

North Northamptonshire Council

North Northamptonshire Greenway Strategic Masterplan

Draft Report

February 2024

Project Code: 06859



**Funded by
UK Government**

This strategy is funded by the UK government through the UK Shared Prosperity Fund.

PJA
8 Brewer Street
Hilton Square
Manchester
M1 2EU
UK
pja.co.uk



Version Control and Approval

Version	Date	Main Contributor	Issued by	Approved by
A	05 July 2023	Catriona Swanson, Jack Gray, Maximilian Li	Catriona Swanson	Chris Sibthorpe
B	14 July 2023	Maximilian Li	Jack Gray	Jack Gray
C	February 2024	Lucy Hawes		

Prepared for

Lucy Hawes

North Northants Greenway Officer

North Northamptonshire Council

Cedar Drive

Thrapston

Northants

NN14 4LZ

Contents

Section	Page
1 Executive Summary	6
1.2 Proposed North Northamptonshire Greenway Network	8
2 Introduction	9
3 Study context	10
3.2 National policy context	10
3.3 Regional policy context	13
3.4 Local Planning Policy context	14
3.5 Localised work in North Northamptonshire	20
3.6 Conclusion	26
4 Vision and objectives	27
4.2 Vision	27
4.3 Objectives	27
5 Baseline analysis	28
5.1 LCWIP process overview	28
5.2 Stakeholder Engagement	30
5.3 Local context	30
5.4 Demand analysis	32
6 Network Planning.....	36
6.2 Straight-line Network	36
6.3 Defining Route Alignments	37
7 Delivering the network	39
7.1 Creating new traffic-free routes	39
7.2 Route typologies	39
7.3 Design interventions	40
7.4 Other design considerations	45
7.5 Case studies	50
8 Prioritisation	56
8.2 Prioritisation Criteria	56
8.3 Prioritisation Toolkit	59
8.4 Routes selected for the design recommendations child document	60



9	Costings and Delivery Plan	62
9.2	Delivery plan	64
10	Conclusion and Next Steps.....	65
10.1	Conclusion	65
10.2	Next Steps	65



Appendices

- Appendix A Key stakeholder list
- Appendix B Plans, tables and figures
- Appendix C Technical Note: Creating New Traffic-Free Routes
- Appendix D Costings
- Appendix E Prioritisation toolkit
- Appendix F Template Design Recommendations Booklet

Table I.1 Abbreviations

Abbreviation	Meaning
ANGst	Natural England's Accessible Natural Green Space Standards
CWIS1	Cycling and Walking Investment Strategy
CWIS2	Gear Change
DfT	Department of Transport
EEH	England's Economic Heartland
ENC	Former East Northamptonshire Council
GI	Green Infrastructure
IVSP	Ise Valley Strategic Plan
JCS	Joint Core Strategy
LCWIP	Local Cycling and Walking Improvement Plan
LP	Local Plan



LTN1/20	Local Transport Note 1/20
MSOA	Middle Super Output Area
NNG	North Northants Greenway
NPPF	National Planning Policy Framework
NNGIDP	North Northamptonshire Green Infrastructure Delivery Plan
NNLP	North Northamptonshire Local Plan
PJA	Phil Jones Associates
SPD	Supplementary Planning Document
SUDS	Sustainable Drainage System



I Executive Summary

- 1.1.1 PJA has produced a Strategic Masterplan for the North Northamptonshire Greenway, comprising over 350km of routes connecting settlements within North Northamptonshire and in neighbouring authorities with a combined population of 600,000. The Strategic Masterplan is informed by many plans, strategies and technical studies. These include locally specific documents, for example, the North Northamptonshire Joint Core Strategy and Part 2 Local Plans, the Local Cycling and Walking Infrastructure Plans (LCWIP) for Kettering and Corby and the Ise Valley Greenway Interim Report
- 1.1.2 The Strategic Masterplan has been developed following the methodology set out in the LCWIP guidance, in effect making the North Northamptonshire Greenway a rural strategic LCWIP which connects North Northamptonshire's key settlements and trip generators.
- 1.1.3 The robust, evidence-based approach taken to develop the Strategic Masterplan ensures that future investment in walking and cycling infrastructure is informed by an existing demand. Combined with the vision, bespoke to North Northamptonshire, it highlights investment will contribute to increasing walking and cycling – for all types of journeys including leisure trips – across North Northamptonshire.

Please see 1.2 for the proposed network.

- 1.1.4 This Strategy provides a platform to take forward a further piece of work to develop the formula for the North Northamptonshire Local Plan, and that developer contributions can be a part of the wider contributions picture to ensure the North Northamptonshire Greenway is planned into future developments.
- 1.1.4 Stakeholder engagement workshops with the North Northamptonshire Greenway Board and wider stakeholders including Natural England and National Highways highlighted the strong local desire for routes to be as safe and attractive as possible with a clear preference for traffic-free routes. In addition, given the rural nature of much of North Northamptonshire and high existing levels of walking and cycling for leisure, creating routes that cater for leisure and tourism are a key priority for stakeholders. Stakeholders also demonstrated an appetite to improve existing, and create new Public Rights of Way where needed, to deliver a high-quality network though it was also accepted that improved ways of working would be needed to keep routes maintained to a good standard.
- 1.1.5 As a result, the agreed vision for the North Northamptonshire Greenway is:

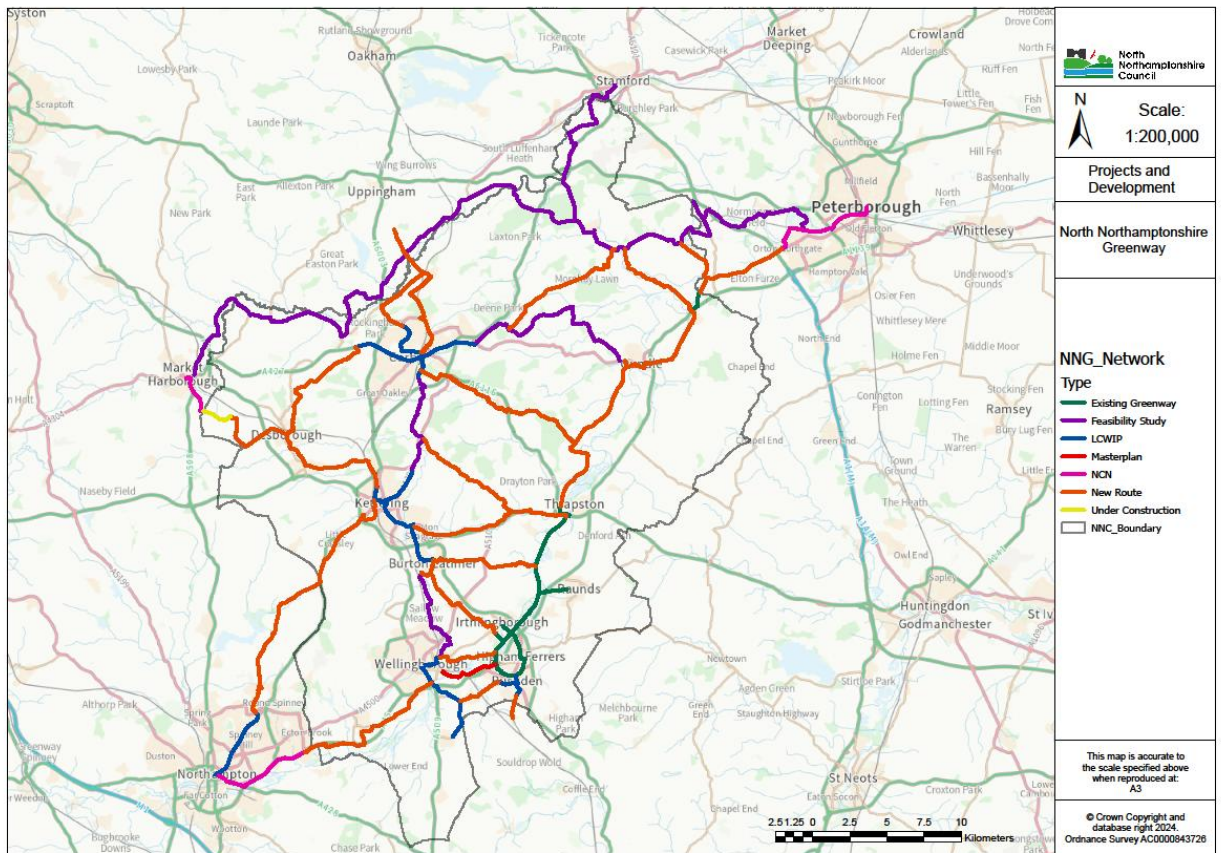
The North Northamptonshire Greenway will be a strategic rural network of safer, largely traffic-free routes suitable for walkers, wheelers, cyclists and equestrian users where appropriate, connecting settlements, employment, leisure and tourism destinations across North Northamptonshire and beyond.



- 1.1.6 A prioritisation toolkit has been developed specifically for the Strategic Masterplan. The toolkit has been designed to inform the delivery of the network including prioritising routes for further feasibility studies.
- 1.1.7 The toolkit includes eight prioritisation criteria that reflects local needs and have been agreed with stakeholders; the criteria include: improving access to employment, education, leisure and tourism and green space, cost, value to network, connections to areas of growth and improving road safety.
- 1.1.8 The prioritisation process informed the selection of four priority routes to be further developed in child/design recommendations booklets. These four priority routes were chosen at random. All the routes highlighted within this Strategy are a priority for North Northamptonshire. The chosen four were done as an exercise to demonstrate how the child/ design recommendation booklets could look, as evolving/live documents to sit beneath the overarching Strategy. The child/design recommendation booklets can be updated as and when progress is made, giving a synopsis of the route itself. It should be noted that other routes will be developed concurrently and will be at various stages depending upon the level of development nearby, local community involvement, availability of funding, neighbourhood planning, priorities.
- 1.1.9 A draft development contributions formula has also been developed as part of the Strategic Masterplan to help inform future negotiations with developers.
- 1.1.10 This is an example of how a methodology could be used, and is not the end result. Further work is required to do this and will be done as a separate exercise. This example has been informed by the cost of the proposed network, the forecast development-related active travel trips and the cost per active travel trip, resulting in the following developer contributions formula:
- Developer contributions = Active travel trips x cost per active travel trips***
- 1.1.11 It is intended that the strategy will be widely consulted on and refined as needed following feedback from stakeholders and residents. It will then be adopted to ensure it has weight in planning terms and can feed into other policies and strategies, including the emerging Strategic Plan for North Northamptonshire and future negotiations with developers regarding planning obligations.



1.2 Proposed North Northamptonshire Greenway



DRAFT



2 Introduction

2.1.1 PJA has produced this Strategic Masterplan for the North Northamptonshire Greenway on behalf of North Northamptonshire Council. The study has followed the DfT approved LCWIP process an evidence-led approach to network planning that ensures future investment in cycling and walking infrastructure can be informed by a coherent vision of how these modes can contribute to the overall transport mix across North Northamptonshire.

2.1.2 The LCWIP process involves:

- Scoping
- Data collection and analysis
- Network development
- High-level cost estimates
- Route prioritisation
- Stakeholder engagement at various stages of the project to 'sense check' the analysis and ensure the plan is informed by local knowledge.

Report structure

2.1.3 The report reviews existing relevant policies and plans and details the comprehensive spatial analysis and audit work undertaken to develop the Strategic Masterplan. The report is structured as follows:

Chapter 3 – Study context

Chapter 4 – Vision and objectives

Chapter 5 – Baseline analysis

Chapter 6 – Network planning

Chapter 7 – Delivering the network

Chapter 8 – Prioritisation

Chapter 9 – Costings and delivery plan

Chapter 10 – Conclusion and next steps.



3 Study context

3.1.1 This chapter summarises the context for this study, with particular focus on the policy framework and major developments proposed in the area.

3.2 National policy context

National Planning Policy Framework (2023)

3.2.1 The National Planning Policy Framework (NPPF) sets out the government's planning policies for England and how these are expected to be applied. The NPPF's chapter on promoting sustainable transport notes that "transport issues should be considered from the earliest strategies of plan-making so that opportunities to promote walking, cycling and public transport use are identified and pursued". It states that planning policies should:

"provide for attractive and well-designed walking and cycling networks with supporting facilities such as secure cycle parking (drawing on Local Cycling and Walking Infrastructure Plans)"

3.2.2 The NPPF also notes that:

"Planning policies and decisions should protect and enhance public rights of way and access, including taking opportunities to provide better facilities for users, for example by adding links to existing rights of way networks including National Trails."

Active Travel

3.2.3 The national policy context for active travel changed significantly in 2020 with the Department for Transport's (DfT) publication of 'Gear Change' and Local Transport Note 1/20 'Cycle Infrastructure Design'. These two documents signify momentous change for the future of transport planning and design in the UK and the prioritisation of measures that enable increased levels of walking and cycling.

Cycling and Walking Investment Strategy

3.2.4 The Government's Cycling and Walking Investment Strategy (CWIS1) was published in 2017 and contained the following objectives:

- increase the percentage of short journeys in towns and cities that are walked or cycled from 41% in 2018 to 2019 to 46% in 2025;
- increase walking activity, where walking activity is measured as the total number of walking stages per person per year, to 365 stages per person per year in 2025;



- double cycling, where cycling activity is measured as the estimated total number of cycling stages made each year, from 0.8 billion stages in 2013 to 1.6 billion stages in 2025; and
- increase the percentage of children aged 5 to 10 who usually walk to school from 49% in 2014 to 55% in 2025.

3.2.5 CWIS2 (2023) articulated this ambition by incorporating Gear Change, which outlines four themes developed by the Government that need to be taken into consideration in order to achieve a modal shift towards walking and cycling. These themes are:

- Better streets for cycling and people;
- Cycling at the heart of decision-making;
- Empowering and encouraging Local Authorities; and
- Enabling people to cycle and protecting them when they do.

3.2.6 The strategy sets out the ambition for England being a walking and cycling nation and explores the important benefits of increasing cycling and walking such as; challenging societal issues including air quality, combating climate change, improving health and wellbeing, addressing inequalities, and tackling congestion.

3.2.7 The strategy stresses the need for high quality cycle infrastructure in order to encourage mode shift towards cycling. It emphasises the need for a connected cycle network, and for it to be easy to use for people of all ages and abilities.

Gear Change (2020)

3.2.8 The Cycling and Walking Plan for England, 'Gear Change: a bold vision for cycling and walking', was published on 27 July 2020. The plan sets out the government's shift in transport policy: to prioritise active travel over single-occupancy private vehicles. The plan set the following vision:

"Places will be truly walkable. A travel revolution in our streets, towns and communities will have made cycling a mass form of transit. Cycling and walking will be the natural first choice for many journeys with half of all journeys in towns and cities being cycled or walked by 2030."

3.2.9 The plan recognises the need to take action to tackle the barriers to active travel, providing better quality infrastructure to make sure people feel safe and confident cycling. To receive government funding for local highways investment where the main element is not cycling or walking improvements, there will be a presumption that all new schemes will deliver or improve cycling infrastructure to the new standards unless it can be shown that there is little or no need for cycling. Gear Change recognises that there can be no "one size fits all" approach and that inevitably rural areas have lower demand for active travel and therefore have different requirements in terms of the level of provision:



“This policy, and the standards, recognise that different levels of provision may be appropriate in different places, both within and between local authorities. For instance, in a shire county, the busy, densely populated county town may be a higher priority for cycling intervention than a small village. We will require more from all local authorities, urban or rural.”

LTN 1/20 – Cycle Infrastructure Design (2020)

- 3.2.10 Cycle Infrastructure Design – Local Transport Note 1/20 (LTN 1/20) establishes much higher standards for cycling infrastructure, including geometric requirements. Rather than a strict set of standards, LTN 1/20 encourages designers to consider the context when designing cycling infrastructure. For example, it identifies what level of protection from motor traffic is appropriate based on the speed and volume of traffic, noting these are not fixed. It also makes specific reference to physical and legal measures to control access and motor vehicles’ speeds, and notes that such measures can bring wider environmental benefits by reducing noise, air pollution and traffic danger.
- 3.2.11 LTN 1/20 provides guidance on a range of types of cycling infrastructure that are appropriate in different contexts including traffic-free routes, quiet mixed streets and lanes, and protected cycling infrastructure on main roads. It also sets out situations where shared use footways may be appropriate such as on inter-urban routes with low flows of pedestrians and cyclists.

Local Cycling and Walking Infrastructure Plans (LCWIPs) (2017)

- 3.2.12 LCWIPs were highlighted in the Government’s Cycling and Walking Investment Strategy (CWIS1) as the recommended approach for planning and coordinating provision for active travel modes. They provide local authorities with a long-term approach for developing walking and cycling networks, ideally over a ten-year period. The development of an LCWIP should include desktop analysis of existing and future behavioural trends, site auditing of existing conditions for walking and cycling, and prioritisation of recommended design measures. LCWIPs were highlighted in the Government’s Cycling and Walking Investment Strategy as the recommended approach for planning and coordinating provision for active travel modes.

The key outputs from an LCWIP are:

- Network Plan for Walking and Cycling identifying preferred routes for development;
- Programme of prioritised infrastructure improvements;
- Report summarising the work undertaken to inform the LCWIP network development.

- 3.2.13 The DfT’s LCWIP guidance provides a recommended approach to developing LCWIPs, however, the intention is for LCWIPs to respond to local conditions and requirements to improve walking and cycling networks.



3.3 Regional policy context

England's Economic Heartland Active Travel Strategy

- 3.3.1 England's Economic Heartland (EEH) is the sub-national transport body for the region stretching from Swindon across to Cambridgeshire and from Northamptonshire down to Hertfordshire. One of seven sub-national transport bodies, EEH is jointly funded by the Department for Transport and its local authority partners. It advises the government on the transport infrastructure, services and policy framework needed to realise the region's economic potential while supporting the journey to net zero.
- 3.3.2 The EEH Active Travel Strategy: Phase 1 (published in March 2022) sets out the high-level ambition for active travel across the region based upon a review of European, national, regional and local policy, and the views of active travel officers across the region. The Phase 2 Active Travel Strategy is currently being developed and builds on the work undertaken during Phase 1 to set an ambitious yet achievable active travel strategy. The combined phases of work set a framework for active travel investment at a regional and cross boundary level, supporting EEH as a sub-national transport body to 'join the dots' between different policy objectives to achieve a clear policy direction for active travel in the region.



3.4 Local Planning Policy context

North Northamptonshire Joint Core Strategy (2011-2031)

- 3.4.1 The North Northamptonshire Joint Core Strategy (JCS) 2011 – 2031 (Adopted 2016) sets out the long-term vision and objectives for the whole of North Northamptonshire for the plan period up to 2031. It includes strategic policies for steering and shaping development. These include identifying specific locations for strategic new housing and employment and changes to transport infrastructure and community facilities. It identifies the Green Infrastructure Corridors for North Northamptonshire and recognises the importance of landscape character, biodiversity and the historic environment by providing strategic policies to protect and enhance existing provision and, where appropriate, lead to the creation of new provision. It provides policies relating to water quality and flood risk management, place shaping principles and well-connected towns, villages and neighbourhoods.
- 3.4.2 The JCS includes reference to improving walking, cycling and public transport throughout. It also identifies the sub-regional and local green infrastructure (GI) corridors for the area through Figure 17: Green Infrastructure Corridors. These are safeguarded through Policy 19: Delivery of Green Infrastructure which also seeks to manage development and investment to secure a net gain in GI and to contribute to corridor enhancement. Please see Figure 3.4 Green Infrastructure Corridors identified in the Joint Core Strategy
- 3.4.3 Other key policies in the JCS of direct relevance to the North Northamptonshire Greenway include Policy 15: Well-connected Towns, Villages and Neighbourhoods and Policy 20: The Nene and Ise Valleys. There are additional policies that have influence with respect to the developing NNG including Policy 8: Place Shaping Principles and Policy 12: Town Centres as well as site-specific policies like Policy 14: Deenethorpe Airfield and Policy 27: Rockingham Enterprise Area.
- 3.4.4 It is important to note that the JCS is currently under review through the development of the North Northamptonshire Local Plan (NNLP). The review will assess existing strategic planning policies to take into account changes since 2016 and extend the plan period to 2041. The new Plan will also cover some non-strategic matters that are currently set out in the Part 2 Local Plans.
- 3.4.5 The North Northamptonshire Greenway Strategic Masterplan will form part of the evidence base for the emerging North Northamptonshire Local Plan. It will inform the development of policy that will recognise the NNG routes and provide a basis to develop a formulaic approach for the securement of S106 contributions where appropriate.

Part 2 Local Plans

- 3.4.6 The Part 2 Local Plans for Corby, Kettering, East Northamptonshire and Wellingborough provide a local context that complements the strategic policies of the JCS. They include site-specific policies



for residential and employment uses and detailed development management policies against which planning applications must be determined. They also provide topic- based policies relating to associated policy themes including health and well-being, the natural environment and heritage.

3.4.7 It should be noted that, with the exception of the East Northamptonshire Part 2 Plan, the other three Part 2 Plans do not carry specific policies relating to a 'Greenway'. This is because they were drafted in advance of the Council's commitment to the development of an area wide Greenway across North Northamptonshire.

3.4.8 However, all the Part 2 Local Plans are keen to stimulate active travel through the development of pedestrian and cycling routes. Opportunities are generally sought through site-specific policies, for example, through well-designed pedestrian and cycle routes that facilitate active travel both within a new development and beyond to key destinations and leisure opportunities. The revision of the NNLP presents an opportunity to strengthen these policy approaches so routes leading beyond a development site lead, where possible and appropriate, into the defined NNG.

3.4.9 The development of local level green infrastructure corridors can play a vital role in the development of the NNG. All four Part 2 Plans identify a local level GI network and provide policies for the development of these local corridors. The policy approach could be strengthened through the emerging NNLP to ensure, where possible and appropriate, there is synergy and connectivity between local green infrastructure corridors and the NNG.

Greenway Policy in East Northamptonshire Part 2 Local Plan

3.4.10 East Northamptonshire has been developing the East Northamptonshire Greenway for a number of years. The Part 2 Local Plan sets out the ambition to deliver a fully integrated greenway network for the Nene Valley between Wellingborough, Peterborough and the Rockingham Forest. Much has already been delivered in the south of the district, with links between Rushden, Higham Ferrers, Irthlingborough, Stanwick, Raunds, Ringstead and Woodford.

3.4.11 The East Northamptonshire Part 2 Local Plan defines the conceptual corridors for the East Northamptonshire Greenway through **Figure 8 (The Greenway)** and the Policies Map. These are 'conceptual' in recognition of the need for flexibility to develop detailed route designs and so that routes can be delivered as separate projects or through contributions from new development where opportunity arises.

3.4.12 The Greenway is recognised in policy throughout the Plan, particularly through the site specific policies and also through EN14: Tourism and Cultural Development. Policy EN6: The Greenway, provides a specific policy approach on the development and delivery of the East Northamptonshire Greenway. It requires new development to make contributions towards the Greenway (where



appropriate) in accordance with the most up to date standards set out in the Supplementary Planning Document.

Developer Contributions

- 3.4.13 The SPD has not yet been developed and therefore no formulaic system to calculate developer contributions is currently in place. Changes happening to the planning system mean the use of a formulaic approach set out in an SPD will no longer be permissible. Instead, the formula must be set out in the Local Plan for the area. It is the Council's ambition that the NNLP will set out an area wide, formulaic approach using the NNG to inform its development. The formula will sit alongside the suite of approaches in the NNLP used to secure developer contributions to ensure costs to developers are fairly and reasonably related in scale and kind to the development and have due regard to viability.

Neighbourhood Plans

- 3.4.14 Neighbourhood planning gives communities direct power, through the Localism Act 2011, to develop a shared vision for their neighbourhood and set out policies to shape development and growth in their local area. When 'made', a neighbourhood plan forms part of the North Northamptonshire development plan. They are used in decision-making alongside the JCS and Part 2 Local Plans for North Northamptonshire and are therefore an important and effective tool for Parish and Town Councils.
- 3.4.15 There are over 100 Towns and Parishes scattered across North Northamptonshire. At the time of writing just under a quarter had 'made' neighbourhood plans with many more expressing an interest to prepare one
- 3.4.16 The development, and subsequent success of the East Northamptonshire Greenway, has seen town and parish councils keenly proposing new links and extensions into it through their neighbourhood plan development. The benefits are quite evident; given the dispersal of towns and villages across North Northamptonshire and cuts to public transport, the use of the private vehicle is high in rural areas. The development and delivery of a Greenway for North Northamptonshire will provide alternative options for local communities to connect with essential services, work and leisure opportunities.
- 3.4.17 It will not simply improve accessibility but could support and encourage people to embrace healthier lifestyle options. Neighbourhood planning provides an important channel for local communities to develop policies that will help deliver the NNG. They may have access to alternative funding streams from the council; working in partnership could offer the potential to deliver the Greenway more swiftly. Current working examples include Braybrooke and Great Addington, and formerly



Warmington, Higham Ferrers and Woodford have used this approach to develop Greenway connections.

Evidence Base and Supporting Documents

North Northamptonshire Joint Core Strategy Infrastructure Delivery Plan (2017)

- 3.4.14 The North Northamptonshire Infrastructure Delivery Plan (2017) identifies the strategic priorities for infrastructure to support the Joint Core Strategy. The plan includes a number of relevant priorities including sections of the North Northamptonshire Greenway between Islip, Thrapston and Woodford and Irthlingborough.

North Northamptonshire Investment Framework (2019)

- 3.4.15 The North Northamptonshire Investment Framework focuses on the measures required to accelerate growth of both housing and employment. The framework includes targets and projects relevant to the North Northamptonshire Greenway under the headings: health and wellbeing, environment, natural capital and green infrastructure and flood management. The green infrastructure projects have been further developed through the Green Infrastructure Delivery Plans.

North Northamptonshire Infrastructure Funding Statement

- 3.4.16 In accordance with the Community Infrastructure Levy (Amendment) (England) (No.2) Regulations 2019, all councils in receipt of developer contributions are required to produce an annual Infrastructure Funding Statement (IFS). The IFS sets out the Council's priorities for infrastructure delivery funded by developer contributions; it provides a summary of Section 106 contributions secured and received as a result of new development. Most major infrastructure projects are identified through, and in response to the local plan process but projects can also be identified through the Local Transport Plan and other adopted policies and strategies.
- 3.4.17 The latest IFS was published in 2022 to 2023, Section 6.0 summarises some of the key projects that will be funded through S106 obligations in the coming years. Contributions for greenway links are currently considered under the heading of Community Infrastructure; under the list of examples of projects delivered in the name of Community Infrastructure is the investment made towards the enhancement of the Greenway between Rushden, Higham Ferrers and Irthlingborough. The Council are currently reviewing whether the NNG will be infrastructure considered under the area of Community Infrastructure or Highways and Transport. Understanding this position is important when it comes to securing developer contributions for a number of technical reasons beyond the scope of this Masterplan but it is worth making reference to here. Current thinking is that the Greenway should be considered as Community Infrastructure in future years, this will ensure it is



not competing for funds against Highways schemes which often have rival and / or conflicting priorities for delivery.

- 3.4.18 The current review of the North Northampton Local Plan will progress this discussion to a conclusion. The Greenway will have both a policy direction and a formulaic approach to securing developer contributions set out in the Local Plan. As this work progresses through the review process the council will be able to determine the best approach to securing developer contributions. This will help ensure the NNG is both recognised as a necessary infrastructure requirement and delivered to meet the needs of new development.

Transport Plans and Strategies

- 3.4.19 Northamptonshire has a suite of adopted transport plans and strategies. The Northamptonshire Transportation Plan is Northamptonshire's Local Transport Plan; it sets out transport policies, objectives and vision for the longer term.
- 3.4.20 The Transportation Plan is supported by a suite of thematic transport strategies which include approaches for cycling, walking, smarter travel choices and road safety, plus town transport strategies for Kettering, Corby and Wellingborough.
- 3.4.21 The publication dates range from March 2012 to January 2015 meaning the plans are dated. Nevertheless, alongside the JCS and Part 2 Local Plans, they set the strategic context for transportation across North Northamptonshire.
- 3.4.22 The Northamptonshire Cycling Strategy aims to “increase the number of people choosing to travel by cycle for trips under 5 miles through a combination of improvements to the on and off-road cycling environment, promotion and training”. The Northamptonshire Walking and Cycling Strategies include key opportunities and guidance on enhancing relevant off-road links and providing new links between urban and rural settlements to increase connectivity to employment, education, amenities and leisure destinations.

Local Cycling and Walking Infrastructure Plans (LCWIPs)

- 3.4.23 Local Cycling and Walking Infrastructure Plans (LCWIPs) provide a strategic approach to identifying cycling and walking improvements at a local level. They set out a long-term, prioritised programme for developing local cycling and walking networks over the next ten years.
- 3.4.24 With the exception of the inter-urban LCWIP linking Wellingborough and Northampton via Earls Barton the local cycling and walking (LWC) networks for North Northamptonshire are town based. Plans have been approved by the Council for Kettering and Corby; Plans for Wellingborough and Rushden are currently under development.



3.4.25 The LCWIP networks identified in these Plans are important components in the development of the NNG as they will allow the rural NNG to link into town LWC networks. Rutland has a county-wide LCWIP in development which will be useful to bring about cross boundary links.

3.4.26 Please see Figure 24 and 40 showing the existing cycle routes and proposed alignments from feasibility studies and the emerging LCWIPs. Where practicable, the NNG route alignments will adopt/incorporate these existing and proposed routes.

Rights of Way Improvement Plan 2020 - 2030

3.4.27 The Rights of Way Improvement Plan highlights that the rights of way network (and other routes segregated from the main carriageway) provides for a range of cycle users. This includes leisure seekers but importantly, such routes provide a safe alternative for less confident users who prefer not to cycle with motorised traffic and families with children too young to cycle on roads.

3.4.28 The growing demand for off-road recreational cycling across Northamptonshire is recognised as demonstrated through the popularity of cycling on routes such as the East Northamptonshire Greenway and the Brampton Valley Way.

3.4.29 A key aim of the Rights of Way Improvement Plan is for 'A safer, more connected and accessible network for all'. The Plan states:

"As we hope to make walking and cycling the natural choices for shorter journeys in Northamptonshire we need to remove the barriers people may face to using the rights of way network. The speed and volume of motorised traffic on the rural road network can deter vulnerable users; there are not enough routes connecting the places people live with the services they need, and parts of the network are off-limits to those who find structures such as stiles and steps too challenging".

3.4.30 The Plan observes that incomplete linkages between routes and substandard maintenance are an issue for cyclists. It goes on to note that maintaining the existing rights of way network to a standard where the network can safely be used by all users is a priority for the Council. It also recognises there is a necessity to balance maintenance with biodiversity and the needs of users when considering the design of routes, including the choice of surfacing materials.

3.4.31 The issues noted above could be alleviated through the development of the NNG. In the fulness of time, some of the principal routes could even become adopted as Public Rights of Way (PRoW) helping to grow the PRoW network.



3.5 North Northamptonshire Council's Culture, Leisure and Tourism

- 3.5.1 The NNG development work sits within the Culture, Heritage and Tourism Service for NNC, and this Strategy aligns neatly with the new county-wide Tourism Strategy adopted in January 2024 by both North and West Northamptonshire Councils. In January 2024, a long-term strategic business plan was agreed and signed off by NNC Executive. This document sets out the ambition the Council has to deliver the NNG in line with its other core service areas.
- 3.5.2 The Tourism Strategy seeks to both promote but also connect and make accessible the many wonderful destinations Northamptonshire has to offer including our towns and villages as well as the more obvious tourism spots like sporting venues and historic houses and buildings.
- 3.5.3 In addition NNC, through its Leisure service, is currently developing a new Active Communities Framework which includes an overarching strategy to increase physical activity across our population. Physical Activity is also one of the 5 new priorities being proposed for the new North Northamptonshire Health and Wellbeing Strategy. Increasing physical activity will have a positive impact on health outcomes, mental wellbeing and health inequalities. Active travel opportunities, which sit at the heart of the NNG Strategy is a key solution for increasing physical activity and wellbeing.

3.6 Localised work in North Northamptonshire

The Greenway and North Northamptonshire

- 3.6.1 The Greenway was an initiative at the former East Northamptonshire Council pre-Unitary when North Northants Council was formed in 2021. The East Northamptonshire Greenway's ambition was to connect Wellingborough to Peterborough through the Nene Valley. Various routes were opened through partners on the Greenway Board who owned the land and a significant section through Rusden, Higham Ferrers, Irthlingborough, Stanwick Lakes and north towards Thrapston is now a well utilised route for both leisure and commuter journeys.
- 3.6.2 Further spurs were delivered by parish and town council using the former East Northamptonshire Council's Community Facilities Fund to connect to the spinal Nene Valley Greenway corridor. Higham Ferrers Town Council, Woodford Parish Council and Warmington Parish Council all delivered routes and maintain them themselves.
- 3.6.3 These councils all had Greenway connections and increased opportunities for walking and cycling identified within their Neighbourhood or Community Plans. This approach allowed them to follow their less stringent procurement rules; use the evidence from their community consultation to support their bids; increase their precept for the future maintenance, gain the support and guidance from the local authority's Greenway Team; increase the Greenway network; develop a model that other town and parish councils can use.



Figure 3.5.1 shows the Woodford to the main Nene Valley Greenway opened in April 2017 funded through ENC's Community Facilities Fund.



Figure 3.5.2 shows the Higham Ferrers Town Council spur delivered to connect the existing Greenway to the north close to the local secondary school, funded through ENC's Community Facilities Fund.

- 3.6.4 In addition, working with the Wildlife Trust a route was opened with Section 106 monies in October 2019 to improve connectivity from the south of Irthlingborough to the main spinal Nene Valley corridor. This was of two-fold benefit: it provided an improved surface for users whilst also protecting the wildlife in the area from users straying from the official route.



Ise Valley Greenway

- 3.6.5 The Ise Valley Greenway (IVG) was presented as a flagship project in the Ise Valley Strategic Plan. It was identified, through desktop study and ground truthing, as a single and continuous active travel route from Wellingborough through Kettering and up to Corby along the Ise Valley. The route is for both leisure seekers and commuters and will be fit to accommodate pedestrians, cyclists, and wheelers.
- 3.6.6 To provide additional detail and indicative costs for the route, Waterman was commissioned to produce a feasibility study entitled the Ise Valley Greenway Interim Engineering Design Report (2022). The Report recognises that the exact determination of routes will be identified through detailed designs and informed by consultation with landowners (where appropriate) and local communities.
- 3.6.7 However, in the interim the Report identifies a long, Y-shaped route of approximately 35km. The route establishes links with the new garden communities of Weldon, Tresham Garden Village, Hanwood Park and Stanton Cross so they can easily access employment, essential services, schools and other key destinations. It also joins with the proposed Wellingborough to Rushden Greenway. In the long term, the IVG will form an integral part of the wider North Northamptonshire Greenway.

Rushden to Wellingborough Masterplan

- 3.6.8 The Rushden to Wellingborough Greenway linked is identified as a priority for North Northamptonshire Council, to link the two towns with Chester House Estate. Chester House Estate is equidistant between Rushden and Wellingborough, and is currently only accessible by road or by foot.
- 3.6.9 Sustrans was commissioned in July 2022 to undertake the Rushden and Wellingborough Masterplan which identifies how the Greenway can be developed through this intrinsically special landscape. Chester House Estate is a Scheduled Ancient Monument, sitting on the banks of the River Nene, opposite the Specially Protected Area to the north of the river.
- 3.6.10 Designing the route having due regard to the landscape and the necessary assessments that need to take place in order for this route to be delivered is challenging with significant costs. The Rushden to Wellingborough Masterplan is available as a separate document.
- 3.6.11 As of February 2024, work is being carried out to gain the necessary permissions, finance and assessments in order for planning permission to be sought in 2026/2027.

Design and capacity studies



3.6.12 Studies to look at how routes can be delivered to connect proposed developments; utilising former railways; connecting communities not yet served by the Nene Valley Greenway have also taken place during the East Northamptonshire Greenway time pre-Unitary. Where these now correspond with a route identified through this Strategy, that route number has been shown, and will be developed as a Design Recommendation Booklet as per this Strategy. All such studies done previously are outlined in the table below:

Table 3.5.12 Design and capacity studies

Route	Route number as per NNG Strategy	Type	Date of issue	Status as of February 2024
Wellingborough to Rushden	23a	Masterplan	May 2023	Draft to be presented to Executive
Oundle to Peterborough	17 & 18	Design Recommendation Booklet	October 2018	To be refreshed as part of NNG Strategy as an identified priority route
Corby/ Weldon to Tresham Garden Village	5	Design Recommendation Booklet	April 2018	To be refreshed as part of NNG Strategy as an identified priority route
Ise Valley Greenway (Corby-Kettering-Wellingborough)	10/12/24/	Interim design study	June 2022	Parts of the route are being updated to Detailed Design as of January 2023
Welland Valley Railway (Market Harborough to Peterborough)	FR	Design Recommendation Booklet	March 2005	Requires an updated study



Slate Trail (Easton on the Hill- Collyweston-Duddington) to connect to Stamford and King's Cliffe	8	Design Recommendation Booklet	November 2023	Liaison with private landowners as at February 2024
---	---	-------------------------------	---------------	---

North Northamptonshire Green Infrastructure Delivery Plan 2014

- 3.6.13 As noted above, the North Northamptonshire Joint Core Strategy identifies the green infrastructure (GI) corridors for the area. The North Northamptonshire Green Infrastructure Delivery Plan (NNGIDP) was developed to set out how green infrastructure will be delivered in North Northamptonshire. It includes details of known projects some of which are supported by cost estimates.
- 3.6.14 The North Northamptonshire Greenway is identified as one such project with the following vision: "A network of safe, non-motorised green corridor routes between Rushden, Higham Ferrers, Irthlingborough, Irchester and Wellingborough, suitable for use by cyclists, walkers and wheelchair users".
- 3.6.15 The NNGIDP is now quite dated, some projects have been delivered and others taken forward through other plans and strategies including the Ise Valley Strategic Plan (see below). Furthermore, it is clear through the development of this Masterplan, that the ambition for a NNG has grown.
- 3.6.16 The emerging North Northamptonshire Local Plan will revisit how the enhancement of existing and development of new GI will be addressed. This will take account of the new Natural England Principles and Standards to be applied in North Northamptonshire's approach. It will be an opportunity to use the evidence set out in this Masterplan to draw the concept of GI and the NNG closer together to bring about joint benefits.

Local Level Green Infrastructure Corridors

- 3.6.17 Wellingborough, Kettering and Corby towns sought to connect with the wider, rural GI corridors to enable a town to country connectivity. Through individual green infrastructure plans they identified new GI corridors to achieve this. Further details can be found in:
- Spatial Analysis of Green Infrastructure Resources in Wellingborough Town (2016);
 - the Green Infrastructure Delivery Plan for Kettering Borough (2018) and
 - North Northamptonshire Green Infrastructure: Local Framework Study for Corby (2005).



- 3.6.18 These GI corridors have the potential to be important components in the development of the NNG. They provide an opportunity to realise the ambition of town to country links; connectivity from town GI corridors to the rural NNG and, unlike the more urban local walking and cycling routes, (see LCWIPs) these corridors are intended to have a more ‘off-road’ naturalized feel to them.

Ise Valley Strategic Plan (2022)

- 3.6.19 Developed by the River Ise Partnership, the Ise Valley Strategic Plan (IVSP) is a large-scale programme to enhance the quality of the valley’s natural environment and help improve its resilience to climate change. The Plan was approved by NNC Executive in June 2022 as a tool with which to secure funding to develop and deliver projects that enhance the Ise Valley.
- 3.6.20 The Ise Valley Greenway was developed as a flagship project in the IVSP. It is a long, Y-shaped route of approximately 35km providing a single and continuous active travel route from Wellingborough through Kettering and up to Corby along the Ise Valley. A feasibility study, the Ise Valley Greenway Interim Engineering Design Report (2022) has been produced by Waterman to provide additional detail and indicative costs with respect to delivering the route. In the long term the IVG will form part of the wider NNG.

Nene Valley Sense of Place Toolkit

- 3.6.21 The River Nene flows out of the hills of West Northamptonshire through a long valley that stretches the length of the county to Peterborough. The Nene Valley Design Toolkit has been produced to engage people with the landscape through promotion and branding of the Nene Valley and outlines high-level guidance for placemaking and public realm improvements.



3.7 Conclusion

- 3.7.1 The policy review demonstrates that there is significant policy support for a strategic active travel network at a national, regional and local level. Nationally, the CWIS sets the overarching targets for increasing active travel journeys while the NPPF and LCWIP guidance sets out how local authorities should plan for active travel and Gear Change and LTN1/20 set the design standards. At a regional level, the EEH Active Travel Strategy and Oxford-Cambridge Arc Spatial Framework show the importance of cross-boundary connections. There is a wealth of local policy supporting the development of active travel routes and green (and blue) infrastructure across North Northamptonshire generally and the North Northamptonshire Greenway specifically, ranging from the North Northamptonshire JCS, Infrastructure Delivery Plan, Investment Framework, Green Infrastructure Delivery Plan and Local Transport Plan at the most strategic level all the way down to Part 2 Local Plans, neighbourhood plans, LCWIPs and feasibility studies which identify specific routes.
- 3.7.2 The NNG will align with, and build upon this wealth of supporting policy, incorporating existing proposals and routes within the strategic network and where possible, filling in gaps and developing cross boundary connections to provide a cohesive network of routes.



4 Vision and objectives

4.1.1 It is important to have a clear vision and objectives for the NNG to guide the development of the network including funding bids, discussions with developers, route prioritisation and scheme design and delivery.

4.2 Vision

The vision has been informed by discussions with a wide range of stakeholders (see list in Appendix A) as well as planning policy in the JCS and Part 2 Local Plans and associated evidence base documents. The agreed vision for the NNG is:

The North Northamptonshire Greenway will be a strategic rural network of safer, largely traffic-free routes suitable for walkers, wheelers, cyclists and equestrians where appropriate, connecting settlements, employment, leisure and tourism destinations across North Northamptonshire and beyond.

4.3 Objectives

Key objectives of the NNG are to:

- Enable people to choose to walk, wheel or cycle for a range of trip purposes including school, commuting, every day and leisure trips.
- Deliver an accessible, inclusive active travel network in line with current design standards in terms of coherence, directness, safety, comfort and attractiveness.
- Help to deliver North Northamptonshire's Green Infrastructure network including the Ise and Nene Valley Corridors, with a target of delivering at least 10% Biodiversity Net Gain.
- Improve the tourism offer across North Northamptonshire, with connected market towns, nature reserves and tourism sites and circular routes.
- Improve the vitality of North Northamptonshire's towns, aiding local businesses by improving access for commuters and shoppers.
- Provide safe routes to schools.
- Provide additional sustainable transport options for residents who don't own a car.



5 Baseline analysis

5.1 LCWIP process overview

- 5.1.1 As set out in Chapter 2, this Strategic Masterplan for the North Northampton Greenway follows the DfT guidance on preparing LCWIPs. A Local Cycling and Walking Infrastructure Plan (LCWIP) is a long-term strategic programme which is part of the Government's policy to have cohesive Active Travel (AT) networks established in order to meet the objectives set out by the Department for Transport's (DfT) 2020 Gear Change ambition.
- 5.1.2 The aim of an LCWIP is to create a network of high-quality active travel routes that are direct, safe, accessible, coherent and comfortable for all potential user groups, ensuring active travel is the natural choice for short journeys. This provides the added benefits of improving mental and physical health, air quality and reducing congestion by encouraging people to leave their cars at home more often.
- 5.1.3 LCWIPs provide an evidence-based prioritised list of improvements which support funding applications. They can guide strategic funding decisions to ensure active travel investment unlocks the most benefits for local people. The DfT technical guidance for authorities developing an LCWIP sets out a methodical approach to the planning and delivery of cycling and walking infrastructure. It breaks down the process into six steps which can be viewed in Table 5-1 below. Given the strategic nature of the North Northamptonshire Greenway, LCWIP stage 4 – Network Planning for Walking is not appropriate and has been omitted from the study. Instead, walking will be considered in the design recommendation for the identified routes.

Table 5-1.3: LCWIP stages from DfT technical process guidance

LCWIP 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.



- 5.1.4 LCWIPs should be evidence-led and comprehensive. An LCWIP should identify a pipeline of investment so that over time, a complete cycling network is delivered at an appropriate geography (see step 1 – determining scope) and that walking and cycling improvements are delivered coherently. The goal of an LCWIP should be to grow cycling and walking mode share, which means looking at routes and areas where more people could choose these modes in preference to other means of travel. Therefore, an LCWIP should consider travel demand regardless of mode, rather than looking just at existing walking and cycling trips.
- 5.1.5 The North Northamptonshire Greenway is in essence a rural LCWIP. It identifies the routes outside of the main towns which are a priority to develop to ensure connectivity from urban to rural, rural to rural and rural to urban. Although many of the measures highlighted through LTN1/20 cannot always be delivered on rural routes due to the sensitivities of the landscape, the principles of identifying demand have been followed to ensure there is a network of routes both urban and rural for future generations.
- 5.1.6 It should be noted that Urban LCWIPs should be considered as predominantly a “hard LCWIP” with Rural LCWIPs being “a softer LCWIP”. Both are developed using the same framework and share the same outcomes. Due to current funding being predominantly urban focussed, delivery of the NNG will take time. Other considerations also need to be highlighted for rural LCWIPs such as:
- Due to the landscape access may not always be available 365 days a year e.g. in a flood zone
 - Surface material will vary subject to the landscape, sensitivity of the surrounding area
 - Routes may not always been open 365 days a year due to factors including diversion, redevelopment, harvest, logging, flooding
 - It may not always be appropriate for all types of users
 - Furniture needs to accommodate the intended users
 - Each route has its own challenges. There is no prescriptive way of delivering Greenways, they are subject to many factors including private landowners, rights of ways, protected status
- 5.1.7 With the above in mind, North Northamptonshire Council sees the development of the Greenway as an equal to a LCWIP and as important to ensure connectivity for our residents.



5.2 Stakeholder Engagement

- 5.2.1 Local Cycling and Walking Infrastructure Plans (LCWIPs) were introduced to support the Cycling and Walking Investment Strategy (CWIS) by enabling local stakeholders to identify and prioritise infrastructure improvements that will make walking and cycling the natural choices for shorter journeys or as part of a longer journey.
- 5.2.2 Realising the ambition of the CWIS will take sustained investment in cycling and walking infrastructure and partnership working with local bodies, the third sector and the wider public and private sector to build a local commitment to support this national Strategy. Stakeholders are therefore fundamental to the generation and delivery of the LCWIP.
- 5.2.3 Stakeholders were identified by officers at North Northamptonshire Council and included all members of the North Northamptonshire Greenway Board which includes councillors, officers from across the Council (including public rights of way, planning, highways etc), Sustrans, National Highways, Natural England, Nene Rivers Trust, Environment Agency, and the Wildlife Trust.
- 5.2.4 Stakeholder engagement has taken place throughout the development of this Strategic Masterplan with workshops at three key stages:
- 1 Early in the process to agree the geographic scope, establish the vision, sense check the baseline analysis, agree the draft straight-line network, and wider issues to address through the plan.
 - 2 Mid-way through the project to agree the route alignments and identify prioritisation criteria.
 - 3 Towards the end to sense check the final network and prioritised routes.
- 5.2.5 In addition to the three workshops, additional meetings (via Teams and on site) and email exchanges were undertaken as required to explore specific issues. The stakeholder workshops were particularly useful to confirm the geographic scope of the Strategic Masterplan including key cross boundary links and the overarching vision including the focus on traffic-free routes and leisure and tourism in more rural parts of North Northamptonshire.

5.3 Local context

- 5.3.1 North Northamptonshire is a unitary authority which was created in 2021 along with West Northamptonshire Council. The two unity authorities replaced Northamptonshire County Council which was abolished in 2021. North Northamptonshire's principal towns are Kettering, Corby and Wellingborough but there are a number of smaller town settlements such as Rushden, Raunds, Desborough, Rothwell, Irthlingborough, Thrapston and Oundle. The former East Northamptonshire area is predominantly rural, particularly when compared to other parts of North Northamptonshire Please see Figure 42; a full set out plans is provided in Appendix B.



New development

- 5.3.2 There is significant new development planned across North Northamptonshire; Hanwood Park (Kettering East), Stanton Cross (Wellingborough East), Priors Hall (Northeast Corby), Tresham Garden Village, Rushden East Sustainable Urban Extension and Rushden Lakes retail and leisure park. Please see Figure 14 &15 Planned new development.

Census data

- 5.3.3 Census data has been used to understand the baseline for active travel across North Northamptonshire. In general, this study uses 2011 Census data as the 2021 Census was undertaken during the Covid-19 pandemic when the country was in lock-down and most people could not travel to work. Figure 5-3 illustrates the percentages of walking and cycling mode share for journeys to work by Middle Super Output Area (MSOA) in North Northamptonshire, as recorded in the 2011 Census.
- 5.3.4 As would be expected, urban areas present higher percentages of walking and cycling as a method of travel to work than rural areas in North Northamptonshire. Accordingly, the map shows that more rural areas have mode shares between 7.5% - 15% for walking and cycling, areas in and around North Northamptonshire's principal towns record higher percentages ranging between 20% - 25%. Smaller settlements and more rural areas such as Rushden, Raunds, and around Oundle and Warmington also show higher mode shares. MSOAs with relatively high percentages of walking and cycling may demonstrate proximity to employment sites. Conversely, those areas with lower percentages may reflect longer distances to employment sites, but also poor levels of active travel infrastructure provision. Please see Figure 24 Journey to work mode share by walking and cycling.
- 5.3.5 Census data on distance travelled to work shows that while there is a higher proportion of shorter commutes in larger towns such as Corby and Kettering, there is still a good proportion of commutes in the 0-5km range in the more rural parts of the North Northamptonshire that could be walked or cycled (approximately 30.6% in rural areas compared to 45.9% in urban areas). Please see Figure 24 Journey to work- distance to work.

Collisions

- 5.3.6 Figure 25 shows collisions involving pedestrians and cyclists between 2017-2021. Unsurprisingly, there are clusters of collisions in the more urban areas where walking and cycling levels are highest but there are also collisions in more rural areas of North Northamptonshire where pedestrian and cycle flows are much lower, particularly along the main road corridors. Please see Figure 25 Collisions involving pedestrians and cyclists.



Cycling catchments

- 5.3.7 30-minute (9.65km) cycling isochrones from some of the key settlements (including settlements in neighbouring areas) were generated in ArcGIS. This shows lots of overlapping cycling catchments around the more urban part of the area such as around Kettering, Corby and Desborough whereas there are gaps between Thrapston and Corby and between Oundle and Stamford due to the more rural nature of these parts of North Northamptonshire. Please see Figures 31,32 & 33 Cycling isochrones.

Terrain

- 5.3.8 Terrain is a key consideration in the development of the NNG and how the preferred alignments are routed – severe or constant gradients can reduce the accessibility for some users. The plan clearly highlights the importance of the Nene and Ise in defining the topography of North Northamptonshire. Please see Figures 11 & 12 Terrain plans.

Severance

- 5.3.9 Understanding the impact of severance is critical for contextualising how walked, wheeled and cycled trips are currently made through North Northamptonshire, particularly in relation to key severance features including main roads, rivers, railway lines and other geographical features including steep topography.
- 5.3.10 Figure 13 was developed to highlight the key ‘Severance’ features in the County: ‘Severance’ typically refers to barriers to movement, and we typically consider these as either ‘hard’ or ‘soft’ features. ‘Hard’ severance features tend to refer to features which are fixed and generally harder (although not impossible) to overcome through design (e.g. rivers and railways), whilst ‘Soft’ severance is more likely to refer to a feature which is easier to overcome/relocate (e.g. use of lower speed/ trafficked roads or relocating existing crossing points).
- 5.3.11 The plan highlights several key severance features including; various A roads, the Rivers Nene and Ise, and railway lines. The extent to which these features act as barriers to movement is very site specific however the purpose of this plan is to identify these features and consider them later in the project when developing ‘on the ground’ route alignments. Please see Figure 13 Severance.

5.4 Demand analysis

- 5.4.1 The Propensity to Cycle Tool (PCT) (www.pct.bike) is a nationwide model that identifies where increases in the rates of cycling can be expected through the provision of better infrastructure. It uses census travel to work data and school travel data and looks at trip distances to see where there may be scope for more short journeys to be undertaken by cycling. The PCT is a critical tool in the development of the LCWIP cycling networks and provides a framework of demand for identifying



the location of future desire lines for cycling. The PCT uses 2011 census data uplifted with current population estimates and consented and proposed development.

Propensity to Cycle Tool – Commuter Travel

- 5.4.2 The PCT commute layer provides scenarios for forecasting future levels of cycling which range in ambition from the 'Government Target' (based on doubling cycling set out in the 2014 draft Cycling Delivery Plan), 'Gender Equality' (where women are as likely as men to cycle), 'Go Dutch' (uses Dutch propensities to cycle) up to the 'E-Bike' scenario (builds on the 'Go Dutch' assumptions but also takes account of the role that electrically assisted cycles can play in facilitating longer distances and hillier routes). For the purposes of the North Northamptonshire Greenway, the e-bike scenario has been used to reflect the rural nature of the area where e-bikes are likely to need to play an important role in enabling more cycling.
- 5.4.3 Figure 26,27 &28 shows the straight-line network generated by the PCT analysis which shows direct paths between population centroids (origins) and destinations, giving an overview of the key desire lines for cycling flows. This suggests that the main demand for commuting is in the main towns but does show some demand between Oundle and King's Cliffe and Oundle and Warmington, for example. Please see Figure 5.4 Propensity to Cycle Tool commuter travel.

Propensity to Cycle Tool – School Travel

- 5.4.4 The PCT schools layers uses 2011 National School Census travel-to-school data. The schools layer extends and complements the Commute layer by putting a greater emphasis on local trips in residential areas as opposed to arterial routes into city centres. The schools layer can therefore help plan for cycling (and walking) at the neighbourhood level, and is often a better proxy for local trips than the Commute layer for 'everyday' trips.
- 5.4.5 As with the Commute layer, the schools layer has a range of scenarios for forecasting future levels of cycling, including the 'Government Target' (which represents a doubling of school cycling nationwide to 3.7%), 'Go Cambridge' (based on cycling levels among school children in Cambridge (21.5%)) and 'Go Dutch' (based on travel to school trips in the Dutch Travel Survey (41%)). The 'Go Dutch' scenario has been selected for the North Northampton Greenway as it provides the most ambitious scenario. The analysis shows in Figure 5-10 shows demand between Earls Barton and Wollaston, between Desborough and Rothwell and around Oundle as well as in the major towns. Please see Figure 28 Propensity to Cycle Tool school travel.



'Everyday' trips analysis

- 5.4.6 As noted above, one of the limitations of the PCT Commute layer is the lack of detail on short 'everyday' trips that account for around two-thirds of short journeys such as shopping, visiting friends or going to the doctor. While the PCT Schools layer addresses this lack of detail to a certain extent, PJA has developed an additional layer of analysis to further understand the potential for short journeys by cycling which is particularly useful in smaller towns and rural areas.
- 5.4.7 In order to determine the key desire lines for 'everyday' walking and cycling such as such as to work, school and the shops, the spatial relationship between key origin and destinations was analysed. First, a 0.5km² hexagon grid was applied and origin clusters of LSOA centroids and future housing development with 100 or more residential dwellings were identified. Please see Figure 29 Everyday trips "Origin cluster".
- 5.4.8 Second, two classes of destinations were identified (see Figure 30):
- Class 1: key employment sites, local, town and village centres
 - Class 2: education (primary and secondary schools), healthcare facilities (hospitals, GP practices, dentists), community centres, leisure facilities, supermarkets etc. Please see Figure 5.4.3 Everyday trips-destinations by class.
- 5.4.9 Given the rural nature of the area and the potential for leisure trips, it is appropriate to look at longer distances than a standard LCWIP would use. Origin–destination desire lines were therefore created from each origin centroid to the nearest Class 2 destination, and to all Class 1 destinations between 5-10km and 10-20km. Clustering analysis was used to cluster desire lines together and identify the routes with the highest demand for 'everyday cycling' (Figures 5.4.4 and 5.4.5). The analysis demonstrates that for trips between 5-10km demand is mainly around the bigger settlements but does show some demand between Tresham Garden Village and Oundle, Oundle and King's Cliffe. At 10-20km, the analysis shows demand between Oundle and Peterborough, Corby and Stamford etc as well as within and between the more urban parts of North Northamptonshire. Please see Figure 31 & 33 "Everyday" cycling desire lines 5-10km and Figure 32 & 33 10-20km.



Strava Metro

- 5.4.10 Strava Metro provides the data collected by individuals using the Strava app to track their rides, runs and walks, to local authorities free of charge to help them understand mobility patterns and inform investment in infrastructure. By its nature, the dataset has limitations and should not be viewed as comprehensive in terms of the types of journey being undertaken or the absolute numbers. For example, it only represents people who use Strava and only rides that they choose to record; short trips or cycle trips to the shops are not likely to be recorded. While the data doesn't reliably indicate demand, it can highlight severance by showing routes and areas that cyclists avoid. It can also help build a wider picture of routes that are currently cycled, particularly leisure cycling which is not captured in the PCT.
- 5.4.11 The Strava Metro analysis shows that there are relatively high existing levels of cycling trips (given the rural context) around Oundle and King's Cliffe (see Figure 5-15). 73% of the Strava Metro trips in North Northamptonshire are for leisure purposes which helps justify an approach that considers leisure cycling and longer distance cycling. In conjunction with the severance plan (see Figure 5-8) this can help identify key severance such as around the Corby, Kettering and Wellingborough areas where main roads create hostile conditions for cycling. Please see Figure 34 Strava cycle trips per day 2022.

Combined demand analysis

- 5.4.12 Figure 35 combines the PCT commute layer, 'everyday trips' and Strava Metro data to show where the three types of analysis overlap in order to help identify where there is most demand/pro propensity to cycle considering all journey types including commuting, school, everyday journeys such as to the shops, and leisure. The red hexagons are where the most types of analysis overlap and are, unsurprisingly, concentrated around the main towns but also demonstrate the value in providing routes around Earls Barton, Raunds, Tresham Garden Village, Rushden and Higham Ferrers (which already benefit from greenway routes). Please see Figure 5.4.7 Combined demand analysis.



6 Network Planning

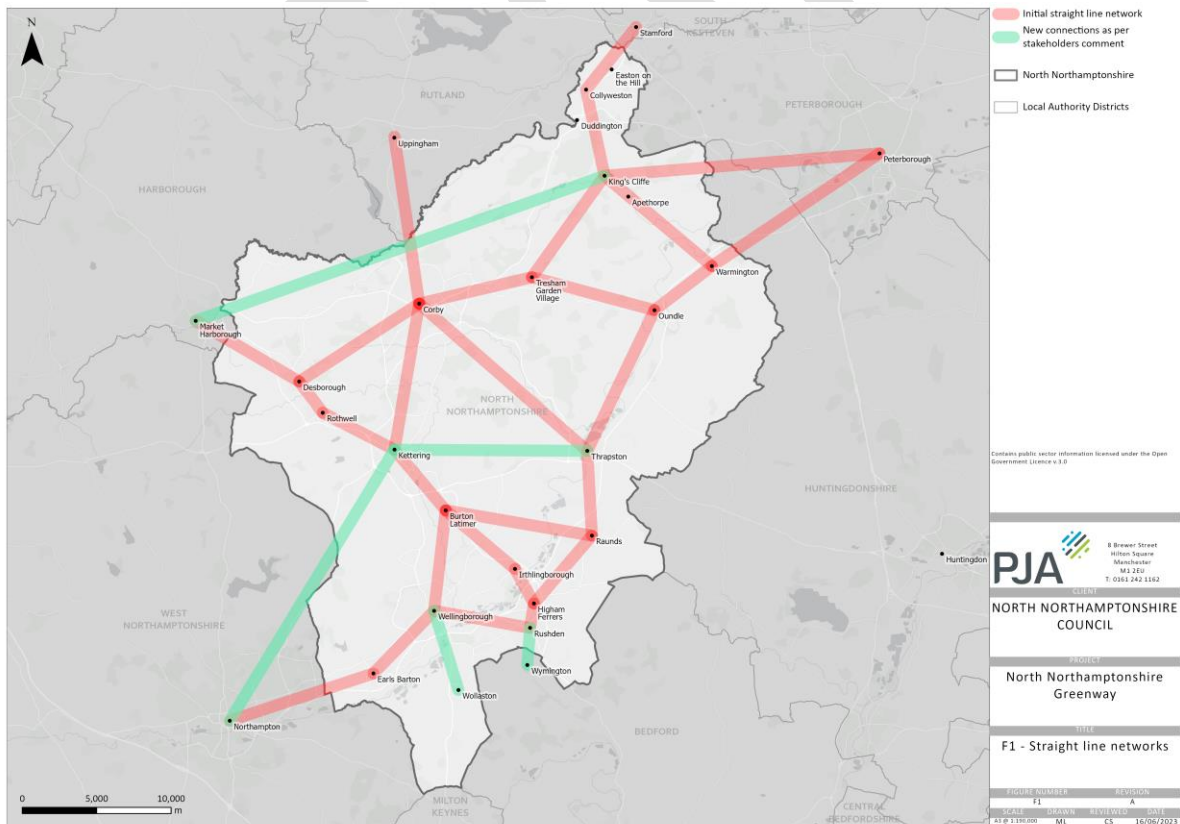
6.1.1 The outputs from the data analysis presented in Chapter 4 and stakeholder feedback were used to draft the network. Initially, a straight-line network was developed to agree the key connections. Following this high level route alignments were identified in line with the vision and objectives set out in Chapter 5.

6.2 Straight-line Network

6.2.1 The outputs from the analysis presented in Chapter 4 were used to draft the proposed NNG 'straight-line' network connecting key settlements and destinations across North Northamptonshire.

6.2.2 These desire lines reflect the outcomes from the baseline and demand analysis and incorporate feedback from officers and stakeholders. The green lines on the plan show the desire lines added to the straight-line network as a result of stakeholder feedback. With rural networks, the demand analysis is only as good as the available data which can be patchy and unreliable in rural areas. Therefore, local insights on key routes are important and are as valid as routes identified through the data to develop robust networks.

Figure 6.2: Straight line network following stakeholder feedback





6.3 Defining Route Alignments

6.3.1 Following agreement of the straight-line network, the route alignments were developed in line with the following considerations:

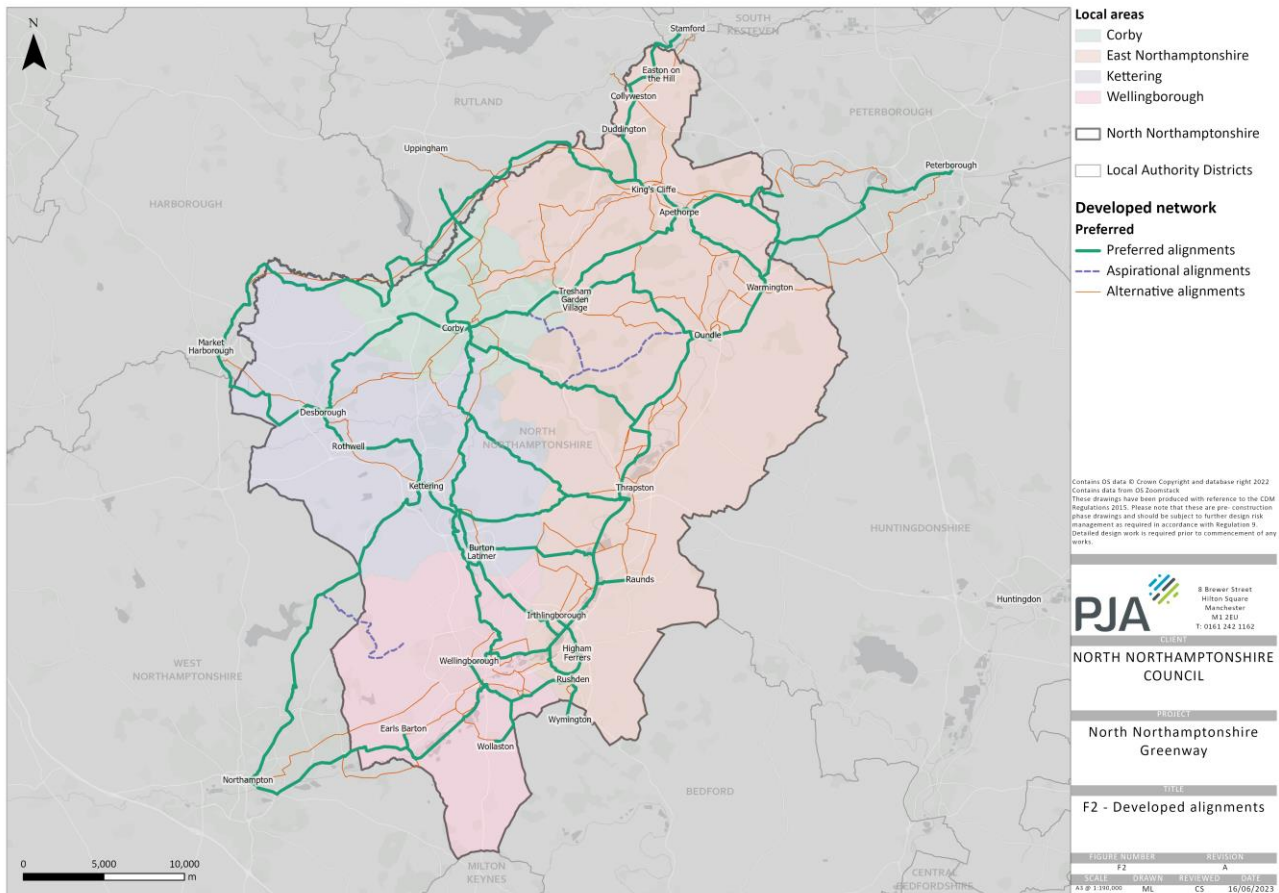
- Draft straight-line network;
- Stakeholder feedback on draft straight-line network;
- Stakeholder feedback that the network should be traffic-free where possible;
- Topography and ‘severance’ e.g. main roads and watercourses;
- Align with existing proposed routes where possible e.g. existing LCWIP routes, feasibility studies;
- Align with Green Infrastructure corridors where possible;
- Following existing Public Rights of Way where possible (new sections proposed where required); and
- Routes aim to strike a balance of the five core design principles: coherent, direct, safe, comfortable and attractive.

6.3.2 Draft route alignments were developed and issued to stakeholders for comment. Following stakeholder feedback, the alignments were refined as shown in Figure 6-2 to create the finalised network that is approximately 356km long. Key changes included:

- Including an additional alignment between Corby and Thrapston via Sudborough and Brigstock.
- Amending the alignment between Kettering and Wellingborough to more closely follow the Ise Valley feasibility study route.
- Adding in the Welland Valley route between Market Harborough and Peterborough along the line of the former railway due to strong stakeholder support for it as a leisure route.
- Adding a direct route alignment between Kettering and Northampton.



Figure 6.3: Finalised route alignments



6.3.3 In total, the proposed network is 356km and connects settlements within North Northamptonshire and in neighbouring authorities with a combined population of 600,000. The total network within North Northamptonshire is 275km comprising existing greenways, routes proposed in LCWIPs and new routes. Excluding the LCWIP routes, the proposed network within North Northamptonshire is 212km long demonstrating the scale of Greenway network.

6.3.4 High level route typologies and key point interventions were also developed (Figure 6.4). The plan shows that much of the proposed network is traffic-free in line with stakeholders' aspirations. However, to balance this with considerations such as directness, topography and the existing network of roads and Public Rights of Way, in some cases proposals shows routes along quietways /rural lanes/shared use footway/cycleways and protected cycling infrastructure in more urban parts of the network. The design considerations are explored further in Chapter 7.



7 Delivering the network

7.1 Creating new traffic-free routes

7.1.1 A large proportion of the proposed network is traffic-free, utilising mostly existing public rights of way including footpaths and bridleways but also, in some cases, proposing new routes. Therefore, a key element of future feasibility studies that will be required to progress the routes will be understanding the status of routes (variables listed below), refining alignments and identifying the most appropriate mechanism for changing the status of routes, where necessary.

7.1.2 There are a number of mechanisms for creating new traffic-free routes for walking, wheeling, cycling and, where relevant, horse riding, including:

- Public path creation agreements;
- Landowner dedication;
- Public path creation orders;
- Compulsory acquisition of land;
- Upgrading existing public footpaths;
- Creating high rights for a public footpath;
- Use of Traffic Regulation Orders;
- Highways maintainable at the public expense;
- Permissive access;
- New development; and
- The Environmental Land Management Scheme and Right to Roam

7.1.3 Further details about these options with relevant case studies are provided in Appendix C.

7.2 Route typologies

7.2.1 High level design proposals for the NNG fall into four main categories:

- **Greenway/ traffic-free:** These are routes that are separate to the highway. As noted above, this is a major proportion of the network and ranges from minor upgrades to existing traffic-free routes to upgrading existing bridleways to creating new Public Rights of Way where needed to create more direct routes. The design of traffic-free routes can vary depending on the context such as how rural or urban a route is, and forecast flows of pedestrians, cyclists and horse riders. Therefore, there is a large range of costs within this route typology.
- **Quietway/ rural lane:** These routes generally follow minor roads and lanes comprised mainly of B/ unclassified roads located in-between the main road network connecting smaller



villages and destinations but can also include quieter residential streets within towns and villages. For rural lanes, routes are normally national speed limit (60 mph) with no existing pedestrian or cycling provision. The design scope on some of these routes is limited due to constrained highways environments where reducing traffic speed and sometimes volume is the main approach. However, it is relatively common to have wide grass verges alongside rural lanes across North Northamptonshire meaning there is potential to create pedestrian and cycle infrastructure alongside some routes though at much greater cost than accommodating pedestrians and cyclists in the carriageway.

- **Shared use paths alongside main roads:** Where it is not feasible to deliver traffic-free routes or routes along quiet lanes, widening existing footways to create shared use paths alongside main roads outside built up areas where flows of both pedestrians and cyclists are relatively low can be a cost-effective option to deliver parts of the network.
- **Routes on main roads:** In more built-up areas where pedestrian and cycle flows are too high for shared use footpaths, protected cycling infrastructure should be provided within the carriageway. These routes are focussed on the existing main road network comprising of both A and B roads within towns. Most of these types of routes are covered in existing LCWIPs and are therefore not duplicated here but there are a small number of sections of route where this typology is appropriate.

7.3 Design interventions

- 7.3.1 This section is intended to provide a range of design approaches based on the typologies identified above. The toolkit uses a range of different scales and scenarios to inform the development of the NNG. It uses best practice examples to help illustrate typical approaches and includes examples of best practice from schemes elsewhere in the UK, internationally and, where possible, locally. There are many good examples nearby such as the Waddesdon Greenway in Buckinghamshire and Lias Line in Warwickshire which can be used as inspiration for future routes.
- 7.3.2 The intention is that the design toolkit is used to inform and provide a range of options which will need more detailed consideration including site audits and engagement with stakeholders and landowners (where applicable).



Link Interventions

- 7.3.3 Link interventions will represent a majority of the NNG and therefore are the most important area for design consideration. There are a range of options, including traffic-free routes, shared use paths and quiet lanes.
- 7.3.4 Availability of route options, and any mixing with/exposure to vehicular traffic will be key considerations in the development of the linear sections of the network. The design of any protected facilities should consult the recent LTN 1/20 on 'Cycle Infrastructure Design' to ensure that any proposed facilities are appropriate for their design context. The below table from LTN 1/20 summarises the cycle infrastructure required relative to vehicle speeds and speed limits. The table highlights how many scenarios will require protected cycle facilities in some form unless vehicle speeds and traffic flows are particularly low (ideally below 20mph and 2,000 vehicles per day).
- 7.3.5 Some link intervention examples are shown in Figure 7-1 below and expanded upon in Appendix G.

Table 7.3.5: Appropriate protection from motor traffic on highways from LTN1/20

Speed Limit ¹	Motor Traffic Flow (pcu/24 hour) ²	Protected Space for Cycling			Cycle Lane (mandatory/ advisory)	Mixed Traffic
		Fully Kerbed Cycle Track	Stepped Cycle Track	Light Segregation		
20 mph ³	0	Green	Green	Green	Green	Green
	2000	Green	Green	Green	Green	Green
	4000	Green	Green	Green	Green	Yellow
	6000+	Green	Green	Green	Green	Pink
30 mph	0	Green	Green	Green	Yellow	Yellow
	2000	Green	Green	Green	Yellow	Yellow
	4000	Green	Green	Green	Yellow	Pink
	6000+	Green	Green	Green	Yellow	Pink
40 mph	Any	Green	Yellow	Yellow	Pink	Pink
50+ mph	Any	Green	Pink	Pink	Pink	Pink

- Provision suitable for most people
- Provision not suitable for all people and will exclude some potential users and/or have safety concerns
- Provision suitable for few people and will exclude most potential users and/or have safety concerns

Notes:

1. If the 85th percentile speed is more than 10% above the speed limit the next highest speed limit should be applied
2. The recommended provision assumes that the peak hour motor traffic flow is no more than 10% of the 24 hour flow
3. In rural areas achieving speeds of 20mph may be difficult, and so shared routes with speeds of up to 30mph will be generally acceptable with motor vehicle flows of up to 1,000 pcu per day



Figure 7.3.3: Link intervention examples



Area-Based Interventions

- 7.3.6 The predominant focus of the NNG is to provide linear routes for walking, wheeled and cycled trips but there are many locations which would benefit from more holistic street design changes to reduce the impact of vehicular traffic. There are also more discreet elements of street design and placemaking that could be incorporated on the minor roads within the network that would help calm traffic and generally make conditions more comfortable for on-street cycling.
- 7.3.7 Reducing the scope for conflict between cyclists and vehicular traffic is a critical consideration in the development of a comfortable network, particularly on narrow rural lanes where there is limited design scope for providing protected facilities. The ‘quiet lane’ approach is based upon the assumption of low volumes of vehicular traffic and can be further reinforced with modal filters to remove through traffic.
- 7.3.8 These measures therefore are generally more targeted measures for smaller locations - predominantly smaller settlements within the county. These include:
- Area-wide speed limit reductions
 - Traffic calming
 - “Traffic in Villages” type approaches.

7.3.9 Some area-based intervention examples are shown in Figure 7.3.6 below and expanded upon in Appendix G.

Figure 7.3.6: Area-based intervention examples



Spot Interventions

7.3.10 Spot Interventions are measures which are utilised on a site-specific application. They are particularly focused on crossings and junction improvements, as well as other complementary measures such as cycle parking, lighting, artwork and dedicated infrastructure such as ramps and bridges. This category can also include fencing, lighting, retaining structures and drainage. Table 7-2 below from LTN1/20 summarises the type of crossing relative to vehicle speeds and speed limits. In rural areas where routes often need to cross fast, busy A roads, this will often require crossings to be grade separated (e.g. bridges or subways) or speed limits to be reduced so that signalled crossings can be provided.

7.3.11 Some spot intervention examples are shown in Figure 7.3.10 below and expanded upon in Appendix F.



Table 7.3.6: Crossing design suitability table from LTN1/20

Speed Limit	Total traffic flow to be crossed (pcu)	Maximum number of lanes to be crossed in one movement	Uncontrolled	Cycle Priority	Parallel	Signal	Grade separated
≥ 60mph	Any	Any	Yellow	Yellow	Yellow	Yellow	Green
40 mph and 50 mph	> 10000	Any	Yellow	Yellow	Yellow	Green	Green
	6000 to 10000	2 or more	Yellow	Yellow	Yellow	Green	Green
	0-6000	2	Yellow	Yellow	Yellow	Green	Green
	0-10000	1	Yellow	Yellow	Yellow	Green	Green
≤ 30mph	> 8000	> 2	Yellow	Yellow	Yellow	Green	Green
	> 8000	2	Yellow	Yellow	Yellow	Green	Green
	4000-8000	2	Yellow	Yellow	Yellow	Green	Green
	0-4000	2	Yellow	Yellow	Yellow	Green	Green
	0-4000	1	Yellow	Yellow	Yellow	Green	Green

- Provision suitable for most people
- Provision not suitable for all people and will exclude some potential users and/or have safety concerns
- Provision suitable for few people and will exclude most potential users and/or have safety concerns

Notes:

1. If the actual 85th percentile speed is more than 10% above the speed limit the next highest speed limit should be applied
2. The recommended provision assumes that the peak hour motor traffic flow is no more than 10% of the 24 hour flow

Figure 7.3.10: Spot intervention examples





7.4 Other design considerations

Circular routes

7.4.1 Providing circular routes was identified as a priority by stakeholders but, by their nature, they do not in themselves deliver strategic connections or lend themselves to identification through demand analysis. Therefore, the development of circular routes will require a different approach to the strategic walking and cycling routes as they serve a very different purpose with key considerations including:

- Facilities at the start/end point, e.g. car parking, cycle hire, toilets, café;
- Accessibility including potential use by disability organisations and charities;
- Attractiveness;
- Thing to see and do along the way;
- Distance(s).

7.4.2 It is anticipated that key stakeholders such as tourism and leisure operators will have a large input into the identification of potential routes. However, where possible, it is recommended that these build on or overlap with existing and proposed routes in this strategy and existing public rights of way so that they can be created through signage and wayfinding rather than requiring additional investment in infrastructure.

Maintenance

7.4.3 It is important that infrastructure is maintained properly, including both day-to-day and long-term maintenance. Day-to-day maintenance includes sweeping leaves, cutting back vegetation, gritting and addressing graffiti and vandalism, which can have a big impact on the attractiveness and utility of routes. Long term maintenance should also be considered in the design, particularly given the pressure on revenue budgets with higher quality, durable materials selected over cheaper products which are likely to need replacing more frequently. For example, although they are much more expensive to construct, bound surfaces such as bitmac or Flexipave® will have a much longer lifespan and require much less maintenance than crushed stone surfaces and are much more accessible and comfortable. Where bridleways are part of the route, or the route is expected to be well-used by horse riders, Flexipave® is preferred over bitmac as it is grippier and more forgiving. Where there is adequate width, a grass “trotting strip” adjacent to the main route could be considered (see Figure 7-4 for examples of different surface types).

7.4.4 Bespoke seating, signage and artwork can make nice additions to routes but the cost and ease of ongoing maintenance should always be factored in.



7.4.5 Spending more upfront in capital funding can reduce demands on revenue funding in the long term. It is important to engage with maintenance teams in the design of schemes to ensure they can efficiently maintain schemes in the long term and, where possible, to ringfence revenue budgets for maintaining routes.

Branding and wayfinding

7.4.6 While there are a number of key, discreet routes within the proposed network which are likely to attract visitors in their own right such as the Welland Valley, Ise Valley and Nene Valley routes, the network would benefit from an overarching approach to branding and wayfinding. This would support cyclists undertaking longer rides as well as encouraging people to explore more of the network. It is therefore recommended that the overall network is branded as the North Northampton Greenway with individual routes given their own name but sharing the overarching branding in terms of typeface, logo etc.

7.4.7 Individuality can be brought to individual routes through the use of bespoke artwork, street furniture and signage materials. For example, signage could be affixed to recycled railway sleepers on the Welland Valley route to reflect its former use.

7.4.8 Given the rural nature of much of the network, one option to consider for wayfinding, is the approach taken in some European countries including the Netherlands, Belgium and parts of France and Germany. They use a numbered node or junction wayfinding system for rural cycle networks. Each junction is given a number and the numbers are signposted (see Figure 7-6). Cyclists can plot routes in advance by simply writing down the numbers of the nodes along their route. Paper maps are also normally available from tourist offices.

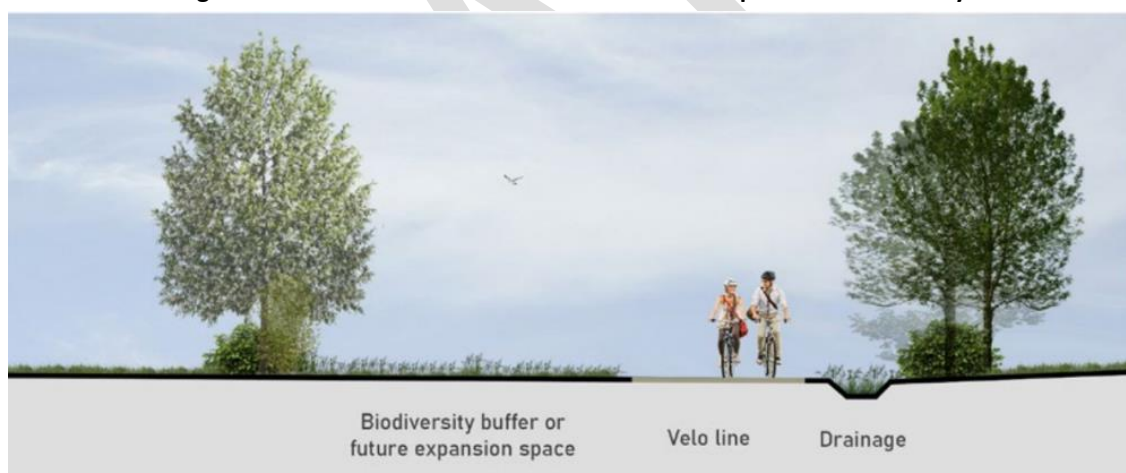
Figure 7.4.8: Numbered junction sign in The Netherlands



Biodiversity and habitat

- 7.4.9 As explored in Chapter 3, the NNG and North Northamptonshire’s green (and blue) infrastructure network are inextricably linked and one of the key objectives of the NNG is to enhance the green corridors and deliver enhanced biodiversity and habitat , for example through enhancing verges along new and improved traffic-free routes with trees, grassland and wildflower planting or even swales (see section below).
- 7.4.10 It is recommended that proposals should aim to go above and beyond the minimum 10% biodiversity net gain where possible and that Natural England’s Green Infrastructure Planning and Design Guide is referred to in the development of designs for traffic-free sections of routes particularly where these follow identified Green Infrastructure Corridors, are close to water or Special Protection Areas. Natural England should also be treated as a key stakeholder throughout the design process.
- 7.4.11 It is also possible to enhance cycle routes along rural lanes through enhancing hedgerows, planting wildlife corridors on existing wide verges and adjusting mowing regimes. This approach can also help encourage slower vehicle speeds.

Figure 7.4.9: Illustrative traffic-free corridor with space for biodiversity



Mitigating flood risk

- 7.4.12 Much of the proposed network follows the Nene and Ise Valley Corridors. The Environment Agency has permissive powers to carry out maintenance and channel improvements where required, but ownerships lies with the riparian landowners. It is important that a balanced approach is taken to the design of these sections which:
- Accepts that there may be times of the year when the routes are inaccessible for short time due to flooding;



- Is resilient so that the Greenway can be used the majority of the time and can be back in use as quickly as possible following a flood event; and
- Delivers additional flood storage attenuation.
- Additional tree planting to assist with natural flood risk management, however details would need to be reviewed by the Environment Agency as planting within 8 metres could reduce access for maintenance.
- Flood Risk Activity Permits would be required if the route is within 8 metres of channel or 8 metres from the landward toe of any raised banks.
- Any routes within Flood Zone 3 are expected to be constructed at ground level as any raised paths would obstruct flood flows.
- Where the route is within 8 metres of the top bank of the main river (or 8 metres from the landward toe of any raised bank or flood defence), it will need to be capable of withstanding the passage of heavy plant, which may include tracked vehicles.

7.4.13 Where possible it is recommended that Sustainable Drainage Systems (SuDS) such as swales and rain gardens are incorporated into the design of the route, particularly in areas at risk of flood. SuDS and tree planting have the dual benefit of reducing flooding and contributing to biodiversity.

7.4.14 In order to establish the presence of contaminated along individual routes running alongside rivers, the Environment Agency recommend a Preliminary Risk Assessment is produced. Such land can include historical landfill sites and work on or near such sites can produce waste.

7.4.15 It is recommended that the Preliminary Risk Assessment follows the Land contamination risk management (LCRM) - GOV.UK (www.gov.uk) , refers to Land contamination: technical guidance - GOV.UK (www.gov.uk) and considers using NQMS (claire.co.uk)

7.4.16 The Environment Agency should be contacted at an early stage for advice.

7.4.17 If there is any waste from construction activities then we would advise that it is dealt with in compliance with the Waste Duty of Care Code of Practice and that the following is considered: If materials that are potentially waste are to be used on-site, the applicant will need to ensure they can comply with the exclusion from the Waste Framework Directive (WFD) (article 2(1) (c)) for the use of, 'uncontaminated soil and other naturally occurring material excavated in the course of construction activities, etc...' in order for the material not to be considered as waste. Meeting these criteria will mean waste permitting requirements do not apply.

7.4.18 Where the applicant cannot meet the criteria, they will be required to obtain the appropriate waste permit or exemption from the Environment Agency.



20mph Speed limits

- 7.4.19 Several rural areas have rolled out 20mph initiatives to improve road safety including Oxfordshire, Surrey, Scottish Borders and the Highland Council. Benefits of 20mph speed limits include:
- **Safer roads** - Research by the UK Transport Research Laboratory has shown that every 1mph reduction in average urban speeds can result in a six percent fall in the number of casualties.
 - **Reduced congestion** - Research shows that slower speeds encourage a smoother driving style with less stopping and starting which helps traffic to flow. Slower speeds also encourage more people to walk and cycle.
 - **Reduced air pollution** - Driving at 20mph causes some vehicular emissions to rise slightly (mainly Heavy Goods Vehicles) and some (car) to fall. Reduced acceleration and braking can help to reduce fuel consumption and the associated particulate emissions from items such as tyres and brakes.
- 7.4.20 In Oxfordshire, the County Council is providing funding of up to £8,000,000 to deliver 20mph areas where requested by local communities, at no cost to town or parish councils. In the Scottish Borders a 20mph trial was introduced across 90 towns in villages in 2020 in order to encourage more active travel and improve safety. An independent evaluation by experts from Edinburgh Napier University found speed reductions in most areas with average speeds across all settlements reducing by 3mph and by as much as 6mph in some locations. As a result of the successful trial, a permanent 20mph speed limit is being introduced across all Borders' towns and villages.

Maximising the value of the network

- 7.4.21 Opportunities should be taken where possible to maximise the value of the network, for example by establishing cycle hire and café facilities at key locations along routes. Facilities such as these can help attract families and new cyclists.
- 7.4.22 In addition to standard bike hire, opportunities to establish community initiatives such as those organised by Brightwayz (see Case Study 4) should be considered to enable and encourage as many people to use the network as possible, particularly people from deprived communities who may struggle to access or afford bikes. Inclusive cycling hubs with a range of bikes and non-standard cycles suitable for all abilities disabled people should also be considered as the network has huge potential to provide safe and attractive routes for disabled cyclists.



Figure 7.4.22: Non-standard cycles



7.5 Case studies

7.5.1 The first three case studies below illustrate how many of the design considerations detailed above including for wayfinding and signage, biodiversity net gain and maintenance have been used in the delivery of best practice schemes elsewhere in the country. The final case study showcases some of the local initiatives run by Brightwayz which enable people to become more active across North Northamptonshire and should be considered a key partner in promoting the network.

Case Study 1: National Cycle Network (Sustrans)

7.5.2 The most established cycle route brand at a national level is the National Cycle Network (NCN), established by Sustrans in 1995. NCN routes are divided into national and regional routes (although the branding and signing of regional routes is less consistent).

7.5.3 The main branding element that is visible to users is a red route number patch on direction signs (blue on regional routes). This is supplemented in many places by sculptures and public art, and a sponsored programme of 'millennium mile markers' was available for the first 1,000 miles of the network completed by the year 2000. These help to provide landmarks along the route, often celebrating local heritage or a wildlife site.

7.5.4 Many routes that make up the NCN have their own identity, e.g. The North Sea Route, the C2C (coast to coast), Way of the Roses etc. This identity is used for route-specific mapping and booklets. Further information about routes or local sites of interest is also included on interpretation boards along each route.

Figure 7.5.2: Roadside mapping and signing, NCN routes 68 and 2



Case Study 2: Aylesbury Gemstone Routes

- 7.5.5 Following a successful branding and marketing exercise using colour coding for promoting public transport, Aylesbury adopted a similar approach for its cycle route network. To differentiate from on-street marketing for bus routes, the cycle routes were given a gemstone name that was associated with a particular colour. For example, the Emerald Route features green patches on the direction signs.
- 7.5.6 The branding was supported by Cycling England funding as part of Aylesbury’s designation as a “Cycling Demonstration Town”. As a new town, Aylesbury has extensive provision of off-highway cycle routes built alongside post-war housing, but they had never been signed as a network. Funding was used to sign the network and to provide additional infrastructure for cyclists at road crossings and along on-road sections.
- 7.5.7 One innovative measure that was adopted in the project was the use of thermoplastic markings to create a ‘sign’ on the ground. This was to avoid clutter and reduce the chance of vandalism but keep continuity of signs, particularly on the off-street network. Thermoplastic sign markings have also been used in Swindon, Wiltshire.



Figure 7.5.5: Left: Signing in Aylesbury showing route branding and local destination off the main route. Right: Thermoplastic marking used only off-highway



Case study 3: Lias Line, Warwickshire

7.5.8 The Lias Line is a section of National Cycle Network Route 41 in Warwickshire. The greenway connects Rugby, Long Itchington and Leamington Spa, with part of the route taking users along the Grand Union Canal. It passes pretty villages, wildlife reserves, reservoirs and canals.

Enhancing Biodiversity

7.5.9 Enhancing biodiversity and delivering biodiversity net gain was at the heart of the design of the greenway which was completed in autumn 2022. The Lias Line offers a valuable habitat for local species and many ecological enhancements have been undertaken with the help of local volunteers including creating four ponds for Great Crested Newts and grassland habitats for the rare butterfly Cupido Minimus.

7.5.10 Creating bug and insect 'hotels', bat and bird boxes and an artificial badger sett during construction helped create both temporary and permanent large and micro-habitats and woodland management is part of this. Pallets used to bring materials in have been reused and gaps filled with locally cut branches creating homes for 'mini-beasts' which in turn support other species such as birds, hedgehogs and frogs.

Maintenance

7.5.11 Removing vegetation periodically and restricting growth is a routine part of the maintenance regime for the Lias Line with each area having a clear plan for the appropriate levels of clearance or planting. Volunteers planted over 200 native trees and shrubs alongside the new branch line route in winter 2022 with matting and tree guards helping the whips get established.

7.5.12 A specialist mower to maintain the grassland habitats and create space for wildflowers has already started to show benefits with cowslips starting to appear alongside the route. Offering different habitats and maintaining them appropriately is at the heart of delivering a really ‘green’ greenway.

Wayfinding and artwork

7.5.13 Users of active travel networks like the Lias Line need to be able to both orientate themselves and enjoy the experience of using the routes.

7.5.14 New benches were installed along the route offering views and rest points. Information boards and artwork were added providing both a distinctive identity for the route and reflecting the local environment and helping people connect with the natural world.

Figure 7.5.8: Photos of the Lias Line. Clockwise from top left: specialist mower, bug hotel, bespoke signage, bespoke benches and artwork



Case study 4: Brightwayz

7.5.15 Local organisations and social enterprises such as Brightwayz should be considered as key partners in maximising the potential of the network. Initiatives such as active travel hubs, road safety and active travel programmes with schools, community cycle clubs, cycle training, events offering bike repairs, led bike rides, social prescribing and bike recycling projects can all be used to target those who would benefit most from the Greenway. Below are a few examples of Brightwayz’ projects and how they could help promote and increase use of the proposed network.



Kettering Community Cycle Club

Brightwayz set up Kettering Community Cycle Club in 2022 with support from Cycling UK and Sport England. The club organises and promotes monthly 'Tour Your Town' short rides within the urban area of Kettering and Burton Latimer for all ages and abilities to enable new riders and those lacking confidence to join a friendly, social ride. Throughout the summer they also offer 'Visit Your Villages' rides which are longer but still leisurely and social, to provide led rides in the local countryside. The delivery of the Greenway network will benefit these established groups and enable them to expand across North Northamptonshire.

Kettering Town Active Travel Hub

- 7.5.16 For example, Brightwayz has been running an active travel hub in Kettering one day a month since June 2022. The hub is manned by volunteers and managed by Brightwayz social enterprise. Services provided include free indoor, manned cycle parking, free cycle maps, free cycle security marking, information on current local active travel plans and consultations and occasional free cycle service (when funding is available). The hub attracts local residents who want to talk about their active travel needs such as concerns about cycle security, need a contact who can help their child learn to ride, want to know about social rides for mobility scooter users etc and therefore has an important part to play in promoting new routes and giving people the confidence to start cycling.

The Green Patch, Brightwayz active travel centre

- 7.5.17 Building on the successful Kettering Active Travel Hub, it is understood that Brightwayz are in talks with the Green Patch a community garden based on the Grange estate close to the proposed IVG in Kettering, to establish a storage facility for specialist and recycled cycles which can be lent out to the community and used for engagement events. Brightwayz aim to establish this facility in 2023 and use it to trial a range of projects such as 'try an electric bike' as well as linking to existing Brightwayz community cycle rides and training opportunities.

Figure 7.5.16: Example Brightwayz initiatives in North Northamptonshire



DRAFT



8 Prioritisation

- 8.1.1 This study makes recommendations on the emerging network of cycle routes across North Northamptonshire. To make the implementation of a comprehensive network manageable, it is necessary to prioritise schemes so funding and construction timescales can be placed in a logical order. To do this, a prioritisation toolkit has been developed.
- 8.1.2 The purpose of the prioritisation is not to decide which schemes are worth constructing and which should not be, but simply to establish an order and where to start. As some funding opportunities may be opportunistic, such as Section 106 agreements with property developers, the prioritisation scale does not necessarily preclude lower-priority schemes being implemented early.
- 8.1.3 In the prioritisation toolkit, schemes are broken down by nodes within the network so that the longer corridors can have internal break points to allow a phased implementation.
- 8.1.4 It is worth noting that although four routes have been chosen during the completion of this Strategy, they were chosen as an exercise to demonstrate how they can be produced into the design recommendation booklets that will sit beneath this Strategy. All the routes identified are a priority, and the future work of the NNG is to prepare those routes into a design recommendation booklet, then further them through to design studies when and as funding arises.

8.2 Prioritisation Criteria

- 8.2.1 A prioritisation toolkit has been developed specifically for the NNG to reflect local needs. Eight prioritisation criteria were agreed with stakeholders. These are each explained in more detail below.
- 8.2.2 The agreed prioritisation criteria are:
- 1 Access to employment
 - 2 Access to education/ training
 - 3 Access to leisure/ tourism
 - 4 Access to growth
 - 5 Access to green space
 - 6 Value to network
 - 7 Improving road safety
 - 8 Cost
- 8.2.3 Criteria 1-7 are scored (0, 1 or 2) based on the data source, such that there is a gradient of ranking across the county, with values of 2 representing high scores (highest priority) and 0 representing low scores (lowest priority). Cost is scored 0-4.



- 8.2.4 Criteria 1-4 consider proximity to respective destinations. A route would score 2 if any one of the destinations are within a 400m buffer of the route, and score 1 for destinations beyond 400m but within 1,400m. These thresholds have been informed by the LTN1/20 and the LCWIP guidance around cycling network density and acceptable cycling distances.

Access to employment

- 8.2.5 The purpose of this criteria is to assess how well a cycle route provides access to employment. Data is taken from the 2011 census, where employment distribution data were not skewed by the impact of the pandemic and working from home practices, to identify output areas with the highest workplace density (top 10%) within 20km reach of North Northamptonshire. Buffers were then established with scores from 0-2 with 2 being the highest proximity to jobs and therefore the highest priority. The data set includes workplaces outside North Northamptonshire, to reflect the proximity of major employment sites over the border with neighbouring authorities. Please see Figure 46: Prioritisation plan based on employment density.

Access to education/ training

- 8.2.6 This criterion assesses how well a cycle route provides access to education and training including nursery, primary and secondary schools, colleges and universities. As with the access to employment criterion educational institutions in adjacent areas were included and buffers were established with scores from 0-2 with 2 being the highest proximity to education and training establishments, and therefore the highest priority. Please see Figure 47: Prioritisation plan based on education and training.

Access to leisure/ tourism

- 8.2.7 The purpose of this criteria is to assess how well a cycle route provides access to leisure and tourism destinations including tourist attractions, leisure centres and libraries. Routes with the highest proximity to leisure and tourism destinations scored 2. Please see Figure 48: Prioritisation plan based on access to leisure/tourism.

Access to new development

- 8.2.8 North Northamptonshire Council has a number of growth areas and development sites identified in its Joint Core Strategy and Part 2 Local Plans for Wellingborough, Corby, Kettering and East Northamptonshire. NNC is keen to ensure the NNG is well placed to serve these areas, not only to contribute toward their success but as this may also unlock developer contributions towards delivering the network. Please see Figure 50: Prioritisation plan based on access to new development.



Access to green space

- 8.2.9 For access to greenspace, we used data from Natural England's Accessible Natural Green Space Standards (ANGSt), which is a research-based set of buffers on minimum distance people would travel respectively to access greenspace of respective scales. Routes that were less covered by the ANGSt buffers are prioritised to increase access to residents who currently have the least access to greenspace. The bottom 25% of routes with ANGSt coverage were scored 2, while below average scores 1, any routes that have above average ANGSt coverage scores 0. Please see Figure 49: Prioritisation plan based on access to green space.

Value to network

- 8.2.10 The NNG aims to build on existing routes such as sections of the East Northamptonshire Greenway, existing National Cycle Network NCN (routes) and routes identified in LCWIPs. Routes have therefore been prioritised based on their proximity and strategic connection to these. Routes that fill the gap between the existing routes stated above score 2, while routes that connect onto the existing routes on one end score 1. Please see Figure 51: Prioritisation plan based on value to network.

Improving road safety

- 8.2.11 Personal collision data, collected by the police using the STATS19 system, can be used to identify corridors and areas with high numbers of injury collisions involving pedestrians and cyclists. This can be a useful indicator of where investment in infrastructure would have personal safety benefits. Routes proposed close to clusters of collisions involving casualties to pedestrians and cyclists were given the highest priority score. However, considering collisions alone can be misleading; here, the absence of collisions on a route may be a sign that few cyclists feel comfortable using it; hence, the level of trip making on a route must be considered in parallel. Similarly, a high number of cycle collisions may reflect that a route is very well-used by cyclists.
- 8.2.12 Therefore, our analysis of collision risk has considered the type of route currently available to undertake a journey with routes that are currently served by busy/high speed routes prioritised, as these routes will have the most benefit in road safety terms. Links that are already served by traffic-free/ low traffic routes are therefore the lowest priority. . Please see Figure 52: Prioritisation plan based on improving road safety.

Cost

- 8.2.13 The final prioritisation criterion is cost with the lowest cost routes (up to £250,000) prioritised over more expensive routes on the basis that cheaper links could be delivered using local funding as quick wins whereas more expensive routes are likely to require grant funding and/or developer



contributions. The high-level cost calculations are outlined in Chapter 9. The cost bands are set out in Table 8.2.12 below. Also see Figure 45: Prioritisation plan based on cost bands.

Table 8.2.12: Cost bands

Cost band	Cost
4	<£250,000
3	£250,000 - £500,000
2	£500,000 - £1,000,000
1	£1,000,000 - £2,000,000
0	>£2,000,000

8.3 Prioritisation Toolkit

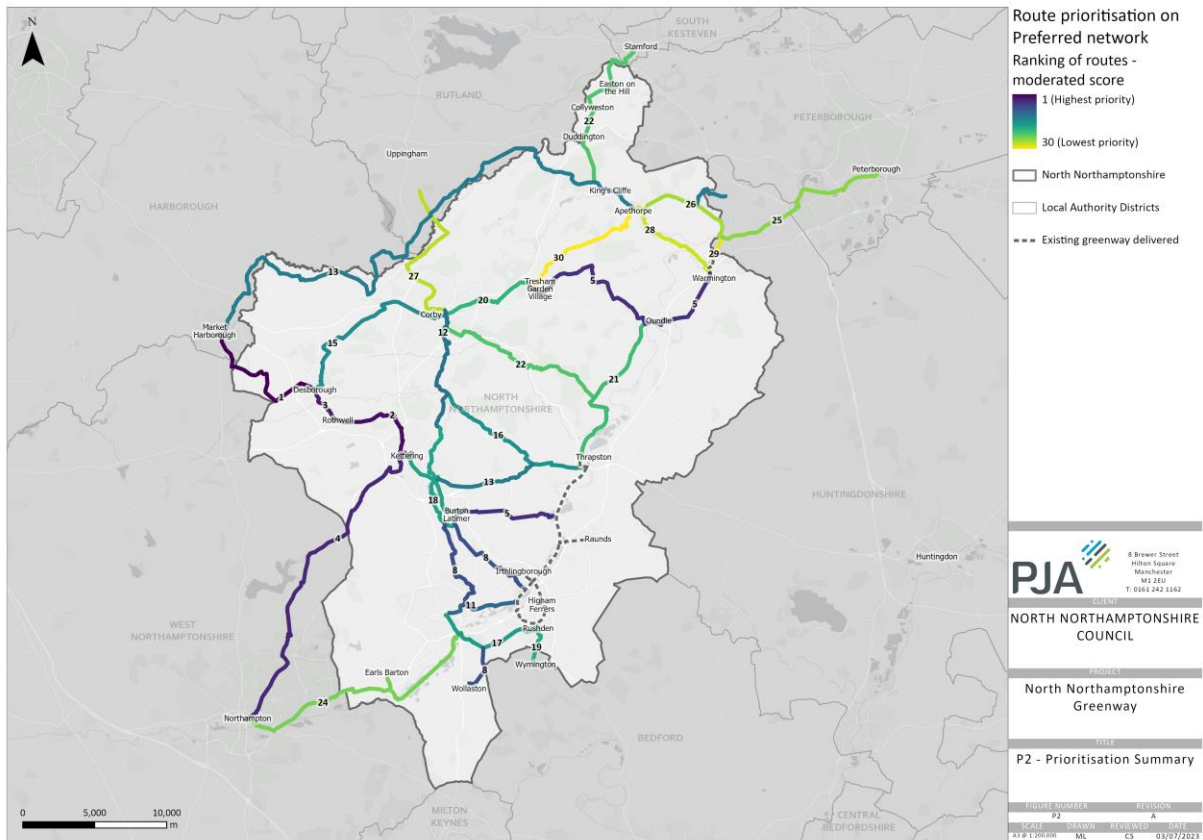
8.3.1 The scores from each of the above eight criteria were combined into a prioritisation toolkit. Scores for each route were then moderated to marginally discount routes that are a combination of NNG and existing or proposed routes (e.g. NCN or LCWIPs), by using a logarithmic scale. In addition, based on stakeholder feedback, four prioritisation criteria were given higher weightings:

- Access to employment
- Access to education/ training
- Access to leisure
- Access to green space.

8.3.2 The resulting prioritised routes are showing in Figure 8.2.13 below and the prioritisation toolkit is at Appendix F. The prioritisation scores are intended to be a guide when deciding which routes to commission feasibility studies or develop funding bids for but is not intended to be set in stone or worked through in a rigorous order. If a route is in the plan, it means there is demand data and/or stakeholder support for the route. The prioritisation toolkit is intended to be reviewed and updated as priorities change, or as new datasets emerge.



Figure 8.2.13: Prioritised network



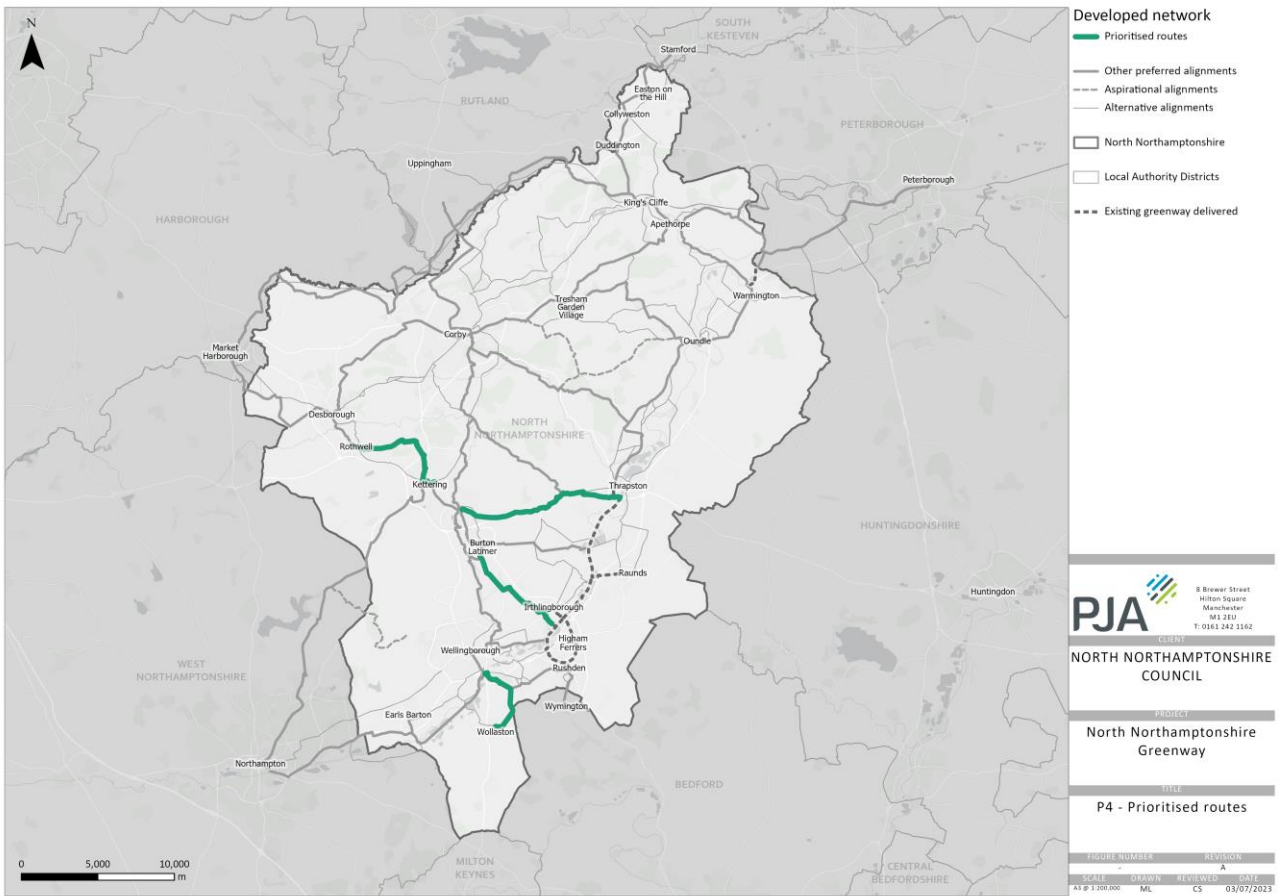
8.4 Routes selected for the design recommendations child document

8.4.1 Four routes have been identified to be prioritised for the development of design recommendations booklets which will accompany this Strategic Masterplan (see Appendix G). These have been informed by the prioritisation scores, which routes have existing feasibility studies, and stakeholder feedback. On this basis the following four routes have been selected (also see Figure 8.2.14):

- Rothwell – Kettering
- Wellingborough - Wollaston via Irchester
- Burton Latimer - Irthlingborough
- Kettering – Thrapston.



Figure 8.2.14: Routes prioritised for the design recommendations booklet



DRAFT



9 Costings and Delivery Plan

9.1.1 Alongside a link-based priority for each scheme in the network, a high-level cost has also been assigned to each route section. The LCWIP guidance provides high-level costings which are recommended to generate initial costings for walking and cycling measures, but these include a fairly limited suite of interventions and are from 2017. PJA has therefore developed a costing tool for rural cycling networks with benchmarked costings from recent schemes that has been endorsed by Active Travel England, examples of which are in Tables 9-1 and 9-2 below.

Table 9-1: High level link typology costs

Link typology	Cost per km
Traffic free route - shared use, rural (new)	£255,000
Traffic free route - urban/suburban (new)	£340,000
Traffic free route - urban/rural (improve existing)	£205,000
Traffic free route - minor improvements to existing	£50,000
Quietway/rural lane	£55,000
Traffic in Villages/ high street improvements	£150,000
Shared use footway/cycleway alongside a road (widening and converting existing footway to shared use)	£305,000
Shared use footway/cycleway alongside a road - minor improvements to existing	£60,000
Protected infrastructure on main roads	£1,115,000

Table 9-2: High level point intervention costs

Point interventions	Cost per intervention
Parallel crossing	£30,000
Toucan crossing	£70,000
New bridge over minor watercourse	£100,000
New bridge over river	£500,000
Level crossing upgrade	£140,000
Upgrade existing crossing to Toucan crossing	£120,000
Priority junction treatment and crossing	£100,000
Signalised junction improvements	£250,000

9.1.2 The high-level cost excludes elements of the network already included in LCWIPs. Several routes cross boundaries into adjacent local authorities. Where this is the case, the full route has been costed (as there is no point in a route stopping at the border) but the costs have been disaggregated by local authority.

9.1.3 The proposed NNG would cost in the region of £38,085,999 (see Table 9-3). Due to the high-level nature of this strategy, the costs do not include programme management, design or consultation costs and excludes preliminaries, traffic management, contingency/ optimism bias etc. Further investigation should be carried out to determine the acceptability of these pricing assumptions.



Table 9-3: High-level route costings

Route No	Point A	Point B	Intermediate Point	Total Length (Km)	Total Cost
1	Market Harborough	Desborough		8.05	£1,321,197
2	Desborough	Rothwell		3.01	£703,924
3	Rothwell	Kettering		8.17	£411,716
4	Desborough	Corby		14.36	£1,188,479
5	Corby	Oundle	Tresham Garden Village	6.99	£912,717
6	Tresham Garden Village	King's Cliffe		10.15	£2,318,190
7	King's Cliffe	Elton		7.62	£1,218,879
7 & 18	Elton	Peterborough		0.00	£0
8	King's Cliffe	Stamford	Collyweston, Easton on the Hill	10.78	£2,261,542
9	Corby	Lyddington		10.45	£61,601
10	Corby	Kettering	Geddington	10.06	£1,701,540
11a	Corby	Thrapston	Brigstock	13.62	£2,965,019
11b	Corby	Thrapston	Geddington	12.46	£1,729,230
12	Kettering	Burton Latimer		17.47	£2,645,194
13	Burton Latimer	Raunds	Great Addington	7.80	£1,430,275
14	Thrapston	Raunds		9.22	£0
15	Oundle	Thrapston		12.78	£1,564,822
16	Tresham Garden Village	Oundle		14.00	£3,250,417
17	Oundle	Warmington		5.13	£579,450
18	Warmington	Peterborough	Eaglethorpe, Elton	1.50	£481,343
19	King's Cliffe	Warmington	Apethorpe	8.22	£1,170,146
20 & 21	Burton Latimer	Irthlingborough	Higham Ferrers	7.34	£1,385,459
22	Higham Ferrers	Rushden		1.71	£0
23a	Wellingborough	Rushden		3.04	£812,650
23b	Wellingborough	Rushden	Little Irchester, Irchester, Route X	8.20	£1,289,015
24	Burton Latimer	Wellingborough		4.38	£1,117,654
25	Raunds	Higham Ferrers		5.30	£0
26 & 27	Wellingborough	Northampton	Earls Barton	12.04	£652,756
28	Wellingborough	Wollaston	Irchester	3.15	£705,361
29	Rushden	Wymington		2.03	£24,777
KT	Kettering	Thrapston		7.52	£2,547,086
FR	Market Harborough	Wansford		20.87	£1,586,198
KN	Kettering	Northampton		8.07	£798,891
			Total	275.48	£38,835,525

9.1.4 For detailed costings for each route see Appendix E.



9.2 Delivery plan

Short term

9.2.1 It is recommended that the short-term delivery plan focuses on quick wins and producing the design recommendations booklet for the routes identified. Quick wins could include strengthening existing routes such as:

- Developing the overarching wayfinding and branding strategy and implementing it on existing routes.
- Undertaking maintenance of routes and developing a long-term maintenance plan for existing and proposed routes.
- Development of the Greenway Champions programme to support the ongoing upkeep and development of the Greenway.
- To create awareness of the North Northamptonshire Greenway project in order for our residents to understand what we are trying to achieve and gain their buy-in, support and future input.
- Continued engagement with planning and highways authorities to develop the design recommendation booklets and to understand the next steps in the planning process in order for these to be ready for when funding is established.
- To start exploring funding utilising all possible options.

9.2.2 In addition, quick wins could be themed, such as county-wide improvements to cycle parking. It is recommended that an audit is undertaken to identify poorly sited cycle parking such as where stands were too close to each other and/or walls which would make using the parking difficult, particularly for people with heavier or non-standard cycles. As well as obvious locations such as trip attractors and town and village centres, suggestions for new cycle parking locations could also be “crowdsourced” through local active travel forums, social media or an online survey.

Medium term

9.2.3 In the medium term, the focus should be on securing funding to deliver the prioritised routes, following the successful completion of design recommendation routes.

9.2.4 Medium term improvements could also include county-wide themed interventions which would bring safety improvements such as implementing a 20mph limit on rural lanes or upgrading key crossings across North Northamptonshire in line with the point interventions identified for the network.

Longer term



- 9.2.5 Given the scale of the proposed network it is recommended that the network and priorities are reviewed periodically. There should be an ongoing programme to develop design recommendation booklets for routes so that as routes secure funding and are delivered, work is already underway to develop the next tranche of schemes.
- 9.2.6 Following the completion of routes, 360 reviews to take place to enhance learning to inform future delivery.

DRAFT



10 Conclusion and Next Steps

10.1 Conclusion

- 10.1.1 This study has identified a 356km long network of active travel spanning North Northamptonshire and linking to key settlements in neighbouring local authorities with a combined population of 600,000. The total network within North Northamptonshire is 275km comprising existing greenways, routes proposed in LCWIPs and new routes. Excluding the LCWIP routes, the proposed network within North Northamptonshire is 212km long and will cost approximately £38.1m to build. In conjunction with active travel networks proposed for the key settlements in existing and emerging LCWIPs, the NNG will create a comprehensive network of safe and attractive, largely traffic-free and quiet routes across the county linking key settlements and trip attractors to deliver the vision set out in this Strategic Masterplan.
- 10.1.2 It is intended that the strategy will be widely consulted on and refined as needed following feedback from stakeholders and residents. It will then be adopted to ensure it has weight in planning terms and can feed into other policies and strategies, including the emerging North Northamptonshire Local Plan and future negotiations with developers regarding planning obligations.

10.2 Next Steps

- 10.2.1 Route alignments and intervention types have been informed by stakeholder feedback but are necessarily high level and are suggested for costing and feasibility purposes only. Further feasibility studies are required to confirm route choices and typologies, informed by detailed site visits and further stakeholder engagement.
- 10.2.2 A template “design recommendations booklet” for four routes has been developed a key next step is to complete the document and produce further booklets for the remaining priority routes.
- 10.2.3 Continue working on the methodology to secure developer contributions with internal NNC colleagues.
- 10.2.4 Formal adoption of this Strategy by NNC Executive in order to proceed with implementation of the routes.



DRAFT