West Northamptonshire Council

Northampton Local Cycling and Walking Infrastructure Plan

Draft Report for Consultation

June 2025

Project Code: 07644

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	10 October 2024	PP/ML	EJ	CS
B	15 April 2025	PP/ML	EJ	EJ
C	8 May 2025	ML	EJ	EJ
Draft for Consultation	June 2025			WNC

Prepared for

West Northamptonshire Council
One Angel Square
Angel Street
Northampton
NN1 1ED

Contents

List of Tables

List of Figures

Appendices

1 Executive Summary

This Local Cycling and Walking Infrastructure Plan (LCWIP) for Northampton has been produced on behalf of West Northamptonshire Council. The document aims to provide an evidence based for the development of future walking and cycling networks in and around Northampton.

The LCWIP is one of several recently completed by West Northamptonshire, and the proposed active travel networks outlined in this document link into those developed for Daventry and Towcester, as well as Wellingborough in North Northamptonshire – recognising the interdependency of the towns and villages around the study area.

The LCWIP takes account of the existing networks as well as considering future developments in and around Northampton – particularly the planned Sustainable Urban Extensions, which are likely to significantly expand the footprint and population of the town – the proposed network includes key connections to these planned areas – indicating where active travel improvements could be incorporated into development masterplans.

The LCWIP is developed with reference to a wealth of background population and socio-demographic data, as well as input from stakeholders through workshops to inform and refine the proposed networks.

Tools including the Department for Transport's Propensity to Cycle (PCT) tool, and PJA's Everyday Trips analysis has informed where the demand for active travel trips is likely to be highest, and where the opportunities for mode shift are greatest. Site visits to assess key parts of the network were complemented by telematics data to provide an indication of traffic flows, feeding into an audit of key routes. This analysis showed that a comprehensive network in the most densely populated areas of Northampton would provide for the complex journey desire lines – linking neighbourhoods around the edge of the town as well as providing links into the town centre. The recently improved Active Quarter around Delapré Park – connecting the University and key employment centre at Brackmills is an example of where active travel trips have great potential outside the town centre.

A number of key routes to outlying areas were identified, in particular towards M1 J16, where significant residential and employment developments are likely to increase demand for active travel trips in the future.

The LCWIP summarises potential interventions along a sample of key routes, providing a starting point for the more detailed development of route designs.

2 Introduction

PJA has produced this Local Cycling and Walking Infrastructure Plan (LCWIP) on behalf of West Northamptonshire Council. The LCWIP aims to provide an evidence base for the development of active travel networks in and around Northampton, informing future funding bids and local transport improvements.

The process for producing this LCWIP is based upon the Department for Transport's LCWIP Guidance, and involves;

- Scoping – understanding the policy context and what the study should aim to achieve.
  - Data collection and analysis, including the use of:
  - Propensity to Cycle (PCT) toolkit, 'Everyday Trip' analysis; School Travel Data, Strava and feedback from previous consultations
  - Population data including data on demographics, deprivation, access to cars

- Network development and site audits for walking and cycling networks, including:
  - Identification of core walking zone and key walking routes;
  - Identification of key cycle routes within the Northampton urban area and routes to surrounding settlements;
  - Route audits (using Route Selection Tool (RST) and Walking Route Assessment Tool (WRAT));
  - Identification of interventions and high level design recommendations for key routes;
  - High-level cost estimates for key routes;

- Stakeholder engagement throughout the network development to ensure that the plan takes account of local priorities and incorporates local knowledge which may be helpful in understanding the barriers to the uptake of walking and cycling.

As with the LCWIPs completed for Brackley, Daventry and Towcester, this study identifies walking and cycling routes both within the urban area, and a number of routes to surrounding settlements – hereafter referred to as inter urban routes. In several cases, these inter urban routes connect to others identified by neighbouring LCWIPs, including Daventry, Towcester and Wellingborough.

3 Study Context

This chapter summarises the context for this study, focussing on national, regional and local policy frameworks impacting on the LCWIP, and major developments proposed in the area.

3.1 National Policy Context

3.1.1 Cycling and Walking Investment Strategy

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.

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.

The policy document sets out the vision 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, improving health and wellbeing, addressing inequalities, and tackling congestion.

The policy 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.

3.1.2 Gear Change and LTN 1/20 (2020)

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

Gear Change

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, which is 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."

The plan provides recognition of the barriers to active travel, and recognises the need to take action to tackle these barriers through 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.

The plan introduces Active Travel England as a new Inspectorate body, which provides oversight of active travel designs and has a scrutiny role of major planning applications.

The plan also recognises the need to reduce rat-running on residential side streets through more low traffic neighbourhoods (LTNs) as well and creating cycle, bus and walking corridors by closing a limited number of main roads to through traffic except for buses and access.

LTN 1/20 – Cycle Infrastructure Design

The Cycle Infrastructure Design Guidance – Local Transport Note 1/20 – establishes much higher standards for cycling infrastructure, including geometric requirements.

Rather than a strict set of standards or a "one size fits all" approach, 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. For example, it 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. It notes:

> "Encouraging through-traffic to use main roads can provide benefits for pedestrians and residents, particularly children and vulnerable adults, as well as enabling cycling. This can be achieved through implementing measures such as turning bans, one-way streets, and by modal filtering … These measures also have the benefit of making short journeys quicker on foot or cycle compared to driving, providing a disincentive to using a car for short trips."

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

LCWIPs were first introduced in CWIS1. LCWIPs are intended to 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. The key outputs from an LCWIP are:

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

The DfT's LCWIP guidance provides a recommended approach to developing LCWIPs. However, their intention is that LCWIPs respond to local conditions and requirements to improve walking and cycling networks.

3.2 Local Policy Context

3.2.1 West Northamptonshire Local Transport Plan 2025 to 2045

The West Northamptonshire Council Local Transport Plan 2025 - 2045 sets out the council's transport priorities for the next 20 years, replacing the previous document. While recently adopted in 2025, the LTP indicates the priorities for the council in transport terms, with its vision:

> "Working together with our communities we have made travel by active modes like walking and cycling the natural first choice for short trips, travel by public transport has become increasingly attractive and accessible, and communities are less dependent on private cars. Our transport system is both safer and cleaner, benefitting our health and the environment, and supporting the access needs of everyone in our community to foster social inclusion and wellbeing. More resilient infrastructure and services increase opportunities for people to live their best lives by facilitating vibrant town and local centres, and a thriving local economy."

Three themes, and six objectives are identified to help achieve the vision:

Connecting People Better

- Objective 1: Improve the accessibility of the public transport, walking and cycling networks, to promote a system that is fair and provides attractive travel alternatives to key destinations.
- Objective 2: Create thriving communities through local investment in a more resilient transport network, services and the public realm in urban and rural towns and villages across West Northamptonshire.

Shaping Healthier Places

- Objective 3: Improving road safety and reducing pollution, while expanding active travel networks and supporting infrastructure that facilitates public health outcomes.
- Objective 4: Enhance local environments and further reduce carbon emissions from transport by investing in low carbon and electric modes, mindful of local heritage.

Mobility Enabling Prosperity

- Objective 5: Reducing inequalities through better transport connections to key employment and education opportunities, to support local socio-economic growth.
- Objective 6: Maximise the benefits to communities and businesses through use of technology and innovation.

Active travel is a key theme cutting across many of the draft objectives, including the provision of connections to employment, training and education opportunities, and achievement of public health goals. Policy 6 specifically identifies the development of active travel networks as a key ambition – removing barriers to people choosing to walk or cycle.

3.2.2 West Northamptonshire Local Plan (Regulation 18 Draft, 2024)

The new West Northamptonshire Local Plan is currently under development, with the Regulation 18 draft consultation running between April and June 2024, while this LCWIP was being developed. The document, when adopted, will replace the West Northamptonshire Joint Core Strategy (2014) referenced in 3.2.3, and the Daventry, Northampton, and South Northamptonshire Local Plans, and help shape development across West Northamptonshire.

In March 2025 a new timetable for the production of the Local Plan was published taking into account the consequences of recent government proposals for plan making on the plan. The older, adopted Local Plans and Joint Core Strategy remain in place until a replacement plan is formally adopted – so the information on draft policies outlined here should be considered only as an indication of possible future policy.

The draft document[1] includes a spatial vision for 2041, which includes;

"…vibrant, active and sustainable communities with ready access to the services, facilities and infrastructure they need." "…a thriving economy with increased productivity."

"A regenerated Northampton is the key strategic centre at the heart of West Northamptonshire."

The document includes draft Spatial Objectives across five priorities which link to the Council's Corporate Plan;

- Green and Clean – Environment and Wellbeing
- Improved Life Chances – Health, Social Care and Families
- Connected Communities – Transport and Connectivity

[1] https://www.westnorthants.gov.uk/planning-policy/new-local-plan-west-northamptonshire

- Thriving Villages and Towns – Place Shaping and Homes
- Economic Development – Growth and Prosperity

Key aspects of the draft document relevant to this LCWIP include;

Policy TR1 which sets the ambition for development proposals to prioritise pedestrian, wheelers, cyclists and public transport users ahead of car users, and ensure new development is designed to encourage walking, wheeling and cycling to everyday services and facilities such as schools, community facilities, open spaces and shops.

The draft document identifies several future transport schemes which may be delivered during the Local Plan period;

1. Northampton to Market Harborough railway line (reinstatement)

2. Brackmills and Northampton Station corridor improvements

3. North-West Relief Road (Northampton)

4. Northampton Growth Management Scheme (A43 and A45)

5. A5 at Towcester

6. Northern Orbital Route (Northampton)

Policy TR3 outlines that a parallel opportunity for walking and cycling will need to be provided should the reinstatement of the Northampton to Market Harborough railway line be progressed.

3.2.3 West Northamptonshire Joint Core Strategy Local Plan Part 1 (2014)

The currently adopted Core Strategy sets out the framework for planning strategy across West Northamptonshire.

The document vision includes the ambition for Northampton, as the principal urban area, to drive economic growth and provide a focus for well-integrated neighbourhood communities.

Key policies in the Joint Core Strategy include;

Policy S4- Northampton related development area

The Joint Core Strategy includes an aim to provide an additional 28,470 dwellings within the years 2011 to 2029. A significant proportion of this development would be a part of Northamptonshire Sustainable Urban Extensions.

Policy S5 – Sustainable Urban Extensions

This policy identifies the locations of Sustainable Urban Extensions (SUEs) around Northampton;

a Northampton Kings Heath (3,000 Dwellings, 10 Ha Employment)

b Northampton North (3,500 Dwellings, 10 Ha Employment)

c Northampton North of Whitehills (1,000 Dwellings, Local Employment Opportunities)

d Northampton South (1,000 Dwellings, Local Employment Opportunities)

e Northampton South Of Brackmills (1,300 Dwellings, Local Employment Opportunities)

f Northampton Upton Park (1,000 Dwellings, Local Employment Opportunities)

g Northampton West (2,550 Dwellings, Local Employment Opportunities)

h Northampton Norwood Farm/ Upton Lodge (3,500 Dwellings, Local Employment Opportunities)

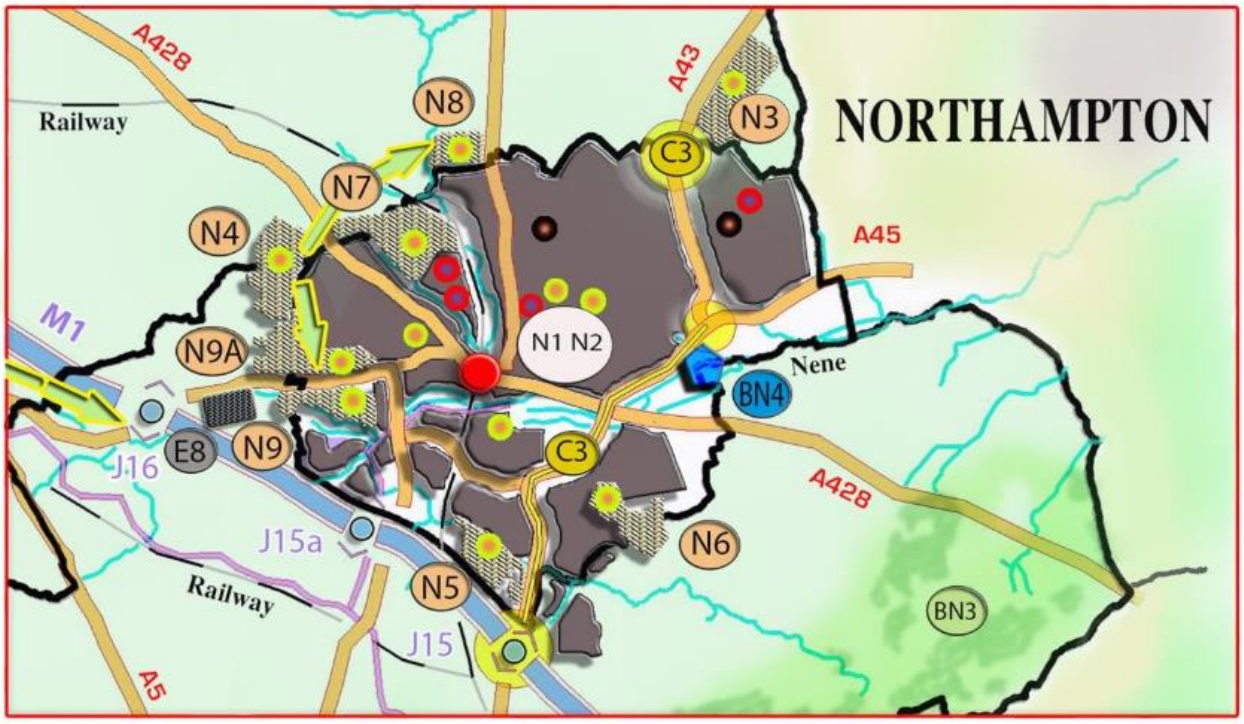

Figure 3-1: West Northamptonshire Joint Core Strategy Local Plan Part 1, Figure 3 showing SUEs around Northampton

More detail on the SUEs is shown in the Places policies below.

Policy C1- Change behaviour and modal shift

The strategy aims to provide access through and promote the use of walking, cycling and public transport over private cars to key facilities and services. To bring in behavioural change, the council

plans to provide a comprehensive network of public transport and make provisions of cycling networks to key transport interchanges within existing urban and rural areas.

Policy C2- New Developments

Provision of a dense urban development to sustain public transport. Promote walking and cycling connections and enhance public transportation within SUE.

Policy C4- Connecting Urban Areas

The council plans to improve the public transport infrastructure under the proposed Northampton Arc Transit network. It plans to provide efficient connectivity to surrounding major urban areas like Milton Keynes. Central Northampton Bus Interchange and Northampton Castle Rail Station have been identified to be priority interchanges.

Policy E8- Northampton Junction 16 Strategic Employment Site

The area measuring 42 ha, south of A4500 and within proximity of Northampton town (7km) has been identified as an employment site. Can be found on policies map.

Places Policies

Policy N1- Regeneration of Northampton

Focus on Northampton town centre to develop retail, leisure, and office spaces. Deliver high quality public realm and urban design proposals. Development of houses within the proposed SUEs around Northampton. Improvement in public transport, walking and cycling facilities. Upliftment of deprived areas like Spring Boroughs, Kings Heath, Eastfield, Northampton East.

Policy N2- Northampton Central Area

Development of office and retail spaces within the town centre to support local economy.

Sustainable Urban Extensions

Policies N3-N9a outline the policies relating to the provision of SUEs around Northampton. All SUEs will make provision for: 'An integrated transport network focused on sustainable transport modes including public transport, walking and cycling with strong links to the adjoining neighbourhoods, employment areas and the town centre'

Policy N3- Northampton North SUE – 3500 dwellings

Northampton North SUE possesses key features that would facilitate ease in connectivity to the town centre and ensure better quality of life despite being away from the town.

The SUE plans to accommodate at least one local centre which would provide facilities of convenience store and health care facilities.

It includes provision of a local multi modal interchange which would be located close to local centre to provide connectivity to the town centre and to Moulton. This multi modal interchange will provide connectivity through cars, cycle, walking and public transport.

This is followed by educational facilities like a primary school to cater the needs along with an employment area of 10 Hectares to ensure ample opportunities and minimise travel.

Proposals include connectivity within the development through a central spinal greenway and PRoW network connecting A43 to Sywell Rd through local centre to initiate more sustainable transit like cycling and walking.

Policy N4 – Northampton West SUE- 2550 dwellings

Northampton West SUE features similar developments like North SUE. Additionally, it also includes a provision for recreational and sport facilities within the development.

Policy N5 – Northampton South SUE- 1000 dwellings

Following the key features of SUE, Northampton South SUE proposes green spaces and wildlife corridors followed by play areas, open spaces, and golf courses.

Policy N6 – Northampton South of Brackmills SUE -1300 dwellings

Following the key features of other SUEs, Northampton South of Brackmills SUE also proposes cycling routes and a walking route within the site.

Policy N7 - Northampton Kings Heath SUE- 3000 dwellings

Northampton Kings Heath SUE includes provision for two primary schools followed by 10 Ha land for secondary school and equally for employment zone. It includes key developments similar to other SUEs.

Policy N8 Northampton North of Whitehills SUE- 1000 dwellings

Northampton North of Whitehills SUE includes key features like children play areas and open spaces. It also includes a bus link connecting Welford road and Brampton lane through the site and a Cycleway along Welford road.

Policy N9 Northampton Upton Park SUE- 1000 dwellings

Following the key features of other SUEs, Northampton Upton Park SUE includes a connection through Upton Valley Way North and West Street.

Policy N9A – Northampton Norwood Farm/Upton Lodge SUE- 3500 dwellings

Northampton Norwood Farm/ Upton Lodge SUE includes a provision for two primary schools followed by a relief road phase 2 for Sandy lane. It also includes provision for green spaces, wildlife corridors, open and recreational spaces.

Policy N11- Supporting areas of community regeneration

Regeneration of Spring Boroughs, Kings Heath, Eastfield, Northampton East (Improvement in transport facilities, public realm, quality of public spaces, provision of safe & inclusive environment, creating employment opportunities).

Policy N12- Northampton's transport network

Improvement in connectivity of public transport within town, cycling and walking network, cycle parking facilities, interchange terminals. Revised parking standards and highway improvements- sandy lane relief road, Northampton north west bypass.

3.2.4 Northampton Local Plan Part 2

3.2.5 The Northampton Local Plan covers the area of Northampton, and policies are in line with those in the Joint Core Strategy Local Plan Part 1.

The document vision for 2029 includes the ambition that;

New development in Northampton will respond directly to the challenge of climate change. In so doing, Northampton will be a leading example of low environmental impact, with gains made wherever possible. Development will be resilient to the impacts of climate change and, wherever possible, adverse impacts will be mitigated. Northampton will be better connected and have a sustainable and highly accessible transport network that is recognised locally, regionally and nationally.

12 Strategic Objectives have been identified, in line with the Joint Core Strategy Local Plan Part 1.

Relevant objectives include;

- Objective 1 – High quality design and place shaping
- Objective 2 – Housing
- Objective 3 – Supporting the town centre
- Objective 4 – Economic advantage

- Objective 7 – Protecting and building communities
- Objective 8 – Public health
- Objective 10 – Green infrastructure
- Objective 11 – Connections
- Objective 12 – Climate change
- Objective 13 – Infrastructure and development

Objective 11 – Connections is especially pertinent to the LCWIP, as this sets out the ambition to;

"reduce the need to travel, shorten travel distances and make sustainable travel a priority and an attractive option across Northampton by maximising and promoting 38 the use of alternative travel modes. In so doing, the Plan will promote the principal objectives of the Northampton Low Emissions Strategy, combat congestion, reduce carbon emissions and address social exclusion for those who do not have access to a private car. In addition, to ensure a much wider range of destinations will be accessible by direct railway services from Northampton, including some fast, long distance services."

Key Policies

Policy RS1: Supporting Northampton town centre's role

Policy RS2: Regeneration opportunities in the central area

These policies support the role of the town centre as a key place for retail, leisure and services, as well as identifying sites for regeneration.

Policy MO1: Designing sustainable transport and travel

This policy sets the ambition that developments should promote active lifestyles, promote modal shift away from private car usage, improve accessibility by sustainable transport means, maximise opportunities for integrated walking and cycling routes which connect to the existing network, and promote sustainable transport to day to day destinations.

Policy MO3: Transport schemes and mitigation

This policy includes the identification of the former Northampton to Market Harborough, and Northampton to Brackmills railway lines for future transport use.

Site Specific policies set out the expectations for development on these sites, including provision of active travel connectivity along key corridors.

Policy A1: Northampton Railway Station (LAA0288), Railfreight and adjoining sites (LAA0333)

Policy A3: The Green, Great Houghton (LAA1098)

Policy A4: Greyfriars (LAA1113)

Policy A5: Ransome Road (LAA1139)

Policy A6: Sites in Tanner Street, Green Street, St Peter's Way and Freeschool Street (LAA0167/ 0818/ 0931/ 1010)

3.3 New and Proposed Active Travel Schemes

Two active travel schemes are currently under development with construction expected to be completed in 2024/25. These schemes have been included in the network development and are shown in Figure 3-2

3.3.1 Abington Active Travel Scheme

The Abington Active Travel Scheme is an Active Travel Fund project aimed at improving walking, cycling, and sustainable travel in the Abington area. In December 2024, a junction improvement at Billing Road/ Rushmere Road junction was completed which significantly improved pedestrian crossing facilities, enabling 'all direction crossing', along with improved traffic signal technology to better manage all movements. The next phase is planned to start on site in early 2026.

3.3.2 Active Quarter – Delapré Abbey

The Active Quarter access improvements in the grounds of Delapré Abbey include a number of new greenway paths, connecting the town centre and university to Brackmills Industrial Estate and the Northampton Bike Park. Construction of these paths was completed in 2024.

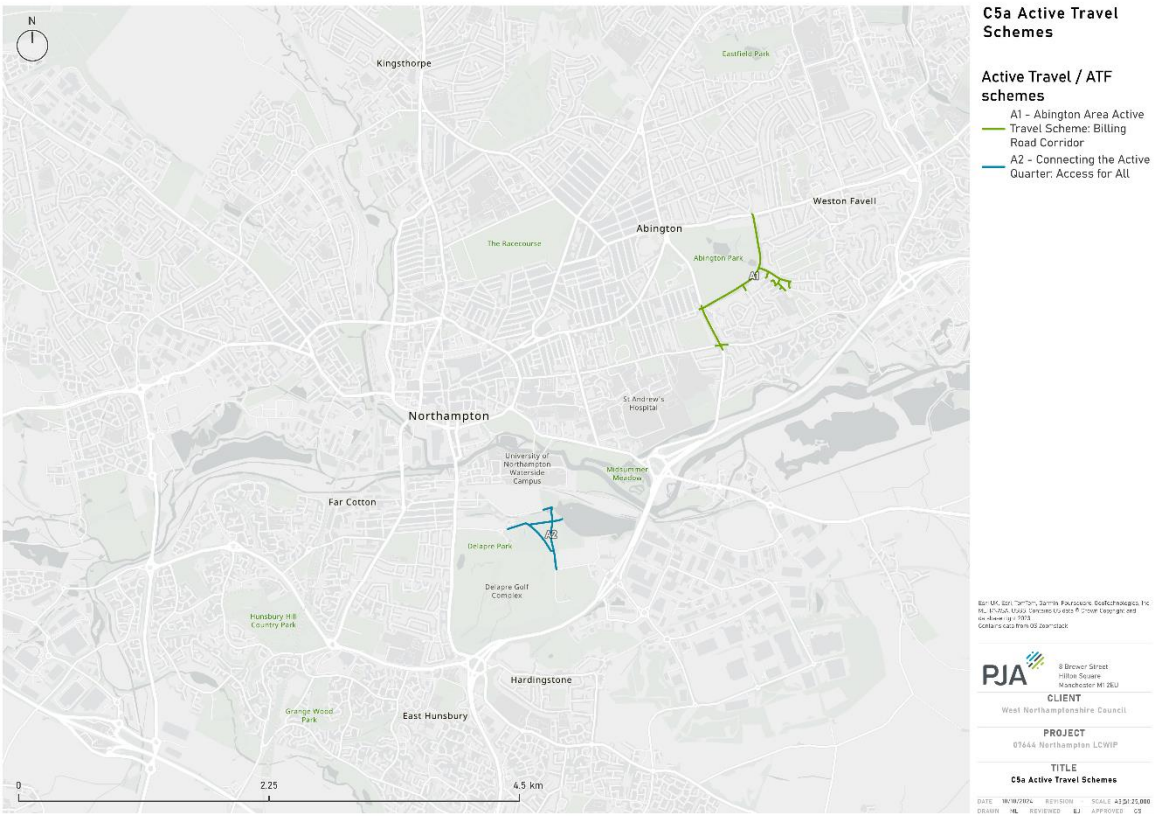

Figure 3-2: New and proposed Active Travel Schemes

4 Northampton LCWIP

4.1 LCWIP process overview

The DfT technical guidance for authorities developing an LCWIP, published in 2017 sets out a methodical approach to the planning and delivery of cycling and walking infrastructure. It breaks down the process into six steps. These can be viewed in Table 4-1 below.

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.

Table 4-1: LCWIP stages from DfT technical process guidance

LCWIPs should be evidence-led and comprehensive, aiming to 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, within core walking zones. The goal of an LCWIP is to grow the use of cycling and walking, which means looking at routes and areas where more people could choose these modes in preference to other means of travel. Therefore, an LCWIP considers travel demand regardless of mode, rather than looking at existing walking and cycling trips in isolation.

4.2 Stakeholder Engagement

Engagement with local stakeholders is a key part of the LCWIP development, enabling local groups to help identify and prioritise potential improvements to walking and cycling networks. Meaningful engagement with stakeholders during the plan development can help build support for the network proposals and meet local as well as county-wide priorities.

A series of workshops with stakeholders was undertaken at key points in the project, in order to understand local priorities and test the emerging network proposals. Stakeholders were identified by officers at West Northamptonshire Council and included;

- West Northamptonshire Councillors and Officers, including planning and regeneration, public health and transport planning
- Parish Councillors
- National Highways
- Living Streets Northampton
- University of Northampton
- Sustrans
- Northampton Bike Park
- Delapré Abbey
- British Cycling
- British Horse Society

Workshops were held at three key stages of LCWIP development;

- At the start of the process (LCWIP Stage 1) to help identify key issues and opportunities for active travel, key areas for consideration, wider issues to be considered, and links with other workstreams.
- Following the completion of the data analysis (LCWIP Stage 2) to sense-check the findings, and review a draft 'straight line' network that would inform the network development.
- Following the site visit and audits, to share a more complete draft network with indicative route typologies, examples of more detailed recommendations for key routes, and initial thoughts on prioritisation (LCWIP Stages 3, 4 and 5).

The workshops provided good feedback on local priorities, and highlighted stakeholder views on areas for consideration.

4.3 Local context

This section of the report outlines the characteristics of the study area, in terms of the population and physical characteristics of the area, and the existing transport network and movement patterns.

4.3.1 People and Place

Population

Northampton is one of the largest towns in the UK, with a population of 243,511, and is currently experiencing significant growth, with the construction of the Sustainable Urban Extensions around

the town, which will add 16,850 homes to Northampton by 2029 (see section 3.2 on local plans). This change in population patterns will significantly change travel patterns around the study area, so existing travel patterns provide just a baseline of movement.

Figure 4-1 shows the pattern of population density around Northampton, with the highest concentrations in the terraced streets to the west and south of the Racecourse. Lower densities around the suburban areas reflect the larger housing stock in these areas – and may indicate more dispersed demand for walking and cycling, and higher car ownership. Low population concentrations exist in areas dominated by employment landuses, for example around Brackmills and the Westgate Industrial estate – these a predominantly trip destinations. The completion of several urban extensions will alter the population density patterns of Northampton significantly, as new district centres are built out.

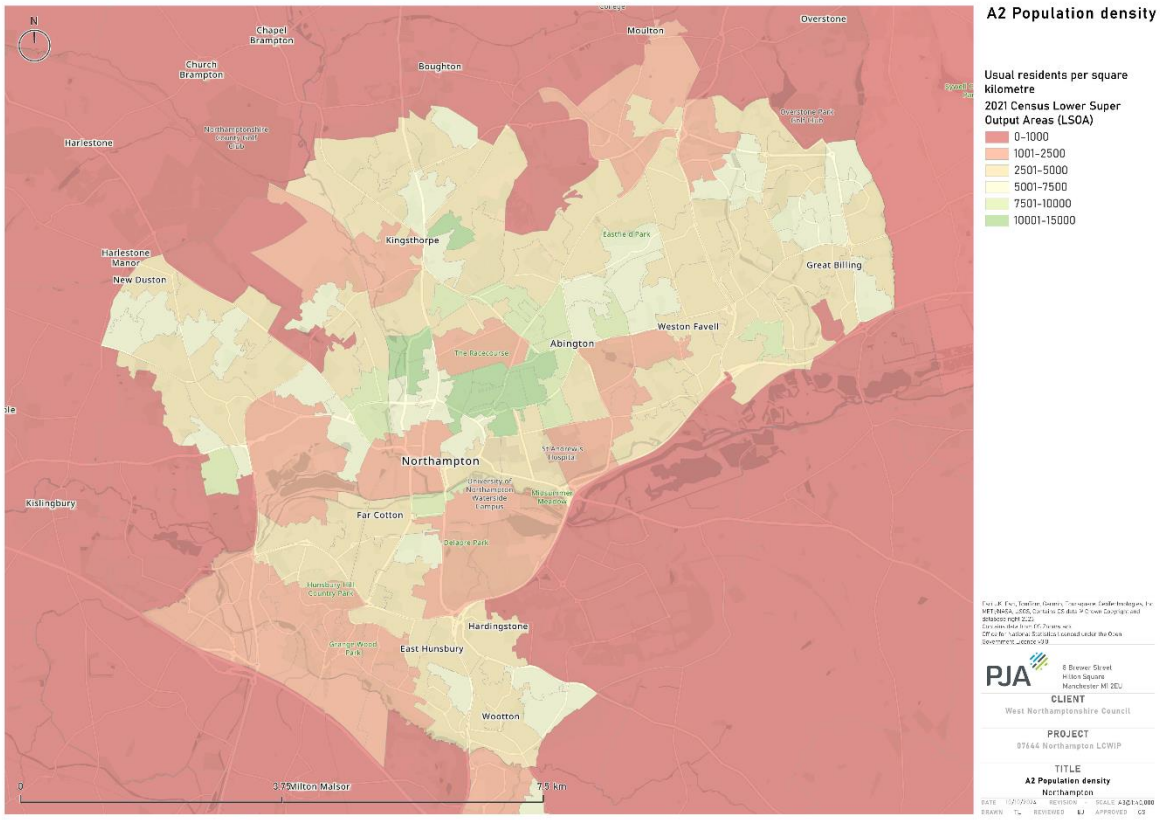

Figure 4-1: Northampton Population Density, 2021

Figure 4-2 shows the change in population within the study area, and shows the development of new housing areas around the urban fringe – especially to the north, south and west of the town centre. The west of the town has seen less dramatic change, as the area is largely already built up.

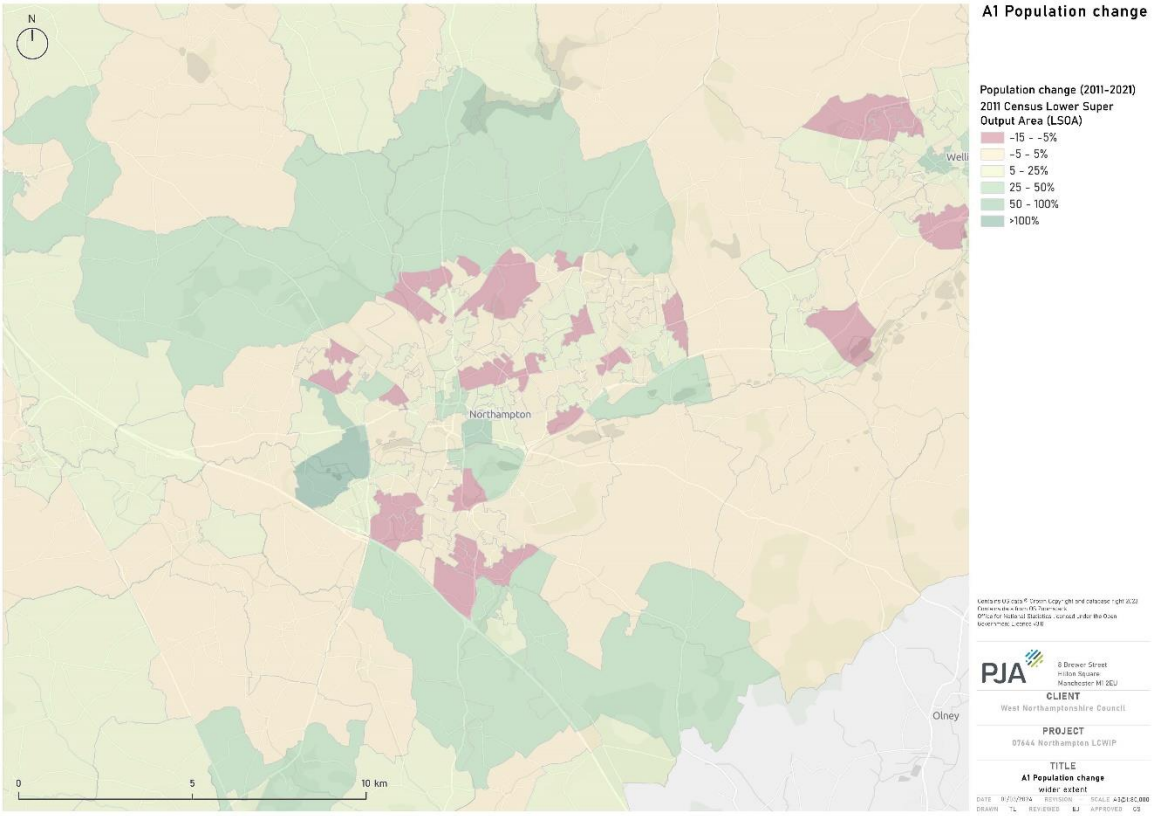

Figure 4-2: Population Change Northampton (2011-2021)

Deprivation

The index of multiple deprivation is a measure of relative deprivation across seven dimensions;

- Income Deprivation
- Employment Deprivation
- Education, Skills and Training Deprivation
- Health Deprivation and Disability
- Crime
- Barriers to Housing and Services
- Living Environment Deprivation

The measure aims to identify the areas which experience the greatest levels of overall deprivation. As active travel improvements can yield significant benefits across several of these dimensions –

including improvements to health outcomes and access to employment education and training, the analysis can help inform where improvements may be most beneficial.

Figure 4-2 shows the relative levels of deprivation across the study area. Areas of higher deprivation exist to the east of the study area, around Weston Favell, as well as Far Cotton to the south, and Kings Heath to the north-west. The more suburban areas close to the M1, and the Abington Park area are comparatively prosperous. Areas outside the town boundary are generally considered to be less deprived.

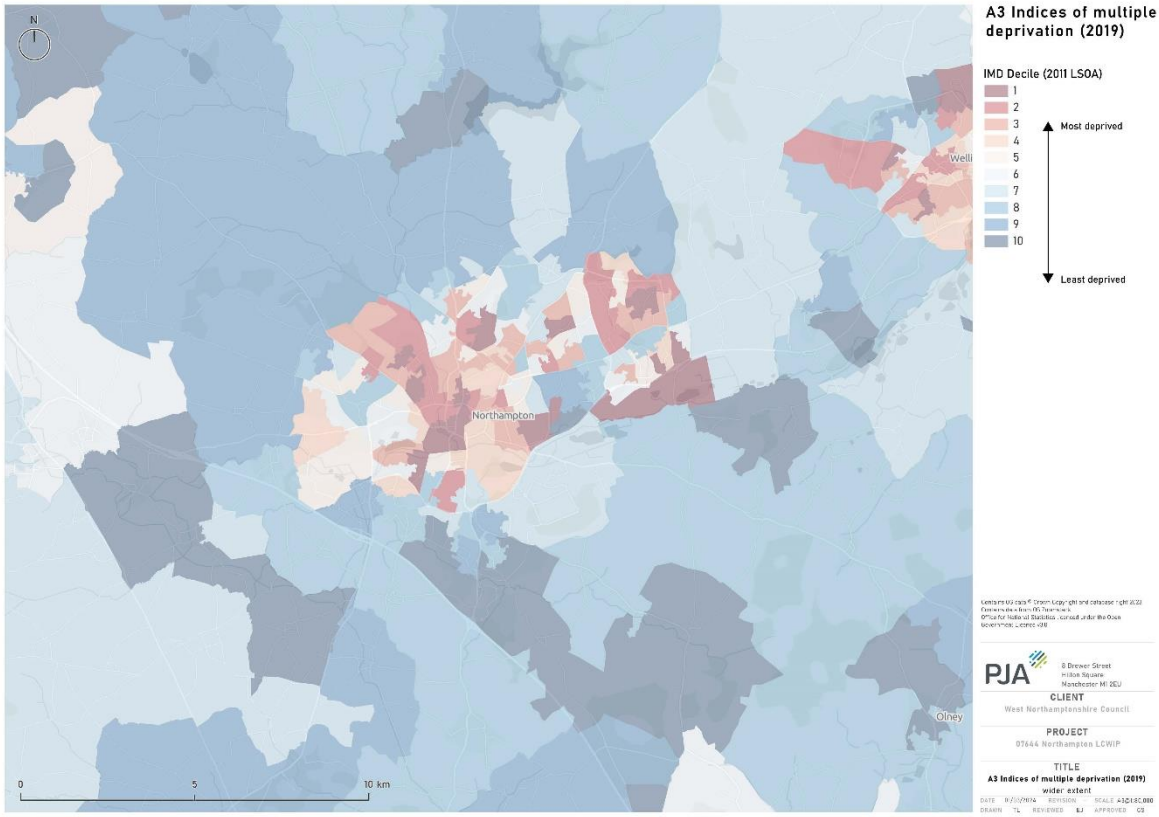

Figure 4-2: Index of Multiple Deprivation

Car Ownership

Car ownership can provide an indication of likely demand for active travel trips, but is also linked to household income. Figure 4-3 shows that in some areas of the town centre, over 50% of households do not have access to a car. Areas of terraced housing close to the town centre, including Far Cotton and streets off the A508 towards Kingsthorpe generally have lower car ownership than more suburban areas. Weston Favell and the Eastern District also have lower car ownership with around a third of households lacking access to a car. Outside the urban area, car ownership is generally very high.

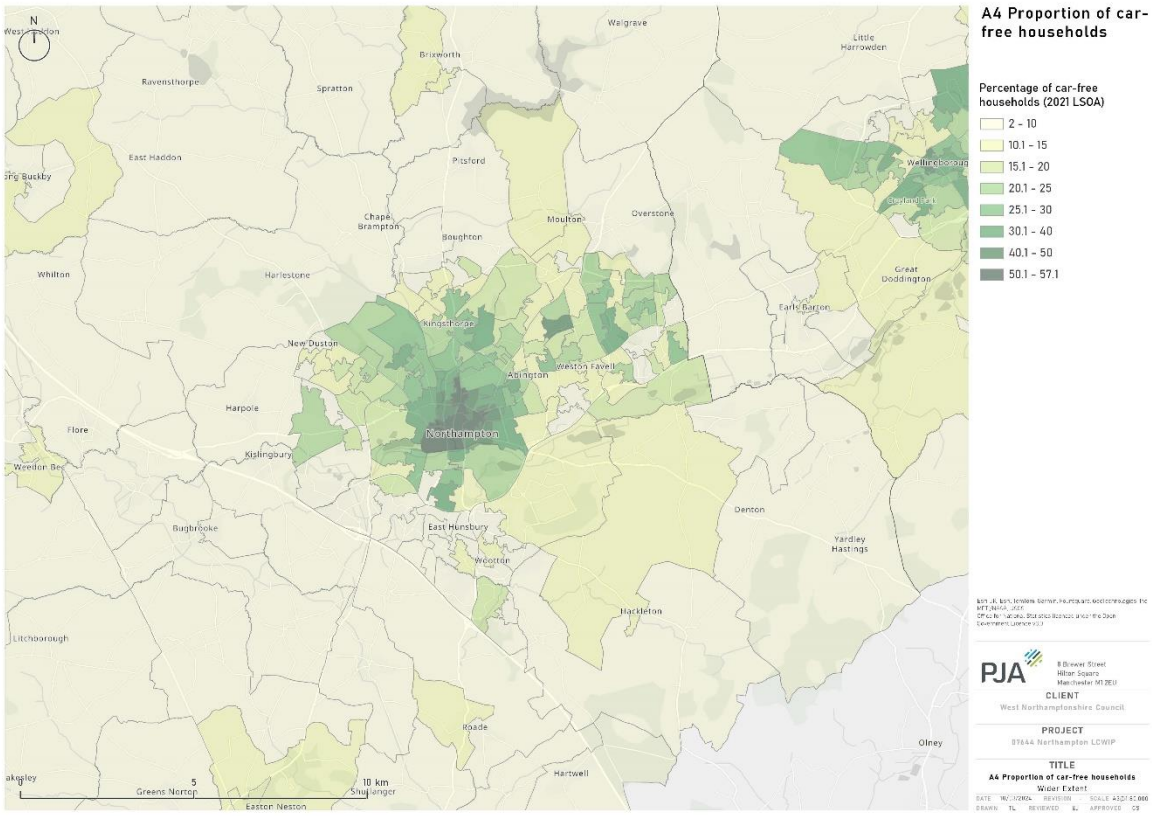

Figure 4-3: Household Car Ownership

Workplace Population

Analysis of the workplace population helps inform the likely clusters of destinations for commuting and work-based trips which could benefit from improvements to the active travel network. The Brackmills area south of the town centre is home to a large number of office and warehouse spaces, with employment numbers comparable to the town centre and St James Mill Road Industrial area combined. Other, smaller areas of employment are concentrated around business and industrial parks at Moulton Park, Lodge Farm and Swan Valley. The expansion of employment sites around M1 junction 15 and 16 will likely mean that more employees travel to these areas in the future. For example, the SEGRO Logistics part at M1 Junction 15 will employ over 4000 employees once fully operational.

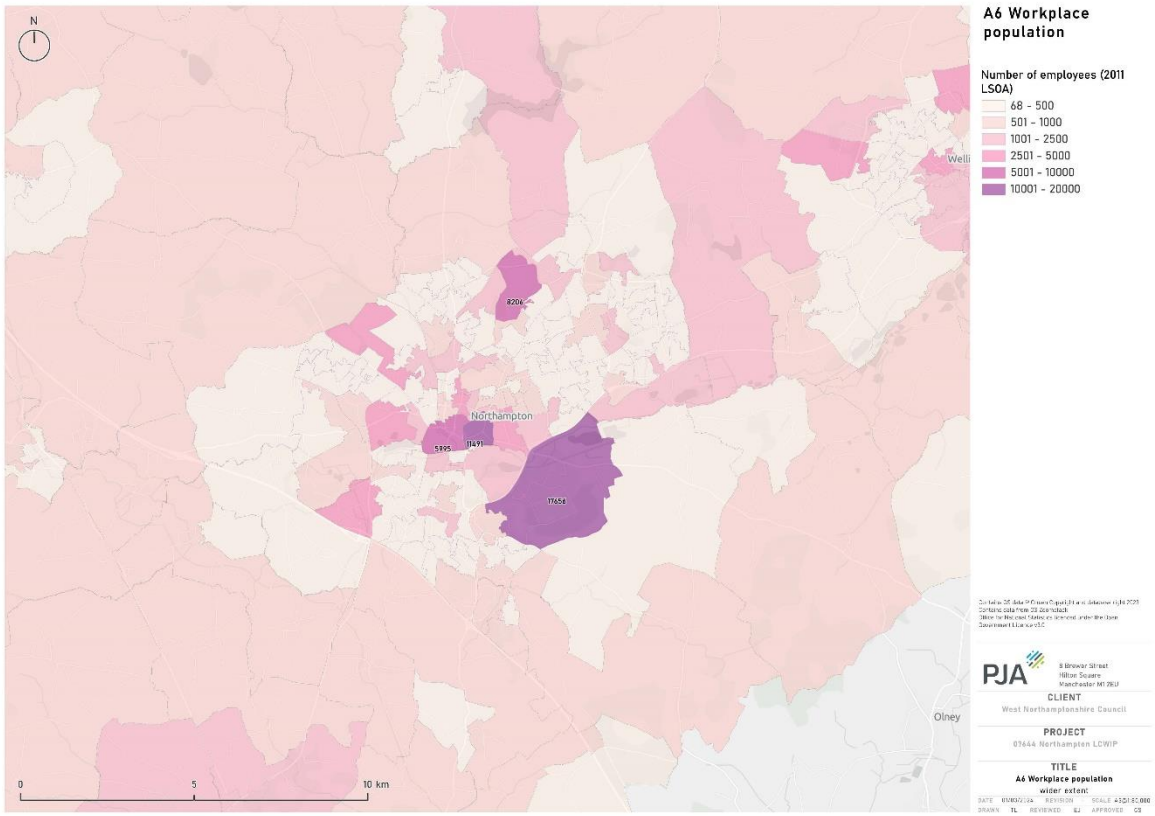

Figure 4-4: Workplace Populations 2011

Proposed Developments

The policy background behind the regeneration of Northampton Town Centre is discussed in section 3.2, but the spatial impact of the regeneration is an important factor in the development of the network. While the detail of much of the redevelopment is not yet clear, in terms of walking and cycling routes, the extent of the proposals is significant.

Figure 4-5 shows the proposed development in the town centre, which will significantly impact on how walking and cycling trips approach and use the centre from the north, east and west. Key to the success of the town centre regeneration will be a well-connected walking and cycling network.

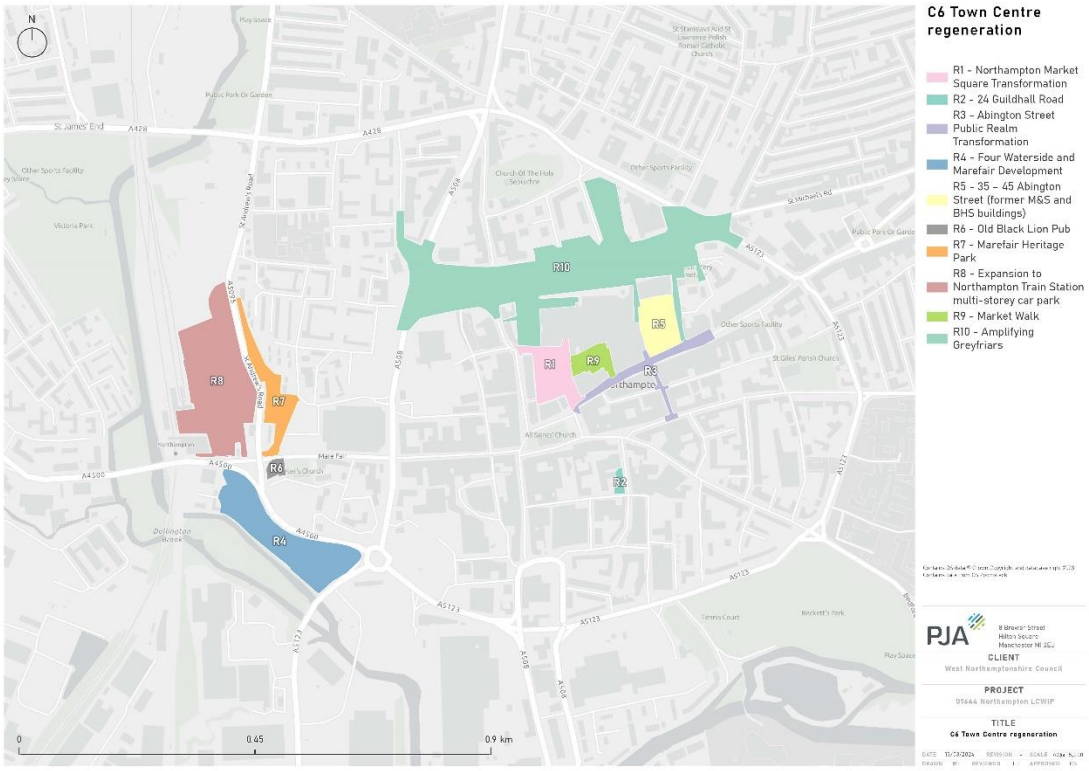

Figure 4-5: Proposed Town Centre regeneration schemes

Beyond the town centre, the SUE sites (outlined in section 3.2) will significantly impact on the long-term population distribution around Northampton. The most significant extensions still to be developed are to the north-west – along the alignment of the new orbital road, and to the north-east around Moulton. In most cases, these larger extensions will have their own local centres, providing facilities including schools, retail and employment, meaning that many 'everyday' trips from these areas are likely to be short, and could be undertaken by active modes within the new development. Shorter trips from existing areas to the new district centres also need to be accommodated by the active travel network. Demand for longer trips to the town centre and other employment areas will inform the network development of longer-distance corridors.

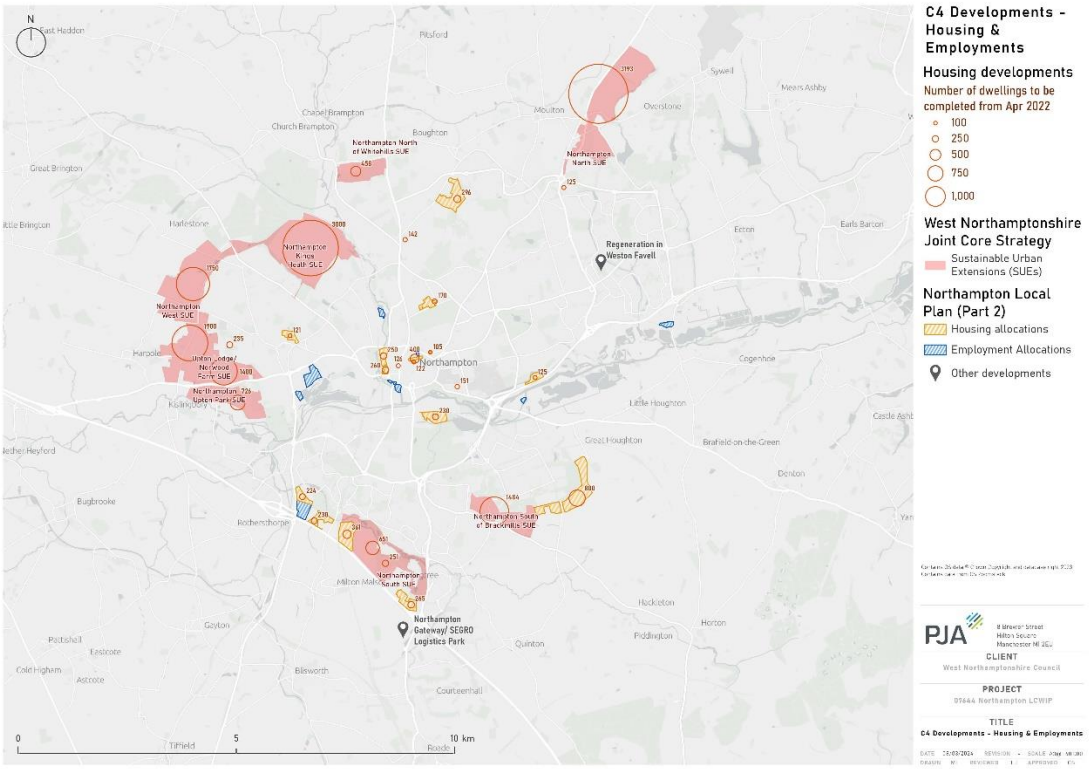

Figure 4-6: Housing and Employment Allocations

4.3.2 Transport and Movement

National and Regional Connections

Northampton is well-served by regional transport links, lying just off the M1 motorway – the major north-south road artery through the Midlands. The A45 provides an east-west trunk road connection to the A14, which runs to the north of the town. The A43 connects the town to Towcester and Silverstone to the south, and Kettering to the north east.

Northampton is situated on a loop off the West Coast Main Line, and enjoys comparatively good train services to London and Birmingham, with both destinations approximately 1 hour from Northampton station. As a key station – categorised by Network Rail as an 'important feeder' station, access between the town centre and station by active modes is crucial.

Local Connections

The town centre has an inner ring road formed by the A5123 and A508 which carries a significant proportion of the traffic around the town. Movement through the town centre is restricted for motor vehicles, with partial pedestrianisation of Abington St – the main shopping street – and

access restrictions on Drapery and Marefair. At the time of the study, Bridge St was also closed to accommodate building works. Many town centre streets are subject to one-way working, which, along with the access restrictions on some streets, encourages through traffic to use the inner ring road.

The town centre streets are generally available to cyclists, although cycles are currently banned from the pedestrianised areas of Abington St and the Market Square. Some of the key one-way streets have cycle contraflows in place (for example Dychurch Lane and Gold St) but others, such as Guildhall Road, do not allow contraflow cycling. The inconsistency of through cycle provision in the town centre impacts on the legibility of the space for cyclists, making wayfinding difficult, especially for east-west movements.

An orbital cycle route (the "Norbital") provides a largely, but not completely, off-carriageway cycling route around the edge of the town – serving the Eastern District, Moulton Park, Kingsthorpe, Kings Heath, Upton, Hardingstone, and Brackmills. The route tends to follow major roads, and has some crossings which are less attractive to inexperienced cyclists. The Riverside Path along the Nene provides a popular greenway route running east-west through the town centre.

Severance

The natural geography of the area means that there is some natural severance between areas of the town. The Nene Valley – including the River Nene and Grand Union Canal – constrains the crossing points between the town centre and key destinations including the University of Northampton (including severance between student residential locations in the town centre and Kingsthorpe, and the main university campus), Delapré Abbey, Brackmills and the M1. The network of major roads, and the railways (both in use and redundant) around Northampton also add to the severance effect. The A45 especially, as a major dual carriageway close to the centre of the town has a particular impact on local movement, with very limited crossing opportunities. The M1, while not especially close to the town centre, has limited crossing opportunities, limiting the routes available to outlying villages. The alignment of the railway – especially north of the station where there is no tunnelling of the railway – means that east-west connection opportunities are limited. Figure 4-7 shows the major causes of severance across the study area.

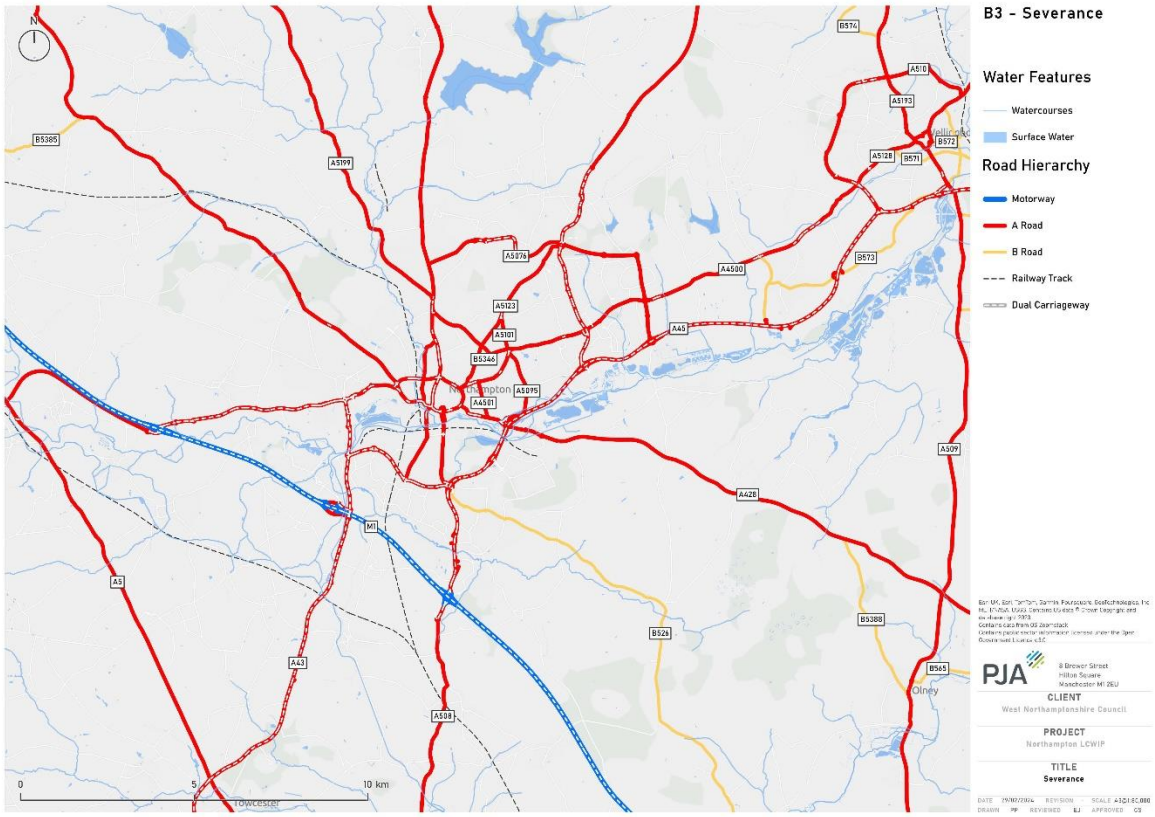

Figure 4-7: Severance across the study area

Collisions

Analysis of collision data from 2018-2023 indicates that the town centre experiences the highest numbers of collisions causing pedestrian and cycle injuries. Closer analysis of the town centre collisions indicates that a few junctions and corridors are responsible for a significant proportion of these – Abington Square, A428/A508, A4500/A428 and the Bridge Street gyratory are particular collision hotspots, Comparatively fewer collisions occur in the town centre where traffic speeds and volumes tend to be lower.

Further from the town centre, smaller clusters of collisions are evident around Weston Favell Centre, around Kingsthorpe, and along the Wellingborough Road.

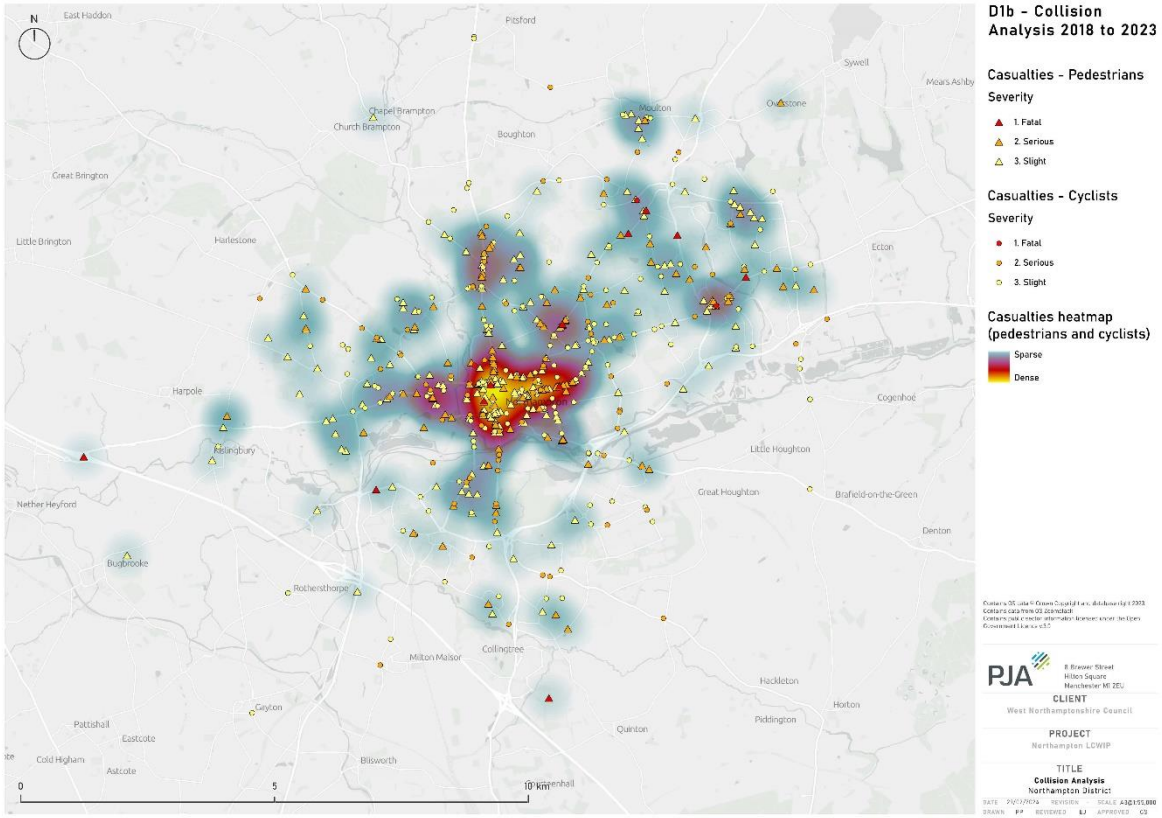

Figure 4-8: Pedestrian and Cycle Collisions

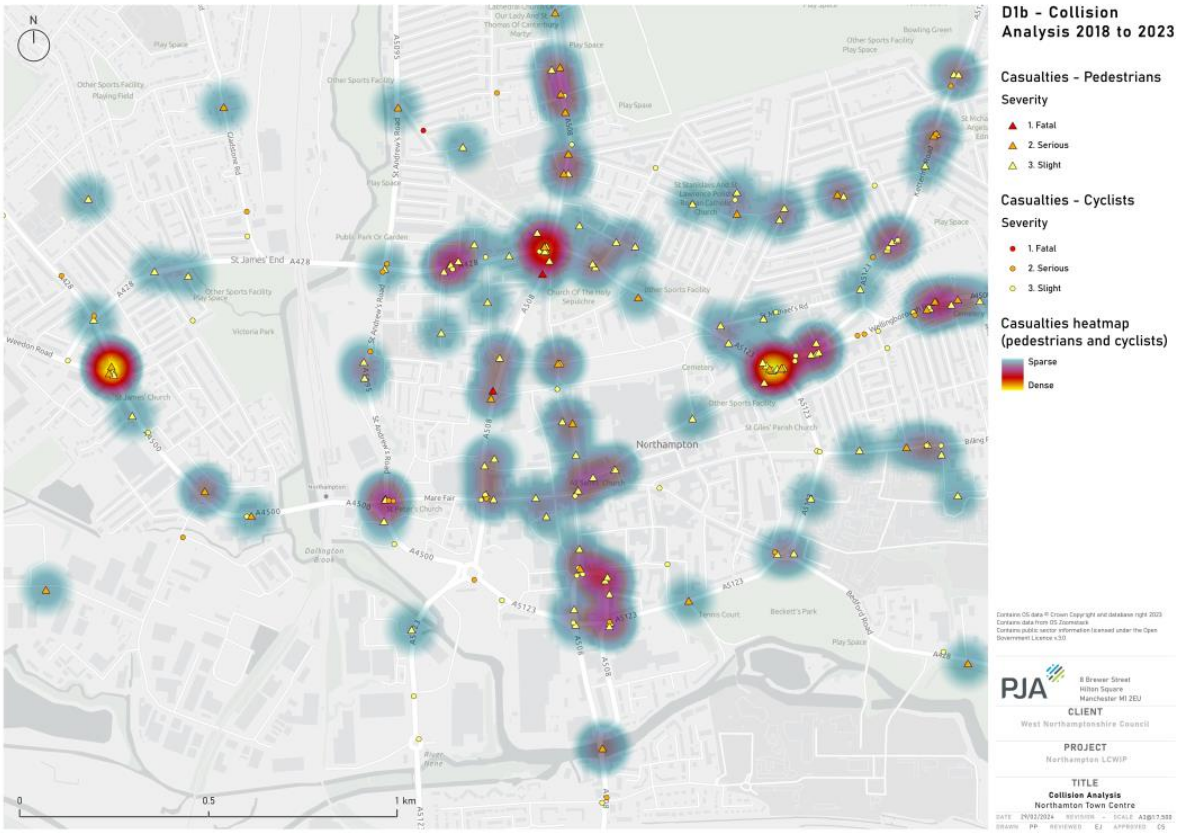

Figure 4-9: Pedestrian and Cycle Collision locations – town centre

Walking and Cycling

Northampton is the largest town in the area, and the town comprises several smaller district and local centres in addition to the centre of Northampton itself. Kingsthorpe and Weston Favell are the key district centres, with clusters of employment and retail serving the surrounding areas. Smaller local centres closer to the town centre – generally high street centres – provide smaller clusters of facilities. Mapping of these centres along with indicative 15 and 30-minute walking and cycling isochrones shows that the majority of the existing populated area is within a 15-minute cycle (just under 5km), indicating that many of the trips associated with these centres could be undertaken by active modes. The development of the SUEs will put some new residents slightly outside this 15 minute area, but still generally within a 30 minute cycle journey of an existing district centre. New developments will generally include local centres, providing key local facilities including schools and essential retail.

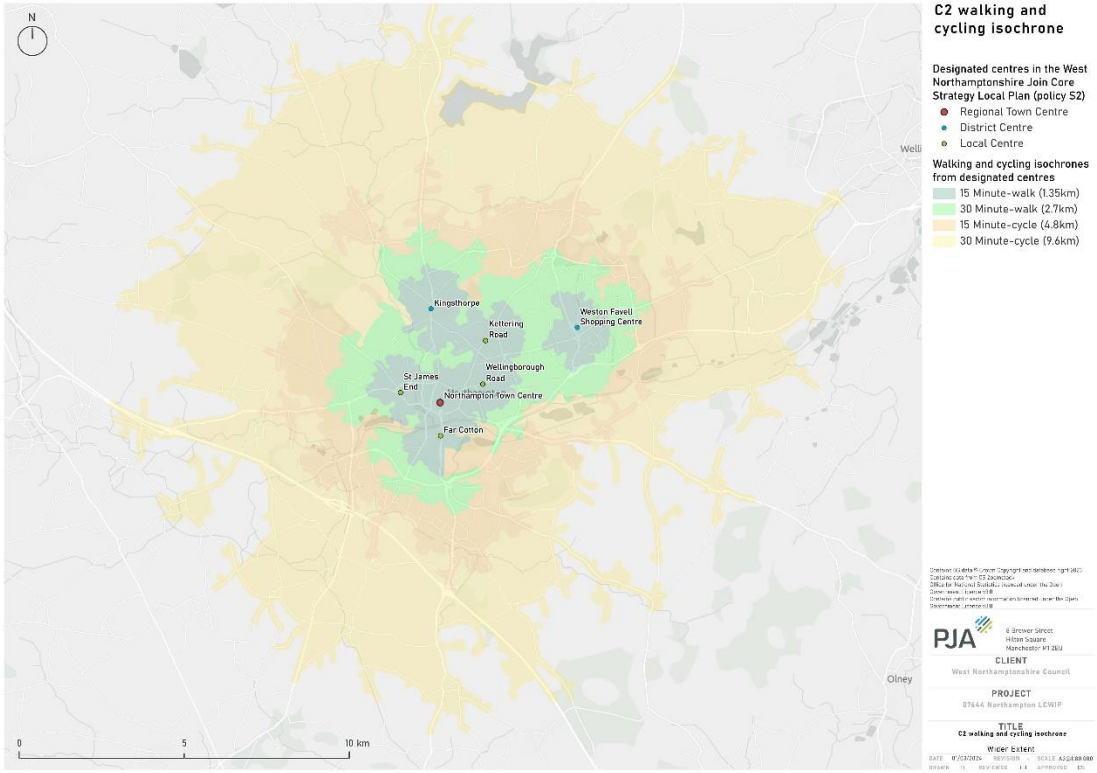

Figure 4-10: Walking and cycling isochrones

5 Network Planning

The background data outlined in the previous section helps develop our understanding of the study area's physical characteristics and population patterns which will impact on the development of the active travel networks. This section outlines the assessment of demand for the network, which directly informs the desire lines for walking and cycling.

A number of tools are employed to assess the likely demand for active travel, looking at the key drivers of movement – commuting trips, journeys to school, 'everyday' trips (e.g. for shopping, leisure activities, personal business etc) and leisure cycling trips.

5.1 Network Planning for cycling

5.1.1 Propensity to Cycle (PCT) tool

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. It should be noted, however, that the PCT uses comparatively old 2011 census data. To address this weakness in the data, population numbers have been uplifted in our analysis to reflect 2021 census data, but local knowledge and input from stakeholders has supplemented the analysis.

5.1.2 Propensity to Cycle Tool commute layer

The PCT 'commute' layer uses a number of scenarios to forecast the potential future levels of commuting cycling in a given area, using census household and workplace location data. The tool includes a number of scenarios of different levels of ambition – from the limited '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 most ambitious '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). Using the most ambitious 'e-bike' scenario for Northampton allows us to show the differentiation between the various desire lines most effectively – as well as taking account of the potential for longer journeys made possible by the increasing popularity of e-bikes.

The PCT Commute layer provides two outputs;

- Figure 5-1 (Propensity to cycle- straight line network): shows direct paths between population centroids (origins) and destinations, which gives an overview of the key desire lines for cycling flows.
- Figure 5-2 (Applied Network): applies the straight desire line to the existing road network to provide an indication of possible routeing for cycle flows via the existing road and path network.

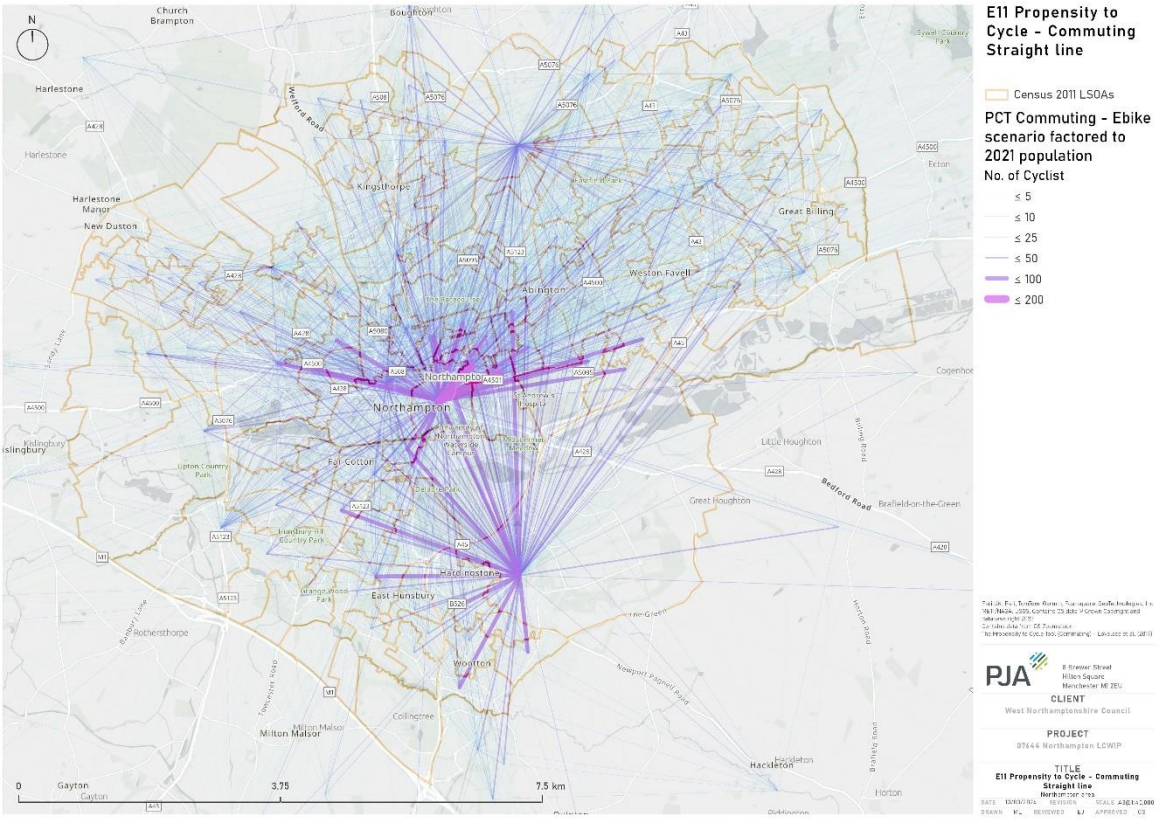

Figure 5-1: Propensity to Cycle – Commuting straight line network

The straight line analysis highlights the key employment centres around Northampton. The town centre is a key attractor from all areas of the town, but particularly from the north of the River Nene, where the population density is higher. The demand for trips from the east and west of the town centre are particularly evident. The large employment centre of Brackmills is shown clearly to the south – the census zone centroid is located to the south of the true employment centre in this case, so the trips indicated converging at this single point are likely to be distributed around the Brackmills area. Smaller employment centres are evident in this analysis, including Moulton Park to the north.

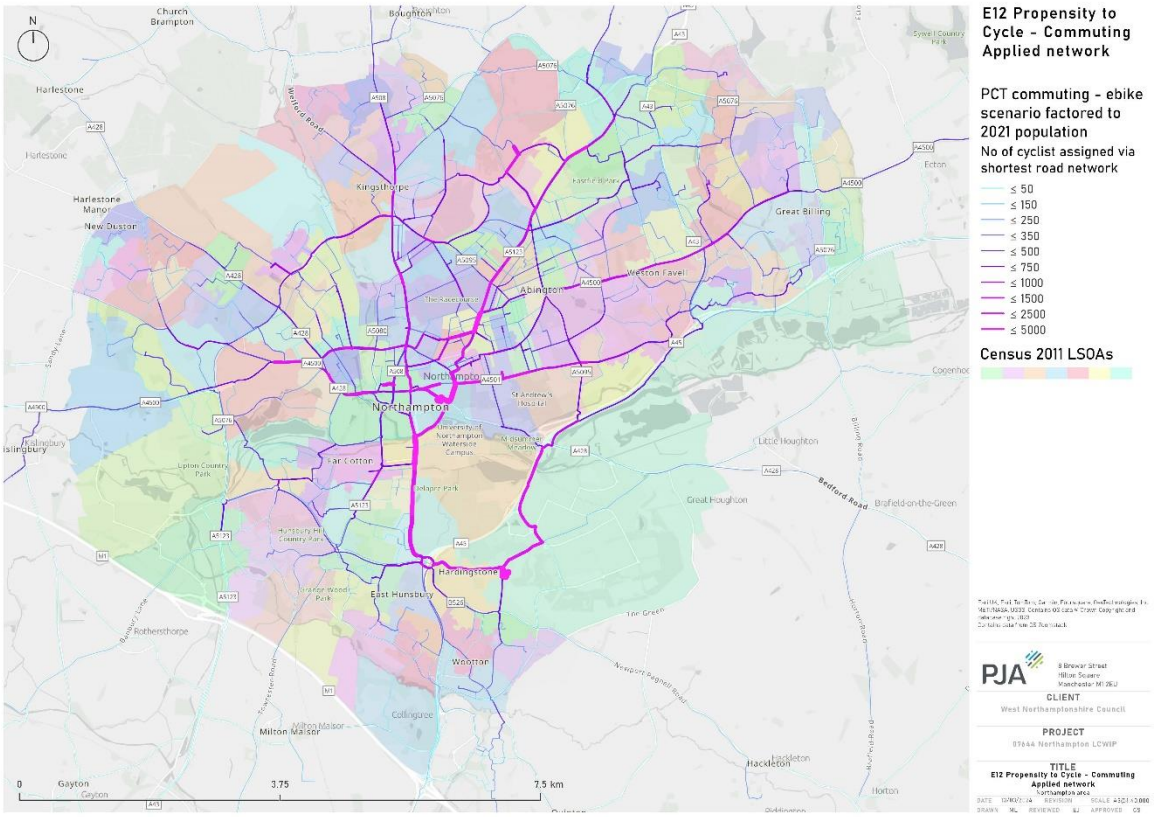

Figure 5-2: Propensity to Cycle – Commuting Applied Network

The applied network map uses the same data as the straight line network and can provide an indication of possible routeing for active travel trips, and can show key corridors of demand more clearly but does not necessarily reflect the recommended network. The plan is shown here for clarity, along with the census zone structure which can influence the routeing.

5.1.3 Propensity to Cycle Tool schools layer

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.

As with the Commute layer, the schools layer has a range of scenarios for forecasting future levels of cycling, but the most ambitious 'Go Dutch' scenario is used here to identify the greatest potential for school-based cycle trips - Figure 5-3.

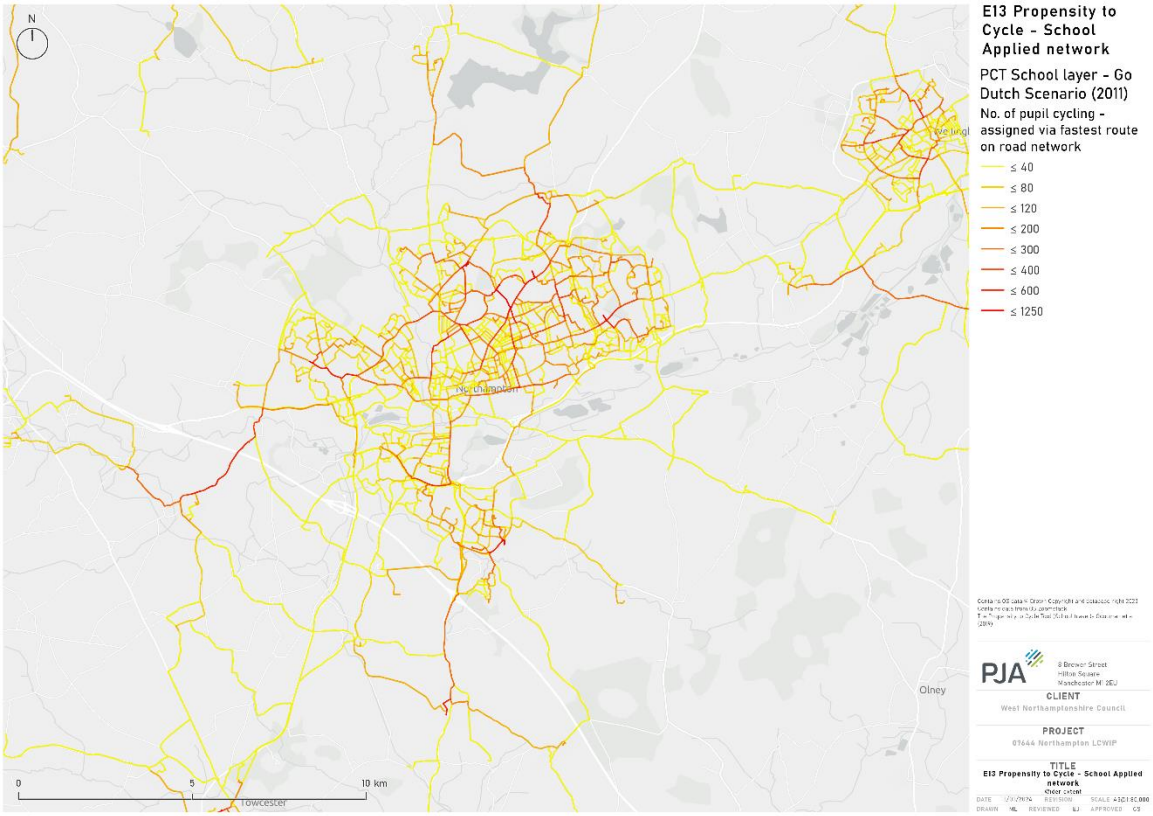

Figure 5-3: Propensity to Cycle Schools Layer - Go Dutch Scenario

The analysis indicates the distribution of demand associated with school travel – whereas the commuting analysis focuses on potential trips to a few key employment areas, school demand is much more local, with a large number of potential orbital trips. Schools outside the urban area are clearly defined – with potential for active travel journeys to Campion secondary school in Bugbrooke particularly evident. Demand from Roade into Northampton is also clearly shown. As with the commuter applied network mapping, the routeing shown here is purely indicative, but can highlight routes of greater demand.

5.1.4 Pupil postcode data

The PCT school census data is now relatively dated – particularly important given the turnover of school pupils, new school construction and changing school performances and popularity. Separate analysis was therefore undertaken using current school locations and pupil postcodes to indicate potential routes to schools. The pupil postcode data provides a current snapshot of where pupils attending each school in Northampton and surrounding settlements live, which can then be analysed to identify routes with the highest demand. It can be particularly useful in planning walking routes where there is often a lack of data.

The pupil postcode data for all schools was aggregated using GIS analysis to create a heatmap showing the potential routes with highest demand for active travel - Figure 5-4

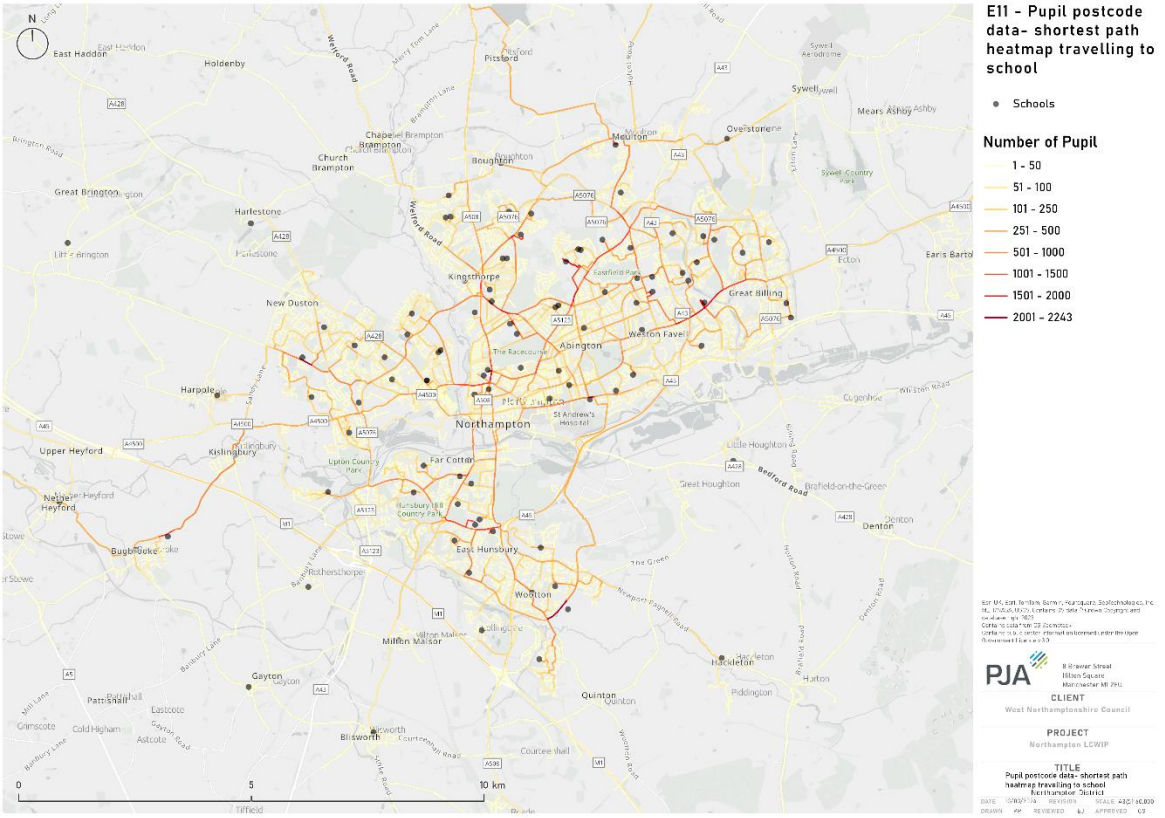

Figure 5-4: Pupil postcode map- shortest path to school

The pupil postcode data analysis shows a broadly similar pattern to the PCT schools layer, although the corridor of demand from Roade into Northampton is lower – potentially due to the establishment of the Elizabeth Woodville School in recent years. The concentration of school sites around Kingsthorpe and Weston Favell are particularly clear from this newer data set, emphasising the importance of school travel routes in these areas.

5.1.5 Everyday Trip Analysis

In addition to commuting and school-based trips, it is estimated that the majority of journeys are for neither of these purposes, but for other – 'everyday' purposes, such as shopping, running errands, visiting the doctor etc. To take account of these trips, an assessment of 'everyday' trips has been undertaken. This additional layer of analysis helps further understand the potential for short journeys by cycling and walking in poly centric areas which is particularly applicable to the Northampton area.

To determine the key desire lines for 'everyday' walking and cycling such as to work, school and the shops, the spatial relationship between key origin and destinations was analysed. First, a 0.5km^2 hexagon grid was applied and origin clusters of LSOA centroids and future housing development with 100 or more residential dwellings were identified (Figure 5-5). The analysis includes demand associated with the sustainable urban extensions and other planned housing development which will influence future demand patterns.

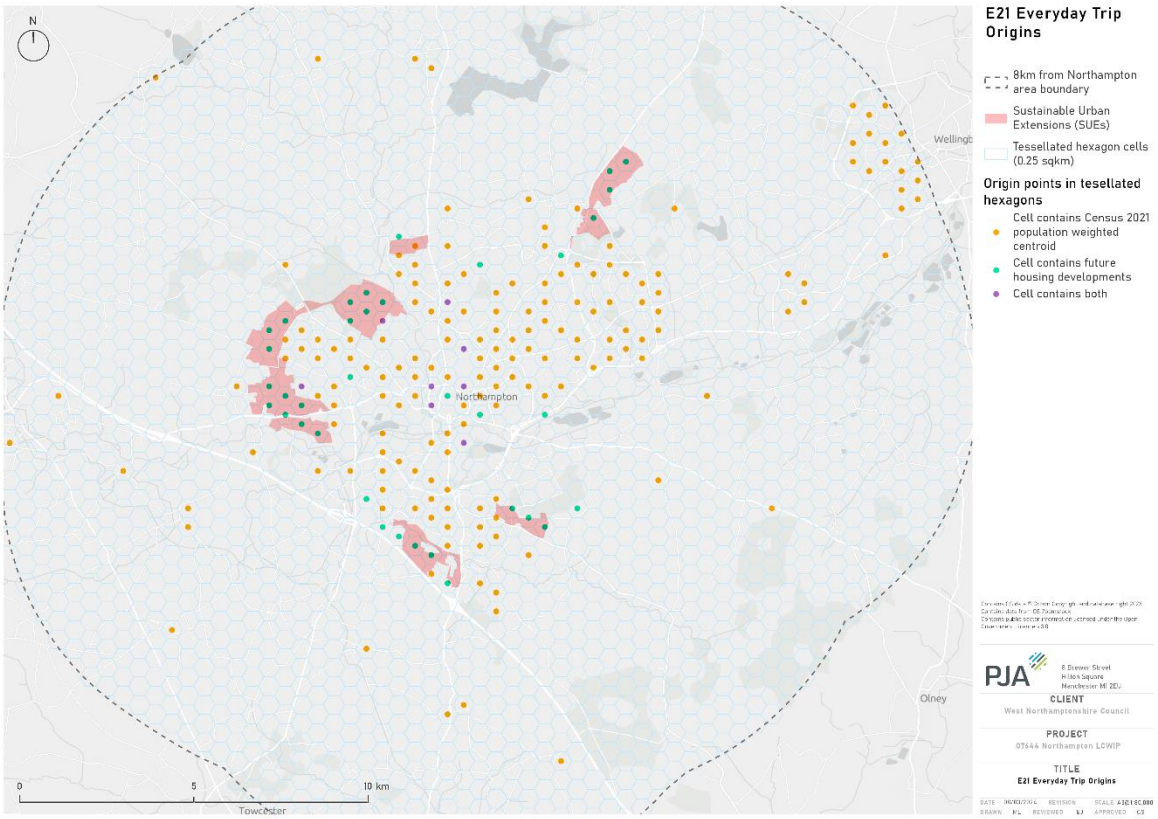

Figure 5-5: Everyday Trip origins

Second, two classes of destinations were identified (Figure 5-6)

- 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.

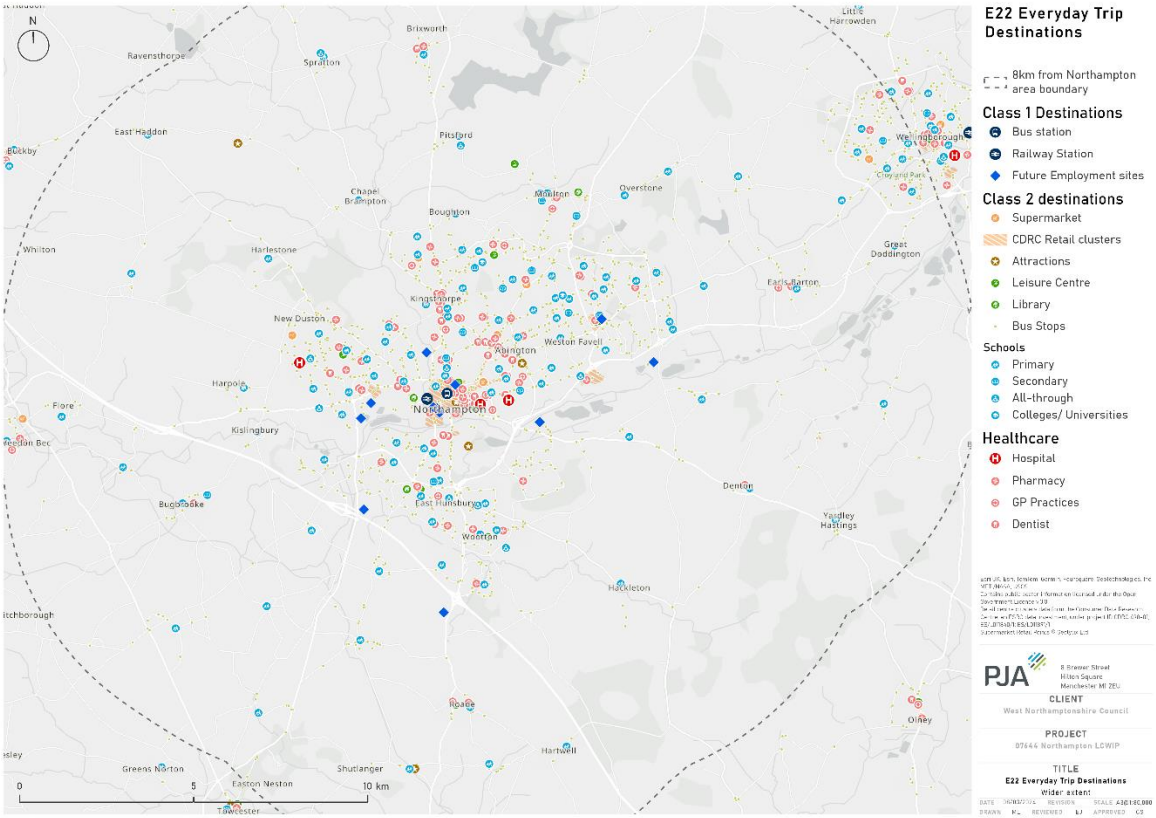

Figure 5-6: Everyday trips destinations

Origin–destination heat maps were created from each origin centroid to the nearest Class 2 destination, and to all Class 1 destinations between 2km and 5km. Clustering analysis was used to cluster desire lines together and select the routes with the highest demand for 'everyday trips.

The Everyday Trips analysis considers a variety of journey types, so desire lines for different journey lengths are considered;

- Cycling Trips (2-5km) – Figure 5-7
- Cycling Trips (5-10km) – Figure 5-8

The analysis of shorter cycling trips demonstrates significant demand within the town centre, as well as around smaller local centres such as the stadiums and Sixfields Leisure complex. The attractor to the north of the town centre along the A508 means there is greater demand around these areas. The leisure facilities and nearby retail around Delapré Abbey contribute to a greater demand for non-work trips in this area, and the retail along Wellingborough Road contributes to a concentration of demand to the east of the town towards Abington and Weston Favell.

Analysis of longer trips shows the demand for non-work trips to the east of the town centre more clearly. The area of highest demand is between the key centres of Weston Favell and Northampton Town centre itself.

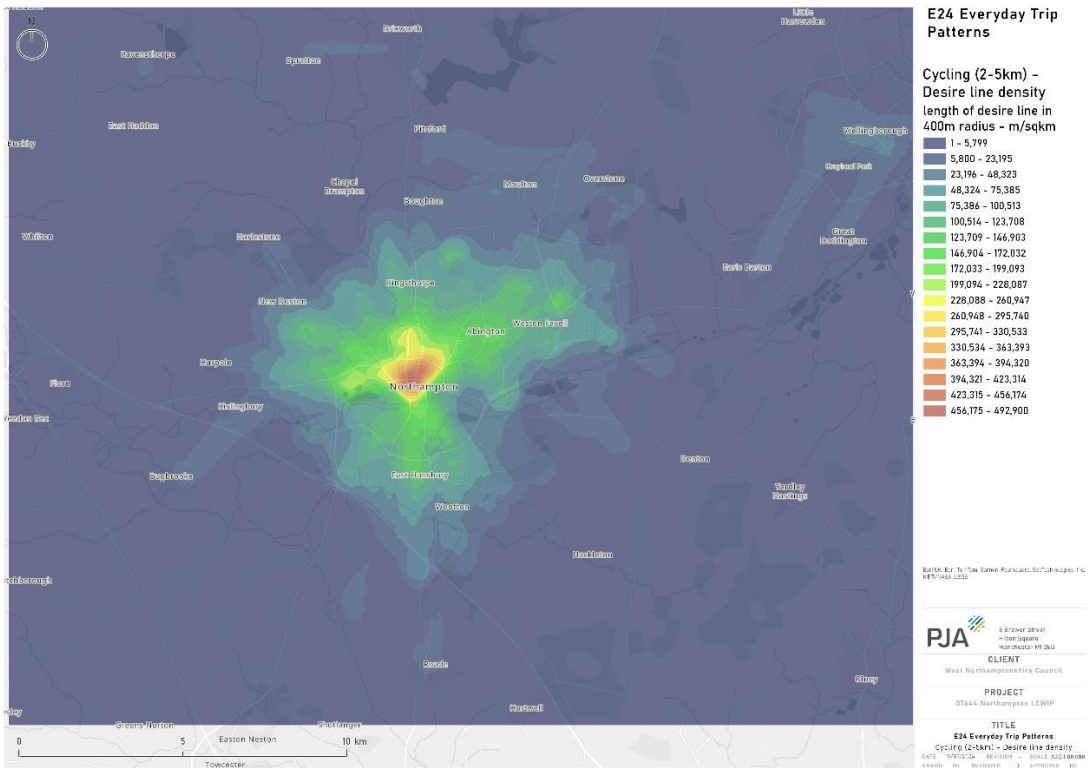

Figure 5-7: Everyday Trip Patterns (Cycling 2-5km)

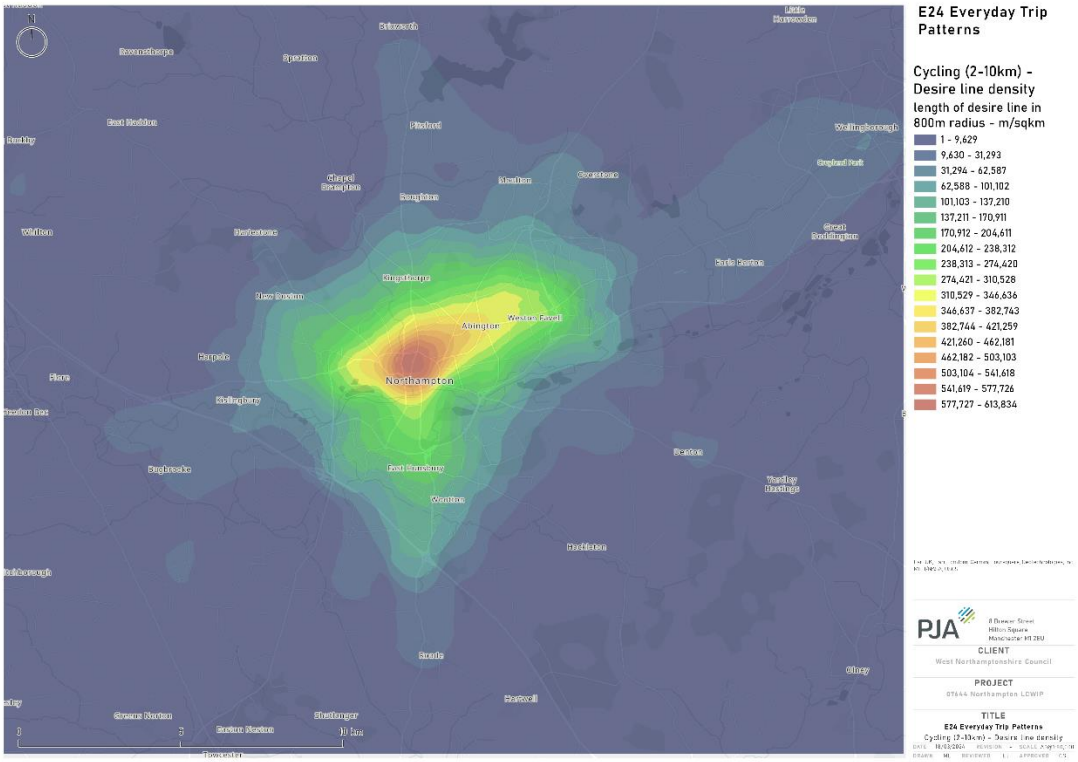

Figure 5-8: Everyday Trip Patterns (Cycling 5-10km)

5.1.6 Strava Metro

Strava is a popular sports activity tracking app often used by cyclists, runners and walkers to record outdoor activities using GPS. Strava makes the aggregated data available to UK local authorities to help inform the development of active travel networks. While the data set is imperfect – only those who choose to use Strava will see their journeys contributing to the data, so the data sample does not reflect the local demographics – the information can help identify already popular leisure routes.

The data heatmap in Figure 5-9 shows that the riverside routes are popular for existing cyclists as means of traversing the town centre. The comparatively low numbers of users on some key corridors into the town centre may indicate that these routes are avoided by those cycling for leisure reasons. Leisure routes outside the urban area – such as the Brampton Valley Way, and Pitsford Reservoir loop appear to be popular.

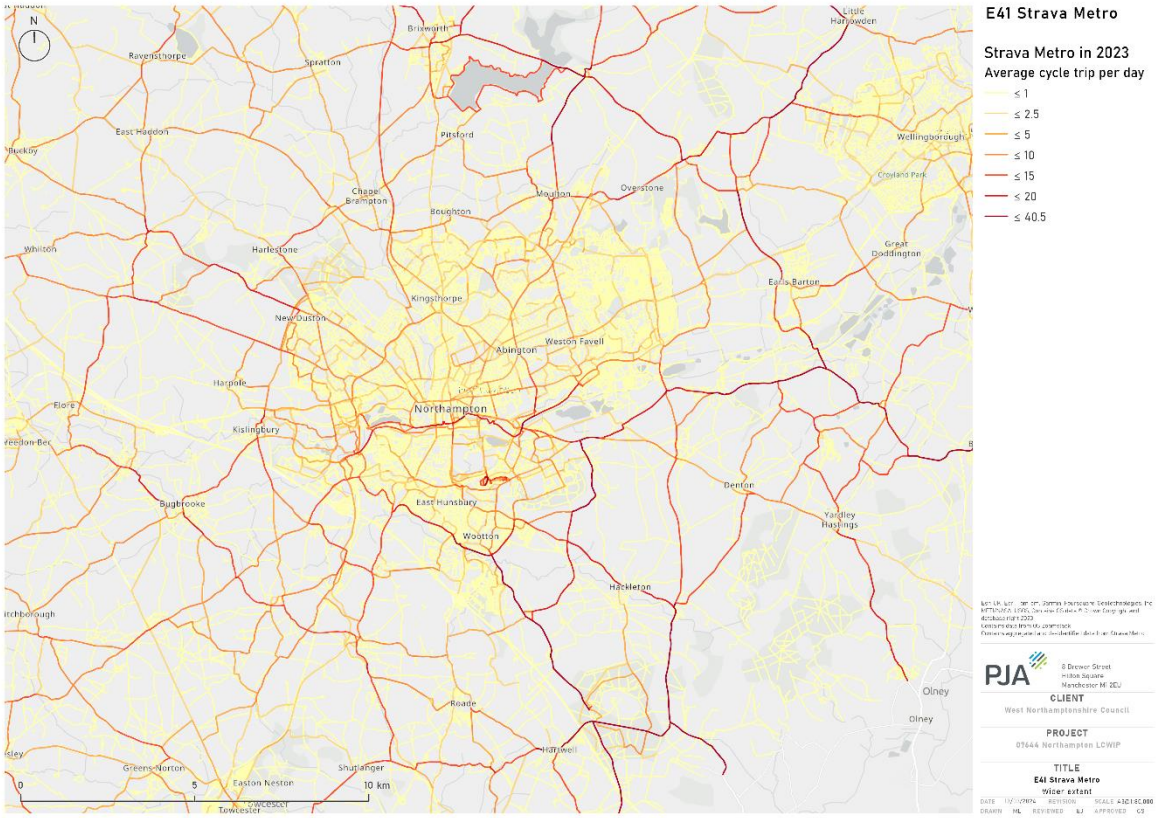

Figure 5-9: Strava Metro showing cycle trips

5.1.7 Combined Analysis

The analyses described above have been combined into a single heatmap, using a hexagon analysis to clearly indicate the likely areas of greatest demand for active travel trips across all journey types. This combined analysis shows the extent to which Northampton is a polycentric town, with demand between the suburbs and town centre only part of the demand profile. Areas of high demand are especially evident to the east and north of the town centre, where relatively high population densities along with 'everyday' trip attractors distributed throughout the area combine to produce a complex demand pattern.

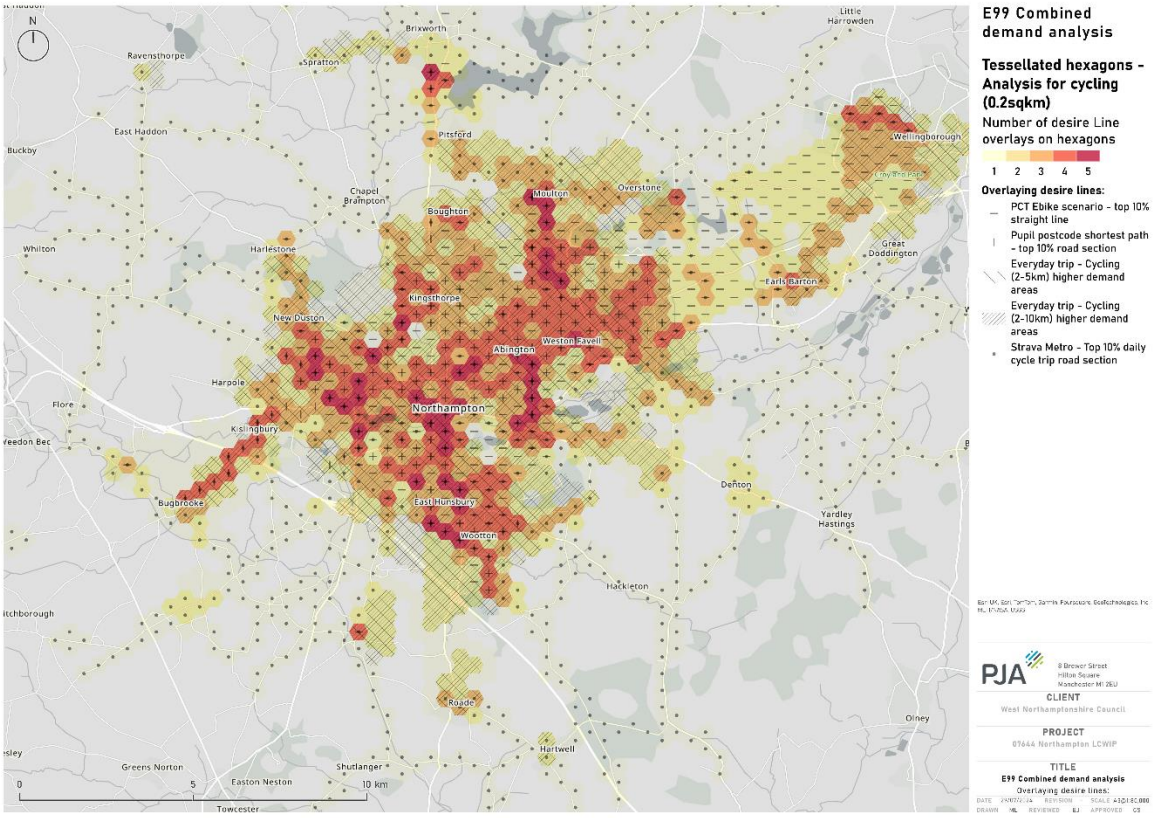

Figure 5-10: Combined Demand Analysis

5.1.8 Straight line indicative network

The combined analysis provides the basis for the development of an active travel network - Figure 5-11. This 'skeleton' network indicates the desire lines for cycling based on the combined demand model, with additional links added to reflect other background analysis and feedback from stakeholders. The network aims to indicate the principal desire lines identified through the data-gathering and demand assessment stage. This network was shared with the stakeholder group through a workshop, which provided some updates to ensure that key links were included in the network. The network incorporates planned and under construction active travel infrastructure schemes around Delapré Abbey and Abington Park.

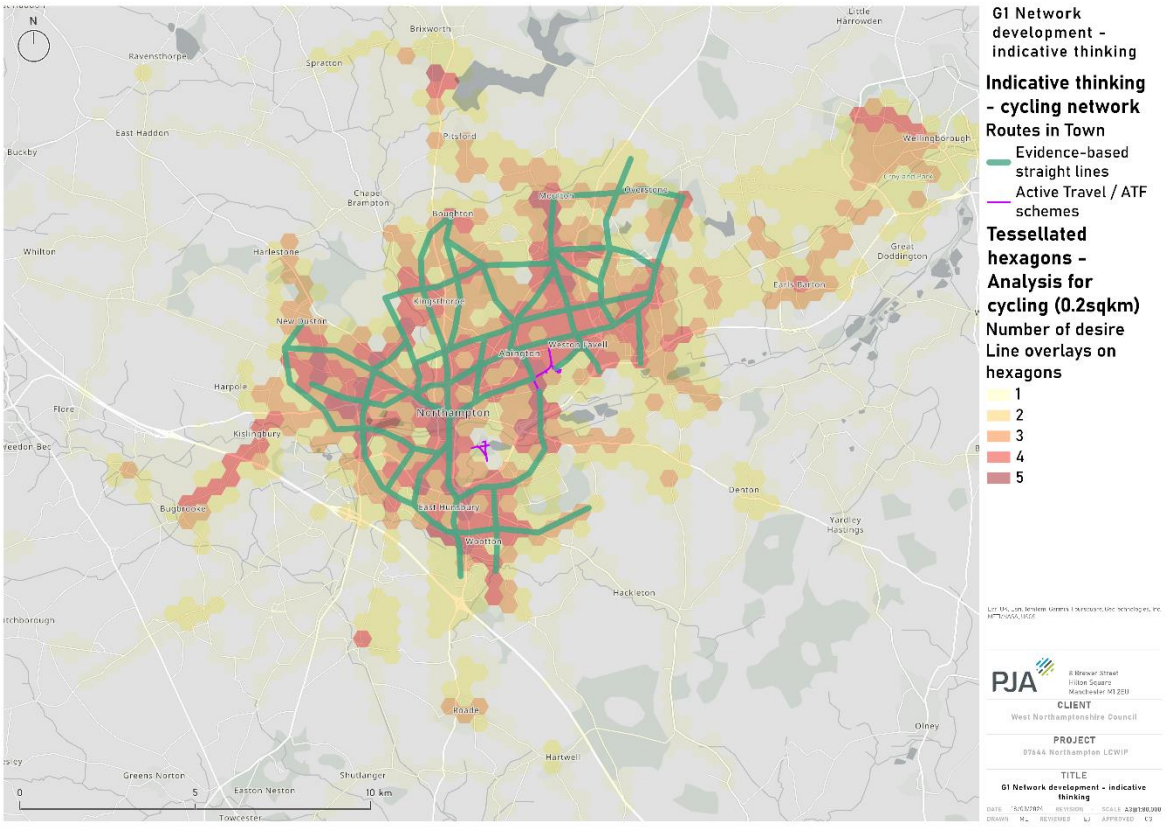

Figure 5-11: Indicative Cycle Network within Northampton

5.1.9 Inter-urban routes

In addition to the routes within the urban area, a number of Inter Urban routes have been identified as shown in Figure 5-12. Through analysis of the demand data, and stakeholder input – catering for demand for longer cycling trips from outlying settlements where demand exists, providing links with routes identified in other LCWIPs in West Northamptonshire, and responding to stakeholder priorities for connections.

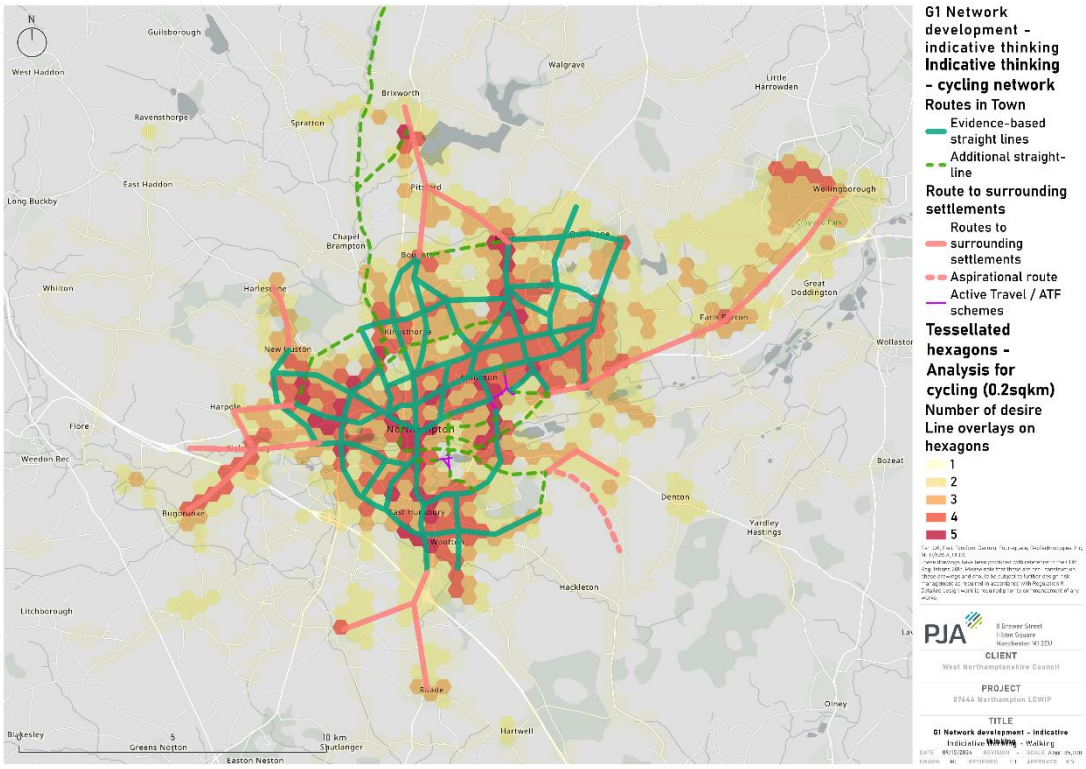

Figure 5-12: Indicative Cycle Network showing Inter Urban Routes

5.1.10 Telematics data

Telematics data was procured from The Floow as part of this study to understand vehicle traffic patterns within Northampton. The data provides indicative daily traffic flows on most streets within the study area – see Figure 5-13 – which was used alongside the indicative desire lines to establish more detailed route alignments, identify potential alternative routes, and inform the level of infrastructure provision along these routes (i.e. whether the route is likely to be quiet enough for cyclists to use the carriageway with low volumes and speeds of general traffic, or whether segregation of cyclists is likely to be needed).

The data can also be used to identify where through traffic may be using residential streets ('rat running'), and area-wide measures may be an appropriate way of creating streets more suitable for walking and cycling.

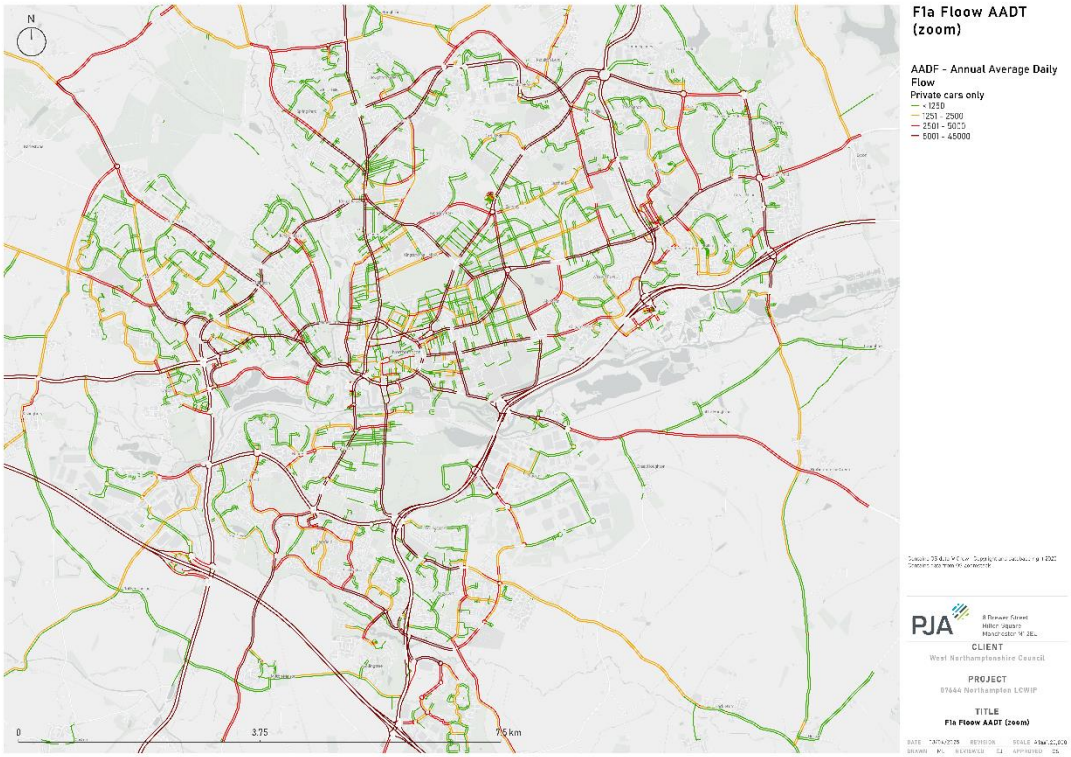

Figure 5-13: Floow Estimated Traffic levels

5.2 Network Plan for Walking

The rationale of developing a network plan for walking is to improve and extend the quality and coverage of the existing walking network to enable more people to walk for everyday trips. The development of the walking network is based upon the identification of 'Core Walking Zones' (CWZ) which represents areas that contain key walking trip generators and therefore likely to create higher levels of footfall (see Figure 5-14). Key Walking Routes connecting areas of demand to the CWZ are identified using similar tools and analyses as for cycling, but with an assumption of shorter trips. In line with the LCWIP guidance, trips of up to 2km are generally considered as potential walking trips for most people.

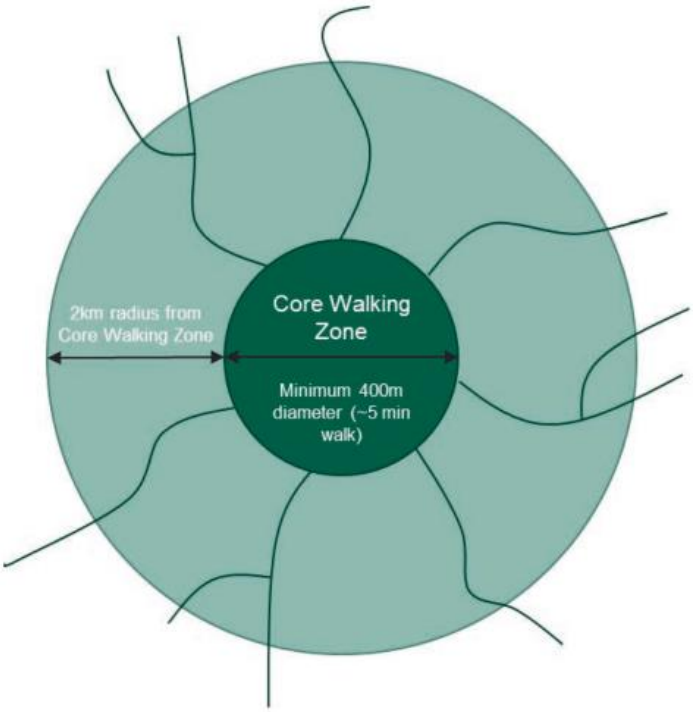

Figure 5-14: Illustration of core walking zone and key walking route development

Analysis of everyday trip destinations, and employment clusters in the study area was used to identify Core Walking Zones around Northampton, and these were cross-referenced with the District Centres identified in the adopted Local Plan;

- Northampton Town Centre (Regional Centre)
- Kingsthorpe District Centre
- Weston Favell District Centre

5.2.1 Walking Demand Analysis

The analysis used to inform the development of the cycling network also helps identify the potential for increased walking trips. In addition to the analysis of work-related trips outlined in section 5.1, the potential for shorter trips of up to 2km has been considered through the 'everyday trips' methodology.

Figure 5-15 outlines the analysis of shorter everyday trips – where desire lines for trips under 2km are concentrated. The centre of Northampton shows a clear pattern of potential walking trips converging into the retail and commercial core, with some corridors – for example along the

Wellingborough Road, and towards the station – evident from the analysis. Outside the main regional centre, Weston Favell, where shops and services are clustered into a small area, is highlighted as a key district centre for walking trips. The concentration of schools in this area also contributes comparatively high demand for walking around this centre.

Kingsthorpe lies just 2km from the centre of Northampton, but is defined as a district centre, and the cluster of trip destinations in this area are expected to contribute to comparatively high walking demand. The comparatively wide distribution of destinations along the A508 Harborough Road – destinations are spread between the recreation ground in the north, to the junction with Mill Lane to the south – means that walking trips are likely to be less concentrated to a single centre, and therefore show less clearly through the analysis, but spread along the corridor.

The analysis also indicates that there is potentially higher demand for walking around New Duston and East Hunsbury. These locations have less of a defined centre – and are consequently not defined as District Centres in the Local Plan, or as Core Walking Zones in this LCWIP, but the value of walking trips in these areas should be considered in future study.

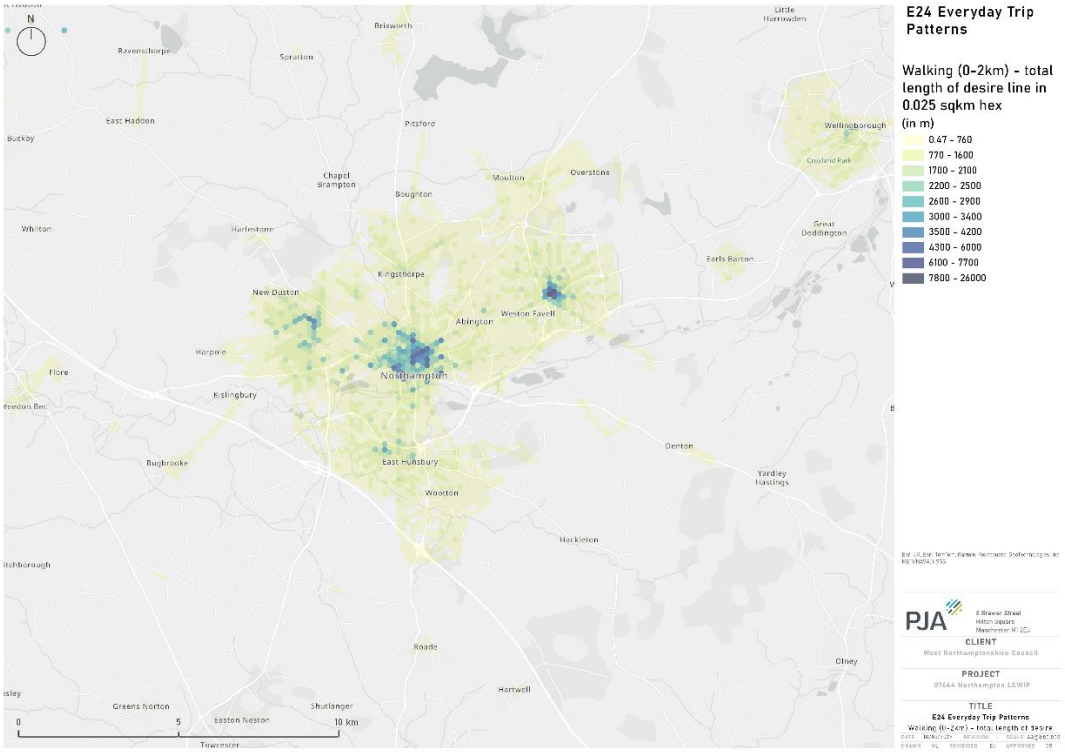

Figure 5-15: Everyday Trip Patterns (up to 2km)

5.2.2 Walking Network Plan

Based on the analysis of potential shorter trips that could be undertaken on foot, a walking network was developed, based around the town centre and District centre Core Walking Zones - Figure 5-16.

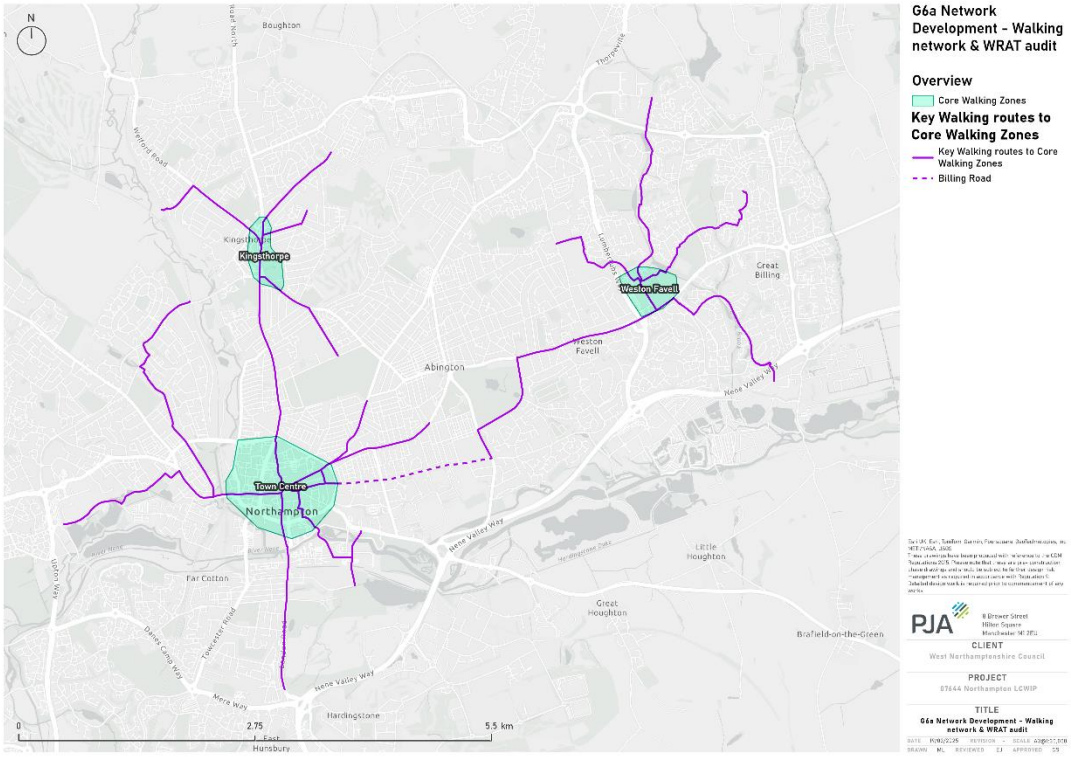

Figure 5-16: Walking Network with Core Walking Zones

5.3 Audit Approach

Following the identification of the networks for walking and cycling, an audit process was undertaken to assess the current condition of the networks, refine potential routes, and inform potential interventions to improve the network quality.

The extent of the network means that a full audit of all proposed routes would not be practical within the scope of the project, so a representative subset of the network was identified for audit using the LCWIP audit tools – the Route Selection Tool for cycling, and the Walking Route Assessment Tool for walking. The routes selected for audit were agreed with WNC and aim to cover a range of broad route typologies. Figure 5-17 shows the cycle routes selected for audit.

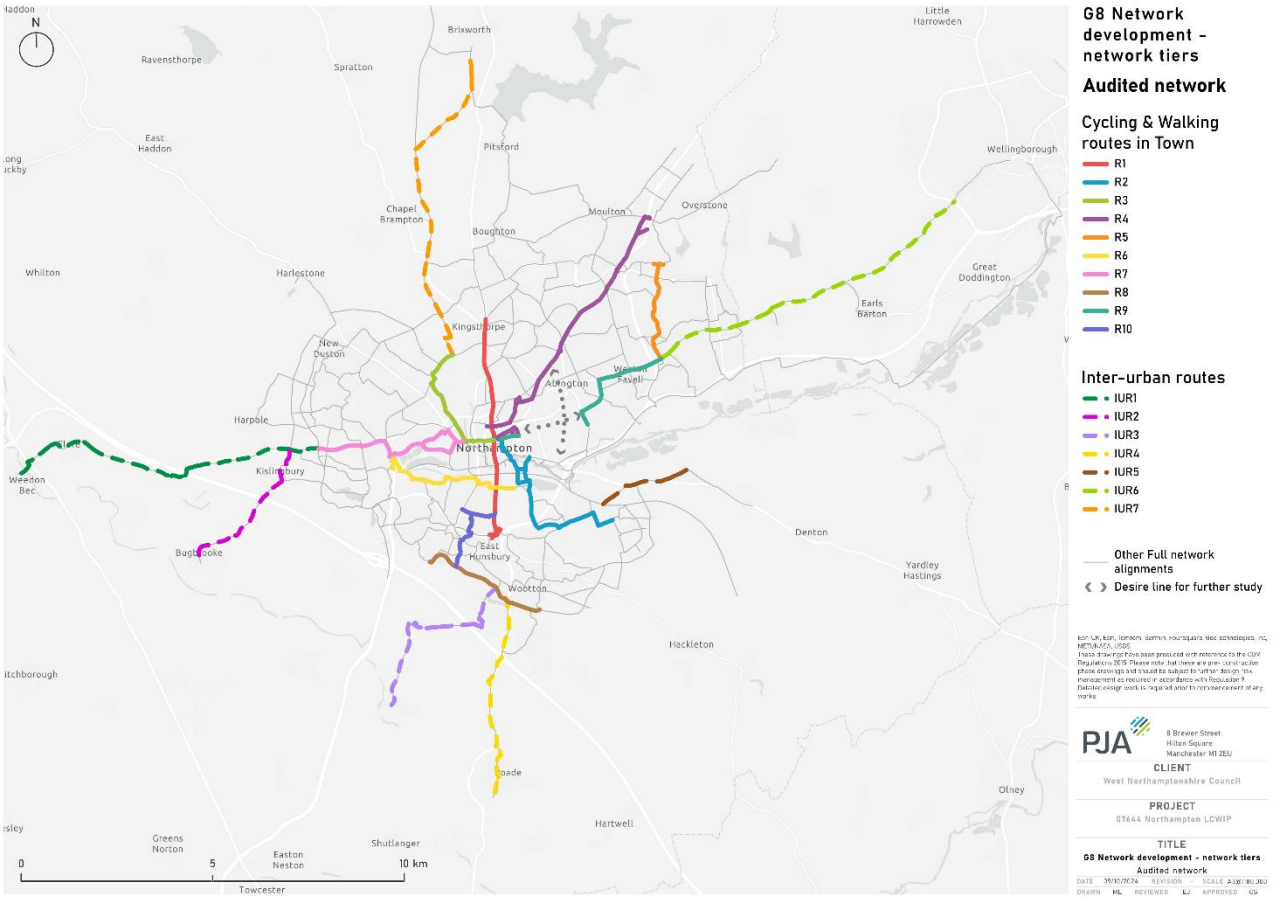

Figure 5-17: Cycle Routes Selected for Audit

- Routes 1, 4 and 7 represent busier corridors – where the routes are likely to be shared between cyclists and other modes, including buses.
- Routes 2 and 5 represent largely traffic-free routes, which make greater use of greenway paths.
- Routes 3, 6 and 10 represent quietway routes, making greater use of low traffic streets.
- Route 8 is an example of a busier suburban spine route through a residential area.
- Route 9 is a link between the town centre and the proposed Abington Active Travel Scheme around Abington Park.

In addition to these routes, seven Inter Urban Routes have been audited, looking at routes to settlements outside the Northampton urban area.

5.3.1 RST audit methodology

The methodology for auditing the cycle network is based upon the LCWIP Route Selection Tool (RST) - an appraisal methodology that helps identify the best route for cycling along a particular corridor.

The methodology breaks down the network into sections of similar character areas, and uses key criteria to determine the quality of a cycling route (directness, safety, gradient, comfort) plus consideration of junction safety at 'critical' points. Along with other information collected during the LCWIP development, the RST audit then helps inform recommendations for improvements along each corridor.

- Directness: Compares the length of cycle route against the equivalent vehicle route with cycle routes that are shorter than the vehicle is scored positively for directness. Higher scores can be achieved through the introduction of modal filters or routing cyclists through parks/open spaces to provide a more direct connection.
- Gradient: Identifies the steepest section of route within the proposed alignment with gradients that exceed either 5% in gradient and/or 50m in length scoring lower.
- Comfort: Assesses the space available for cycling and the quality of surfacing with a preference for protected cycle facilities of >3m (bi-directional) or >2m (uniflow).
- Safety: Considers traffic speed and volume, as well as personal safety factors such as lighting and passive surveillance.
- Critical Junctions: Assesses several critical junction design issues including vehicle flows, protection from vehicular traffic, wide junction splays, and junction geometries.

The detailed audit results are shown in Appendix B with a summary Red/Amber/Green plan shown in Figure 5-18, showing the average scores across the categories.

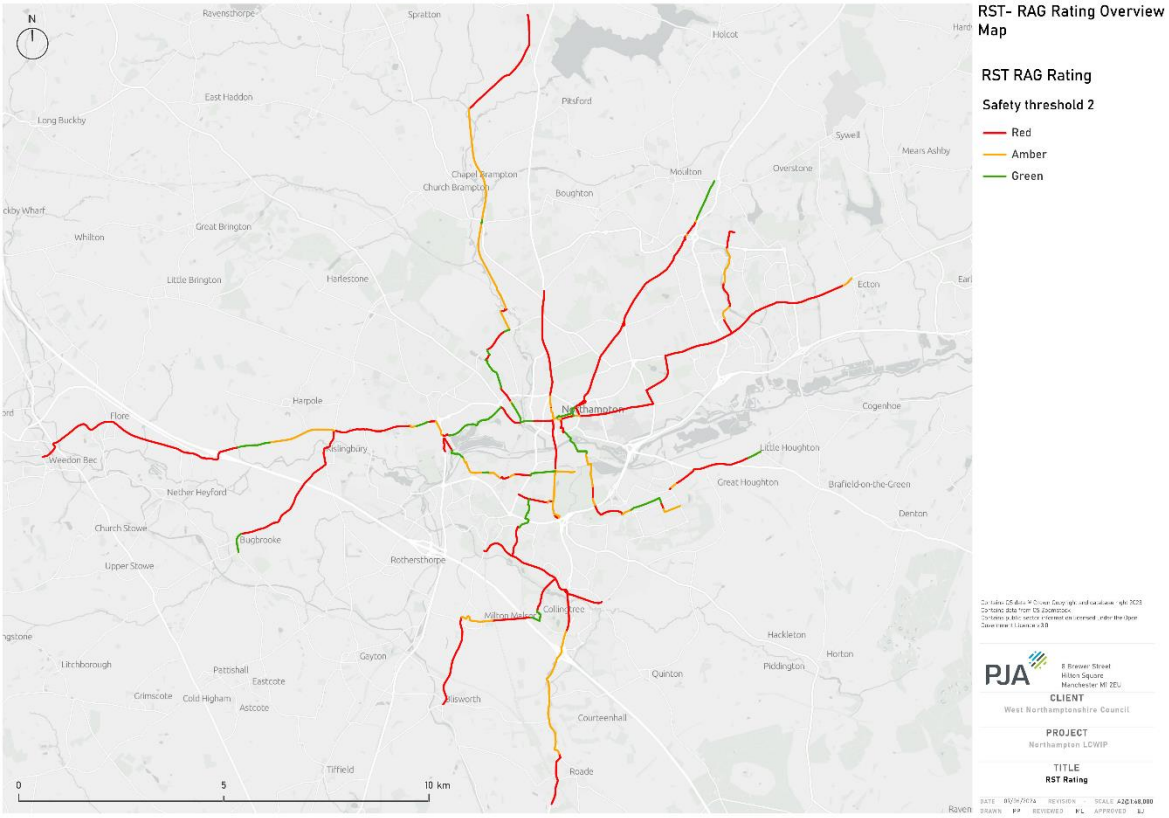

Figure 5-18: Cycle Route Audit Summary

More information the RST can be found in the DfT LCWIP Guidance suite of documents.[2]

5.3.2 RST audit findings

Several common issues were identified through the RST audit process;

Change underway in the town centre – significant changes to the way the town centre operates are happening, with the complete remodelling of the marketplace, comprehensive redevelopment of the Greyfriars area, and substantial changes to the area around the railway station, and Four Waterside, Marefair Heritage Park developments. It was evident from the audit process that traffic and active travel movement patterns in the town centre are likely to change substantially with the changes under way. Many of the gateways into the town centre – crossing the inner ring road – offer a poor experience for people on foot or cycling, with busy junctions – mostly with limited or no facilities for cycling.

[2] https://www.gov.uk/government/publications/local-cycling-and-walking-infrastructure-plans-technical-guidance-and-tools

The study area is well served by greenway paths offering traffic free routes through green spaces and along the riverside, but these routes can be narrow, discontinuous and overgrown, making them difficult to use – especially where the space is shared with pedestrians. Several of the routes feature subways underneath busy roads. While these offer good, grade separated crossings of busy roads, they can be isolated and poorly maintained, leading to a sense of insecurity. The greenway paths around Weston Favell offer good traffic free connectivity, but narrow paths, poor natural surveillance and difficult wayfinding contribute to low usage.

Some main route routes – notably Route 1 (south of the town centre), and Route 7, incorporate some segregated cycle infrastructure, usually in the form of shared use paths. This infrastructure is often inconsistent however, and does not tend to extend along the whole route, with the infrastructure ceasing where road space becomes more constrained or a busier section is reached.

5.3.3 WRAT audit methodology

The Walking Route Audit Too uses similar criteria to the cycling RST, grading the walking routes on several criteria which impact on the experience of walking a given route;

- **Attractiveness**: Considers the impact of maintenance, traffic noise, pollution, and fear of crime impacting on the attractiveness of a route.
- **Comfort**: Reviews the amount of space available for walking and the impact of obstructions upon walking such as footway parking, street clutter and staggered crossings.
- **Directness**: Assesses how closely pedestrian facilities are aligned with the natural desire line and accommodating the crossing facilities are for pedestrians to follow their preferred route.
- **Safety**: Focusses on the impact of vehicle volumes and speeds and interaction with pedestrians.
- **Coherence**: Focuses on the provision of dropped kerb and tactile information for pedestrians.

More information the WRAT can be found in the DfT LCWIP Guidance suite of documents.[3]

5.3.4 WRAT audit findings

The detailed audit results are shown in appendix B, with a summary Red/Amber/Green plan shown in Figure 5-19 , showing the average scores across the categories.

Some of the key issues identified by the Walking Route Assessment included;

[3] https://www.gov.uk/government/publications/local-cycling-and-walking-infrastructure-plans-technical-guidance-and-tools

Narrow footways, often alongside busier roads, making it difficult for pedestrians to pass – especially people using buggies or wheelchairs.

Footway clutter was observed on several streets, and was particularly evident on Abington Square and Kettering Road. Shop front displays and advertising 'A' boards in high street environments reduce the useable space for pedestrians and can be difficult for blind or partially sighted people to navigate. In some areas – for example outside the railway station – large numbers of parked e-scooters can create an obstacle on the footway.

Several signalised junctions, including those close to key pedestrian hubs lack pedestrian facilities on all crossing arms. Kettering Road/St Michaels Road is an example of where a lack of signals means that pedestrians are forced to take a circuitous route to cross busy roads.

Shared paths – especially those around Weston Favell which are set back from the road tend to be narrow and can be intimidating, with poor natural surveillance and wayfinding. The routes provide good connectivity for pedestrians, but worn desire line paths in several location suggest that the people prefer easier to navigate or better overlooked routes closer to the roads.

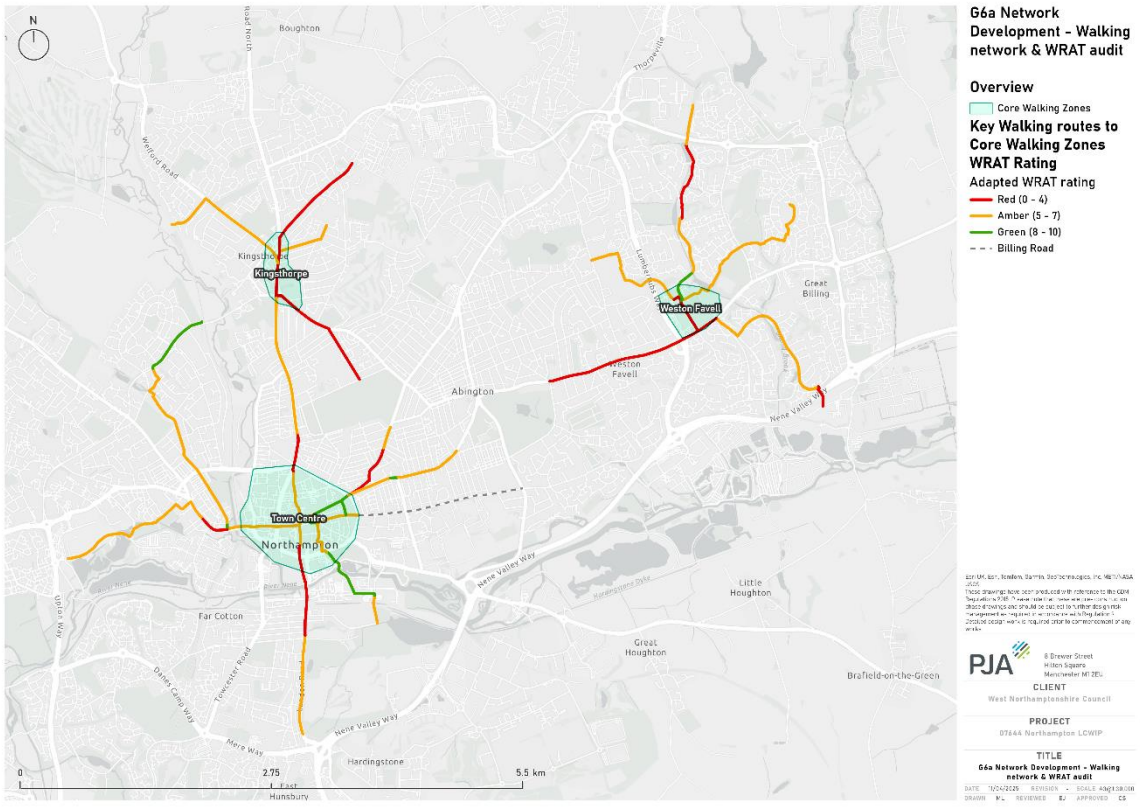

Figure 5-19: Walking Route Assessment summary

5.4 Proposed Network and Design Recommendations

Based on the analysis undertaken, feedback from stakeholders, and site visits and audits, the proposed networks for walking and cycling have been developed. High level design recommendations have been provided for the routes which were audited, with a deeper dive looking at a smaller number of case study routes. The recommendations, which reflect guidance from LTN 1/20 are fully presented in Appendix C, but are summarised in Figure 5-20.

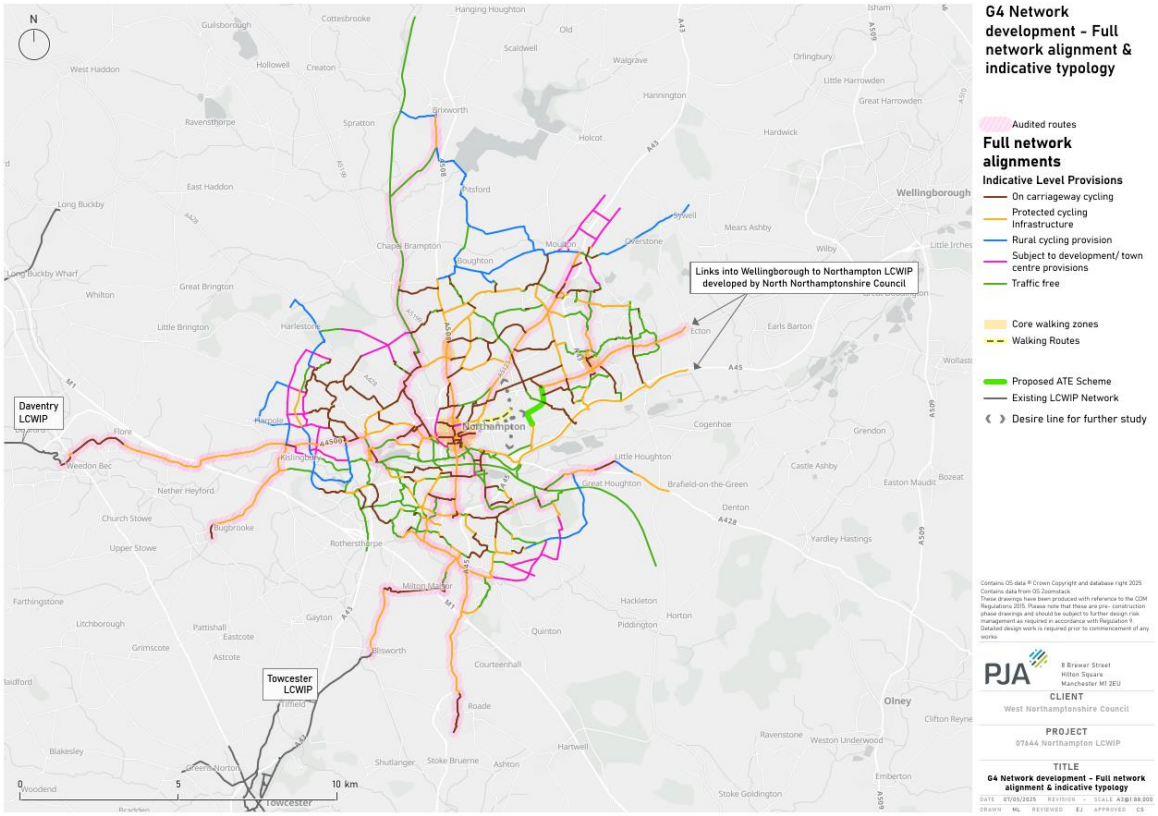

Figure 5-20: Whole Network showing indicative typologies

5.5 Costings

A high level costing exercise has been undertaken for the routes selected for audit. While the LCWIP is not intended as a design document, this exercise can provide a rough comparison of the likely costs for construction of the routes identified. As surveys and other assessments are beyond the scope of this work, the costings provided in Table 5-1 are indicative, based on the cost of delivering similar interventions elsewhere. The table distinguishes between Link costs (i.e. the cost of providing infrastructure between junctions – for example kerb-separated cycle tracks, or simple

'light touch' interventions to accommodate cycling on quiet streets), and Point costs – (i.e. the cost of improving junctions or crossings, removing a barrier, or improving a gateway point).

Route	Link Cost	Point Intervention Cost	Final Total Cost
R1	£3,453,000	£7,826,000	£11,279,000
R2	£1,494,000	£184,000	£1,678,000
R3	£204,000	£2,265,000	£2,469,000
R4	£4,619,000	£2,830,000	£7,449,000
R5	£1,602,000	£657,000	£2,259,000
R6	£490,000	£1,160,000	£1,650,000
R7	£3,260,000	£1,275,000	£4,535,000
R8	£1,487,000	£1,720,000	£3,207,000
R9	£3,146,000	£2,500,000	£5,646,000
R10	£358,000	£330,000	£688,000
IUR1	£7,010,000	£395,000	£7,405,000
IUR2	£3,000,000	£10,000	£3,010,000
IUR3	£5,552,000	£1,155,000	£6,707,000
IUR4	£2,380,000	£1,040,000	£3,420,000
IUR5	£1,382,000	£320,000	£1,702,000
IUR6	£3,689,000	£215,000	£3,904,000
IUR7	£2,784,000	£225,000	£3,009,000
Grand Total			£70,017,000
Note: All design interventions and therefore costs are provided at a very high level. Works have not been done to identify delivery issues such as the movement of utilities, etc. These therefore do not form part of the costing estimates. Overheads such as preliminaries, contract, contingency, optimism, design and project management are also not included. Costs are itemised at a high level as per the LCWIP guidance and previous PJA project experiences.			

Table 5-1: Indicative costing summary

5.6 Prioritisation

5.6.1 Prioritisation approaches

Stage 5 of the LCWIP model covers the prioritisation of the routes identified, providing an indicative ranking of the routes against a series of locally specific criteria. The aim of the prioritisation exercise is to identify what could be delivered relatively quickly, or with more limited resources, and which elements of the proposals may be longer term ambitions.

Three overarching criteria are typically used for prioritisation;

Effectiveness – how well the improvement could deliver mode shift to active travel and improve conditions for existing trips.

Policy – how well the improvements can help deliver against council policies including planning and transport as well as other corporate priorities.

Deliverability – how easily the improvements could be completed, given the complexity of the improvements and potential stakeholder support.

Cost of delivery is an additional consideration, but is considered separately. The outline costings of the routes are outlined in section 5.5.

5.6.2 Prioritisation approaches for Northampton

Prioritisation has been undertaken for the audited routes, where high level interventions have been identified for the routes.

The criteria agreed with West Northamptonshire officers for prioritisation of the routes is;

Policy

- The route improves accessibility to the bus and rail stations - alignment with LTP Draft Policy 4&5
- The route improves equitable access to green/blue infrastructure – alignment with LTP Draft Policy 10
- The route improves access to employment areas by active modes – alignment with LTP Draft Policy 13
- The route improves active travel links to/from areas of higher deprivation

Effectiveness

- The route has a high correlation with identified desire lines for active travel.
- The route has strong connectivity with development/regeneration plans
- The route will include improvements to points of high collision frequency
- The route will serve an area of high population density

Deliverability

- The route is likely to be technically straightforward to deliver
- The route aligns with priorities identified by stakeholders and elected members

A simple 1-3 scoring matrix is used to prioritise the routes, with the outcome shown in Table 5-2. The scoring detail is outlined in Appendix D.

Route	Prioritised Rank
R3	1
R1	2
R7	3
R4	4
R2	5
R5	6
R6	6
IUR4	6
IUR6	6
R9	10
IUR7	10
IUR1	12
IUR3	12
R10	14
IUR2	14
IUR5	16
R8	17

Table 5-2: Route Prioritisation Summary

6 Conclusions and Recommendations

This chapter summarises the key recommendations for the Northampton LCWIP.

The network outlined in Figure 5-20 aims to provide a comprehensive walking and cycling network that can be delivered over time to meet future demand for active travel. The network has been developed using an evidence-based approach, looking at population demographics, existing and projected travel patterns, and accounting for future development. The recommended network has been tested with a group of stakeholders, with feedback incorporated into the network where possible.

The network, while comprehensive in its coverage – including links to nearby settlements – does not provide detailed design recommendations, but is intended to provide a framework for delivery of a strategic active travel network. Indicative recommendations are provided in Appendix C to indicate the typical measures that are likely to needed to bring a route up to the standards outlined in the LTN 1/20 guidance.

The study has shown that there is considerable potential for a significant increase in active travel within Northampton. The polycentric nature of the town means that a comprehensive network catering to trips between smaller centres is likely to suit the future needs of the town, in addition to providing for safe and convenient active travel along key corridors into the town centre. The expansion of the town, through significant residential urban extensions and large employment hubs on the M1 corridor means that this polycentric pattern is likely to become increasingly prevalent in the future as Northampton grows. The LCWIP provides an active travel network that will help inform the development of the area, and reduce the potential for car dependency in these areas.

Appendix A Plans

Appendix B Walking and Cycling Audit Tables

Appendix C Design Recommendations

Appendix D Prioritisation