North Yorkshire County Council

LOCAL CYCLING AND WALKING INFRASTRUCTURE PLAN

Malton & Norton

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SEPTEMBER 2020

PUBLIC

North Yorkshire County Council

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Malton & Norton

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1 INTRODUCTION

1.1 BACKGROUND

1.1.1. Local Cycling and Walking Infrastructure Plans (LCWIPs), as set out in the Government's Cycling and Walking Investment Strategy (CWIS), are a new strategic approach to identifying cycling and walking improvements required at the local level. They enable a long-term approach to developing local cycling and walking networks, typically over a 10-year period, and form a vital part of the Government's strategy to increase the number of trips made on foot or by cycle.

1.1.2. The key outputs of LCWIPs are:

- a network plan for walking and cycling which identifies preferred routes and core zones for further development;
- a prioritised programme of infrastructure improvements for future investment; and
- a report which sets out the underlying analysis carried out and provides a narrative which supports the identified improvements and network.

1.1.3. By taking a strategic approach to improving conditions for cycling and walking, LCWIPs will assist Local Authorities (LAs) to:

- identify cycling and walking infrastructure improvements for future investment in the short, medium and long term;
- ensure that consideration is given to cycling and walking within both local planning and transport policies and strategies; and
- make the case for future funding for walking and cycling infrastructure.

1.2 LCWIP PROCESS

1.2.1. The Department for Transport (DfT) has produced guidance to develop a LCWIP; this defines 6 distinct stages in the production of an LCWIP, as outlined below.

Table 1-1 – The LCWIP Process

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

1.2.2. The Malton & Norton LCWIP will be split into two distinct phases.

- The Phase 1 project report details the evidence review, network development process, and prioritisation of routes for short-term intervention, reflecting Stages 1 to 5 of the LCWIP guidance.
- The Phase 2 project report details the development of the identified priorities into 'bid-ready' schemes.

1.2.3. The two project reports will be taken forward for integration and application (Stage 6 of the LCWIP guidance) with the wider policy and strategy framework by NYCC.

1.3 DEFINING THE STUDY AREA

1.3.1. Malton and Norton are twin towns separated by River Derwent in the district of Ryedale, North Yorkshire, located between York and Scarborough. Together, the two towns form the largest settlement in Ryedale and the District's Principal Town, with a joint population[1] of approximately 12,000.

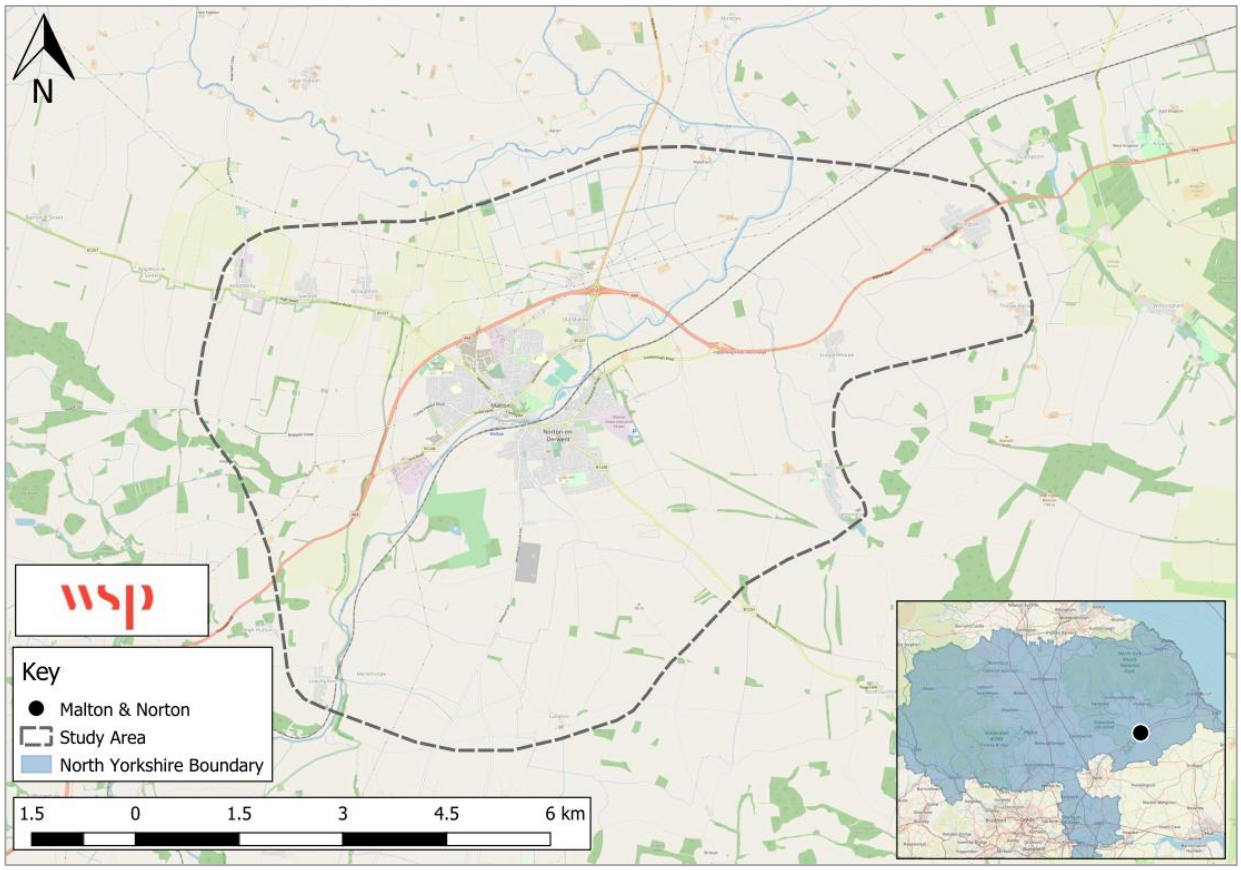
1.3.2. In addition to the physical boundary line created by the River Derwent, the towns are also separated by an active railway line; the Grade II listed Malton railway station is located to the south of Malton, approximately 0.5km from each of the town centres. The York to Scarborough railway line separates the two towns and the associated level crossing is the single crossing point between the towns for all modes of transport (including pedestrians, cyclists and motor vehicles). Historically, there was a pedestrian bridge over the railway line at the eastern side of the level crossing, but this was removed in the 1980s.

1.3.3. The focus of the LCWIP process is to create a cohesive network for walking and cycling that will encourage those who do not currently walk or cycle for everyday purposes to do so, generally aligning with travel for commuting and utility purposes over shorter distances. Links between urban areas are often less likely to promote the desired modal shift, with greater benefits obtained through the provision of a denser urban network, connecting residential areas with a range of employment opportunities, schools, shops and facilities within a desirable walking or cycling distance.

1.3.4. The LCWIP will also consider strategic longer-distance inter-urban links, connections to outlying areas, and tourist or leisure focussed routes where these are deemed to add significant value.

[1] *Source: Office of National Statistics - Census Dataset QS102EW*

Figure 1-1 – Study Area Boundary



1.4 REPORT STRUCTURE

1.4.1. This project report details Phase 1 of the Malton & Norton LCWIP and is structured as follows:

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

2

EVIDENCE BASE

2 EVIDENCE BASE

2.1 INTRODUCTION

2.1.1. This chapter places the LCWIP within the national, regional, and local policy framework and establishes the existing geographic, demographic, and active travel situation in the study area. Forecast trends in growth are also presented to understand the future situation, considering changing travel patterns and future development in the district.

2.1.2. The culmination of this work is an evidence base that supports and informs development of the Malton & Norton LCWIP, helping to define network connections and emerging priorities.

2.1.3. A detailed desktop research exercise has been undertaken to help establish the baseline situation and understand future trends, considering available datasets, policies and strategies. However, in order to ensure that the LCWIP and the resulting network plans are founded on robust evidence, this research has been supplemented by a range of data collection and stakeholder consultation exercises, including:

- Site Visits: Site visits were undertaken to appreciate the study area at ground level. The site visits were undertaken on foot and bicycle in order to understand travel around the study area as vulnerable road users.
- Stakeholder Workshops: An external stakeholder workshop took place with officers of North Yorkshire County Council and Ryedale District Council as well as members of the public in order to gain their input on the challenges and opportunities related to walking and cycling in the study area. A summary note regarding this workshop is provided in Section 6.
- Meetings / Conference Calls: The project team have liaised with key internal stakeholders from RDC in order to gain detailed insight into the work the District has done relating to walking and cycling network planning. Meeting with RDC staff (as the planning authority) and NYCC area officers 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.

2.1.4. The structure of this section is as follows:

- Policy Context;
- Local Geography;
- Demographics;
- Existing Transport Networks: Cycling and Walking;
- Existing Transport Networks: Road, Rail and Public Transport;
- Existing Origins and Destinations; and
- Future Situation (Developments, Infrastructure and Forecasting Growth).

2.2 POLICY CONTEXT

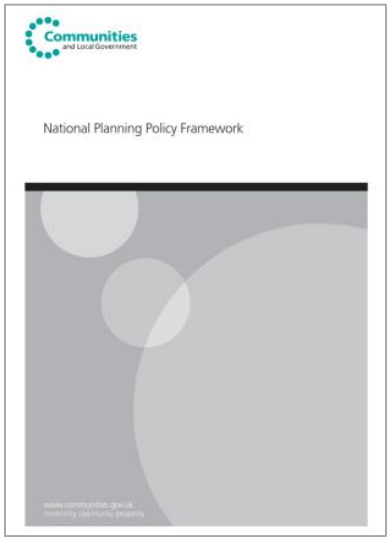
2.2.1. The DfT LCWIP guidance highlights the need to understand the local, regional, and national policy framework with which the LCWIP document will align and be integrated. Several key policy documents have been identified and summarised below, highlighting synergies with the aims of LCWIP and how the LCWIP can support the delivery of these policy objectives:

- National Planning Policy Framework (NPPF), 2012 and updated 2018;
- White Paper: Creating Growth, Cutting Carbon, 2011;
- DfT Cycling and Walking Investment Strategy, 2017;
- DfT Local Cycling and Walking Infrastructure Plan Guidance, 2017;
- NYCC Local Transport Plan 4 (LTP4), 2016-2045;
- York, North Yorkshire & East Riding LEP Strategic Economic Plan, 2014;
- A Strategic Transport Prospectus for North Yorkshire;
- Ryedale District Council Local Plan Strategy 2012-2027; and
- Ryedale District Council Draft Local Plan Sites Document & Policies Map Draft Local Plan 2017.

NATIONAL POLICY

Revised National Planning Policy Framework

2.2.2. The Government's Revised National Planning Policy Framework (NPPF) was published on 24th July 2018, and is the first revision to the 2012 publication of the NPPF; the NPPF replaced all previous planning policy in England on its release, condensing over 1,000 pages of guidance into a single comprehensive document.



2.2.3. The revised NPPF implements approximately 85 reforms announced previously through the Housing White Paper, the 'planning for the right homes in the right places' consultation and the draft revised National Planning Policy Framework consultation.

2.2.4. Chapter 2: 'Achieving Sustainable Development' continues to place significant emphasis on sustainable development, summarising this as:

"meeting the needs of the present without compromising the ability of future generations to meet their own needs"

2.2.5. The document continues to state that the planning system has three interdependent and mutually supportive overarching objectives, which include:

- an economic objective – to help build a strong, responsive and competitive economy;
- a social objective – to support strong, vibrant and healthy communities; and
- an environmental objective – to contribute to protecting and enhancing our natural, built and historic environment.

2.2.6. Chapter 8: 'Promoting Healthy and Safe Communities' states that planning policies should aim to achieve healthy, inclusive, and safe places, which carries implications for those routes included within the LCWIP; with due regard given to these requirements.

2.2.7. This chapter also sets out policies in relation to open space and recreation. Paragraph 98 states that:

"Planning policies and decisions should protect and enhance public rights of way and access, including taking opportunities to provide better facilities for users"

2.2.8. The PROW network has the potential to complement and support the LCWIP network, providing facilities for multiple trip purposes. Improvements to surfacing and designation (such as conversion to a cycle track) may be necessary.

2.2.9. Chapter 9: 'Promoting Sustainable Transport' specifically addresses the promotion of sustainable transport through the planning system. The document recognises that transport issues should be considered from the earliest stages of plan-making and development proposals, including identifying and pursuing opportunities to promote walking and cycling, and ensuring that patterns of movement, streets, parking, and other transport considerations are integral to the design of schemes, and contribute to making high quality places.

2.2.10. Paragraph 104 references that planning policies should both:

- identify and protect, where there is robust evidence, sites and routes which could be critical in developing infrastructure to widen transport choice and realise opportunities for large scale development; and
- provide for high quality walking and cycling networks and supporting facilities such as cycle parking (drawing on Local Cycling and Walking Infrastructure Plans).

2.2.11. The emerging LCWIP can support the development of such policies, identifying a contiguous walking and cycling network within a given area and prioritising interventions to ensure the network comes forward in a cohesive manner.

2.2.12. The Revised NPPF also addresses the role that new development can play in ensuring that walking and cycling are the natural choice for shorter journeys. Paragraph 108 states that allocated or proposed development sites should ensure that:

- appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location; and
- safe and suitable access to the site can be achieved for all users.

2.2.13. Paragraph 110 states that development proposals should:

- give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and
- create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards

2.2.14. Chapter 12: 'Achieving Well-designed Places' sets out how high-quality design is essential to creating genuinely sustainable development. Paragraph 125 states that:

"*Design policies should be developed with local communities so they reflect local aspirations, and are grounded in an understanding and evaluation of each area's defining characteristics"*

2.2.15. While the Malton & Norton LCWIP Phase 1 is not focussed on the design of schemes, the principles of how future interventions should be designed is a key consideration when determining the proposed network.

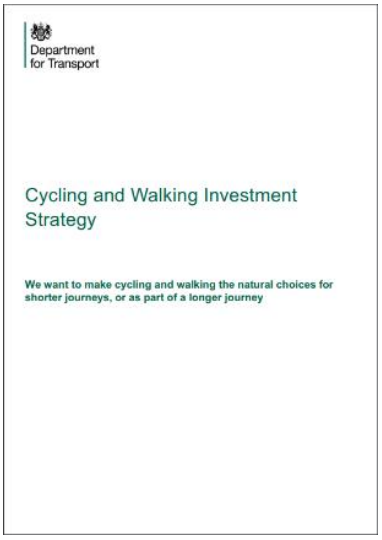
White Paper: Creating Growth, Cutting Carbon (2011)

2.2.16. 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, stating a vision 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."

2.2.17. 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. 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

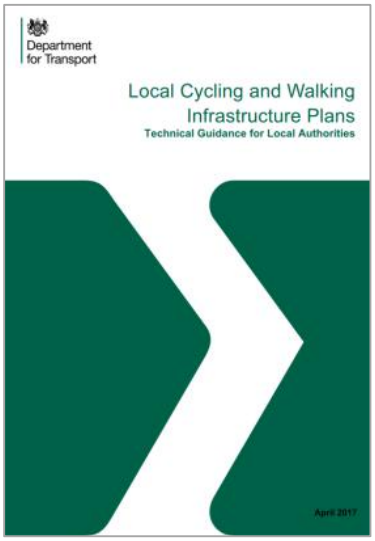
2.2.18. The Government published its first Cycling and Walking Investment Strategy (CWIS) in 2017, setting out an ambition to make walking and cycling the natural choices for shorter journeys or as part of a longer journey. The CWIS states that the benefits to doing this would be substantial, potentially 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.



2.2.19. 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)

2.2.20. 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.



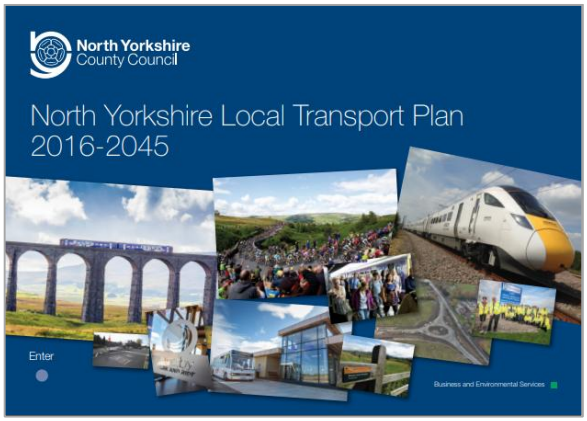
2.2.21. The LCWIP guidance sets out a recommended methodology to planning networks of walking and cycling routes that connect places that people need to get to, whether for work, education, shopping, or for other reasons. The guidance brings together national and international guidance on best practice, 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.

2.2.22. The development of the Malton & Norton LCWIP has been prepared in line with the approach set out in this guidance.

SUB-REGIONAL POLICY

North Yorkshire Local Transport Plan (LTP4) (2016-2045)

2.2.23. NYCC's 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.



2.2.24. 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.

2.2.25. 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.

2.2.26. 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.

2.2.27. The LTP4 has identified the upgrade of the A64 between Malton and York, introduction of selective overtaking lanes and 2+1 running on the A64 between Malton and Scarborough as future priorities. It is also supportive of rail improvement proposals to increase rail frequency and reduced journey times between York and Scarborough.

2.2.28. The air quality in the majority of North Yorkshire is of a good standard; however, localised transport-related air quality issues have been identified at various places, including at Butcher Corner in Malton. One of the objectives of the A64 Brambling Fields junction improvement scheme at Malton and Norton was to remove traffic from Butcher Corner in order to help mitigate the associated AQMA. The LTP4 also identifies other mitigation measures to reduce the impact of transport on air quality, including travel planning for new developments; the document stresses the importance of NYCC leading by example through encouraging staff to travel to work using sustainable modes, e.g. walking and cycling.

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

2.2.30. 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

2.2.31. 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).

2.2.32. 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. 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.

2.2.33. Malton has been identified as a growth town in the SEP, due to its importance to the overall economy of North Yorkshire; in recognition of this importance, the SEP states that NYCC will investigate and develop proposals to reduce urban congestion where applicable.

2.2.34. In line with TfN’s objective for improved east-west connections, NYCC has identified a number of east–west routes as priorities for improvement - including the A64 between York and Scarborough. This includes:

- Supporting the upgrade of the A64 to dual carriageway standard between the Hopgrove Roundabout in York and Malton; and
- Supporting the introduction of selective overtaking lanes and 2+1 running on the A64 between Malton and Scarborough.

2.2.35. Improvements are also proposed for rail, and it is particularly noted that there will be support for proposals to reduce journey times on the York to Scarborough line which passes through Malton. There will also be strong support for improvements to the TransPennine rail network, which provides key links between the County and the major city regions across the north of England.

2.2.36. Improving access to the rail network is also identified as a key priority, presenting an aim of ensuring that at least 85% of the County’s population are within 40 minutes journey time (by road or rail) of an HS2 gateway at York, Leeds or Darlington. The existing congestion and delays currently experienced in Malton and Norton, which will be exacerbated in future years by new development

and associated traffic growth, may threaten NYCC's ability to achieve this aim, particularly if the A64 becomes more congested.

LOCAL POLICY

2.2.37. Local policy typically relates to targeted transport enhancements designed to address social, health and environmental issues, as well as to benefit the economy by enhancing access to jobs, training and services. In many cases there is a focus on improving integration between land-use planning and transport to support more sustainable patterns of travel and reinforce the case for targeted enhancements to the transport network.

Ryedale District Council – Local Plan Strategy (RDC, 2013)

2.2.38. Ryedale's Local Plan Strategy (LPS) was adopted in 2013; it sets out a vision for continued economic growth, resulting in a more diverse and resilient economy and new housing and employment development that provides better and balanced communities with improved access to services. The vision also identifies that Malton and Norton are the focus for much of the District's growth, and considered to be the cultural and economic heart of the area (noting the strong links with York's economy as the largest conurbation nearby). The LPS considers that these aspirations will partly be achieved through provision of and improvements to transport and public realm in the two towns.

2.2.39. The LPS sets out a growth policy which seeks to provide a minimum of around 200 new houses per year (3,000 over the Plan period to 2027); 50% of this residential development is planned to be provided in the Malton and Norton areas. In addition, 37ha (net) of additional employment land (plus a further 8ha additional land supply, if required) is to be allocated across the district, excluding existing commitments. The LPS states that around 80% of new employment land allocations are to be provided in and around Malton and Norton.

2.2.40. The key ambitions, aspirations and overall approach for growth for the towns, as set out in the Local Plan Strategy, are set out below:

- Support the role of the Principal Town as a District-wide Service Centre;
- Housing and employment growth;
- Improve choice and affordability of housing;
- Strengthen and develop links with the York economy;
- Improve choice and availability of employment land and premises including high quality business space, managed workspace and a Business and Technology Park;
- Redevelop key Town Centre and Rail/River Corridor sites;
- Maintain the vitality and viability of Malton Town Centre;
- Improve shopping to enhance choices for food retailing and non-food shops, particularly fashion shops;
- Protect and improve leisure and entertainment facilities, including the Milton Rooms and Malton Cinema;
- Provide new and improved sport and recreation facilities;
- Support opportunities to develop tourism related to Roman/Georgian heritage and horse racing;
- Identify and secure a new location for the Malton Museum/display of Malton Museum artefacts;
- Improve accessibility and movement in and between the twin towns, including new and improved pedestrian routes, traffic management measures, improved internal junctions and the Brambling Fields strategic junction improvement; and

- Improved cycle and pedestrian facilities and routes and links between new development areas and existing facilities and employment areas.

2.2.41. The LPS identifies the importance of ensuring there is an adequate supply of land and buildings to support existing high-tech manufacturing activity and new and expanding businesses, as well as attracting alternative new and growing sectors. It is also recognised that there is a need for improved linkages with York's economy.

2.2.42. The LPS characterises transport in Ryedale as having low levels of public transport provision, which may be due to the large rural nature of the District and its very low population density. The highest levels of public transport deprivation in the District are recorded in the Wolds which reflects the limited public transport provisions in the area, resulting in limited access to employment opportunities and services in this area of the District. This creates a reliance on at least one private car and increasingly two cars per household in order to access the jobs, shops and services that are focussed on the local market towns or outside of the district such as York or Scarborough.

2.2.43. The LPS highlights that there are a number of strategic transport improvements identified by NYCC (as the highway authority) that could help address issues of congestion and connectivity experienced in the town, including:

- A junction at the A64 in the Broughton Road area;
- Improvements to the A64 Brambling Fields junction;
- A second Rail/River crossing from York Road to the Woolgrowers site;
- Improvements to the A64 junction at Musley Bank; and
- Scarborough Road to Beverley Road link.

2.2.44. The LPS notes that the cost of these schemes is likely to be prohibitive to their implementation; however, it is considered that the level of development set out in the LPS could still be delivered in the Plan period if the Brambling Fields junction improvement were provided together with a package of associated traffic management measures, improvement to junctions within the internal network and improved cycling and pedestrian facilities. The LPS goes on to state that further strategic transport improvements will be required in order to facilitate and support longer term growth in the towns.

Ryedale District Council – Local Plan Sites Document (Draft) (RDC, October 2017)

2.2.45. The emerging RDC Local Plan Sites Document highlights that there are around 1,500 committed dwellings (i.e. with planning permission or forming part of approved land allocations) across the district; 650 of these are in Malton and Norton. Additionally, in terms of employment uses, approximately 29ha of land is committed for employment uses (B1, B2, B8), of which around 27ha is in Malton and Norton.

2.2.46. In addition to setting out the proposed housing and employment sites, the document also identifies the infrastructure required to be delivered as part of the allocations to ensure the sites are deliverable.

2.2.47. The provision of the types of sustainable transport improvements which will need be implemented include:

- New or modified road and junction improvements;
- Improvements in public transport services and passenger facilities;

- The provision of a network of safe cycling and walking routes linking residential areas with employment sites, town centres, schools and recreational facilities.
- The use of former railway lines and tracks for recreational purposes (including walking, cycling and horse riding) or for potential public transport use should the opportunity arise in the longer term.

2.2.48. The need for public realm improvements was also highlighted as part of the LPS, however there are no specific details of any proposed measures other than aspirations to provide public realm enhancements to Castlegate, entrance to Norton, Malton's Market Square and the bus/rail interchange area in order to enhance the arrival experience and connectivity of each of the towns.

SUMMARY

2.2.49. The policy review demonstrates that the Malton and Norton LCWIP will contribute to a range of policy objectives at various spatial scales.

2.2.50. At a national level, the LCWIP will contribute toward the Government objectives of supporting sustainable development, by contributing to economic growth in a sustainable manner. The Government recently released the Cycling and Walking Investment Strategy (CWIS) and Local Cycling and Walking Infrastructure Plan (LCWIP) guidance; the LCWIP represents part of North Yorkshire's contribution to support the CWIS objectives. The LCWIP will also support and contribute toward all five objectives of the North Yorkshire Local Transport Plan due to the wide-ranging way that walking and cycling, as a mode of transport, can deliver benefits to individuals and wider society.

2.2.51. At a local level, the LCWIP will complement Ryedale District Council's aspirations to improve connectivity and movement between the towns of Malton and Norton and contribute towards the District's vision for better opportunities to access work and leisure activities, and have wider benefits for the environment, health, air quality, and social cohesion.

2.2.52. If adopted as an SPD, as per the DfT's LCWIP guidance, the Malton and Norton LCWIP will provide a policy basis for development to contribute towards a cohesive walking and cycling network, and helps ensure Malton and Norton's significant growth aspirations come forward in a sustainable manner.

2.3 LOCAL GEOGRAPHY

AREA PROFILE - MALTON AND NORTON

2.3.1. The twin towns of Malton and Norton serve an important function in the provision of facilities and services for smaller settlements across the wider district, particularly in terms of public transport links, employment opportunities and, retail, leisure and health provision.

2.3.2. Of the two towns, Malton has a larger range of key services, with an attractive market place where a weekly market is held, and off which the historic livestock market can be accessed; the Market Place occupies an elevated site which is sub-divided into a number of varied interlinked spaces around a central island of buildings including the Church of St Michael.

2.3.3. The town centre itself has numerous narrow streets and alleyways which link the Market Place to both Wheelgate and Yorkersgate (the key through routes in the town), with the majority of shops and services located adjacent to these streets. Many of the buildings in and around the Market Place are

noted as being of architectural or historical importance, including numerous Listed Buildings; the centre of Malton itself is designated as a conservation area.

2.3.4. While the towns are closely linked, Norton possesses a different townscape to Malton, with the main shopping centre located along a linear east-west thoroughfare (comprising Church Street and Commercial Street) protected by a conservation area designation. There are also a number of listed buildings in the town. Commercial Street includes several small supermarkets in addition to a range of convenience shops and food establishments, generally catering for local needs.

2.3.5. The twin towns are separated by two physical boundaries; the railway line and the River Derwent, with an associated single crossing point, resulting in significance severance issues between the two town centre areas. The single crossing is intersected by a live level crossing and forms part of a complex road junction—at present, the junction is perceived to be unsafe and difficult to navigate for all users. There are further issues for active travel users due to limited pedestrian refuges available, and with the limited facilities and perceptions of poor safety is considered to discourage modal shift to more active modes of travel.

LCWIP Implications

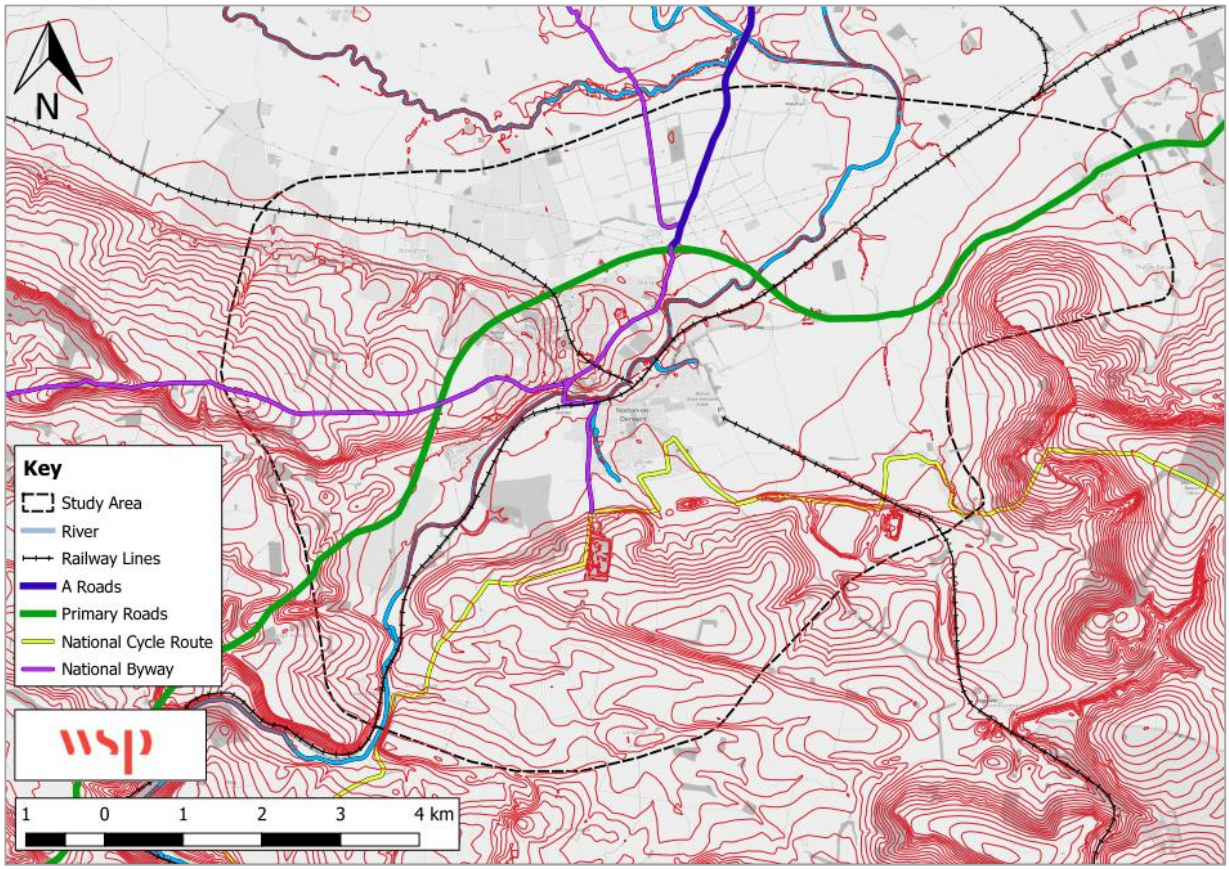
- Malton town centre is characterised by historic layouts and constraints such as narrow streets, with some areas many centuries old, limiting the type of infrastructure that can be implemented.
- There are significant severance issues between the town centre, with the single crossing point perceived unsafe for active travel users, there is opportunity to improve the safety for walkers and cyclists surrounding the junction through the LCWIP programme.
- Reintroduction of the pedestrian bridge could encourage more people to use active modes away from the single level crossing points.

TOPOGRAPHY

2.3.6. Figure 2-1 illustrates the topography within the LCWIP Study Area, displaying 5m contours, with key arterial routes shown for additional context. Topography will be more important when considering specific desire lines and potential routes; however, as evidenced by the data, the towns of Malton & Norton are considered to be relatively flat, with only a few relatively shallow gradients. The wider District is characterised by open and sparsely wooded arable landscapes, with hillier regions to the south and west.

2.3.7. The average gradient in Malton is 1.5%, although in some areas (particularly north of the Market Place) gradients are somewhat steeper. The land in Norton to the south of the river is much flatter, with the average gradient being just 0.75%. Gradients below 2% are considered to provide the most conducive conditions for cycling.

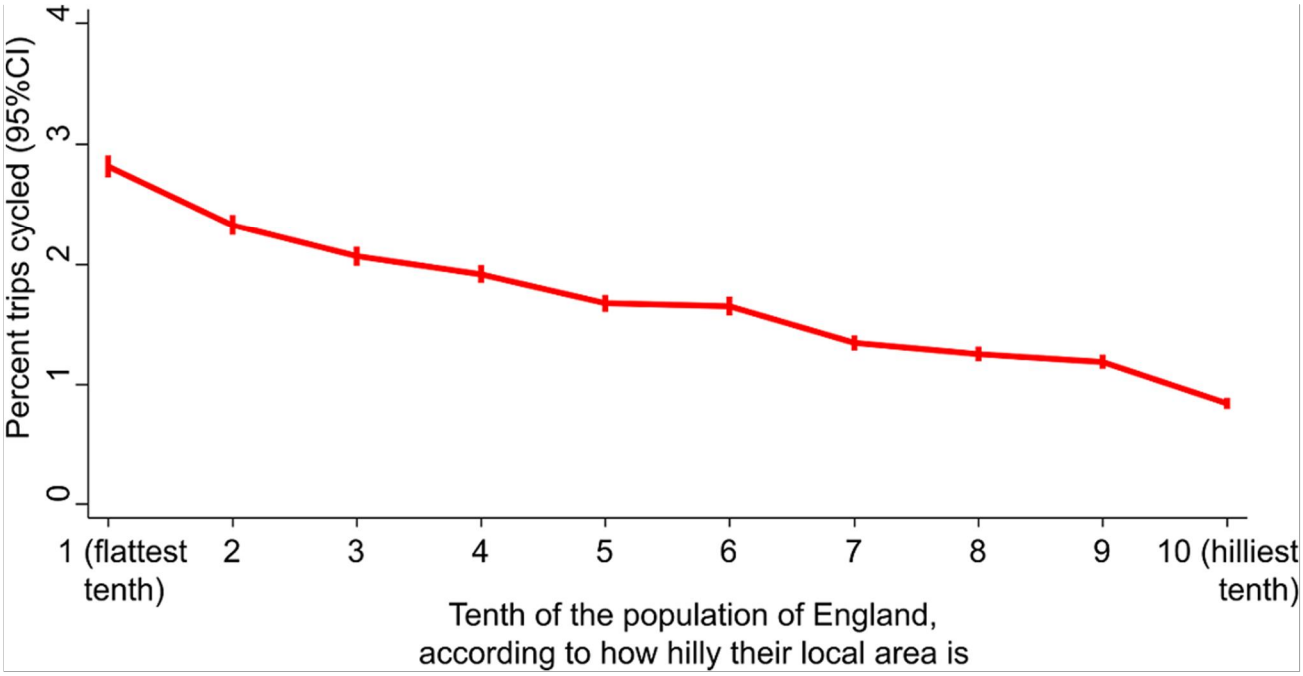
Figure 2-1 – LCWIP Study Area Topography



2.3.8. 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 district[2]."

2.3.9. Furthermore, as demonstrated in Figure 2-2, 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.

Figure 2-2 – Proportion of trips cycled in England (according to 'Hilliness' of local area)



Source: Centre for Diet and Activity Research

2.3.10. Gradient also plays a major role in the perceived 'comfort' or 'attractiveness' of pedestrian routes (footpaths and footways), and thus, the propensity to walk a route. As highlighted in DfT's 2005 'Inclusive Mobility' guidance[4], and replicated more recently in the 2014 Welsh Active Travel

[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

[4] Inclusive Mobility, Department for Transport, 2005

Guidance[5], steep gradients can have a particular impact on older people, those with physical difficulties and parents with pushchairs. The guidance recommends that as a general rule, a gradient of 5% (1 in 20) should be the desirable maximum in most situations and 8% (1 in 12.5) should be used as the absolute maximum unless justifiable. Research by Meeder et al (2017)[6] concluded that slope (and by inference 'hilliness') has a significant influence on walking attractiveness primarily due to the effort (or energy) required to scale the slope, suggesting that for every 1% increase in incline there is a 10% reduction in walking attractiveness.

2.3.11. Such evidence suggests that 'hilliness' in certain areas is likely to have a bearing on the propensity of people to walk or cycle to and from these areas and must be taken into consideration when determining potential networks.

LCWIP Implications

- The gradients within Malton and Norton are not seen as a barrier to the development of a stronger active travel culture.
- Consideration should be given to implementing infrastructure in areas of limited 'hilliness' or inclines, depending on other factors identified during this study.
- Much of the centres of Malton and Norton are fairly flat, and some flatter routes may be capable of forming part of a cycling and walking network through quick wins.

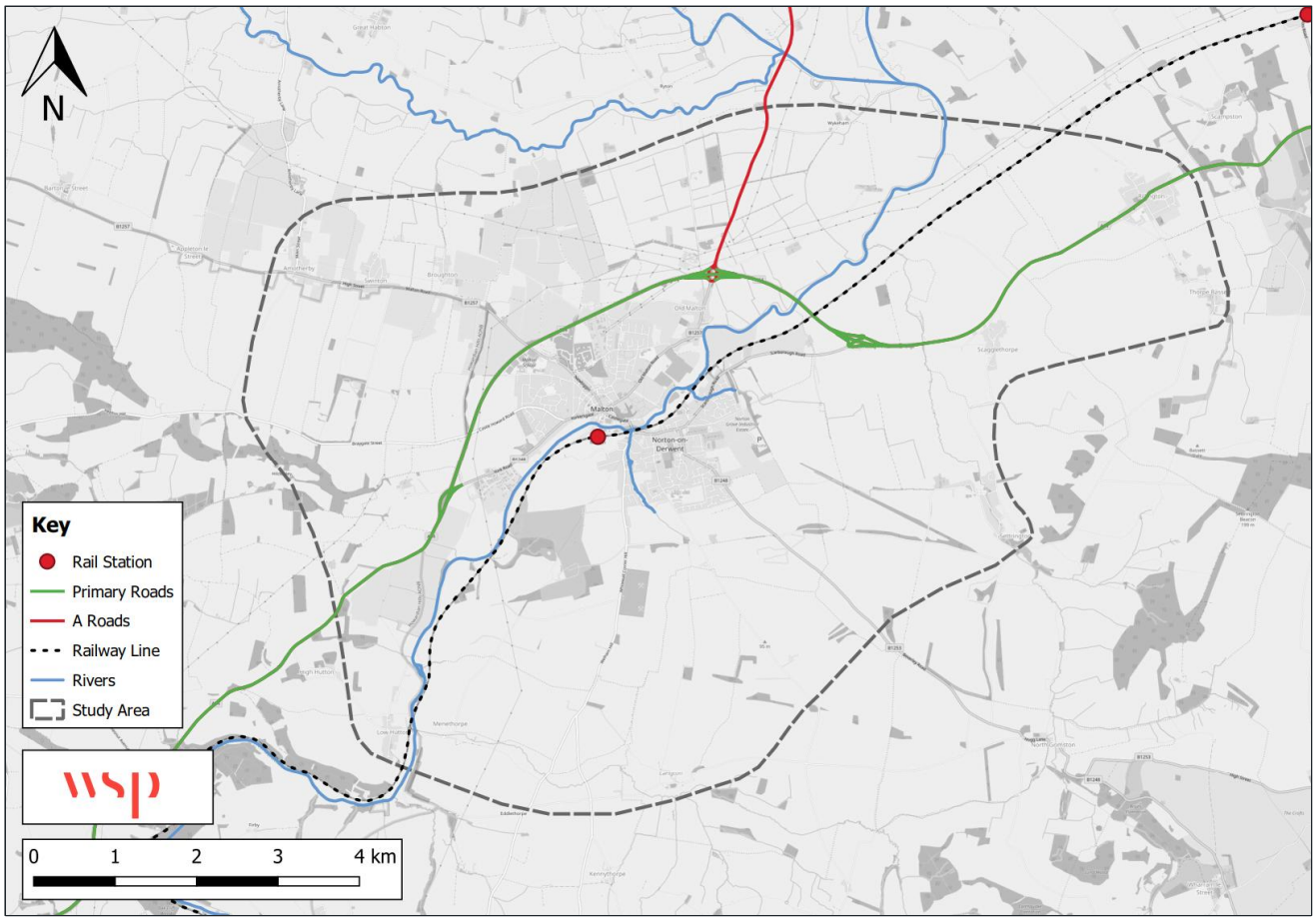
[5] Active Travel Design Guidance, Welsh Government, 2014

[6] 'The influence of slope on walking activity and the pedestrian modal share', Meeder M. *et al*., 2017

BARRIERS TO MOVEMENT

2.3.12. Although the topography of the area has been identified as generally conducive to walking and cycling, there are several physical barriers which can significantly impede active travel movements within each study area. Figure 2-3 displays various key features that can cause high levels of severance, creating barriers to movement across many desire lines and potentially requiring significant engineering interventions to mitigate this impact.

Figure 2-3 – Barriers to Movement



2.3.13. Malton & Norton suffer from significant severance between one another caused by the adjacent railway line and river between the two towns. This severance is only mitigated by a single crossing point over the railway line, which causes a funnel point for all forms of movement between the two areas. While there are two river crossings, the westernmost bridge is of limited benefit, connecting primarily to the rail station.

2.3.14. This severance is further exacerbated by the level crossing control over the railway line; when the level crossing barriers are down to allow trains to pass through, traffic builds up on the surrounding road network resulting in congestion and delay. At present, there are typically 2 trains an hour which stop at Malton, although a doubling of frequency is anticipated.

2.3.15. Traffic counts were undertaken on 17th January 2018 as part of the Malton and Norton Infrastructure Improvements Study. This Study analysed the impacts of the level crossing barrier down time; it indicated that the barrier was down for approximately 22 times per day during the 12-hour period

between 7am and 7pm. The longest and shortest closure times recorded were 03:25 minutes and 01:45, with an average closure time of 02:31 minutes.

2.3.16. Table 2-1 details the barrier closures times of duration of the closures over the survey period.

Table 2-1 – Barrier Closure Times

North Side: Barrier Closure Times/Duration							
Serial	**Barrier Down**	**Barrier Up**	**Duration**	**Serial**	**Barrier Down**	**Barrier Up**	**Duration**
1	07:04:56	07:06:51	00:01:55	**12**	13:08:12	13:11:02	00:02:50
2	07:18:26	07:21:46	00:03:20	**13**	14:07:09	14:09:16	00:02:07
3	07:56:15	07:59:14	00:02:59	**14**	14:09:59	14:13:17	00:03:18
4	09:13:04	09:15:00	00:01:56	**15**	14:36:39	14:38:36	00:01:57
5	09:23:41	09:27:03	00:03:22	**16**	15:05:15	15:07:00	00:01:45
6	10:08:02	10:10:50	00:02:48	**17**	15:20:26	15:23:16	00:02:50
7	10:18:56	10:20:51	00:01:55	**18**	16:06:48	16:10:13	00:03:25
8	11:08:45	11:11:26	00:02:41	**19**	17:03:00	17:05:32	00:02:32
9	12:05:09	12:07:07	00:01:58	**20**	17:07:57	17:10:39	00:02:42
10	12:07:43	12:10:08	00:02:25	**21**	18:00:18	18:02:21	00:02:03
11	13:05:44	13:07:33	00:01:49	**22**	18:07:35	18:10:16	00:02:41

2.3.17. The results show the majority of closures are over 2.5 minutes, therefore it is assumed the barriers are down for a total of circa 5 minutes each hour. The train services generally run to timetable, however on the day of the study there were some delays recorded and two cancellations (08:04 to Scarborough and 09:13 to York).

2.3.18. A queue length survey was also undertaken as part of this study to determine the impact the level crossing closures had on the surrounding highway network. Table 2-2 sets out the length of queues as a result of the barrier closures.

Table 2-2 – Queue Lengths

Road	Queue Lengths (No of Vehicles)	
	Average	Maximum
B1248 Castlegate	29	54
Norton Road	5	17
B1248 Church Street	10	20
Welham Road	13	26

2.3.19. The maximum queue length which was recorded was 54 vehicles; this occurred at 4pm on Castlegate, which lies north of the level crossing. This queue number also reflects the time of day when the barrier was down for the longest duration, at approximately 3.4 minutes.

2.3.20. The notes from the survey also indicated that the queue stretched up to 30m south of Butcher Corner which indicates that the stationary traffic at these intervals could have directly impacted on the AQMA at this junction.

2.3.21. Table 2-3 sets out the time taken for the traffic queues, as a result of the level crossing to clear.

Table 2-3 – Traffic Clearing time

Road	Average Queue	Maximum Queue	Average Clearing Time	Maximum Clearing Time
B1248 Castlegate	29	54	00:02:03	00:04:22
Norton Rd	5	17	00:02:10	00:06:28
B1248 Church St	10	20	00:03:05	00:07:08
Welham Rd	13	26	00:01:04	00:03:46

2.3.22. The table shows that queue on Church Street takes the longest time to clear in both the average and maximum scenarios, which is likely due to the priority arrangements at the junction which requires vehicles to give way to the mainline flow. As such, the queue lengths at Castlegate do not correlate with the maximum queue dissipation times (as recorded on Church Street).

LCWIP Implications

- There is a physical boundary line between Malton and Norton, created by the River Derwent, the towns are also separated by an active railway line features significant human made barriers.
- While some crossing points do exist, additional crossing points may be a key requirement in order to create a cohesive active travel network.
- The barrier closure time impacts on congestions on the surrounding highway network, resulting in standstill traffic which could have a direct impact on the AQMA.
- The current crossing has safety implications for active travel users and therefore may discourage people from travelling this way.
- These issues could be alleviated by a new crossing point, including the potential for southern access at the railway station.

ENVIRONMENTAL CONSIDERATIONS

2.3.23. Environmental considerations have the potential to form a key part of the LCWIP process. Protected areas of land can restrict the type of infrastructure that can be implemented, or even prevent a route from being adopted at all, while the LCWIP can contribute or complement strategies to protect or enhance the environment.

2.3.24. The Ryedale environment is considered to be of exceptionally high quality; this 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. Malton is located immediately east of the Howardian Hills Area of Outstanding National Beauty (AONB); this designation ensures that the natural beauty and special qualities of the area can be conserved and enhanced. The District also borders the North York Moors and Yorkshire Wolds.

2.3.25. The District is also home to a range of heritage assets, including Roman remains in Malton and Norton. There are also 34 Conservation areas and circa 1,600 listed buildings across the District. Within Malton town centre itself there are a significant number of listed buildings, in addition to three Scheduled Monuments, including a Roman fort, the site of Malton Castle, and Old Malton Priory Church.

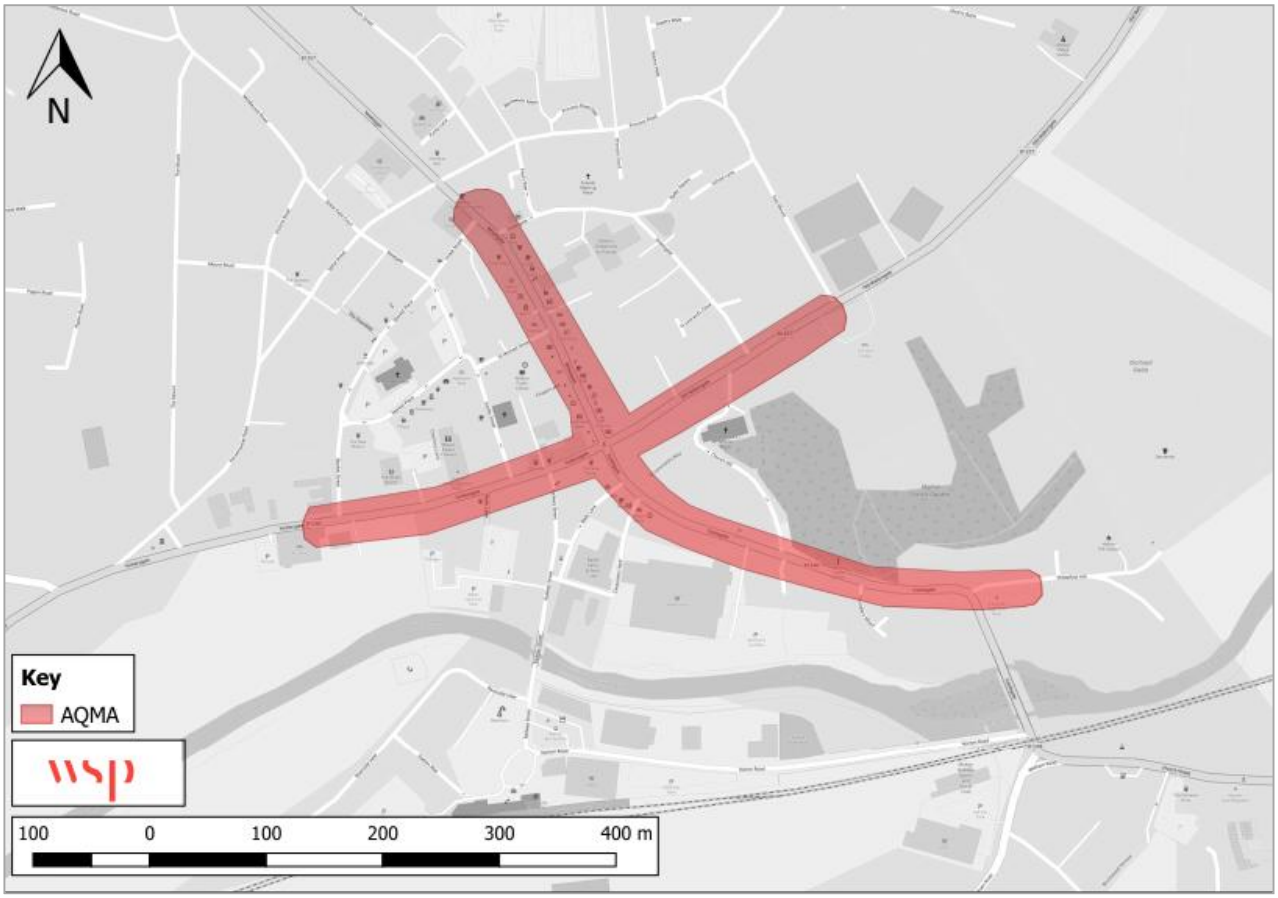
2.3.26. The high volumes of traffic passing through the towns on a daily basis, and the resulting congestion, are considered to be eroding the character of the towns and reducing its attractiveness to visitors and potential investors.

2.3.27. This section of the report presents a brief overview of environmental constraints that could impact on the overall LCWIP proposals.

Air Quality Management Areas

2.3.28. There is one AQMA within the study area designated in 2009 for exceedances of NO2. The AQMA is located at Butcher Corner, and includes the junction of Wheelgate / Old Maltongate / Castlegate / Yorkersgate and a short section of Church Hill, as illustrated in Figure 2-4.

Figure 2-4 – Malton AQMA: Broad Extents



2.3.29. The carriageway within the AQMA is narrow and bounded by buildings on both sides. This section of the road network experiences regular queuing and congestion, particularly on the approaches to the junction intersection known locally as 'Butcher Corner'; queuing is exacerbated by the downstream level crossing to the east of Malton Railway Station, which causes extensive queueing while down.

2.3.30. RDC has developed an Air Quality Action Plan (adopted in 2012), which aims to reduce NO2 concentrations through tackling the dominant source of emissions—vehicular traffic. RDC reported that road traffic accounted for over 75% of the NO2 within the AQMA; Heavy Duty Vehicles (HDVs) are identified as having a disproportionate impact in terms of their emissions, contributing 40% of the NO2 emissions while comprising less than 5% of the traffic. Consequently, measures proposed in the Action Plan seek to reduce traffic volumes, in particular HGVs; the proposals identified to achieve this include:

- Improved traffic management including improved timing of roadworks and optimising capacity of junctions by altering signal timings;
- Encouragement of multi-purpose trips to reduce travel demand; and
- Effective management of new developments and car parking to reduce need to travel.

2.3.31. Since the Action Plan was adopted, in 2012, the number of exceedances of the annual mean NO2 objective has gradually fallen (7 exceedances in 2012, 3 in 2013, 2 in 2014, 1 in 2015 and no exceedances in 2016). Despite this, the current AQMA boundary is still considered relevant; pollutant concentrations vary from year to year, due to the influence of meteorological conditions; it is also considered that these improvements in air quality may partially be a result of improvements in

vehicle technology and cleaner engines - as such RDC will continue to monitor air quality at this location.

2.3.32. The development of the LCWIP could contribute towards mitigation of the AQMA, with the proposed cycling and walking networks helping promote active modes as a viable alternative form of transport, thereby potentially reducing the numbers of vehicles passing through Butcher Corner.

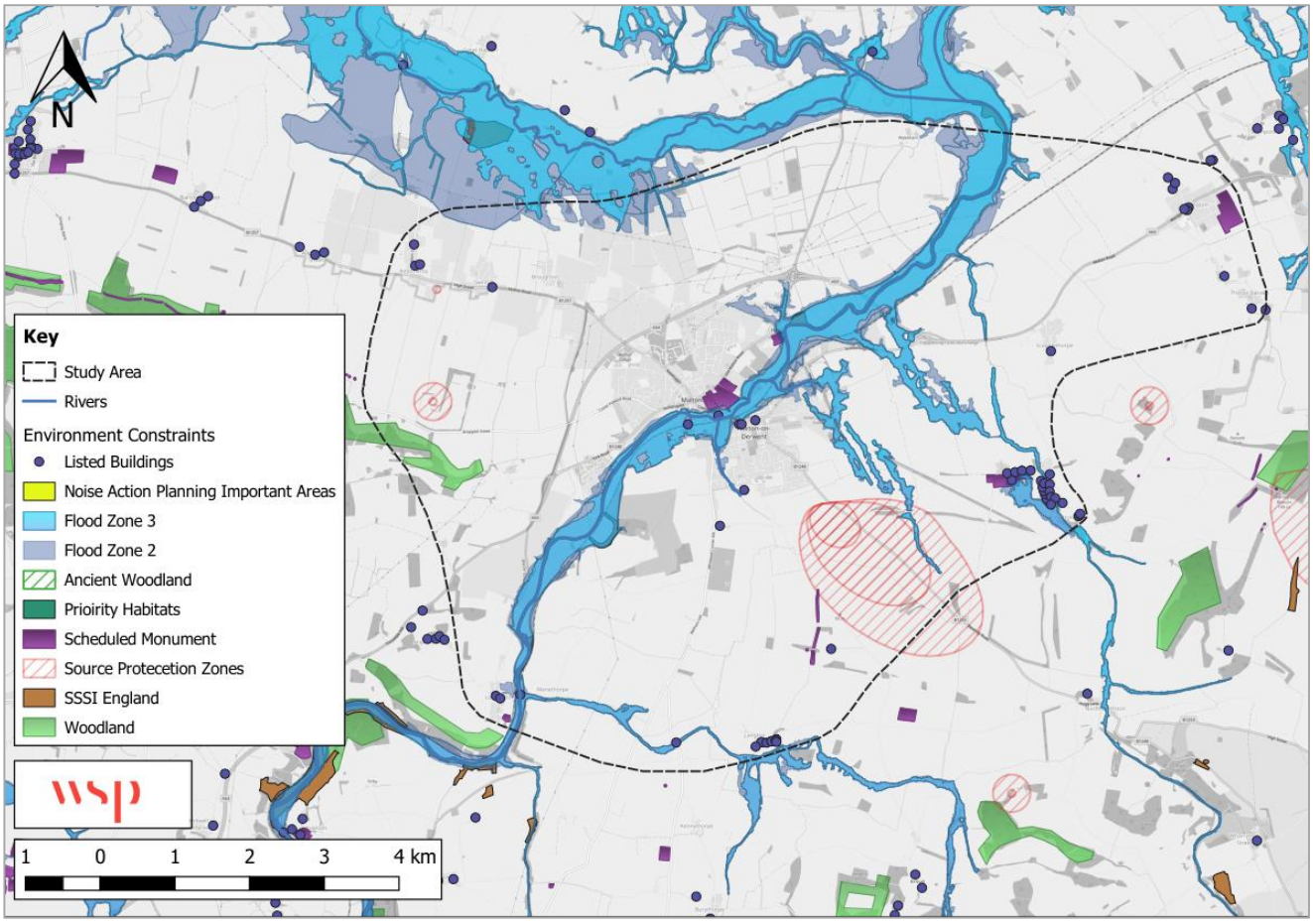
2.3.33. It is noted that NYCC's LTP4 also recognises the issues caused by poor air quality, and states that the county will support the district councils in seeking air quality grant funding through a variety of sources.

Environmental Constraints and Designations

2.3.34. Figure 2-5 illustrates the various environmental constraints that may need to be considered as part of the emerging Malton & Norton LCWIP.

2.3.35. Many of the potential constraints are associated with flooding, particularly in the low-lying areas surrounding the river. The area has been adversely affected by flooding in the past, with key links damaged. New infrastructure in these areas will need to consider resilience to flooding, and how it could potentially contribute toward mitigation of flood risk. There are also a number of SSSIs and scheduled monuments across the various study areas that will need to be considered.

Figure 2-5 – Environmental Constraints



LCWIP Implications

- The LCWIP offers a significant opportunity to help mitigate the declared AQMA at Butcher Corner and contribute toward the delivery of the AQAP. Conversely, the AQAP measures can promote the LCWIP as part of the identified measures.
- Any proposed routes that enter flood risk zones should consider their resilience to flood damage. Furthermore, such infrastructure could be designed or placed in such a way as to mitigate severance issues during flooding events.
- Routes that could potentially impact on a scheduled monument (such as any alterations) will need to consider Scheduled Monument Consent.
- Any routes that could impact on a SSSI will need to consult with Natural England and any other relevant stakeholders.

2.4 DEMOGRAPHICS

INDICES OF MULTIPLE DEPRIVATION

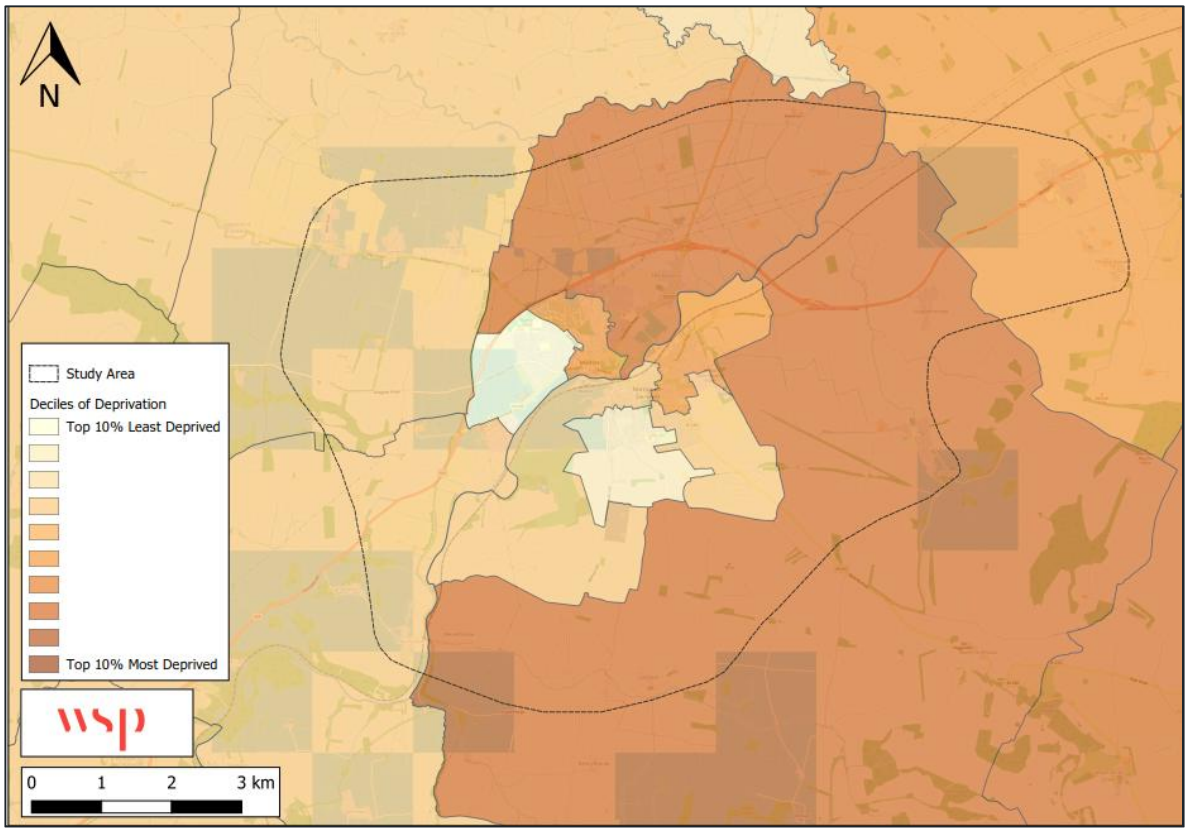
2.4.1. A key set of demographic indicators when promoting walking and cycling are those related to deprivation. This section of the report compares the 50 Lower-level Super Output Areas (LSOAs) within the District to the 32,482 LSOAs nationwide, paying particular regard to those within the three LCWIP study area.

2.4.2. 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 in relative deprivation

2.4.3. The following figures classify the various indices presented as deciles based on data across the whole of the England. Number 1 is considered the most deprived, while 32,482 is the least deprived; therefore 1 is presented as within the most deprived 10%, whereas 10 is in the least deprived 10% nationwide.

2.4.4. 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 2-6 illustrates the rankings of the LSOAs within Ryedale District.

Figure 2-6 – Indices of Multiple Deprivation (IMD)



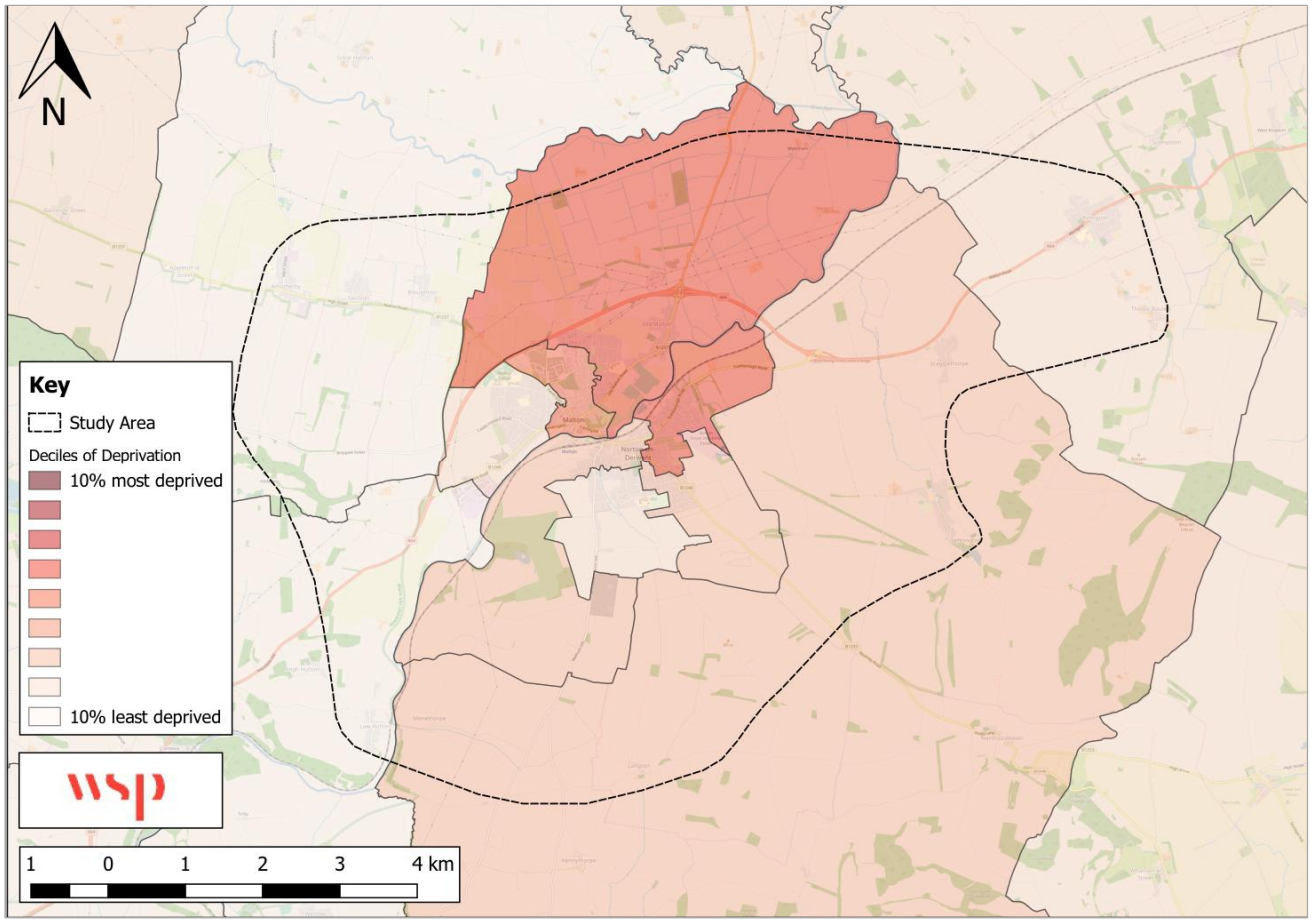
2.4.5. Ryedale is one of the least deprived areas of North Yorkshire, with all LSOAs within the study area within the top 60% less deprived areas in the country, although proportions of the population in fuel poverty are significantly higher than the national average. This reflects the largely rural nature of the district, combined with relatively low wages and older housing stock. In addition, average wage levels are amongst the lowest in northern England and the housing affordability ratio is one of the highest in the north. The LSOA to the east of Malton lies within the top 10% least deprived neighbourhoods in the country.

2.4.6. 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 understand the various aspects of 'deprivation'.

Health Deprivation and Disability

2.4.7. 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 2-7 shows that none of the LSOAs within the District are within the bottom most deprived decile. The LSOAs to the north of Malton lie within the top 50% most deprived LSOAs in England, and this area would therefore likely see the most benefit of walking and cycling interventions in regards to health.

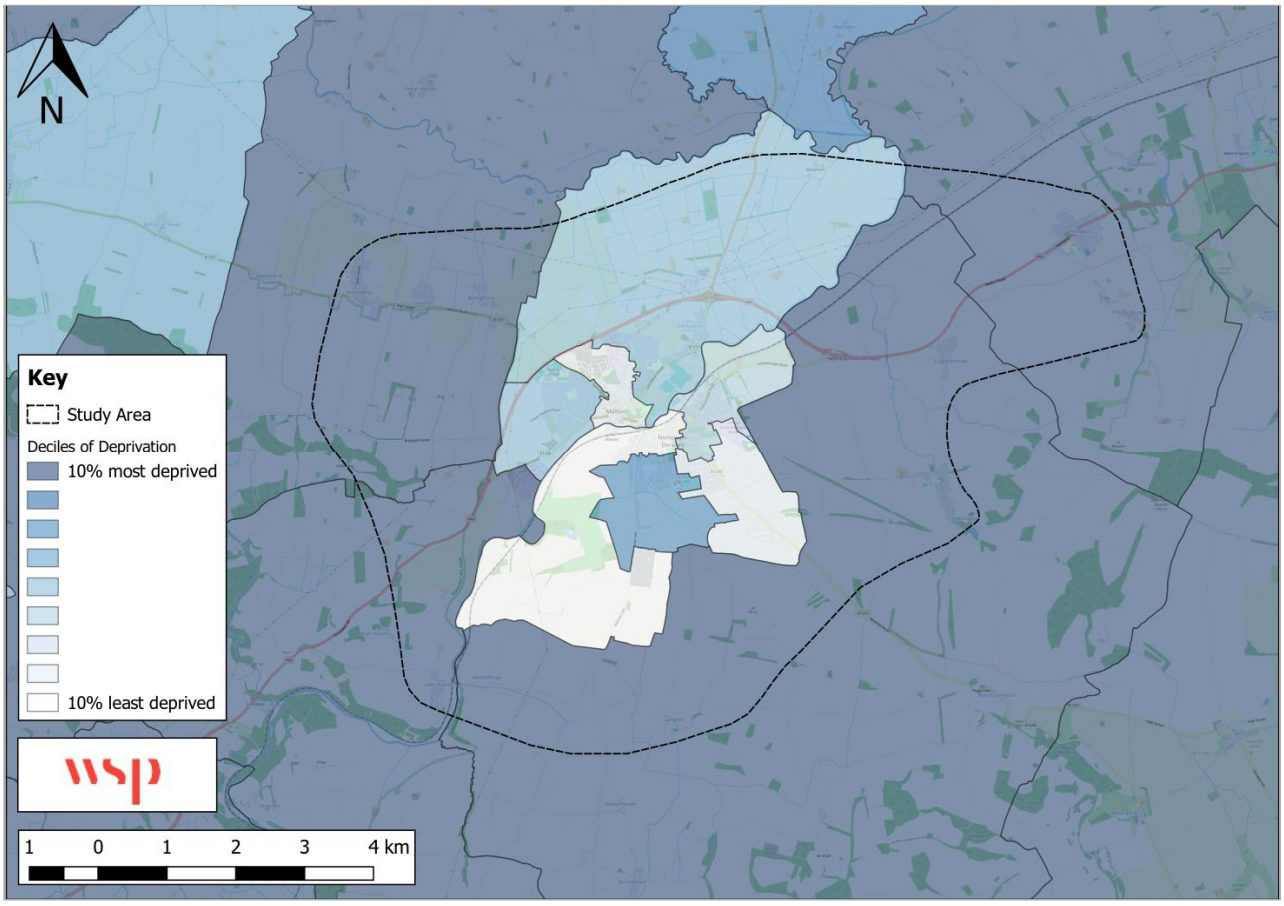
Figure 2-7 – Health Deprivation



Barriers to Housing and Services

2.4.8. 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 2-8 – Barriers to Housing and Services

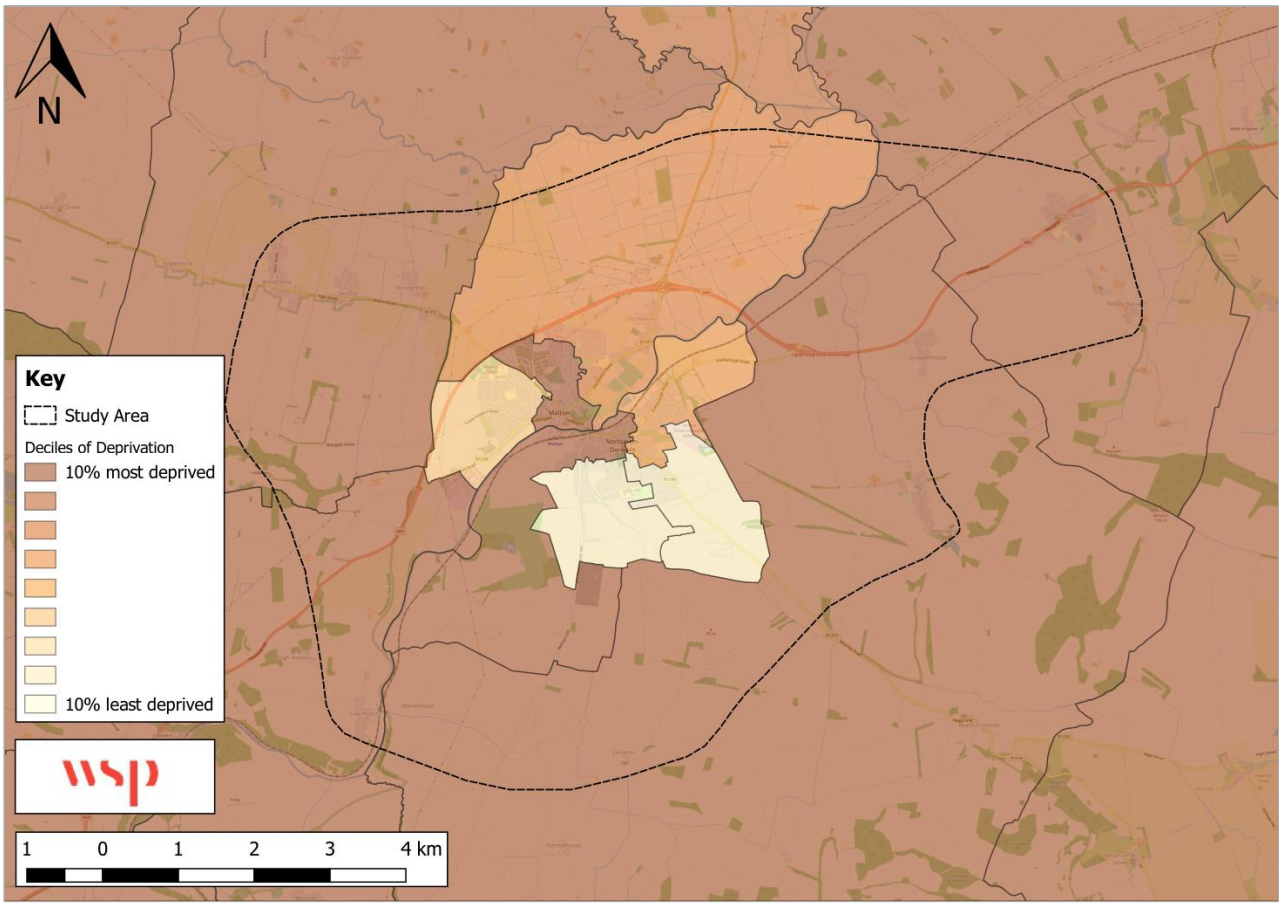


2.4.9. The indicators used in generating this Domain invariably favour urban areas, which are usually characterised by improved access to a wider range of services. Figure 2-8 highlights the lower levels of deprivation in relation to this Domain within the town centre areas.

Living Environments

2.4.10. Living environments 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 if 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 2-9 – Living Environments



2.4.11. Figure 2-9 indicates significant disparity in the rankings across the district, and notably between Malton and Norton. The rural areas surrounding the LCWIP study area includes some of the most deprived areas, while the LSOAs to the south of Norton are amongst the 20% least deprived neighbourhoods in the country.

LCWIP Implications

- While the overall IMD rankings indicate that Malton & Norton have relatively low levels of deprivation, the more rural areas see high levels of deprivation, particularly in regard to living environments and health.
- The LCWIP presents an opportunity to introduce physical measures that could contribute towards overcoming these issues, likely in conjunction with a wider package of interventions.
- Some of the outlying rural villages within the LCWIP study areas are characterised by a greater level of barrier to housing and services—the LCWIP proposals could enhance access to local services for residents in these areas, increasing access to services along the desire line by active travel modes.
- IMD and Domains of Deprivation mapping will be used to influence the prioritisation of routes in the LCWIP.

2.5 TRAVEL PATTERNS – JOURNEY TO WORK

2.5.1. The journey to work patterns of Malton and Norton are based upon data collected as part of the 2011 Census data. Table 2-4 sets out the journey to work patterns for residents which live within the MSOA of Malton and Norton, showing the broad areas, most commonly travelled to.

Table 2-4 – Commuting destinations from Malton & Norton

Location	No. in Employment	% of Total
Malton and Norton	2,437	47%
Ryedale District (excluding Malton and Norton)	1,345	25.9%
York	499	9.6%
Scarborough	188	3.6%
East Riding of Yorkshire	109	2.1%
West Yorkshire	108	2.1%
Other	499	9.6%
Total	5,185	100%*

*Due to rounding percentages illustrated may not total 100%

2.5.2. The data shows that 73% of residents within Malton and Norton work within the Ryedale District, with almost half of those living and working in the two towns. The next highest proportions were travelling to York (9.6%) and Scarborough (3.6%).

2.5.3. Table 2-5 shows where people are commuting to work from to the urban area of Malton and Norton.

Table 2-5 – Workplace Destinations

Place of Residence	Total Workers	% of all workers
Malton and Norton	2,437	42.8%
Ryedale District (excluding Malton and Norton)	1,575	27.8%
Scarborough	411	7.8%
York	378	6.6%
East Riding of Yorkshire	239	4.2%
Other	620	10.9%
Total	5,690	100%

2.5.4. This data shows that 70.5% of workers in Malton and Norton originate from the Ryedale District, with 43.8% residing in the urban area itself. The remaining 29.5% travel from outside the District, predominantly from Scarborough and York.

2.5.5. As such, there are approximately 2,400 resident workers in Malton and Norton, resulting in purely internal commuter trips. Just under 3,300 workers travel into the towns for employment from elsewhere in the Ryedale District and beyond, and approximately 2,750 travel out of Malton and Norton to other locations for work, resulting in a net gain of approximately 500 workers. In total there are just over 6,000 commuting trips in and out of the urban area.

2.5.6. As a result of the net gain in workers, this reinforces the importance Malton and Norton play on the wider district, but therefore these trips also likely contribute the congestion and delays on the local road network.

2.5.7. It is important to understand how those who purely undertake internal trips (i.e. live and work in Malton and Norton) travel to work, as these individuals live within a feasible active travel distance and could therefore be encouraged to travel on foot or by bike. Table 2-6 sets out the mode share for journeys to work.

Table 2-6 – M&N Internal Journeys to Work: Modal Split

Mode	% of travellers
Car (Driver or Passenger)	46.5%
Train	0.2%
Bus	0.6%
Walk	40.0%
Cycle	11.0%
Other	1.7%

2.5.8. The data shows that over half of these internal trips are taken by active modes (approximately 40% Walking and 11% Cycling); this is likely due to the compact size of the twin towns, which makes these trips feasible in terms of distance.

2.5.9. A key statistic to take from this analysis is that over 45% of trips are made by car, despite the compact nature of the study area, and may not necessarily need to be undertaken by car.

2.5.10. This relatively high level of car use for provides the opportunity to encourage long term behaviour change to more active modes of travel with the introduction of appropriate support interventions which could have a positive impact on the local highway network.

LCWIP Implications

- The proportion of internal commuting trips may demonstrate potential to further substitute walking or cycling for car trips within the towns.
- Encouraging the 47% of car users who travel within the study area for work to switch to walking and cycling could have a positive impact on the local highway network and ease local congestion.
- Engendering such modal shift will likely require a high quality and dense walking and cycling network with dedicated infrastructure.

2.6 EXISTING TRANSPORT NETWORKS: CYCLING AND WALKING

2.6.1. This section of the report provides additional context about the existing walking and cycling facilities in the LCWIP study areas, allowing identification of areas and features with high-quality infrastructure and those areas with a deficit.

2.6.2. Note that the section focusses more strongly on cycling and cycle users, as walking for any purpose is considerably more prevalent than cycling nationally. The needs of pedestrians have long been catered for through the provision of footways; while sometimes inadequate or substandard, the presence of a footway nevertheless facilitates some movement on foot. The needs of cycle users have been poorly understood until recently, and the lack of cycle-specific infrastructure has been identified as one of the key factors in supressing demand.

DEFINING CYCLE USERS

2.6.3. 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 regarding the infrastructure and facilities required, but also in terms of ‘soft’ measures such as information, publicity, safety and security.

2.6.4. Table 2-7 displays the range of cycle users that are expected to benefit from the measures proposed in the Malton & Norton LCWIP; identification of user types helps to inform the development of the strategy in the consideration of all user types and recognises that users can change type during their lives.

2.6.5. 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.

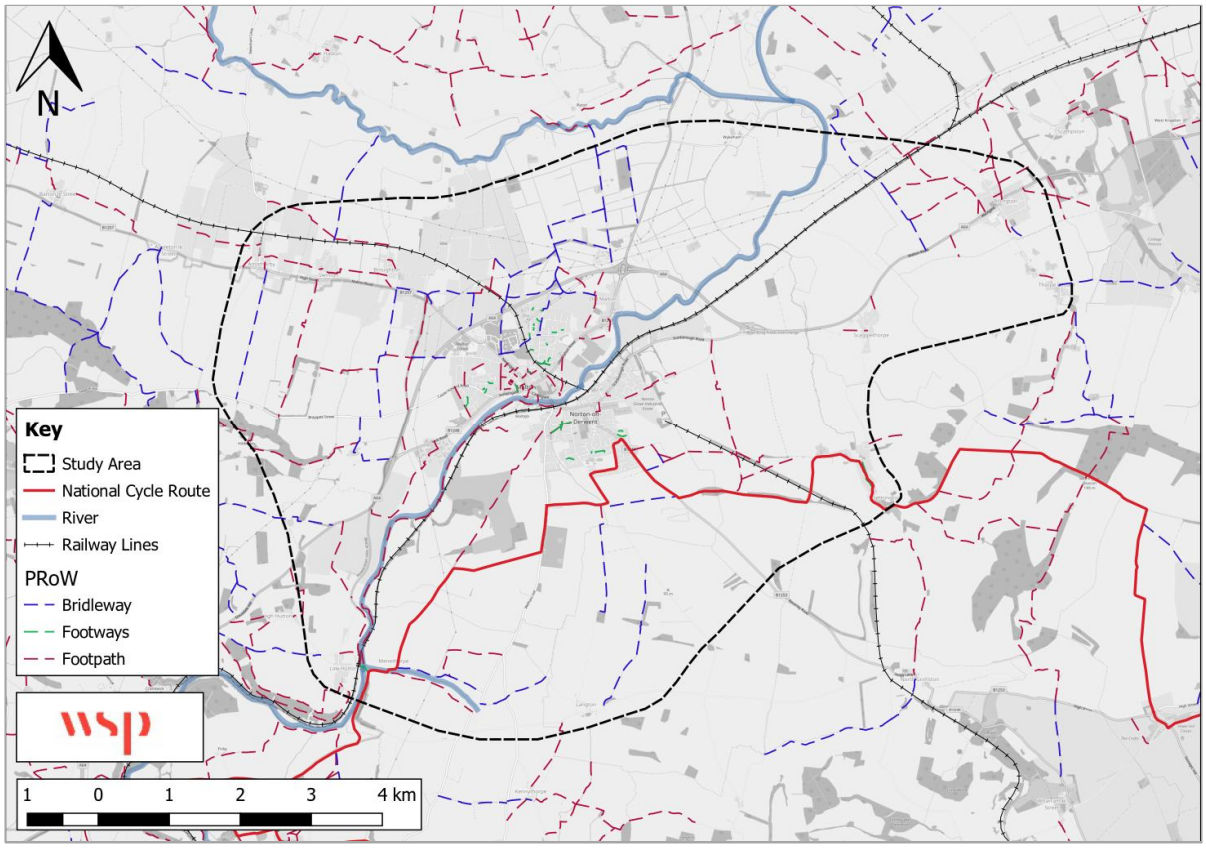
Table 2-7 – Types of Cyclist

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
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

EXISTING CYCLING AND WALKING NETWORKS

2.6.6. Figure 2-10 shows the existing cycling and walking network in the study area (excluding highway infrastructure). Note that this figure only shows Public Rights of Way (PROW) and designated Sustrans routes. RDC / NYCC do not hold any detailed GIS data relating to cycling infrastructure provision, although there is some limited existing infrastructure across the District, mainly consisting of shared use footways.

Figure 2-10 - Cycle Network & PROW within the LCWIP Study Area



2.6.7. Malton and Norton experiences significant severance issues caused by the River Derwent and the York – Scarborough railway line, which has an impact on the number of footpaths and cycle ways crossing these features, having an effect on pedestrian and cycle connectivity. There are significantly more footpaths in Malton in comparison to Norton, which link the main town centre to surrounding villages such as Old Malton, Broughton and Swinton.

2.6.8. National Cycle Network route 166 lies to the south of the town, providing connectivity between NCN route 164 from Pocklington to the NCN route 1 at Filey.

2.6.9. The Malton & Norton Infrastructure and Connectivity Improvements Study (WSP, 2018) identified that while there is some provision of dropped kerbs and tactile paving to facilitate crossing at key junctions. However previous site visits conducted by WSP identified a lack of convenient and safe crossing facilities for all non-motorised users across the towns, particularly at the level crossing.

PEDESTRIAN AND CYCLIST COLLISION DATA

2.6.10. Collisions involving pedestrians and cycle users can be seen as a barrier to taking up or continuing the activity, as they have a negative effect on both perceived and actual safety. However, existing data on collisions only provide some additional context regarding barriers to active travel. A poor route or junction may supress demand to such an extent that the numbers of walkers or cyclists are negligible or non-existent. Furthermore, the data only records accidents that cause injury; there are no records of near-misses or damage-only accidents.

2.6.11. Table 2-8 shows the total number of accidents involving pedestrians or cycle users within the LCWIP study area from 2013 to 2017 (note this is no. of accidents, rather than no. of casualties), as well as the severity breakdown.

Table 2-8 – Malton & Norton Pedestrian & Cycle User Collisions

Severity	2013		2014		2015		2016		2017	
	Cycle	Walk	Cycle	Walk	Cycle	Walk	Cycle	Walk	Cycle	Walk
Slight	5	5	4	9	6	8	2	1	3	6
Serious	1	2	1	2	0	0	2	3	1	2
Fatal	0	0	0	0	0	0	0	0	0	0

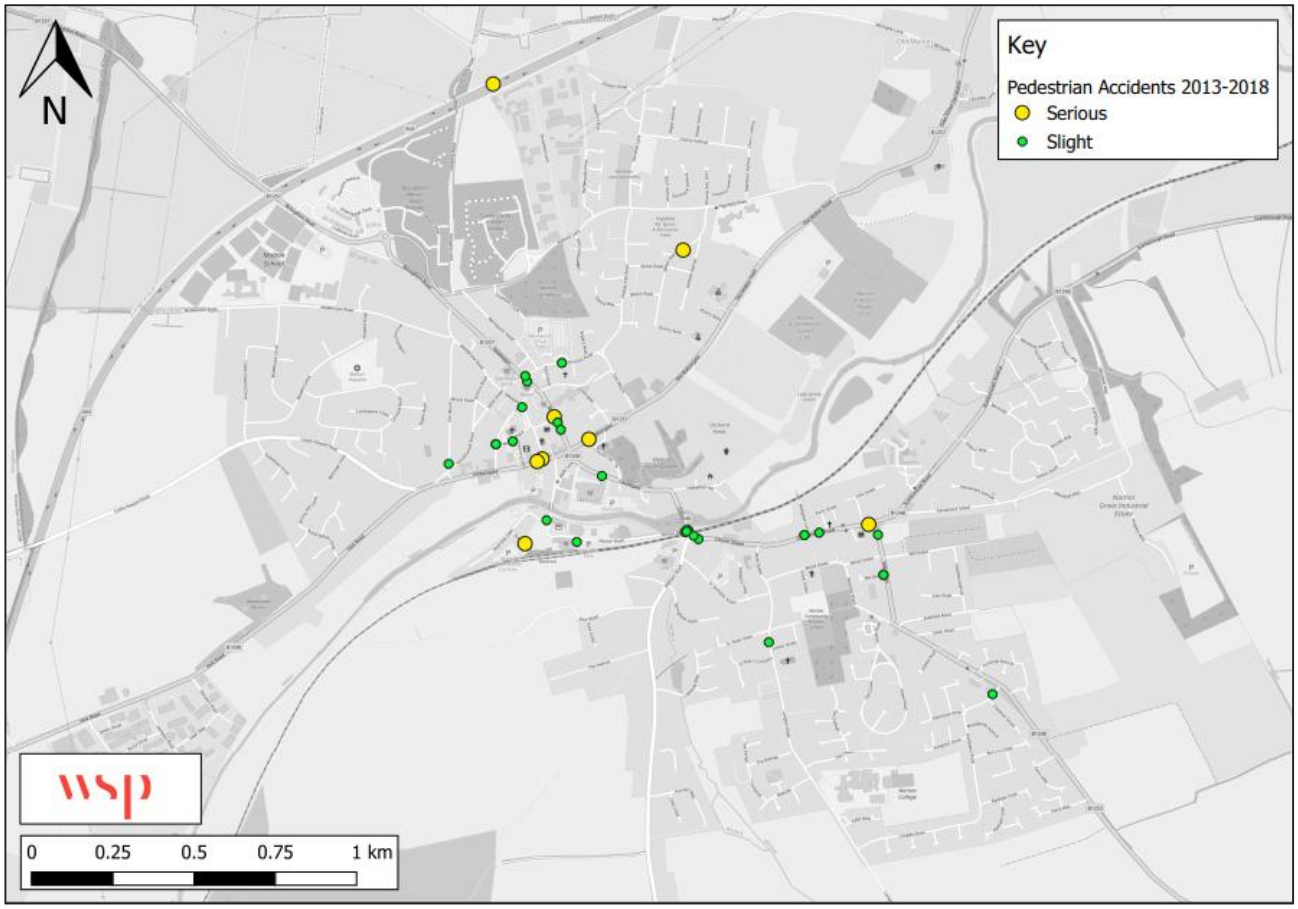
2.6.12. The data shows that over the six-year period there were no fatal collisions that involved a cycle user or pedestrian. The data shows that the fewest collisions occurred in 2018. Improving infrastructure within the study area could potentially contribute to reducing these accidents.

2.6.13. The accident locations have been plotted in Figure 2-11 and Figure 2-12. The figure shows all collisions over the 5-year period between 2013 and 2017. The data shows that where accidents occur in close proximity, this is typically along arterial roads or at junctions where there is also a higher number of vulnerable road users, such as pedestrians crossing.

Figure 2-11 – Cycle User Collisions Location Plot (by Severity)

2.6.14. The data shows all of the collisions that occurred over the 5-year period between 2013-2018 involving at least one cycle user. The data shows that there is a small cluster of incidents on Commercial Street, a key route into residential and employment areas in Norton. There are other notable clusters of incidents at the level crossing and Butcher Corner; these routes are likely to be integral to delivering a successful cycle network in Malton and Norton.

Figure 2-12 – Pedestrian User Collisions Location Plot (by Severity)



2.6.15. The data shows that most incidents involving pedestrians occurred in the vicinity of the town centre / Market Place in Malton; the concentration of ODs indicates that this area is likely to experience higher footfall than most of the towns. There are also notable cluster sites at the level crossing, where there are limited pedestrian crossing facilities, and at Church Street / Mill Street, the local centre of Norton.

WALKING AND CYCLING ISOCHRONES

2.6.16. An active travel isochrone has been produced encompassing the LCWIP Study Area, identifying what extent of the District could reasonably be accessed by walking or cycling from a central point of interest.

2.6.17. The isochrone uses the Market Place as a proxy central location in the area, highlighting the maximum desirable active travel distances to the main commercial centre. While more comprehensive isochrone mapping from various strategic locations will form a key part of developing the Walking Network Map, this isochrone is used to help determine the extent of the study area.

2.6.18. The NPPF and other established guidance documents on access to services and facilities (for example, *Guidelines for Providing for Journeys on Foot*, CIHT 2000) recognise that, beyond a certain distance, it becomes increasingly unlikely that people will walk or cycle to access services and facilities, instead using public transport or private motor vehicles. The following criteria are used in generating walking and cycling isochrones, representing the maximum desirable walking and cycling distances as identified in these documents.

Table 2-9 – Walking and Cycling Isochrone Criteria

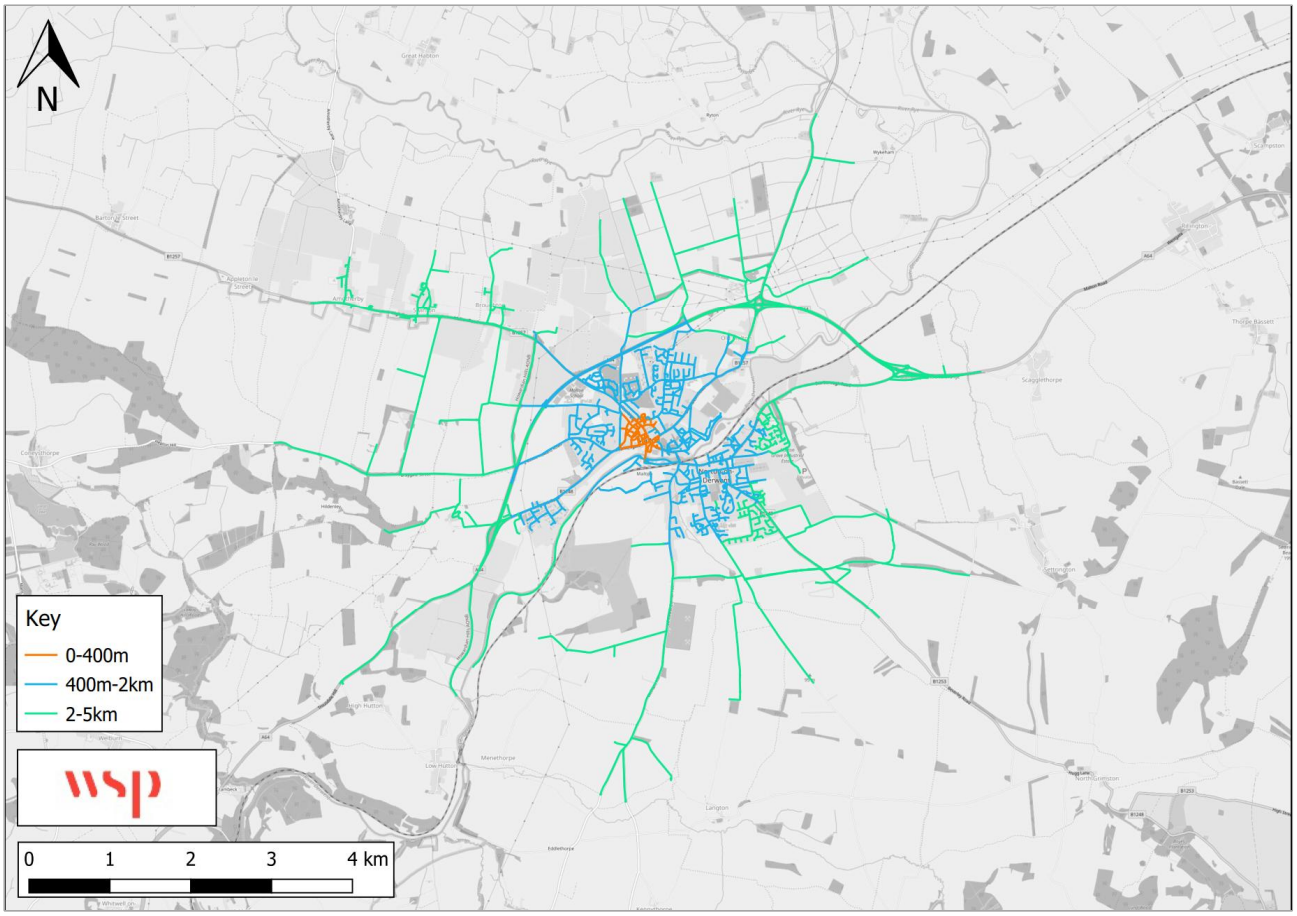
Mode	Maximum Desirable Distance
Walk	2km
Cycle	5km

2.6.19. The figure also shows a distance of 400m; this relates to the Core Walking Zones as specified in the DfT LCWIP guidance (as discussed in **Appendix A**).

2.6.20. Note that the isochrone shows what extent of each LCWIP study area *could* be considered accessible by cycle or on foot based solely on distance (rather than the provision of infrastructure or hilliness, for example).

2.6.21. Figure 2-13 presents the isochrone for the study area.

Figure 2-13 – LCWIP Study Area Active Travel Isochrone



The following points are noted in relation to Malton & Norton:

- The central marketplace of Malton has been identified as a Core Walking Zone due to the number of significant destination points within a close proximity to each other.
- The main town centre of Malton is captured within the maximum desirable walking distance.
- The urban area of Malton and Norton lie within the maximum cycling distance. This also includes York Road Industrial Estate.

- Additional outlying areas, such as Broughton, Swinton and Amotherby, represent potentially major key origins points. While the distance of such areas lessens the propensity to cycle, it has been considered prudent to include such outlying areas within the LCWIP study area.

LCWIP Implications

- The isochrone analysis shows the entire town centres of Malton and Norton and additional surrounding villages lie within the maximum desirable cycling distance.
- The gradients within Malton and Norton are not seen as a barrier to the development of a stronger active travel culture.
- There are opportunities to create links off the National Byway and NCN 166 to connect new and existing key employment and residential sites.

CYCLING ACTIVITIES AND INITIATIVES

2.6.22. The geography, natural assets and tourist attractions in and around Ryedale make the District well-situated for on and off-road leisure and competitive cycling. However, there is currently very little infrastructure in terms of protected space or cycle parking to promote local trips or new cycle users, particularly for utility or commuting purposes.

Routes and Places to Ride

2.6.23. Signed on-road routes in the area include:

- Dalby Forest, a well-known mountain biking destination, with many walking and cycling routes available inside the North York Moors National Park;
- The Yorkshire Wolds Circuit, a leisure cycling route including the East Riding and coming into Norton and Malton;
- Part of the National Byway, a signed low-traffic cycling route which passes through Malton and Norton; and
- Sustrans NCN Route 166 goes through the southern part of Norton, with routes 167, 65, 66 and 164 within ten miles of the towns.

Dalby Forest

2.6.24. Dalby Forest is situated at the south of the North York Moors National Park, and attracts walkers, cyclists and outdoor adventurers. There are 70km of cycling trails through the forest with separate routes for non-experienced cyclists to experienced mountain-bikers. Within the forest, Dalby Cycle Hub and Dalby Bike Barn offer bike hires for both residents and tourists.

2.6.25. The Dalby Forest Loop is a 23km circular bike route, through Dalby Forest via the villages of Lockton and Levisham. The route starts at Saltersgate car park on the A169 and follows mostly stone tracks and tarmac. The route is suitable for beginners and more experienced cycle users and takes approximately 2-2 ½ hours.

North Yorkshire Moors National Park

2.6.26. Malton and Norton are located approximately 10 miles from the North York Moors National Park. The National Park offers a range of cycle routes including family-friendly off-road rides, longer road rides and a 150-mile Moor to Sea network.

2.6.27. The ‘explorer’ routes are circular routes geared at people with mountain bikes and hybrids, following forest and moorland tracks. Road routes offer the some of the National Park’s most outstanding scenery. The Moor to Sea cycle network covers around 150 miles through the centre of the National Park on quiet roads, woodland tracks and bridleways, and joins the Cinder Track between Scarborough and Whitby.

Sustrans National Cycle Network

2.6.28. There is limited provision for cyclists in the Malton and Norton urban area; the single formal route (shown in Figure 2-14 below) is the Sustrans ‘Yorkshire Wolds Cycle Route’ (NCN 166), which passes through the southern part of the Norton urban area. The 38-mile route connects the villages of Kirkham, which lies south west of Malton, and Hunmanby, to the east; however, it should be noted that the section of the route that passes through Norton has no formal infrastructure, such as cycle lanes.

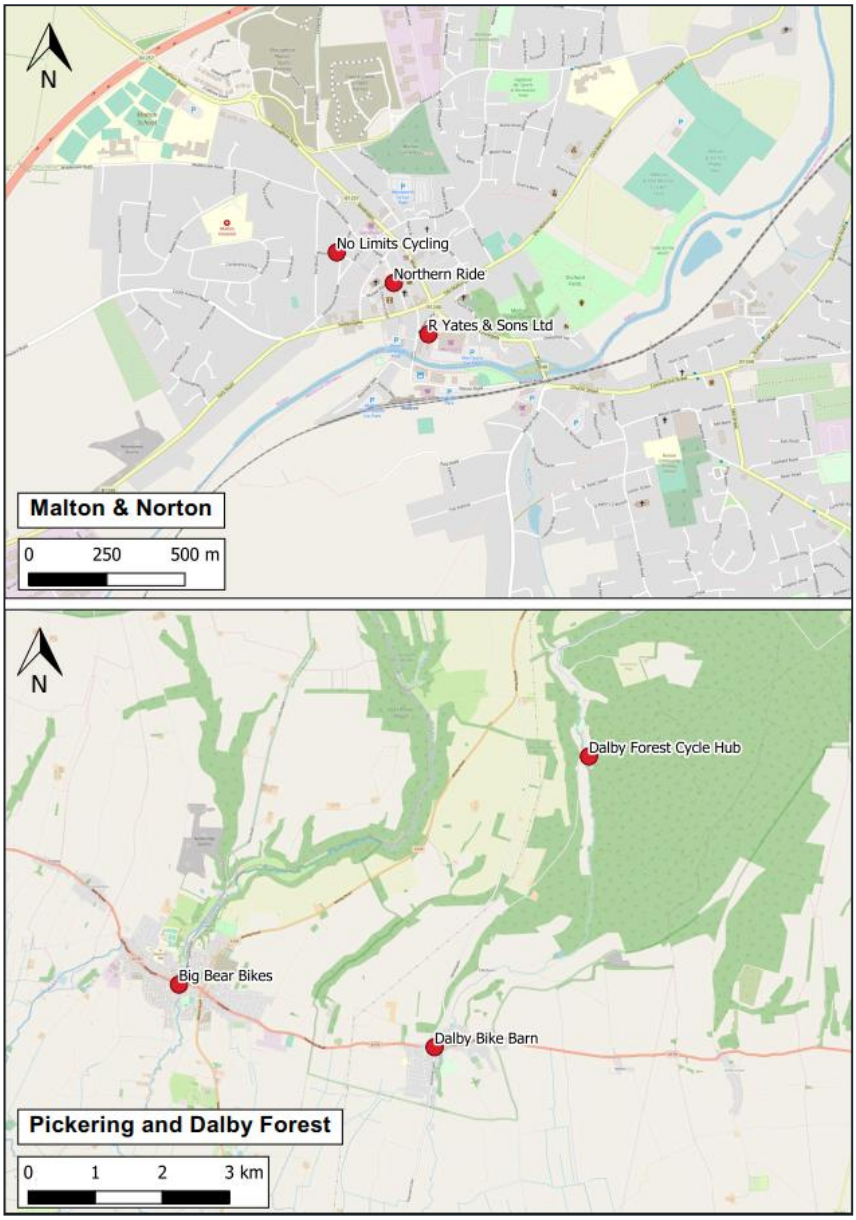
Figure 2-14 – Designated Cycle Routes in Malton & Norton

2.6.29. There is also a lack of cycle provision on the main highway corridors in the area; this means that cycle users travelling through the main urban areas of the towns must make use of the main carriageway. The high volumes of traffic on these routes, levels of congestion in the towns, and the lack of cycle infrastructure may be acting as a deterrent to encouraging higher levels of cycling in the towns.

ACCESS TO CYCLE OPPORTUNITIES

2.6.30. There are three cycle shops and services located in Malton and Norton, and three nearby in Pickering and Dalby Forest; these are shown in Figure 2-15.

Figure 2-15 – Cycle Shops and Services in Malton & Norton



Malton Cycle Shops:

- No Limits Cycling: an independent bike shop based in Malton, which offers a bike maintenance service, and maintenance courses;
- Northern Ride: a local bike shop in Malton town centre, open 9:30-5pm every day excluding Sundays; and
- R. Yates and Sons Ltd: a traditional department store situated on Railway Street, open Monday to Saturday 8am - 5pm and Sunday 10am to 4pm.

Norton Cycle Shops:

- Big Bear Bikes: based in Pickering, open from 9:30-5:30 every Tuesday – Sunday;

- Dalby Bike Barn: bicycle store in Thornton Dale Open every day 9:30-5:30 and until 7pm on a Monday; and
- Dalby Forest Cycle Hub: located at the by the cycle trails within Dalby Forest, offers e-bike and push bicycle hire, popular with tourists.

2.6.31. There are also three projects which work to make cycling available and inclusive:

- Coast and Dale Yorkshire Bank Bike Library, allowing families to borrow or donate bikes, has a collection at Malton Community Primary School and at Big Bear Bikes in Pickering. The Yorkshire Bank Bike Libraries scheme was set up as a legacy of Tour de France in 2014, and aims to give every child in Yorkshire access to a bike. Since its inception the scheme has seen 46 libraries set up, with over 5,000 bikes donated and in excess of 40,000 opportunities for people in the county to cycle.
- Scarborough and Ryedale Community Cycling brings both standard and adapted bikes or trikes to events in Ryedale.
- Dalby Forest Cycle Hub (note approximately ten miles away) offers courses and bikes for hire, including mountain bikes; electric mountain bikes and adapted bikes and trikes.

Cycle Training

2.6.32. The Bikeability programme is a DfT-led initiative 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 programme is available to all schools in the country and is provided in a series of three levels.

2.6.33. Bikeability is delivered by North Yorkshire County Council in Ryedale as the Local Highway Authority. The DfT release statistics relating to topics such as funding and delivery; the latest Bikeability delivery statistics for the County are for 2006 to 2018[7], released in August 2018. These show NYCC were awarded £122,960 in funding in 2018, bidding for 3,371 places. NYCC delivered 4,311 places throughout North Yorkshire during 2017/18, approximately 940 more than were bid for.

2.6.34. Dalby Forest Cycle Hub also offers courses in mountain biking, including for those with disabilities.

Cycling Clubs

2.6.35. The Malton Wheelers Road club is the main cycling club in Malton and Norton. It is mainly a road cycling club which competes in time trials, road races and cyclo-cross. There is a 40-50-mile club ride every Sunday starting from the marketplace, with additional meetings on Tuesday and Thursday evenings. More information can be found at www.maltonwheelersrc.weebly.com.

Cycling Events

2.6.36. There are several events in the annual cycling calendar which take place near or in Malton and Norton:

- Tour de Yorkshire, held annually since 2015.

[7] Bikeability Delivery statistics 2006-18 – Local Highway Authorities, https://bikeability.org.uk/publications/

- Ryedale Grand Prix, held annually since 2005, on three occasions has doubled as the National Championships in 2005, 2008 and 2012
- Annual Yorkshire Wolds Challenge
- Ryedale Rumble

2.6.37. There are a number of rides listed in the surrounding area, especially in the East Riding. British Cycling promote Breeze[8] rides aimed specifically at women, but none of these start from Malton or Norton at present.

LCWIP Implications

- Expand upon cycle share and hire initiatives for the benefit of those who currently do not have access to cycles
- Capitalise on existing initiatives, events, infrastructure and club structures in an effort to increase cycle participation across the community; and
- Tour de France and Tour de Yorkshire are particularly noted to have raised the cycling profile within the study area and present opportunities to engage a wider audience.

[8] https://www.letsride.co.uk/breeze

2.7 EXISTING TRANSPORT NETWORKS: ROAD, RAIL AND PUBLIC TRANSPORT

INTRODUCTION

2.7.1. WSP was commissioned in December 2017 by Ryedale District Council (RDC) and North Yorkshire County Council (NYCC) to undertake a study into potential options for improvements (both highway and non- highway) to infrastructure and facilities in Malton and Norton.

2.7.2. This study was commissioned in anticipation of a forthcoming doubling in the frequency of train services from Malton Station; as noted earlier in this report, the towns are currently considered to suffer from significant congestion and poor connectivity between the two, which are primarily considered to be the result of the railway level crossing, limited crossing points over the river, and high traffic flows at the signalised crossroad junction of B1248/B1257, known locally as Butcher Corner. While likely to have many associated benefits, an increase in rail frequency will unavoidably result in additional delays at the level crossing, as well as increased demand for travel to and from the rail station. The aim of the study was to propose a package of interventions that would minimise the adverse impact of the increase in rail frequency, while also improving the existing situation. The study also considers the impact that poor connectivity and existing congestion may have on future long-term growth plans for the area.

2.7.3. Preparing an LCWIP for the two towns was part of the final package of recommended measures, with an aim to produce a:

- A detailed review of existing provision (including condition and use of facilities);
- An outline strategy based on existing land use and facilities, and also taking account of planned land-use and infrastructure changes.
- A strategy to identify priorities for measures; and
- An implementation programme.

2.7.4. Although the focus of the Malton and Norton LCWIP is first and foremost on providing the necessary infrastructure to create a high quality active travel environment, is also essential that such a network should engender modal shift, recognising the LCWIP's role as part of a wider package of transportation measures and enabling journeys that were previously unattractive by walking and cycling. It is therefore important to understand and appreciate the current transport situation in the District, considering the synergies between the LCWIP and the various issues associated with other modes of travel.

2.7.5. This section of the report summarises the content and findings of the Malton & Norton Infrastructure and Connectivity Improvements Study Options Assessment Report (WSP, 2018) in regards to this synergy, presenting the salient points from that document and highlighting the LCWIP's role in a wider package of measures.

HIGHWAYS AND TRAFFIC FLOWS

2.7.6. The principal road through the area is the A64 which, as part of the Strategic Road Network, is managed by Highways England. The A64 connects Malton and Norton to York to the west and Scarborough to the east, bypassing Malton to the north of the town. A combination of agricultural vehicles, HGVs and seasonal holiday traffic (such as caravans) are considered to contribute to a significant degree of journey time unreliability on the A64.

2.7.7. Accessibility between the two towns is considered to be effectively severed by both the railway line and the River Derwent, which run between them. There are two crossing points over the river, at Railway Street and County Bridge on the B1248 Castlegate, while the single level crossing provides just one route over the railway line, immediately south of County Bridge. These limited crossing points create bottlenecks for vehicular traffic and a barrier for pedestrians and cycle users, who have no alternative routes. A survey of traffic undertaken in January 2018 showed 10.4% of trips over the level crossing were pedestrians and 1.4% bicycles.

2.7.8. Other roads of particular note in the area include:

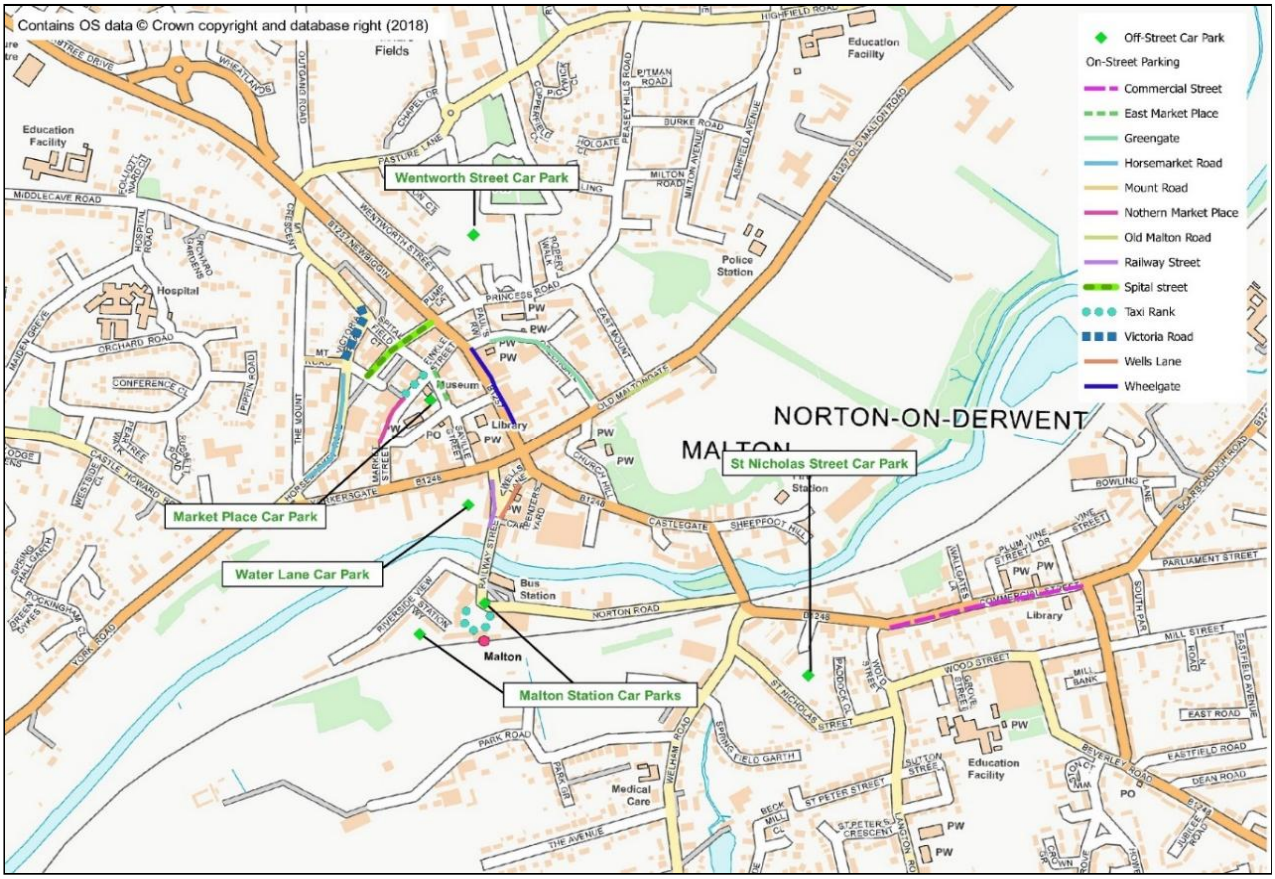
- B1257: Connecting Malton town centre, at Butcher Corner, with areas to the northwest (along Broughton Road) and northeast (along Old Malton Road), where it connects to the A64 and A169.
- The B1257 Broughton Road has no direct access to the A64; vehicles using this route must travel into Malton and through the signal-controlled, congested Butcher Corner for onward travel to the A64. This section of the B1257 carries over 8,000 vehicles AADT, of which approximately 10% are HGVs.
- B1257 Old Malton Road, to the east of Malton, connects to an all movements junction with the A64. This section of the B1257 has traffic flows in excess of 9,000 AADT, 11% of which are HGVs.
- B1248: Providing the link between Malton and Norton town centres, the B1248 connects from the A64 at Musley Bank, to the west of Malton along York Road, through Malton town centre and Butcher Corner. The route crosses the River Derwent and railway line, via County Bridge and the level crossing respectively, and continues through Norton town centre where it branches east, along Scarborough Road to the A64 Brambling Fields junction, and southeast, along Beverley Road.
- The B1248 junction with the A64, to the west of Malton at Musley Bank, provides an exit off the A64 (for eastbound traffic only) and an entry from the B1248 York Road (for westbound traffic only). The lack of an all-movements junction at this location is considered to encourage traffic to travel through the town centre, adding to congestion. This section of the B1248 carries around 6,500 vehicles AADT (13% HGVs).
- The B1248 Castlegate crosses the River Derwent, via County Bridge, and the level crossing over the railway line before continuing as Church Street. A change in junction priority was completed in December 2016. 2018 traffic count data shows an average two-way traffic flow of approximately 12,000 vehicles (5% HGVs) on the Castlegate section of the B1248 and 10,000 AADT (9% HGVs) on the Church Street section.
- The B1248 Scarborough Road, east of Norton, joins the A64 at the Brambling Fields junction, enabling onward travel on the A64 in both easterly and westerly directions. This section of the B1248 carries around 5,500 vehicles AADT including 12% HGVs.
- The B1248 Beverley Road, south east of Norton, provides a link to the A166 which connects to Driffield. This section of the B1248 has an AADT of around 3,300 vehicles (13% HGVs).
- Welham Road (C177) connects to the B1248, in Norton, at the Castlegate / Church Street junction; this now provides the priority alignment with Castlegate. Recent (2018) traffic count data shows an AADT of approximately 8,000 vehicles (8% HGVs).
- Langton Road (C355) connects to Norton from the south, and carries approximately 700 vehicles AADT, of which 8.5% are HGVs.

2.7.9. Traffic modelling work, undertaken as part of the development of the Ryedale District Council Local Plan, forecast that approximately 1,000 additional trips will be generated within the towns as a result of proposed housing and employment developments.

PARKING

2.7.10. Parking is acknowledged as a significant issue in Malton and Norton. There is considerable car parking provision in the towns which includes free and metered short and long stay car parks in addition to generally free, albeit time restricted, on-street parking in the town centres. There are three RDC managed car parks across the two towns, as well as a number of privately-operated car parks which are available for public use. The availability of parking, along with the comparatively low cost, is considered likely to be a contributory factor to the high levels of car use within the towns, particularly short internal trips that could potentially be undertaken by other more sustainable modes of transport.

Figure 2-16 – Car Parks in Malton & Norton



PUBLIC TRANSPORT

Rail

2.7.11. Malton Railway Station, operated by TransPennine Express, is the only rail station in the Ryedale District with regular passenger services. Nearly all rail services operating on the York to Scarborough line call at Malton. The station is used by approximately 350,000 passengers a year, a figure that has increased by 20% in the last five years.

2.7.12. The main rail route serving Malton Station is the First TransPennine Express Liverpool Lime Street to Scarborough service; passengers can then connect for onward travel to a range of destinations at both York and Leeds. There is currently one train per hour in each direction, which is expected to increase to two trains per hour from December 2019.

2.7.13. Malton is a single platform station; this presents significant limitations, in terms of capacity, and is a major constraint to the wider Trans-Pennine route. The provision of a single platform means that services travelling in both directions must use the same line on the approaches to and through the station, with no existing way to operate services travelling in opposite directions concurrently. Waiting for services to exit the station can have a significant detrimental impact and compound any delays experienced. The single platform at Malton also impacts the accessibility of the station for rail users, particularly for residents of Norton and areas to the south of the station who currently have to cross the level crossing to access the station.

2.7.14. The 2011 census showed that 1.9% of commuters from Malton and Norton travelled to work via train. This is higher than in other parts of Ryedale, but lower than the England average (5.8%) or North Yorkshire average (2.2%).

2.7.15. Network Rail's Long-Term Planning Process (LTPP) Strategy looks at the long-term capability of the rail network, for up to 30 years into the future. Contributing to the LTPP strategy, the 'Network Rail Regional Urban Market Study' which highlights that demand, on the Scarborough via Malton line into York, is already relatively high and that planned housing growth in the area may support the commuting markets into York and Leeds. In the context of North Cross-Pennine electrification, the continuation of through services to Leeds and beyond is important to stakeholders. Conditional output recommendations for this route, as set out in the LTPP Strategy, are to:

- Increase capacity to meet demand through lengthening or increasing frequency in situations where frequency improvements are more affordable and demonstrate better value for money; and
- Continue to provide direct connectivity to York, Leeds and beyond - this is especially important in the context of electrification of the North Cross-Pennine route.

2.7.16. In terms of connections to Leeds, the Regional Urban Market Study highlights that the generalised journey time from Malton is in excess of 60 minutes, and that significant changes would need to be made for people to be more willing to commute to Leeds by rail (it should be noted that timetable service journey times are typically between 53 and 61 minutes). Therefore, specific conditional outputs to improve the frequency and journey times to Leeds have not been made as part of the Strategy.

2.7.17. As part of the Franchise Agreement between First TransPennine Express Limited and the Secretary of State for Transport it is stated that the franchisee should maintain the Secure Station and Secure Car Park Accreditations at Malton Station. In addition, it states that there should be new secure

cycle parking spaces; First TransPennine Express has recently installed new cycle parking facilities (for approximately 50 bicycles) at Malton Station.

2.7.18. Further to the above, there are a number of committed improvements to rail provision and services in Malton that also form part of the franchise agreements; this includes:

- Increased service levels to two trains per hour;
- Provision of earlier departure and later arrival services;
- Improved rolling stock and on-board facilities, e.g. free Wi-Fi, charging sockets, catering and luggage space; and
- Increased passenger capacity on services, with more carriages and more seats.

2.7.19. Planned improvements on the York to Leeds line are also expected to reduce journey times between Malton and Leeds. The current journey times to York are around 25 minutes. Fares to both York and Leeds are generally around £11.40 and £24.90 for an off-peak day return[9]. The median average income for a fulltime worker in Ryedale in 2017 was £23,095, making a rail journey of £25 equivalent to more than two hours of work (gross), at £12/hour approximate gross hourly wage.

2.7.20. In terms of multi-modal trips, car and cycle parking is available at the station, there is a taxi rank at the station entrance and the Coastliner Bus Station is located directly opposite, on Railway Street, although there are reported issues around integration of timetables for trains and buses.

Bus

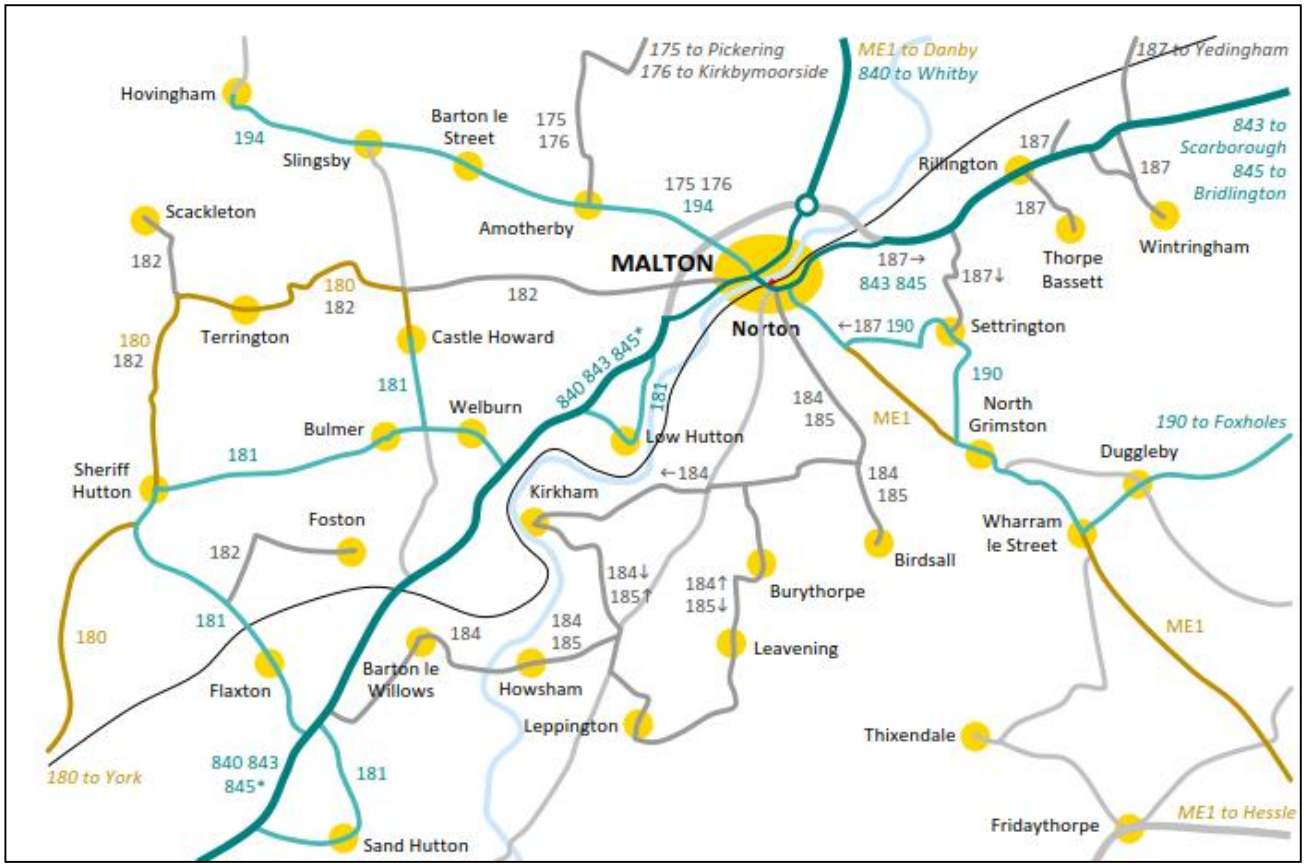
2.7.21. Bus mode share, for all commuting trips undertaken by residents of the Malton and Norton urban area regardless of destination, is 2.3%. This is substantially lower than the regional and national averages of 3.6% and 8.5%. However, where people are employed locally, 51% of journeys are by foot or bicycle.

2.7.22. Bus provision in the area consists of a mixture of local infrequent services, operating in loops of the towns in the region, as well as longer distance services connecting with destinations including Leeds, York, Whitby and Scarborough. Figure 2-17 shows the strategic bus network that connects into the Malton and Norton urban area[10].

[9] Prices taken from TheTrainline.com and correct as of 28/01/2020.

[10] *Source: http://getdown.org.uk/bus/maps/wolds.pdf*

Figure 2-17 – Malton & Norton Strategic Bus Network



2.7.23. Services in Malton and Norton are primarily provided by three operators:

- Transdev / Coastliner services connect the towns with York and Leeds, to the west, and Whitby, Filey and Scarborough, to the east;
- NYCC Fleet operate infrequent services to settlements in close proximity to Malton in addition to a town centre service; and
- Ryedale Community Transport operate local bus services, some of which operate from Malton, including circular services around Malton generally starting and finishing at Newgate. All services operated by Ryedale Community Transport are wheelchair accessible.

2.7.24. The East Coastliner 840 and 845 to York or to the coast provider longer distance services, stopping hourly in Malton. Other services (that are not school services) include:

- 194: 2-hourly service daily Mon-Saturday from Hovingham to Malton, operated by Transdev;
- 193: running between Malton and Norton and to local stops Monday to Saturday every 40-60 minutes from 9am, operated by NYCC Fleet;
- 190: running between Malton, Norton and Foxholes three times a day, Monday to Saturday, NYCC Fleet;
- 181: Malton to York, four times per day between 9am and 5pm, Monday to Saturday, Transdev;
- Other services are operated by Ryedale Community Transport;
- 187: From Malton and Norton to Yedingham, twice on Tuesdays;
- 184-185: Malton to Barton-le-Willows and Firby, once or twice on Tuesdays;
- 182: Malton to Foston, once on Thursdays and Saturdays;

- 176: Malton to Kirkbymoorside, once on Wednesdays and Saturdays; and
- 175: Malton to Pickering, once on Mondays and Fridays.

2.7.25. NYCC administers senior and disabled persons' bus pass schemes, and coordinates transport for the district.

2.7.26. Many of the bus services operate limited timetables that are not conducive to commuting by bus, with local villages served a few times per week outside of commuting times. Bus / cycle integration is also less common than the rail equivalent, with bus services typically accessible from more locations and bicycles generally prohibited from buses themselves. There has been some effort to

2.7.27. Ryedale Community Transport is a volunteer-supported charitable service, providing transport opportunities for communities and individuals in need. The group offers:

- Provide volunteer drivers to people who can no longer use their own cars,
- Offer outings to groups using their minibus, and
- Loan mopeds to those who are struggling to get to work, training or education (the Wheels-to-Work scheme).
- Run a ring-to-ride service in Malton and Norton.

LCWIP Implications

- There is an opportunity to expand upon cycle-share and hire initiatives for the benefit of those who currently do not have access to cycles.
- Opportunity to capitalise on existing initiatives, events, infrastructure and club structures in an effort to increase cycle participation across the community.
- The anticipated increases in rail services through Malton will likely increase patronage, presenting an opportunity to influence travel to and from the stations.
- Any associated improvements to the rail station could also incorporate additional enhancements to the walking and cycling network, potentially including a southern access point and/or associated infrastructure (such as parking.
- Access to bus stops and stations could also be enhanced through the LCWIP process, likely focussing on improvements to the walking network in regards to busses.
- Despite potential deliverability challenges, the need for such infrastructure presents an opportunity to provide genuine high-quality pedestrian and cycling infrastructure that can be an exemplar for best practice across North Yorkshire and the wider country.
- Relatedly, given the constrained nature and built up urban areas, it may be necessary to also consider traffic movements and wider highways schemes in conjunction with walking and cycling interventions.

2.8 EXISTING ORIGINS AND DESTINATIONS

2.8.1. The development of an LCWIP relies on a detailed understanding of the key origins and destinations (ODs) in each study area, identifying where individuals currently move to and from. A desktop study of key origins and destinations was therefore carried out in order to identify the existing locations within the LCWIP study area that are most likely to benefit from additional pedestrian and cycle access and connectivity.

ORIGINS

2.8.2. To identify significant residential (origin) areas, proxy nodes were plotted using a GIS, based on 2011 Census data available from the Office for National Statistics (ONS). Population weighted centroids for Census Output Areas (OA) were mapped, showing where the population is greatest within the OA boundaries, and thereby indicating the urban areas with the greatest potential for trips. These nodes were reviewed, using an Ordnance Survey (OS) basemap as a reference, and manually adjusted where necessary to ensure that they were located over urban areas to represent realistic trip origins. Additional points were added where required in order to ensure all urban residential areas were adequately represented.

DESTINATIONS

2.8.3. Key destinations were identified across each of the LCWIP study areas in order to determine where people are travelling to on a regular basis. These sites were identified through analysis of available spatial data, desktop and site surveys, and stakeholder engagement. Key destinations include the following location types:

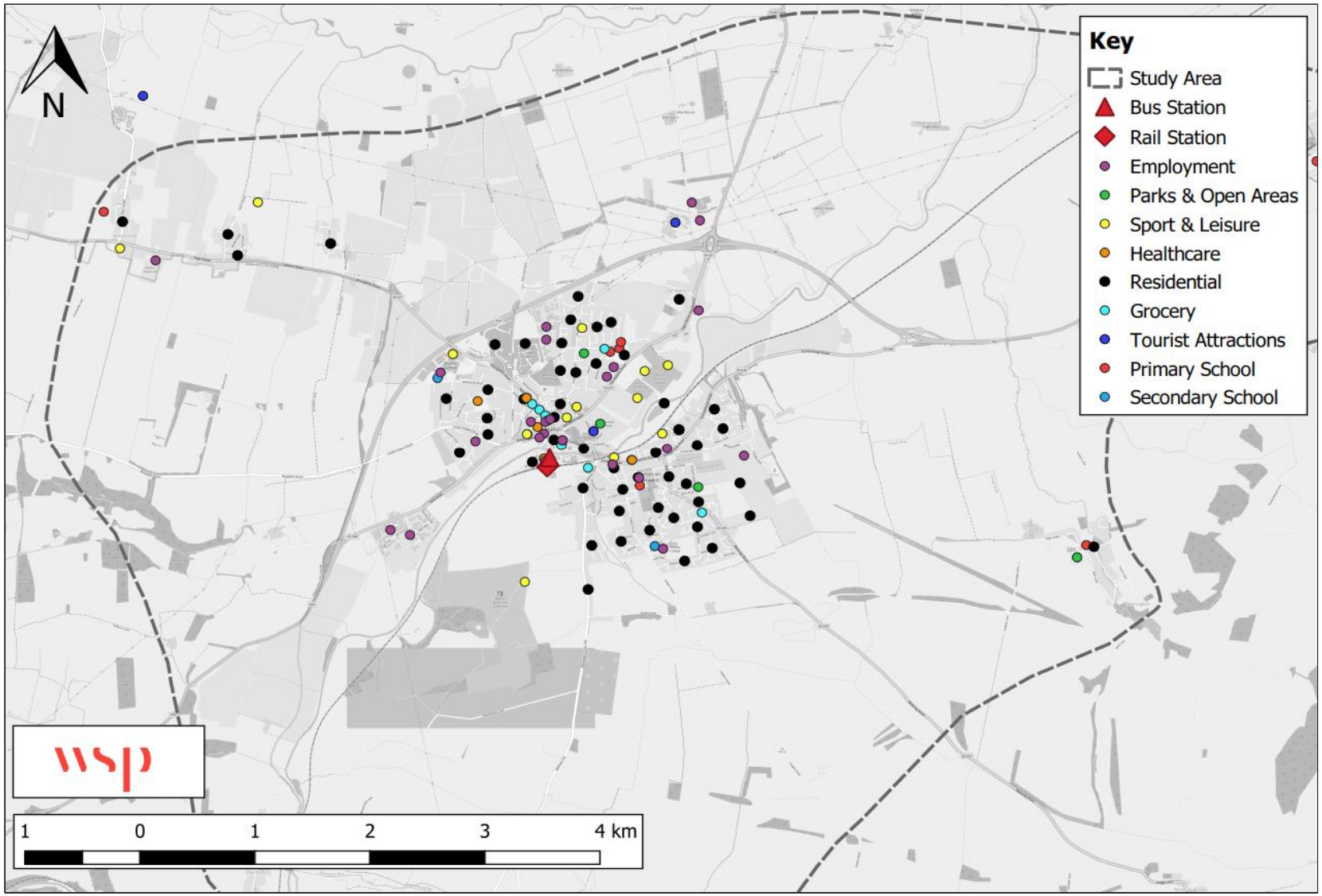
- Employment Sites;
- Parks and Open Spaces;
- Sport and Leisure Facilities;
- Healthcare Facilities;
- Grocery / Shopping Facilities;
- Tourist Attractions and Points of Interest; and
- Schools and Further Education Establishments.

2.8.4. Malton and Norton is the largest urban area in the Ryedale District, and as such features significantly more ODs within the town centre than in the surrounding areas. Table 2-10 presents a list of the key identified destinations (note this list is not intended to be exhaustive), while the accompanying spatial plots are shown in Figure 2-18.

Table 2-10 – Key Destinations

Type	Destination
Employment Sites	York Road Industrial Estate, Norton Grove Industrial Estate, Showfield Lane Industrial Estate
Primary and Secondary Schools	Norton Community Primary School, Norton College, Malton School, Malton Community Primary School, St Marys RC Primary School
Retail Sites	Newbiggin / Market Place / Town Centre area, Wheelgate, Yorkersgate, Commercial Street.
Supermarkets	Asda Malton Supermarket, Morrisons Malton, Lidl Norton
Leisure Uses	Malton Community Sports Centre, Malton Railway Sports & Social Club, Derwent Swim & Fitness Centre, Malton & Norton Rugby Club, Malton & Old Norton Cricket Club
Healthcare	Malton Community Hospital, Derwent Practice, Derwent Surgery
Transport Hubs	Malton Railway Station, Malton Bus Station

Figure 2-18 – Existing Origin-Destination Plots



2.9 FUTURE SITUATION

PLANNED AND ASPIRATIONAL DEVELOPMENT GROWTH

2.9.1. Planned and aspirational growth is an important consideration when implementing new cycling and walking infrastructure. New developments may become significant origins and destinations due to size, capacity or influence and therefore links to the cycle and walking networks would be necessary. This section of the report therefore considers planned and aspirational growth in the District, focussing on that occurring within a desirable walking and cycling distance from Malton and Norton and highlighting proposed locations of significant development including new housing, employment and retail space.

ASPIRATIONAL GROWTH

2.9.2. Ryedale District Council's growth aspirations for the District and, more specifically, Malton and Norton, are set out in the Ryedale Local Plan Strategy (LPS), adopted in 2013. Since then, RDC have prepared a Local Plan Sites Document (LPSD) which allocates specific sites for development in order to ensure the growth aspirations for the District are met in a sustainable and controlled manner. This emerging document also takes into account the development that has occurred since the adoption of the LPS.

2.9.3. The LPS sets out an aspiration which seeks to provide 200 new houses per year as a minimum (equating to at least 3,000 new dwellings over the Plan Period to 2027); approximately 50% of this residential development was expected to be provided in the Malton and Norton area.

2.9.4. However, the LPSD identifies that completed and committed housing development accounts for a large proportion of the growth target set out in the LPS, and therefore only allocates two housing sites in Malton and Norton:

- Land to the east of Beverley Road (24.29ha, 600 dwellings); and
- Land at Old Maltongate (Ryedale House Site) (1.44ha, 60 dwellings)

2.9.5. Given its strategic size and potential impact in relation to the towns, the Land to the East of Beverly Road site is discussed in more detail below.

2.9.6. Policy SP6 of the LPS provides for the identification of up to 45 hectares of land for employment purposes. The policy commits to the allocation of two tranches of employment land: an initial 37 hectares, followed by a further 8 hectares to be released if this is required over the Plan Period. Approximately 80% of the employment land allocations would be located within the LCWIP study area. The LPSD identifies that a significant proportion of the initial 37ha has already been completed, is under construction, or is committed since the adoption of the LPS.

2.9.7. However, the LPSD notes that the completions accounted for results in a small shortfall against the approximate distribution figures for Malton and Norton. Rather than make additional allocations in the LPS, the document states that land in the vicinity of the Malton Agri-Business Park at the A64/A169 junction is promoted as a broad location for further employment land releases to meet identified requirements, if they are needed within the Plan Period.

2.9.8. The planned growth in the area up to 2027 is likely to result in significant increases to worker and resident populations within the urban areas of Malton and Norton. As a result, mitigation measures are likely to required, including the creation of new cycling and walking infrastructure to help support

future travel demands. These opportunities could also support the vision for public realm improvements within the historic town centre.

COMMITTED AND RECENT DEVELOPMENT

2.9.9. Over the last 5 years, Ryedale District Council has determined over 60 planning applications for large scale employment and housing developments. This has included an application for 260 houses to the North East of Broughton Road, with associated landscape improvements. Additional housing developments included an application for 180 houses at Scarborough Road, Norton and 90 houses at Cheesecake Farm, Norton.

2.9.10. As identified above, a significant proportion of the employment sites allocated for Malton and Norton in the LPS have already been completed, are under construction, or are committed, including the following sites:

- York Road Industrial Estate, Malton (6.8ha) B1, B2, B8 uses;
- Land at Norton Grove, Norton (0.78ha) B1, B2, B8 uses;
- Agri-Business Park and Business Technology Park, Eden House Road, Malton (17.8ha) B1, B2, B8 uses; and
- Land to the west of Kirkby Mills Road, Kirkbymoorside (0.49ha) B1, B2, B8 uses

2.9.11. While the LPSD recognises that there is currently a shortfall of 900sqm in new non-food retailing space in Malton and Norton, the document does not allocate new sites, instead affirming an intent to work with landowners and Land East of Beverley Road.

Land East of Beverly Road, Norton

2.9.12. The Land East of Beverley Road, Norton site is expected to cover an area of 24.29 (Ha) with an indicative yield of 600 houses (including 540 delivered in the Plan Period). This allocation is expected to contribute to the delivery of significant associated infrastructure improvements and to provide a choice and mix of new homes.

2.9.13. As outlined in the LPSD, the detailed proposals for the development of the site will include the identification of circa 2ha of land for a new primary school and a Neighbourhood Area for Play (NEAP). The school, NEAP and site access points will be connected by pedestrian and cycle routes in and through the development site.

2.9.14. To support this new development, a number of network changes are considered to be required to mitigate the associated transport impacts; these are listed below:

- A new road linking Beverley Road to Hugden Way and associated access which will help mitigate traffic on the local road network through Norton and neighbouring Malton;
- Implementation of a MOVA system at the junction with Scarborough Road and Westfield Way;
- A substantive landscape, visual and noise attenuation buffer between the housing development and the Malton Bacon Factory;
- Integrated site and boundary landscaping to include landscape areas for play and fitness and to soften the visual impact of the scheme;
- Well defined hierarchy of streets and spaces;
- Maximise opportunities for green infrastructure, including 3 phase Sustainable Drainage Systems;
- Capability for electric vehicle charging through the provision of a 13 AMP electrical socket; and
- Lighting scheme to minimise glare, reduce energy usage, and protect amenity.

Malton Agricultural Business Park

2.9.15. The land located North of Malton at Edenhouse Road has been identified as a suitable site for development for the Malton Agricultural Business Park, which is to include a business park, agricultural business park and a new purpose-built livestock market.

2.9.16. The existing livestock market currently operates in the centre of Malton, and is a key element of the town's economic infrastructure; however, the site has no tenure security due to the landlord's aspirations to redevelop the site for retail use.

2.9.17. The current location of the market has numerous transport constraints, including poor access for large vehicles with trailers and HGVs, which can lead to serious congestion on the associated access roads. As a result of these constraints, the livestock market has seen a decline in the number of farmers and visitors over recent years. Combined with continuous congestion and the obstruction of HGVs on the narrow streets within Malton, the site is considered to contribute toward a less desirable environment for walkers and cycle users in the vicinity.

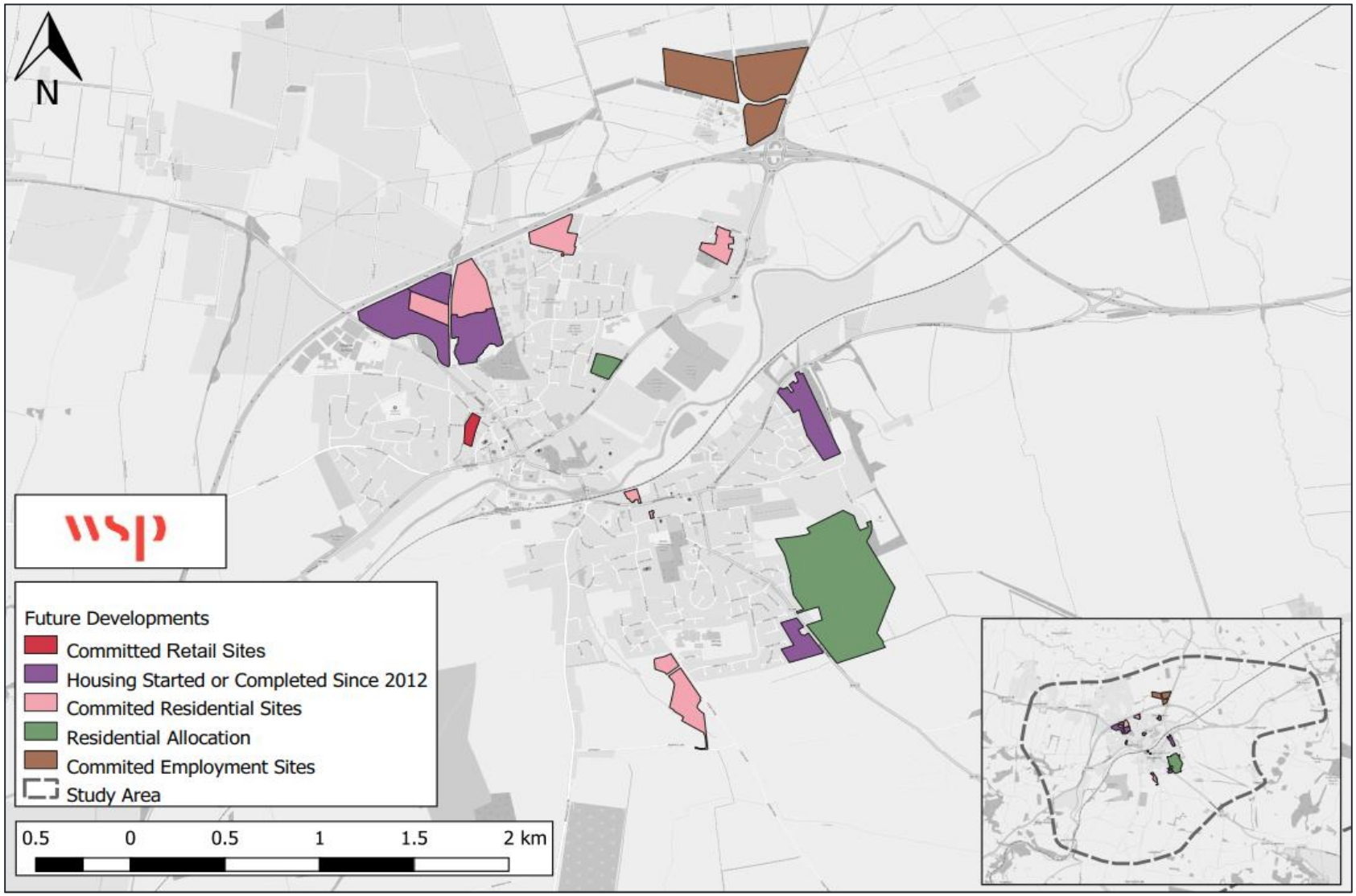
2.9.18. The development of the new livestock market is anticipated to free up the existing site for development and support the strengthening and expansion of the town centre. The 30 acres identified for bespoke industrial and commercial development is expected to create additional jobs and safeguard jobs of those directly employed by the agriculture sector. In Ryedale, 28% of enterprises sit within the Agriculture, Forestry, and Fishing industries; this is approximately 7 times higher than the national average, reflecting the importance of the development to the local economy.

2.9.19. The scheme began to be delivered in 2015/2016 with the development of a new roundabout at the A169 / Edenhouse Road junction and the initial phase of construction, while the entire development is expected to be completed in 2025.

FUTURE DEVELOPMENT OD MAP

2.9.20. The committed and allocated growth sites are identified in Figure 2-19. These sites are added to the Existing OD map to create the final Existing & Future OD Map used in the identification of desire lines.

Figure 2-19 – Committed & Aspirational Growth Sites



GROWTH OUTSIDE THE STUDY AREA

2.9.21. While the growth within the LCWIP study area is of primary concern when developing the Walking and Cycling Network Maps, the wider growth aspirations in the District, and in neighbouring areas such as Scarborough, York, the East Riding of Yorkshire, and Hambleton District could have an impact on transport in Malton and Norton. The Malton & Norton Infrastructure Connectivity Study (WSP, 2018) considered this impact and found the following key points:

2.9.22. The level of development proposed across Malton and Norton, (employment, retail and housing) will place significant additional demand on an already constrained local network. The impact of this growth, on the network, could potentially deter further inward investment and diversification of the economy that is considered critical to ensuring the economic resilience of the district.

2.9.23. More than half of workers employed in Malton and Norton travel from areas outside of the towns while, similarly, more than half of residents travel outside of the towns to access employment. This means that housing and employment allocations elsewhere, both within and outside of the Ryedale district, will have a direct impact on Malton and Norton's transport network, over and above the impact from development based in these towns.

2.9.24. The Local Plan Strategy highlights acute traffic congestion within the towns, which detracts from their appearance and attractiveness; additional planned growth, without adequate mitigation, will exacerbate this further. It is recognised in the Local Plan Strategy that a package of transport improvement measures will be required in order to release additional capacity, manage congestion, and improve air quality and safety to mitigate the additional growth. However, it should be noted that the measures identified to facilitate Local Plan growth are intended to ensure that traffic conditions do not worsen from their current state and not to improve upon current conditions

2.9.25. While the LCWIP is likely to have a limited impact on those trips to and from further afield, the LCWIP could complement various other measures to help encourage multi-modal journeys by train or bus and bike / on foot, as well as limiting the number of short local trips undertaken by car and providing capacity where most necessary. It is therefore important to ensure that the Malton & Norton LCWIP is considered and delivered alongside a package of measures in order to ensure the greatest possible impact.

KEY GROWTH FACTORS

2.9.26. The Malton & Norton Infrastructure Connectivity Study (WSP, 2018) identified 3 key areas of growth that could have significant implications on the transport network of Ryedale (and Malton & Norton), encompassing:

- High Value Sectors;
- Visitor and Tourist Economy; and
- Freight.

2.9.27. Business growth, particularly of high value sectors, is a key objective for RDC and essential in ensuring an economy that is diverse and resilient. Continued overdependence on low value sectors leaves the local economy vulnerable during times of national and global downturns and makes housing unaffordable.

2.9.28. RDC recognises that in order to maximise Ryedale'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. It is considered that transport connectivity is key to achieving this.

2.9.29. RDC aspires for significant growth in Malton and Norton, as the Principal Town for the District. Existing traffic and congestion are considered to be a threat to this aspiration, while the removal of traffic from the town centres would also help to improve the aesthetics and quality of the public realm in order to promote growth.

2.9.30. Growth of the tourism offer in Malton and Norton is a key target for RDC; if the attractiveness of the area for investment is to be maximised, and targeted growth achieved in a sustainable manner, it will be necessary to address issues of congestion and delay in the towns.

2.9.31. It is recognised that the District's infrastructure (including transport) helps to reinforce and shape the distinctiveness of the area and make it an easy place to visit. If the number of residents, workers and visitors in the area is to increase, without complementary infrastructure improvements designed to facilitate this growth, there will be additional stress experienced on the transport network. This will result in the exacerbation of adverse impacts relating to traffic congestion, currently being experienced in Malton and Norton, negatively impacting the attractiveness of the area.

2.9.32. With aspirations of economic growth across the north, and the identification of logistics as a key enabler to unlocking this, freight movements on the A64 are likely to increase as east-west connections become more viable. New freight movements through the towns themselves, associated with the delivery of planned development, will also need to be managed effectively

LCWIP Implications

- The level of new development within the urban area of Malton and Norton will place significant additional demand on the transport network.
- It is likely the heavily trafficked roads and associated congestion discourages walking and cycling.
- RDC have an overarching vision to improve the local transport infrastructure and make public realm improvements, which can be supported and enabled by the LCWIP.
- Out of town developments such as the new agricultural business park can potentially draw away traffic from the town centre area and relieve congestion, while complementary measures facilitated by the LCWIP could create a better environment to encourage walking and cycling.
- New development sites provide an opportunity to incorporate high-quality active travel networks within the development, promoting travel by the modes for new employees / residents.
- Such sites can also contribute to off-site highways improvements to help create a cohesive active travel network in the town centre area.

2.10 TRANSPORT SCHEMES AND INITIATIVES

2.10.1. The Malton & Norton LCWIP must also consider long term changes to the local transport system as outlined in relevant policy and strategy documents, as well as any aspirational schemes identified through stakeholder engagement, and consider the implications of such changes for walking and cycling in the study area, identifying any potential opportunities or threats to the LCWIP.

2.10.2. Ryedale is characterised by low levels of public transport provision, with most settlements having very limited public transport connections or no connections at all. This creates a reliance on privately owned cars in order to access, jobs and local services in Malton and Norton.

CHANGES TO THE TRANSPORT SYSTEMS

Highway Schemes

2.10.3. NYCC's LTP4 sets out a range of strategic transport priorities for the period 2016 to 2045. These priorities include the need to improve east-west connectivity, in line with TfN and LEP aspirations, as well as enhancing reliability of the transport network.

2.10.4. LTP4 identifies the A64 as one of two primary east-west corridor routes in North Yorkshire that currently experience poor journey times and reliability and, as such, prioritises the route for improvements during the LTP4 period. This includes:

- Supporting the upgrade of the A64 to dual carriageway standard between the Hopgrove Roundabout (in York) and Malton; and
- Supporting the introduction of selective overtaking lanes and 2+1 running on the A64 between Malton and Scarborough.

2.10.5. As the A64 is part of the Strategic Road Network (SRN), Highways England have proposed a scheme for the Hopgrove Roundabout with associated dualling of the A64, estimated to cost up to £250m. The scheme aims to address the delays that are often encountered at the roundabout, which are primarily considered to be as a result of a lack of capacity and safety issues. This scheme is identified for inclusion in the second Highways England Roads Investment Strategy (RIS2).

2.10.6. It should be noted that Highways England is currently working to achieve a target to deliver 150 cycling schemes by the end of Road Investment Period 1 (2015-2020), and 200 cycling schemes by 2020/21 after the government set up a £100 million dedicated fund for cycling in its Road Investment Strategy (RIS). This £100 million fund forms part of the £250 million designated fund for Cycling, Safety and Integration. Any scheme relating to the A64 in the vicinity of Malton and Norton should take into consideration how this could help deliver walking and cycling improvements in the area.

2.10.7. The YNYER Strategic Economic Plan (SEP) sets out that proposals for improvements to the section of the A64 in the vicinity of Malton and Norton are being developed by a consortium of local authorities (North Yorkshire County Council, City of York Council, Ryedale District Council, and Scarborough Borough Council) in conjunction with Highways England. The YNYER SEP states that the LEP is seeking approximately £50m of funding in order to provide additional sections of dual carriageway on the A64, to the east of the Hopgrove Roundabout.

2.10.8. The LEP is also seeking to identify revenue funding to allow for investigation and detailed design of longer-term transport improvement schemes. It is intending to use this funding to investigate potential village bypasses for settlements to the east of Malton, such as Rillington and Sherburn, with a view to accessing funding opportunities post 2020/21

2.10.9. The RDC LPS states that further improvements to physical transport infrastructure are critical and necessary to support delivery of the Strategy. For Malton and Norton this includes:

- An additional Slip Road at Brambling Fields junction on the A64 at Norton (now completed);
- A package of complementary town centre measures, in Malton and Norton, to ensure proper operation of Brambling Fields improvement;
- A package of internal junction improvements in Malton and Norton;
- Improvements to Malton's bus and rail interchange; and
- An improved cycle network and pedestrian facilities (including public realm improvements).

2.10.10. The LPS states that the Council will also support the provision of transport infrastructure and services, such as new road junctions, improvements to public transport services and facilities for active modes where there is a net environmental benefit to the District.

Growth Sites and Associated Infrastructure

2.10.11. The RDC LPSD sets out proposed new housing and employment sites, as well as identifying the infrastructure required in order for this development to be delivered without significant impact on the local network.

2.10.12. A summary of the transport implications and proposed mitigation and network changes that will be required include:

- Land to the east of Beverley Road, Norton (c600 dwellings): The Norton Lodge site will provide a link road between Scarborough Road and Beverley Road (Hugden Way Link), which is considered to be necessary in order to deliver the site, as well as being a significant strategic transport improvement for the Principal Town. Whilst the road is not a bypass, when considering the location of the site which enables access using the Brambling Fields A64 junction, the road could help to mitigate the impact of traffic on the local road network through Norton and neighbouring Malton. It is also recommended that the site development should include implementation of a MOVA system at the signalised junction with Scarborough Road and Westfield Way in order to optimise its operation.
- Land to the West of Old Maltongate (c60 dwellings): It is considered that redevelopment of the Ryedale House site would support additional residential development in the town without significant net increases in traffic, given that the site is in existing use as offices. As part of the site allocation it is proposed that capability for electric vehicle charging for each property is provided.

Public Transport

2.10.13. RDC's Local Plan Strategy states that "Ryedale is unlikely to experience a significant expansion of public transport services across the District and, as a consequence, the private car is likely to remain a key element of transport provision in Ryedale and consequent investment in road infrastructure may be required."

2.10.14. In this regard, the Strategy highlights a need to ensure that new development is located in areas that will increase opportunities to improve access to jobs, shops and services by modes other than the private car, and to ensure that those without access to private car do not become isolated. The Strategy also notes that congestion needs to be addressed in order to improve safety and air quality, as well as the general environment for pedestrians, through road transport improvements, traffic

management measures, and by ensuring that new development is located in areas that are accessible by public transport, and active modes.

2.10.15. Improvements to the Scarborough to York Railway Line are highlighted as a priority in the NYCC LTP4, with the aim of ensuring that at least 85% of the County's population are within a 40-minute journey time (by road or rail) of an HS2 gateway at York, Leeds or Darlington. Arriva Rail North are expected to introduce an hourly service throughout most of the day from December 2019; this will double the existing service provision and result in a twice hourly service in each direction between Scarborough and York, significantly increasing accessibility from Malton & Norton by rail.

2.10.16. In May 2018, First TransPennine Express introduced an earlier service between Scarborough and York (to arrive in York before 7am and London by 9am), in addition to later evening trains during the week and increased frequency of services at weekends.

2.10.17. These changes are also expected to provide improvements in journey times and infrastructure, including:

- By 2020 journey times between Malton and London will be around 130 minutes (including change of train); currently around 160 minutes.
- By 2023 journey times between Malton and Leeds will be around 40 minutes, and Malton to Manchester 80 minutes; currently in excess of 50 minutes and 100 minutes respectively.
- By 2033 journey times between Malton and London will be around 110 minutes, and Malton to Birmingham approximately 90 minutes, including a change of trains;
- currently Malton to Birmingham journey times are around 180 minutes. Additional improvements to Malton Station, and the calling services, are proposed as part of the First TransPennine Express franchise and include:
- Improved rolling stock and on-board facilities, e.g. free Wi-Fi, charging sockets, catering and luggage space;
- Increased passenger capacity on services – more carriages and more seats on services through Malton (148% increase in seating capacity by May 2020);
- Free station Wi-Fi;
- New ticket machines;
- Improved secure cycle facilities;
- Secure Stations status; and
- Secure Car Park Accreditation.

2.10.18. However, this planned increase in railway operations and service frequencies will result in additional closures of the level crossing, with associated impacts on traffic flows. The level crossing barriers are currently down for in excess of five minutes in each hour; the doubling of services has the potential to effectively double the amount of time the crossing is down, and so it could be reasonably assumed that the level crossing is likely to be down for in the region of ten minutes in every hour.

Committed Transport Schemes

2.10.19. Despite significant work having been undertaken previously in order to identify the key issues and areas of concern within the study area there are currently no committed transport schemes identified, over and above the proposed rail service improvements at Malton.

2.10.20. However, it should be noted that an experimental 7.5t Heavy Commercial Vehicle restriction over Norton Level Crossing was implemented in February 2018; a restriction of this type was proposed as part of the Brambling Fields Complementary Measures.

The Ryedale Cycle Forum

2.10.21. The Ryedale Cycle Forum was initially founded in 2013; the forum is supported by RDC and promotes cycling events, routes and safer cycling across the District. The Forum is attended by several key partners and stakeholders as well as local cyclists. Its overall aim is to encourage more people of all ages and abilities to cycle more often across the District whether they are residents or visitors.

2.10.22. The forum seeks to develop cycling in Malton and Norton and looks to increase the number of routes between communities. Their main goal is to develop cycle routes through Ryedale as part of the Sustrans National Cycle Network, and link together villages and market towns.

2.10.23. To date the forum has promoted a number of potential routes and cycleways within the District, noting the limitations of the current provision within Malton and Norton. Those routes of relevance to the Malton & Norton LCWIP are:

- Malton - Kirby Misperton (as the first stage of the Malton Pickering route): this route would provide a safer cycling route north from Malton town centre to Eden Camp and the new development of Eden Business Park and Food Enterprise Zone;
- York Road Industrial Estate – Huttons Ambo Lane end: this includes a 0.5-mile section of 2 way, off road segregated cycle path alongside the A64 at Musley Bank, which would link the Huttons Ambo turn off with York Road. This would particularly benefit recreational cyclists travelling between York and Malton and commuters travelling to York Industrial Estate from outlying villages;
- Malton – Amotherby: This includes provision of a pedestrian/cycle crossing across Pasture Lane, extending onto Broughton Road, which would serve the villages of Broughton, Swinton and Amotherby;
- Norton – Rillington: the route between Brambling Fields and Rillington has been identified for improvement. The forum has suggested the track is too narrow, there is poor signage provision, and part of the route has been deemed unsafe for active travel users and requires segregation from traffic; and
- Norton – Malton – Old Malton: There is an existing right of way between Sheepfoot Hill at the fire station to Old Malton Road, this route would pass through Orchard Fields and would give an alternative route to the congested Castlegate.

Sustrans Malton to Pickering Cycle Route Proposal

2.10.24. A safe and attractive cycle route between Malton and Pickering is a long-standing aspiration of the local communities. In 2017 Sustrans developed a proposal to create a new cycle route between the two market towns which would include a connection to the existing Yorkshire Wolds Cycle Route (NCN 166). This scheme was driven by an objective to make Malton the hub of sustainable cycle tourism in the area; the link would enable cycle tourists - potentially accessing the town by train - to have the option of two NCN routes; one extending northwards connecting the North York Moors, Dalby Forest and the Coast and one to the Yorkshire Wolds in the south. Despite the new routes attracting leisure and tourist trips, there is anticipated to be little impact on non-leisure trips.

2.10.25. Detailed proposals were included for the Malton to Eden Camp section of the route, which would likely have more impact on commuter routes within the urban area. The likely starting point of the route would be at Wentworth Street car park, enhanced with secure cycle parking and applicable signage. The intended route would extend towards Eden Camp via Pasture Lane and Rainbow

Lane; the junction between Peasey Hills Road, Pasture Lane and Rainbow Lane could be modified to make it easier for cyclists to use.

2.10.26. An additional route was identified via Outgang Lane, which would provide connectivity to various+ housing and employment. Both options would use Freehold Lane which would serve Eden Camp and the planned growth at Eden Business Park Enterprise Zone.

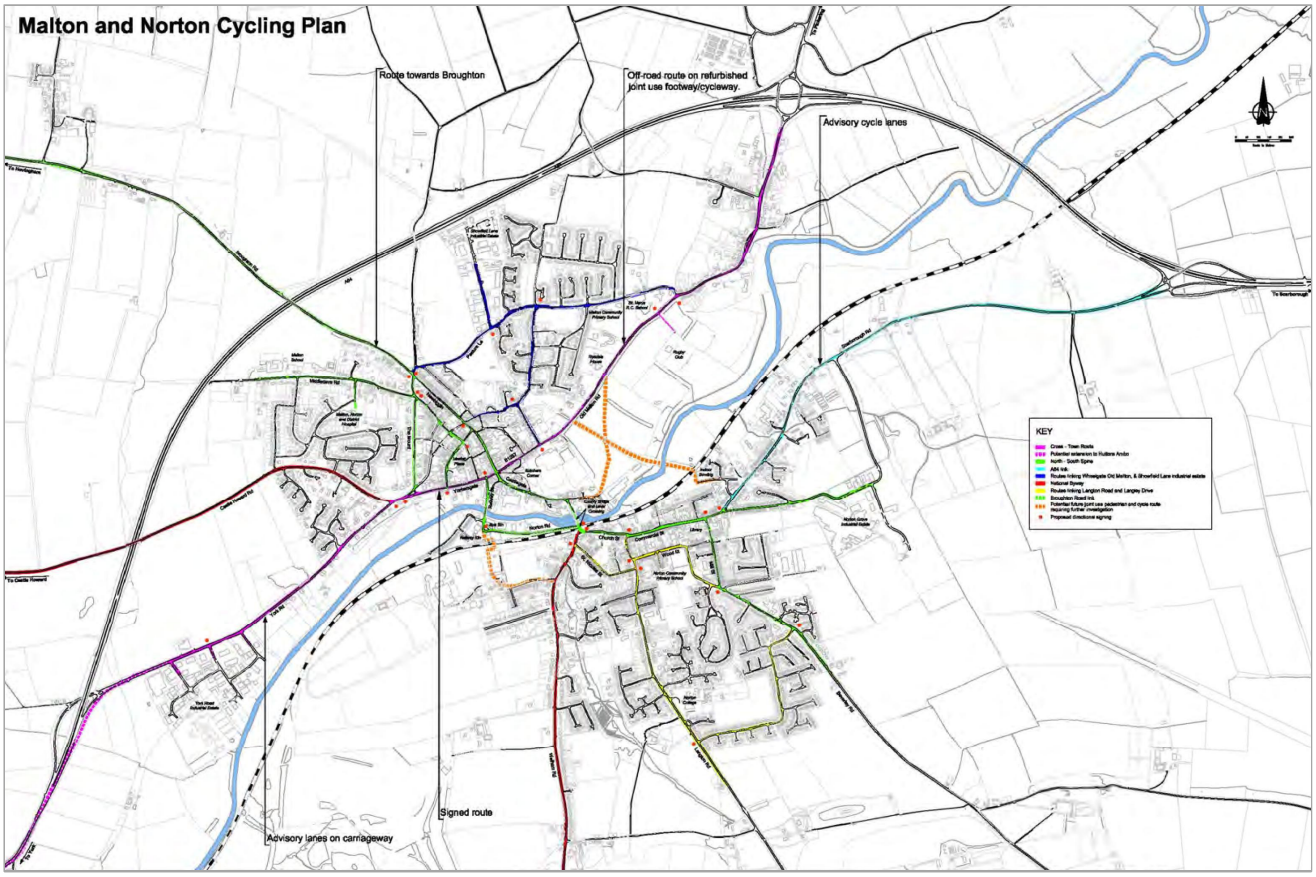
Malton and Norton Transportation Strategy (Mouchel Parkman, 2005)

2.10.27. NYCC commissioned Mouchel Parkman to develop a Transport Strategy for the twin towns, which was adopted in 2005. The strategy focussed on delivering improvements that would provide long lasting benefits, including those for vulnerable road users, whilst maximising economic and environmental well-being. A Pedestrian Action Plan and Cycling Plan was developed for Malton and Norton as part of the strategy, identifying costs and prioritising a programme of schemes for intervention.

2.10.28. A public consultation exercise was undertaken as part of the commission in order to seek views and receive feedback on a long list of potential interventions. In addition to improvements on the SRN, this long list also identified sustainable transport improvements, including:

- Pedestrian Action Plan Improvements – includes dropped kerbs, tactile pacing, footway and route improvements;
- An integrated signed cycle routes and provision map (see Figure 2-20) as well as additional secure cycle parking;
- Upgrading of bus stops; and improvements of the bus station.

Figure 2-20 – Malton and Norton Cycling Plan 2005



2.10.29. The 2005 cycle plan consisted of Primary and Secondary routes, including:

- North South Spine – a primary route which extends from B1257 in the north and along Middlecave Road forming a spinal distributor crossing the river Derwent, railway and onto Commercial Street and Beverley Road in the south. There are also addition spurs connecting to the railway station via Railway Street and Norton Road, and Norton Grove Industrial Estate via Parliament Street;
- The Cross-Town Route – this primary route stretches from the A64 at B1248 providing a link to York Industrial Estate, the town centre, Ryedale House and up to Old Malton, adjoining with the A1257 at the A64 to the East of Old Malton;
- Wheelgate Old Malton and Showfield Lane is a secondary link providing connections to the large residential areas in the north-east of Malton, Showfield Lane Industrial Estate and the town centre;
- Langley Road and Langley Drive links with the large residential areas to the south west of Norton and serves the college and local primary school in Norton;
- There are a number of shared footpath cycle routes which were also identified in the study, these would see existing footpaths be converted into routes which can be shared with cyclists, this included:

  Links between Kingston Drive, The Chase and The Grove. The conversion of the existing estate footpath to shared use would be beneficial for cyclists travelling towards Norton College.

Peasey Hills footpath which is bound to the northern side of the disused railway extends to Old Malton and Norton Road;
Gilling Way and across the cemetery to Pasture Lane;
The Footpath linking Spring Hall Garth with Fitzwilliam Drive;
Cycle Route using the disused Gilling to Malton Railway Line; and
A Footpath/Cycleway Link from the Railway Station to Development land in the south.

2.10.30. While the Strategy stated that the above routes and corridors were to be put forward for implementation (alongside a new southern access at Malton Railway Station), very few of these interventions have been implemented. It is also noted that while many of the proposed routes align with the proposed M&N LCWIP Cycling Network Map, the 2005 proposals mainly consisted of signed routes and shared-use paths, which are generally considered to be the minimum standard and only applicable in very limited circumstances according to the most recent released best-practice guidance.

Proposed Pedestrian/Cycle bridge at the railway station

2.10.31. A new bridge allowing for a southern access into the rail station for cyclists and pedestrians was identified as priority in the 2005 Malton and Norton Transport Study. The proposed increase in rail services and growth in housing and employment within the town is likely to result in a significant increase in the amount of rail trips to and from Malton, and providing such would give pedestrians and cyclists the opportunity to travel between the towns and to the rail station without having to cross the constrained level crossing / Castlegate area.

Malton & Norton Infrastructure and Connectivity Improvements Study: Preferred Package

2.10.32. As part of the Malton & Norton Infrastructure and Connectivity Improvements Study (WSP, 2018), a package of measures was identified in order to meet an agreed set of Strategic and Specific Objectives; the Strategic Objectives included:

- Enhance economic performance of the study area and improve opportunities for residents;
- Improve efficiency and resilience of the transport system;
- Promote and support a sustainable built and natural environment; and
- Improve safety and health for residents and visitors in the study area.

2.10.33. The preferred package of measures encompasses the following interventions:

- Bus service connectivity improvements. This intervention will review current bus services and, where applicable, will seek additional service provision, in particular a service connecting key destinations within the towns and consideration of the potential for providing services that avoid impacts of the level crossing either through timetabling and/or routing. In addition, to ensure coordination of bus and rail timetabling to provide for onward connections;
- Behaviour Change Measures targeting local businesses, schools and new residential developments: Behaviour change education and measures would look to target local businesses, schools, and new housing developments, to encourage a change in travel behaviour for shorter journeys;
- Walkway and Bridge over the railway line at Malton Station. This would provide a new pedestrian / cycle link between the towns, avoiding the need to use the level crossing;
- Improved Footpath and Cycle Links: Walking and Cycling Strategy. A Strategy approach to considering walking and cycling improvements is proposed to ensure a coordinated approach for

footpath and cycle provision and linkages across the towns. This will holistically consider provision and possible improvements to include, but not limited to:

Way finding signage, between Norton and Malton and to and from the rail station.
Identify footway improvement requirements.
Identify cycle routes and infrastructure provision including consideration of routes on and off the main road network (i.e. 'greener routes')

- Car Parking Strategy for the Ryedale District. The proposed Car Parking Strategy would include a review of both on- and off-street car parking. It is acknowledged that a holistic strategy is required, rather than changes in individual parking locations, as alterations in one location can have impacts on car parking at other locations. A review of car parking, and implementation of recommended proposals, would aim to improve coordination of parking, and reduce the need to drive across the towns and the recognised congestion points, e.g. Butcher Corner and the level crossing. The Strategy would also recommend potential new parking regimes and additional provision requirements, in particular to support the additional rail services in the towns;
- Internal Junction Improvements and Traffic Signal Strategy. The proposed Strategy would consider improvements to various junctions across the towns. An overarching strategy is required as changes to any one junction will impact the operation of others, and therefore measures need to be considered and tested as part of a towns-wide package;
- Relocation of Livestock Market. This proposal is for the relocation of the Livestock Market to an out of town centre location. There is outline planning consent for this use at Eden Camp; the intervention is included in this package as it is considered an important element of improvements to the town centre and public realm.
- Transport Hub / Interchange Masterplan. It is proposed to carry out a Masterplanning exercise for the area around the bus and rail stations, including Norton Road, with the aim of developing an attractive transport interchange / hub.
- Provision of Second Platform at Malton Railway Station. This intervention considers the potential for the introduction of a second platform on the southern side of the railway line, together with access, particularly for cyclists and pedestrians. Vehicular access and potential additional parking would be investigated, including an assessment of highways impacts, to identify deliverable measures;
- Provision of a New All Movements Junction between A64 and Broughton Road. This intervention is for the provision of a new all movements junction between the A64 and Broughton Road (B1257);
- Upgrade A64 Musley Bank Junction – to provide an all movements junction This proposed scheme consists of improvements that would result in an all- movements junction at the existing Musley Bank / A64 / York Road (B1248) junction, to the west of Malton; and
- Link road between Beverley Road and Hugden Way. Provision of this link road is a requirement of the proposed housing allocation in the emerging Local Plan (under Policy SD3 Housing Allocation - Land to the east of Beverley Road, Norton: Development Principles) but could potentially be delivered earlier if funding could be identified.

2.10.34. The report also identified a number of next steps required in order to bring this package forward and implement the various measures. A number of these measures are directly related to walking and cycling infrastructure, such as ‘Improved Footpath & Cycle Links via Walking and Cycling Strategy’ and ‘Walkway & bridge for Pedestrians and Cyclists to access Malton Station from the South’.

2.10.35. However, it should be recognised that many of the interventions also have the potential to implicitly contribute towards walking and cycling in the area, whether through additional road capacity providing space for infrastructure, or behaviour change programmes encouraging uptake in walking and cycling for everyday purposes. The priorities of the LCWIP should therefore consider the implications of the various other measures, and its role in enabling the wider package of interventions.

2.11 FORECASTING GROWTH IN CYCLE TRIPS

Propensity to Cycle Tool (PCT)

2.11.1. The Propensity to Cycle Tool (PCT) is a web-based tool that can assist with understanding potential demand for cycling across a study area, under a variety of forecast scenarios. The tool can aid in the identification of the most promising routes with regard to potential cycle growth, and inform network development and areas for investment.

2.11.2. The PCT project was primarily funded by the Department for Transport (DfT), with the Welsh government funding an extension to Wales. It was developed by an academic-led team involving the universities of Cambridge, Leeds and Westminster. The PCT helps to provide an evidence base for planning for cycling, and can be used to explore cycling potential at different geographical scales – from a county to a potential route corridor.

2.11.3. For research into cycling potential (and the resulting models) to be useful for local transport planners, their spatial scale must coincide with those over which the planning process has some control. For this reason, practitioners and researchers focus on scale as the primary way of categorising research into cycling potential.

2.11.4. At the route-based scale, the design of measures uses origin-destination data which can be used to create 'desire lines' and (using route allocation) estimates of existing and potential demand at each point on the road network

How the PCT Works

Baseline Data

2.11.5. Central to the PCT approach is origin-destination (OD) data recording the travel flow between administrative zones. Combined with geographical data identifying the population-weighted centroid of each zones, these OD pairs can be represented as straight 'desire lines' or as routes allocated to the transport network.

2.11.6. The OD pairs are derived from 2011 census data using data obtained from the following questions:

- 'What is the address of your main workplace'? and
- 'How do you usually travel to work'?

2.11.7. This is enhanced through gender composition data for each OD pair, data on background mortality at an area level, and OD pair level data on route distance and hilliness.

Forecasting Growth in Cycling

2.11.8. Four scenarios were developed to present a range of potential cycling future scenarios. These scenarios consider the removal of different infrastructural, cultural and technological barriers that currently prevent cycling being the natural mode of choice for trips of short to medium distances. The PTC guidance stresses that these are not predictions of the future, but snapshots indicating how the spatial distribution of cycling may shift as cycling grows based on current travel patterns.

2.11.9. The four scenarios are:

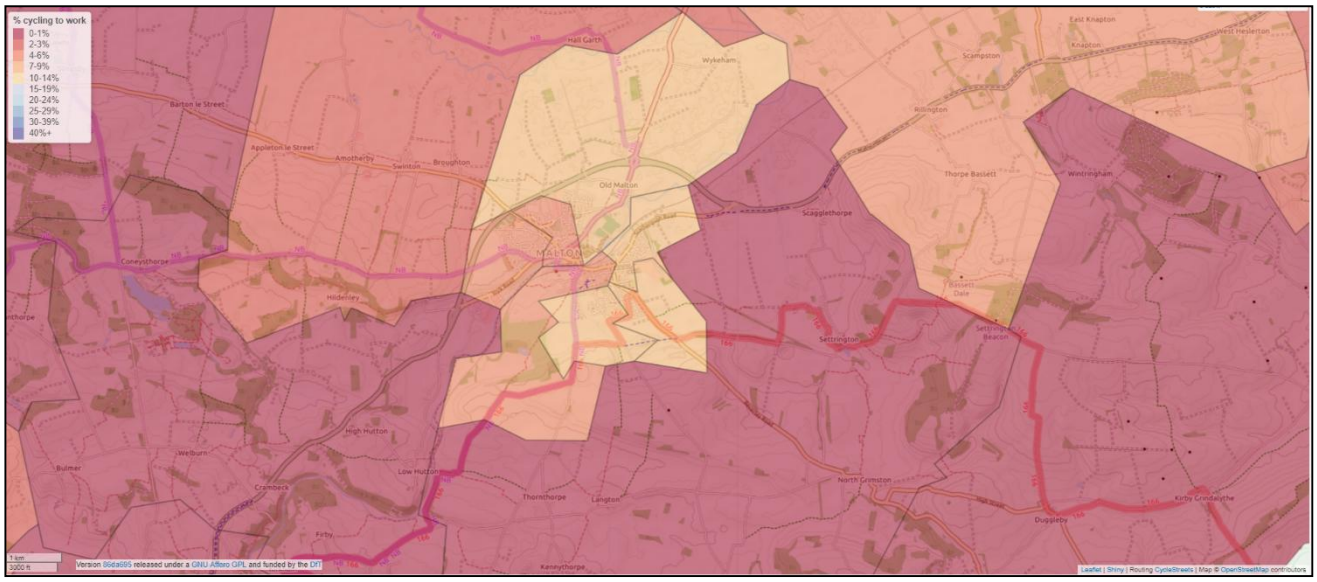
- Government Target: a doubling of cycle trip stages by 2025. Note that this is not uniform, with a greater increase in areas with many existing short, flat trips but a low current level of cycling.

- Gender Equality: this scenario assumes female cycle user numbers increase to equal levels of male cycle users, with the greatest impact where cycling is most gender unequal.
- Go Dutch: this scenario considers the increase in cycle users if England had the same infrastructure and cycling culture as the Netherlands, but retained the hilliness and commuter distance patterns. It applies 'Dutch scaling factors' calculated through analysis of British and Dutch National Travel surveys. These include one fixed 'main effect' parameter, plus a distance-based factor, as the Dutch effect is greater on shorter trips. Note this does not use current levels of cycling, rather considering the distance and hilliness of existing O-D pairs.
- Ebikes: this scenario is an extension of the Dutch scenario; The Ebike scaling factors were generated through analysis of the English, Dutch and Swiss National Travel Surveys, which estimated how much more likely it was that a given commute trip would be cycled by Ebike owners versus cyclists in general.

PCT Outputs

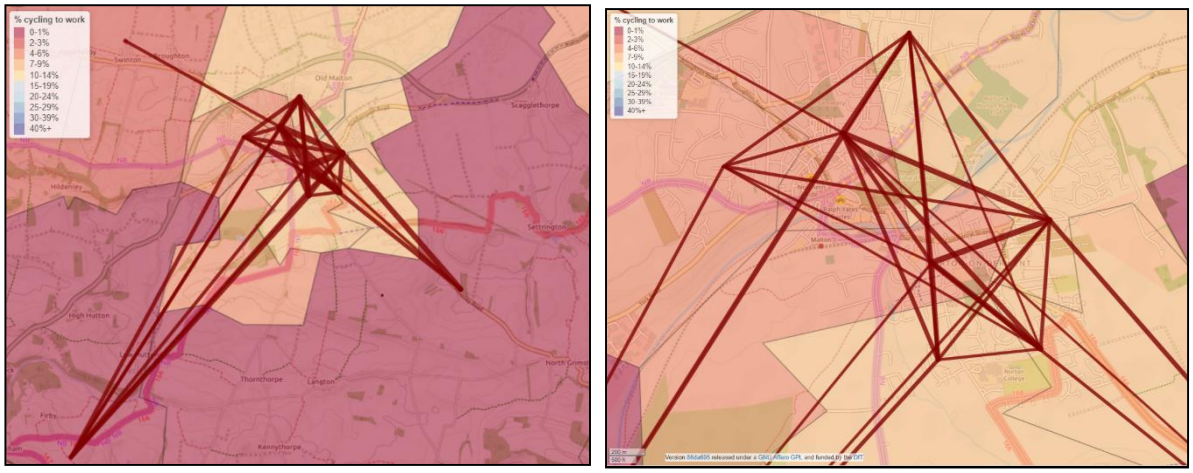
2.11.10. The basic PCT interface displays the existing levels of cycling to work, based on 2011 census data. Figure 2-21 illustrates this scenario at the LSOA level.

Figure 2-21 – PCT Output: % of Population Cycling to Work, by LSOA (2011 Census)



2.11.11. The outputs show that existing levels of cycling between LSOA OD pairs are moderately high in the north and south-western areas of Malton and Norton, with 7-9% of journeys to work undertaken by bike.

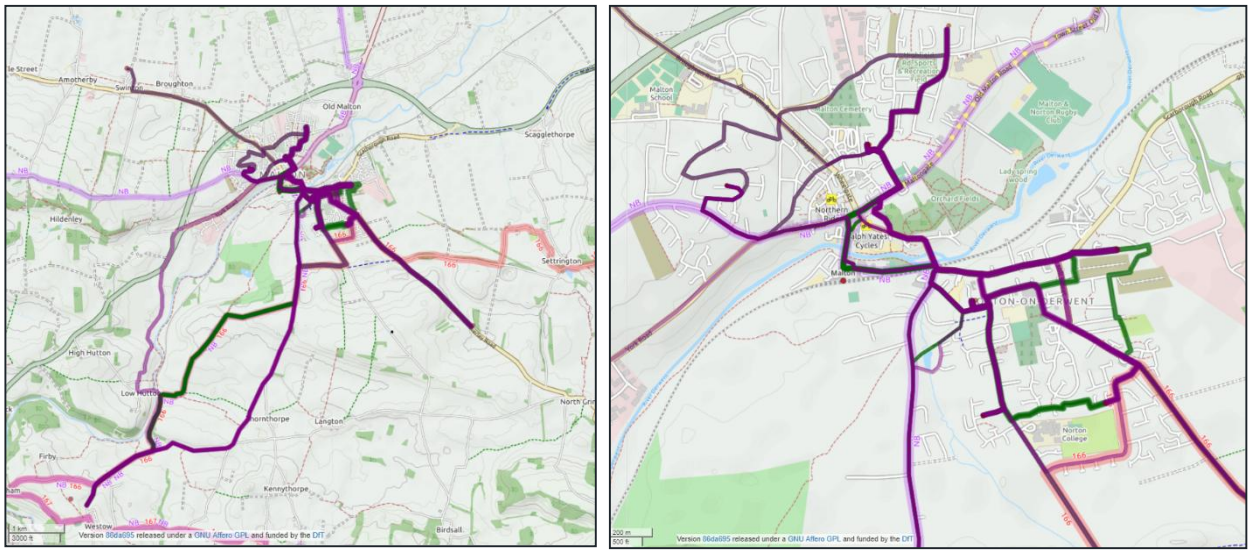
Figure 2-22 – PCT Output: Top 30 Cycle Flows between OD Pairs (2011 Census)



2.11.12. When considering the top 30 OD pairs, a large proportion of the existing travel to work by cycle occurs in the urban area of Malton and Norton; however, there is also existing demand for cycling from the outlying Local Service Centres, with connections to villages in the north west such as Swinton, Appleton le-Street, Broughton and Amotherby, as well as multiple connections to the smaller villages to the south of the main urban area.

2.11.13. Figure 2-23 then assigns the OD pair movements to the most likely routes: the purple lines represent the fastest routes, while those in green show quieter routes with less vehicular traffic. These routes are generated by CycleStreets.net, so do not necessarily represent the paths that cyclists currently take, rather the route choice models are based on GPS data developed specifically for this purpose.

Figure 2-23 – PCT Output: Top 30 Cycle Flows between OD Pairs, mapped to Fast and Quiet Routes (2011 Census)



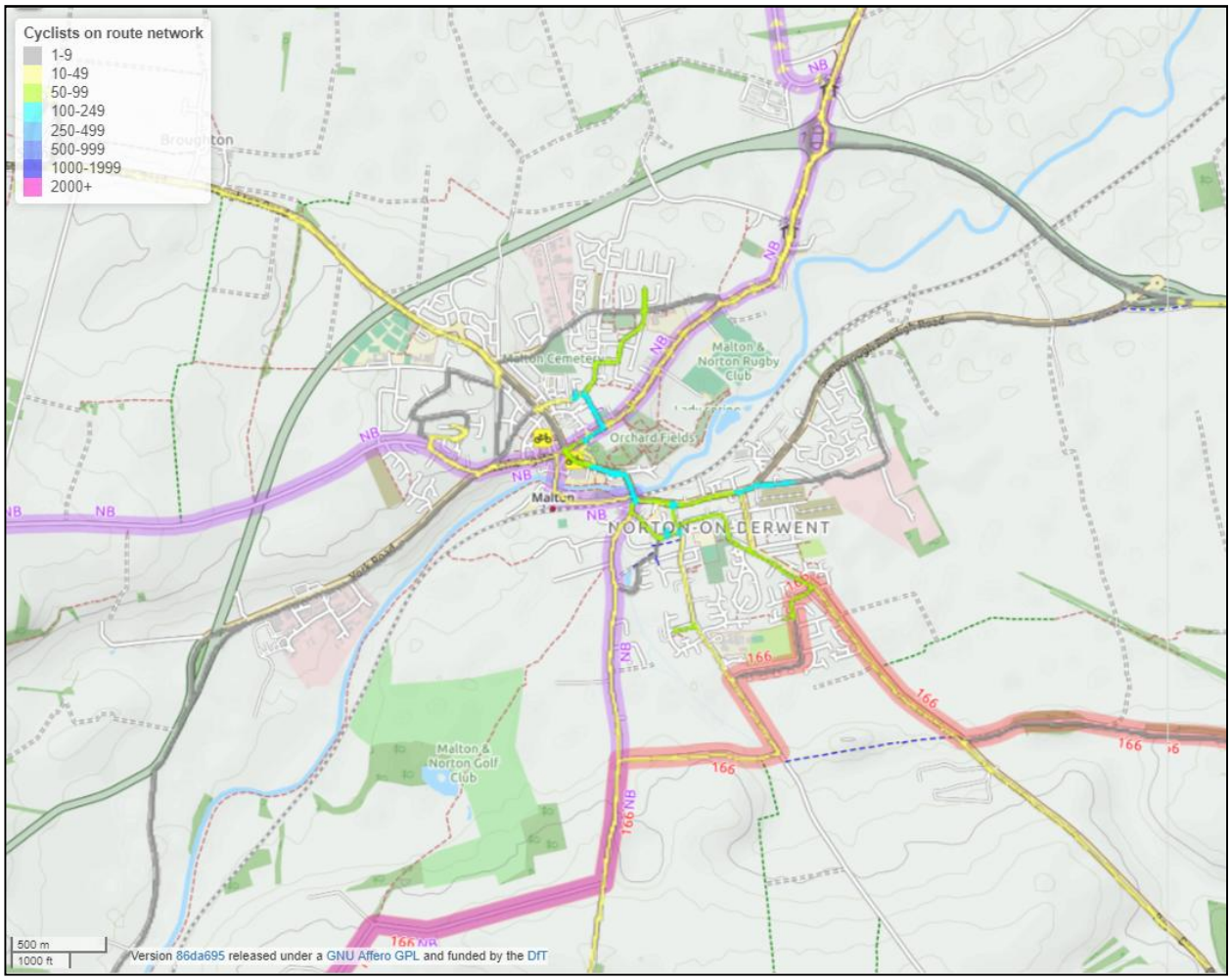
2.11.14. The mapping indicates significant overlap between the fastest and quietest routes, likely as a result of the limited route choice between Malton and Norton. While this makes it easier to identify where improvements could be of benefit to cycle users, the constraints associated with the crossing points

over the River Derwent and railway line pose significant challenges to introducing high-quality cycling infrastructure. It is also noted that the National Byway, which runs along Castle Howard Road to the Old Malton Road route of the Trans Pennine Trail, forms a key link in the centre of the towns.

2.11.15. It is also important to note that the tool only considers journey to work data, so excludes all other journey purposes, such as recreational cycling, tourist demand, and movements to school.

2.11.16. Figure 2-24 allocates these routes with the Route Network layer, aggregating the 'fastest route' flows together in order to consider the likely most cycled existing routes on the network.

Figure 2-24 – PCT Output: Total Cyclists on Route Network (2011 Census)

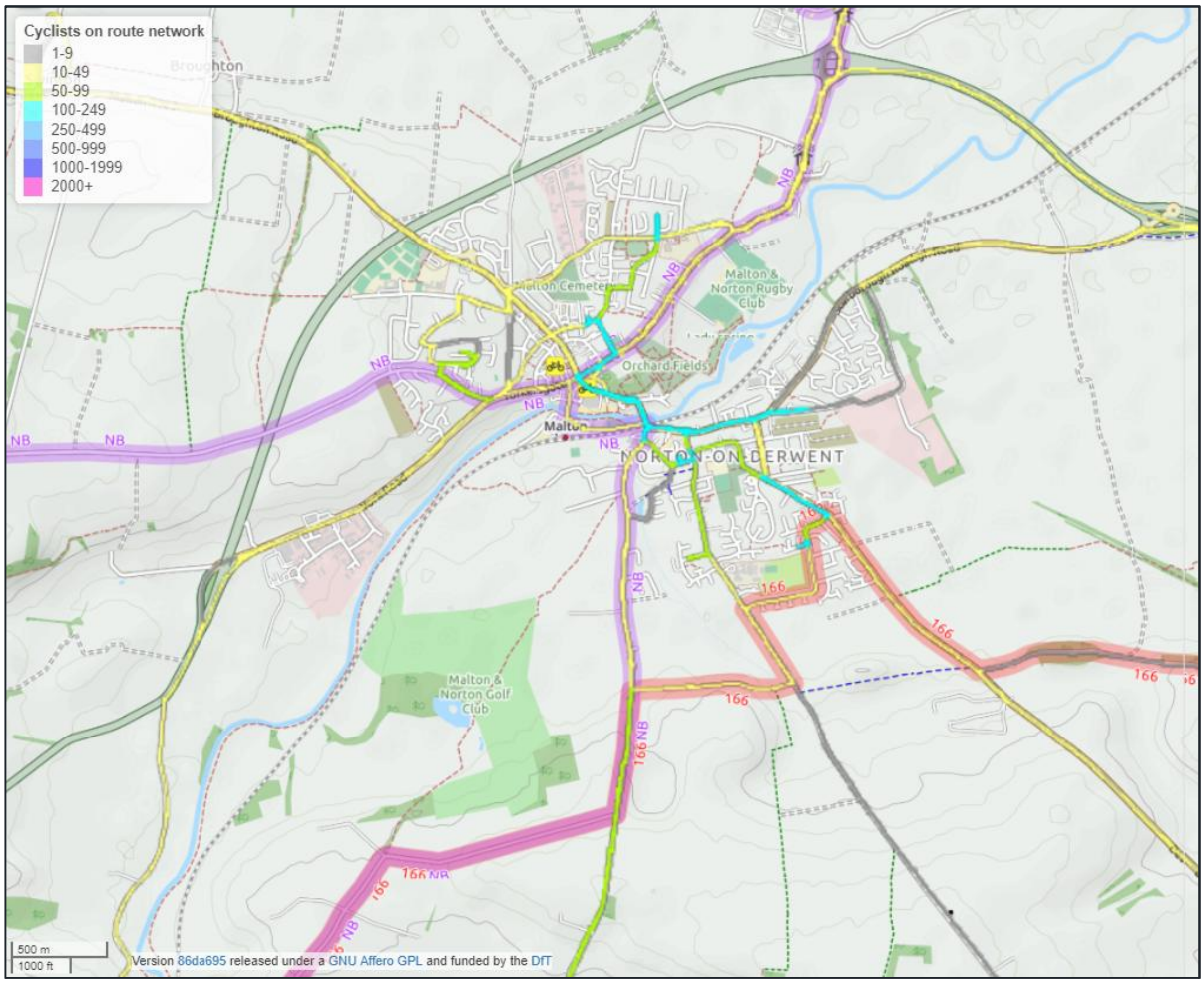


2.11.17. The existing conditions in Malton and Norton are shown in Figure 2-24; the highest number of cyclists use the single crossing point between the twin towns, with approximately 100-249 cyclists per day using this route. Additional routes recording more than 100 cyclists include East Mount Road in Malton, which connects to residential areas in the north and Parliament Street in Norton, which leads to a key employment area in the east.

Future Scenarios – Government Target

2.11.18. The PCT also allows the identification of key routes under the various future scenarios, as described above. Figure 2-25 shows the potential route network under the government target scenario. These figures show an increase in cycling in Norton along Church Street and Parliament Street, as well as higher cycle flows in the Malton town centre area. These routes are likely to represent the convergence points for journeys from the outlying residential areas, as well as potentially rail / cycle multi-modal journeys.

Figure 2-25 – PCT Output: Forecast Cycle Flows mapped to Route Network, based on Government Target Scenario

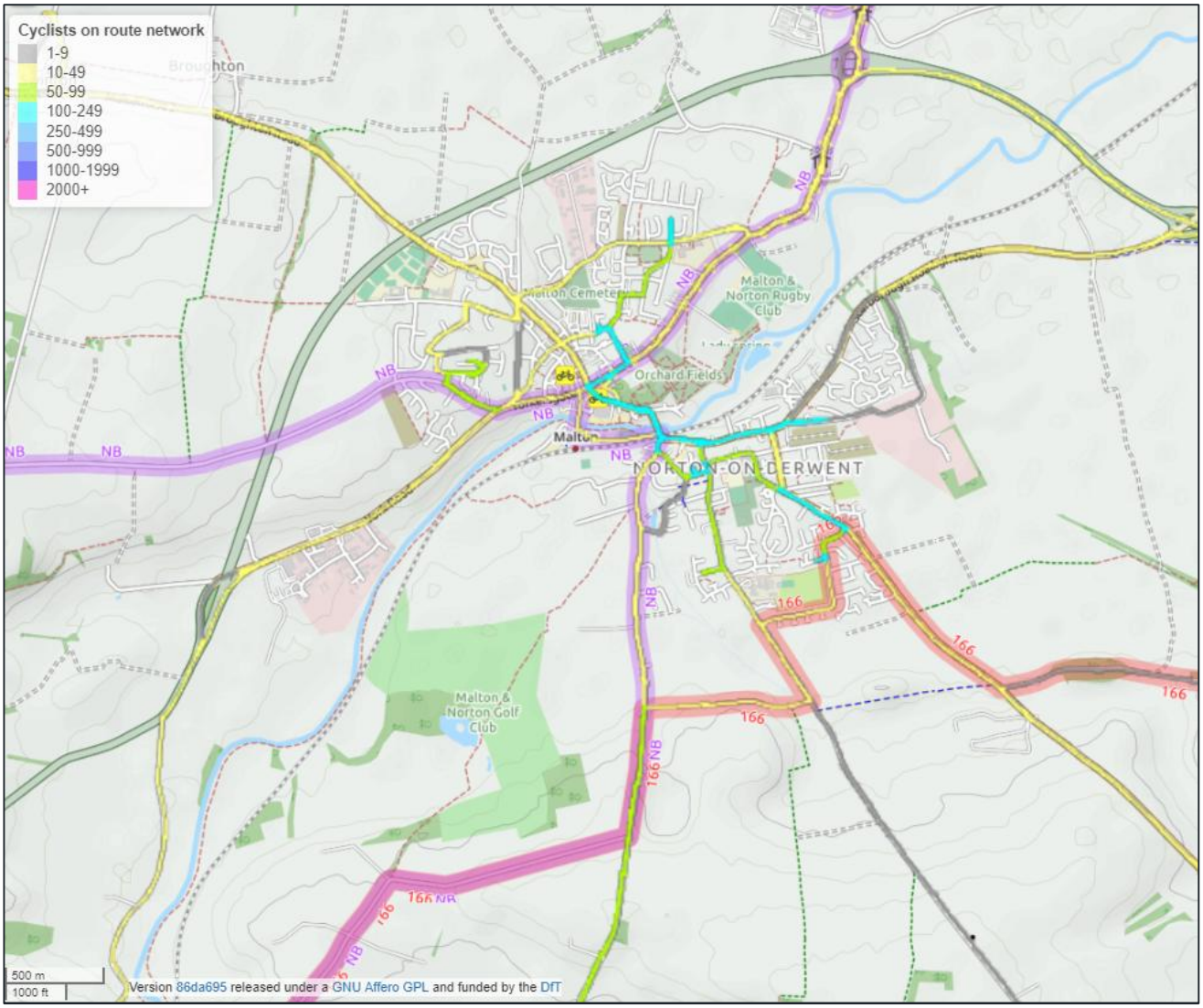


Future Scenarios – Go Dutch

2.11.19. The 'Go Dutch' scenario is considered more aspirational than the government target, presenting a potential scenario of cycling demand in the future if 'Dutch style' infrastructure was available, as well as a similar attitude toward cycling. Figure 2-26 shows the results of this scenario on the potential cycling network, highlighting areas of significant additional demand.

2.11.20. The figure shows increased demand across the key route between Malton and Norton and westwards in Norton towards residential and employment areas, and additional residential areas to the south west of Norton as a result of residents changing to more active modes.

Figure 2-26 – PCT Output: Forecast Cycle Flows mapped to Route Network, based on Go Dutch Scenario



LCWIP Implications

- The PCT outputs evidence existing cycle movements are concentrated on the urban area across the level crossing between Malton and Norton.
- Future scenarios reinforce the role of these central routes, while extending the potential for cycling out towards the key employment areas in Norton and residential areas to the South West.

Applying the PCT

2.11.21. It is important to understand the limitations of the PCT. The tool allows for an indicative understanding of the probable key existing cycle routes, as well as those under various future scenarios. However, these routes do not take into account journeys for any other purposes than commuting to work, and do not consider future growth in the area.

2.11.22. The PCT outputs should therefore only be considered as a starting point, with the network further refined through the subsequent stages in the LCWIP process.

3

BEST PRACTICE REVIEW

3 BEST PRACTICE REVIEW

3.1 OVERVIEW

3.1.1. Streets need to manage a wide range of road users and their competing demands by providing clear but flexible spaces, with consistent and legible features that acknowledge where, when and how users should interact.

3.1.2. Continuous improvement of the street environment and of public places is critical to meet the changing demand and expectations as urban areas grow and diversify. This will rely on best practice, creativity and innovation to develop places that cater for the current and future users

3.1.3. Priorities should be applied to best provide for efficient and safe movement of people, goods and services, while reflecting and enhancing the character of the place. Balancing user priorities, especially the needs of pedestrians and cyclists, is often challenging in busy urban contexts. There is a need to carefully consider configurations, phasing and infrastructure to respond to the most challenging junctions and increase permeability.

3.1.4. This high-level review of best practice highlights the salient points from a range of industry-leading documents, discussing how each document could shape the emerging cycling and walking networks in the study area. These documents include:

- London Cycle Design Standards (TfL, 2014);
- Greater Manchester Cycling Design Guidance (TfGM, 2014);
- City Connect Cycle Superhighway Design Guidance (CCDG)
- Interim Advice Note 195/16: Cycle Traffic and the Strategic Road Network (Highways England, 2016);
- Designing for Cycle Traffic: International principles and practice (DCT) (John Parkin, ICE, 2018);
- Design Manual for Bicycle Traffic (CROW, 2007);
- Cycling Infrastructure Design LTN 2/08 (DfT, 2008);
- Local Transport Note 1/12: Shared Use Routes for Pedestrians and Cyclists (Department for Transport, 2012);
- Creating Better Streets: Inclusive and Accessible Places – Review of Shared Space (CIHT, 2018)
- Streetscape Guidance (Transport for London, 2016);
- Planning for Walking (CIHT, 2015);
- Designing for Walking (CIHT, 2015);
- Design Guidance: Active Travel (Wales) Act 2013 (Welsh Government, 2014);
- Manual for Streets 2 (CIHT, 2010); and
- Providing for Journeys on Foot (CIHT, 2000)

3.2 CYCLING GUIDANCE AND BEST PRACTICE

London Cycle Design Standards (LCDS) (TfL, 2014)

3.2.1. The London Cycling Design Standards (LCDS) document sets out the requirements and provides advice for cycle network planning in London (although the guidance is equally applicable in many other areas).

3.2.2. The document is split up into eight separate sections, each covering different aspects of cycling design. The introductory chapters explore general design requirements and techniques for planning

and delivering high quality infrastructure. Several design outcomes are listed which are envisaged to help shape the design of cycling infrastructure in London:

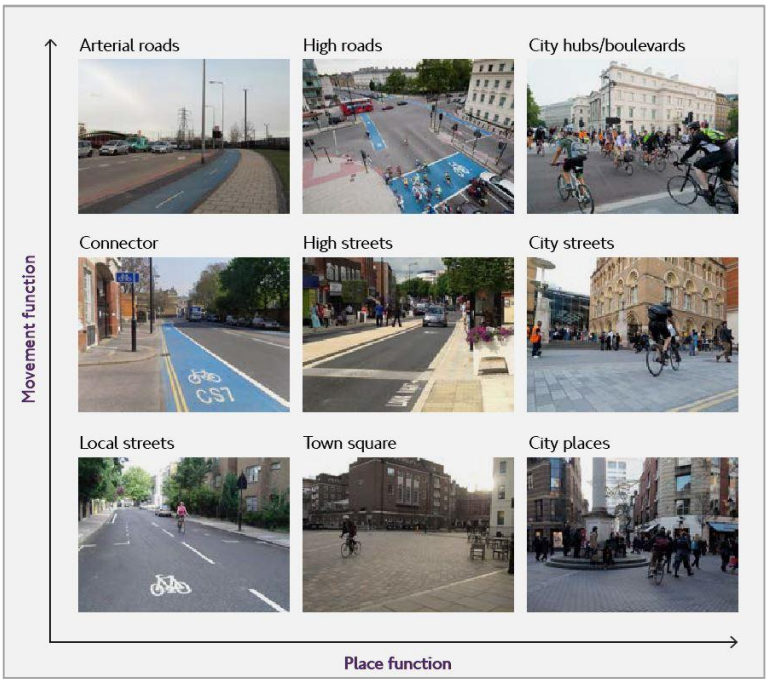
- Safety
- Directness
- Comfort
- Coherence
- Attractiveness; and
- Adaptability

3.2.3. The LCDS explores user needs, and provides guidance and principles that different places should adopt in order for them to become places for everyone.

3.2.4. The LCDS presents a framework of nine street types that have been designated in accordance with their 'movement' and 'place' function, allowing a route to be classified depending on how its purpose relates to either the 'movement' of people or a 'place' to be in Figure 3-1, shown below, is taken from the LCDS and shows these nine street types and how they relate to their place and movement function.

3.2.5. Street types classify the function of a location on the highway and the implementation of suitable measures can improve a streets performance so that it can better meet its functional requirement. Where a location is determined to have a high place function, a scheme may have an objective to bring people into the space and remain there for a period of time, potentially through calming or reducing vehicular traffic. Where through movement is the primary function, a scheme may focus more on objectives such as capacity, cycle priority and avoidance of delay.

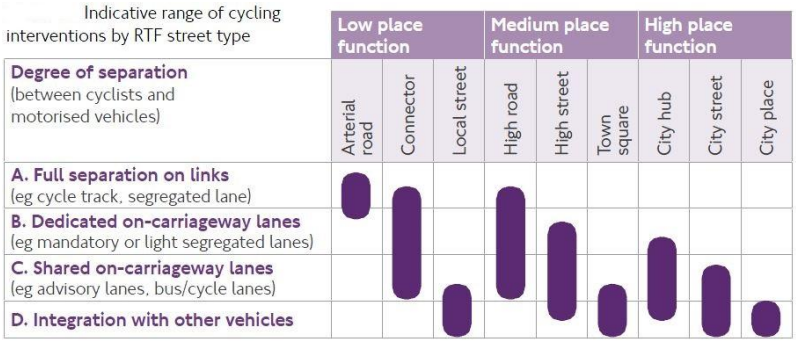
Figure 3-1 – LCDS Street Type Matrix



3.2.6. The LCDS also provides broad guidance on the types of intervention for cycling that may be most suitable depending on the determined street type, discussing the level of segregation that between

cyclists and motor vehicles that is most likely to be required. This relationship between place, movement, and segregation has been considered throughout the LCWIP process.

Figure 3-2 – Street Type and Associated Interventions



3.2.7. The remaining chapters of the document consist of detailed design guidance covering cycle lanes and tracks, junctions and crossings, signs and markings, construction, surfacing and cycle parking.

Greater Manchester Cycling Design Guidance (TfGM, 2014)

3.2.8. The Greater Manchester Cycling Design Guidance document aims to promote consistency in the provision of cycling infrastructure across Greater Manchester in support of Transport for Greater Manchester's (TfGM) aspirations to achieve a target of a 300% increase in the levels of cycling across the city region.

The document describes the different types of links that exist across Greater Manchester, including: cycle tracks; cycle lanes; shared use footways/cycleways; quiet streets; and cycle paths. The guidance identifies key design criteria which are used to determine a framework for designing effective and appropriate cycle infrastructure in a similar manner to the LCDS, including:

- Safety – cycling infrastructure must cater for all age groups (ages 8-80) and the full range of cycling abilities. To achieve this 'Family Network', the Vélocity aspiration is therefore to provide largely segregated cycle facilities whereby cyclists are separated from other road users.
- Coherence – the cycle route must be easy to find and intuitive to navigate; be consistent in quality; and offer route continuity and completeness.
- Directness – the cycle facilities must be direct in terms of both distance and time. Cycle routes need to serve key desire lines, connecting origins to destinations end-to-end without significant detour or delay.
- Attractiveness – the cycling environment along a route should be pleasant and interesting to encourage the full range of cyclists including beginners, recreational cyclists and commuter cyclists. Furthermore, there should be good levels of natural surveillance and, where appropriate, street lighting in order to promote personal safety.
- Comfort – cycling infrastructure should be designed, built and maintained for ease of use and for comfort. This means application of high-quality surface treatment and seeking to minimise the number of times it is necessary to stop or conflict with other road users.

3.2.9. The guidance also promotes a Quality of Service rating; this rating is a measurement of the degree to which the needs of the cyclists are considered to have been met, assessed against the five key

design criteria. This approach is similar to the Cycling Level of Service (CLoS) assessment promoted by Transport for London.

3.2.10. The guidance is divided into chapters covering distinct elements of cycle infrastructure design, including: link facilities and route features; junctions and crossings; signs and markings; and general construction guidance (including surfacing). In each of the chapters, parameters are defined to assist designers in developing appropriate infrastructure for a wide range of scenarios, taking into account constraints that may be present, such as cost, acceptability, and deliverability.

3.2.11. A range of standards, look up tables and related guidance, such as cycle parking, is included in the appendices of the document.

City Connect Cycle Superhighway Design Guidance (CCDG)

3.2.12. Developed by West Yorkshire Combined Authority, City Connect's Super Highway Design Guidance describes different measures that have been implemented along the Cycle Superhighway between Leeds and Bradford.

3.2.13. The document explains how users should navigate these different spaces and which transport mode has priority. Design features covered in the document include side roads and non-signalised junctions, bus stops, bi-directional sections of track, shared spaces and diagonal crossings. Guidance on ancillary design features is also included.

Design Manual for Roads and Bridges (DMRB) - Interim Advice Note 195/16: Cycle Traffic and the Strategic Road Network (Highways England, 2016)

3.2.14. IAN 195/16 provides guidance and technical specifications for the provision of cycle infrastructure along the Strategic Road Network (SRN). The SRN is typically concerned with provision for longer distance journeys between urban areas, generally at higher speeds, and non-motorised traffic is prohibited from travel on any motorways; the guidance therefore focusses predominantly on segregated provision away from the carriageway. Through adoption of the design principles laid out in the document, convenient and safe movement of cycle traffic crossing or travelling along the SRN should be made possible.

3.2.15. Different aspects of implementing infrastructure on the SRN are covered, including links, junctions, crossings and roundabouts, as well as signage, construction and maintenance. For each design feature, different factors are taken into consideration (e.g. traffic volumes, speed, road dimensions) allowing the designer to make a more informed decision about the most suitable infrastructure element used.

Designing for Cycle Traffic: International principles and practice (DCT) (John Parkin, ICE, 2018)

3.2.16. This book describes and analyses best practise design principles from the UK, Holland, Denmark, and the US. It covers different elements of cycling design, including on and off-carriageway routes, junctions, and crossings design. A major theme running through the document is that only distinct and separate cycling provision can ensure attractive and comfortable cycling infrastructure.

3.2.17. The document also explains related topics, including the planning processes involved when designing for cycling, legal and policy requirements, and the monitoring and evaluation of cycling infrastructure.

3.2.18. The concluding chapters explore different ways of modelling and auditing cycling infrastructure and recent innovations in cycling design.

Design Manual for Bicycle Traffic (CROW, 2007)

3.2.19. The Dutch Design Manual for Bicycle Traffic – commonly referred to as the 'CROW' explains the engineering and design principles that have been deployed in the Netherlands which have helped to create and maintain the current high level of cycling in the country.

3.2.20. Detailed guidance on cycle user types, their needs, and cycle infrastructure design to meet those needs is provided; ensuring infrastructure is planned to reflect cycle users' characteristics is a key theme throughout the document. The guidance also considers how infrastructure can best meet four core design criteria, ensuring routes are perceived to be safe, direct, comfortable and attractive. The document discusses the overarching principles in designing a cycling network, before setting out more detailed network components including road sections and junctions, and details of cycle path maintenance, furnishings, lighting, and signing.

3.2.21. The final chapter presents methodologies for evaluating cycling projects and how to ensure the long-term maintenance of roads.

Cycling Infrastructure Design LTN 2/08 (DfT, 2008)

3.2.22. This Local Transport Note (LTN) provides guidance on improving safety and reducing unnecessary delays and diversions for cyclists and pedestrians through the design of cycle infrastructure.

3.2.23. A hierarchy of safety measures is suggested, with measures that aim to reduce traffic volume and traffic speed recommended be considered first, and conversion of footways/footpaths to shared use for pedestrians and cyclists be considered last.

3.2.24. Design recommendations are included in the document covering a variety of different cycling infrastructure components: signage, cycle lanes, off-road cycle routes and junctions, as well as ancillary cycling aspects such as cycle parking and integration with public transport.

3.2.25. It is noted that, while still current, the guidance contained in LTN 2/08 is no longer considered to reflect best practice, and it is anticipated that a new version will be published in 2019. The updated LTN will replace the original guidance note, and recognise and promote recent innovations in cycling infrastructure, taking on board the views and opinions of a number of prominent cycling groups and stakeholders.

WALKING GUIDANCE AND BEST PRACTICE

Local Transport Note 1/12: Shared Use Routes for Pedestrians and Cyclists (Department for Transport, 2012)

3.2.26. This Local Transport Note focuses specifically on routes within built-up areas where pedestrian and cycle use is likely to be frequent. The document uses a hierarchy of provision, developed in LTN 2/08, to encourage practitioners to develop on-carriageway solutions first, in order to prevent designers from resorting too readily to 'shared use' interventions.

3.2.27. An overview of the scheme development process is provided, using a flow chart to explain how different traffic characteristics may influence design considerations and whether the adoption of shared use schemes or on-carriageway improvements may be more appropriate.

3.2.28. If a shared use intervention is considered to be the most appropriate design element, a key decision that needs to be made by practitioners is whether segregate the route or not, ensuring that whatever interventions are proposed reflect the core design principles of being convenient, accessible, safe, comfortable and attractive. The document weights up the advantages and drawback of these different design elements.

3.2.29. Pedestrian design considerations are examined, ensuring that the conversion of footways into shared use routes does result in the displacement of existing users and that the perception of reduced safety does not deter elderly people or disabled people from using the route. The document therefore recommends that pedestrians have sufficient width after conversion and that their particular concerns are discovered early on in the route's design.

3.2.30. Other design recommendations include ensuring the shared use route is clear from street clutter and aligning the cycle track so that it is placed on the carriageway side of a segregated shared-use route, improving pedestrian safety.

3.2.31. Related aspects of the scheme development process are also covered including how to hold effective stakeholder engagement and manging the route post-implementation.

3.2.32. Shared space has recently been the subject of debate regarding inclusive mobility and accessibility in shared space, with the lack of a defined kerb and formal crossing points have a particularly negative impact on certain user groups.

3.2.33. Following the publication of the "Inclusive Transport Strategy: Achieving Equal Access for Disabled People" (DfT, 2018) and the Ministry for Housing, Communities and Local Government's National Planning Policy Framework refresh, the DfT have called for a pause on the introduction of new shared space schemes as they update LTN 1/12 to address these issues. The pause relates to those shared space schemes that feature a level surface in areas with relatively large amounts of pedestrian and vehicular movement, such as high streets and town centres (outside of pedestrian zones). The pause does not apply to streets within new residential areas or the redesign of existing residential streets with very low levels of vehicular traffic, such as appropriately designed mews or cul-de-sacs.

Creating Better Streets: Inclusive and Accessible Places – Review of Shared Space (CIHT, 2018)

3.2.34. This CIHT document examines the current debate regarding the effectiveness and safety of shared space initiatives in the UK through a review of several case studies, as well as an exploration of the relevant legislation.

3.2.35. The report recommends that future projects be scored against several objectives:

- whether a scheme represents an inclusive environment or not;
- ease of movement for all users; and
- quality of place and economic benefit.

3.2.36. The report recognises the difficulty that defining 'shared space' schemes has had in hampering any meaningful discussion about them. Three types of shared space schemes were identified through a review of case studies, each with different characteristics:

- pedestrian prioritised streets;
- informal streets; and

- enhanced streets.

3.2.37. The report intends that using these distinctions will provide greater clarity for designers, decision makers, stakeholders and users and calls for these (or similar) 'shared space' street typologies to be adopted by government. It also suggests that these criteria be used to determine the effectiveness of a scheme post-implementation.

3.2.38. The document also recommends that local authorities set clearer outcomes during the design stage of a shared space scheme and that government emphasises the importance of stakeholder engagement. Calls were also made for the government to review several different specific elements of shared space initiatives.

Streetscape Guidance (Transport for London, 2016)

3.2.39. TfL's Streetscape Guidance document is guided by three major functions:

- To encourage designers of streetscapes to use robust design methods;
- to highlight the level of ambition that is required to develop high-quality levels of service; and
- to highlight best practise design principles.

3.2.40. The document's design considerations take examples from case studies all over London where the successful redesign of streets has taken place and, where practical and appropriate, encourages the trialling and testing of new transport schemes and initiatives in order to stimulate future street improvements.

3.2.41. Different street types are recognised as supporting different functions which must balance the sometimes-competing functions of movement and place. Technical guidance on different design principles complements these considerations, with detailed information on different street components.

Planning for Walking (CIHT, 2015)

3.2.42. CIHT's Planning for Walking document describes the early stages of how best to implement walking strategies. The document begins by exploring current walking trends and characteristics, before explaining the benefits of walking and the problems and barriers pedestrians face.

3.2.43. The legal and regulatory context of walking is examined, setting the scene for how effective strategies can be envisaged and planned, describing how walking catchments, desire lines, pedestrian safety and other aspects of the pedestrian environment can contribute towards planning for walking.

3.2.44. Examples of ways in which local authorities have encouraged greater levels of walking for all purposes are described, such as through the implementation of travel plans or promotional campaigns, before considering potential trends, opportunities, and challenges which could affect levels of walking in the future.

Designing for Walking (CIHT, 2015)

3.2.45. Designing for Walking follows on from CIHT's Planning for Walking (see above), with this document explaining how facilities for walking should be designed.

3.2.46. Design considerations that affect the quality of the walking environment are considered, as are other factors including the assessment of options for crossing streets, assessment of pedestrian routes,

the necessity of pedestrian guard railing, the use of tactile paving, way finding, journey end facilities/interchanges, and the use or impact of street features and furniture.

Design Guidance: Active Travel (Wales) Act 2013 (Welsh Government, 2014)

3.2.47. This statutory guidance document provides details on the planning, design, construction and maintenance of active travel networks and infrastructure in Wales, addressing both walking and cycling provision.

3.2.48. The document presents a summary of the legal and policy framework enshrining the Active Travel Act, and describes how the Act mandates local authorities to develop active travel network maps in order to show existing infrastructure provision and to demonstrate where new active travel routes will be developed.

3.2.49. The guidance explains the processes of creating new and improving existing walking and cycling infrastructure, as well as setting out how to successfully engage with stakeholders and members of the public when considering active travel improvements.

3.2.50. The document sets out five essential design criteria for new cycling and walking infrastructure, which are: Coherent, direct, safe, attractive and comfortable. The guidance presents different design elements to achieve these criteria in a range of different conditions.

3.2.51. Within the appendices of the document, detailed guidance is provided to assist designers in developing appropriate infrastructure for a wide range of scenarios considering constraints that may be present, such as cost, acceptability and deliverability. Each element is given a rating as to whether the infrastructure is well understood and widely used or whether the element has been largely untested in Wales, but has been adopted elsewhere.

3.2.52. Further guidance is also given on the assessment of walking routes, with a scoring system used to determine whether a route provides good quality provision for pedestrians or not, using the five core design criteria.

Manual for Streets 2 (CIHT, 2010)

3.2.53. Manual for Streets 2 (MfS2) builds on the guidance contained in MfS1, exploring in more detail how and where to apply its key principles, ensuring streets are designed with pedestrians considered first, promoting collaboration and engagement between different parties, setting a clear vision and objectives, and developing innovative approaches to street design.

3.2.54. The characteristics of different street types are explored, emphasising how town centre and city centre streets often have to serve multiple different functions and support multiple different users. Possible interventions to consider in these environments include vehicle access restrictions and adoption of an area-wide public realm strategy and streetscape manual.

3.2.55. The latter part of the document explores the detailed design of several streetscape elements. Regarding pedestrian provision, the document advises that:

- The propensity to walk is influenced not only by distance, but also by the quality of the walking experience;
- Good sightlines and visibility towards destinations and intermediate points are important for way-finding and personal security;
- Pedestrian routes need to be direct and match desire lines as closely as possible, including across junctions, unless site-specific reasons preclude it;

- Pedestrian networks need to be connected. Where routes are separated by heavily trafficked roads, appropriate surface-level crossings should be provided where practicable;
- Pedestrians should generally be accommodated on multifunctional streets rather than on routes segregated from motor traffic. In situations where it is appropriate to provide traffic-free routes they should be short, well-overlooked and relatively wide;
- Obstructions on the footway should be minimised. Street furniture on footways can be a hazard for vulnerable people; and
- There is no maximum width for footways—widths should take account of pedestrian volumes and composition.

3.2.56. Regarding footway provision, recommendations include providing footways along both sides of the highway, ensuring footways are of a sufficient width to cater for peak demand without causing crowding or potentially risking people getting pushed into the carriageway, taking space away from the carriageway in order to create a better-balanced street and rationalising street furniture.

3.2.57. The document's appendices include several case studies, explaining the design elements used and evaluating whether the interventions were successful or not.

Providing for Journeys on Foot (CIHT, 2000)

3.2.58. Providing for Journeys on Foot is one of the earliest publications exploring ways in which local authorities should plan and provide for pedestrians, maintain walking infrastructure and promote walking, and while almost 20 years old, the principles it promotes are still highly relevant.

3.2.59. The document sets out 'The Five Cs' as being the most important considerations when assessing the overall quality of the existing environment and when designing new infrastructure, which are: connected, comfortable, convenient, convivial and conspicuous.

3.2.60. Urban design principles are also endorsed, taking into consideration the importance of multi-disciplinary working. Different aspects of the walking environment are examined in more detail, taking into consideration how pedestrian environments vary, basing design recommendations on these findings.

3.2.61. Post-construction aspects of walking provision are also examined, including footway maintenance, promoting walking, and the appraisal and monitoring of pedestrian infrastructure schemes. The document concludes with example checklists and frameworks used to assess existing walking environments and assess possible investment options.

4

CYCLE NETWORK DEVELOPMENT

4 CYCLE NETWORK DEVELOPMENT

4.1 OVERVIEW

4.1.1. One of the key outputs of Phase 1 of the Malton & Norton LCWIP process is the determination of the Cycling Network Map (CNM), which sets out a cohesive potential network for cycling. This network is then considered against the baseline evidence in order to identify preferred routes for further development.

4.1.2. The development of the Cycling Network follows the LCWIP Technical Guidance for Local Authorities document (DfT, 2017), and is founded on the principle of connecting people to places, ensuring that the proposed networks correspond to both the routes people currently take and those people are likely to want to take, both now and in the future. This method also helps to identify the long-term vision for the networks while ensuring investment is focused on the key routes and the needs of cycle users. The resulting outputs are networks that are evidence-based and facilitate strategic development.

4.2 METHODOLOGY

4.2.1. The development of the Cycle Network Map can be divided up into a 10-step process. These are as follows:

- Step 1 – Define and Understand the Study Area
- Step 2 – Identify Key Origins and Destinations
- Step 3 – Identify Key Future Developments and Infrastructure
- Step 4 – Clustering of Origins and Destinations
- Step 5 – Schematic Connections Between Origins and Destinations
- Step 6 – Identify Routes Serving the Schematic Network
- Step 7 – Consider a Route Hierarchy
- Step 8 – Produce Draft Cycle Network
- Step 9 – Validation and Review
- Step 10 – Produce Final Network

4.2.2. The following sub-sections describe the process undertaken in developing the CNM for the Malton & Norton LCWIP study area.

4.3 STEP 1 - DEFINING THE STUDY AREA

4.3.1. The first step in developing the network map is to define the extents of the study area.

4.3.2. In order to determine these extents, a process of ‘baselining’ was undertaken to understand travel movements and demographic variations in the District, including a review of various data sources in order to understand the existing transport-related issues, physical constraints and topography. Isochrone mapping was undertaken in order to understand the likely extents of active travel distances, while the DfT’s Propensity to Cycle Tool (PCT) was used to identify existing and potential future cycle travel patterns.

4.3.3. A number of site visits have also been undertaken at various stages of the process; these site visits have helped understand existing and future travel demands, identify key corridors, and consider constraints on the network.

4.3.4. Stakeholder engagement has also been key in understanding the priorities of the District and the implications and alignment with other workstreams.

4.3.5. Following an analysis of this evidence base, it was agreed that the Malton & Norton LCWIP would focus primarily on the urban area, as shown in Figure 1-1.

4.4 STEP 2 - IDENTIFY KEY ORIGINS AND DESTINATIONS

4.4.1. Key origins and destinations were plotted using data collected through the baselining exercise, site audits, stakeholder engagement, and through local knowledge. These ODs included the following key origin points:

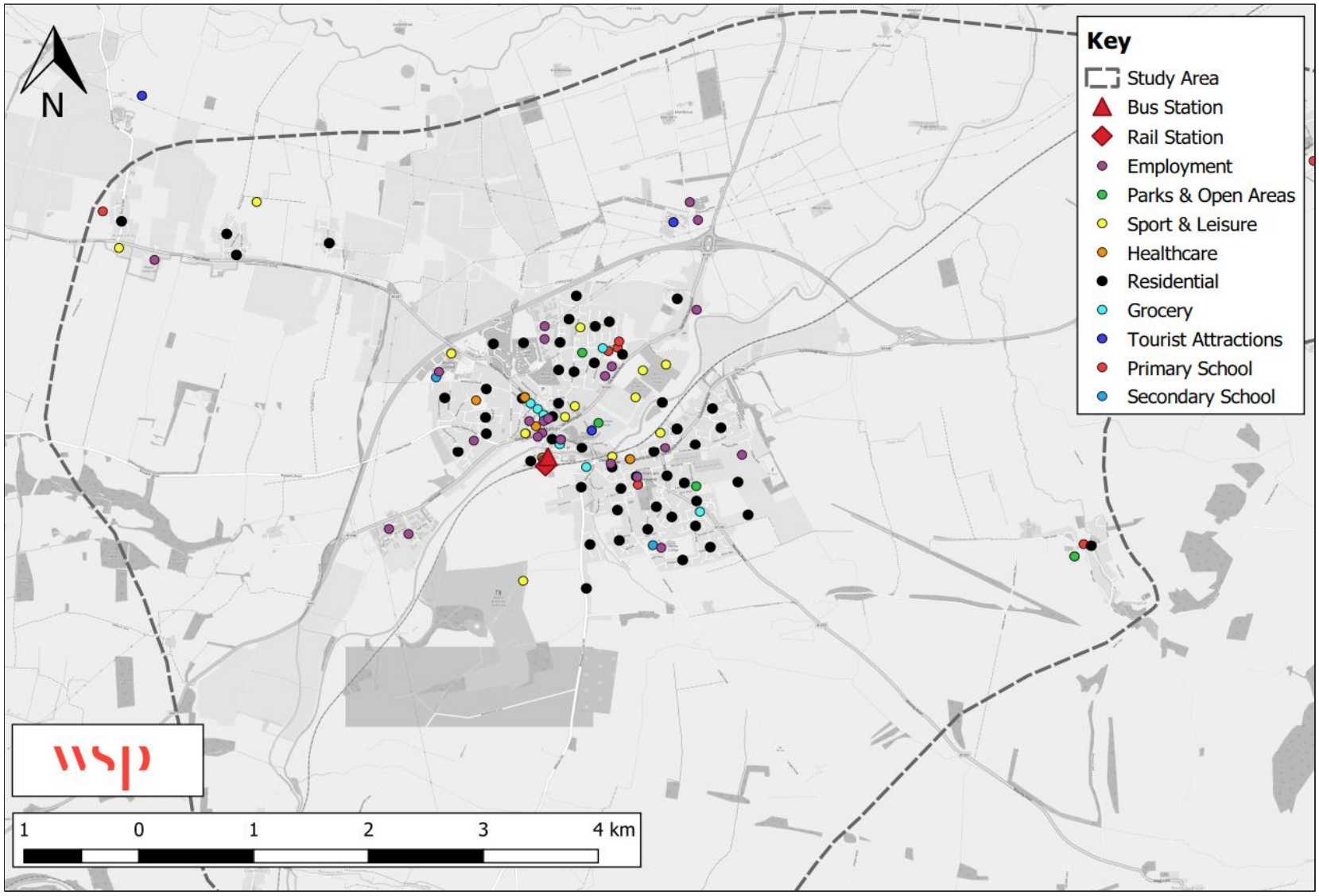
- Residential areas – LSOA population-weighted centroids were used as proxy locations for residential areas;
- Public transport interchanges – these are both origins in terms of people arriving in the study area and destinations people use to travel to wider locations

4.4.2. Key destinations included:

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

4.4.3. Figure 4-1 shows these key ODs in relation to the Malton & Norton LCWIP Study Area. Further detail regarding OD identification is available in Sections 2.8 and 2.9.

Figure 4-1 – Malton and Norton: Key Origins and Destinations

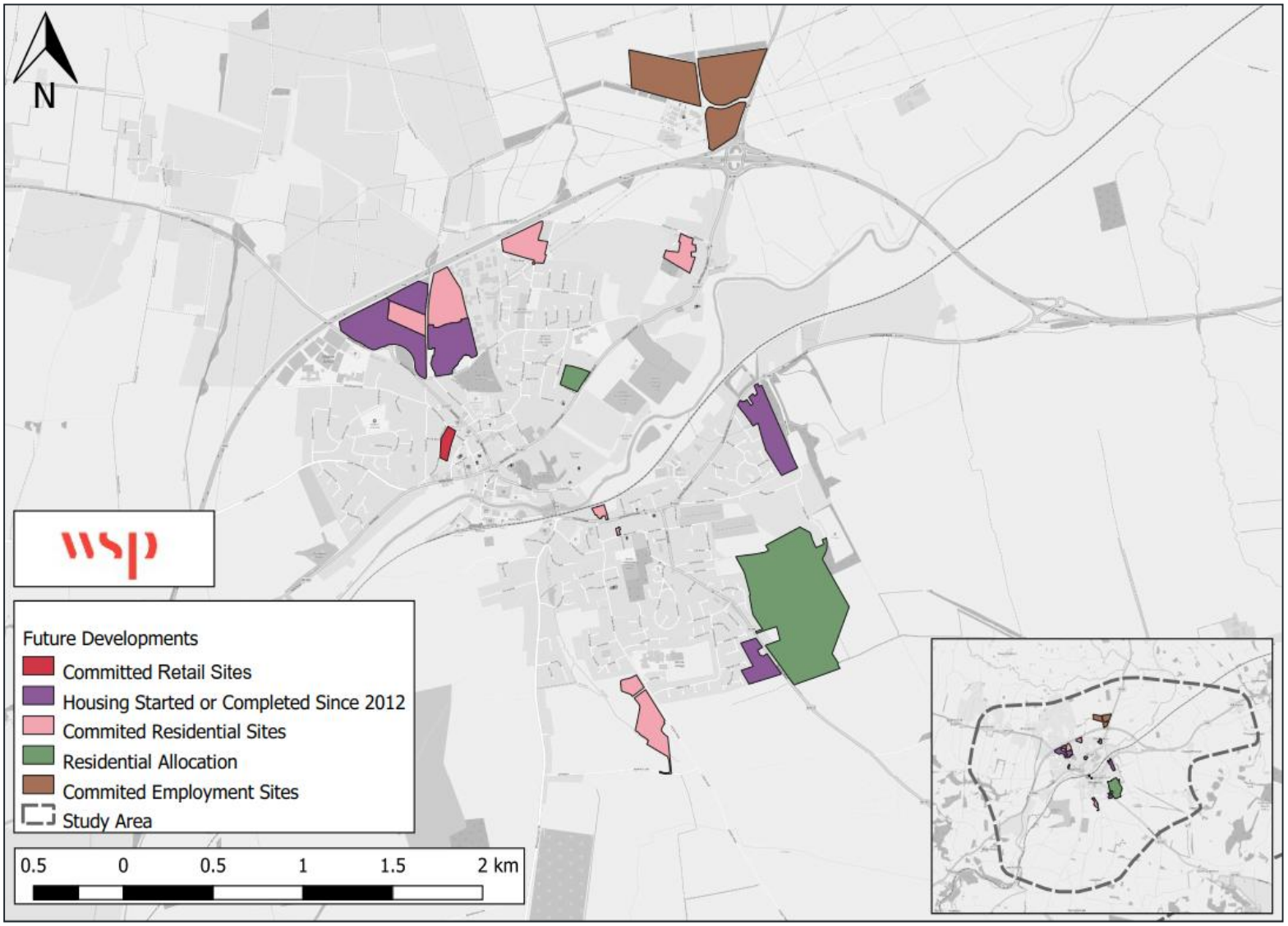


4.5 STEP 3 - IDENTIFY KEY FUTURE DEVELOPMENTS AND INFRASTRUCTURE

4.5.1. Identifying potential development and infrastructure is important in terms of understanding where future origins and destinations may be located, as well as the potential for new desire lines. Understanding the location of and proposals for such development allows the network to be developed in a way that links these sites and makes the most of planned infrastructure.

4.5.2. Figure 4-2 identifies the key future committed and allocated development sites in the Malton & Norton LCWIP Study Area, presenting these alongside the existing ODs, as determined in Step 2.

Figure 4-2 – Malton and Norton: Key Future Developments and Infrastructure



4.6 STEP 4 - CLUSTERING OF ORIGINS AND DESTINATIONS

4.6.1. In Step 4, trip generators in close proximity to one another have been clustered together as key destination areas. This process simplifies the analysis of desire lines, agglomerating multiple destination points into a single broad destination.

4.6.2. Figure 4-3 illustrates these clusters, as well as identifying the desire lines discussed in the following sub-section.

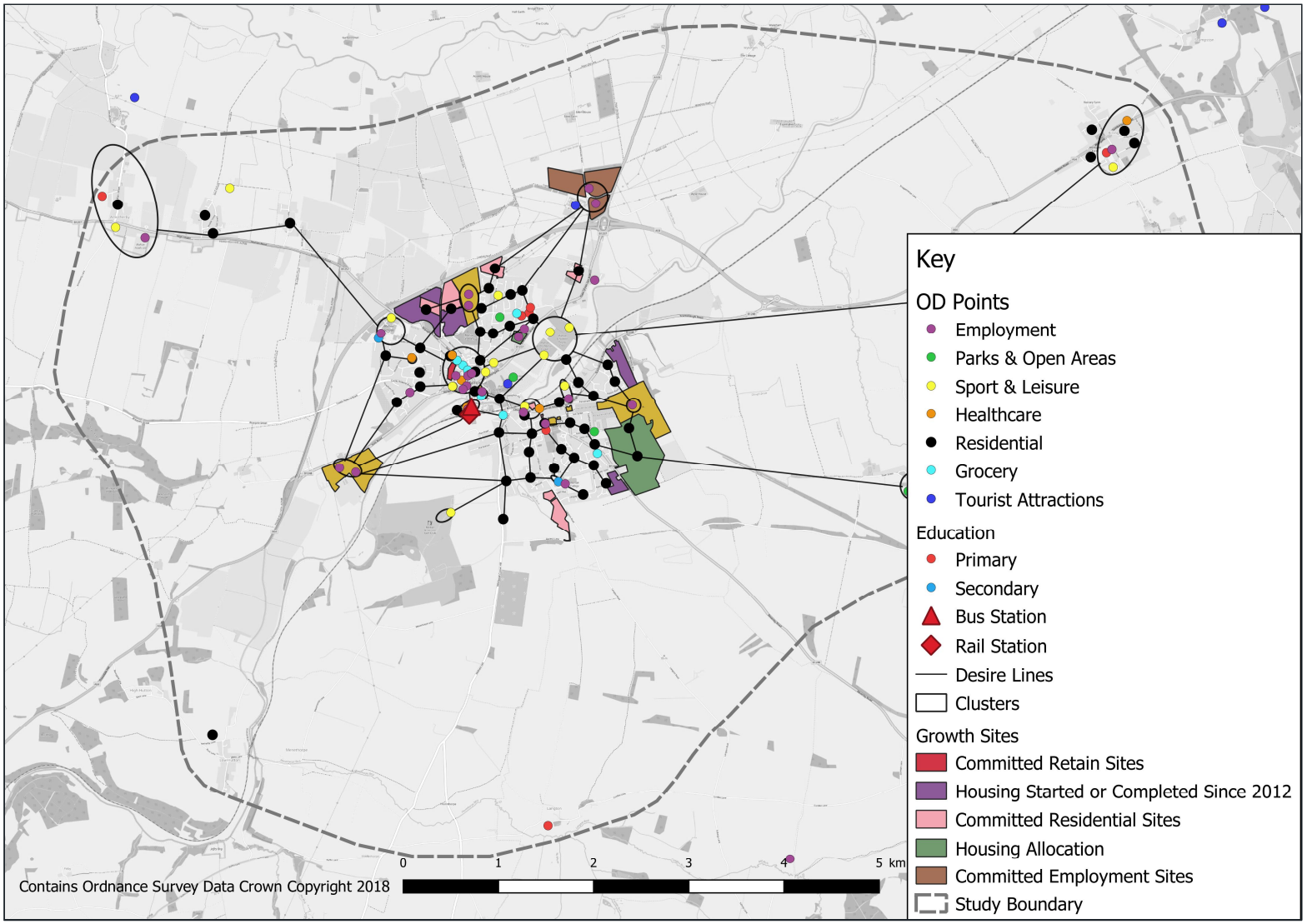
4.7 STEP 5 - SCHEMATIC CONNECTIONS BETWEEN ORIGINS AND DESTINATIONS

4.7.1. Step 5 maps desire lines between the various origin and destination points. Straight lines were drawn between the key origins and destinations in order to create a schematic web network. These represent the most direct paths for cycle users between points (i.e. 'desire lines') and are, at this stage, irrespective of existing transport networks or constraints.

4.7.2. Parallel lines or lines in close proximity to each other were combined to simplify the network and are considered as 'primary connections'.

4.7.3. Figure 4-3 illustrates these desire lines, as well as the clusters described in the preceding sub-section.

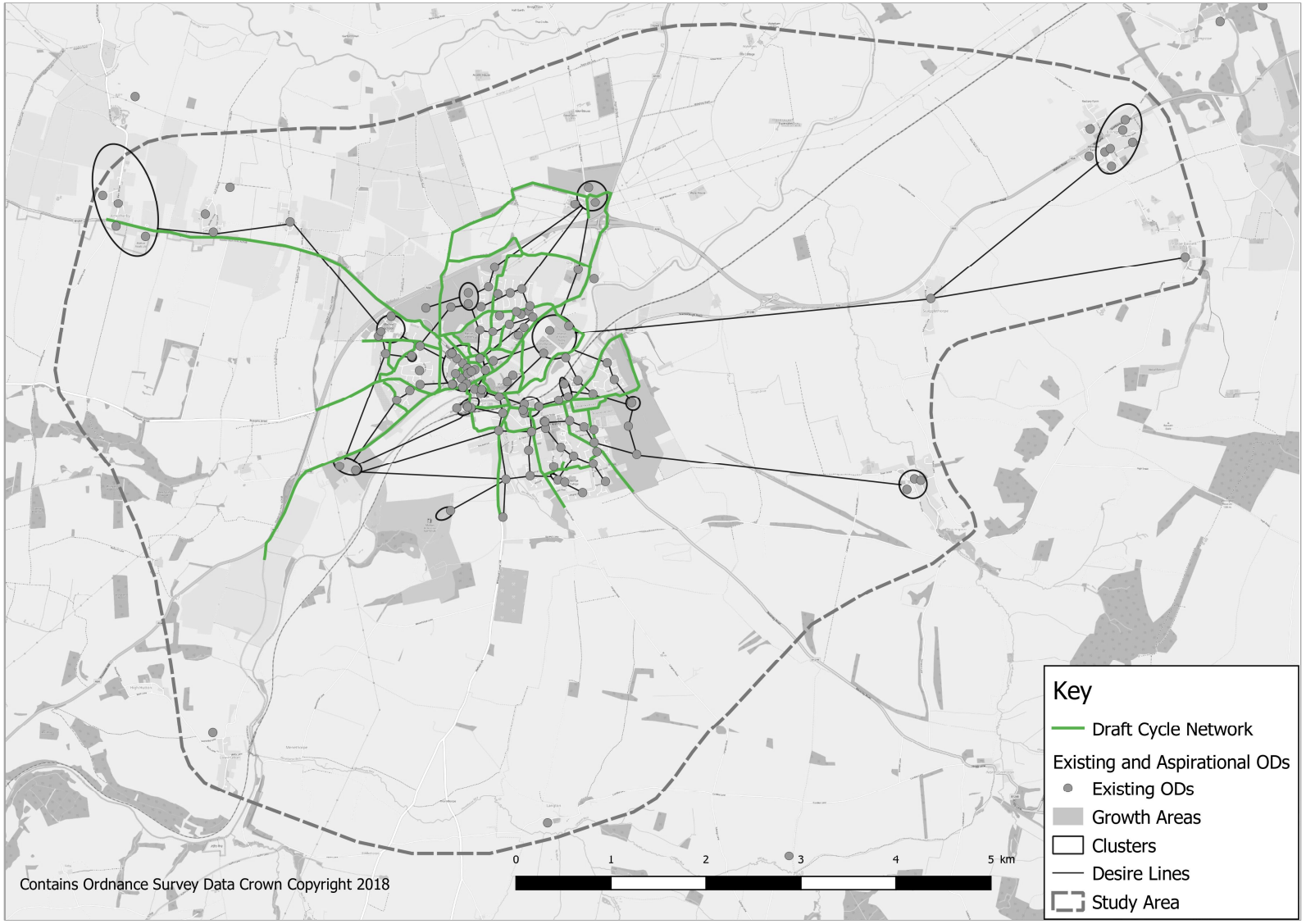
Figure 4-3 – Malton and Norton: Schematic Connections



4.8 STEP 6 - IDENTIFY ROUTES SERVING THE SCHEMATIC NETWORK

4.8.1. Potential route alignments were then plotted, following the schematic connections identified in Step 5 as closely as possible. The routes selected consider existing roads, paths and structures but do not consider current constraints, such as carriageway width or traffic management restrictions such as one-way orders**.** Figure 4-4 below illustrates this process, displaying both clusters / desire lines in addition to the routes selected to best represent the network.

Figure 4-4 – Malton & Norton: Draft Cycle Network



4.9 STEP 7 - IDENTIFY A ROUTE HIERARCHY

4.9.1. From reviewing best practice and through knowledge and experience of established cycle networks it was recognised that a cycle network hierarchy would 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 accordance with the criteria presented in Table 4-1. This Network Hierarchy has been applied across the NYCC LCWIPs to ensure a consistent approach.

Table 4-1 – Draft Network Hierarchy

Network Element	Characteristics
Primary	• High number of cycle users; • Creates arterial routes that support a wider network; • Links large residential areas to main clusters such as town centre locations; • Through, internal, and inbound-outbound cycle traffic; • Direct, following the shortest possible route; • Low gradients (where possible).
Secondary	• Lower number of cycle users; • Caters for shorter local trips; • Increases density of network; • Ensure local access to origins and destinations from the primary network; • Provides quieter routes for less confident cycle users (while primary network is being developed).
Town Centre Cores	• High levels of permeability and priority for cycle users and pedestrians.

4.9.2. This hierarchy has been applied to the identified cycle corridors, respective to their location in the study area and perceived role in the network, with discussion provided on the following pages. The full draft CNM is presented Step 8.

4.9.3. A core network of primary routes underpins the proposed network, taking into account the main destination clusters, origin points, and any isolated major destinations. The primary routes are supported by a network of secondary and local links, which are discussed below in relation to each study area.

Malton and Norton

4.9.4. Figure 4-5 presents the draft Cycle Network Map for Malton and Norton. The key corridors identified are summarised as:

PRIMARY CYCLING ROUTES

Malton

- A key east to west route extending from York Road Industrial Estate to Old Malton, with secondary extensions to the A64 and FEZ. This route will provide connectivity to origin points along York Road and Old Malton Road, with the town centre becoming a key confluence between the various proposed routes;
- A central route along Wentworth Street as an alternative parallel route to the highly trafficked and physically constrained Newbiggin, connecting Showfield Lane and new development with the town centre and onward connections;
- A radial route along The Mount and Pasture Lane/Highfield Road, bypassing the town centre and providing additional connectivity for the residential areas in Malton.

Norton

- A vital link along Castlegate, as the only existing contiguous route between the two towns. This route extends along Church Street and Scarborough Road, connecting to a multitude of uses, including Commercial Street and Karro Food Group. The route connects to three north-south routes through the main urban area of Norton;
- Three primary links extending north to south from Church Street:

  The most westerly route extends southwards down Welham Road serving predominantly residential areas;
  The central route via Langton Road will provide an important connection to Norton College and supporting east-west links through residential areas; and
  The south-eastern alignment on Mill Street/Beverley Road extends through residential areas, linking to an indicative route corridor which could provide connections between southern OD points and Westfield Way industrial estate.

SECONDARY CYCLING ROUTES

4.9.5. The Cycling Network Map includes several shorter distance Secondary routes that complement the longer distance Primary routes listed above. Despite the reduced length, these routes link key origins and destinations and add vital connectivity and accessibility to the Primary network.

4.9.6. These routes include:

Malton

- Railway St / Norton Road – this link provides a quieter parallel route to Castlegate via Malton Railway Station;
- Church Hill – this route provides a quieter route that cuts out Butcher Corner for some desire lines;
- Sheepfoot Hill to Old Malton Road via Orchard Fields – this route extends through Orchard field and could be a quieter alternative to Castlegate / Butcher Corner along a greenway, while also providing connections to leisure destinations such as the rugby and cricket clubs;

- Rainbow Lane to Westgate Road/Lowfield Road – This route connects residential areas to the north east of the town to Old Malton and the Primary network along a quieter alternative to Highfield Road, and could be designed as a greenway route;
- Outgang Road – this extends from the Lowfield Road link and travels directly between both new housing developments onto Pasture Lane. Enhancements to this route could increase accessibility between the two;
- Castle Howard to York Road Link – this connection supports trips from Malton School and the Hospital to Primary network; and
- B1257 (A64 overbridge) to Swinton– a secondary corridor extending via Broughton Road/ Malton Road/High Street, and providing onward connectivity between Malton and Broughton, Swinton and Amotherby.

Norton

- A number of secondary routes forming orbital connections between the three radial routes described above; and
- Mill Street to Eastfield Ave – a small but important connection to Eastfield Rd industrial estate which could also support future nearby developments.

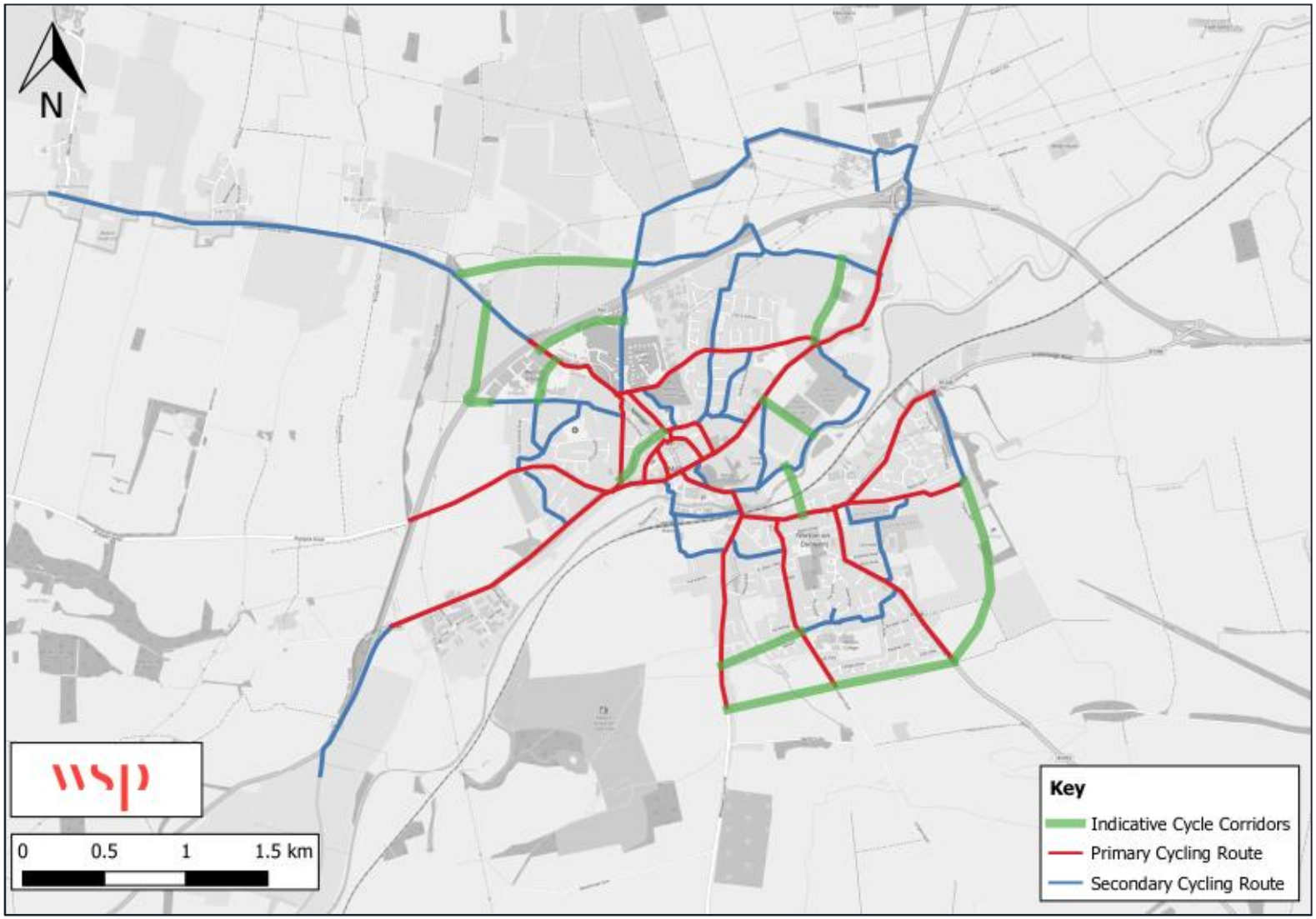
SUPPORTING NETWORK

4.9.7. A number of indicative route corridors have also been identified where there is potential desire for travel with no current provision; these include the following routes:

- Cricket Club to Old Malton Road;
- Alternative Westgate Lane to Highfield Road Route;
- Lowfield Road to Broughton Road;
- Broughton Road to Middlecave Road;
- Malton School through-route;
- Northern Broughton Road to Outgang Road Route;
- Newbiggin to Yorkersgate link;
- The Chase to Welham Road; and
- Eden House Road to Lowfield Road

4.9.8. These routes could contribute to permeability and accessibility to the network, enhancing the identified routes and ensuring the network accommodates for the final stage of the journey.

Figure 4-5 – Draft Cycle Network Map: Malton and Norton



4.10 STEP 8 - PRODUCE DRAFT CYCLE NETWORK

4.10.1. Step 8 is the culmination of the previous steps, bring all the data together to formalise a draft network ready for Step 9 - validation and review.

4.11 STEP 9 - VALIDATION AND REVIEW

4.11.1. The validation and review of the draft networks was informed by the baseline evidence, site visits, local knowledge, stakeholder engagement and a review of connectivity between key origins and destinations. The PCT outputs (Government Target scenario) were also used to validate the network in terms of existing and future demand.

4.12 STEP 10 - PRODUCE FINAL NETWORK

4.12.1. The final step is the production of the final Cycling Network Map, which is presented in Chapter 7 of the report.

5

WALKING NETWORK

5 WALKING NETWORK

5.1 OVERVIEW

5.1.1. One of the key outputs of Phase 1 of the M&N LCWIP process is the determination of the Walking Network Map (WNM), which sets out a cohesive potential network for walking. This network is then considered against the baseline evidence in order to identify preferred routes for further development.

5.1.2. The development of the walking network follows the LCWIP Technical Guidance for Local Authorities document (DfT, 2017), and is founded on the principle of connecting people to places, ensuring that the proposed networks correspond to both the routes people currently take and those people are likely to want to take, both now and in the future. This method also helps to identify the long-term vision for the networks while ensuring investment is focused on the key routes and the needs of pedestrians. The resulting outputs are networks that are evidence-based and facilitate strategic development.

5.2 METHODOLOGY

5.2.1. The development of the walking network map can be divided up into an 8-step process. These are as follows:

- Step 1 – Define and Understand the Study Area
- Step 2 – Mapping walking trip generators;
- Step 3 – Identifying core walking zones;
- Step 4 – Identifying core walking routes;
- Step 5 – Consider a route hierarchy;
- Step 6 – Produce a draft walking network;
- Step 7 – Validation and review;
- Step 8 – Produce final network map

5.2.2. The following sub-sections describe the process undertaken in developing the WNM for the Malton & Norton LCWIP study areas.

5.3 STEP 1 - DEFINING THE STUDY AREA

5.3.1. The first step in developing the network map is to define the extents of the study area.

5.3.2. The study area used in the determination of the Walking Network Map was agreed to focus on the same boundary as the Cycling Network Map, as shown in Figure 1-1.

5.4 STEP 2 - MAPPING WALKING TRIP GENERATORS

5.4.1. The key origin and destination data used in the derivation of cycling origin and destination points in Section 4.3.5 were again utilised to understand the key ODs in relation to walking. It is considered that, while cycling is likely to enable longer distance journeys and connect OD pairs further afield, the trips generators and attractors remain the same.

5.4.2. These ODs included the following key origin points:

- Residential areas – Lower Super Output Area (LSOA) population-weighted centroids were used as proxy locations for residential areas; and

- 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.

5.4.3. Key destinations included:

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

5.4.4. Figure 2-18 shows these key O/Ds in relation to the Malton & Norton LCWIP study area.

5.4.5. Future O/Ds are also considered in the development of the WNM, with the same assumptions applied in the development of both the CNM and the WNM. Section 4.5 details the process of identifying future O/Ds, while Figure 2-19 illustrates the location of these sites in relation to the study area.

5.5 STEP 3 - IDENTIFYING CORE WALKING ZONES

5.5.1. Following the identification of walking trip generators Core Walking Zones (CWZs) can be defined.

5.5.2. CWZs are areas that consist of a number of walking trip O/Ds located in close proximity (e.g. town centre, business park, university campus, etc). These CWZs are most likely to attract trips for utility / commuting purposes.

5.5.3. While CWZs may include points of interest (POIs), these locations are considered to predominantly attract trips for leisure and recreational purposes—although it is recognised that these destinations are also likely to accommodate some measure of employment.

5.5.4. The CWZs identified within the LCWIP study areas are listed in Table 5-1.

Table 5-1 – Core Walking Zones

Core Walking Zone	Area	Purpose
Market Place	Malton Town Centre	Commuting/Utilities/Retail
York Road Industrial Estate	Malton West	Commuting/Utilities/Retail
Town Street / Westgate	Old Malton	Commuting/Utilities
Karro Food Group	Norton East	Commuting/Utilities
Norton College	Norton South	Commuting/Utilities

5.5.5. The Malton & Norton LCWIP study area is relatively compact, with the majority of the study area within a maximum desirable walking distance (approximately 2km). It is considered reasonable that the entire study area could be accessed on foot from any point, and that therefore only a single CWZ would be necessary, highlighting the importance of maximising walking opportunities across the whole area.

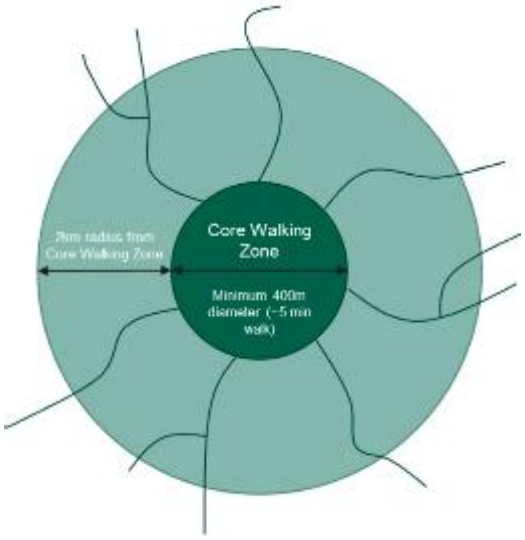
5.5.6. However, a number of CWZs have also been identified at strategic peripheral points on the edges of the study area, highlighting where the likelihood of journeys on foot may decrease with increasing

distance from each CWZ, and also identifying where walking distances overlap, with these locations likely to see higher volumes of pedestrian use.

5.5.7. As per LCWIP guidance, an approximate five-minute walking distance of 400m can be used as a guide to the minimum extents of CWZs. Each identified CWZ has therefore been plotted using a proxy central point, with a GIS-based isochrone tool and the local highway network used to map the CWZ five-minute extents.

5.6 STEP 4 - IDENTIFYING KEY WALKING ROUTES

5.6.1. Following the identification of the CWZs, key walking routes to each zone should then be identified by mapping a 2km isochrone from the central point, considered to be the maximum desirable walking distance from the CWZs[11]. The proportion of journeys made on foot typically decreases significantly beyond this distance.



5.6.2. While each 2km isochrone allows the identification of key walking routes in relation to each individual CWZ, the analysis of overlapping isochrones shows where key walking routes are likely to serve multiple CWZs, and therefore potentially have higher levels of demand.

5.6.3. A GIS-based isochrone tool was used to identify potential walking routes of 2km (approximately a 25-minute journey) for each of the CWZs listed in Step 2.

5.6.4. It should be recognised that there are some limitations to this method; centroids are used as proxies for each OD, and pedestrian movement is unconstrained by infrastructure provision in the same way as vehicles (although the propensity to travel on foot can be heavily supressed by poor quality infrastructure). The isochrone analysis is therefore used to identify movement corridors, within which a combination of stakeholder engagement and site visits are used to identify specific routes for improvement.

5.6.5. Figure 5-1 shows the CWZs and respective 2km isochrones in relation to the M&N LCWIP study area.

5.6.6. The CWZs are highlighted in red (representing a 400m or 5 min walk), whilst all walking routes accessible within a 2km radius (approx. 25 min walk) are highlighted in blue.

[11] Providing for Journeys on Foot, CIHT, 2000

Figure 5-1 - Identified Core Walking Zones

5.7 STEP 5 - CONSIDER A ROUTE HIERARCHY

5.7.1. Following the identification of key walking routes for each CWZ, each has been prioritised using the definitions provided in the RLG Footway Maintenance Classification[12] as replicated in Table 5-2. Whilst definitions can be tailored to local circumstances, the DfT's LCWIP technical guidance recommends that a defined classification of footways is used as a basis for establishing where to focus improvements to walking infrastructure.

5.7.2. Within this hierarchy the type of infrastructure provided would vary both depending on the link's position in the network hierarchy, and on the type of link, where it connects to, and how it will be used.

Table 5-2 – Footway Hierarchy in 'Well-Maintained Highways'

Category	Name	Description
1(a)	Prestige Walking Zones	Very busy areas of towns and cities, with high public space and street scene contribution.
1	Primary Walking Routes	Busy urban shopping and business areas, and main pedestrian routes
2	Secondary Walking Routes	Medium usage routes through local areas feeding into primary routes, local shopping centres, etc.
3	Link Footways	Linking local access footways through urban areas and busy rural footways.
4	Local Access Footways	Footways associated with low usage, short estate roads to the main roads and cul-de-sacs.

5.7.3. Prestige, Primary, Secondary and Link Footways have been identified and mapped as these are expected to have the highest demand for walking trips and are the busiest local routes, based on the definitions above. It is therefore considered that these routes would be the focus for improvements.

5.7.4. It should be noted that that these assignments should be considered indicative in the initial stages, and alternative or complementary routes within the corridors may come forward through stakeholder engagement, detailed assessment and design.

5.7.5. Further discussion on the identification of routes for each footway hierarchy category are provided below, respective to their location in the study area.

[12] Well-maintained Highways: Code of Practice for Highway Management 2005 Edition, updated September 2013, Roads Liaison Group- London: TSO

5.8 STEP 6 - PRODUCE A DRAFT WALKING NETWORK

5.8.1. Following the methodology described in Steps 1-5, a draft Walking Network Map has been developed for each study area, with links categorised based on the network hierarchy established in Step 5.

5.8.2. Figure 5-2 presents the draft Walking Network Map for Malton & Norton. The key corridors identified are summarised as:

PRESTIGE / PRIMARY WALKING ROUTES

Malton

- The town centre prestige connections encompass the central CWZ; this includes Market Street, Market Place, St Michael Street, Saville Street, Yorkersgate, and Newbiggin. This is a key route for both tourists and the local population;
- An axial east-to-west route from York Road Industrial Estate via Butchers Corner to Old Maltongate. This route would facilitate connectivity within the central town centre CWZ. There are a number of opportunities to connect to Secondary Network and Prestige Networks within the main urban centre of Malton;
- A Railway Station prestige route has been identified to improve accessibility to Malton station on foot. This route could also direct tourists and leisure users into the town centre along the Railway Street primary route link across the River Derwent;
- The Norton Road connection is also part of the key walking route between Norton and Malton Railway Station, providing an eastwards connection into Norton including onwards links to local amenities and services, residential areas and St Nicholas Street Car Park; and
- The Newbiggin route links Malton School and the new residential developments in the north west of Malton.

Norton

- The Castlegate to Parliament Street route via Commercial Street connects employment areas to the west of Norton with Norton and Malton Town Centres. This route also serves residential areas, key services and local amenities as well as providing links to primary routes in Malton and secondary routes to the South of Norton.

SECONDARY WALKING ROUTES

Malton

- Castle Howard Road – This route connects residential areas to the primary walking route on York Road and into the town centre area;
- Middlecave Road – This route serves Malton School and residential areas in the west of Malton, feeding into the main town centre area, and also has the potential to provide connections into Malton Hospital;
- The Mount – This route connects residential areas to the primary roads of Horsemarket Road and Newbiggin;
- Princess Road/East Mount – this provides a quieter easterly route from the town centre area to Old Maltongate and Old Malton Road;
- Pasture Lane/Highfield Road – this walking route accommodates mainly residential areas including the two new developments;

- Princess Road to Westgate Lane – this south-north route extends from the town centre area via Princes Road, Peasey Hills Road and Rainbow Lane then stretches to Westgate Lane into Old Malton;
- Sheepfoot Hill /Orchard Fields to Rugby Cricket Club – a quieter country route away from the main road, the path passes through Orchard Fields, through the improved footways along to Malton and Norton Rugby Ground and feeding north into Old Malton Road; and
- Edenhouse Road – this route supports the development at Eden Business Park, it may also be used as a tourist route into Eden Camp.

Norton

- Welham Road – southern route feeding into key primary route on Castlegate from residential areas;
- Langton Road – accommodate those wishing to travel to Norton College at the south of the town, it will also feed into link roads through residential areas;
- Beverley Road – this route supports predominately residential areas and would also feed links at Norton Grove Industrial Estate and Norton College;
- Wood Street/Mill Street – this route is a short east-west connection between Langton Road and Beverley Road; and
- Scarborough Road – Westfield Way – Hudgen Way – this route would provide better pedestrian access into Norton Grove Industrial Estate, and it also has the potential to support a new crossing on the old railway bridge.

LINK FOOTWAYS

5.8.3. The potential routes identified through the corridors above present a dense network of Secondary Walking Routes. A number of other complementary Link Footways could increase this density, including:

Malton

- Link between Castle Howard Road and York Road;
- Maiden Greve/Hospital Road;
- Middlecave Drive;
- Crab tree Drive/Acre Way;
- Outgang Road/Lowfield Road/Borough Mere Lane/Freehold Lane;
- Highfield Road to Westgate Lane Link;
- Cherry Ave/Hawthorne Ave;
- Milton Ave to Bridge Road and Old Malton Road Links;
- Showfield Lane;
- Wentworth Street;
- Old Maltongate Road to Sheepfoot Hill; and
- Old Maltongate Road through Orchard Fields.

Norton

- Park Road;
- St Nicholas Street;
- St Peter's Street/Lakeside Way/Springfield Garth Links;
- Hambleton Road/Langley Drive;

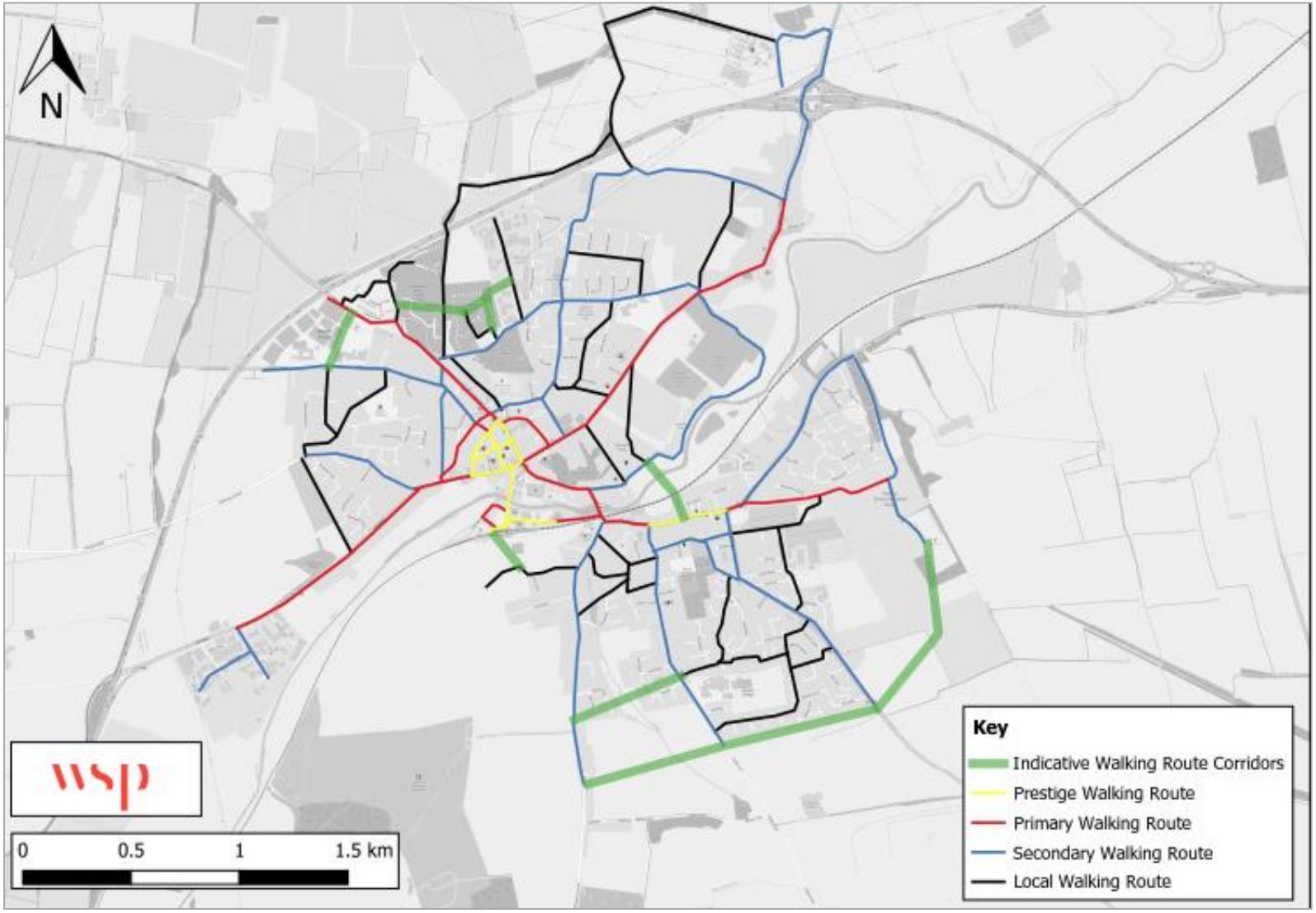
- The Chase/The Grove/Kingston Drive Links;
- Burdale Close to Beverley Road; and
- Mill Street and Eastfield Avenue

SUPPORTING NETWORK

5.8.4. Although not directly along any of the identified CWZ corridors, the following routes are also identified as supporting the walking network in the area and providing important connections for local trips to key destinations:

- Malton School through-route;
- Connections between the two new housing developments onto Outgang Lane and supporting connections into Showfield Lane Industrial Estate;
- Southern access into Malton Railway Station connecting onto Park Road;
- Southern link connecting Welham Road, Langton Road, Beverley Road to the new housing and employment developments; and
- New river crossing at the old former railway bridge.

Figure 5-2 – Draft Walking Route Hierarchy



5.9 STEP 7 - VALIDATION AND REVIEW

5.9.1. The validation and review of the draft networks was informed by the baseline evidence, site visits, local knowledge, stakeholder engagement and a review of connectivity between key origins and destinations. The emerging WNM should also reviewed against the existing Malton & Norton Footway Maintenance log to assess the prioritisation of links, and suggest potential amendments where required.

5.10 STEP 8 - PRODUCE FINAL NETWORK

5.10.1. The final step is the production of the final Walking Network Map, which is presented in Chapter 7 of Report.

6

STAKEHOLDER ENGAGEMENT

6 STAKEHOLDER ENGAGEMENT

6.1 OVERVIEW

6.1.1. The DfT's LCWIP guidance highlights the importance of stakeholder engagement throughout the development of the LCWIP.

6.1.2. Initial stakeholder engagement for the Malton & Norton LCWIP took place during the baseline review stage, whereby the project team engaged with key stakeholders, such as NYCC and RDC officers, to gain a detailed insight in terms of challenges and opportunities for developing the respective networks within the study area.

6.1.3. Following the development of the draft cycling and walking networks, an external workshop was held at RDC offices on 5th July 2019 with the following objectives:

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

6.1.4. The workshop format provided an opportunity for stakeholders to review and validate the draft networks developed by the project team, aiding the refinement of the networks through contribution of local knowledge and expertise.

6.1.5. The attendees to the external workshop included staff from NYCC and RDC who were involved during the baseline engagement, and widened to include further stakeholders that had not previously been engaged but were identified by NYCC and RDC as being important to the development and delivery of the cycle and walking network.

6.1.6. The stakeholders were split into two groups to participate in exercises and discussions around the draft networks and priorities. The workshop itself was split into two sections, with the first focusing on cycle network development and the second focussing on walking network development.

6.1.7. A range of internal and external stakeholders were invited to the workshop, as listed below.

Table 6-1 – M&N LCWIP Workshop Attendees

Name	Role
Phil Freestone	WSP
David Stannard	WSP
Howard Kinneavy	WSP
Tim Coyne	North Yorkshire County Council
Howard Wallis	Ryedale District Council
Mark Brayshaw	Malton Amenity CIC
Matthew Lishman	Ryedale District Council
Gary Housden	Head of Planning, Ryedale District Council
Ray King	Councillor, Ryedale
Liz Parker	Norton CP School
Mandy Carpenter	Malton CP School
Charlie French	TransPennine Express
Janice Lane	Malton Secondary School

Name	Role
Caron Twamley	NYCC Road Safety & Travel Awareness.

6.2 CYCLE NETWORK VALIDATION AND REVIEW

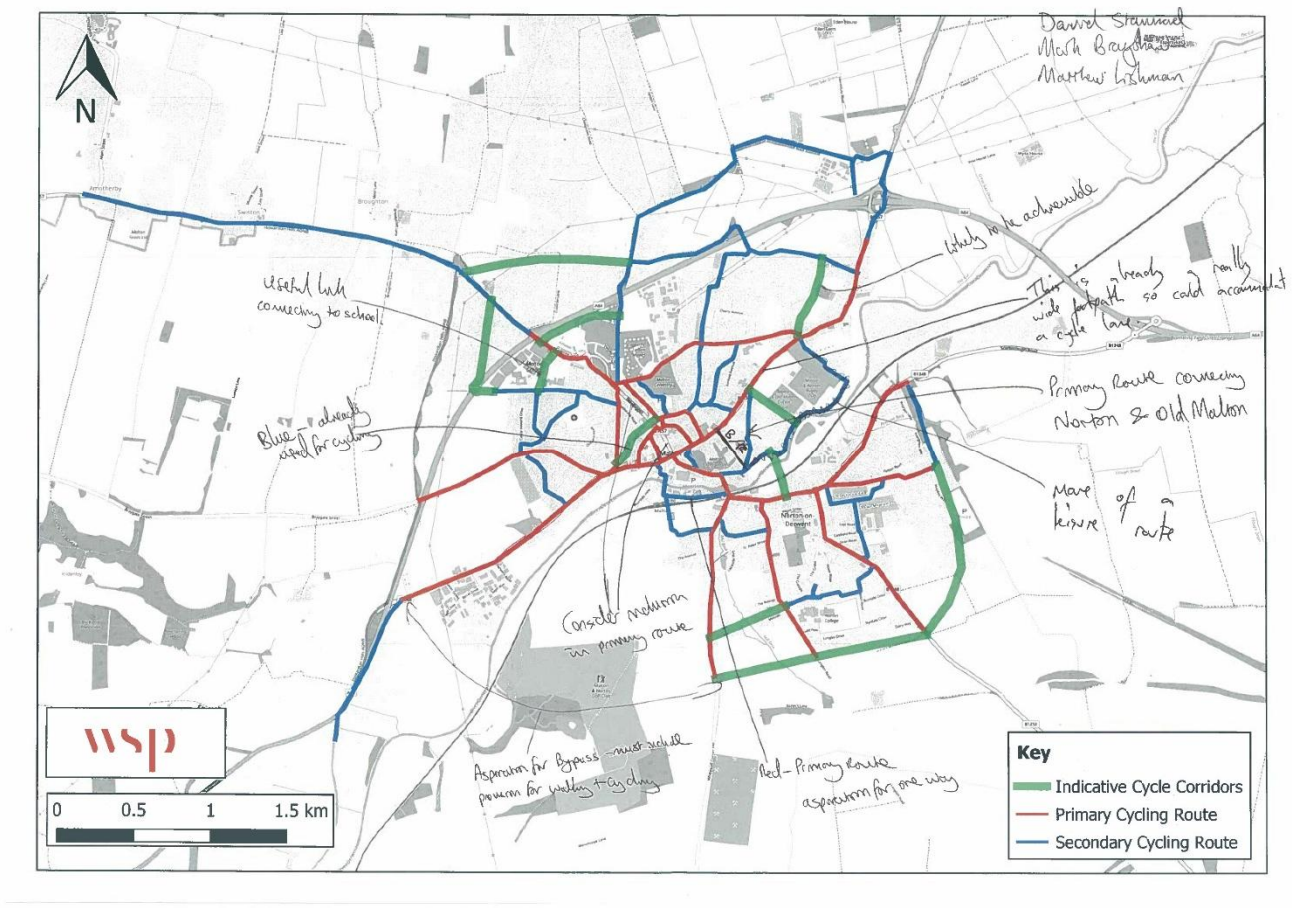
6.2.1. One of the primary aims of the external workshop was to review the work WSP have already undertaken in terms of draft network development. To do this, the first group activity was a validation exercise of the draft cycle network.

NETWORK COMMENTS & AMENDMENTS

6.2.2. When validating the network, the stakeholders were asked to record whether they agreed with the proposed draft Cycling Network Map (CNM) or if they thought the draft cycle 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.

6.2.3. Figure 6-1 demonstrates the outputs from this exercise.

Figure 6-1 – Cycling Network Feedback



COMMENTS RECEIVED

6.2.4. Table 6-2 lists the comments that were received in relation to the draft cycling network. The table presents each comment, whether it was included in the final draft network plan, and the rationale behind this decision.

Table 6-2 – Draft Cycle Network Comments

Ref.	Comment	Include in Final Network plan	Rationale
CN1	Consider Newbiggin as a Primary route	Y	Potentially. Likelihood of improvements depends on possibility of increasing movements. Parallel route more feasible in short term. Preferred routing should be identified in Phase 2 during the Route Selection exercise.
CN2	The Cut should be considered more of a leisure orientated route	N/A	Agree. Likely less of a priority due to perceptions of safety.
CN3	Direct off-road link between fire station and RDC office should be considered a priority	N/A	Agree. Likely less of a priority than parallel on-road links. .
CN4	Old Malton Road footway could already be wide enough to accommodate cycle infrastructure and be a 'quick win'	N/A	Agree – but need to consider onward connections.
CN5	Off-road route to the north-west of Old Malton could be an achievable 'quick win'	N/A	Dependent on land ownership + cost. Pasture Lane, etc., is more desirable route.
CN6	Link between Horsemarket Road and Princess Road already exists and should be considered 'Secondary'	Y	Spital Street – agreed.
CN7	Link through Malton School field would be useful	No	Would enhance connectivity but unlikely to deliverable due to safeguarding issues. Potential alternative connection along parallel route (eastern boundary) but may encounter resistance from school and local residents.
CN8	Upgrade Malton Rd to Amotherby to Primary	N	Unlikely to meet criteria (use) for primary status. Not to be confused with prioritisation.
CN9	Add Newbiggin as Primary	Y	Unlikely to meet criteria (use) for primary status – parallel routes are more desirable and more practicable for improvements. Not to be confused with prioritisation. However, added to highlight long term strategic importance.
CN10	Add Wood Street	Y	Agreed. Parallel route to Commercial Street.
CN11	Change rail station crossing and Norton Road to 'Primary' instead of Castlegate	Y	Both links identified as Primary links due to the number of destination points both on the route and that they facilitate access to. Preferred routing should be identified in Phase 2 during the Route Selection exercise.
CN12	Add new link as alternative to railway station route – Bark Knotts Terrace to Asda Car Park	N	Funding and land take are significant issues – current aspirational route via rail station is more feasible as ties in with potential new platform.

CYCLE NETWORK PRIORITIES

6.2.5. The workshop also included a prioritisation exercise; the attendees were asked to consider which links or junctions they felt should be prioritised in the short-term (2–3 years) if funding should become available. Attendees were also asked to consider the wider strategic priorities for the network, which may influence the identification of key links, junctions, or wider corridors for development.

6.2.6. Stakeholders were asked to draw and annotate on the network plans to show which areas they considered should be given priority. Verbal comments were also captured by the group facilitators.

6.2.7. The comments received on the short-term priorities are listed below. These have been grouped into two categories: Spatial and Thematic. Spatial comments relate to specific locations for intervention, whilst Thematic comments relate to wider strategic ideas / concepts / strategies.

6.2.8. Table 6-3 indicates whether the comments were taken forward for consideration as a priority and if not, the rationale for why they were not included.

Table 6-3 – Cycle Network Priority Comments

Ref	Comment	Thematic / Spatial	Notes
CP1	Movements between Malton and Norton (i.e. bridge)	Thematic	-
CP2	Ensure development sites are well connected from the design stage	Thematic	-
CP3	Consider connections to and collecting contributions towards Malton – Pickering route	Thematic	-
CP4	Connection through Orchard Fields	Spatial	-
CP5	Outgang Road to Food Enterprise Zone	Spatial	This section to be upgraded as part of Malton – Pickering Cycle Route – due to be implemented in 2020
CP6	Horsemarket road	Spatial	-
CP7	The Mount	Spatial	-
CP8	Scarborough Road to Malton town centre	Spatial	-
CP9	Langton Road	Spatial	-
CP10	Railway crossing between Malton and Norton	Thematic	(note second comment for this)
CP11	Malton Secondary School to Broughton Manor	Spatial	-
CP12	Movements around Food Enterprise Zone (FEZ)	Thematic	(note second comment for this)
CP13	Route through new housing site in Norton	Thematic	(note second comment for this – although this is a specific site)
CP14	Direct line through Church Street, Castlegate & Newbiggin	Spatial	-
CP15	Avoid difficult routes through town centre	Thematic	-
CP16	Outgang Road to FEZ	Spatial	This section to be upgraded as part of Malton – Pickering Cycle Route – due to be implemented in 2020
CP17	Prioritise new crossing through rail station	Thematic	(not third comment to prioritise a new crossing point)
CP18	York Rd between Industrial Park and Rockingham Close	Spatial	Existing shared use path along north side of York Road ends just after 30mph zone starts – however, traffic speeds are not conducive to mixed use and visibility is restricted (shadowing from overhanging trees)

Ref	Comment	Thematic / Spatial	Notes
CP19	Improve walking / cycling across bypass roundabout to FEZ	Spatial	(note fourth broad comment for this)
CP20	Better provision between the town centre and York Road Industrial Estate	Spatial	(note second comment for this)
CP21	Railway crossing	Spatial	-
CP22	Butcher Corner	Spatial	-
CP23	Castlegate	Spatial	-
CP24	Highfield Road	Spatial	-
CP25	Langton Road	Spatial	-
CP26	Grove Street	Spatial	-
CP27	York Road	Spatial	(note third comment for this)
CP28	Butcher's corner	Spatial	-
CP29	Level crossing	Spatial	-
CP30	Castlegate	Spatial	-
CP31	Langton Road	Spatial	-
CP32	Connections to schools	Thematic	-
CP33	York road	Spatial	-
CP34	Pasture Lane	Spatial	-
CP35	Highfield Road	Spatial	-

EMERGING CYCLING PRIORITIES

6.2.9. The outputs of the exercise indicated a wide variety of spatial and thematic priorities across the urban area, including interventions on the existing highway network, upgrades to and new off-road routes, and within aspirational development sites. The following broad emerging priorities have been identified:

Table 6-4 – Emerging Cycling Priorities

Emerging Priority	Description
Improved crossing points between Malton & Norton	This was raised a number of times and is a clear immediate priority. These improvements could include the existing pinch point from Butcher Corner to the level crossing along Castlegate as the primary route, or could be focussed on the parallel routes possible via the rail station or the Cut – these routes could also complement improvements to the primary route.
Improved connections to the FEZ	Ensuring high quality cycling connections is a clear priority based on feedback, including potential improvements to the provision at the A64 grade separated roundabout.
Pasture Lane / Highfield Road	Key orbital route providing links between new and existing housing sites, Showfield Lane Industrial Estate and key schools.
York Road	Comments received highlighting the need to provide improved connections from wider town centre / rail station to the key employment site of York Road Industrial Estate
Langton Road	Key radial route with multi-functional purpose linking residential areas, schools and new developments with Norton local centre. Potential to support orbital connections between the three Norton radial routes.

6.3 WALKING NETWORK VALIDATION AND REVIEW

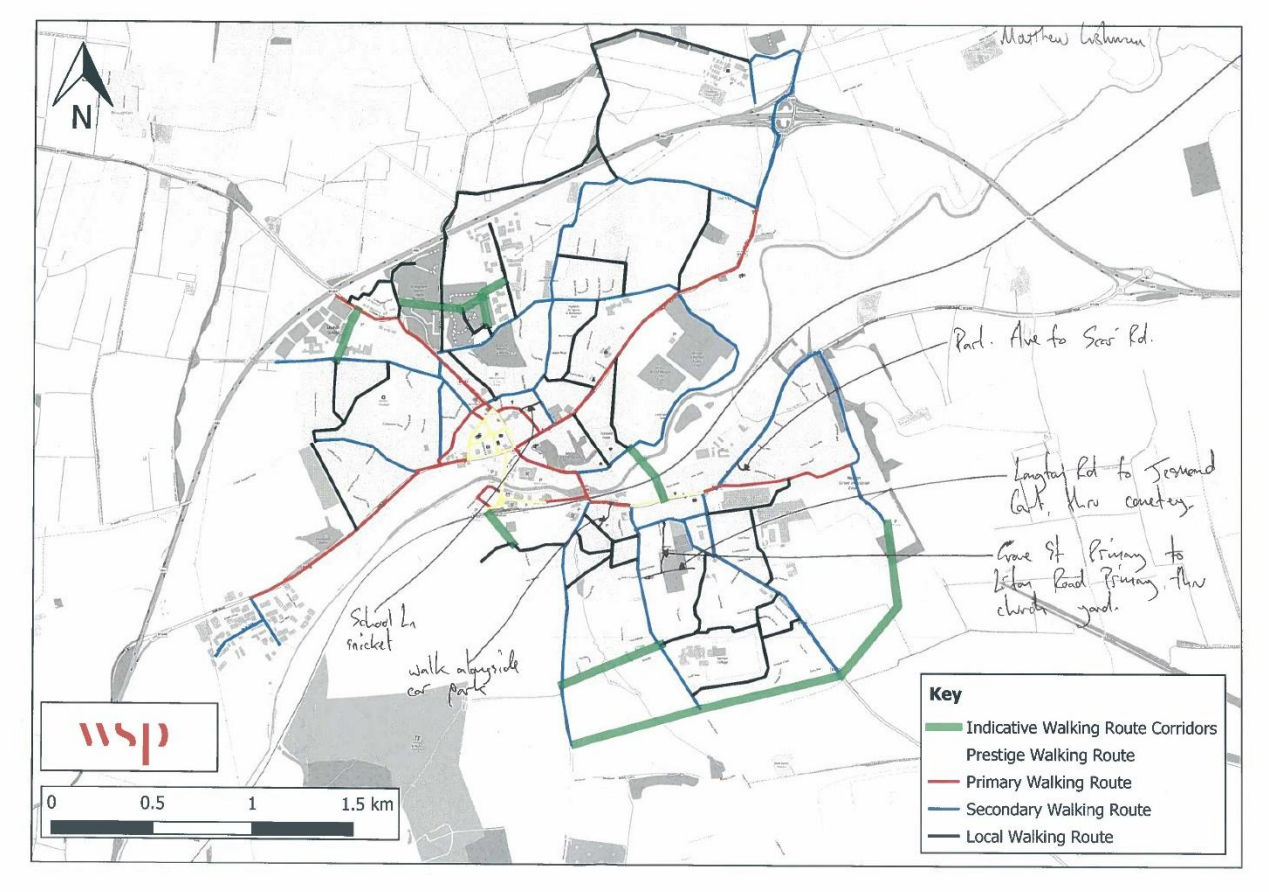
6.3.1. Part 2 of the workshop followed the same format as the first session, but focussed on reviewing the network development process in regards to walking. Again, the first group activity was a validation exercise of the draft walking network.

NETWORK COMMENTS AND AMENDMENTS

6.3.2. Stakeholders were then asked to review the draft Walking Network Map (WNM) and record whether they agree with the proposals or if they suggested any amendments.

6.3.3. Figure 6-2 illustrates the outputs from this exercise.

Figure 6-2 – Walking Network Feedback



COMMENTS RECEIVED

6.3.4. Table 6-5 lists the comments that were received in relation to the draft WNM. The table presents each comment, whether it was included in the final draft network plan, and the rationale behind this decision.

Table 6-5 – Draft Walking Network Comments

Ref	Comment	Include in Final Network Plan	Rationale
WN1	Add School Lane snicket	Y	Agreed.
WN2	Add walking route through St Nicholas Street Car Park	N	Difficult to actively promote as a walking route.
WN3	Add Langton Rd to Jesmond Court via cemetery	N	Access via cemetery may not be permanently open.
WN4	Add Grove St to Langton Road via the cemetery	N	Off road route is less desirable.
WN5	Add Parliament Ave to Scarborough Rd snicket	Y	Agreed.
WN6	Change Princess Rd car park to Newbiggin route to 'Primary'	N	Unlikely to meet criteria (use) for primary status. Not to be confused with prioritisation
WN7	Change Yorkersgate to 'Prestige' up to junction with Horsemarket Rd	N	Unlikely to meet criteria (use) for prestige status. Not to be confused with prioritisation
WN8	Extend York Rd link further west to account for new employment site	N	Route appears to accommodate existing site.
WN9	Connect Malton and Norton 'Prestige' walking routes	N	Unlikely to meet criteria (use) for prestige status. Not to be confused with prioritisation
WN10	Connect the two 'Prestige' routes	N	Unlikely to meet criteria (use) for prestige status. Lower sense of 'place' in relation to 'movement'. Not to be confused with prioritisation.
WN11	Upgrade Pasture Lane to a 'Primary' route	N	Unlikely to meet criteria (use) for primary status. Not to be confused with prioritisation
WN12	Upgrade Town St to FEZ to 'Primary'	N	Unlikely to meet criteria (use) for primary status. Not to be confused with prioritisation
WN13	Add route to Old Malton Rd from FEZ avoiding roundabout	N	No apparent route at this location?
WN14	Add link to existing PROW on river behind bus station.	N	No real obvious benefit?
WN15	Route through Malton School grounds would present a safeguarding concern	N/A	Agreed.
WN16	Change Pasture Lane to 'Primary' Route	N	Unlikely to meet criteria (use) for primary status. Not to be confused with prioritisation.
WN17	Change Beverly Rd to 'Primary'	N	Unlikely to meet criteria (use) for primary status. Not to be confused with prioritisation.
WN18	Add snicket on South Parade, Norton as Secondary	Y	Agreed.

WALKING NETWORK PRIORITIES

6.3.5. As with the first session, attendees were asked to participate in a prioritisation exercise, considering which corridors, links or junctions they felt should be prioritised in the short-term (2–3 years) if funding should become available. Attendees were also asked to consider the wider strategic priorities for the walking network, which may influence the identification of key links, junctions, or corridors for development.

6.3.6. Stakeholders were asked to draw and annotate on the draft walking network plans to show which areas they considered should be given priority. Verbal comments were also captured by the group facilitators.

6.3.7. The comments received on the emerging priorities are listed below. Table 6-6 indicates whether the comments were taken forward for consideration as a priority and if not, the rationale for why they were not included.

Table 6-6 – Network Link Priority Comments

Ref	Comment	Spatial / Thematic	Notes
WP1	Spital St / Princess Rd junction improvements	Spatial	-
WP2	Old Malton Rd / Highfield Rd junction	Spatial	-
WP3	Crossing on Yorkersgate	Spatial	-
WP4	Pedestrian priority between bus and rail stations	Spatial	-
WP5	Level crossing	Spatial	-
WP6	Safe crossing between Wentworth St car park and town centre	Spatial	-
WP7	Crossing point between Yorkersgate and Horsemarket Rd	Spatial	-
WP8	Ensuring new development is well connected to the existing networks	Thematic	-
WP9	All school access points	Thematic	-
WP10	Pedestrian route from centre of Malton to Hospital	Spatial	-
WP11	County Bridge	Spatial	-
WP12	Malton School may have concerns over route through grounds, but considered an important links	Spatial	Note that safeguarding issues over public route through school grounds are likely insurmountable. Network map includes and indicative route that could take parallel alternatives.
WP13	Town St to FEZ	Spatial	-
WP14	Link Malton to Old Malton via The Cut	Spatial	-
WP15	Upgrade bridge and level crossing	Spatial	-
WP16	Improve York Rd to the west after Castle Howard Rd	Spatial	Note footway specifically ends at Seph Way, and could be extended to Seven Street
WP17	Link east Norton to East Malton via a new bridge connection	Thematic	-
WP18	Create a new link through railway station	Spatial	-
WP19	Improve walking / cycling across bypass roundabout to FEZ	Spatial	-
WP20	Improved crossing facilities on new Broughton Road roundabout	Spatial	-
WP21	Railway crossing	Spatial	-
WP22	Scarborough Road	Spatial	-
WP23	Highfield Road	Spatial	-

EMERGING WALKING PRIORITIES

6.3.8. Table 6-7 lists emerging priorities for further development based on outputs from the workshop:

Table 6-7 – Emerging Walking Network Priorities

Emerging Priority	Description
Improved crossing points between Malton & Norton	This was raised a number of times and is a clear immediate priority. These improvements could include the existing pinch point from Butcher Corner to the level crossing along Castlegate as the primary route, or could be focussed on the parallel routes possible via the rail station or the Cut – these routes could also complement improvements to the primary route.

6.4 SUMMARY

These emerging priorities will be discussed with NYCC & RDC alongside the evidence review and draft network plans to identify initial locations/corridors for further development as part of Phase 2 of the M&N LCWIP.

7

NETWORK PRIORITIES & RECOMMENDED NEXT STEPS

7 NETWORK PRIORITIES & RECOMMENDED NEXT STEPS

7.1 INTRODUCTION

7.1.1. The preceding sections of the report have detailed the development and refinement of the draft cycling and walking networks. This section of the report presents the final recommended Cycle and Walking Network Plans and initial priorities to take forward for further development in Phase 2 of the Malton & Norton LCWIP.

7.1.2. Consideration is also given to the types of intervention appropriate for each for each network in the context of the study area.

7.1.3. At this stage of the process these network plans are considered aspirational, and a blueprint for cohesive walking and cycling networks that could occur over the next 10 years (and beyond). In order to bring them forward, the phasing of the networks will require a coordinated approach to identify short, mid, and long-term priorities, and an understanding of complementary opportunities. This prioritisation is likely to need regular revaluation as different funding becomes available.

7.2 CYCLING AND WALKING NETWORK MAPS

The Cycling Network Map for the Malton & Norton LCWIP Study Area is presented in Figure 7-1, while a high-resolution version is presented in Appendix A**.**

7.2.1. The Walking Network Map for the Malton & Norton LCWIP Study Area is presented in Figure 7-2, and a high-resolution version is presented in Appendix A.

Figure 7-1 – Final Cycling Network Map

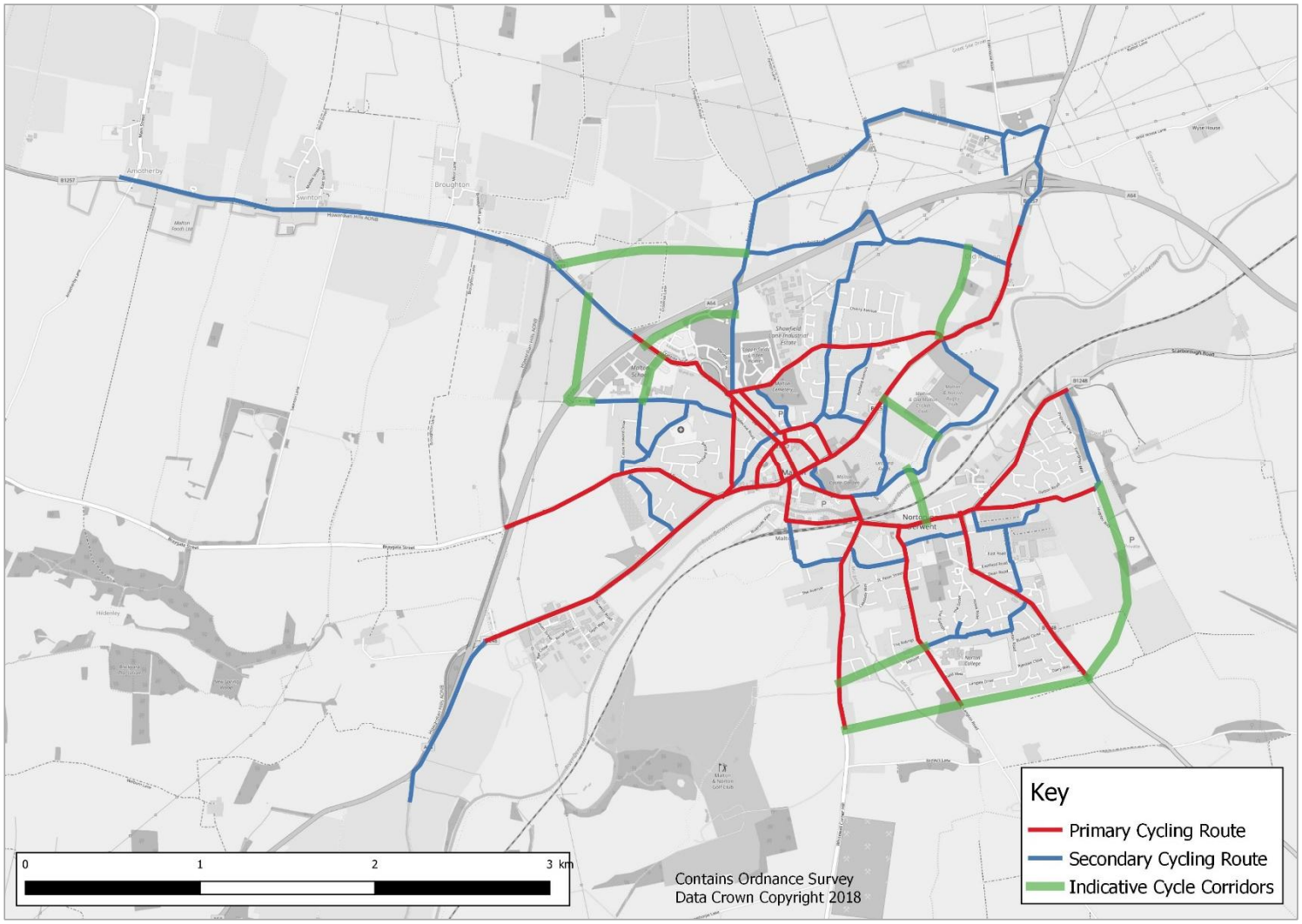
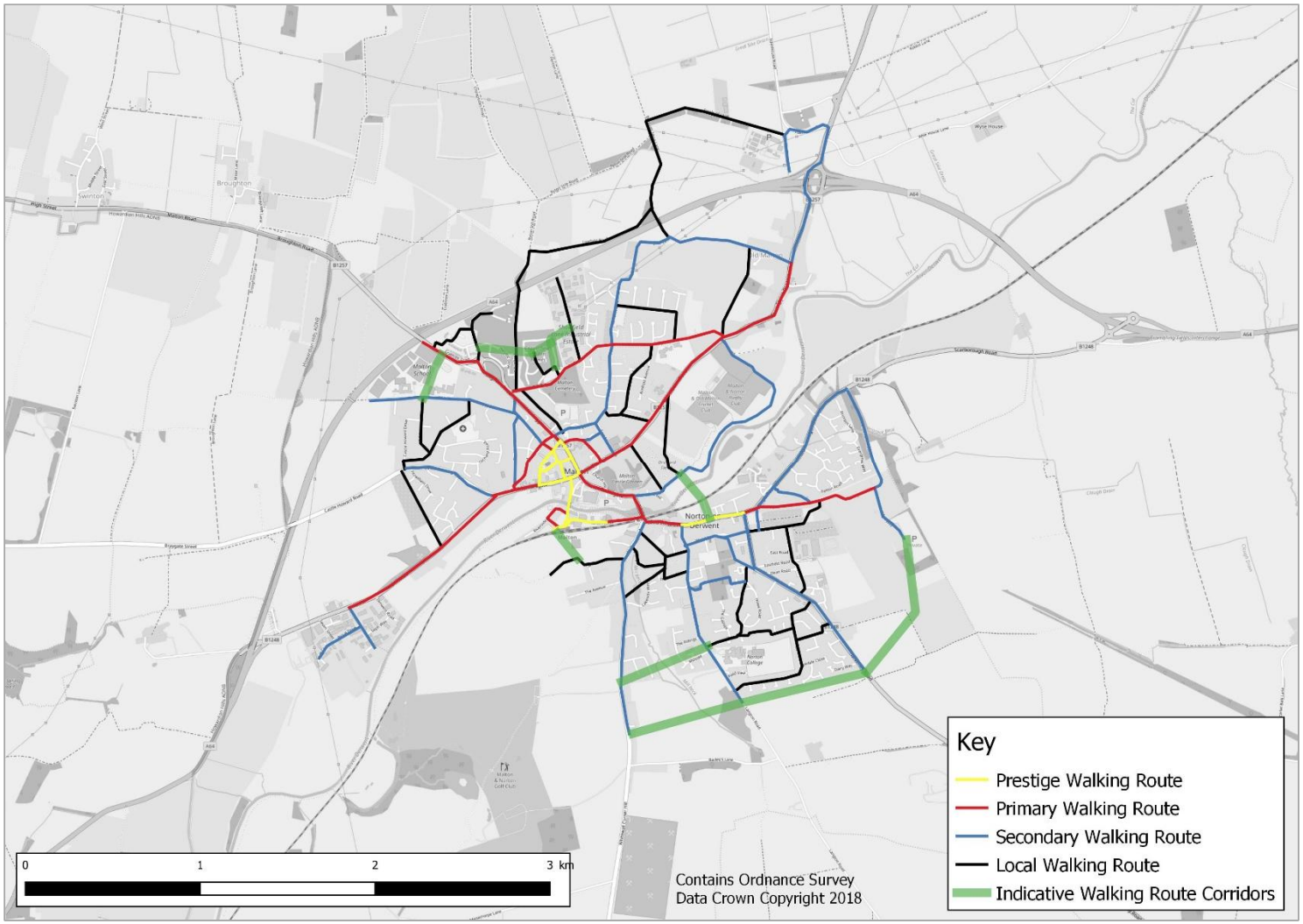


Figure 7-2 – Final Walking Network Map



7.3 NETWORK HIERARCHIES

7.3.1. Draft network hierarchies consistent with those utilised in other North Yorkshire LCWIPs were presented to stakeholders for consideration as part of the external workshop. It was agreed with stakeholders that these remain consistent with no need to amend to reflect local priorities. The final definitions are therefore shown in Table 7-1 and Table 7-2 below.

Table 7-1 – Final Network Hierarchy Definitions - Cycling

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 flow of cycle users; ¡ Creates arterial routes; ¡ Links large residential areas to main clusters such as town centre locations; ¡ Through, internal, and inbound-outbound traffic; ¡ Cater for existing non-cycle users; ¡ Cater for people aged '8-80' to be able to cycle safely; ¡ Direct, following the shortest possible route; ¡ Low gradients where possible.
Secondary	¡ Lower volumes of cycle users; ¡ Further increases density of network; ¡ Ensure local access to origins and destinations from the primary / secondary network; ¡ Provide quieter routes for less confident cycle users (while primary network is being developed).
Town Centre Cores	¡ High levels of permeability and priority for cycle users and pedestrians; ¡ High levels of cycle parking availability.

Table 7-2 – Final Network Hierarchy Definitions - Walking

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

7.4 DIFFERENT TYPES OF INTERVENTION

7.4.1. To achieve the cycling and walking networks based on the respective hierarchies detailed in the previous section, it is necessary to reference how different types of intervention will be required that take into account opportunities and constraints in different parts of the network.

7.4.2. For example, the primary networks cover a range of different types of highway and pedestrian environments from arterial A-roads to town streets. Reflecting this, it is clear that the type of intervention required to achieve the characteristics of what the primary network should be will vary.

7.4.3. The best practice review in Section 3 brought together a range of techniques from the UK and beyond for developing cycling and walking networks. This good practice has informed the types of intervention recommended.

7.4.4. Table 7-3 and Table 7-4 present various types of intervention that are based around the level of segregation of cycle and pedestrian users respectively from other modes, including both vehicle and non-vehicle traffic. The details of what could be included under each type of intervention is also presented for each.

Table 7-3 – Types of Intervention - Cycling

Ref	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 7-4 – Types of Intervention - Walking

Ref	Type of Intervention	Details
A	Full Pedestrianisation	Exclusion or temporal limit on other vehicle access. High quality pedestrian environment with significant place function.
B	Pedestrian enhanced streets / shared space / home zones	Reduction in formal traffic controls; Reduced general traffic speeds; Restricted interaction with other modes; Typically less differentiation between footway and carriageway.
C	Footway / footpath enhancements	Improved surfacing; Increased footway widths; Adequate crossing facilities proportionate to function of link; De-cluttering of route; Minimal gradients for duration of link; Direct routes; Dropped kerbs and tactile paving.
D	Shared use pedestrian / cycle routes	Improved at-level surface conditioning; Improved signage; Segregated or unsegregated; Potential widening of route.

7.4.5. Table 7-5 applies the type of interventions presented in Table 7-3 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 7-5 – Cycle 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	D	C, D	B, C, D	C, D	C, D	C, D	B, C, D	
Town Centre Cores	D	D	D	-	-	-	-	-

7.4.6. Table 7-6 below conducts the same exercise, but this time applying the walking interventions listed in Table 7-4 to the prestige, primary, secondary walking routes and local footways within the network. Again, the different types of intervention are referenced relative to whether the environment has more of a place or movement function, as well as level of footfall.

Table 7-6 – Walking Network Interventions

	Place					Movement		
	Town square	Town street	High street	Local street	Rural road	Off-highway path	Connector	Arterial road
Prestige Walking Zones	A, B, C	A, B, C	A, B, C	-	-	-	-	
Primary Walking Routes	B	B, C	B, C, D	-	-	C, D		
Secondary Walking Routes	-	-	-	C, D	C, D	C, D	C, D	C, D
Link Footways	-	-	-	C, D	C	C, D	C, D	

7.4.7. The output of the tables above reflects the desirable level of intervention for the respective parts of network based on their assignment in the respective cycling and walking network hierarchies.

7.4.8. The network hierarchies and the types of intervention presented above will be used where possible to inform the development of ongoing or future schemes by NYCC or SDC.

7.5 LONG LIST OF PRIORITIES

7.5.1. The following parts of the network were proposed as initial priorities to be considered for further development at the feasibility assessment stage, and to feed in to any bidding opportunities. Eight corridors were identified and presented to NYCC and RDC for review.

7.5.2. These corridors form a 'skeleton network' through the two towns, encompassing the main key OD points and creating both radial and orbital routes along key desire lines. Once the key routes are in place, further links could then be added, increasing mesh density and accessibility to the network. These priorities are presented as 'active travel corridors' focussed on improving conditions for both cycle users and pedestrians and maximising scheme benefits.

7.5.3. The identified long list of priorities are:

- Corridor 1 - Central Loop;
- Corridor 2 - Core Connections;
- Corridor 3 - York Road Corridor;
- Corridor 4 - Old Malton Road Corridor;
- Corridor 5 - Pasture Lane Residential Route;
- Corridor 6 - Langton Road Radial;
- Corridor 7 - Norton Grove Loop; and
- Corridor 8 - Malton Town Curve.

7.5.4. These routes are illustrated in Figure 7-3, and discussed in more detail in Table 7-7 to Table 7-14, with the rationale which links back to the evidence base collected through the project.

Longer Distance Opportunities

7.5.5. Opportunities should also be sought to deliver longer distance routes providing connections to settlements located outside of the immediate Malton & Norton LCWIP study are, such as Pickering and Hovingham, particularly where these can act as an extension to the LCWIP priority corridors. Longer distance routes may support leisure and tourism activity and potentially be funded from wider sources.

Figure 7-3 – Recommended Priorities

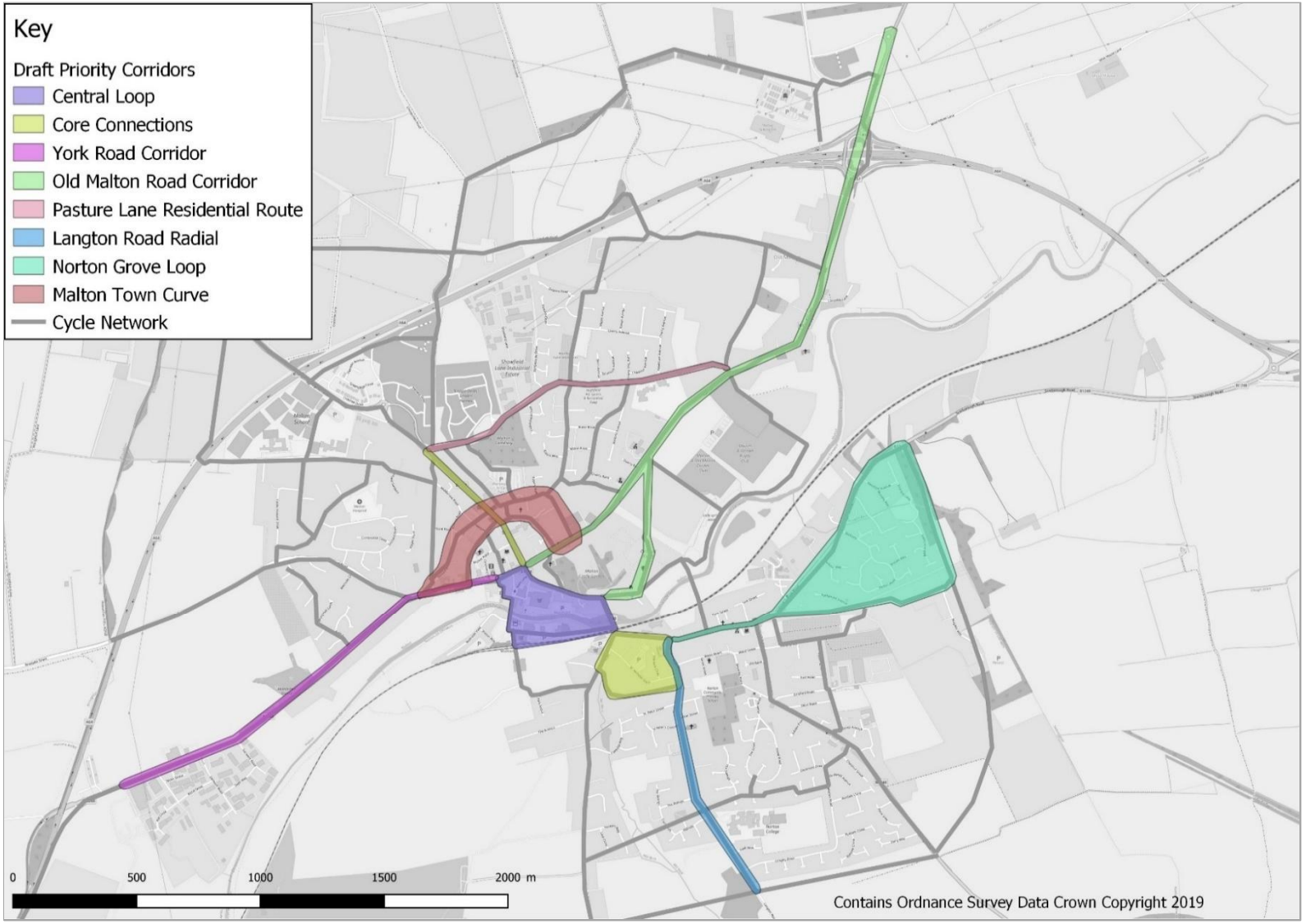
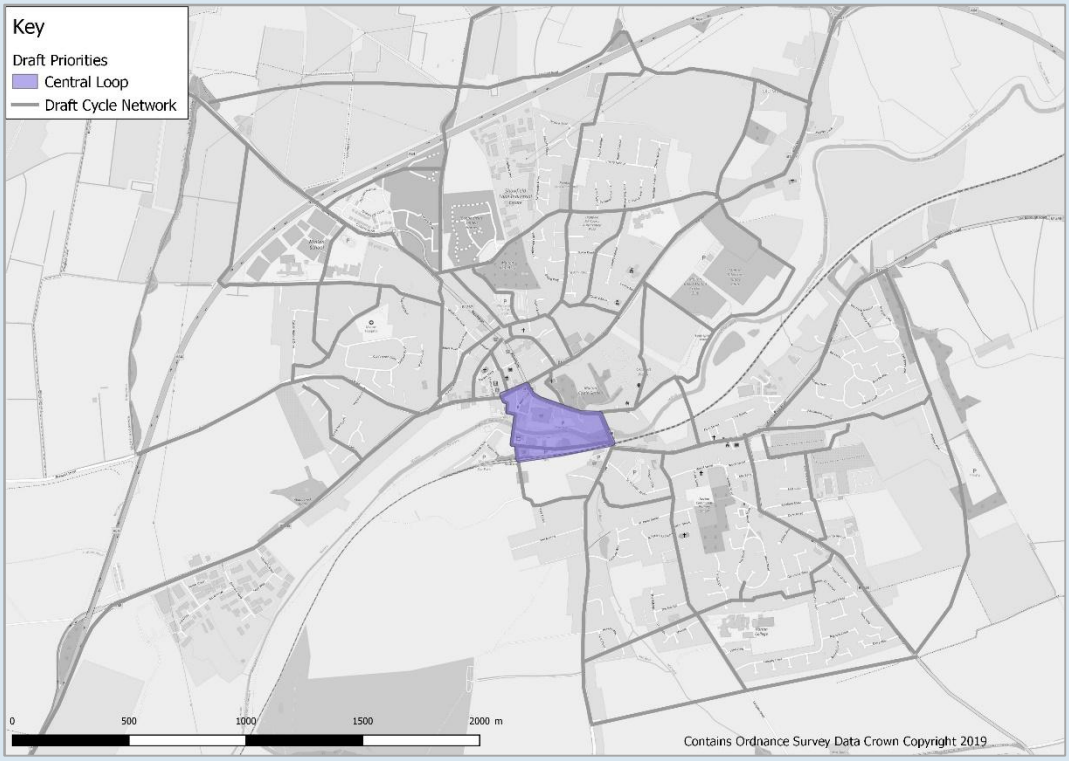
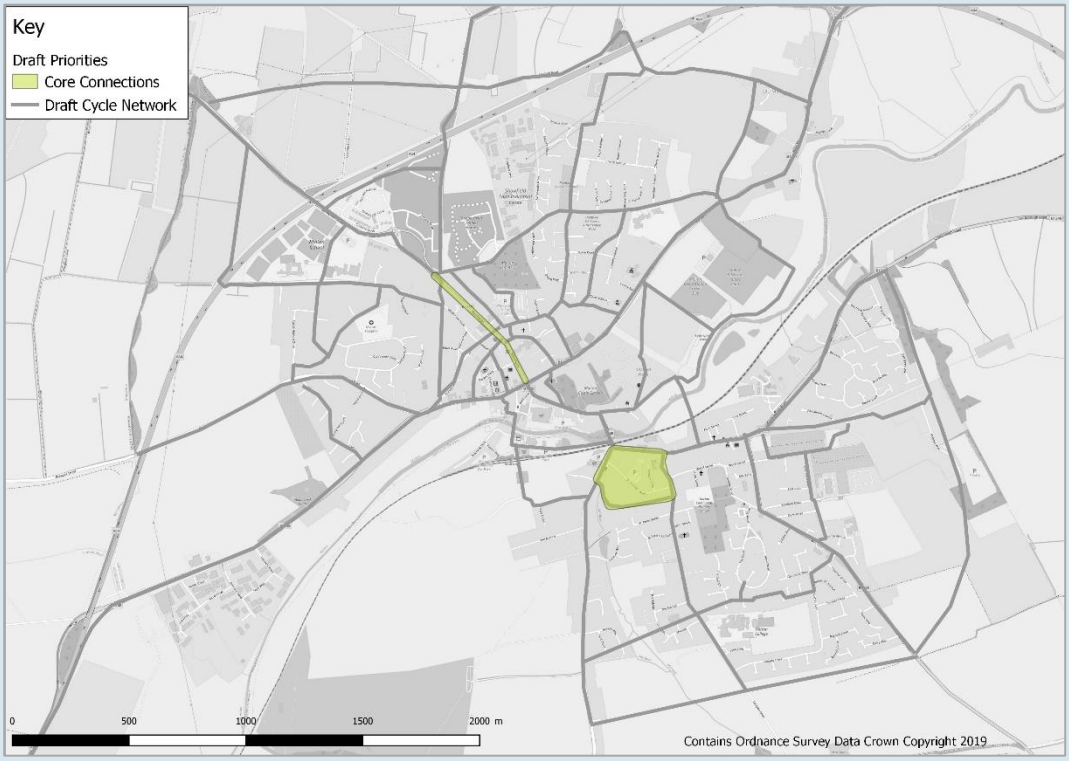


Table 7-7 – Recommended Priorities: Corridor 1 - Central Loop

Corridor Location


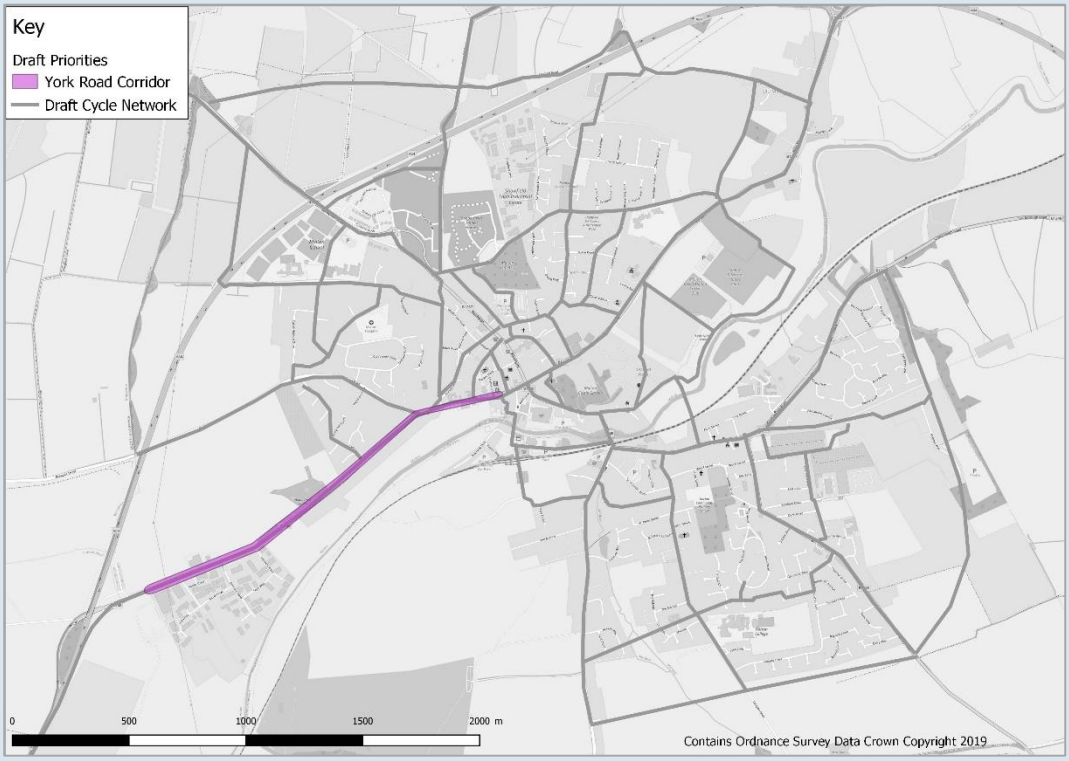
Corridor Description	Rationale
A loop around some of the busiest parts of the town, encompass an array of use types and facilitating journeys for various purposes. This corridor includes the following key features: ¡ Links the centre of Norton and Malton, providing a central point of access for the surrounding origin points and links to local facilities; ¡ Connections to key ODs at the bus and rail stations, as well as numerous key commercial and retail ODs (including Asda and Morrisons); ¡ Encompasses the critical pinch points at the level crossing and Butcher Corner; and ¡ Maximises permeability into the town centre.	¡ Stakeholder input identified this link as the biggest issue in the study area; ¡ Connectivity of many key destinations, including retail, employment and educational ODs; ¡ PCT outputs identified elements of this corridor as potentially being some of the highest trafficked cycle routes in M&N; ¡ Overlapping desire lines and walking isochrones from Core Walking Zones suggest this route sees some of the highest usage; ¡ This route encompasses both Prestige and Primary walking / cycling routes; ¡ The central location of the corridor means many trips will either end within or make use of any associated interventions; and ¡ Could incorporate aspirations for new bridge associated with rail station improvements.

Table 7-8 – Recommended Priorities: Corridor 2 - Core Connections

Corridor Location


Corridor Description	Rationale
Two extensions to the Central Loop, including a loop around St Nicholas Street, and an extension north along Wheelgate/Newbiggin. This corridor includes the following key features: ¡ Links to the centre of Norton and Malton, providing a central point of access for the surrounding origin points and links to local facilities; ¡ Connections to key ODs in both Malton and Norton ¡ Addresses the critical pinch point at Butcher Corner; and ¡ Maximises permeability into the town centre.	¡ Stakeholder input identified parts of these links link as the biggest issue in the study area; ¡ Connectivity of many key destinations, including retail, employment and educational ODs; ¡ PCT outputs identified elements of these routes as potentially being some of the highest trafficked cycle routes in M&N; ¡ Overlapping desire lines and walking isochrones from Core Walking Zones suggest these routes see some of the highest usage; ¡ These routes encompass Primary walking / cycling routes; ¡ The central location of the routes means many trips will either end within or make use of any associated interventions.

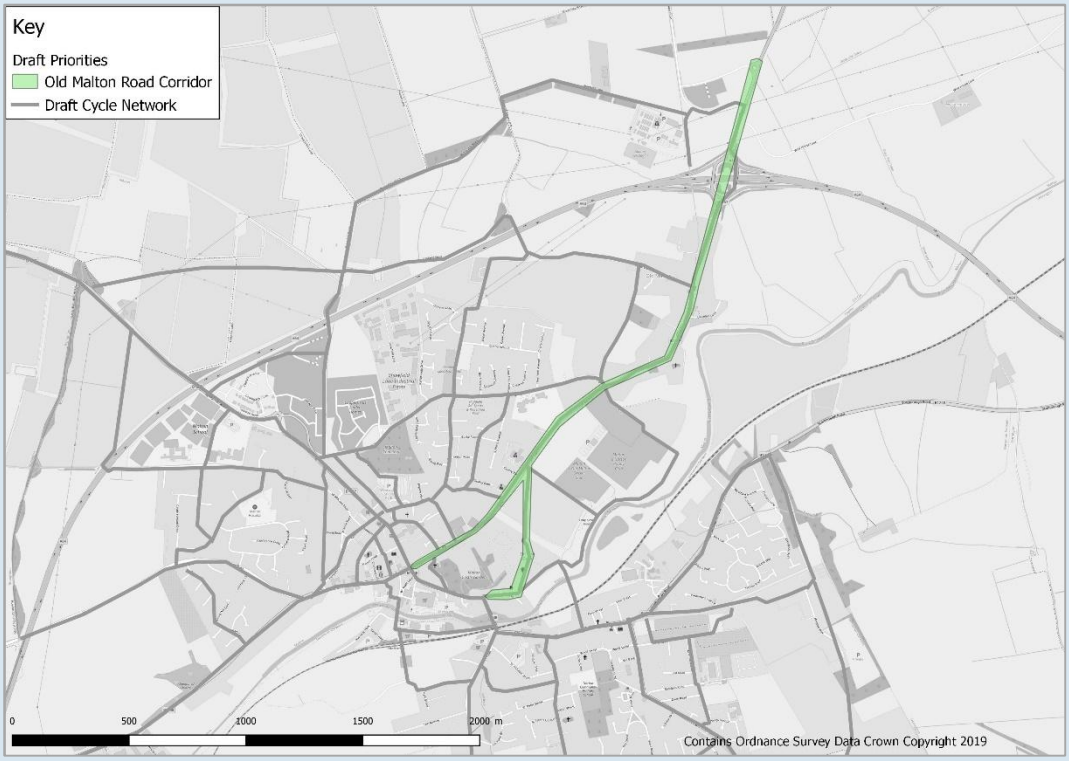
Table 7-9 - Recommended Priorities: Corridor 3 - York Road Corridor

Corridor Location


Corridor Description	Rationale
A westward extension to the Central Loop, providing a radial link to the York Road Industrial Estate. This corridor includes the following key features: ¡ Links to the centre of Malton; ¡ Connections to key ODs such as York Road Industrial Estate and local shops in the town centre; ¡ Could help address the key pinch point at Butcher Corner at its eastern extent; ¡ Promotes connectivity between residential areas to the west and strategic destinations; and ¡ Likely to consist of hybrid cycle tracks where width permits, with complementary crossing points.	¡ Stakeholder input identified this link as a priority; ¡ The existing highway network is comparatively less constrained, and could represent a 'quick win'; ¡ Connectivity of many key destinations, including retail, employment and educational ODs; ¡ Potential options could mitigate the need for pedestrians and cyclists to have to cross the road multiple times to follow infrastructure. ¡ Overlapping desire lines and walking isochrones from Core Walking Zones suggest this route sees high usage; ¡ This route encompasses Primary walking / cycling routes; ¡ The central location of the routes means many trips will either end within or make use of any associated interventions.

Table 7-10 - Recommended Priorities: Corridor 4 - Old Malton Road Corridor

Corridor Location



Corridor Description

An eastward extension to the Central Loop, providing a radial link to Old Malton.

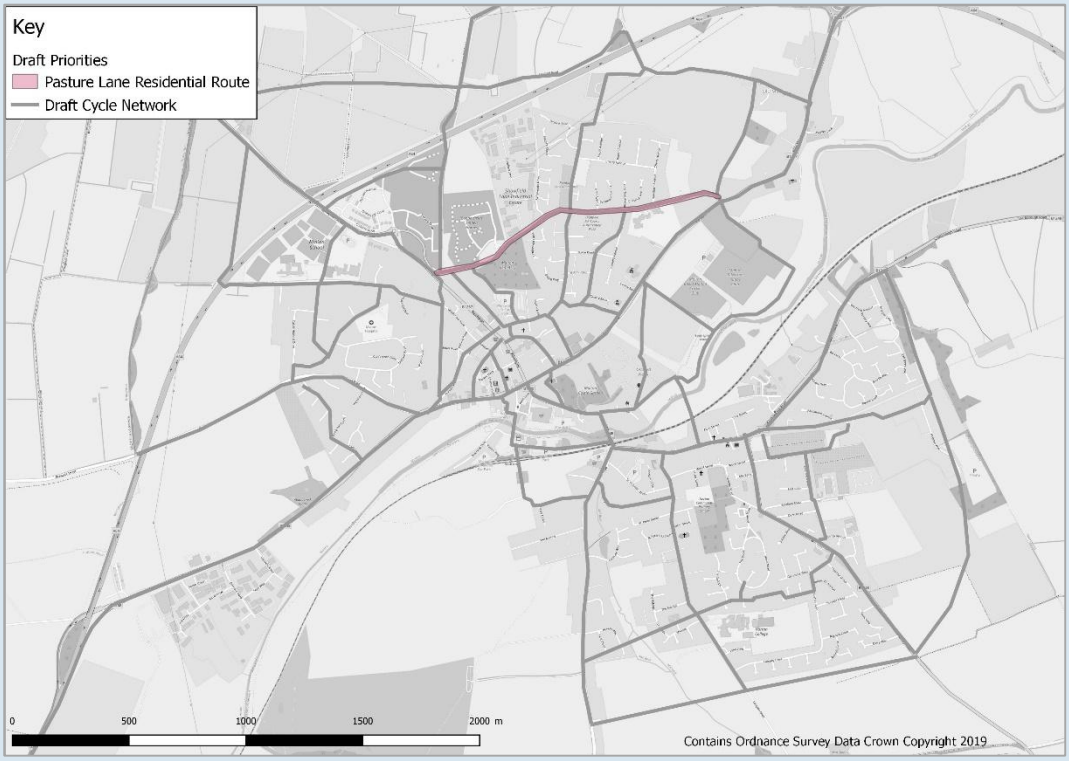
This corridor includes the following key features:

- Links to the centre of Norton and Malton;
- Connections to key ODs such as RDC, Old Malton, and various leisure facilities;
- Helps address the key pinch point at Butcher Corner;
- Promotes connectivity between residential areas to the east and strategic destinations; and
- Likely to consist of hybrid cycle tracks where width permits, with complementary crossing points.

Rationale

- Stakeholder input identified this link as a priority;
- The existing highway network is comparatively less constrained, and could represent a 'quick win';
- Connectivity of many key destinations, including retail and employment ODs;
- The nature of the route and purpose of the area in terms of place and movement suggests opportunity for a relatively fast direct route into Malton;
- This route encompasses Primary walking / cycling routes;
- The central location of the routes means many trips will either end within or make use of any associated interventions.

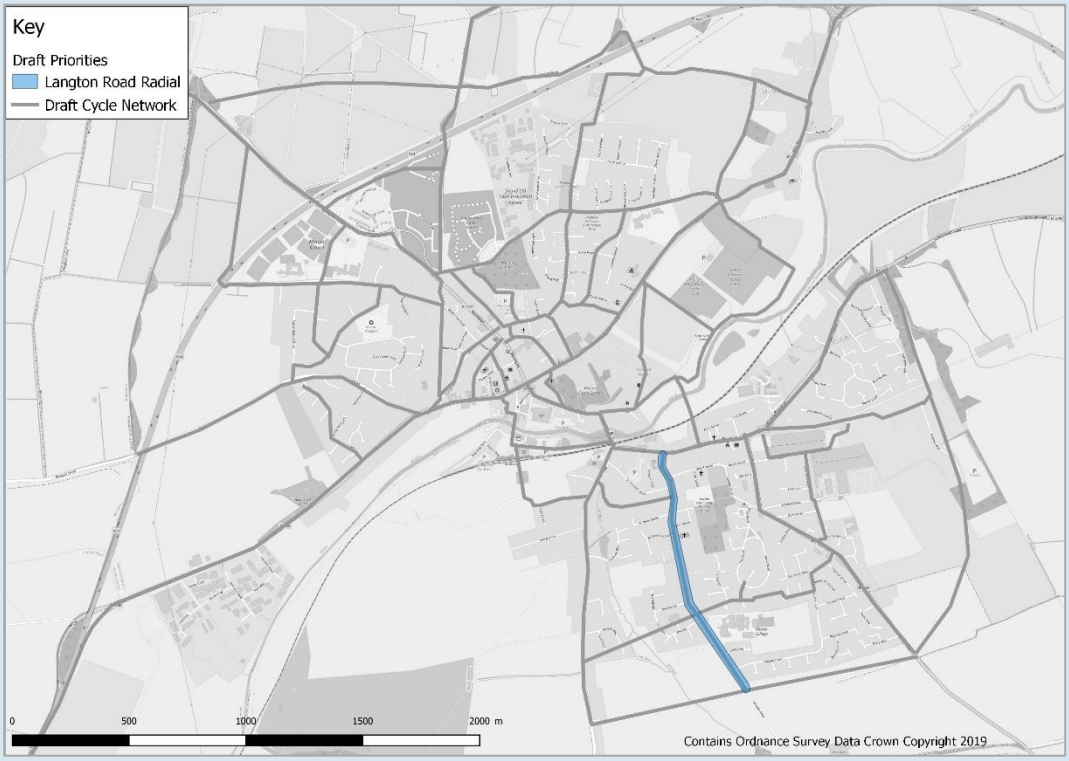
Table 7-11 – Recommended Priorities: Corridor 5 - Pasture Lane Residential Route

Corridor Location


Corridor Description	Rationale
Part of a northerly orbital route through Malton. This corridor includes the following key features: ¡ Runs through predominantly residential areas, as well as established employment sites and schools; ¡ Connects to Corridors 2 and 4, enabling local people to access the wider network; and Likely to consist of a package of measure to promote on-road cycling and increase permeability for active modes.	¡ Stakeholder input identified this link as a priority; ¡ Connectivity of many key destinations, including residential, educational, and employment ODs; ¡ The existing highway sees higher volumes of traffic and higher speeds than are commensurate with the place status of the area, creating a need for intervention; ¡ Orbital connections ensure that routes do not only cater for journeys via the town centre; ¡ This route encompasses Primary walking / cycling routes; and ¡ Could be a beneficial scheme in its own right due to pedestrian / placemaking emphasis.

Table 7-12 – Recommended Priorities: Corridor 6 - Langton Road Radial

Corridor Location



Corridor Description

A central southern corridor extending through Norton and connecting to Corridors 1&2.

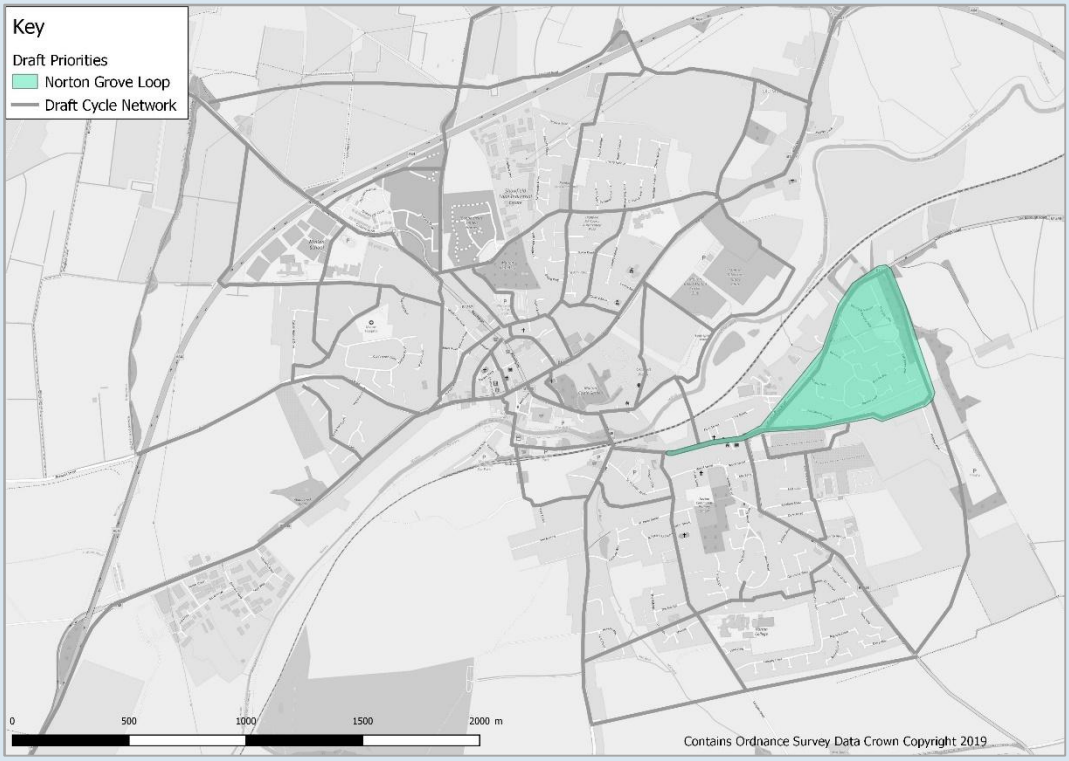
This corridor includes the following key features:

- Runs through predominantly residential areas, as well as a number of educational establishments;
- Connects to Corridors 1, 2, and 7, enabling local people to access the wider network; and
  Likely to consist of a package of measure to promote on-road cycling and increase permeability for active modes, with the potential for hybrid tracks where width permits.

Rationale

- Stakeholder input identified this link as a priority;
- Connectivity of many key destinations, including residential, educational, and employment ODs;
- The central nature of the route allows permeability from local streets more conducive to cycling on the carriageway, and provides direct connections to a number of other proposed routes, including access to the respective town centres and transport hubs; and
- Could be a beneficial scheme in its own right due to pedestrian / placemaking emphasis

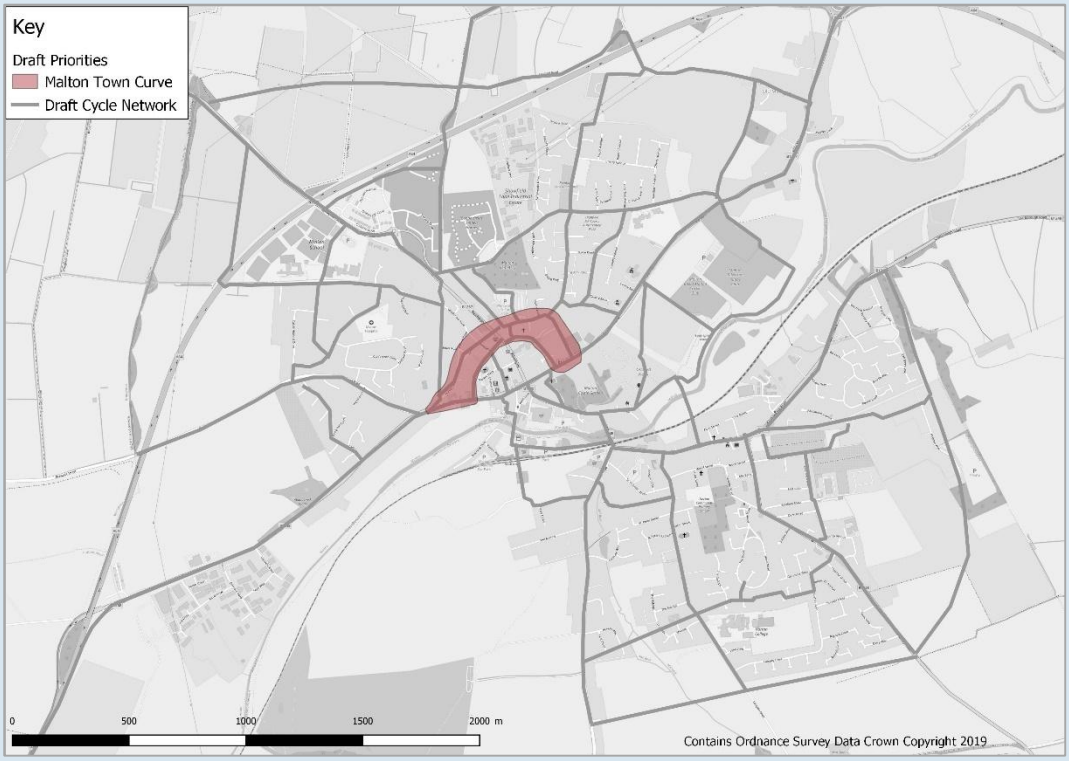
Table 7-13 – Recommended Priorities: Corridor 7 - Norton Grove Loop

Corridor Location


Corridor Description	Rationale
An eastern loop in Norton encompassing Commercial Street/Scarborough Road and key employment areas. This corridor includes the following key features: ¡ Runs through differing street types and purposes, including the town centre core, residential areas, and a proportionately large employment site; ¡ Connects to Corridors 1, 2, and 6, enabling local people to access the wider network; and Likely to consist of a package of varied measures depending on the type of area and local conditions to promote on-road cycling and increase permeability for active modes, with the potential for hybrid tracks where width permits.	¡ Stakeholder input identified this link as a priority; ¡ Connectivity of many key destinations, including residential and employment ODs; ¡ The route includes Commercial Street and Scarborough Road, the main local shopping area in the town, and would contribute towards a commensurate sense of place; ¡ The central nature of the route allows permeability from local streets more conducive to cycling on the carriageway, and provides direct connections to a number of other proposed routes, including access to the respective town centres and transport hubs; and ¡ Could be a beneficial scheme in its own right due to pedestrian / placemaking emphasis.

Table 7-14 – Recommended Priorities: Corridor 8 - Malton Town Curve

Corridor Location



Corridor Description

A northern orbital loop around the periphery of the town centre in Malton.

This corridor includes the following key features:

- Facilitates permeability from various other corridors and local streets into the town centre core;
- Could tie in to the Malton – Pickering route and enhance these proposals;
  Likely to consist of a package of varied measures depending on the type of area and local conditions.

Rationale

- Brings together many of the proposed corridors, increasing permeability into the town centre and contributing toward placemaking;
- Could provide an alternative route, avoiding Butcher Corner, between the York Road and Old Malton Road Corridors;
- Connections with Malton - Pickering Route offers longer distance connectivity
- The route encircles Malton town centre, the main local shopping area in the town and centre for the District, and could contribute towards a commensurate sense of place;
- The route also avoids the busy centre and Butcher Corner, providing more desirable connections to York Road and Old Malton Road;
- The central nature of the route allows permeability from local streets more conducive to cycling on the carriageway, and provides direct connections to a number of other proposed routes, including access to the respective town centres and transport hubs; and
- Could be a beneficial scheme in its own right due to pedestrian / placemaking emphasis.

7.6 SUMMARY AND NEXT STEPS

7.6.1. The culmination of the LCWIP Phase 1 project for Malton & Norton has determined both an aspirational walking and cycling network map, as well as identifying eight priority corridors for further development. Together, these corridors encompass the main routes into and around the twin towns, connecting the key origins and destinations.

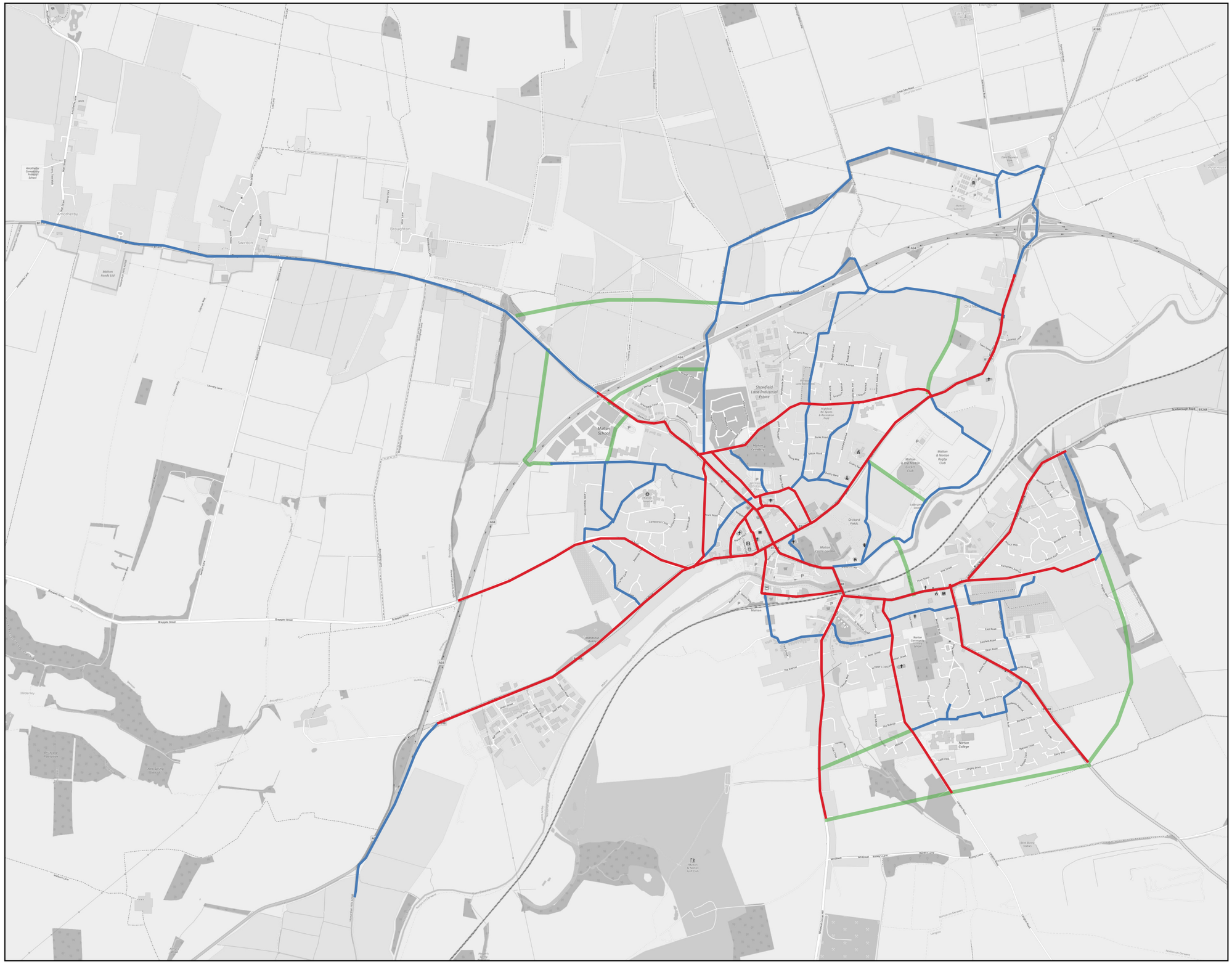
7.6.2. The next steps should include:

- **Route Audits:** Comprehensive audits of the prioritised corridors should be undertaken, utilising the DfT's Walking Route Audit Tool (WRAT) and Route Selection Tool (RST) to understand the existing condition of the routes for pedestrians and cyclists respectively, and the potential condition following intervention. This exercise will help to identify interventions to bring these walking and cycling routes to a sufficiently high standard in line with North Yorkshire County Council's aspirations. It is recommended that the latest design standards for cycling and pedestrian schemes is considered at this stage.
- **Prioritised List of Interventions:** Following assessment of the priority routes, interventions should be prioritised for delivery in the short, medium and long term. An example of the prioritisation exercise is provided in the DfT's LCWIP guidance document (2017).
- **Preliminary Design of Schemes:** Following the prioritisation exercise, schemes should be taken forward for preliminary design. Input for key stakeholders should be considered at this stage.
- **Develop Cost Estimates:** Following completion of preliminary designs, scheme cost estimates should be produced by a suitably qualified quantity surveyor.
- **Economic Appraisal:** Economic appraisal using the DfT's Active Mode Appraisal Toolkit can be undertaken to provide a scheme BCR.

Appendix A

FINAL NETWORK PLANS

Malton & Norton LCWIP

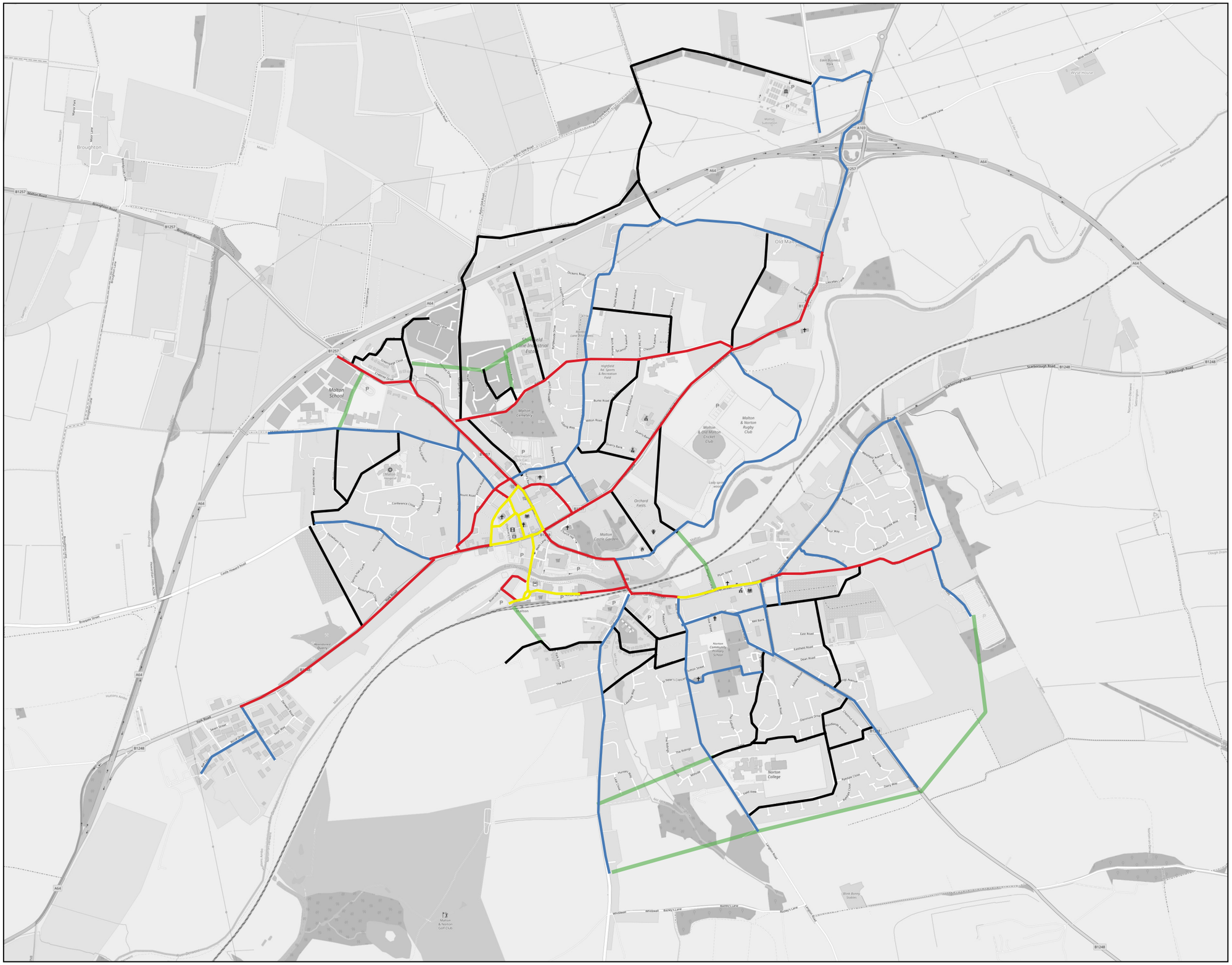


0 . 1 1.5 2 . 3 km

REV	DATE	DRW	DESCRIPTION	CHK	APP

wsp
Amber Court
William Armstrong Drive
Newcastle upon Tyne
NE4 7YQ
Tel: +44 (0)191 226 2100
www.wsp.com

DRAWING No:
001



0 . 1 1.5 2 . 3 km

Key:

- Prestige Walking Route
- Primary Walking Routes
- Secondary Walking Routes
- Local Walking Route
- Indicative Route Corridors

REV	DATE	DRW	DESCRIPTION	CHK	APP
001	16/09/2020	HK	FIRST ISSUE	HK	PF

STATUS: FINAL

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CLIENT: North Yorkshire County Council

ARCHITECT: HK

PROJECT: Malton & Norton LCWIP

TITLE: Walking Network Map

DRAWN:	CHECKED:	APPROVED:
HK	HK	PF
QGIS FILE:	SCALE @A3:	DATE:
M&N LCWIP	N/A	16/09/2020

PROJECT No:	DRAWING No:	REV:
70054112	001	2

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