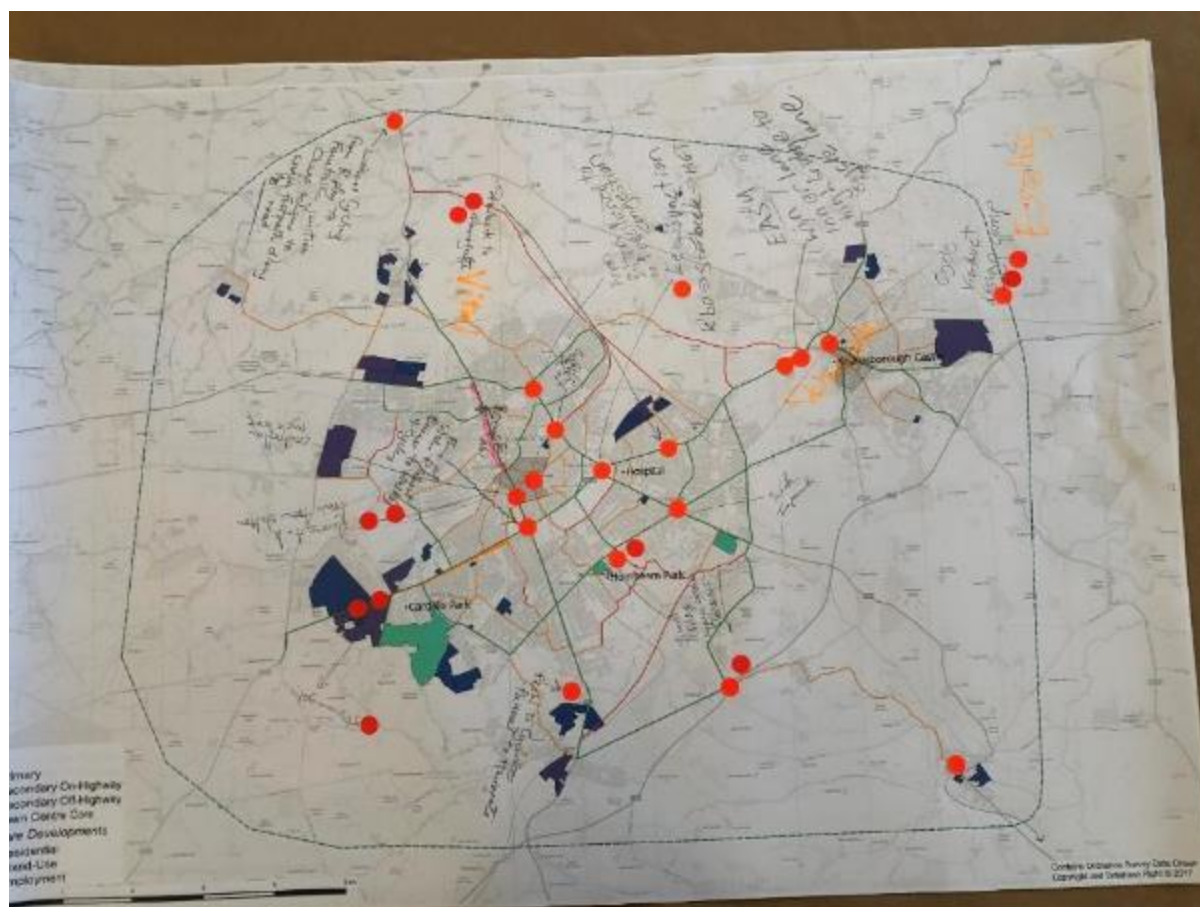
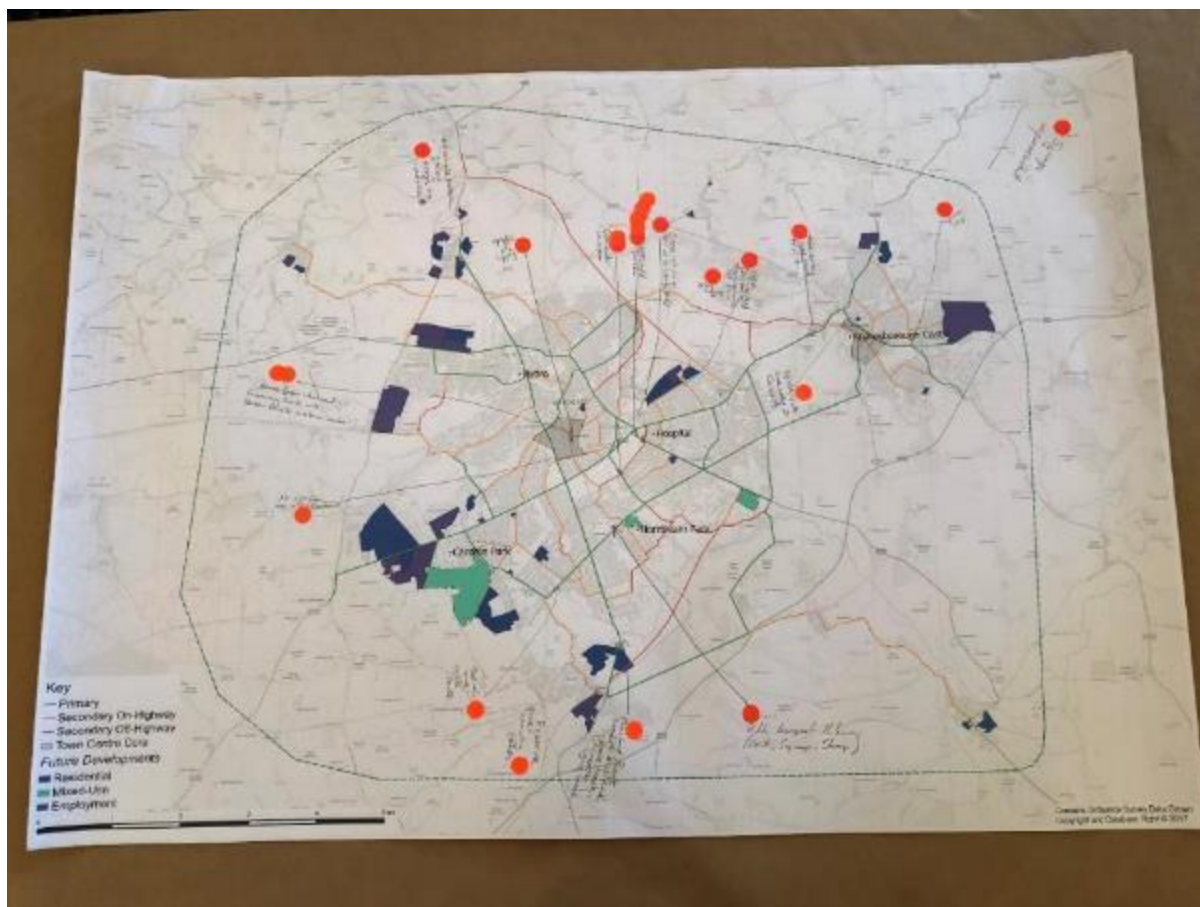


Figure 58 - Table 3, Link Priorities



Comments Received

The comments received on the network link priorities are presented below. The table indicates if the comments were taken forward for consideration as a priority and if not, the rationale for why they were not included. Those that were taken forward were grouped by the location that people were referring to.

Table 34 – Network Link Priority Comments

Ref.	Comment	Priority consideration	Priority location
44	Cycle viaduct design comp between Harrogate and Knaresborough.	Y	A59 Knaresborough Road
45	Convert inner lane of High Bridge to a cycle lane.	Y	A59 Knaresborough Road
67	High Quality connection between Harrogate and Knaresborough. Reallocate lanes to provide cycle route and reduce speed limits.	Y	A59 Knaresborough Road

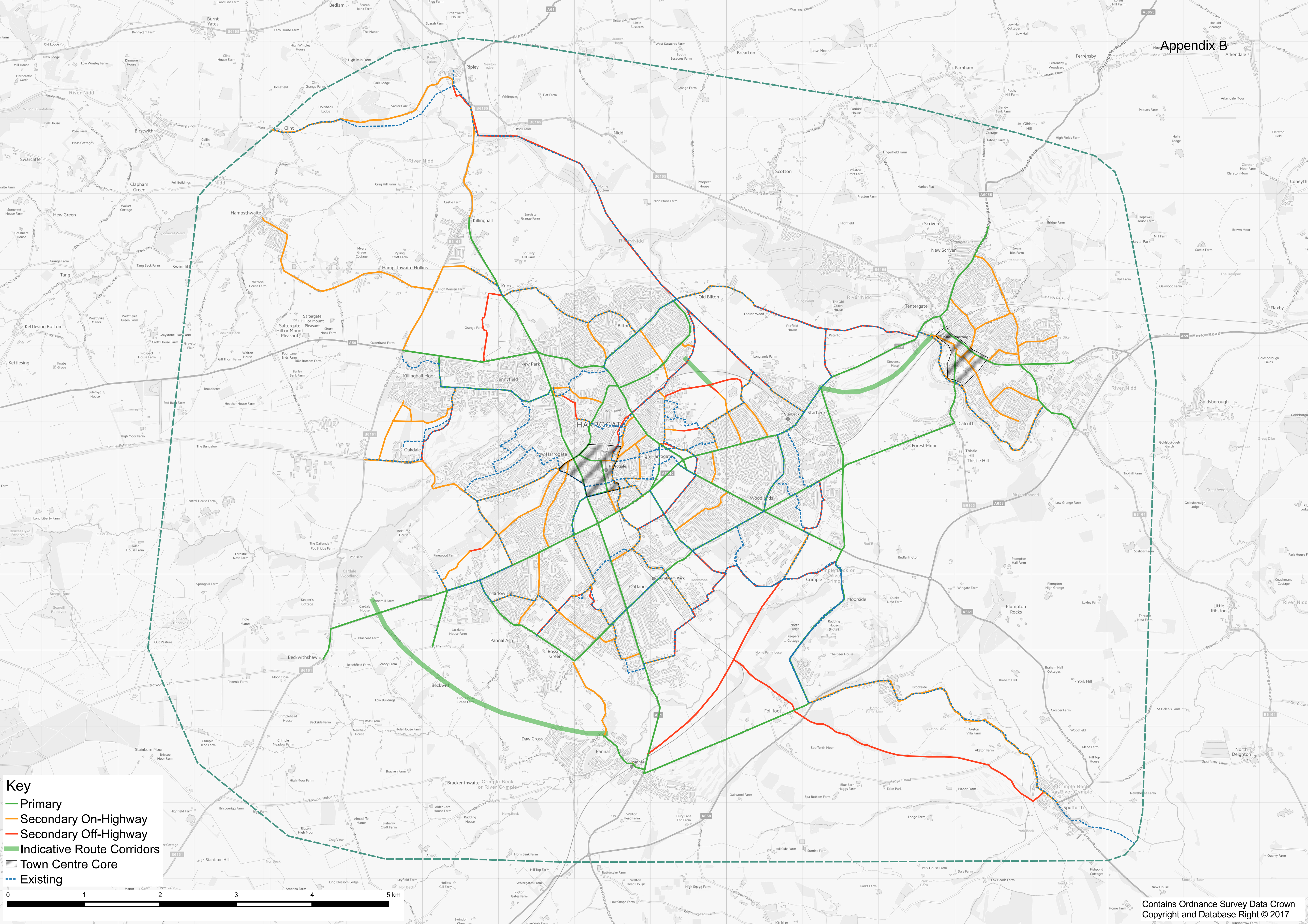
47	Links between Starbeck and Harrogate.	Y	A59 Knaresborough Road (Starbeck)
54	Pinch point at bridge on Skipton Road.	Y	A59 Skipton Road
53	A61 should be a priority as it is a steep and busy route.	Y	A61
48	Links between Pannal and Harrogate.	Y	A61 Leeds Road
59	A complete cycle path from Pannal into Harrogate using footpath on left where practical.	Y	A61 Leeds Road
69	Prioritise Otley Road Route.	Y	A61 Otley Road
77	Add a toucan on Wetherby Road.	Y	A661 Wetherby Road
62	Introduce a Toucan crossing between Slingsby Walk and Wetherby Road.	Y	A661 Wetherby Road/Slingsby Walk
71	Improve connection between Bilton and Harrogate centre.	Y	Bilton to Harrogate
68	Improve East Parade cycle route.	Y	East Parade
46	Empress Roundabout is a key junction between Knaresborough, Harrogate and Starbeck.	Y	Empress Roundabout
64	Cycle path by Forest Moor Road.	Y	Forest Moor Road
80	Signage improvement.	N	General comment.
82	Preserve quiet country lanes.	N	General comment.
74	Access from greenway to station parade and town centre.	Y	Greenway to Harrogate town centre
63	Safe cycle path from Harrogate to Spofforth with long term goal of connecting to Wetherby and York.	Y	Harrogate to Spofforth.
58	A complete cycle path from Hornbeam Park to Fulwith Mill Lane.	Y	Hornbeam Park to Fulwith Mill Lane
70	Resurface bridlepath Hookstone towards Fulwith.	Y	Hornbeam Park to Fulwith Mill Lane
79	Close Kingsley Drive to stop rat-running.	Y	Kingsley Drive
81	Leadhall Lane cycle route.	Y	Leadhall Lane
50	Contraflow cycle lanes in Harrogate town centre.	Y	Linked to Town Centre core package.
55	Signage to clarify who is allowed within the city centre to avoid confusion of where cyclists can go.	Y	Linked to Town Centre core package.
83	Link to public transport hubs.	Y	Links around the public transport hubs

73	Change the no right turn into North Park Road.	Y	North Park Road
75	Eliminate Stray protection on road verges.	N	Not a whole option but part of a potential option.
51	Cycleway from Ripley to Fountains junction. Widen footpath along B-Road	N	Not within Study Area.
65	Oatlands Drive mandatory cycle lanes and shared use footpath.	Y	Oatlands Drive
76	Add a toucan on Oatlands drive.	Y	Oatlands Drive
56	Extend Nidderdale Greenway to Pately Bridge.	N	Outside of Study Area. Not aimed at utility cycling, more a leisure route.
57	Park Road/Leeds Road has an unsuitable crossing for cyclists. It is very narrow on a shared use pathway with railings.	Y	Park Road/Leeds Road roundabout
52	Prince of Wales roundabout improvements to remove barriers to walking and cycling.	Y	Prince of Wales roundabout.
61	Improve safety for cyclist on Prince of Wales roundabout.	Y	Prince of Wales roundabout.
78	Close rat run exit at Silverfields Road.	Y	Silverfields Road
60	Viaduct linking Starbeck and Pannal.	Y	Starbeck to Pannal link.
72	Segregation in Town centre for cyclists.	Y	Town centre core
49	Cycle access to and from Harrogate train station.	Y	Town centre links around the station
66	Riverside Abbey Road Improvements.	Y	Waterside and Abbey Drive



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Appendix C

Responses from Harrogate and Knaresborough Area Constituency Committee Members

Response from Cllr Paul Haslam

Hi All

just realised no response to this

Please see below

MAIN POINT: It appears to completely miss the opportunity to link to a vision for what Harrogate (and Knaresborough) wants to be in the future and just tries to solve for current / predicted congestion. The 2 books I recommend are Bikenomics by Elly Blue (get the latest edition) and Building the Cycling City by Melissa and Chris Bruntlett. If the purpose of the town centre is broadly retail, hospitality, social engagement (plus a few essential services), then what is the actual space (m2) dedicated to this vs other uses, the biggest being traffic/parking. We, the taxpayers, have drifted into providing a huge amount of highly valuable land purely for the convenience of car drivers with no business case to justify it. If the space were reimagined to be somewhere people could just enjoy being (green space, social space, entertainment space,...) then the transport issue can be solved from that perspective rather than the other way around, forcing in what can be fitted around the cars. The result can make town centres become a pleasant place to live as well which further reduces travel load.

Local Cycling and Walking Infrastructure Plans (LCWIP) are set out in the Governments Cycling and Walking Investment strategy, which aims to double cycling activity by 2025. The LCWIP is designed to be a long term approach to cycling and identify a network map, and identify a series of priorities corridors for future investment and will usually form part of a wider vision and not set that vision. For Harrogate, the focus has been on producing a cycle infrastructure plan (CIP), the CIP is not designed to look at all transport issues within Harrogate, the report does include a broad evidence base which includes future traffic growth predictions, constraints and opportunities, local demographics and existing travel to work data. WSP, NYCC and HBC have all worked closely together in developing the CIP.

Other POINTS:

- Representation of cyclists was minimal - 4 from a guest list of 33. What about environmental group representation? None except the Fairtrade shop (if that even qualifies)!

In order for the workshop to be productive, WSP recommended, from past experience to keeping the numbers attending the workshop to a reasonable. The CIP is aimed at commuter trips as opposed to leisure trips, therefore whilst it is important to have some cyclists on the group, it is important to have people who aren't cyclists on the group in order to identify the barriers to cycling currently experienced. It was also explicitly recognised that many of the representatives of the cycle groups are also heavily involved in environmental groups such as Harrogate Friends of the Earth and Zero Carbon Harrogate and as such also brought an environmental perspective to the table. Representatives from the following organisations were invited to the external workshop:

- North Yorkshire County Council
- Cycle Forum
- Harrogate Bus Company
- University of Leeds
- Harrogate College
- Harrogate Hospital
- Harrogate Fair Trade Shop
- Northern Rail
- TransDev

Appendix C

- Traffic demand focuses entirely on government statistics which are based around home and places of work and ignore a major source of journeys in our town - school run. All of the proposed primary routes are prioritised on that basis. The suggested routes will undoubtedly need the level of infrastructure categorised for primary routes (mainly segregated) however the priority routes should look at the main school locations which are almost entirely not on the primary routes or town centre

Traffic and travel demand within the report has been utilised from existing sources including census data and data from the SATURN traffic models have been. As mentioned previously, the CIP is more aimed towards encouraging commuter trips, therefore the prioritised routes have been based around the origin and destination data.

- No consideration is given to solving the residual demand for journeys in/out and through Harrogate by car. Is it reasonable to default to the current spread of routes or should there be a strategy to encourage traffic away from the centre? e.g. invest in some routes for motor traffic to support discouraging traffic in other areas. Looking at both in isolation from each other will never reach an optimum design

The CIP is aimed at addressing local issues, and looking at transferring existing shorter distance trips to cycle. The remit of the CIP is not to address wider traffic issues, or look at alternative routes for motor traffic. As you are aware, there is a separate piece of work ongoing in Harrogate looking at a number of solutions to address congestion experienced in the town.

- Design standards are mentioned at the start of the document but very little is then said about what approach will be taken in difficult situations - roundabouts, narrow points of primary routes, junctions.

What minimum standard should we expect there? Will cyclists and pedestrians be treated at top of the list of priorities for all those situations? or do we just accept major compromise and invalidate all the good work done on the 'easy' sections? If routes don't join up real origin/destination journeys they will fail to make much difference. Beckwith Head Road is a great example of good money completely wasted - no priority for cyclists over side entrances despite fantastic open visibility) and no visible strategy to join up with anything. Design standards should make clear that cyclists can expect to have priority over all unsignalled side turnings and ideally their track should stay at pavement height over these crossings to emphasise to vehicle drivers that they are crossing a cycle route over which they do not have priority. All major junctions or squeeze points should prioritise vulnerable users first — nothing on these topics is mentioned at all

Cycleways need to be protected and connected - the rule should be "would you let you 12 year old child cycle on the route?" - Harrogate has low take up on cycling because of the lack of attention to these safety issues. see photo of Oxford Road.

Section 3 'Best Practice' looks at the different options that could be implemented. However, as part of the phase 2 work to produce draft designs for future inclusion in bids to Government, the specifics (e.g. for each roundabout, junctions and route) would be looked at in more detail. WSP as part of the phase 2 work will outline a full route from origin to destination within the identified corridor. When completing the draft designs for any of the corridors there will need to be different levels priority, segregation and design depending on the levels of traffic flow at any certain point on the route.

- The report is heavy on the driving data (although missing the points above completely) but vary very light on the actual proposals - just some lines on the existing map

Appendix C

The phase one report is intended to be data heavy, as the government guidance outlines, one of the main outputs should be a report which sets out the underlying analysis carried out and provides a narrative which supports the identified improvements and network.

Currently, driving accounts for almost half of the of journeys in Harrogate. As part of Phase 2, the corridors will be developed into draft designs, which will be ready to be developed into full designs should funding opportunities arise in the future.

- Current cycle provision is mentioned however no statement about how fit for purpose it is, i.e. most of it is useless or even dangerous. Exceptions are the Stray paths and Greenway with great stats over uptake of these vs cycling anywhere else

Officers from WSP carried out site visits, at ground level undertaken on both foot and cycle. These site visits helped validate and review the baseline work and understand the current provision of cycle infrastructure, where infrastructure is missing, and what condition the existing infrastructure is currently in.

- What is the strategy for secure parking for cyclists if we want to encourage use of e-bikes for those less fit and able. They are expensive and won't be left in town centre locations if their owners can't be confident in finding them safe when they return. I wouldn't park an expensive bike anywhere in Harrogate centre currently - thieves operate with cordless angle grinders and can cut through most locks in seconds.

The CIP covers existing cycle parking locations, however it is not within the remit of the CIP to design a strategy for cycle parking.

- What is the implementation / funding strategy? Quick wins need to be identified that will allow people to experience for themselves the benefits of new infrastructure and imagine where more can lead. Funding bids need to be targeted to a strategy that includes a mix of quick wins and strategic network delivery

There is no funding currently identified. Section 6 of report outlines the draft priorities, with section 7 outlining the recommended priorities to take forward for feasibility design. The corridors have been prioritised on two elements, their likely ability to attract government funding, and where a propensity to cycle has been identified. It is worth noting that although yet to be formally approved by NYCC the CIP is and has already been used to inform funding bids for new infrastructure including the Otley Road cycle route included in the successful National Productivity Investment Fund bid for the West of Harrogate and in the emerging Transforming Cities Fund bid that NYCC and HBC officers are working with West Yorkshire Combined Authority to develop.

- What is the strategy for planners for all the new developments in the pipeline? Implementing change to infrastructure already in place is very expensive vs ensuring good infrastructure is the default requirement from the start. There should be clear recommendations on this.

Having a CIP in place gives much more leverage for identifying improvements to the current cycle network, and where new infrastructure is potentially needed. The CIP will help the highway authority work with developers in identifying what needs to be delivered.

Finally, delivering the strategy should include engaging with local people in each part of town who can then contribute ideas that will really work because they live there every day and see it. Consultants (no matter how good) can only facilitate this for us to get it right.

Should any funding opportunities come forward, and funding be awarded to any of the corridors, the public would be engaged / consulted as part of the process.

Appendix C

I also attached the introduction of one of the books I mentioned.

This article should also be of interest -

https://www.cyclinguk.org/press-release/sheffield-appoints-dame-sarah-storey-cycling-and-walking-commissioner?fbclid=IwAR1lat0LWw_2P9GrYc8V8hWXpfu9m0QngQxjNTI2_pVZI-CJv0CLAQy9x80

and one other point - this was written in jan 2018 - what release it so late?

As mentioned above the CIP is already being used to attract funding and so any delay is actually only a delay in the formal approval process rather than the use of the CIP. There were contributing factors to the delay in approval but mainly it was due to the change in the structure of the Area Committees (to become Area Constituency Committees) and therefore a need to develop a new approach to approvals of this type of plan.

Response from Cllr Michael Harrison

Samantha, there is just one thing I want to highlight.

Killinghall village to Jennyfields – it was mentioned (by me) in the workshops, that there is an opportunity to create a walking/cycling route along the B6161 that would link Killinghall village to the Old Spring Well.

Essentially, there is a path that goes along the B6161 south of the village as far as its junction with Lund Lane. However, there is now housing development underway in between this junction and the B6161 junction with the A59. A cycle path or footpath along the B6161 between Lund Lane and the A59 would open up the top end of Jennyfields to Hampsthwaite, Killinghall and Ripley, it is only about quarter of a mile lone. The opportunity is now as the development has just started.

Michael

Cllr Michael Harrison

Hi Cllr Harrison,

Many thanks for providing your comments, I will ensure these are recoded accordingly.

Whilst a route between alongside the B6161 between Killinghall and the A59 in the vicinity of the Old Spring Well does not fall within any of the priority corridors as it is unlikely to attract the level of use of the town centre routes it nevertheless could form a useful link between Jennyfields and Killinghall and beyond.

As mentioned by Cllr Harrison there is a substantial amount of new development being undertaken in the Killinghall area and there may be opportunities to have this section of route delivered through planning agreements.

Transport planning officers will therefore raise this potential route with colleagues in Development management to ensure that it is considered when making transport recommendations on planning applications in the area.

Commented [BM1]: Are we able to say more about the suggestion from Cllr Harrison? Have we changed the CIP as a result or is it already covered?

Commented [SR2R1]: Andrew has provided some words – the CIP hasn't been changed to reflect this.

Commented [SR3R1]:

Initial equality impact assessment screening form (As of October 2015 this form replaces 'Record of decision not to carry out an EIA')			
This form records an equality screening process to determine the relevance of equality to a proposal, and a decision whether or not a full EIA would be appropriate or proportionate.			
Directorate	Business and Environmental Services		
Service area	Highways and Transportation		
Proposal being screened	Approval of the Harrogate Cycle Infrastructure Plan.		
Officer(s) carrying out screening	Samantha Raine		
What are you proposing to do?	Formalise a cycle infrastructure plan for the Harrogate area.		
Why are you proposing this? What are the desired outcomes?	Approval of the document will enable the County Council to be in a better position to bid for money towards schemes and receive contributions from developers.		
Does the proposal involve a significant commitment or removal of resources? Please give details.	No		
Is there likely to be an adverse impact on people with any of the following protected characteristics as defined by the Equality Act 2010, or NYCC's additional agreed characteristics? As part of this assessment, please consider the following questions: - To what extent is this service used by particular groups of people with protected characteristics? - Does the proposal relate to functions that previous consultation has identified as important? - Do different groups have different needs or experiences in the area the proposal relates to? If for any characteristic it is considered that there is likely to be a significant adverse impact or you have ticked 'Don't know/no info available', then a full EIA should be carried out where this is proportionate. You are advised to speak to your Equality rep for advice if you are in any doubt.			
Protected characteristic	Yes	No	Don't know/No info available
Age		✓	
Disability		✓	
Sex (Gender)		✓	
Race		✓	
Sexual orientation		✓	
Gender reassignment		✓	
Religion or belief		✓	
Pregnancy or maternity		✓	
Marriage or civil partnership		✓	
NYCC additional characteristic			
People in rural areas		✓	
People on a low income		✓	

Appendix D

Carer (unpaid family or friend)		✓	
Does the proposal relate to an area where there are known inequalities/probable impacts (e.g. disabled people's access to public transport)? Please give details.	Unknown at this stage, this process will look to approve corridors in principle. There would be a further requirement for EIA as part of the detailed design process.		
Will the proposal have a significant effect on how other organisations operate? (e.g. partners, funding criteria, etc.). Do any of these organisations support people with protected characteristics? Please explain why you have reached this conclusion.	No		
Decision (Please tick one option)	EIA not relevant or proportionate:	✓	Continue to full EIA:
Reason for decision	No adverse impact on any of the protected characteristics.		
Signed (Assistant Director or equivalent)			
Date			