



**West Northamptonshire Council**

**Daventry Local Cycling and Walking**

**Infrastructure Plan**

**Draft Technical Report for Consultation**

January 2024

Project Code: 06256

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## Version Control and Approval

Version	Date	Main Contributor	Issued by	Approved by
A	25 October 2022	ML,HH, CSw	CSw	CSi
B	21 December 2022	ML,HH, CSw	CSw	CSi
C – Draft for consultation	November 2023		WNC	

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## I Executive summary

- 1.1.1 PJA has produced a Local Cycling and Walking Infrastructure Plan (LCWIP) for Daventry on behalf of West Northamptonshire Council so that future investment in walking and cycling infrastructure can be informed by a coherent vision of how walking and cycling can contribute to the overall transport mix in the area. The plan is cognisant of significant housing growth planned in Daventry North East and Daventry South East.
- 1.1.2 Two key strands were identified to support West Northamptonshire Council's ambitions to increase levels of walking and cycling in and around Daventry:
- an LCWIP for the town of Daventry
  - inter-urban routes to improve connectivity to towns and villages surrounding Daventry.
- 1.1.3 The LCWIP data analysis and site audits demonstrated that Daventry has a good existing network comprised primarily of shared use infrastructure including an extensive traffic-free network, quiet streets and shared use facilities alongside main roads often with subways connecting routes across major roads. However, it also showed that Daventry's potential for active travel is limited by high traffic volumes and speeds, and substandard or missing infrastructure in key areas including the town centre and key routes to it. It highlighted some priority improvements including making High Street access only for loading, introducing bus gates on key routes including New Street and London Road, and upgrading facilities on main roads including Ashby Road and Drayton Way.
- 1.1.4 The LCWIP identifies that two key approaches could be taken to improve Daventry's network, and the design recommendations are presented in a way that allows flexibility in the approach. The first, and more traditional approach, is to deliver improvements one route at a time. Key recommendations have therefore been provided for priority routes. The second approach is to make improvements based on themes such as crossings, priority junctions or cycle parking. Design recommendations have therefore also been provided based on theme.
- 1.1.5 The analysis and stakeholder engagement workshops highlighted the strong local desire for improved links between Daventry and key surrounding settlements where walking and cycling is currently difficult or impossible, due to high vehicle speeds, flows and a lack of infrastructure. The priority settlements to provide active travel links to Daventry are: Staverton, Braunston, Long Buckby and Weedon Bec. The routes could be delivered in their entirety or could be used to inform localised improvements as opportunities arise, such as during planned road and Public Right of Way maintenance, or to secure developer contributions during the planning process.



## 2 Introduction

### 2.1 Introduction to study

2.1.1 PJA has produced this Local Cycling and Walking Infrastructure Plan (LCWIP) for Daventry on behalf of West Northamptonshire Council. The LCWIP process ensures an evidence-led network plan so that future investment in cycling and walking infrastructure can be informed by a coherent vision of how cycling and walking can contribute to the overall transport mix in the area.

2.1.2 The LCWIP process involves:

- Scoping
- Data collection and analysis, including the use of:
  - Propensity to Cycle (PCT) tool
  - ‘Everyday Trip’ analysis for walking and cycling within Daventry
  - Traffic flow and Throughfare within Daventry, by the use of telematic data from the Floop
  - Other analysis including Cell plan, Terrain, School Travel Data, Walking and Cycling Isochrones
- Network development and site auditing for walking and cycling networks, including:
  - Identification of core walking zone and key walking routes
  - Identification of cycle routes within Daventry and routes to surrounding settlements
  - Route audits (using Route Selection Tool (RST) and Walking Route Assessment Tool) (WRAT)
  - Identification and prioritisation of proposals within Daventry
- High-level cost estimates
- Stakeholder engagement at various stages of the project to ‘sense check’ the analysis and ensure the plan is informed by local knowledge.

2.1.3 Two key strands were identified to support West Northamptonshire Council’s ambitions to increase levels of walking and cycling in and around Daventry:

- Walking and cycling measures within Daventry itself (the core LCWIP)
- Routes to key surrounding settlements from Daventry.

### 2.2 Report structure

2.2.1 The report reviews existing relevant policies and plans and details the comprehensive spatial analysis and audit work undertaken to develop the LCWIP. Findings are presented from each of the individual project strands including the core LCWIP for walking and cycling within Daventry, as well as routes to surrounding settlements. It concludes with a recommended approach for the overarching delivery of the project.

### 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

3.2.1 The national policy context for active travel changed significantly in 2020 with the Department for Transport’s (DfT) publication of ‘Gear Change’ and the revised Local Transport Note 1/20 ‘Cycle Infrastructure Design’. These two policies 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.



**Figure 3-1: Gear Change and LTN 1/20 were both published in 2020, outlining significant investment and changes in walking and cycling**

#### **Gear Change (2020)**

3.2.2 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.



3.2.3 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.”

3.2.4 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.

3.2.5 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 (2020)**

3.2.6 The DfT’s recently published Cycle Infrastructure Design – Local Transport Note 1/20 establishes much higher standards for cycling infrastructure, including geometric requirements.

3.2.7 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.”

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

3.2.8 LCWIPs were first set out in the government’s Cycling and Walking Investment Strategy (CWIS). 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
- Report summarising the work undertaken to inform the LCWIP network development

3.2.9 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.

### 3.3 Local policy context

3.3.1 This section briefly summarises the policy framework for the local area and outlines how this might influence the LCWIP.

#### **Settlements and Countryside Local Plan (Part 2) for Daventry District 2011-2029 (2020)**

3.3.2 Adopted in February 2020, the part 2 Local Plan covers the period up to 2029, and sits alongside the West Northamptonshire Joint Core Strategy Local Plan, both being a part of the development plan for Daventry District.

3.3.3 The policies summarised below are relevant to the study:

3.3.4 **Policy HO1 – Daventry South West** – Site H01 is allocated for residential development. Proposals for this site must be informed by a Masterplan, agreed by the Council as local planning authority, that must demonstrate how the site will come forward comprehensively.

- About 1100 dwellings, with a mix of house type in accordance with policy HO8 unless an alternative mix would assist regeneration and help enhance town's profile
- A two form of entry Primary school
- Local centre providing local shopping facilities of appropriate scale
- An integrated transport network focused on sustainable transport modes, including
  - (i) improved pedestrian and cycle links from site to Staverton,
  - (ii) direct vehicle access from A45 with at-grade crossing connecting to Tyne Road,
  - (iii) at-grade pedestrian connection to Daventry Sports Park,
  - (iv) Improvement to existing Staverton Road -Yeomanry Way crossing
  - (v) Improvement to existing footbridge to support use by pedestrians and cycles
  - (vi) Access to public transport providing connections to Daventry Town Centre and Northampton
- Other contributions including in highway, environment, drainage, and amenities provision



- 3.3.5 **Policy HO2 – Daventry, Micklewell Park Extension** – Residential development of 250 dwellings, and **Policy HO3 – Daventry, Micklewell Park Development principles** which also covers area for policy HO2, including the following contributions:
- Integration with existing urban area, particularly Lang Farm and Middlemore, including through the provision of integrated walking and cycling links
  - Principal access to site via A361
  - A two form of entry primary school
  - A local centre providing local shopping facilities
  - Housing types, sizes and tenures to meet identified needs including the provision of plots for self-build
  - Other contributions in green spaces and infrastructures
- 3.3.6 **Policy HO4 – Daventry Land at Middlemore** – Residential development of 100 dwellings with contributions to the Daventry to Braunston Cycle Link and other contributions including noise mitigation, amenities and water resources.
- 3.3.7 **Policy EC3 – Daventry, Land to the North and West of town centre (Site 3 and 5)** – mixed use development with following provisions:
- Suitable and legible pedestrian and cycle link accommodate the distinct need of different users linking to the town centre, Daventry Country Park, Daventry North East Sustainable Urban Development (SUE) and the Learn Quarter (site 6), including those passing through the site, through design and layout and by utilising public realm
  - Other relevant contributions/ mitigations around heritage, views, public space, active frontages, flood risk, water and water recycling infrastructure
- 3.3.8 **Policy EC5 – Daventry, Land off Newnham Drive, EC6 – Daventry, The Knoll, EC7 – Daventry, Land North West of Nasmyth Road, and EC9 – Daventry South East Gateway:** where walking and cycling links from the site to the remainder of the employment area and also the neighbouring residential area are needed.
- 3.3.9 **Policy ST1 – Sustainable Transport Infrastructure** – where in Walking and Cycling:
- Measures to promote walking and cycling will be supported, this will include the provision or retention of links which provide ready access between;
    - (i) Daventry Town Centre, Strategic Employment Areas, other services/ facilities and residential areas
    - (ii) Daventry and surrounding rural settlements
    - (iii) Interdependent rural settlements

- (iv) Rural settlements and Northampton, Rugby and Market Harborough
- In particular, opportunities to promote and improve walking and cycling routes at the following locations will be supported:
  - (i) Daventry to Long Buckby, including the station
  - (ii) Daventry to Braunston
  - (iii) Daventry to Norton
  - (iv) Daventry South West to Daventry Town Centre
  - (v) Daventry South East Gateway to Weedon
  - (vi) DIRFT to surrounding villages
  - (vii) Daventry Town Centre to the Grand Union Canal
  - (viii) Sustainable Urban Extensions
- Opportunities to make optimum use of waterways and disused railway lines as sustainable transport routes will be supported.
- In assessing development proposals that seek to introduce improved linkages, including those identified in parts A, B and C, regard will be had to the impact on the character of any affected settlement and its surroundings.

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

3.3.10 The West Northamptonshire Joint Core Strategy Local Plan (Part 1) (WNJCS) (adopted 2014) outlines the following housing delivery requirements for Daventry District excluding Northampton Related Development Area:

**Table 3-1: Housing delivery against actual and planned delivery requirement outlined in Daventry Part 2 Local Plan**

Settlement	Delivery requirement	Completions 2011–2019	Commitments 2019–2029	Residual
Daventry Town	4,620	958	4,099	437
Daventry Rural Areas	2,360	2,287	1,402	1,329
<b>Total</b>	<b>6,980</b>	<b>3,245</b>	<b>5,501</b>	<b>1,766</b>

3.3.11 The Joint Core Strategy contains several policies relevant to the study:

3.3.12 **Policy S5 – Sustainable urban extensions** – outside the existing urban areas development will be focused on sustainable urban extensions to the urban areas, including 2,600 dwellings and local employment opportunities in Daventry.



**3.3.13 Policy C5 – Enhancing local and neighbourhood connections** – the connections within urban areas, between neighbourhoods and town and district centres, or the rural hinterlands of West Northamptonshire with their most accessible service centre, will be strengthened by measures including improvements to cycling networks and cycle parking and securing and enhancing urban and rural walking networks.

**3.3.14 Policy D1 – The regeneration of Daventry Town** - The regeneration of Daventry town over the plan period and beyond to provide for a sustainable town of 40,000 population is supported in this joint core strategy in achieving the role of sub regional town centre as stipulated in Policy S1-S2. Within the joint core strategy plan period progress towards this vision will be achieved through the following measures:

- Providing housing development within the existing urban area, remaining development at Middlemore, Monksmoor and the sustainable urban extension at Daventry North East (as set out in policy d3);
- Retaining existing employment areas and encouraging their regeneration and renewal; new employment provision at the town centre via redevelopment schemes and by local employment opportunities provided at Monksmoor and Daventry North East SUE;
- Additional services and facilities provided through central area regeneration schemes and as appropriate at housing developments and Daventry North East SUE;
- Addressing issues of community regeneration in Southbrook (as set out in policy D4);
- Provision of additional retail space within the town centre (as set out in policy D2) and local shopping facilities within the SUE (as set out in policy D3);
- Improvements to public transport, cycling and walking facilities within the town (as set out in policy D5);
- Provision of the Daventry development link a45 corridor improvements from Daventry to Northampton;
- Provision of leisure and tourism development within the town centre via redevelopment, and including an extension to Daventry country park (as set out in policy d3); and
- The development of a green infrastructure network for the town including the canal corridor, Daventry country park and Borough Hill and new greenspace associated with major development sites.

**3.3.15 Policy D2 – Daventry Town Centre** - The town centre boundary and primary shopping area for Daventry will be identified on the Daventry district settlements and countryside local plan policies map. Major retail, office and leisure development will take place within and adjoining the town centre in a manner that is compatible with the appropriate conservation of its heritage assets. Provision will be made for a minimum increase in shopping provision of:





- 5,100 sqm net comparison (non-food) shopping floorspace to 2026; and
- 2,900 sqm net convenience (food) shopping floorspace to 2026.

Development of additional retail floorspace within the town centre in excess of the above figures will be acceptable where it is demonstrated that there will be no unacceptable adverse impact on the vitality or viability of other town centres.

**3.3.16 Policy D3 – Daventry North East Sustainable Urban Extension** – the development will make provision for 4,000 dwellings (a minimum of 2,600 by 2029), a 10 ha school site, local centres providing local shopping and health care, and an integrated transport network focused on sustainable transport modes, walking and cycling, with strong links to the town centre, Southbrook residential area and Long Buckby Rail Station; and an extension to Daventry Country Park including sustainable access links to development to the west.

**3.3.17 Policy D4 – Supporting areas of community regeneration: Southbrook** – to support the regeneration of Southbrook, the council will

- Improve the physical and social integration of it with rest of the town and the North East Sustainable Urban Extension
- Improve walking, cycling and public transport connections to service and facilities in the town centre and adjoining neighbourhoods
- Improve public realm and quality of design, and;
- Creating safe and sustainable environments by designing out crime

**3.3.18 Policy D5 – Daventry’s transport network improvements** including follow improvements:

- Enhanced connectivity of the town to Northampton via the A45/A4500 Corridor
- Improved public transport systems
- Completion of cycling network connecting residential areas, the town centre, employment areas and Long Buckby Railway Station; and
- Improvements to public transport connections to Long Buckby Rail stations and Improved Facilities at the station

### **Daventry Town Centre 2035 Vision (2021)**

3.3.19 Adopted in March 2021, the Daventry Town Centre Vision 2035 sets out a direction of growth for Daventry Town Centre up to 2035, with the goal of healthy, community-focused, green, vibrant, digitally connected, entrepreneurial and historic.

3.3.20 It puts through ambitious vision for public realm and active travel within the town centre area (as shown in the following map) by placemaking, provision of active travel/ public realm facilities and



removal of vehicle dominance in the area. The initiatives that are relevant can be summarised as follows:

- 3.3.21 Junction redesign with traffic calming "gateway" feature and emphasis on pedestrian/ cycle crossings in following location:
- B4038/ Tavern Lane/ Warwick Street Roundabout
  - B4038/ Oxford Street
  - Oxford Street/ New Street/ London Road
  - Abbey Street/ Lodge Road
  - B4038/ Millennium Way
- 3.3.22 Traffic calming, alter road layout or potentially traffic reductions, and facilitate crossing across at following links:
- St James Street
  - Oxford Street
  - New Street & Abbey Street
  - Link to Cinema (Millennium Way) and Brook Street
  - Eastern way west of A425
  - Welton Road north of Eastern Way
- 3.3.23 Public Realm or decluttering proposals including:
- Removal of parking from Bowen Square for outdoor food and drink outlets and extensive landscaping
  - Declutter and strengthen physical and visual link between Tesco / New Street and Bowen Square.
  - Redesign of Chapel Lane/ Market Square/ Abbey Street/ High Street junction to accommodate outdoor drink outlets and events as a focal point/ destination place whilst retaining some parking
  - Downgrade the bus station and relocate it as on-street bus stops on New Street
  - Welton Road north of Eastern Way – creating a piazza space
  - Pedestrian priority piazza along Welton Road south of eastern way -
  - Subways, including connection from Welton Road to Country Park
  - Other public realm improvements at all locations in Figure 3-2
- 3.3.24 A major development option for a new leisure centre:

- Located within the existing roundabout
- An annex wing at Old Gas Works carpark connected via the existing subway which would also become a part of the building
- Releases the existing leisure centre for mixed-use development
- A continuous at grade connection from Eastern Way to B4038.

3.3.25 A large at-grade crossing point along Eastern Way at North Street, and another potentially with school pick up/ drop off point at Welton Road, as with the proposed secondary school at land along Eastern Way west of ICON.

3.3.26 It is unclear whether there are any delivery plans or next stage works related to proposals in the 2035 Town Centre vision plan.

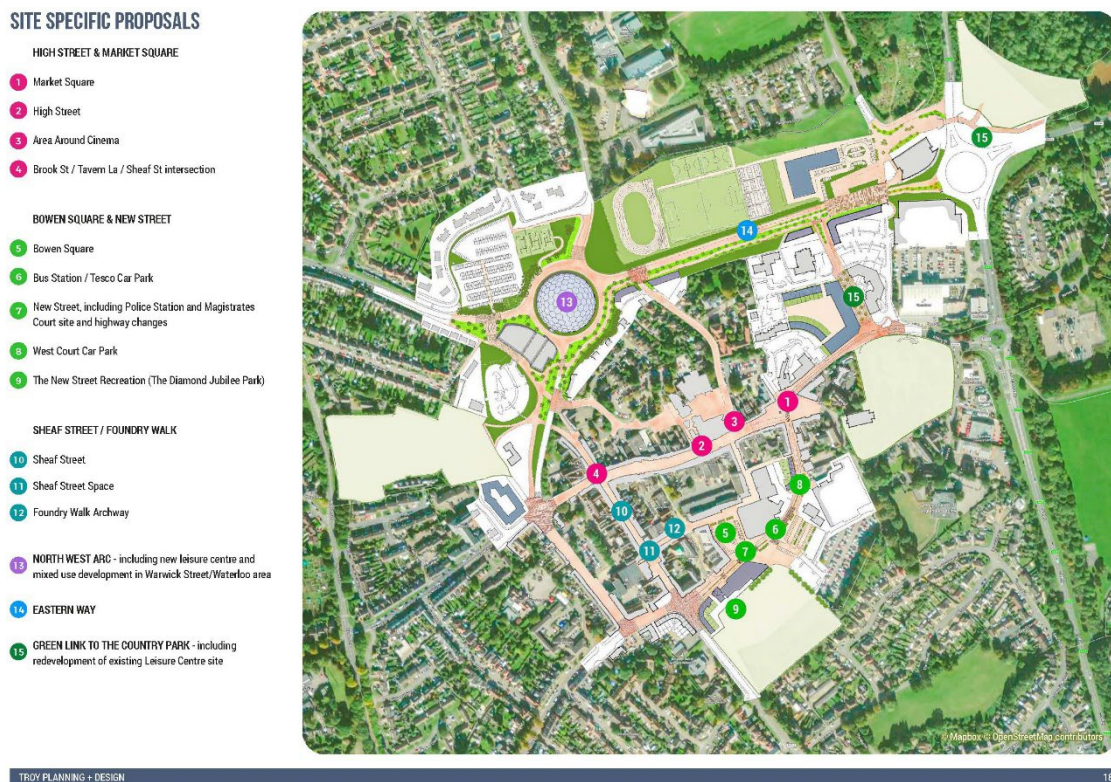


Figure 3-2: Site specific proposals plan in Daventry Town Centre 2035 Visions



### **Northamptonshire Transportation Plan (2012)**

- 3.3.27 The Northamptonshire Transportation Plan was adopted in March 2012 and is the overarching strategy document that sets out what the former Northamptonshire County Council’s strategic aims and goals are for transportation in Northamptonshire. The Transportation Plan states that its overall aim is to create a network that is ‘fit for purpose’, “delivering exactly what Northamptonshire needs to be able to function plus what it needs to be able to grow, no more and no less.”
- 3.3.28 It identifies several objectives: the future, community, choice, economic growth, environment, and best value.
- 3.3.29 One of the priorities identified in the plan is to make public transport and cycling more attractive and encouraging and incentivising low-carbon travel and the policies to improve walking and cycling include:
- 3.3.30 **Strategic Policy 2** - We will support the introduction of effective and attractive sustainable transport options that will encourage lasting modal shift in Northamptonshire. We have set two targets for modal shift, based on 2001 Census journey to work data, to achieve by 2031: A reduction of 5% in single occupancy car journeys to work from the existing built-up areas of the towns A reduction of 20% in single occupancy car journeys to work from new developments.
- 3.3.31 **Strategic Policy 3** - We will ensure that all new developments are well connected by public transport and walking, cycling and motor vehicles routes, to the existing transport network or one that can be reasonable expected to be created – this will allow ease of movement between the development and existing built-up areas and provide access to employment and key services.
- 3.3.32 **Strategic Policy 12** - We will work with communities to identify initiatives as part of an integrated approach to road safety that will aim to reduce casualties and take opportunities to support healthier lifestyles through active travel, promoting modal shift, the Safer Routes to School Programme and walking and cycling schemes.
- 3.3.33 **Strategic Policy 14** - We will work with partners to improve the walking, cycling and public transport infrastructure to make options available for people to travel in Northamptonshire.

### **Northamptonshire Cycling Strategy and Northamptonshire Walking Strategy (2013)**

- 3.3.34 The Northamptonshire Cycling Strategy and the Northamptonshire Walking Strategy were both adopted in January 2013. They set out the overarching vision for cycling and walking respectively within Northamptonshire and the strategy to achieve it.



- 3.3.35 The strategy is one of a series of thematic daughter documents to the Northamptonshire Transportation Plan adopted in 2012. The Daventry Town Transport Strategy is one of several spatial daughter documents and is also relevant to this study as transport is a key theme.
- 3.3.36 The vision for cycling covers both shorter, local utility journeys as well as leisure purposes. The strategy recognises the potential for more cycling to bring significant benefits including reducing congestion, cutting carbon emissions, creating healthier communities and contributing to economic prosperity.
- 3.3.37 The cycling strategy acknowledges that current cycling levels are low with cycle mode share for journeys to work around 2% but notes there is significant potential:

“The compact nature of the towns and in most cases relatively flat topography, presents significant potential to increase cycling trips within the major towns through addressing key missing links and junction treatment. In addition, there are opportunities, if sufficient funding became available, to develop inter-urban links between the main towns and from smaller outlying settlements. The town networks are complemented by the National Cycle Routes 6 and 50 which run north to south through the county, which are used on the whole as leisure routes.”

- 3.3.38 The cycling strategy includes a few high-level policies and design standards regarding the width of facilities which generally align with current guidance in LTN1/20.
- 3.3.39 It is envisaged that walking should be the mode of choice for journey under 1 mile but also for access to public transport, given its benefit in personal and public health, environment, economy and community.
- 3.3.40 The policy context suggests a decline in walking overall, with the proportion of trips made by walking down from 25% to 20% between 2007 and 2010. Walking to access education has the highest level of mode share (about 40%) but is still lower than the car mode share.

### **Daventry Town Transport Strategy (2013)**

- 3.3.41 The former Northamptonshire County Council published the Daventry Town Transport Strategy in 2013. This document recognised that Daventry district has a very high car ownership (almost 1.5 cars per household) and thus modal share of journey to work trips. However, car ownership within Daventry town centre area is much lower, suggesting the potential for walking and cycling trips enabling mobility within the town centre area.
- 3.3.42 The document also recognises the relatively comprehensive existing cycling infrastructure network that mainly consist of shared use footway/ cycleway. Missing links were identified as follows:
- Daventry and Braunston Connect2 link using the former railway line

- Middlemore Site cycle route network
- Ashby Road corridor
- A45 Braunston Road linking existing facilities within the vicinity of Drayton Fields and Royal Oak industrial estates
- Staverton Road/Warwick Street to link existing provision
- At grade crossings to replace subway crossings under the ring road
- Royal Oak Way to link with existing provision to the north and south of Royal Oak industrial estate
- Links to and between town centre development proposals
- Links to expansion areas.

3.3.43 The document identifies the following key issues for cycling:

- Lack of cycle counters in Daventry
- Cycle parking provision at employment sites and on High Street
- Identified missing links in the cycling network.

3.3.44 The strategy also identifies four key opportunities:

- Proposed travel centres at large new development sites provide opportunity for personalised travel planning
- Marketing of cycling routes and benefits of cycling in conjunction with the health authority
- Presence of Cycle Route 70 and an history of close walking with Sustrans
- Proposed residential expansion.

3.3.45 The document recognises that a large proportion of the town is within walking distance of key services, particularly the town centre. It also recognises that instead of investments being made to cycling and public realm improvements, tackling deficiencies in the existing infrastructure such as missing dropped kerbs, signage and footways is where significant improvements can be made to the quality of the walking environment.

3.3.46 It identifies two key issues for walking in Daventry:

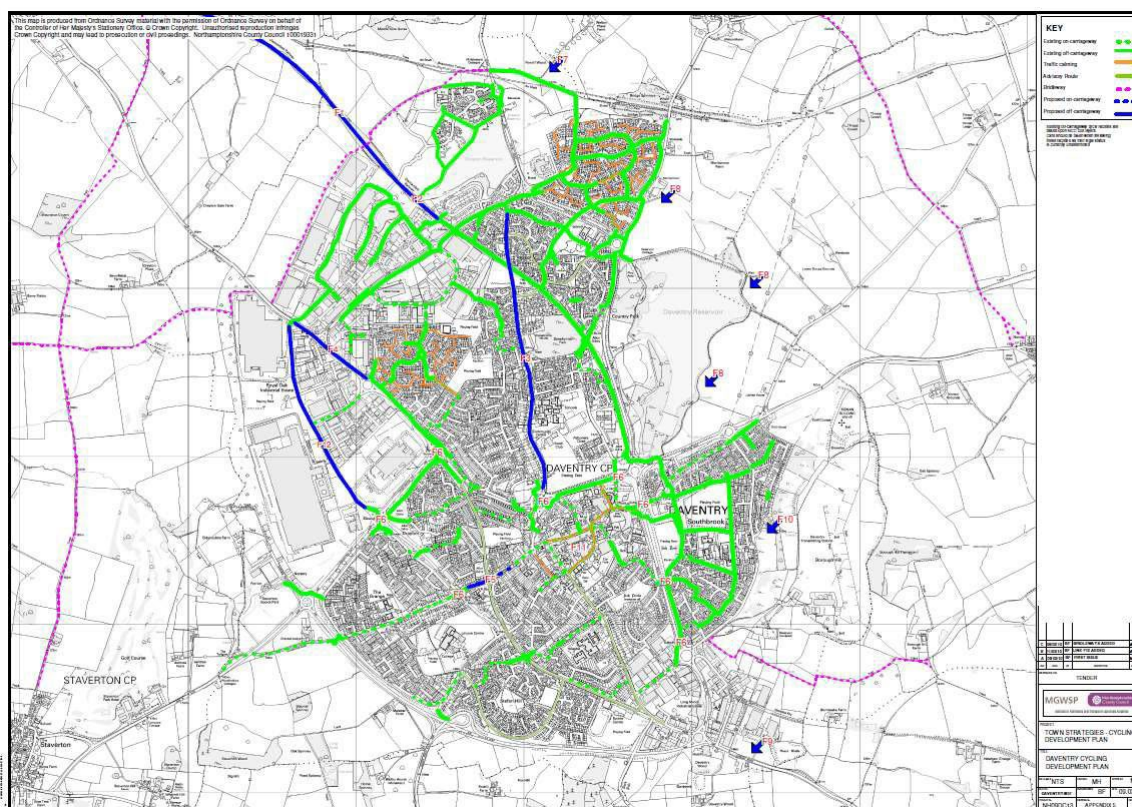
- Proposed new developments, further from the town centre, will need connecting to the existing network
- Missing walking links to some bus stops.

3.3.47 The document identifies the following opportunities for walking:

- Potential funding from new developments to improve walking links

- Pedestrian access to facilities
- Permeability of modern housing estates for people travelling on foot.
- Ability of well-designed new developments to make neighbourhoods walkable.

3.3.48 The Strategy proposes cycling infrastructure improvements in the missing links listed in 3.3.42, but also connections to Long Buckby and Weedon. They are shown in Figure 3-3.



**Figure 3-3: Daventry Town Transport Strategy – existing and proposed cycle network (2013)**

### Oxford-Cambridge Arc Spatial Framework

3.3.49 In the 2020 budget, the government committed to developing, with local partners, a spatial framework for the Oxford-Cambridge Arc, an area that spans the five ceremonial counties of Oxfordshire, Northamptonshire, Buckinghamshire, Bedfordshire and Cambridgeshire. In February 2021 the Ministry of Housing, Communities & Local Government (MHCLG) published a policy paper “Planning for sustainable growth in the Oxford-Cambridge Arc: an introduction to the spatial framework” to set out the Government’s plan for developing the spatial framework.

3.3.50 It notes that, by focusing on the strategic opportunities for growth and environmental improvement that cross local administrative boundaries, it is intended that the plan will:

- Support long-run sustainable economic growth across the area.
- Help to make the area a brilliant place to live, work and travel in – for existing residents and future communities alike.
- Support lasting improvements to the environment, green infrastructure and biodiversity.

3.3.51 For example, the policy paper states it will enable a more integrated approach to planning for new transport infrastructure alongside new development in order to support better, more sustainable planning and growth at the local level. This includes promoting sustainable transport, improving first and last mile connectivity around transport hubs, and better connecting communities, employers, employees, businesses, cultural attractions, nature and universities, including through public transport, cycling and walking.

### **Neighbourhood Development Plans**

3.3.52 Under the Localism Act in 2011, Parish Councils have the opportunity to shape and influence future developments by the preparation of Neighbourhood Development Plans (NDP). The following NDP are areas within the scope of this LCWIP that have certain sections/ policies that cover walking and cycling:

#### *Badby Parish Neighbourhood Plan 2018-2029 (January 2016)*

- 3.3.53 The following points with regards to walking and cycling were made in the Badby NDP:
- **Objective 8** To improve traffic and highways issues in the parish including those related to parking, speed and cycle ways.
  - **Policy B8** Community Facilities and Community Infrastructure Levy  
(Developer contribution/ provision will be sought – where one of the community’s priorities is “improvement of pedestrian ways and cycle paths”)
  - **5.9.6** Badby Parish is a popular destination for cyclists and walkers from far and wide and measures which improve facilities for these forms of sustainable transport are supported. These include improvements to the cycling network between the local villages and to Daventry.
  - **5.9.7** Parking issues, speeding in the vicinity of the village, cycle ways and public transport links are not planning issues but have been included as Parish Actions.
  - **Parish Action 10** The Parish Council will support proposals for cycle ways between Badby, and Daventry and the surrounding villages.





### *Braunston Neighbourhood Development Plan 2011 to 2019 (2017)*

3.3.54 The plan largely stated that improvements for pedestrians and cyclists were favoured throughout the planning process from general public, businesses – that includes safer roads, discouraging through traffic and generally make Braunston a more attractive, accessible place for pedestrians and cyclists.

3.3.55 Specifically, the following policy is relevant to this LCWIP:

– **Policy D – Link to Daventry**

A combined cycleway and walkway between Braunston and Daventry will be supported. The route should be attractive, safe, clearly segregated from vehicular traffic and designed to have the least possible impact on areas of ecological importance.

### *Welton Neighbourhood Development Plan 2018 – 2029*

3.3.56 While the NPD for Welton does not include any policies that directly relate to walking and cycling, it does include a number of “community aspirations”. These were deemed to be outside the scope of the NPD but were nevertheless important to residents. Community Aspiration 1- Traffic Management is relevant to the Daventry LCWIP:

- Where appropriate, traffic management measures will be supported that will improve highway safety provided that the measures be of a design that is in keeping with the Character Area with regards to scale, layout and materials.



## 4 Daventry LCWIP

### 4.1 LCWIP process overview

4.1.1 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. These can be viewed in Table 4-1 below.

**Table 4-1: 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.

4.1.2 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, within core walking zones. The goal of an LCWIP should be 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 should consider travel demand regardless of mode, rather than looking just at existing walking and cycling trips.

### 4.2 Stakeholder Engagement

4.2.1 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.

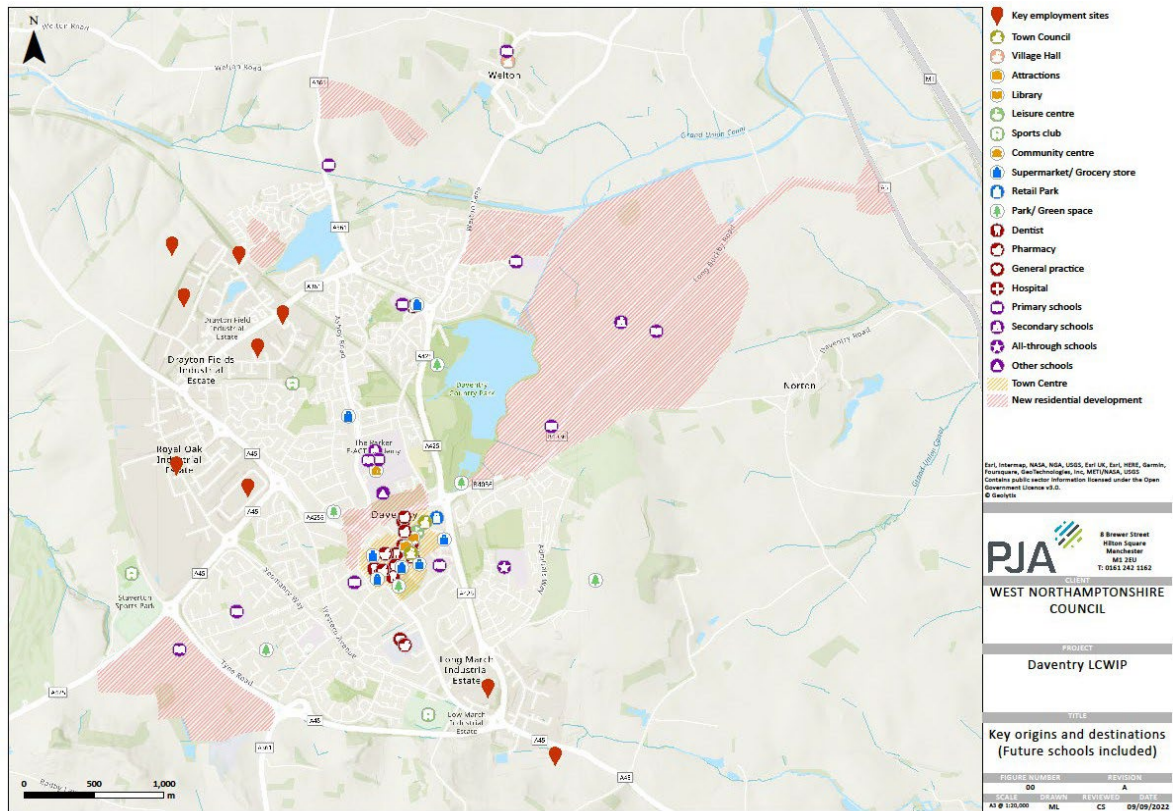
4.2.2 Realising the ambition of the CWIS will take sustained investment in cycling and walking infrastructure and partnership working with local bodies, the third sector and the wider public and private sector to build a local commitment to support this national Strategy. Stakeholders are therefore fundamental to generation and delivery of the LCWIP.



- 4.2.3 Stakeholders were identified by officers at West Northamptonshire Council and included town and parish councillors, key officers from across the Council (including from Public Health, Highways, Planning and Development), Sustrans, Canal and Rivers Trust, the British Horse Society, Ramblers, and Danetre Hospital.
- 4.2.4 Stakeholder engagement has taken place throughout the development of this LCWIP with workshops at three key stages:
- 1 At the very start of the process to help identify key issues and opportunities for walking and cycling within Daventry, key settlements to link to, and wider issues to address through the plan.
  - 2 Following the data analysis to sense check the findings and agree the network to audit.
  - 3 Following site visits to agree the key design recommendations and priorities.
- 4.2.5 In addition to the three workshops, additional meetings (via Teams and on site) and email exchanges were undertaken to explore particular issues, such as the link to Braunston, in more detail.
- 4.2.6 The stakeholder workshops were particularly useful in prioritising links to surrounding settlements where demand tends to be lower and political and community support is often crucial to enabling delivery of routes.

### **4.3 Local context**

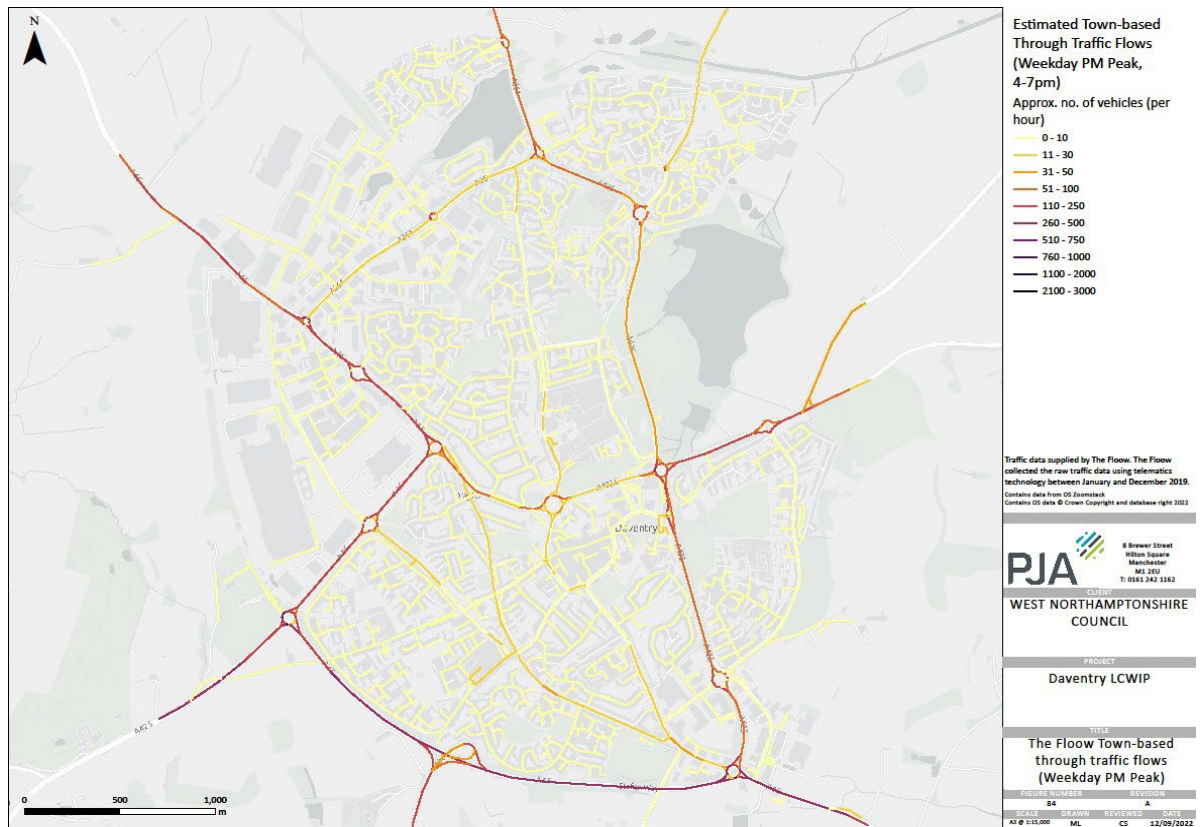
- 4.3.1 As a subregional town centre in West Northamptonshire, Daventry had around 27,500 residents as of the mid-2020 population estimates. It is approximately 2 miles east to west and less than 3 miles north to south. As a planned overspill town since the 1960s, it was designed with a network of – largely shared – walking and cycling routes which are generally separated from main roads by grass verges and grade separated crossings in the form of subways. There is also a large network of shared traffic-free paths linking residential streets. Figure 4-1 shows the key destinations in Daventry as well as future development sites (see Appendix A for full page plans). Most of the amenities are concentrated in the town centre. Existing and future employment allocations are mainly in industrial estates in the northwest and southeast. Significant further developments are also proposed at the periphery of the Daventry Town Centre. Below listed some of the major developments:
- HO1 South West (between Daventry and Staverton), 1100 dwellings
  - Monksmoor new development, 1000 dwellings
  - Daventry SUE North East, 4000 dwellings



**Figure 4-1: Daventry context plan showing key destinations and local plan designations**

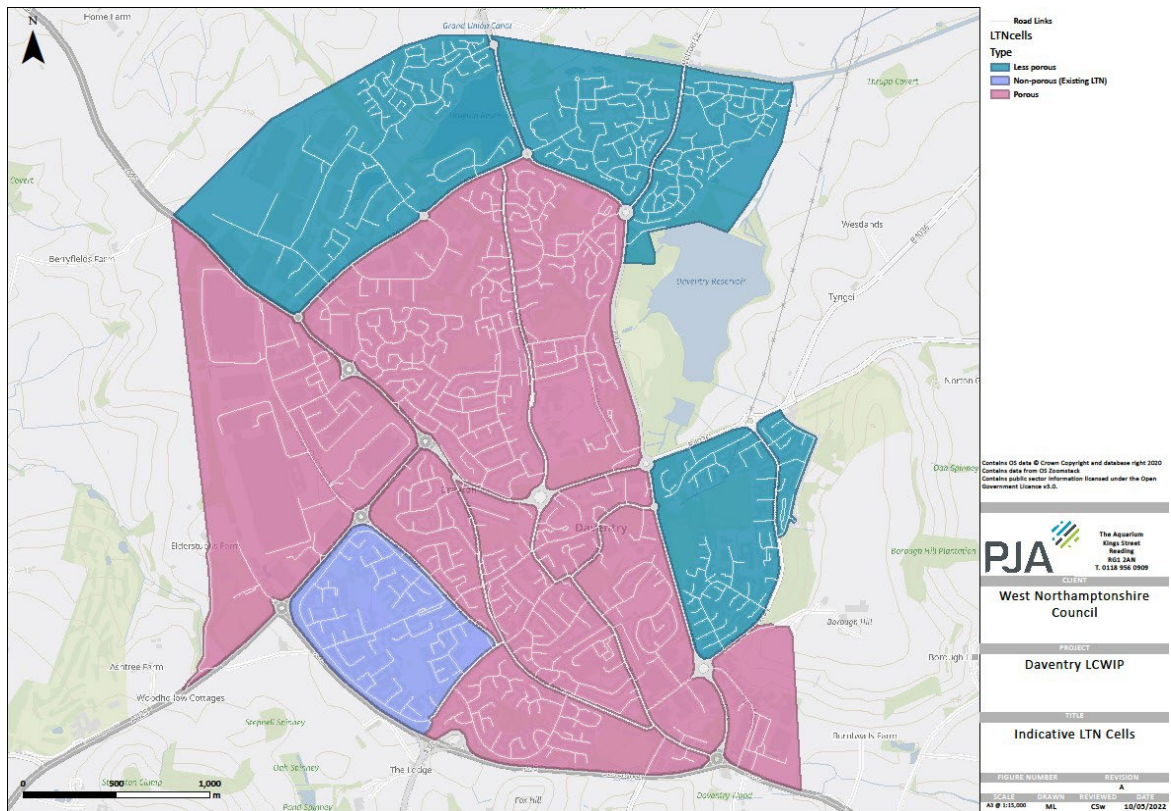
## Transport context & Traffic Data

- 4.3.2 The Department for Transport holds partial traffic counts for some of the busier roads in Daventry but this only provides a partial snapshot of traffic flows across the town. As a result, traffic data was procured from The Flow to inform the study. The Flow uses telematic data to provide estimated general traffic flows (calibrated against existing traffic counts) and throughfare data to provide an understanding of traffic flows and routing across Daventry, including providing insights whether through traffic (also known as rat running) is an issue on any residential streets.
- 4.3.3 Figure 4-2: Estimated through traffic flows shows that the vast majority of Daventry's through traffic is using the main roads rather than 'rat running' through residential roads. This is likely to reflect a lack of congestion and/or quicker journey times on the main roads.



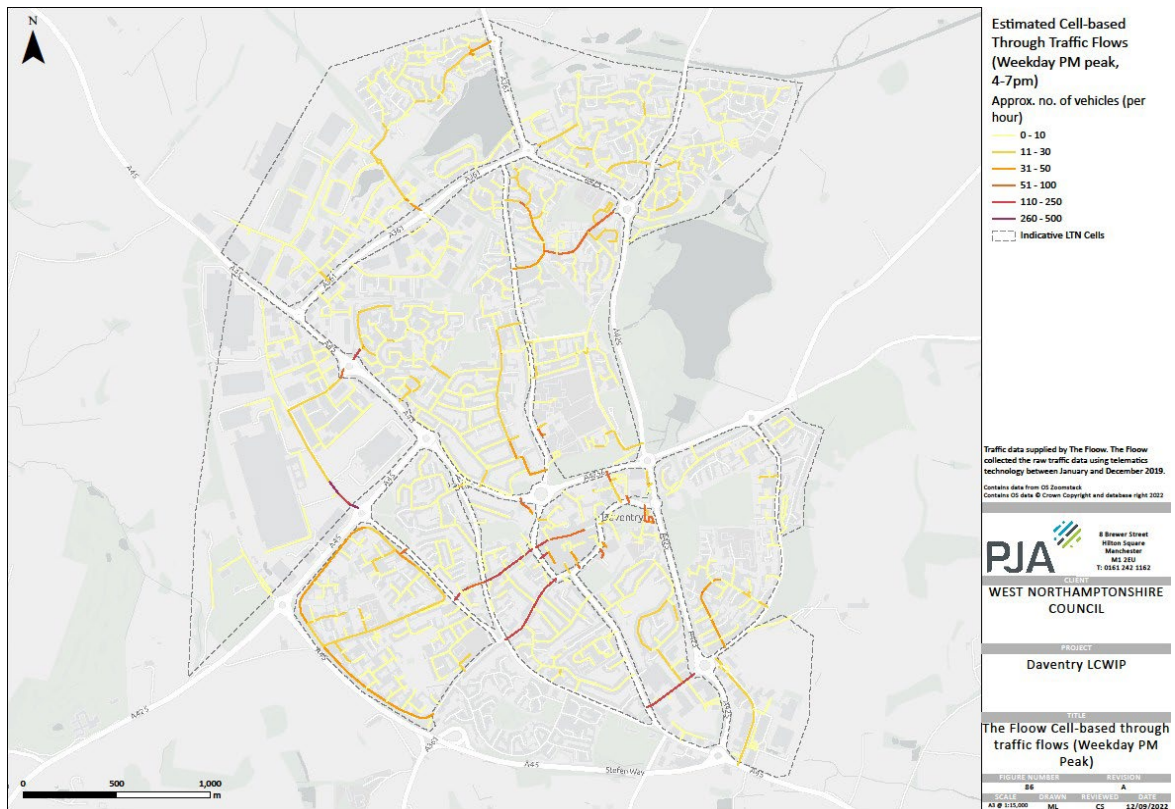
**Figure 4-2: Estimated through traffic flows**

4.3.4 Figure 4-3 identifies low traffic neighbourhood “cells” across Daventry; neighbourhood areas which are bounded by main roads. This demonstrates that although Daventry has a large number of main roads design for speed and capacity, the street network enables drivers to take short cuts through residential street rather using the main roads.



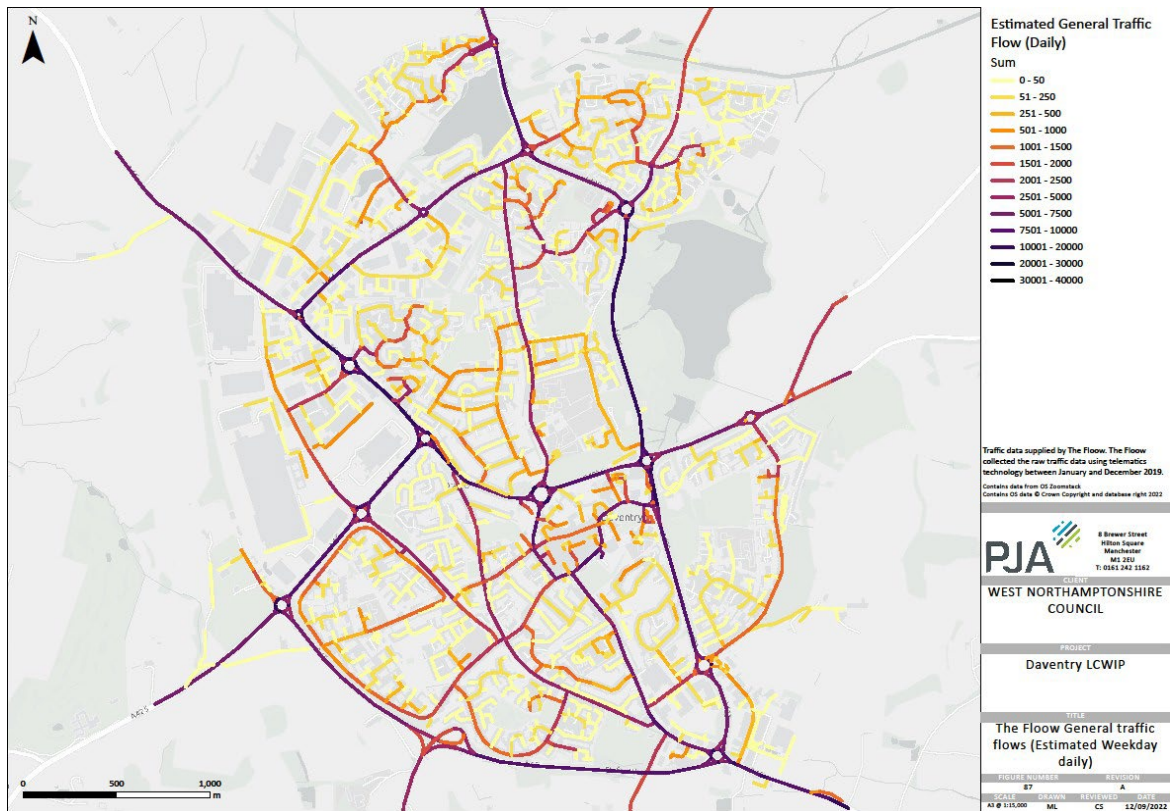
**Figure 4-3: Identified indicative LTN cells**

4.3.5 However, The Flow telematics data in Figure 4-4 shows that there are only a few neighbourhoods where ‘rat running’ is potentially taking place. These locations include Staverton Road/Warwick Street, Badby Road, Long March and Shackleton Drive/Speke Drive. Given the data shown in Figure 4-2, this is likely to be due to the free-flowing nature of the main roads meaning it is quicker for drivers to use the main roads than rat run through residential streets. Intervening in the small number of streets where excessive traffic does appear to be an issue should help improve conditions for walking and cycling in these neighbourhoods.



**Figure 4-4: Estimate through traffic flows among traffic cells in Daventry, Weekday PM Peak**

4.3.6 Finally, Figure 4-5 shows the overall daily traffic flows across the whole of Daventry, again based on telematics data from The Flow. The Flow data shows that, despite the main roads accommodating the majority of the through traffic, traffic levels on other more minor roads within Daventry are relatively high, particularly in the southern half of the town. This suggests a high proportion of journeys within Daventry which could be walked or cycled are being made by car.



**Figure 4-5: Estimated daily traffic flows**

4.3.7 Based on the traffic flow data, there are many roads in Daventry that currently experience traffic flows of 5,000 or more vehicles per day that do not have cycling infrastructure. This means that, in line with Figure 4-6 below from LTN1/20, consideration needs to be given to either providing protected space for cycling or reducing traffic volumes on streets which are important for cycling.



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

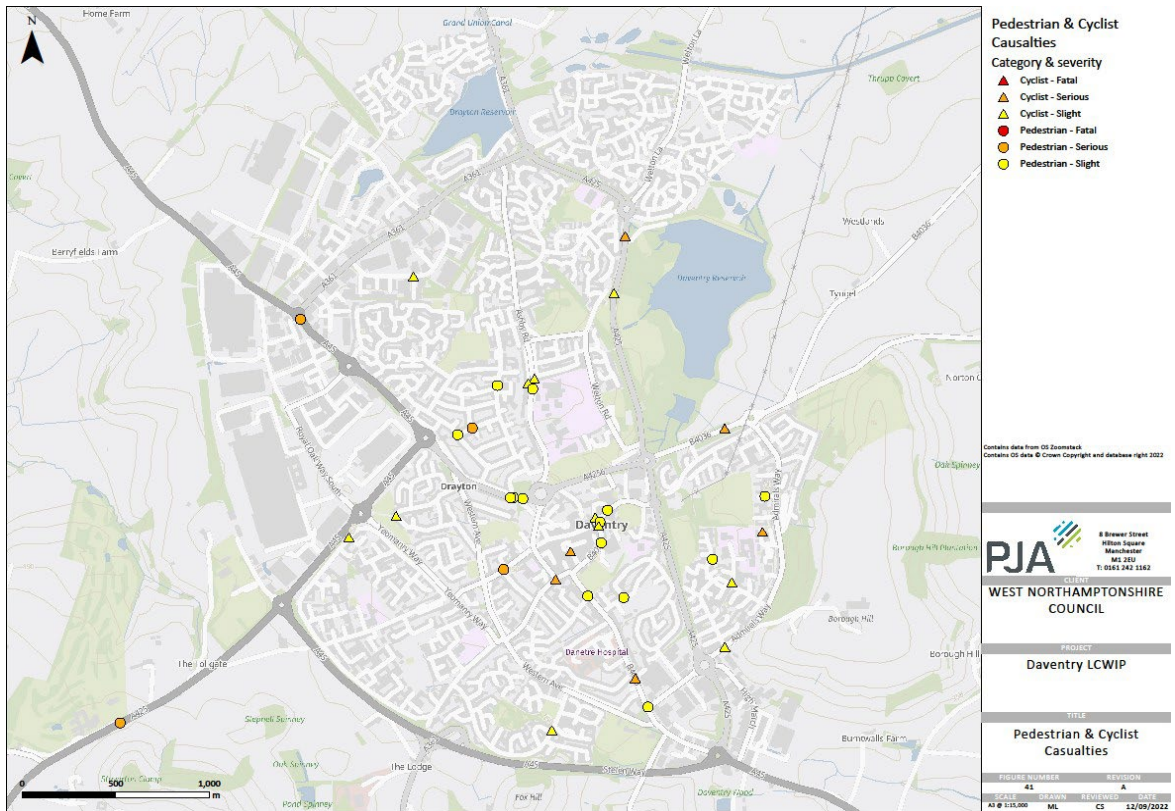
**Notes:**

1. If the 85<sup>th</sup> 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 4-6: Figure from LTN1/20 showing the appropriate protection from motor traffic on highways based on the speed and volume of traffic**

### Pedestrian and cycle casualties

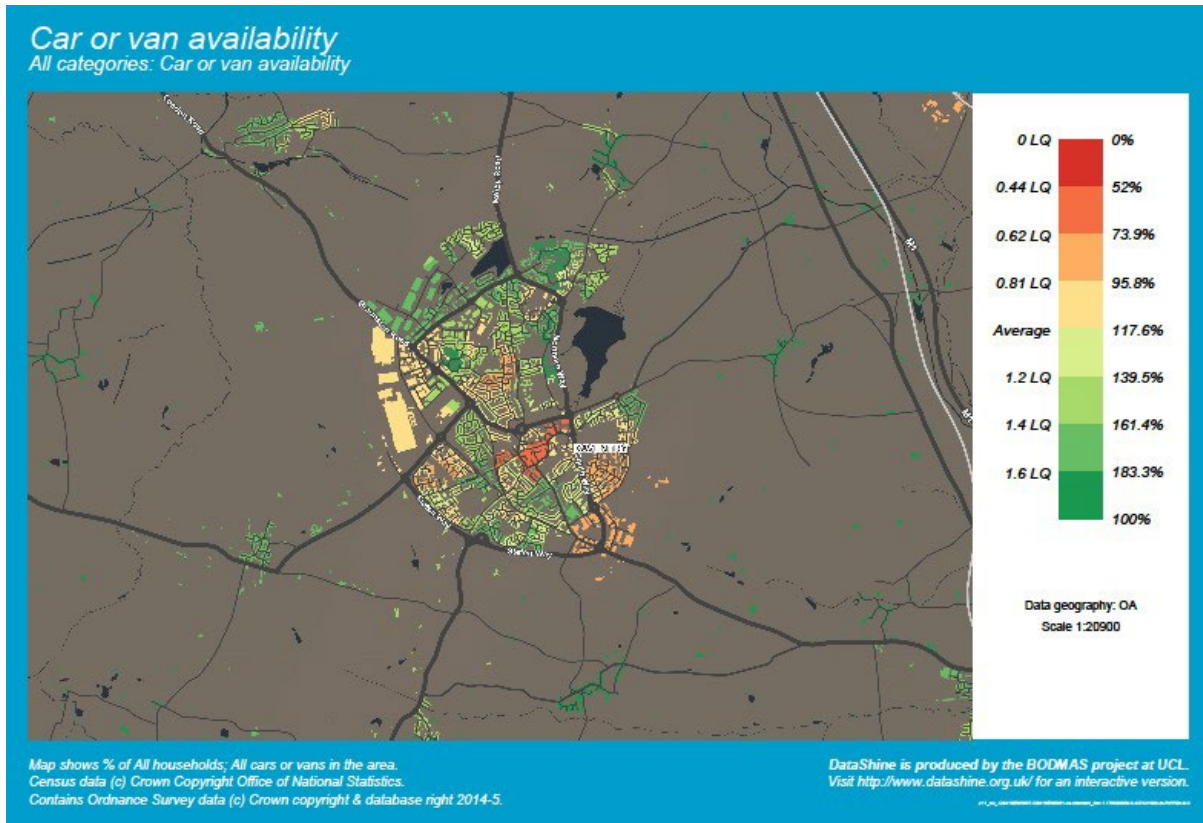
4.3.8 Pedestrian and cyclist casualty data for the last five years was also acquired to help inform where people are currently walking and cycling, and where there are potentially road safety issues. Figure 4-7: Pedestrian and cyclist shows a cluster of casualties around the town centre as well as on Ashbury Road and London Road. The locations generally align with the traffic data shown in Figure 4-5, highlighting the link between casualties and high traffic flows, particularly where walking and cycling infrastructure is missing or substandard.



**Figure 4-7: Pedestrian and cyclist casualties**

### Census data

- 4.3.9 Figure 4-8 highlights that car ownership in Daventry is high, particularly in the northern part of Daventry where the newest housing is located, here most households have more than one car. This part of town is the furthest from the town centre and has few amenities. This, combined with severance created by main roads, could explain the high car ownership and mean that residents rely on their cars for even short journeys which could be walked or cycled.
- 4.3.10 This is also reflected in the 2011 census journey to work data (see Figure 4-9 to 4-11) where over 3,500 daily car trips were made within Daventry for commuting trips alone. This excludes any local car trips made for other purposes such as taking children to school or shopping. This data again demonstrates that a high level of short journeys entirely within Daventry are undertaken by car.



**Figure 4-8: Car or van availability in Daventry (Source: 2011 census, Datashine)**

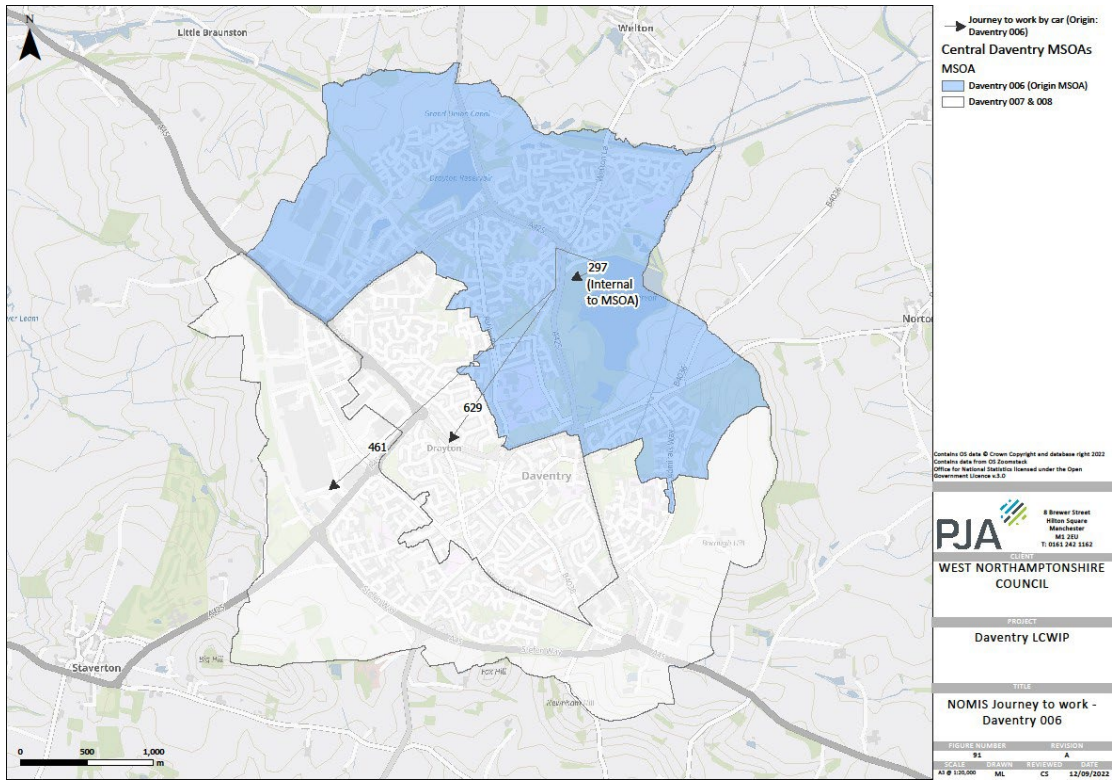


Figure 4-9: Journeys to work by car within Daventry (MSOA 006) (2011 census)

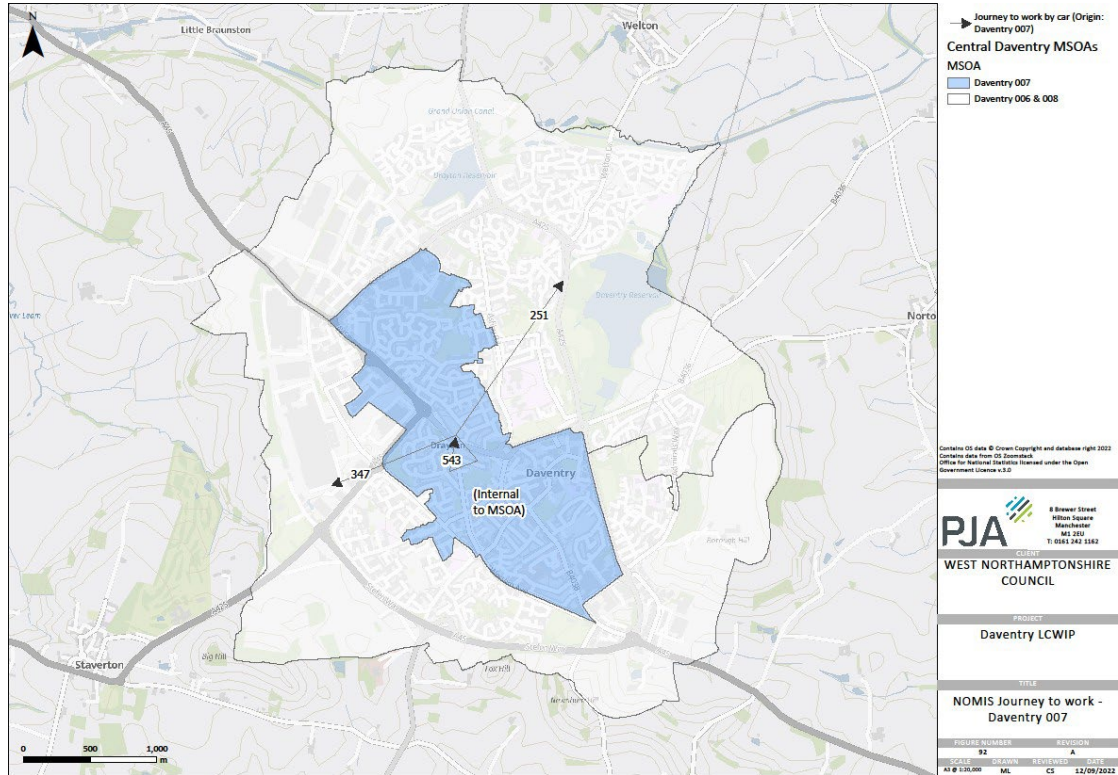
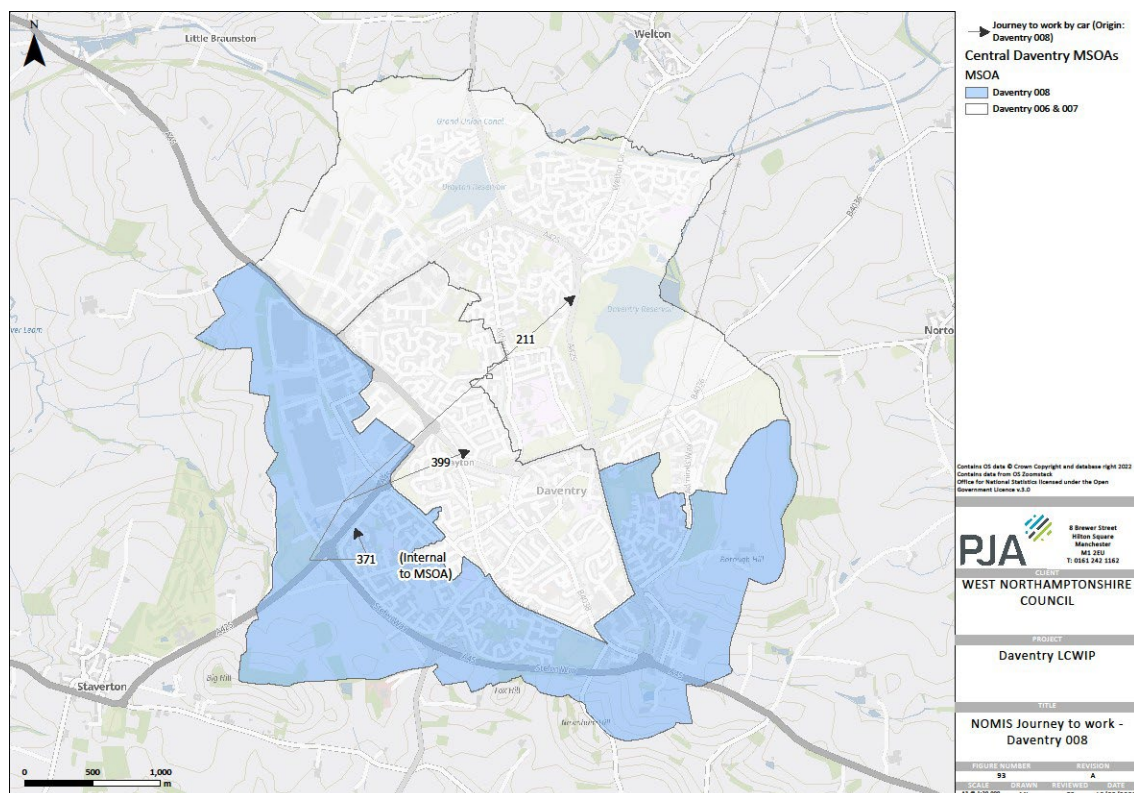


Figure 4-10: Journeys to work by car within Daventry (MSOA 007) (2011 census)



**Figure 4-11: Journeys to work by car within Davertry (MSOA 008) (2011 census)**

## 4.4 Network plan for cycling

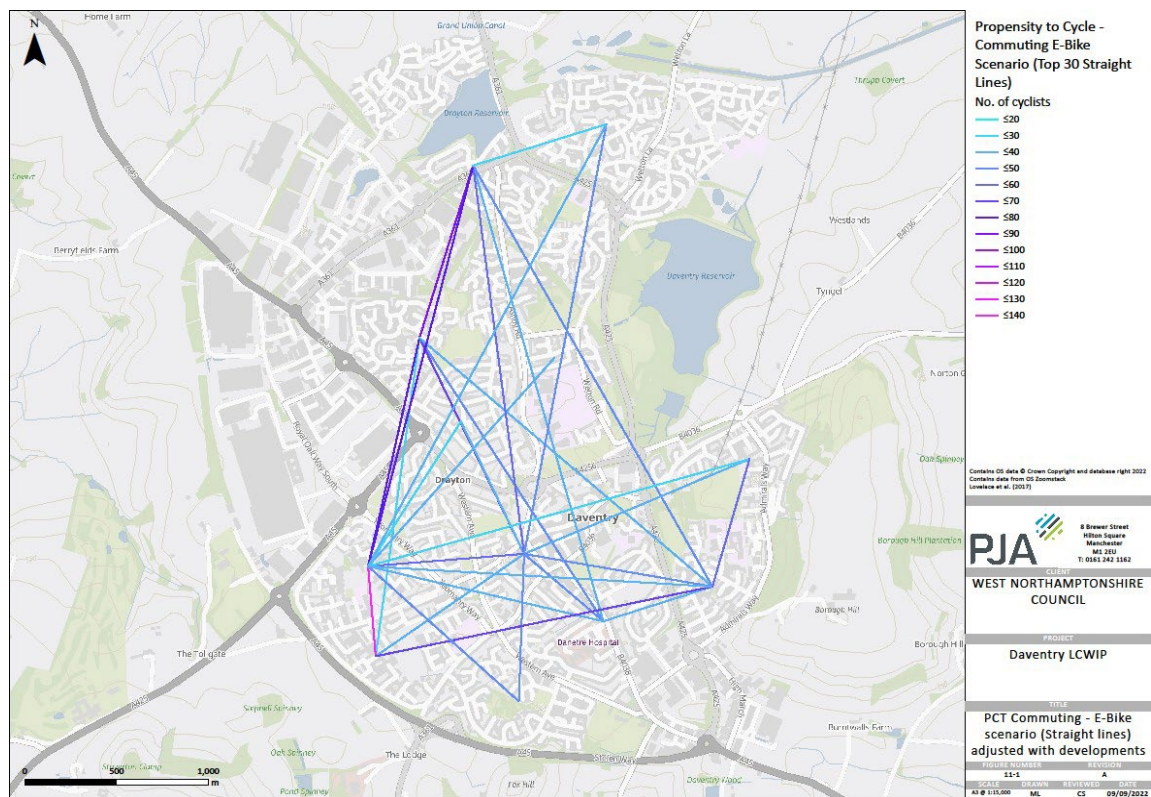
4.4.1 The Propensity to Cycle Tool (PCT) ([www.pct.bike](http://www.pct.bike)) is a nationwide model that identifies where increases in the rates of cycling can be expected through the provision of better infrastructure. It uses census travel to work data and school travel data and looks at trip distances 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 2011 census data. Whilst attempts has been made to incorporate population changes as a result of developments since 2011, the result should still be supplemented by more recent and local knowledge, not to be overly reliant on the adjusted PCT outputs.

### Propensity to Cycle Tool commute layer

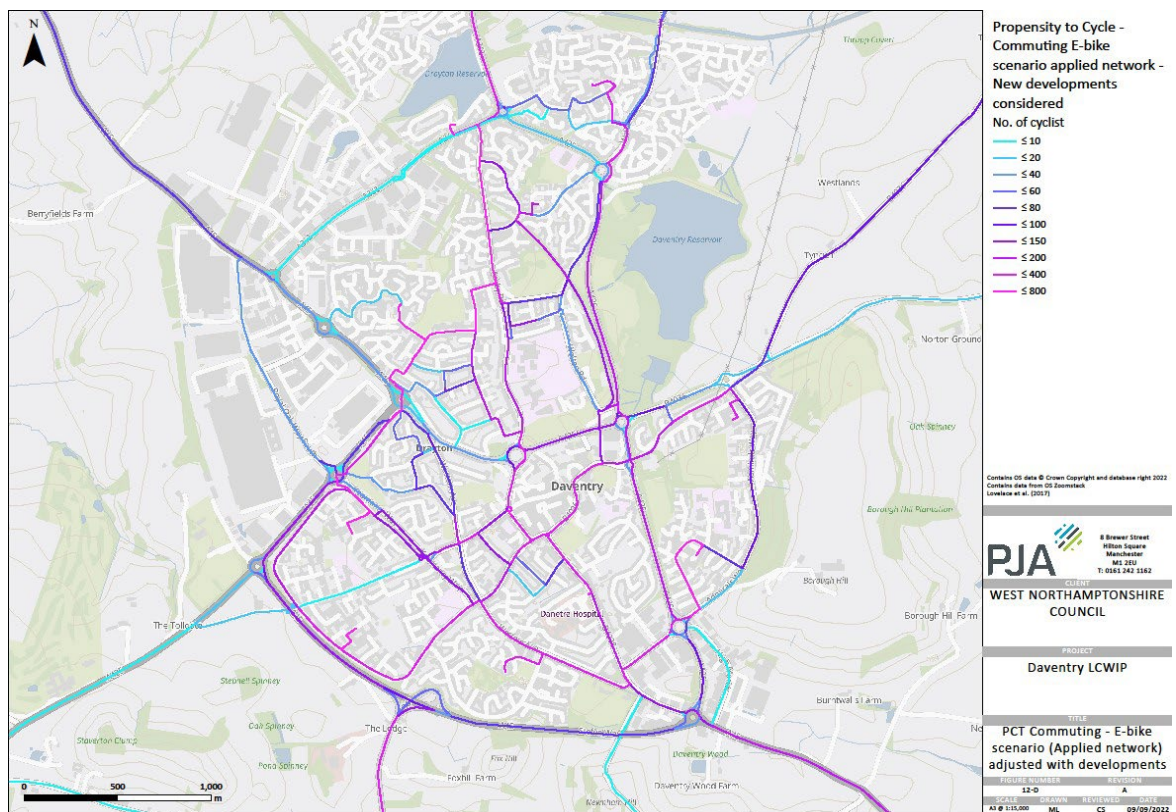
4.4.2 The PCT commute layer provides scenarios for forecasting future levels of cycling which range in ambition from the ‘Government Target’ (based on doubling cycling set out in the 2014 draft Cycling Delivery Plan), ‘Gender Equality’ (where women are as likely as men to cycle), ‘Go Dutch’ (uses Dutch 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 Daventry’s LCWIP, the e-bike scenario was used to reflect the hilly and rural nature of Daventry where e-bikes are likely to need to play an important role in enabling more cycling. The PCT outputs provide two representations of the scenario:

- Straight-Line Networks (Figure 4-12) shows direct paths between population centroids (origins) and destinations, which gives an overview of the key desire lines for cycling flows.
- Applied Networks (Figure 4-13) – the second stage applies the straight desire line to the existing road network to provide a more detailed summary of where increased cycle flows would take place on the local road network.



**Figure 4-12: Daventry – PCT E-Bike straight-line scenario**



**Figure 4-13: Davertry – PCT E-Bike applied network scenario**

4.4.3 Due to the way census data are presented as population weighted centroids, the PCT outputs do not accurately capture demand to Davertry’s employment areas but it can be assumed that the higher levels of demand in a north-south direction on the western side of Davertry shown in Figure 4-12 include commuting trips to employment destinations within Davertry.

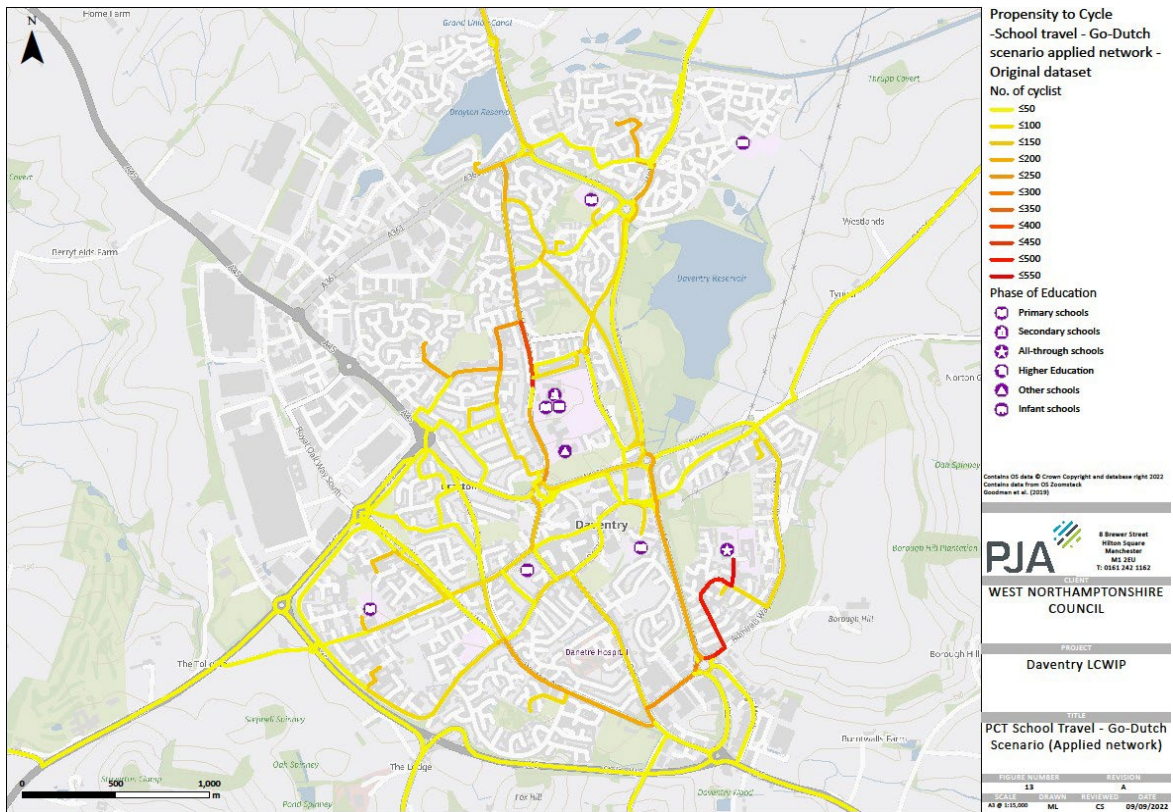
4.4.4 Based on this interpretation, the PCT analysis indicates the corridors within Davertry with the highest potential for cycling are:

- Ashby Road
- Royal Oak Way
- Long Marsh
- Western Way
- London Road

### Propensity to Cycle Tool schools layer

4.4.5 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.

4.4.6 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 Daventry’s LCWIP as it provides the most ambitious scenario.



**Figure 4-14: Daventry – PCT school layer ‘Go Dutch’ applied network scenario**

4.4.7 The analysis shows there is highest demand around Danetre and Southbrook Learning Village (DSLVL) and Ashby Road where there is a cluster of schools including Daventry Hill School, The Parker E ACT and Falconer’s Hill Academy.



### Pupil postcode data

4.4.8 The second stakeholder workshop highlighted strong political will for improving routes to schools for councillors and the need to identify the routes with the highest demand. As a result, following the workshop, current pupil postcode data was provided by West Northamptonshire Council to further inform the plan. The pupil postcode data provides a snapshot of where pupils attending each school in Daventry and surrounding settlements live which can be analysed to identify routes with highest demand. It can be particularly useful in planning walking routes where there is often a lack of data.

4.4.9 The pupil postcode data for all schools was aggregated using GIS analysis to create a heatmap showing the routes with highest demand (see Figure 4-15).



**Figure 4-15: Pupil postcode analysis – journey to school heatmap**

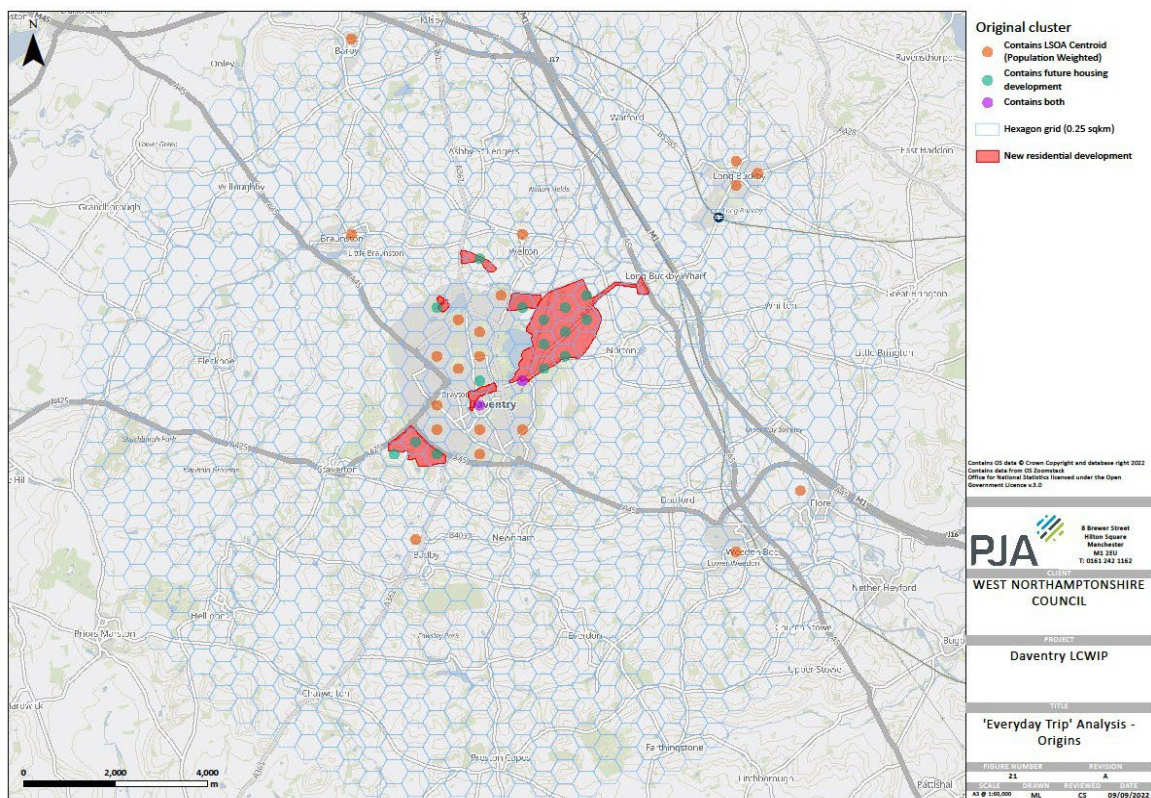
4.4.10 The pupil postcode analysis confirms the high demand along Ashby Road and to DSLV but also indicates high flows along:

- Staverton Road/ Warwick Street;
- Shackleton Drive/ Speke Drive;
- Long March; and
- Burns Road/ Hemans Road/ Wordsworth Road.

## 'Everyday' trips analysis

4.4.11 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 and the pupil postcode data analysis above 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 such as Daventry.

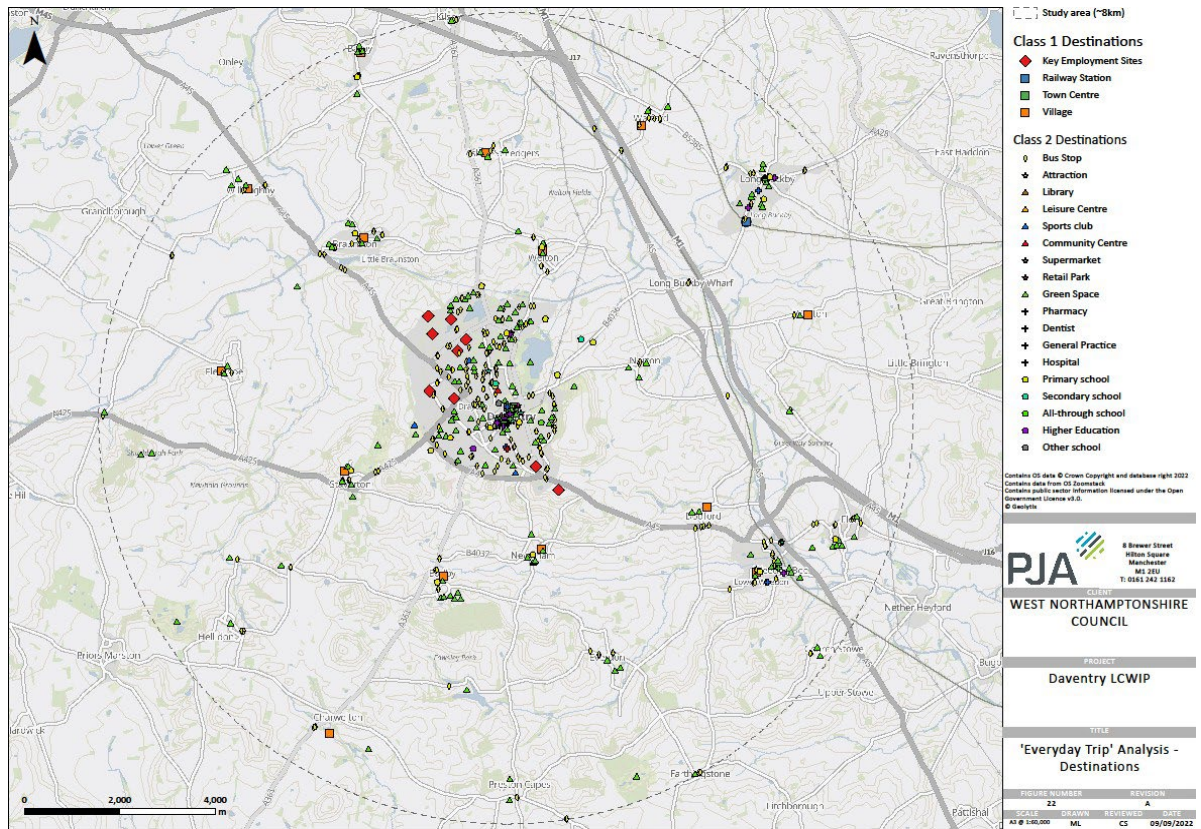
4.4.12 In order to determine the key desire lines for 'everyday' walking and cycling such as such as to work, school and the shops, the spatial relationship between key origin and destinations was analysed. First, a 0.5km<sup>2</sup> hexagon grid was applied and origin clusters of LSOA centroids and future housing development with 100 or more residential dwellings were identified (see Figure 4-16).



**Figure 4-16: 'Everyday trips' – origin clusters**

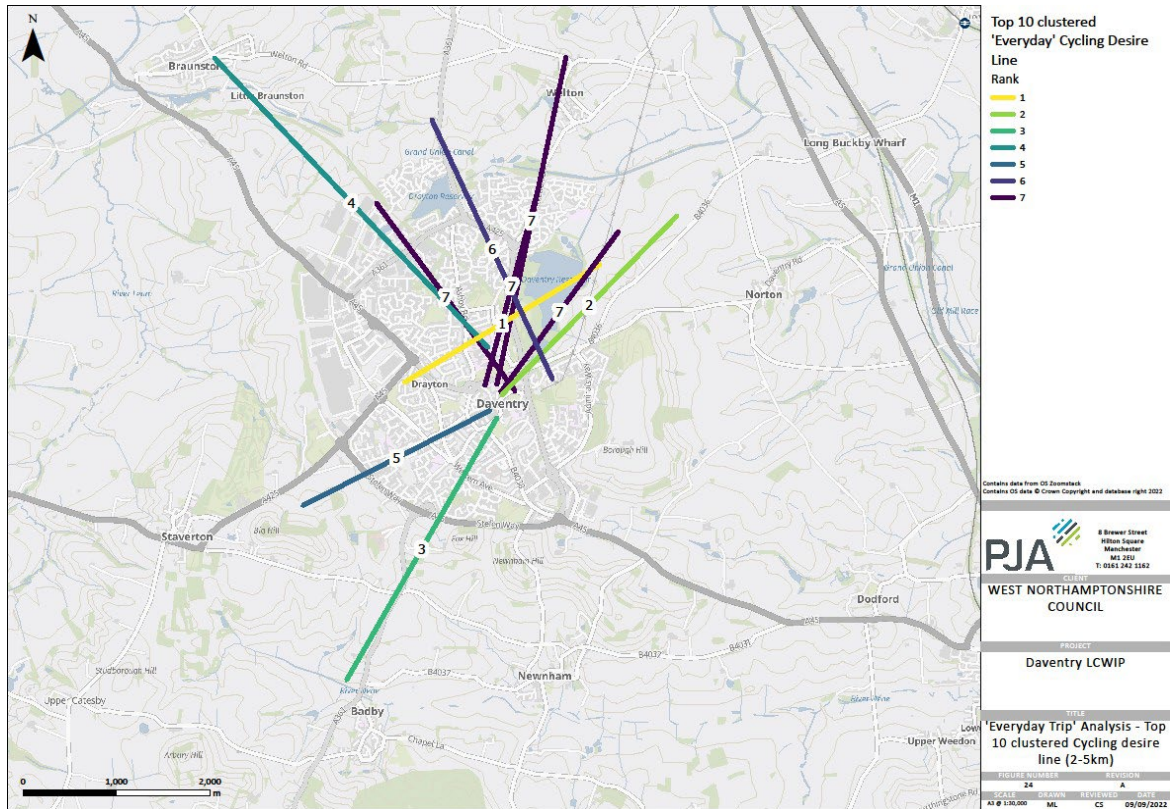
4.4.13 Second, two classes of destinations were identified (see Figure 4-17):

- 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 4-17: 'Everyday trips' – destinations by class**

4.4.14 Origin–destination desire lines 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 ten routes with the highest demand for 'everyday cycling' (Figure 4-18). The analysis demonstrates demand for cycling is more focused on northern part of Daventry and new developments which are further from town centre, but also links to closest surroundings settlements like Staverton and Braunston.



**Figure 4-18: Top 10 'everyday' cycling desire lines (2–5km)**

### Cycle route prioritisation for audit

4.4.15 Based on the above layers of analysis, the routes shown below were identified as priority cycle routes within Daventry for auditing using the Route Selection Tool (RST) set out in the DfT LCWIP process guidance and agreed at the second stakeholder workshop. In addition, a number of additional routes into Daventry were audited as part of the inter-urban routes study (see Chapter 5).



Figure 4-19: Prioritised cycle routes for auditing within Daventry

## 4.5 RST audits and design recommendations

4.5.1 The Route Selection Tool (RST) is an appraisal methodology that allows practitioners to determine the best route to fulfil a particular straight line corridor, referencing against existing conditions and the shortest available route. It considers five important criteria that determine the quality of a cycle route (directness, safety, gradient, connectivity and comfort) plus junction safety. The RST audit then informs recommendations for improvements along each corridor. The RST considers the six important criteria that determine the quality of a cycle route, which are described below. The RST divides routes into shorter sections which should reflect changes in the character and layout of the alignment.

- Directness: compares the length of cycle route against the equivalent vehicle route, with cycle routes that are shorter than the vehicle routes 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% and/or 50m in length scoring lower.



- **Safety:** considers vehicle flows and speeds to better understand the exposure of cyclists to vehicular traffic. Routes with either protected cycle facilities or low-traffic environments score highest.
- **Connectivity:** records the number of individual cycle connections into a section of route. Routes should aim to have >4 connections per km.
- **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).
- **Critical junctions:** provides a number of critically unsafe junction design issues including vehicle flows, protection from vehicular traffic, wide junction splays and junction geometries.

4.5.2 The audits identified four existing route typologies across Daventry:

- Routes along main roads
- Routes along industrial roads
- Quietways
- Traffic-free routes.

4.5.3 For each route typology, a number of routes have been identified and a set of design recommendations proposed, with at least one case study illustrating each.

4.5.4 The RST audit informs recommendations for design proposals later in this chapter. The cycle design recommendations for Daventry generally follow the below overarching design principles:

- **Improving junctions** – while Daventry benefits from an extensive network of shared use facilities along main roads, a large number do not have adequate provision for cyclists to cross both priority junctions and roundabouts. This undermines the network and leads to severance. A key recommendation therefore is to improve key junctions/crossings along Daventry’s existing shared use network. Many of the junctions identified for improvements also require improvements for pedestrians.
- **Addressing high vehicle flows** – despite Daventry being designed with many large, fast roads which have ample capacity, traffic flows on more minor roads are higher than appropriate if cyclists are expected to share the carriageway with motor vehicles. The recommendation is therefore to introduce measures such as bus gates on a number of key routes to reduce traffic volumes and speeds to provide safer conditions for cycling in the carriageway. These measures would also improve conditions for walking.
- **Providing protected cycling facilities** – there are a number of key routes within Daventry where there is currently no cycling infrastructure where protected facilities would be the most appropriate intervention due to HGV flows (Long Marsh and Royal Oak Way) or traffic volumes (Ashby Road).



## **Design approach to proving cycling infrastructure along main roads**

- 4.5.5 Daventry benefits from an extensive existing network of cycle routes. However, these are largely in the form of facilities that are shared with pedestrians with very limited separated walking and cycling infrastructure.
- 4.5.6 LTN1/20 advises against the provision of shared use routes in urban areas with high pedestrian and cycle flows where separate cycle tracks and footways are more appropriate. However, it notes that away from the highway and alongside busy inter-urban roads with few pedestrians or building frontages, shared use paths might be adequate as long as they are designed to meet the needs of cyclists including considerations regarding width, alignment and treatment at side roads and other junctions. In other words, they need to be designed specifically as cycle tracks. This contrasts with many existing shared use facilities across the UK where footways have been converted to shared use facilities through signage alone.
- 4.5.7 The layout of Daventry's roads means that most of the existing shared use facilities are along major distributor roads that have few or no active frontages and very low pedestrian flows. As a result, in line with the guidance in LTN1/20, retaining and improving the existing shared use facilities so that they meet the needs of cyclists is likely to be the most appropriate – and cost effective – approach.
- 4.5.8 It is recommended these facilities should be considered as, and designed to be, bi-directional cycle tracks that can be used by pedestrians rather than as footways that cyclists are allowed to use (see Figure 4-20 for an example of how this might look. Therefore, improvements should include:
- Providing priority for cyclists at priority junctions
  - Providing suitable crossings (e.g. signalised/ grade separated) at major junctions
  - Widening the routes in line with the guidance within LTN1/20 on bi-directional cycle tracks
  - Resurfacing/ addressing defects where necessary
  - Providing centre lines to encourage cyclists and pedestrians to keep to the left to minimise conflict



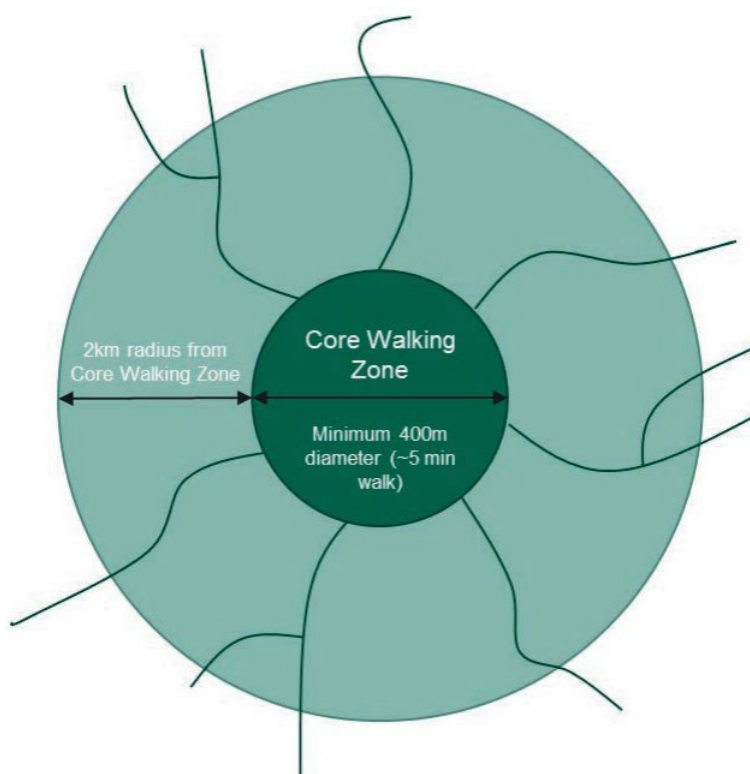
**Figure 4-20: Bi-directional cycle track alongside a main road**

- 4.5.9 This approach would enable Daventry's cycling network on main roads to be rapidly upgraded, providing benefits to both pedestrians and cyclists. On many of the routes, there is significant space available meaning that, in many cases, a footway could be added alongside the cycle track in the future if pedestrian flows increase.
- 4.5.10 An alternative approach would be to install fully separated cycling infrastructure on main roads to provide the highest standard of facility for pedestrians and cyclists. This would involve providing distinct cycle tracks with kerbs and/or different surfacing to differentiate them from footways as well as the improvements to junctions etc listed above. This would be a much more expensive approach due to additional widths, kerbing, drainage etc that would be required. As a result, it would be necessary to prioritise the network and it will take longer to deliver improvements. If this approach is preferred, it is recommended that Ashby Road is prioritised as the analysis shows relatively high walking and cycling demand along this route and does not currently have cycling infrastructure.
- 4.5.11 The full cycle route design recommendations for Daventry are presented in Appendix B.



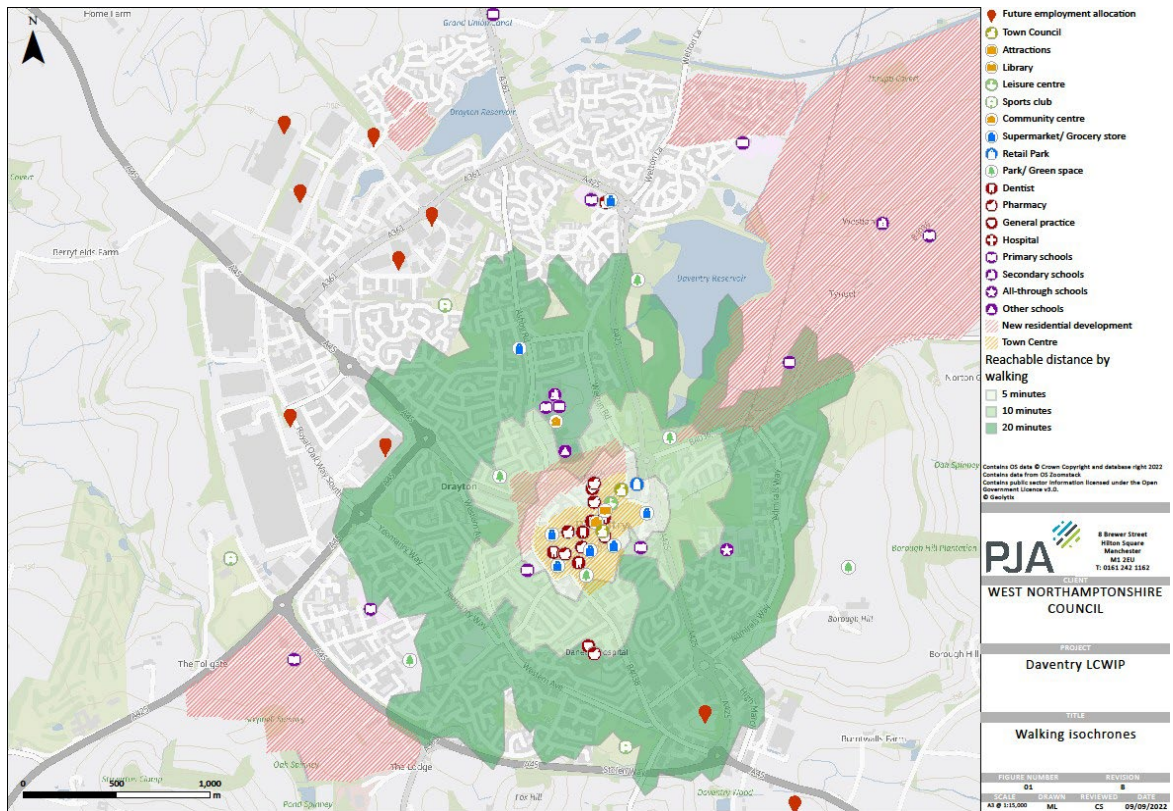
## 4.6 Network plan for walking

4.6.1 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 represent areas that are expected to contain key walking trip generators and therefore likely to create higher levels of footfall (see Figure 4-21). As well as reviewing walking conditions within the CWZ itself, the site audits review conditions on the key walking routes into the CWZ. This ensures that the wider connectivity and permeability of the CWZs is considered during the network development.



**Figure 4-21: Illustration of Core Walking Zones and key walking routes**

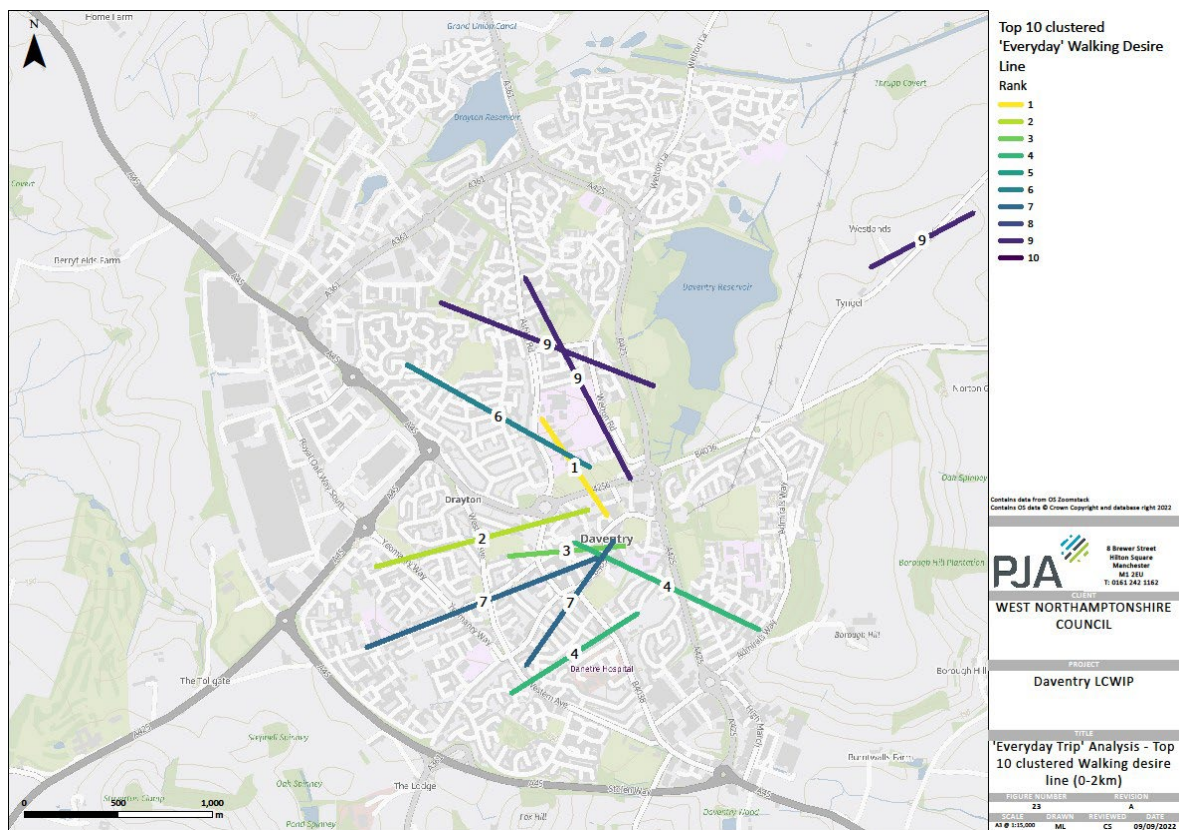
4.6.2 Figure 4-22 shows the walking isochrone for Daventry generated in ArcGIS illustrating the walking catchment from town centre as a series of five-, 10- and 20-minute isochrones. The walking catchment illustrates that the southern part of Daventry is quite walkable in terms of distance, but cycling and public transport may be of more of more importance to the northern part of Daventry where new development is concentrated. The focus of the walking network should therefore be on developing a series of walking routes that strategically connect the town centre with its surroundings.



**Figure 4-22: Walking isochrones from Daventry Town Centre**

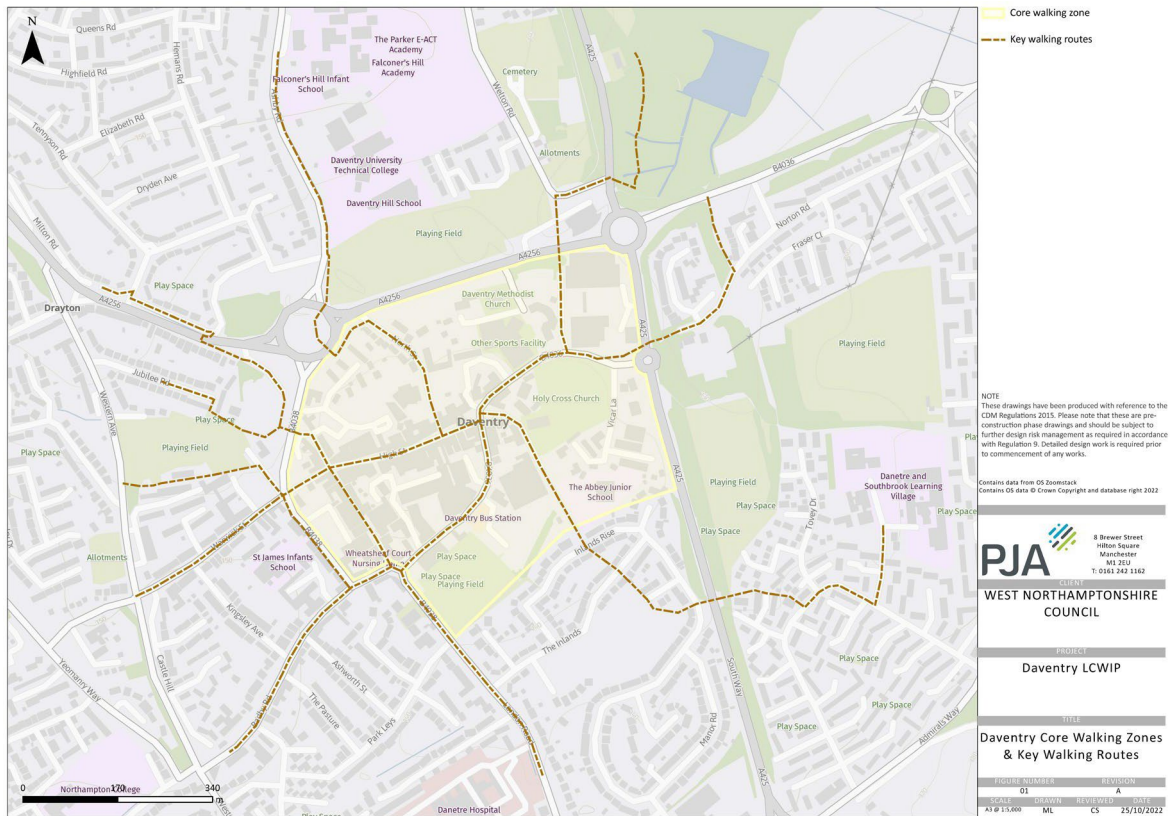
### ‘Everyday trips’ analysis

- 4.6.3 The ‘everyday trips’ analysis detailed above for cycling trips within Daventry was also undertaken for desire lines up to 2km to identify key walking demand in order to identify the extent of the core walking zone and key walking routes. A “K-means” clustering analysis was used to cluster desire lines together and select the routes with the highest demand for ‘everyday walking’ (see Figure 4-23).
- 4.6.4 The analysis illustrates that short trips, which would be predominantly walked, are centred on Daventry town centre showing importance of providing a high-quality walking (and cycling) environment to and within Daventry town centre.



**Figure 4-23: Top 20 'everyday' walking desire lines**

4.6.5 Based on the analysis of the walking isochrone and the 'everyday' walking desire lines, the core walking zone boundary and key walking routes were identified (see Figure 4-24). These were then audited on site using the Walking Route Audit Tool (WRAT) methodology set out in the DfT LCWIP process guidance. The routes reflect the key desire lines to the town centre from the surrounding residential areas which mostly follow roads, although some routes use Public Rights of Way (PROW).



**Figure 4-24: Daventry core walking zone and key walking routes**

4.6.6 The Walking Route Audit Tool is divided into several categories for analysis and uses a Red/Amber/Green (RAG) scoring technique:

- Attractiveness: considers the impact of maintenance, traffic noise, pollution and fear of crime upon 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: focuses 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.

4.6.7 The WRAT RAG ratings for the routes are summarised in Figure 4-25 below.

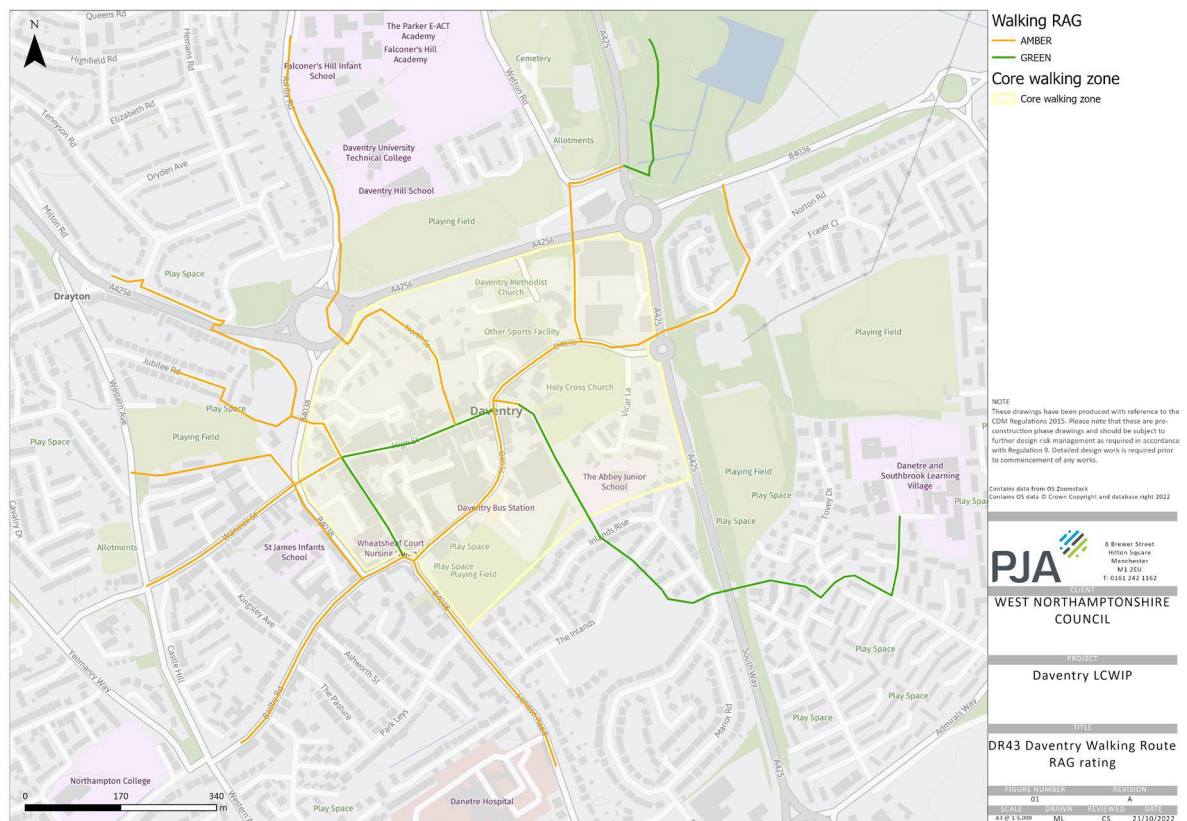


Figure 4-25: Key walking route WRAT RAG ratings

## 4.7 WRAT audits and design recommendations

4.7.1 The findings from the walking audits were translated into design measures for each route and are shown later in this chapter. The key issues are summarised by the below design themes. This approach provides the option of delivering the design measures either by route or by addressing a town-wide theme. For example, the LCWIP identifies many priority junctions across Daventry where tightening the junction radii and providing dropped kerbs and tactile paving would make routes more accessible as well as providing safety benefits for cyclists. It might, therefore, be more logical to undertake a town-wide approach to certain issues rather than by route.

4.7.2 The key walking design recommendations for Daventry are:

- **Controlled crossing points** – There is generally good pedestrian crossing provision in and around Daventry town centre but a number of locations – such as roundabouts - were highlighted where new controlled crossings (such as zebra crossings) would help to ensure all pedestrian desire lines are met.
- **Addressing high vehicle flows** – South Way and Eastern Way fringe the northern and eastern edges of Daventry town centre are fast, high-capacity roads designed to take Daventry's



through traffic. Nevertheless, B4026 New St/Abbey St was observed to suffer from high traffic flows and speeds which creates severance within the town centre and detracts from the pedestrian experience. It is recommended that a holistic approach to reducing traffic flows and speeds in the town centre is taken including consideration of car parking and whether the B4036 – or High Street - need to be open to through traffic.

- **Improving priority junctions** – While this was more of a problem further out, beyond Daventry’s core walking zone, there are a number of instances of wide priority junctions within or close to Daventry town centre. Wide junctions encourage faster driving speeds and create wide crossing distances. Tightening priority junctions and even, in some cases in the town centre, providing continuous footways is a quick and cost-effective way of reducing traffic speeds and improving safety for pedestrians and cyclists.
- **Signage and wayfinding** - although Daventry benefits from an extensive network of shared use facilities, signage and wayfinding could be improved. A comprehensive signing scheme for the whole town would help promote the network and encourage greater use.
- **Narrow or uneven footways** - There were several locations where footways were narrow, cluttered or blocked by cars as well as some cases of damaged or uneven paths. A comprehensive review of street clutter and parking restrictions would help to deliver an improved pedestrian environment across the town centre.

4.7.3 The full walking route audit findings and design recommendations are presented in Appendix C.

## 4.8 Costings

4.8.1 The LCWIP guidance provides high-level costings which are recommended to generate initial costings for walking and cycling measures. The total cost of the Daventry LCWIP walking and cycling proposals is £5,008,800. This includes costing for five of the cycle routes within Daventry (Ashby Road, Drayton Way, Long March, Royal Oak Way and Shackleton Dr/Speke Dr) which have been explored within the design recommendations booklet, the sections of the inter-urban routes that are within Daventry, and the Core Walking Routes. Costings for each of the routes are provided in Appendix E.

## 4.9 Prioritisation

4.9.1 The purpose of the prioritisation stage is to plan the programme for delivery of the cycling measures. The prioritisation process is not designed to discount or rule out schemes, as the full benefits of a walking cycling network would not be realised with an incomplete network. Moreover, funding opportunities tend to require a reactive and "shovel-ready" mindset. Therefore, this study makes recommendations for a complete cycling network for Daventry with a booklet of schemes with suggested infrastructure treatments and indicative costs. This will allow West Northamptonshire Council to be confident that its early investment can be continued over



subsequent years to eventually complete the picture and deliver a comprehensive and fit-for-purpose active travel network.

4.9.2 The LCWIP methodology includes a suggested approach for prioritising measures. However, it also emphasises that the methodology should be tailored to the local context. Stakeholders agreed that when the prioritisation is undertaken, the criteria used should consider the following elements:

- improving road safety;
- access to employment;
- access to education and training; and
- connecting to areas of growth.

4.9.3 At this stage, prioritisation of specific routes has not been undertaken as further work is needed to apply the typology types to the routes identified in the LCWIP that have not been subject to site audits. Once this work has been undertaken, a prioritisation exercise will then be carried out. The delivery plan section below makes some general recommendations on options for scheme delivery.

## 4.10 Delivery plan

### Short term

4.10.1 It is recommended that the short-term delivery plan focuses on quick wins and undertaking feasibility studies on some of the higher priority routes. Quick wins could include strengthening existing routes such as:

- Improving signage and wayfinding, surfacing and links to the cycle route along the former railway line. Naming the route would also enable stronger branding and marketing.
- Upgrading existing shared use facilities along main roads to bi-directional cycle tracks including providing priority at side roads, widening paths, relocating bollards, resurfacing where needed and providing a centre line.

4.10.2 It is recommended that quick wins are also focused on Daventry town centre where improvements such as decluttering footways and pedestrianised areas, pedestrianising High Street, trialling a bus gate on B4036 New Street/ Abbey Street and reviewing car parking fees across the town centre could be delivered quickly and cost effectively.

4.10.3 In addition, quick wins could be themed, such as Daventry-wide improvements to cycle parking or signage and wayfinding. For example, the audit identified a number of instances of cycle parking being poorly sited 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. Relocated these cycle stands and installing additional cycle parking close to destinations is a cost-



effective way of enabling more people to cycle, particularly on routes where there is already cycling infrastructure of a reasonable standard.

### **Medium term**

- 4.10.4 In the medium term, the focus should be on securing funding to deliver the prioritised cycle routes, following the successful completion of feasibility studies.
- 4.10.5 Medium term improvements for Daventry town centre could include providing greening in the form of street trees or planters, continuous footways and controlled crossings such as zebras on pedestrian desire lines.
- 4.10.6 Medium term improvements could also include Daventry-wide themed interventions such as upgrading uncontrolled crossings at roundabouts and on main roads to signalised crossings.

### **Longer term**

- 4.10.7 Once the priorities identified above are delivered, it is recommended that the remaining proposals identified in this report and the accompanying design recommendations booklets are delivered. In addition to the key routes identified, additional links and extensions should also be identified on a case-by-case basis as part of more detailed studies and community consultation for each route.





## 5 Inter-urban routes

### 5.1 Introduction

5.1.1 To fulfil Daventry's active travel potential and help achieve modal shift, it is necessary to provide safe links to its surrounding settlements. For the purposes of this study, these routes have been described as 'inter-urban routes'.

5.1.2 This chapter describes the approach taken to identify the links with the most potential demand and to review and identify preferred alignments to be developed as future inter-urban routes based on the following stages:

- 1 Desktop Review and Network Development
- 2 Site Audits
- 3 Network Development
- 4 Route Recommendations

### 5.2 Scope of inter-urban routes

5.2.1 A cycling isochrone for Daventry was generated in ArcGIS to illustrate the extent of a 30-minute cycle from the centre of the town using the existing road network. Figure 5-1 shows there are a large number of settlements within a 30-minute cycle ride of Daventry including Staverton, Braunston, Welton, Ashby St Ledgers, Long Bucky, Newnham, Dodford and Weedon Bec. The focus of the inter-urban cycle network is therefore on identifying which of the settlements within cycling distance of Daventry have the greatest potential.

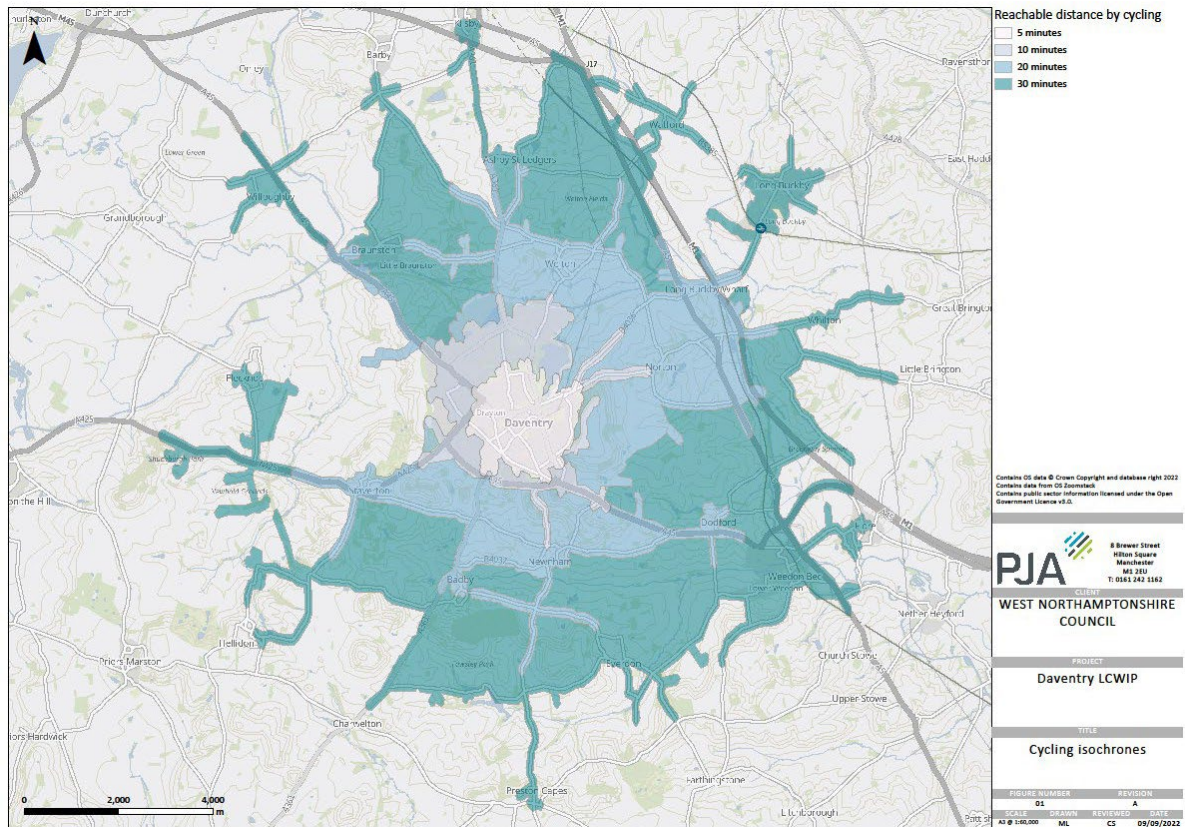


Figure 5-1: 30-minute cycle catchment from Daventry town centre

## 5.3 Desktop review and network development

5.3.1 The main tool for identifying routes with the most potential for cycling is the Propensity to Cycle Tool (PCT). However, in the scale of identifying links to surrounding settlements, the PCT have great limitations in realising demand/ propensity for trips at more rural, longer trip scenarios. A range of other methods have been utilised instead to identify the settlements with the greatest potential for cycling (and walking in some cases) to Daventry.

### Propensity to Cycle Tool

5.3.2 The PCT commute layer relies on the 2011 census travel to work data, meaning it does not reflect non-commuting journeys or changes over the last decade. Due to the distances between Daventry and its surrounding settlements and the low number of commuting trips, the PCT does not identify much – if any – cycling demand and is therefore an inappropriate tool for planning inter-urban cycle routes.

### ‘Everyday trips’ analysis

- 5.3.3 Due to the limitations of the PCT Commute layer detailed above, PJA’s bespoke ‘everyday trips’ analysis has been used to understand the potential for journeys by cycling. This methodology is particularly useful in smaller towns and rural areas where the overall level of demand is less important than identifying desire lines with the highest relative demand.
- 5.3.4 The methodology for the everyday trips analysis is detailed in paragraphs 4.4.11 – 4.4.15. For the inter-urban routes, analysis was undertaken for distances of 2-5km (Figure 5-2) and 5-8km (Figure 5-3). 5km is normally viewed as the maximum distance to be used for the purposes of cycle network planning in urban areas as few people will consider cycling further than this. However, for rural areas where distances are greater, it is appropriate to consider slightly longer distances.

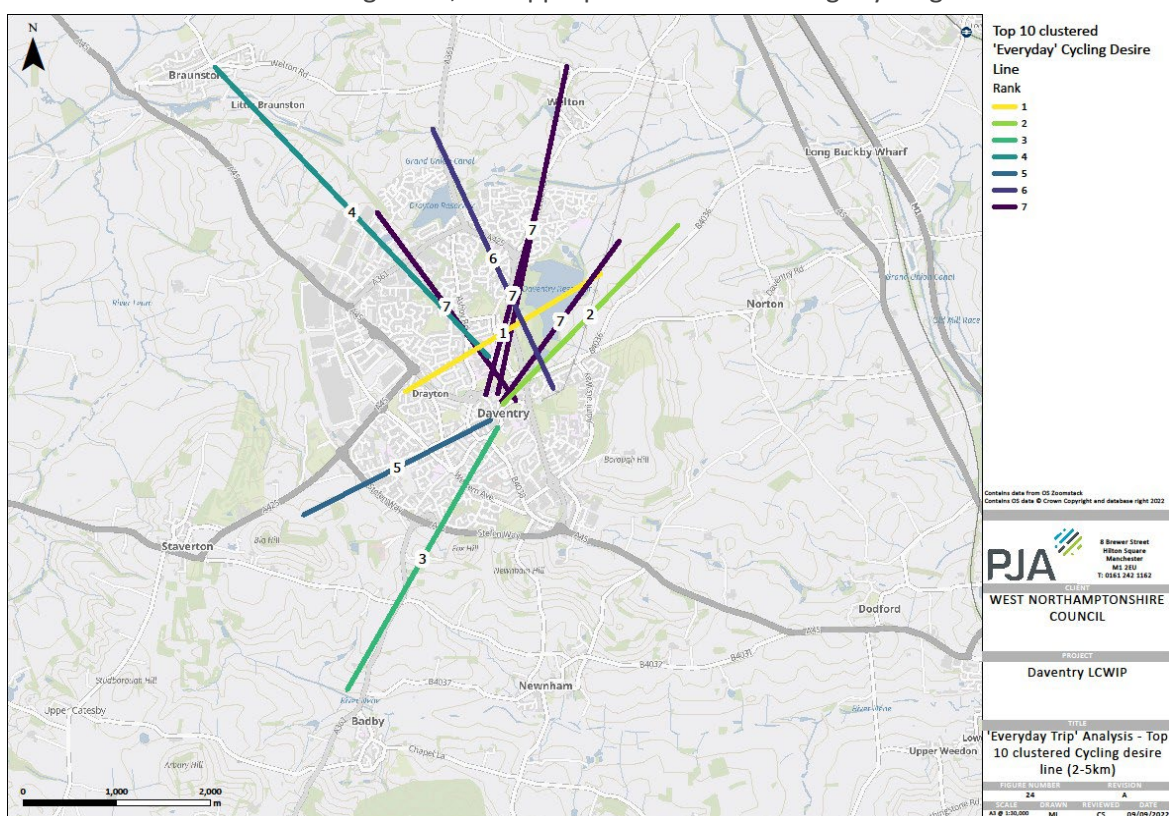


Figure 5-2: Top ‘everyday’ cycling desire lines (2–5km)



**Figure 5-3: Top 'everyday' cycling desire lines (5–8km)**

5.3.5 The 'everyday trips' analysis identifies demand to Braunston, Staverton, Badby and Welton as well as Long Buckby, Weedon Bec and Barby.

### Cycle rail potential

5.3.6 The closest train station to Daventry is Long Buckby which is on the mainline into both Birmingham and London. Cycle-rail potential analysis has been undertaken using 2011 Census Journey to Work data to better understand the value of investing in a cycle route to Long Buckby. The analysis considers all potential journeys between Daventry and destinations within a 800m buffer (considered to be the maximum distance people are willing to walk to work at the other end of their journey) of a station. For simplicity, only direct rail routes have been analysed.

5.3.7 This cycle rail analysis identifies people who may currently already use the rail service but travel to a station by car or by bus, or people who drive all the way to work because they are unable to access Long Buckby as it is too far to walk from home or there is no convenient connecting bus service.

5.3.8 The analysis identifies that there were 613 rail commuters in Daventry at the time of the 2011 Census, many of whom were likely to have driven who could be converted to cycle-rail if a safe cycle route is provided. In addition, there were approximately 70 people who drive who could drive

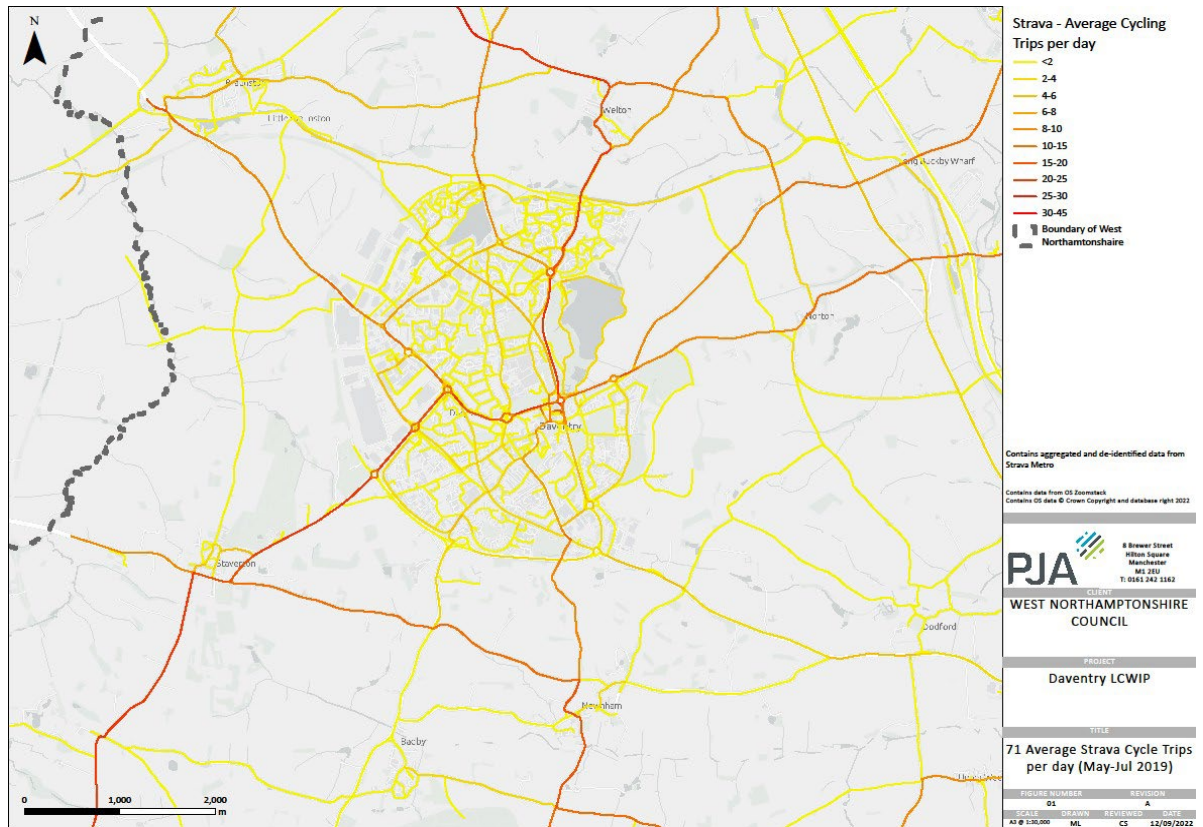


who could shift to a cycle rail commute if a high quality cycle link to Long Buckby was provided. Key destinations are Rugby and Coventry.

- 5.3.9 It is worth noting that annual station usage at Long Buckby has increased from 235,476 in 2011/2012 to 387,382 in 2019/20 suggesting that the census data analysis will undercount the cycle-rail potential.

### **Strava Metro**

- 5.3.10 In order to sense check this approach and develop a comprehensive network that maximises the potential for cycling and gain the best possible understanding of current cycling and residents' propensity to cycle, Strava Metro data has also been analysed to understand where people are currently cycling.
- 5.3.11 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.
- 5.3.12 The Strava Metro analysis (see Figure 5-4) shows that the route between Daventry and Staverton is already relatively popular (though overall numbers are low) as well as the existing National Network Route 50 to the north towards Welton. Lower levels of existing usage are shown between Daventry and Long Buckby and between Daventry and Braunston.



**Figure 5-4: Strava cycle trips per day (May-July 2019)**

## Stakeholder engagement

- 5.3.13 In addition to data analysis, stakeholder input and local knowledge is particularly important in prioritising routes in rural areas where data on walking and cycling can be patchy. Therefore, one of the key discussion points in both workshops one and two was the inter-urban routes. This was also the part of the plan that most stakeholders were interested in as they felt the rural network was of a much poorer quality than the existing network within Daventry.
- 5.3.14 The workshop confirmed strong support for routes to Braunston and Staverton due to their proximity to Daventry and the relatively high demand to walk and cycle between them. For example, the Staverton Park Hotel and Golf Club was cited as a key employment destination. Support was also given for creating links to Long Buckby and Weedon Bec due to the poor bus services in the area making cycling a more attractive option. Improving the route to Welton and Ashby St Ledgers was considered less of a priority as there is already a reasonable cycle link in place. The preferred route alignment for each desire line was also discussed and agreed with stakeholders.

## Prioritised network and route alignments

5.3.15 Based on the above analysis and stakeholder engagement, four settlements have been prioritised:

- Staverton
- Braunston
- Weedon Bec
- Long Buckby

5.3.16 Draft route alignments were identified and discussed with stakeholders to identify preferred alignments to audit, comprising a mix of busy roads, minor roads, public right of way, disused railway lines, farm tracks and tow path (see Figure 5-5).

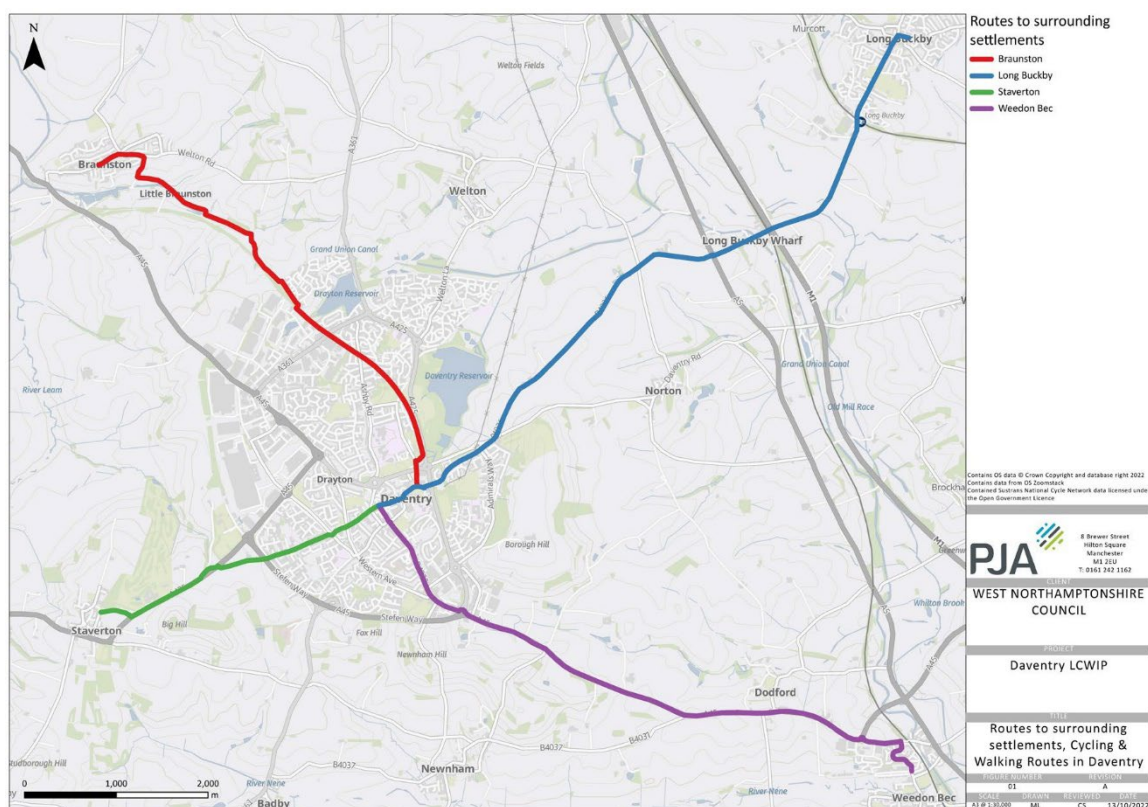


Figure 5-5: Plan of inter-urban routes

## 5.4 Route audits

5.4.1 Prior to undertaking site audits, a desktop review was completed using the Route Selection Tool detailed in Chapter 4 to provide a high-level overview of existing conditions for cycling on the identified corridors and identify key sections for review on site.



5.4.2 The purpose of the site audits was to review the alignments identified in the desktop review to better understand the on-site conditions and feasibility of progressing future routes. The project team visited all the identified routes.

## 5.5 Design recommendations

5.5.1 Based on the findings from the RST audits, design recommendations were made for each inter-urban route. Key design recommendations are informed by LTN1/20 and vary depending on conditions including traffic volumes and speeds and any constraints. Types of infrastructure recommended include:

- Traffic-free routes or sections of route
- Bi-directional cycle tracks designed to be shared with pedestrians and equestrians
- Traffic calming such as priority give ways, pinch points and speed humps
- Crossings such as underpasses and signalised crossings (Toucans/Pegasus).

5.5.2 Although there may be fewer cyclists and pedestrians in rural areas, the same requirement for separation from fast moving motor vehicles applies. A well-constructed facility designed to meet the needs of cycle traffic – including its width, alignment and treatment at side roads and other junctions – may be adequate where pedestrian numbers are very low.

5.5.3 Although the focus of the design recommendations is on walking and cycling, the large network of bridleways in the area and high levels of equestrian use mean it will be important to accommodate equestrians where possible including considerations around widths, buffers (including consideration of providing grass verges), crossing types (e.g. use of Pegasus crossings), and joining up or extending the network.

5.5.4 The key findings and design recommendations for each route are summarised in **Appendix D**.

## 5.6 Costings

5.6.1 The LCWIP guidance provides high-level costings which are recommended to generate initial costings for walking and cycling measures. The total cost of the inter-urban routes (including the sections within Daventry) is £6,701,900. This includes cost estimates from the Canal and River Trust's feasibility study for a wider path along the canal and upgrades to Dark Lane. The cost breakdown is provided at **Appendix E**.

5.6.2 A £10,000.00 allowance has been included for cycle parking on each inter-urban route, but details on proposed locations are not included at this stage.



## 6 Conclusions and recommendations

### 6.1 Introduction

6.1.1 This chapter briefly summarises the key recommendations for the Daventry LCWIP and the inter-urban routes. Figure 6-1 summarises the combined outputs from the two workstreams to help illustrate their combined geographic scope. The plan helps to illustrate how the combined outputs would have a significant impact upon the quality of walking and cycling facilities in the town, and in promoting alternatives to vehicular traffic in Daventry. The recommendations are intended to provide an initial framework for delivery; the precise timescales and prioritisation of measures will depend upon future funding and opportunities.

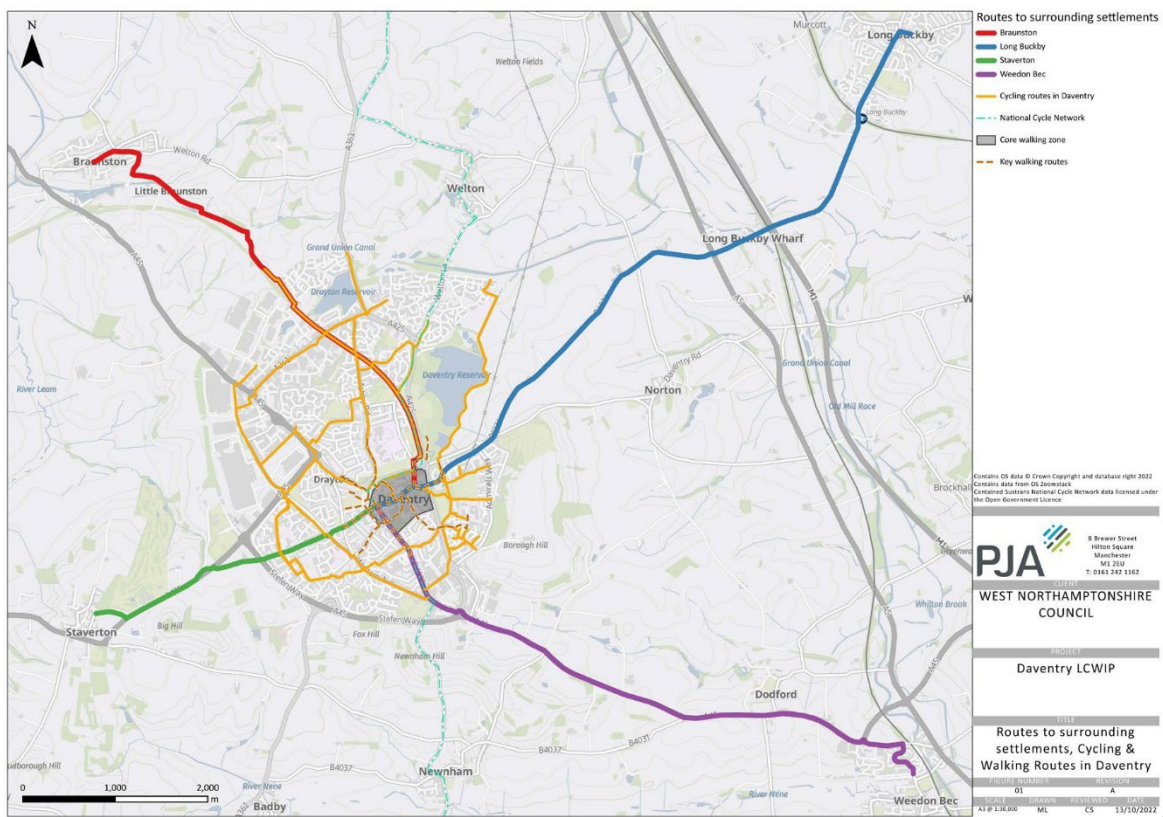


Figure 6-1: Combined Daventry LCWIP and inter-urban routes

### 6.2 Daventry LCWIP

6.2.1 The Daventry LCWIP identifies a cycle network comprised of four cycling route typologies: routes along main roads, routes along industrial roads, quietways, and traffic-free routes. For each route typology, a number of key routes have been identified based on analysis of demand, and design recommendations identified. Key recommendations include improving junctions, addressing high vehicle flows and providing protected cycling facilities.



- 6.2.2 In addition, a core walking zone and key walking routes centred on Daventry town centre have been identified. Key proposals including providing controlled crossing points, addressing high vehicle flows, improving priority junctions, signage and wayfinding, and addressing narrow or uneven footways.
- 6.2.3 Key routes have been costed and prioritised and a short-, medium- and long-term delivery plan put forward.

### **6.3 Inter-urban routes**

- 6.3.1 The purpose of the wider connectivity assessment was to identify and demonstrate that there are potential alignments to develop in the future as cycling routes between Daventry and surrounding settlements. This study has identified four priority links to Braunston, Staverton, Long Buckby and Weedon Bec. The routes identified could be delivered in their entirety or could be used to inform localised improvements as opportunities arise such as during planned maintenance of routes or junctions or to inform discussions about developer contributions during the planning process.



## Appendix A Plans



## **Appendix B    Cycling Route Design Recommendations Booklet**



## Appendix C    **Walking Routes Design Recommendations Booklet**





# Appendix E Costings