



**Frome Town Council**

**Frome Local Cycling and Walking  
Infrastructure Plan**

March 2023

Project Code: 06354

**PJA**  
G.03  
Wenlock Studios  
50 - 52 Wharf Road  
London  
N1 7EU  
UK  
[pja.co.uk](http://pja.co.uk)





## Version Control and Approval

Version	Date	Main Contributor	Issued by	Approved by
A	17 February 2023	Dan Bowditch	Ben Coleman	Ben Coleman
B	02 March 2023	Dan Bowditch	Ben Coleman	Ben Coleman
C	28 March 2023	Dan Bowditch	Ben Coleman	Ben Coleman

### Prepared for

**Nikki Brain**

Resilience Manager

**Frome Town Council**

Frome Town Council

Frome Town Hall

Christchurch Street West

Frome, Somerset

BA11 1EB





## Contents

<b>Section</b>	<b>Page</b>
<b>1 Introduction.....</b>	<b>1</b>
1.1 Introduction	2
<b>2 Study Context .....</b>	<b>3</b>
2.1 National Policy Context	4
2.2 Regional and Local Policy Context	7
<b>3 LCWIP Methodology .....</b>	<b>10</b>
<b>4 LCWIP Stage 1: Determining Scope.....</b>	<b>12</b>
4.1 Walking + Cycling Catchment Areas	13
4.2 Key Developments	15
4.3 First Impressions	16
<b>5 LCWIP Stage 2: Data Collection .....</b>	<b>19</b>
5.1 Local Context	20
5.2 Travel Patterns	28
5.3 Consultation	38
<b>6 LCWIP Stage 3 and 4: Network Planning for Walking and Cycling.....</b>	<b>41</b>
6.1 Walking and Cycling Network	42
6.2 Auditing Tools	43
6.3 Auditing Results	45
6.4 Design Recommendations	53
<b>7 Prioritisation.....</b>	<b>60</b>
7.1 Walking and Cycling Measures	61
7.2 Prioritisation Approach	65
<b>8 Recommendations .....</b>	<b>68</b>

### List of Tables

Table 3-1: LCWIP Stages .....	11
Table 6-1: RST Summary Table .....	46
Table 6-2: Summary of WRAT Results by Theme .....	51
Table 7-1: Design Recommendations .....	61
Table 7-2: Prioritisation Ranking .....	67

## List of Figures

Figure 2-1: Proposed Safer School Streets Zone (Source: FTC) .....	8
Figure 4-1: 20 Minute Walking Catchment from Town Centre .....	14
Figure 4-2: 20 Minute Cycling Catchment from Town Centre.....	15
Figure 4-3: Key Developments in Frome .....	16
Figure 5-1: Local Context + Future Developments .....	21
Figure 5-2: Air Quality – NO <sub>2</sub> Concentrations.....	22
Figure 5-3: Terrain Plan .....	23
Figure 5-4: Key Severance Features .....	24
Figure 5-5: Crossing Provision in Frome .....	25
Figure 5-6: Movement Cells in Frome .....	26
Figure 5-7: Indices of Multiple Deprivation (2019) .....	27
Figure 5-8: PCT Top 30 Straight Desire Lines (Updated with New Development Flows) .....	29
Figure 5-9: PCT Applied Network .....	30
Figure 5-10: PCT School Travel – ‘Go Dutch’ Applied Network .....	31
Figure 5-11: Strava Daily Cycling Trips (June – August 2021).....	32
Figure 5-12: Strava Daily ‘On-Foot’ Trips: June – August 2021 .....	33
Figure 5-13: Origin Clusters .....	34
Figure 5-14: Classed Destinations.....	35
Figure 5-15: Origin – Destination Pairs.....	36
Figure 5-16: Top 10 Desire Line Clusters .....	37
Figure 5-17: Comparison of Everyday Desire Lines, PCT Commuting Desire Lines and Links with High Strava Flows.....	38
Figure 5-18: Commonplace Feedback .....	39
Figure 5-19: Main Corridors identified through Stage 1 + Stage 2 analysis .....	40
Figure 6-1: Map of Recommended LCWIP Network.....	43
Figure 6-2: Route Selection Tool (RST) Overall Route Scores.....	45
Figure 6-3: Critical Junctions identified in RST Audits .....	46
Figure 6-4: Cyclist mixing with high traffic volumes (Gorehedge, left) and cyclists mixing with pedestrians on shared-use path (River Path, right) .....	47
Figure 6-5: Examples of cyclists navigating a busy roundabout (Portway/Vicarage Street, left) and a wide flared side-road junction (Station Approach, right) .....	48
Figure 6-6: WRAT Overall Scores by Route.....	49
Figure 6-7: Members of the LCWIP Working Group supported the WRAT site audits .....	50
Figure 6-8: WRAT Overall Scores by Section .....	50
Figure 6-9: Example clear and sufficiently wide footway (Christchurch Street East, left) and a staggered pedestrian crossing on Culverhill (right) .....	52
Figure 6-10: Example of flared side-road junction with no tactile information (left) and example of narrow and abruptly ending footway on a busy road (right) .....	53
Figure 6-11: Richmond Road Parallel Crossing (Left) and Lea Bridge Road, Parallel Ped/Cycle Crossing (Right) .....	54
Figure 6-12: Devon Gardens Raised Table Crossing (left), Sans Walk Informal Crossing (right) .....	55
Figure 6-13: Wide ‘Dutch Style’ advisory cycle Lanes Magdalen Bridge, Oxford (left) and light segregation on Royal College Street, Camden (right) .....	55



Figure 6-14: Example of a recessed loading/parking (Clapham Old Town, left) and example of clear footway space incorporating SuDS (Crossway, London, left) .....	56
Figure 6-15: Example 'Low Traffic Neighbourhood layout (Walthamstow Village, left) and modal filter using planters (Micawber Street, right) .....	57
Figure 6-16: Examples of existing modal filters in Frome (Spring Lane, left and Lower Keyford, right) .....	58
Figure 6-17: London Fields Pedestrian Priority (left), Swinton Greenway, Salford (right) .....	59
Figure 7-1: Priority Design Recommendations .....	65
Figure 8-1: Cheap Street .....	69





# I Introduction





## **I.1 Introduction**

This report summarises the findings from Frome’s Local Cycling and Walking Infrastructure Plan (LCWIP) study. LCWIPs identify and prioritise investment in new infrastructure to support a greater number of people making walked, wheeled and cycled journeys. LCWIPs should identify infrastructure interventions over a short, medium, and long-term horizon that meet the transport and movement objectives of Frome.

The development of the LCWIP was led by Frome Town Council (FTC) with the support of Somerset County Council (SCC) as well as engagement with stakeholders via the project’s LCWIP Working Group.

The report summarises the LCWIP study based upon the six key stages of the LCWIP methodology below.

- 1 Determining Scope
- 2 Data Collection
- 3 Network Planning for Cycling
- 4 Network Planning for Walking
- 5 Prioritisation
- 6 Integration

## 2 Study Context





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

## 2.1 National Policy Context

### 2.1.1 Gear Change and LTN 1/20

The national policy context for active travel changed significantly in 2020 with the DfT’s 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.



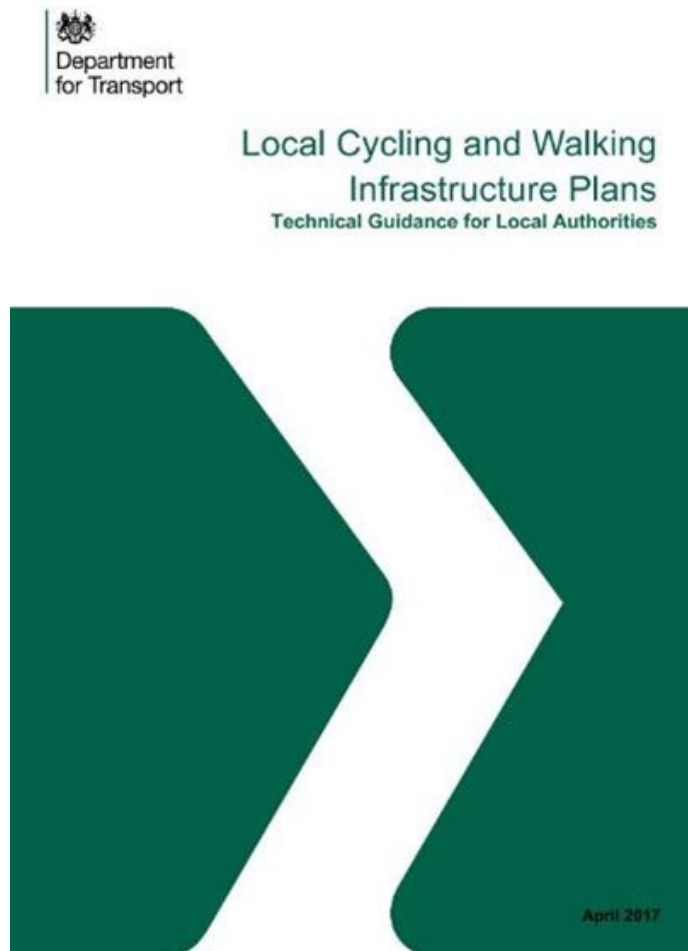
‘We want – and need – to see a step change in cycling and walking in the coming years. The challenge is huge, but the ambition is clear. We have a unique opportunity to transform the role cycling and walking can play in our transport system, and get England moving differently’

(Gear Change, 2020)

These new documents both fully endorse the Local Cycling and Walking Infrastructure Plan (LCWIP) and Low Traffic Neighbourhood (LTN) approaches as means to help improve conditions for walking and cycling. It will be ensured that all emerging design recommendations from this LCWIP will comply with LTN 1/20.

### 2.1.2 Local Cycling and Walking Infrastructure Plan (LCWIP)

An LCWIP is a Local Cycling and Walking Infrastructure Plan that identifies priority investment in new infrastructure to support greater number of people making journeys on foot or by cycle. The LCWIP should identify infrastructure interventions over a short, medium, and long-term timescale that meet the transport objectives of Frome.



The process for undertaking an LCWIP is set out in the Department for Transport's (DfT) process guidance, issued in 2017 as part of the Cycling & Walking Investment Strategy (CWIS). A fundamental aim of an LCWIP should be to help meet the government's aspiration of doubling the number of journeys undertaken by walking or cycling, and as such planning infrastructure around existing or forecast travel patterns is a core principle of an LCWIP. A key consideration in the development of an LCWIP is understanding existing conditions for active travel, and how these facilities can be incorporated into the LCWIP networks. The key outputs of an LCWIP are as follows:

- A network plan for walking and cycling which identifies preferred routes and core zones for further development



- A prioritised programme of infrastructure improvements for future investment
- A report which sets out the underlying analysis completed to support the LCWIP’s development and recommended LCWIP network

LCWIPs are produced with a ten-year timeframe for delivery, however the DfT’s intention is that the documents are flexible and therefore should be considered as ‘live’ documents. This provides local authorities with the flexibility to update their network plans to reflect local changes, including new development sites, funding opportunities and additional routes. On this basis, whilst the plan has recommended routes in the town, future work streams should consider expanding and evolving these initial proposals to ensure that a consistent high quality of walking and cycling infrastructure is provided across Frome.

The Department for Transport are currently reviewing the LCWIP guidance and are intending to ‘refresh’ the guidance. The changes are not intended to be significant and instead will be focussed on refreshing specific elements of the methodology to provide more information and to expand on some technical aspects.

### 2.1.3 National Planning Policy Framework (NPPF)

The NPPF has been revised to implement policy changes in response to the Building Better Building Beautiful Commission “Living with Beauty” report and incorporates the increased focus on design. The NPPF sets out the Government’s planning policies for England and how these should be applied. It must be considered in preparing local development plans and is a material consideration in planning decisions. At the heart of the framework, is a ‘presumption in favour of sustainable development’.

Within Chapter 9 ‘Promoting Sustainable Transport’, Paragraph 110 is of particular relevance requiring the design of streets, parking areas, other transport elements and the content of associated standards reflect current national guidance, including the National Design Guide and the National Model Design Code. Paragraph 106 makes specific reference to LCWIPs as a means for providing attractive and well-designed walking and cycling networks.

Chapter 8 ‘Promoting healthy and safe communities’ also recommends promoting social interaction with *‘street layouts that allow for easy pedestrian and cycle connections within and between neighbourhoods, and active street frontages’*.

### 2.1.4 National Model Design Code (2021)

Building on the 2019 National Design Guide, the National Model Design Code is intended to inform local design guides and codes or, in the absence of local guidance, act in their stead. It places local communities at the heart of plans to make sure that new developments reflect the history and unique character of their areas and are beautiful and well-designed. The code places great weight

on Manual for Streets and Manual for Streets 2, which continue to represent good practice on street design. Paragraph 58 outlines that ‘a connected network of streets, good public transport and the promotion of walking and cycling as key principles’.

## 2.2 Regional and Local Policy Context

### Regional Policy Context

#### 2.2.1 Somerset Climate Emergency Framework (2020)

The five Somerset local authorities all passed resolutions to declare or recognise a Climate Emergency during 2019. This framework document was jointly produced by the authorities to summarise and outline the work to meet the county’s targets for carbon neutrality, arranged under nine workstreams. Under the transport workstream, the framework explains that the aim is to make cycling and walking the default and most convenient travel option wherever possible.

#### 2.2.2 Somerset’s Future Transport Plan 2011 – 2026

Somerset’s Future Transport Plan is the overarching vision document for transport policy in the county. An Active Travel Strategy informs the Future Transport Plan and brings together individual strategies for cycling, walking, information and communication, with a shared vision for people to cycle and walk more often and more safely. The Cycling Strategy (2012) has three objectives and five policies, based around improving links, stakeholder involvement, new developments, promotional campaigns and leisure networks. The Walking Strategy (2012) has four objectives and seven policies, including those relating to network improvements, integration with other modes, maintenance, reducing pedestrian casualties and new developments.

### Local Policy Context

#### 2.2.3 Frome Town Council Strategy 2020 - 2024

Within this document, Frome Town Council pledge to make Frome carbon neutral by 2030, which surpasses the National Government targets for net zero emissions by 2050.

With regards to walking and cycling, the strategy states that Frome Town Council will:

- As part of the conversation with the new Somerset Council, make the case for a town-wide transport strategy for Frome that prioritises active and sustainable travel and includes metrics that measure success.
- Promote and campaign for better public transport infrastructure and greater use of it in Frome.
- Apply for funding and promote agreements with developers that support Local Cycling and Walking Infrastructure Plan (LCWIP) infrastructure improvements.



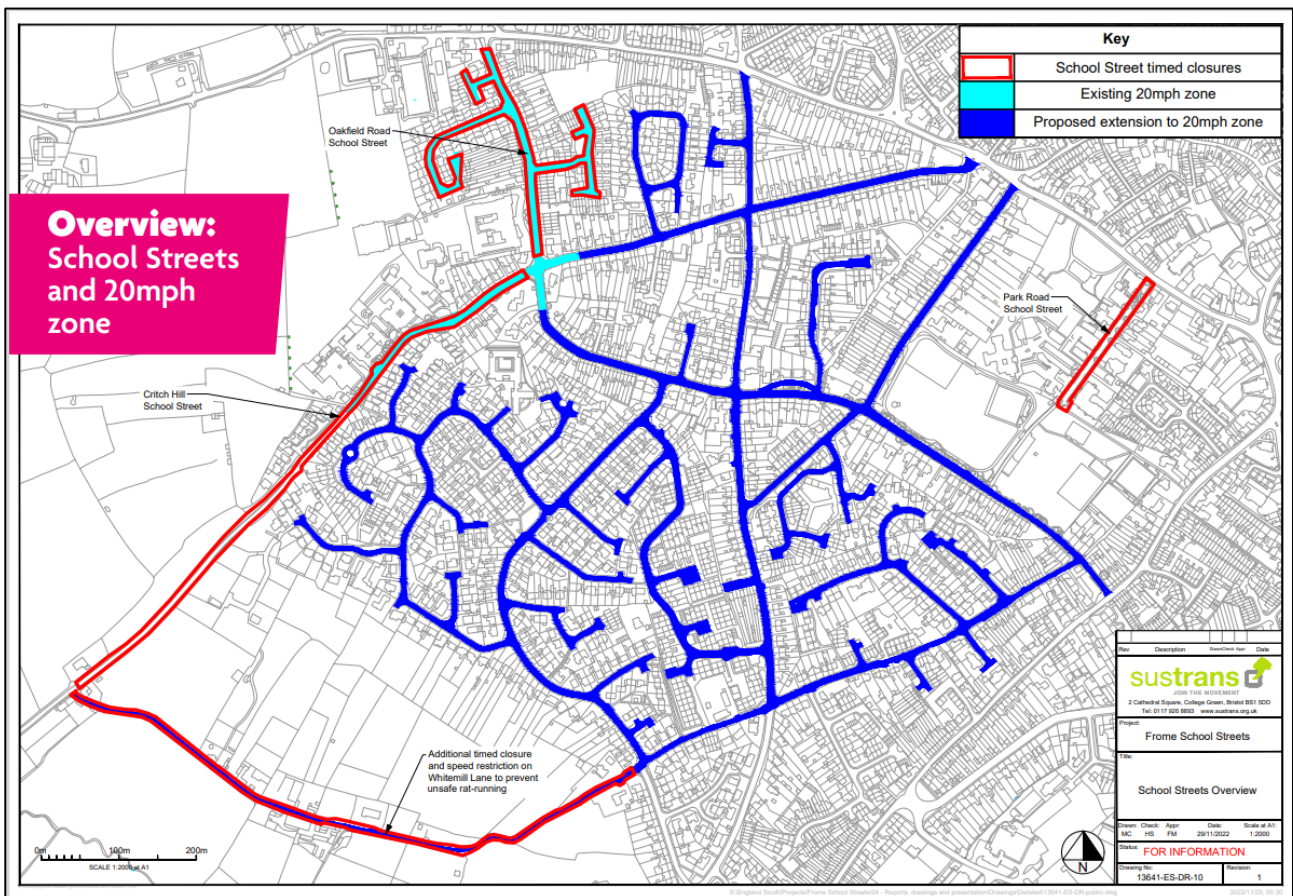
- Develop signposted network of walking and cycling routes.
- Work in partnership with residents, local schools, and stakeholders to influence behaviour change to more sustainable and playful modes of transport.
- Monitor and evaluate the 18 months trial of the Safer School Streets project and continue engagement with residents and schools.

### 2.2.4 Frome Safer School Streets

FTC are currently working with SCC and Sustrans on the Frome Safer School Streets project. The project aims to reduce air pollution and create child friendly streets primarily through the use of timed restrictions on vehicle access.

The study area is outlined below in Figure 2-1. It comprises Oakfield Road, Somerset Road and part of Nunney Road, including 5 schools and over 1,500 pupils in total.

**Figure 2-1: Proposed Safer School Streets Zone (Source: FTC)**



It is anticipated that the scheme will be trialled in Spring 2023 for a period of 18 months.





### 2.2.5 Frome Missing Links Project

Frome's missing links project is a community-led initiative which started in 2010 to campaign for safer walking and cycling routes in Frome and better connections to neighbouring towns and villages.

To the north of the town, the campaign aims to extend the Colliers Way route – a traffic-free route following an old railway line – connected to the centre of Frome. The campaign has already successfully extended part of this route from the centre of Frome and is now working on the remaining phases to link up this route with the Colliers Way route.

To the south, there are plans to extend a route towards East Woodlands and Longleat, beginning in the Edmund Park estate and utilising existing unpaved routes to connect with Feltham Lane.

### 2.2.6 Frome Active Travel Town

Funding has been secured by Somerset County Council to undertake an "Active Travel Town" study for Frome, which would be a first in Somerset.

While the scope of this study is currently in the process of being defined, it will be ensured that builds upon the recommendations of this LCWIP.



### 3 LCWIP Methodology



This chapter provides an overview of the LCWIP process and how it has been applied in Frome. The DfT technical guidance for authorities developing an LCWIP sets out a methodical approach to the planning and delivery of cycling and walking infrastructure and the process is based on the six stages listed below.

LCWIPs should be evidence-led, and comprehensive. An LCWIP should identify a pipeline of investment, ideally over a ten year period, so that a complete network is delivered at an appropriate geography (see LCWIP Stages 1 and 2) and that walking, wheeled and cycle improvements are delivered coherently, in particular within core walking zones (see Stage 4 – Planning for Walking). The goal of an LCWIP should be to increase 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.

The geographic scope for the cycling element and walking elements need not be the same, but there can be efficiencies where cycling infrastructure also considers walking and vice-versa, and planning them together can avoid one mode compromising the other. Given the compact scale of Frome and its walkability as a town, the LCWIP routes have been considered from both a walking and perspective.

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 3-1: LCWIP Stages**



## 4 LCWIP Stage I: Determining Scope





The purpose of Stage 1 is to establish the Geographic Scope of the LCWIP which forms the subsequent basis of the LCWIP Data Analysis and Site Auditing. The DfT guidance recommends that LCWIPs are concentrated on more urban settlements, with a focus of typical trip lengths of up to 10km for cycling and 2km for walking.

Our approach to determining the scope includes a high-level review of the below datasets which we have found to be highly influential on the extents of LCWIPs:

- Walking + Cycling Catchment Areas: Walking and cycling isochrones help to provide a sense of scale and to better understand the extent to which trips could be walked and cycled. Comparing the isochrones also helps to understand the relationship between future walking and cycling routes in the LCWIP.
- Key Developments: New developments, particularly major housing and employment sites, have significant impacts upon trip generation and also trip distribution. Plotting future development sites therefore is essential for understanding the impacts of developments and how these relate to existing settlements.
- First Impressions: Providing a summary of our first impressions helps

#### **4.1 Walking + Cycling Catchment Areas**

The purpose of walking and cycling isochrones is to understand the potential for walking and cycling based on the area covered by 20 minute walking and cycling catchment areas. Frome is a relatively small and compact town with a population of 28,559 according to the 2021 Census. The topography is generally hilly, with the River Frome running in an east-west alignment through the centre of the town. The lowest lying areas are generally in the vicinity of the river, including the town centre, meaning that most walking and cycling routes through the town will encounter hilly terrain. Future residential development in Frome is generally concentrated in the south of the town, the bulk of which is driven by the proposed Selwood Garden Community (1,700 homes). These future developments will affect the distribution of local population and may also have some impact upon movement behaviours in the town. It is therefore important to consider the relationship of future developments and how the LCWIP incorporates these developments.

The catchment area plans in Figure 4-1 and Figure 4-2 are based on straight-line ('as the crow flies') distributions to provide an indication of the distances that can be travelled. Given the hilly nature of the town and the surrounding rural areas, some manual adjustments have been made to account for the effect of gradient on walking and cycling journey times.

The walking catchment plan suggests that the majority of Frome is located within a 20-minute walk of the town centre. This plan therefore highlights the compact nature and walkability of Frome. The notable exceptions to this are the residential areas surrounding Brunel Way in the north-east of the



town and the proposed residential development sites in the south of the town, which are slightly outside of the 20-minute walking catchment area.

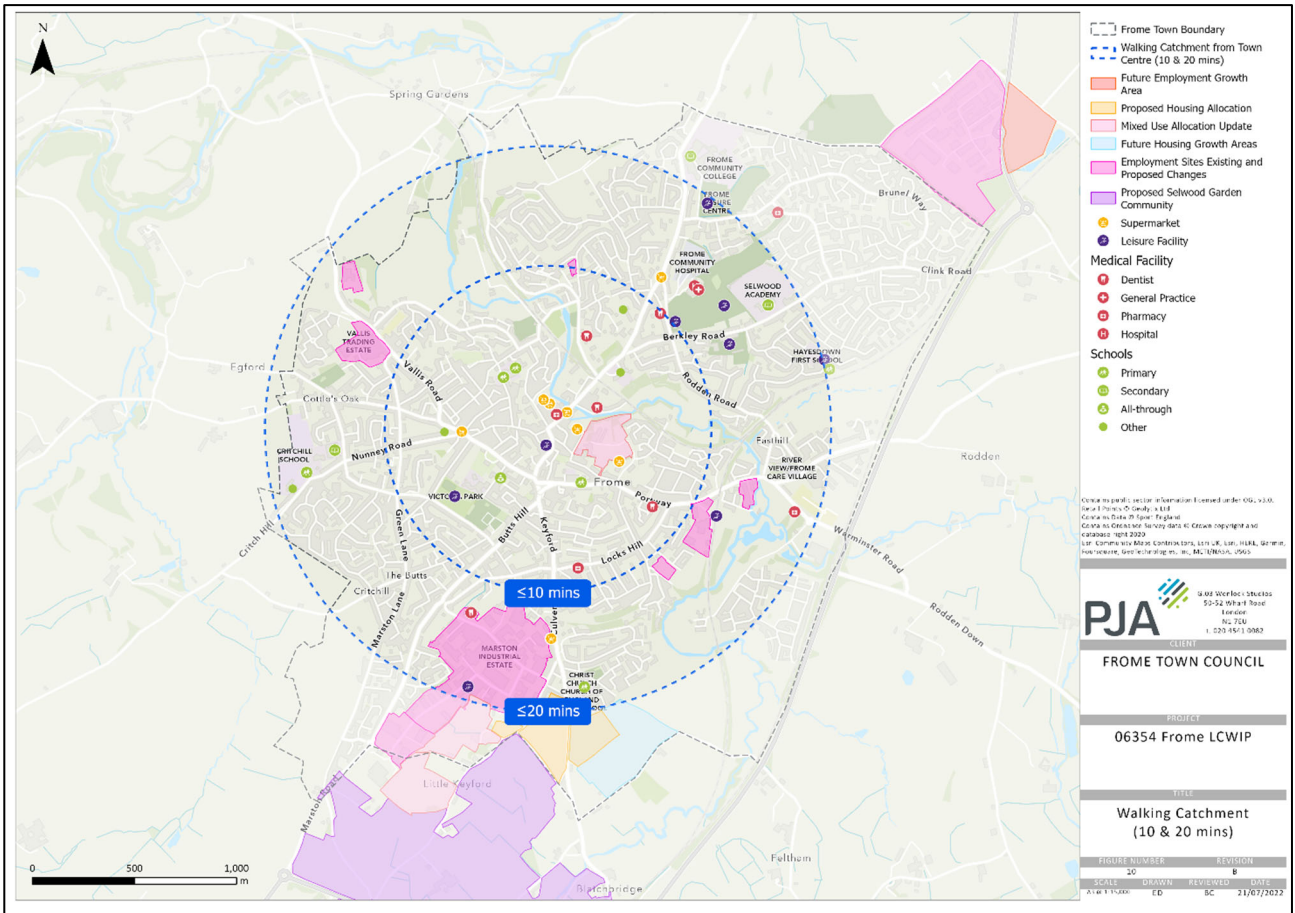


Figure 4-1: 20 Minute Walking Catchment from Town Centre

The cycling plan illustrates that all of the LCWIP study area falls within a 10 minute cycle from the town centre, and that the full width of the town can therefore be cycled in under 20 minutes. The wider 20 minute isochrone extends to include several local settlements, including: Beckington, Buckland Dinham, Mellis, Whatley and Oldford.

This plan also highlights the role of NCN 24, which bisects the borough and provides a connection to Radstock to the north-west and Longleat to the south-west, which lies just outside the 20-minute catchment area. The Frome “Missing Links” project will also enhance interurban connections from the town.

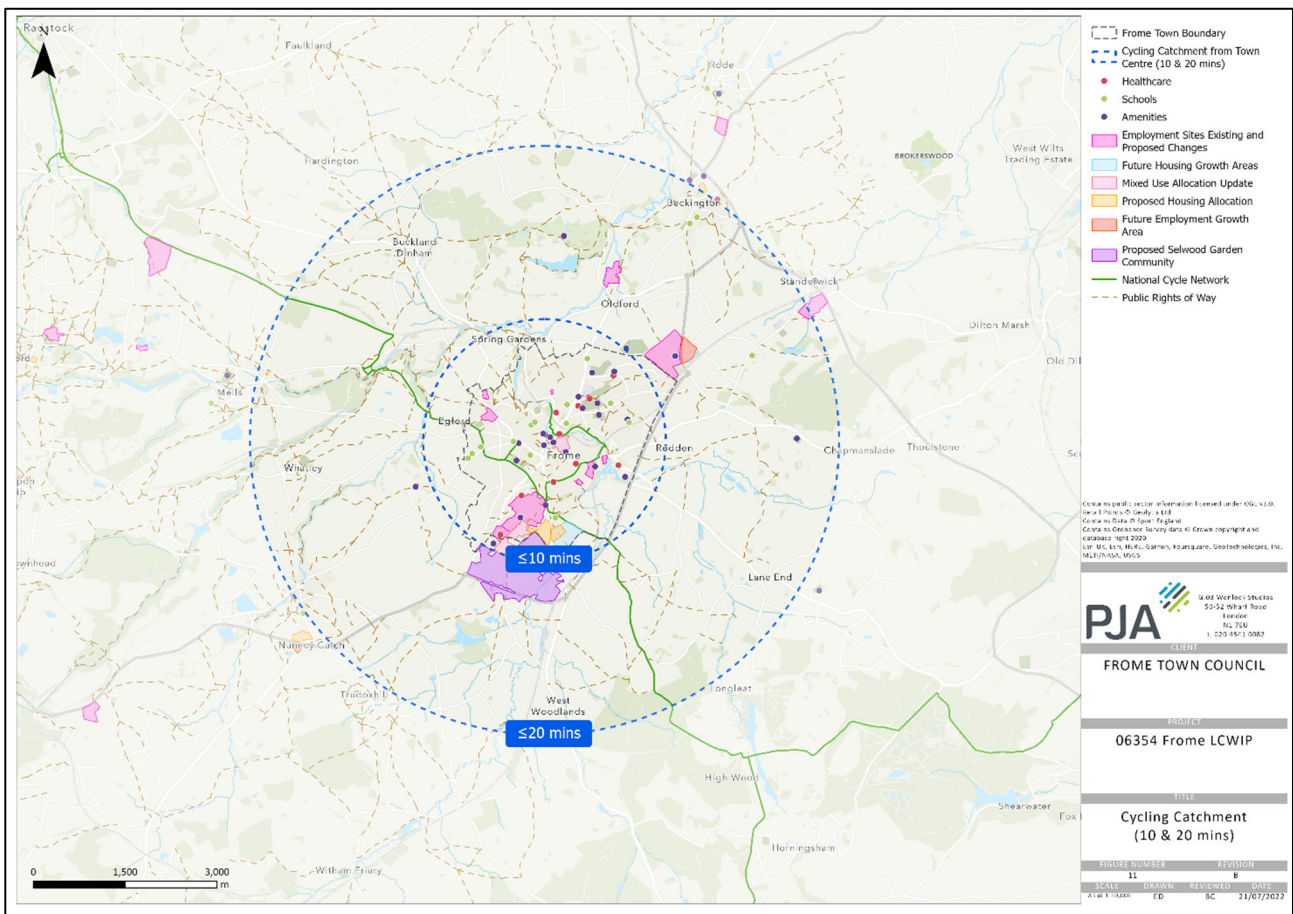


Figure 4-2: 20 Minute Cycling Catchment from Town Centre

## 4.2 Key Developments

The plan below shows the sites allocated with the Mendip District Local Plan Part II that fall within the Frome LCWIP study area. As previously mentioned, the bulk of allocated sites are located in the south of the town and therefore might impact upon movement patterns within the town as these sites are developed.

Given its size, the proposed Selwood Garden Community development has also been included in this plan. If approved, the proposed development would provide 1,700 homes as well as employment, education and retail land uses and significantly alter Frome’s population distribution. At the time of writing, the planning application is still under consideration and therefore this is not a committed scheme.

The allocated and potential development sites are a mixture of mixed use, housing, employment (new and proposed changes to existing employment sites). The most significant developments are as follows:



- Selwood Garden Community – 1,700 dwellings, two care homes, 6.7 hectares of employment land, a mixed use local centre for primary school, cafes/restaurant and convenience store
- FR1 Saxondale – Allocated for mixed use comprising a minimum of 250 dwellings, town centre uses and employment
- FR2 Land North and South of Sandy’s Hill Lane – Allocated for a minimum of 200 dwellings and approximately 4.5ha of employment, commercial and retail use
- FR3A Land South of Little Keyford and The Mount – Allocated for a minimum of 325 dwellings

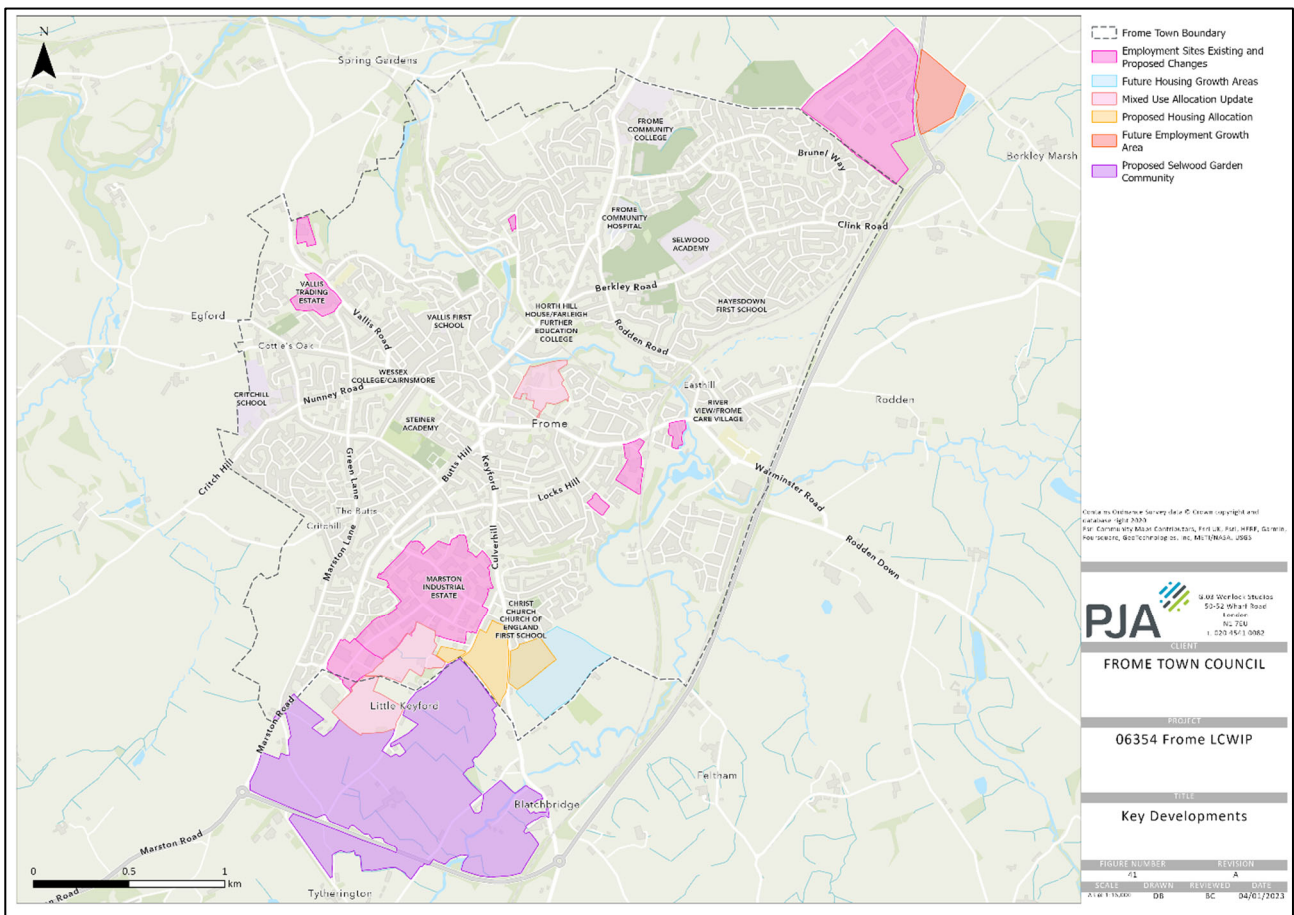


Figure 4-3: Key Developments in Frome

### 4.3 First Impressions

This section briefly summarises the project team’s first impressions of Frome from our inception site visit. The purpose of the site visit was to better understand the local context, and to review conditions for walking and cycling. We have summarised the findings into the following groups:

- **Walkability + Topography:** The compact nature of Frome is a strength, making it an inherently walkable town. The town centre is located at the geographic centre of Frome, with



the majority of the surrounding areas within a 20-minute walking distance. Particularly in the town centre, there is a dense urban network, with a series of alleyways, paths and pedestrianised streets which prioritise pedestrians over other modes. This is also true in the suburban areas of Frome, where there are several footpaths and pedestrian links which enable quicker walking journeys. This results in there often being multiple routes to key destinations, ranging in directness and quietness. Despite the town’s compact nature, Frome’s topography and steep hills down to the river valley will be a key consideration in the LCWIP’s development – particularly on hillier routes such as Welshmill Lane/Selwood Road, Market Place/Bath Street, Catherine Hill/Stony Street, and Whatcombe Road.



- **Historic Streetscapes:** Frome benefits from a number of streets with high-quality public realm within its historic town centre. Catherine Hill, Cheap Street and Stony Street are examples of high-quality streetscapes which combine sensitive heritage materials with low-traffic conditions. It should also be noted that in some instances, the historic streetscapes of Frome can also be an impediment to walking. For instance, narrow carriageway widths often result in narrow or “missing” footways, and cobbled surfaces combined with steep gradients can create a difficult environment for the mobility impaired.



- **Traffic-Free Routes:** There are a number of traffic-free walking and cycling routes in Frome, which are well-used by local residents. These routes serve an important leisure and functional purpose. The most prominent route is the river path, which follows the River Frome and bisects the town in an east to west alignment. There are also linkages to NCN 24, which provides onwards connections out of Frome.



- **Severance + Connectivity:** There are busy vehicular routes which run from north to south (B3090 corridor) and from east-west (A362 corridor). Along these routes there is limited crossing provision for pedestrians and cyclists, as well as high traffic volumes with little cycle provision and limited footway widths in places, creating severance for movement through the town. This severance is enhanced by the presence of some particularly hostile junctions for pedestrians and cyclists, namely the Gore Hedge junction (below right). Marketplace bisects the town centre, between Stony Street and Cheap Street, with a lack of pedestrian crossing along this key desire line (below left). Addressing these severance features will be key to ensure safe and direct movement throughout the town.



- **Community Initiatives:** There are a number of local initiatives and community groups in Frome that are involved in implemented a number of schemes across the town. These include but are not limited to, the Safer School Streets programme, Frome’s Missing Link project, the FTC Fingerpost project, and Friends of the River Frome. There is a strong sense of community in the town, and it will be important to ensure that the LCWIP complements existing initiatives in the town.

## 5 LCWIP Stage 2: Data Collection





The focus of Data Collection (LCWIP Stage 2) is to understand the local context to inform the development of the LCWIP walking and cycling networks. DfT guidance recommends that a broad range of information should be gathered to inform the preparation of the LCWIP, including the below:

- Local context
- Key future developments
- Location of significant trip generators
- Transport network
- Travel patterns
- Existing barriers to cycling and walking

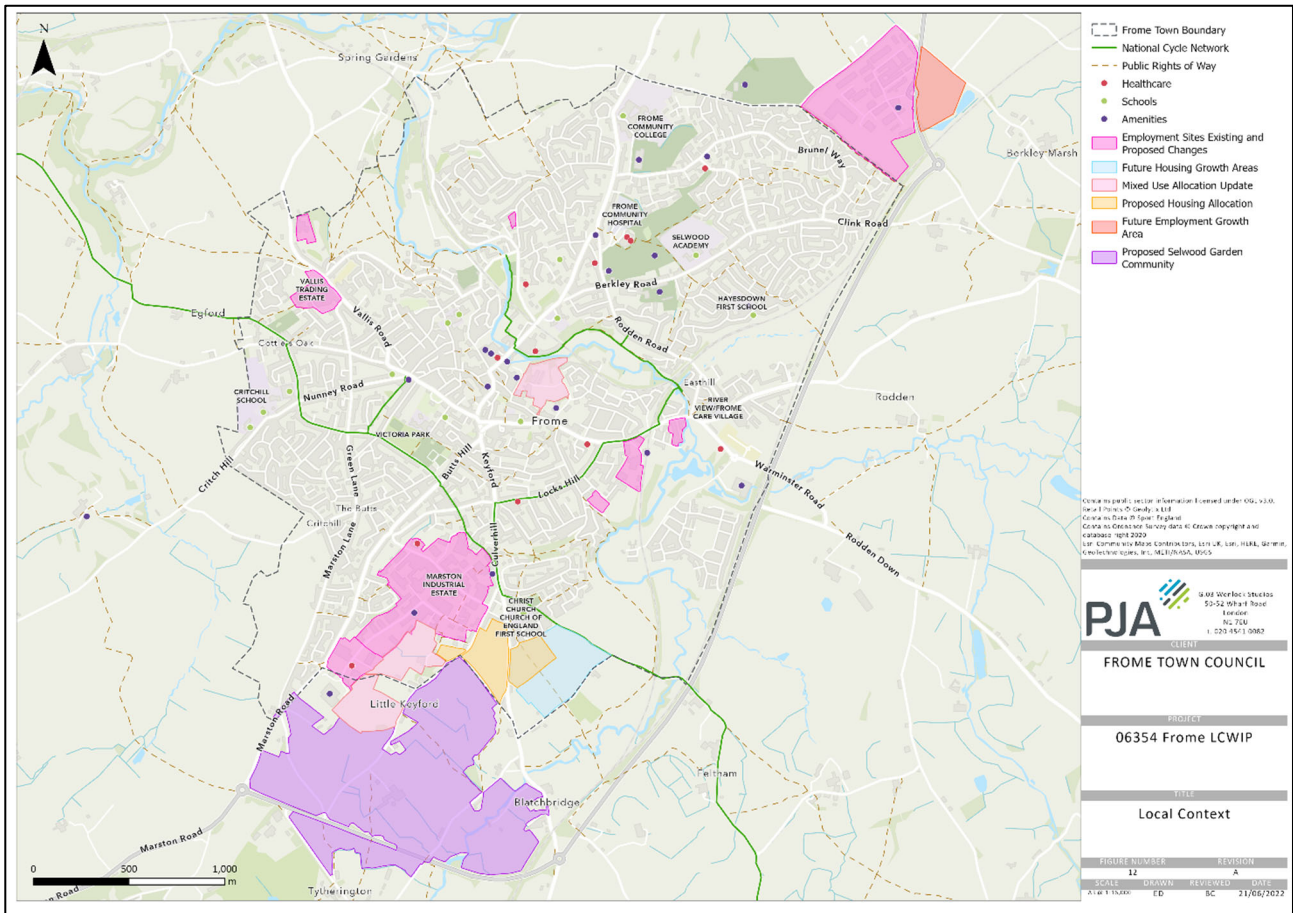
## **5.1 Local Context**

Given the compact nature of Frome, the focus of the data collection was understanding the local context and travel patterns within the existing historic townscape of Frome, and also to understand how future developments could impact upon the town and movement patterns. The isochrone plans illustrated that a majority of the existing town is within a 20 minute walk and the 20minute cycle isochrone covers a significant catchment area beyond Frome.

### **5.1.1 Key Destinations**

The below plan summarises the distribution of key destinations within the town, including schools, future development sites, leisure and retail facilities, cycle routes, Public Rights Of Way (PRoW), open spaces, and key employment sites. The plan shows a cluster of destinations around Frome town centre, as well as in the north-east of the town, where there is a cluster of medical, amenity and educational land uses. The remaining destinations in Frome are spread throughout the town.

The plan also illustrates the significance of the potential development sites and how these might alter the distribution of population. This is particularly evident in the south of the town, where there are a number of planned or potential new residential developments.



**Figure 5-1: Local Context + Future Developments**

5.1.2 Air Quality

Figure 5-2 summarises Annual NO<sub>2</sub> Concentrations across the LCWIP study area. NO<sub>2</sub> is a gas that is mainly produced during the combustion of fossil fuels along with nitric oxide (NO). The plan demonstrates that NO<sub>2</sub> levels throughout Frome are generally low, with little variation across the town. For reference, the UK average annual mean concentration of NO<sub>2</sub> at urban background sites in 2020 was 15.1µg/m<sup>3</sup>, and all sites in Frome are lower than this figure.

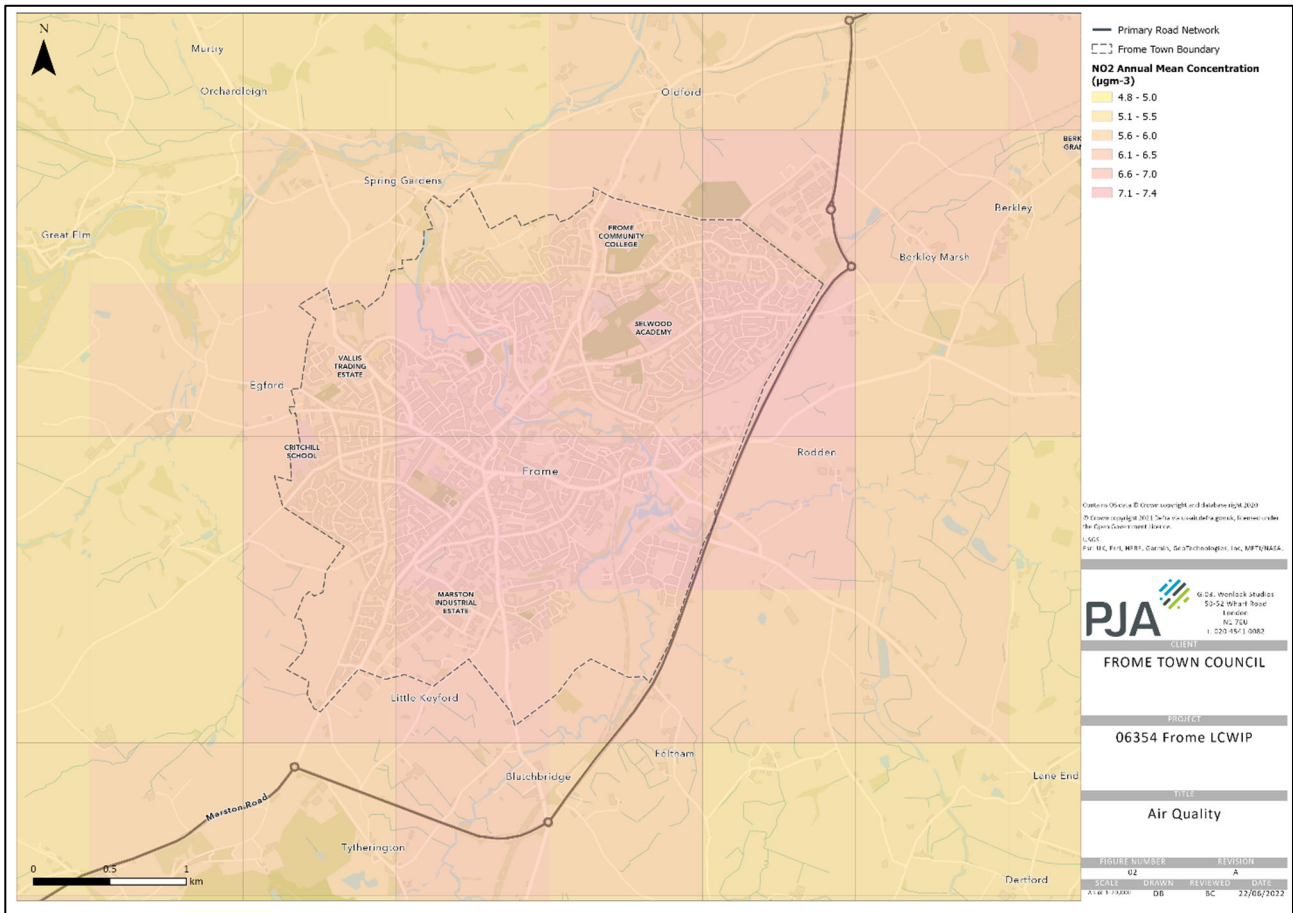
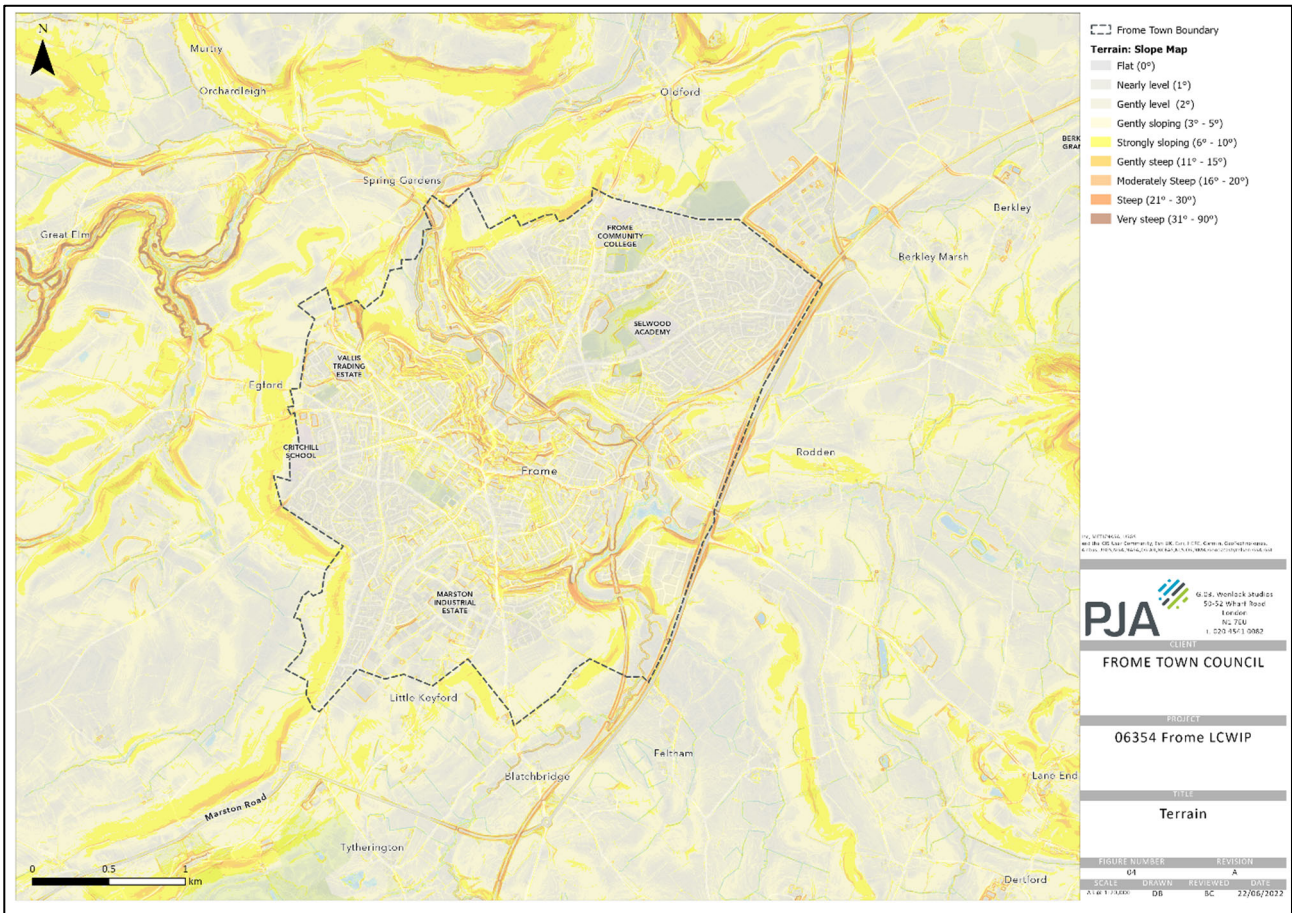


Figure 5-2: Air Quality – NO<sub>2</sub> Concentrations

### 5.1.3 Terrain Plan

Figure 5-3 shows the terrain across the town in terms of gradient. The plan illustrates that the town centre lies at the bottom of the River Frome valley. From the town centre, there are steep gradients rising to the north and west. Likewise, there are steep gradients in the south-east of the town, primarily in the area surrounding the Dippy. This is a key factor affecting the accessibility of several of Frome’s key routes.

Gradient can be a deterrent for many to walk, wheel and cycle, and thus is a key consideration in route planning (and auditing). It also highlights the importance of having route choice when moving through the town, primarily through having the ability to avoid steep gradients through route choice if there are alternatives.



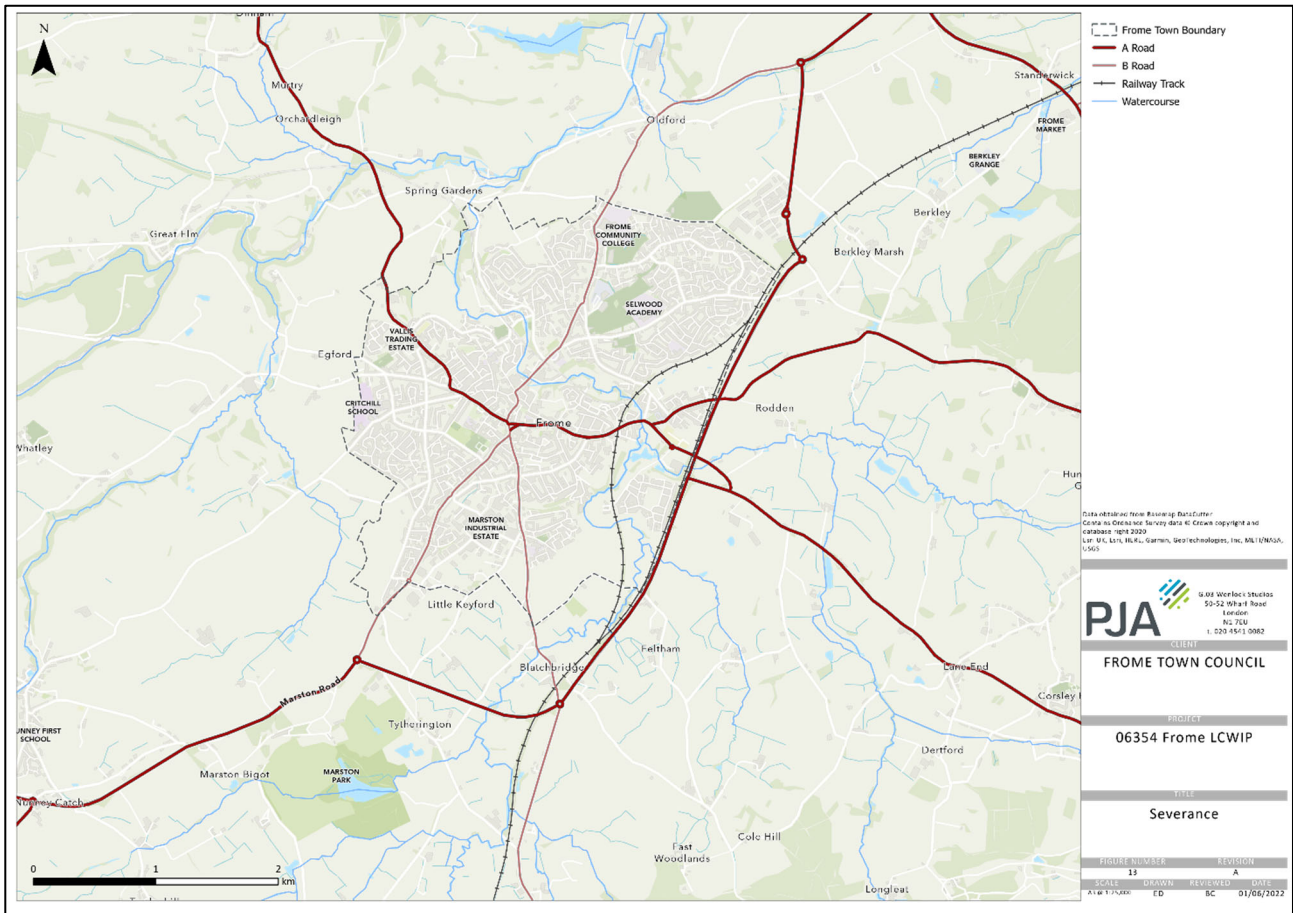
**Figure 5-3: Terrain Plan**

5.1.4 Connectivity and Severance

Understanding the impact of severance is critical for contextualising how pedestrians and cyclists currently move through Frome, particularly in relation to severance features such as the A362 corridor and Marketplace in the centre of Frome. Figure 5-4 was developed to highlight the key ‘Severance’ features in the Borough: ‘Severance’ typically refers to barriers to movement, and features include road and rail infrastructure and geographic landmarks.

The main vehicular route on the plan is the A361, which passes east of Frome and accommodates north to south motor traffic. Although this does present a barrier to movement for rural routes into and out of Frome from the east, it also serves an important purpose as it removes strategic through traffic from the town itself.

The plan highlights the two main severance features within the town boundary, which are the B090 corridor which bisects the town north to south, and the A362 corridor which bisects the town from the east to west. Both of these corridors meet at the Gore Hedge junction, which is a barrier to movement in itself due to its complex layout, high traffic volumes and lack of crossing facilities.

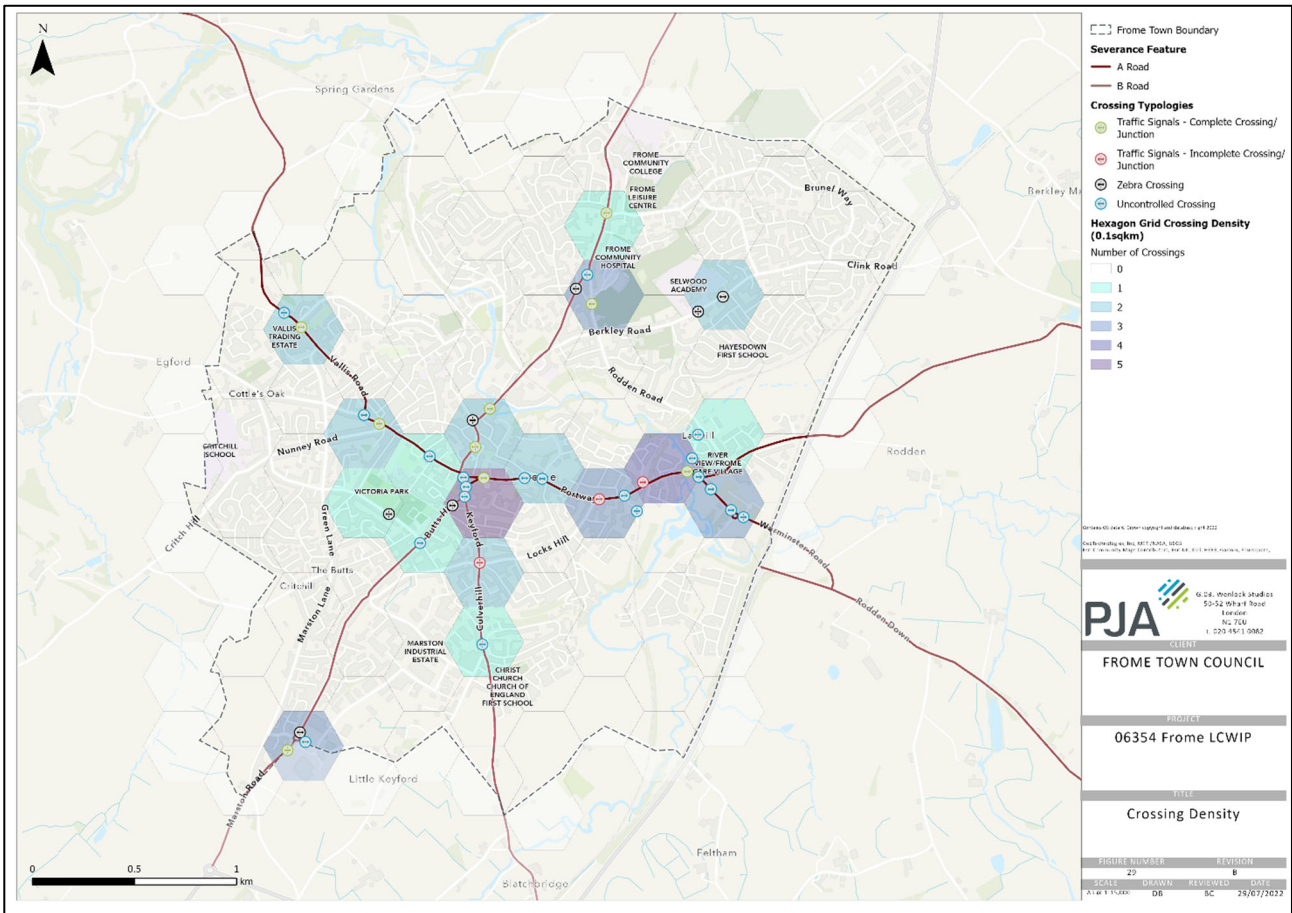


**Figure 5-4: Key Severance Features**

It is also important to understand the level of pedestrian and cycle crossing provision in Frome when considering severance and the impact of severance features on movement. The plan below shows the density of crossings in Frome and highlights junctions with “incomplete” crossing provision, i.e. crossings missing on one or more the arms of the junction.

The plan demonstrates that the crossing provision in Frome is generally quite limited. There are also several junctions with incomplete crossing provision, highlighted by the red symbols on the plan below.





**Figure 5-5: Crossing Provision in Frome**

5.1.5 Movement Cells

In order to gain a more detailed understanding of movement around Frome, the town was split into movement “cells”. These cells were defined based on severance features in the town (primarily A-roads and B-roads) and geographical severance features (rivers and greenspace).

Each cell was classified based on whether it is porous to motor traffic. To aid this, existing modal filters within Frome were plotted based on the site visit undertaken in July 2022. The proposed Safer School Streets area has also been plotted, where a number of area based interventions are proposed.

The resulting plan demonstrates that there are already a number of existing “low traffic neighbourhoods” in Frome, i.e., cells which are not currently porous to motor traffic. This is useful to demonstrate that there is high potential to further expand low traffic neighbourhoods in Frome, firstly though the delivery of the Safer School Streets scheme with the roll out of further LTNs to follow.

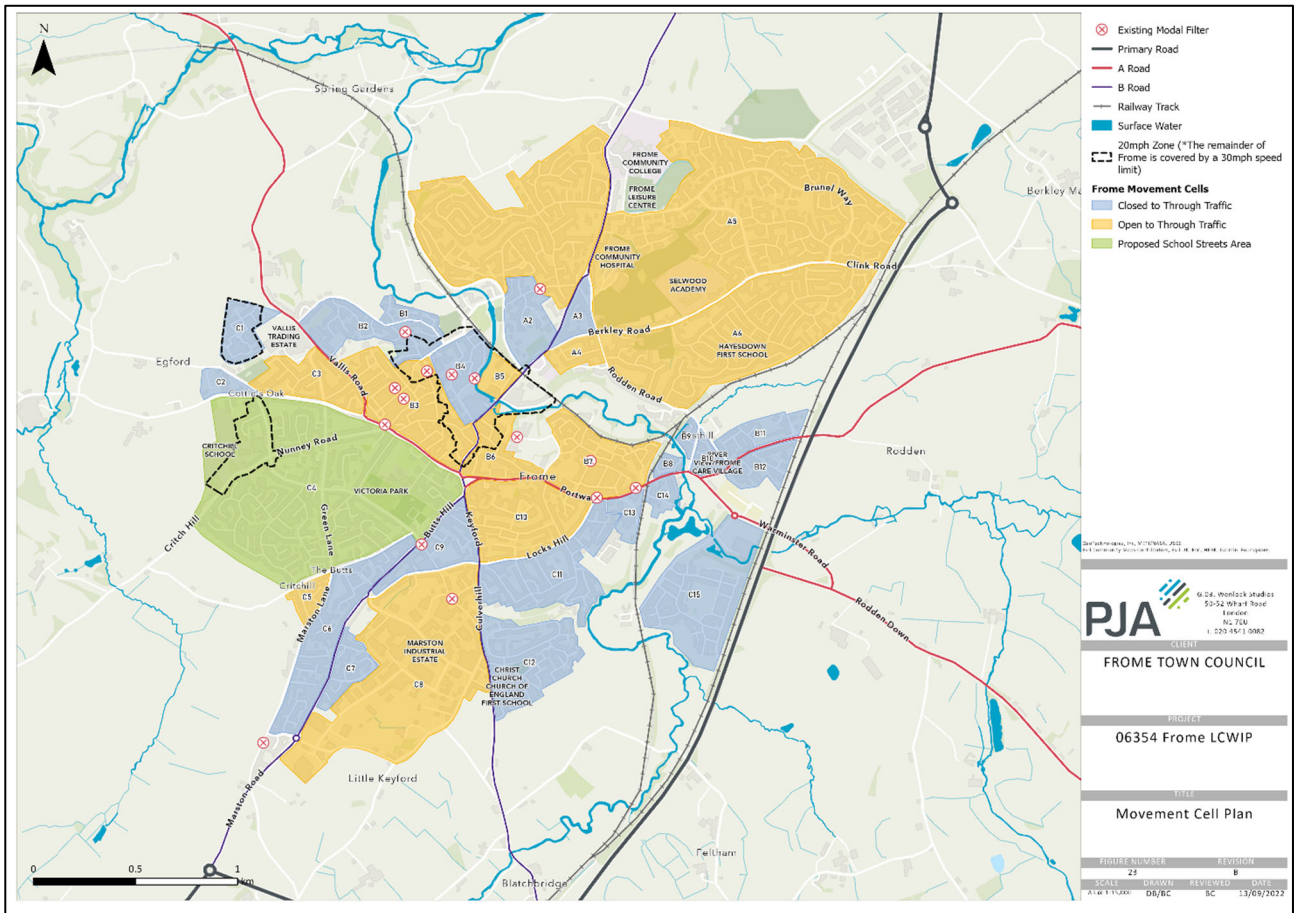


Figure 5-6: Movement Cells in Frome

The cells plotted in Figure 5-6 were also used to obtain telematics data from The Flow. This data was analysed to understand general traffic levels in the town, strategic through traffic and intra-town traffic. The data also enabled analysis of through traffic in Frome at a cell-based level, highlighting areas of the town which are prone to rat-running and therefore would benefit from low-traffic interventions.

This analysis was presented to FTC and the LCWIP working group and has been considered in the development of design recommendations for the LCWIP.

### 5.1.6 Indices of Multiple Deprivation

The Indices of Multiple Deprivation (IMD) is a mathematical dataset calculated using seven 'domains of deprivation' and ranks all LSOAs in England. Each domain is individually weighted in the final IMD calculation: Income (22.5%), Employment (22.5%), Education (13.5%), Health (13.5%), Crime (9.3%), Barriers to Housing and Services (9.3%), and Living Environment (9.3%).

Figure 5-6 summarises the 2019 results for Frome based on 10% intervals and provides insight into levels of deprivation across the town and its surrounding areas. The data shows that the north-east of the town is generally the least deprived, with one LSOA within the 10% least deprived. There is a band of more deprived LSOAs, stretching from the north-west of the town, to the south-east, the majority of which are within the 40% most deprived, and one in the 20% most deprived.

Consideration should be given to deprivation levels when planning and prioritising walking and cycling routes, in order to address economic and health inequalities. It should also be acknowledged that a range of other factors which might influence one’s propensity to walk or cycle. For instance, the National Travel Survey (2021) found that on average males make more annual cycling trips (24) than females (7) . Similarly, the Active Lives report (Sport England) highlights that those with a disability are less likely to be physically active than those without a disability and there are also notable differences in activity levels based on ethnic background. It is therefore also important that walking and cycling infrastructure is designed to be inclusive and accessible for all.

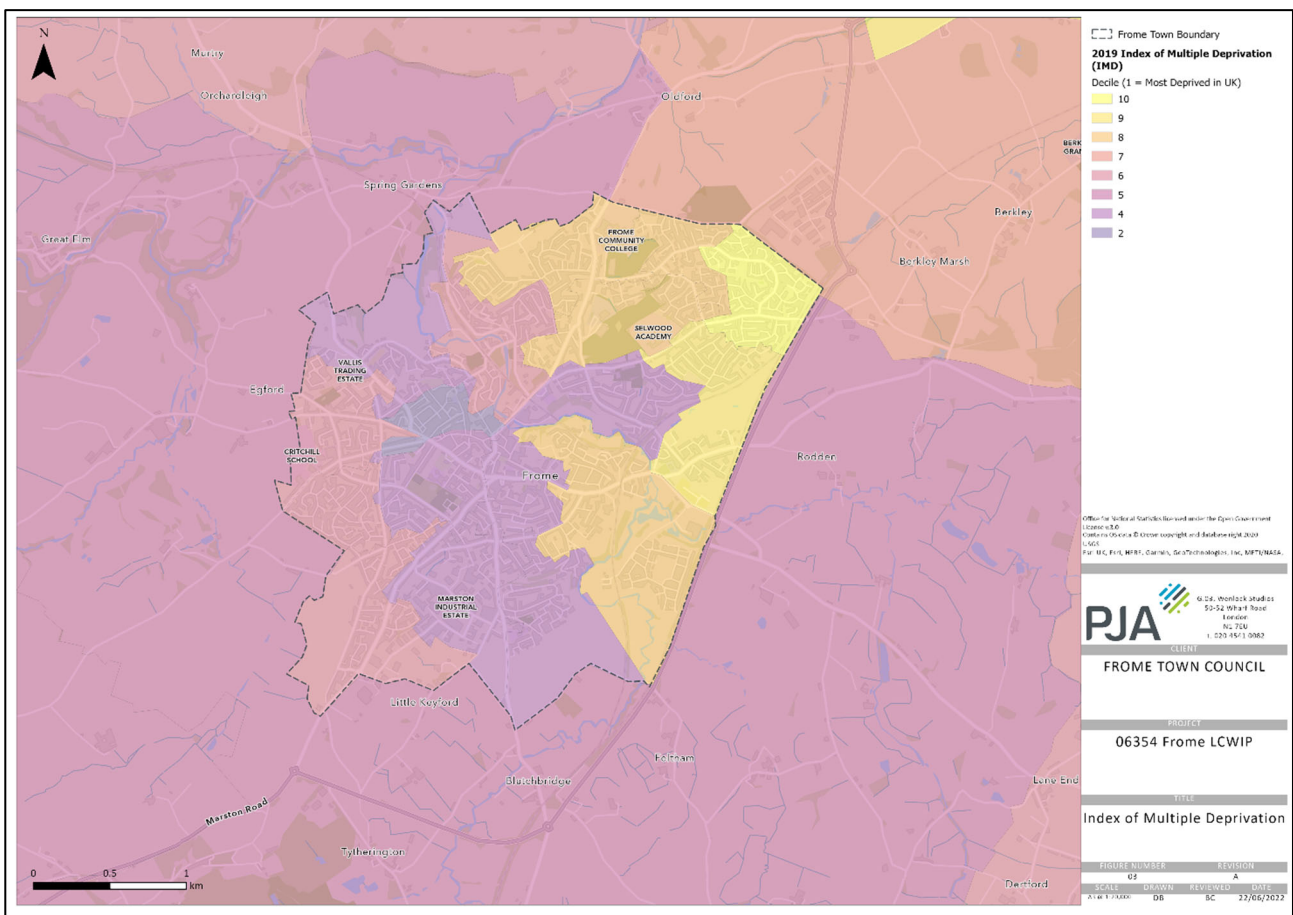


Figure 5-7: Indices of Multiple Deprivation (2019)



## 5.2 Travel Patterns

Understanding existing and potential future travel patterns is an important step in developing the LCWIP network to ensure it reflects local demand. Our analysis of travel patterns has combined analysis of commuter patterns (Propensity to Cycle Tool) and non-commuter travel patterns (School Trips, Everyday Trips and Strava analysis).

### 5.2.1 Propensity to Cycle Tool (PCT)

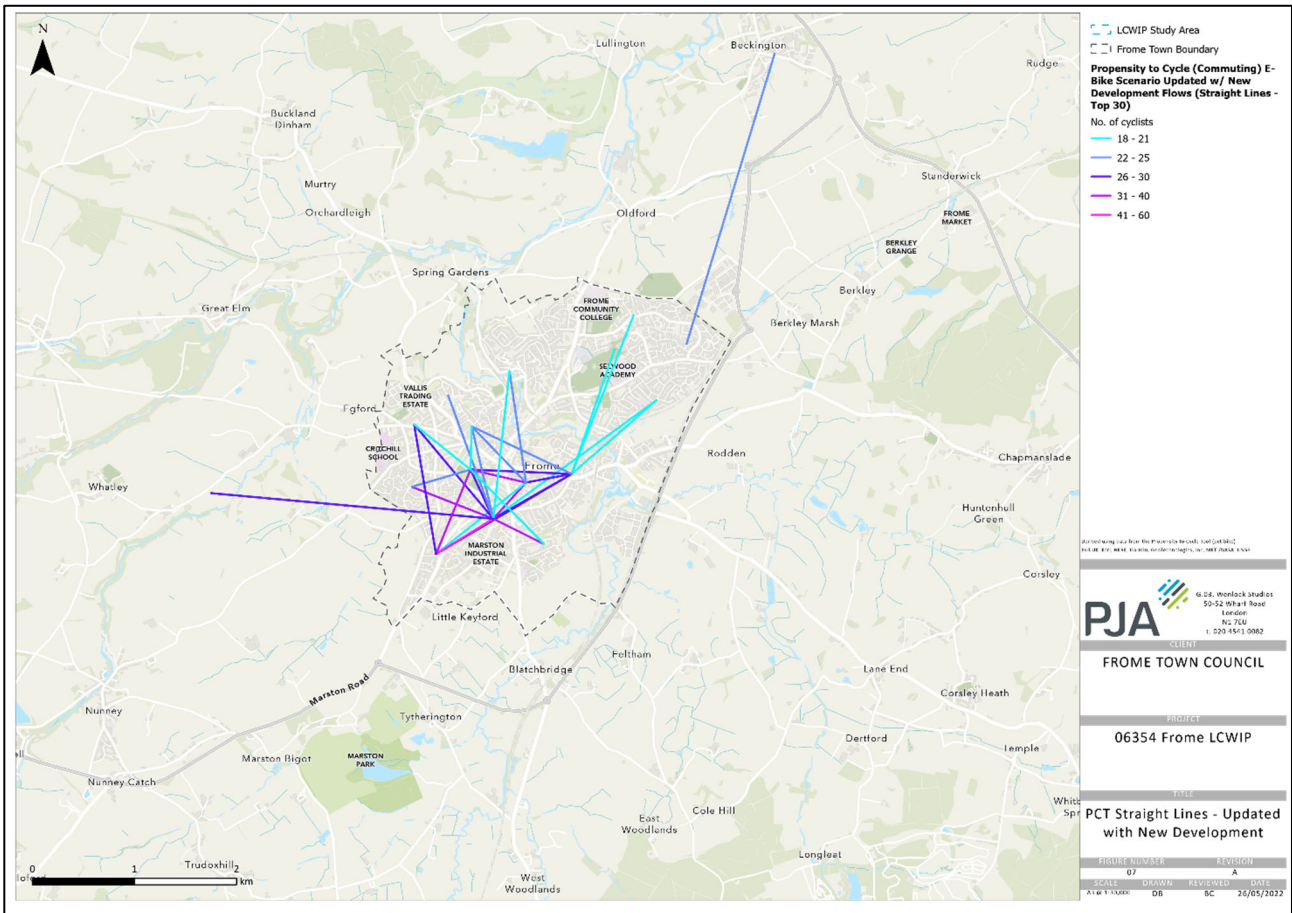
The Propensity to Cycle Tool ([www.pct.bike](http://www.pct.bike)) is a nationwide model that identifies where increases in the rates of cycling can be expected through the provision of better infrastructure. It uses Census travel to work data and school travel data and looks at trip distances to see where there may be scope for more short journeys to be undertaken by cycling. It is important to note that one limitation of the PCT is that it uses the 2011 Census and therefore is not based on recent data.

The PCT provides seven scenarios for forecasting future levels of cycling which range in ambition from the 'Government Target' (assumes 6% of commuting trips by bicycle) up to the 'E-Bike' scenario (assumes 22% of commuting trips by bicycle and improved access to e-bikes). The PCT provides two sets of mapping outputs:

- Straight-Line Networks – these plans show direct paths between LSOA Origin-Destination points which gives an overview of the key desire lines for cycling flows
- Applied Networks – 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 network

The PCT tool was used to identify the greatest latent demand for cycle and school commuting. The PCT analysis used the 'E-Bike' scenario, which models the same mode share for cycling as in the Netherlands, adjusting for trip distance and topography and includes improved access to E-Bikes. Using the 'E-Bike' scenario provides a more ambitious and longer-term outlook for cycling flows which is advantageous in network planning as it ensures that the LCWIP cycle network will provide for assumed future advances in the town's cycle network. To accommodate for future commuting demand from proposed developments, the population forecasts for each proposed site were incorporated into the PCT forecasts to provide a more accurate reflection of a potential future scenario. The forecast populations were assigned to the nearest available LSOA to each development site.

It should be noted that the forecasts presented in Figure 5-8 do not include forecast demand from the Selwood Garden Community, given that this development was not committed at the time of writing. A sensitivity test was undertaken however, and this demonstrated that the inclusion of SGC did not have a significant impact on the top 30 desire lines shown.

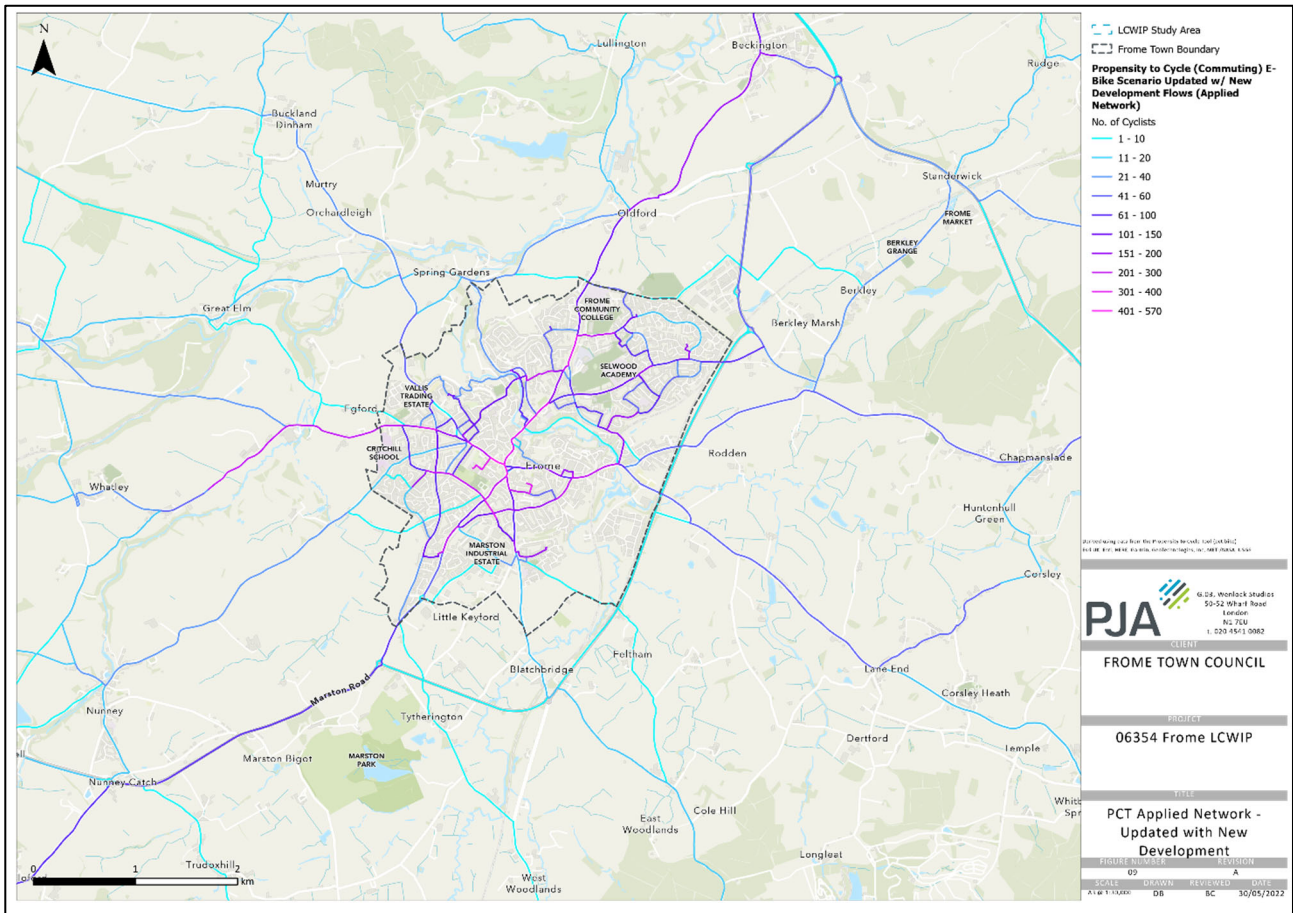


**Figure 5-8: PCT Top 30 Straight Desire Lines (Updated with New Development Flows)**

The results in Figure 5-8 demonstrate that commuting demand is contained within the town boundary and primarily focused on the town centre. From the town centre, there seems to be similar levels of demand to the north, east, south and west. There are some longer distance desire lines, notably to the north-east of the town where there is a large residential population and a cluster of employment land uses.

The PCT tool also provides an ‘applied network’ scenario which snaps the straight-line desire lines to closest applicable road alignment to provide an indication of more applied demand. This is shown in Figure 5-9.

This plan shows that the strongest demand is centred around the B3090 corridor, with a strong north-south demand evident. There is also high demand shown west from the centre of Frome, primarily along Broadway and Christchurch Street. Whilst the applied network outputs are useful, it should be noted that the tool does not consider non-highway routes, such as the traffic-free routes which traverse the town and are known to be well-used by residents.

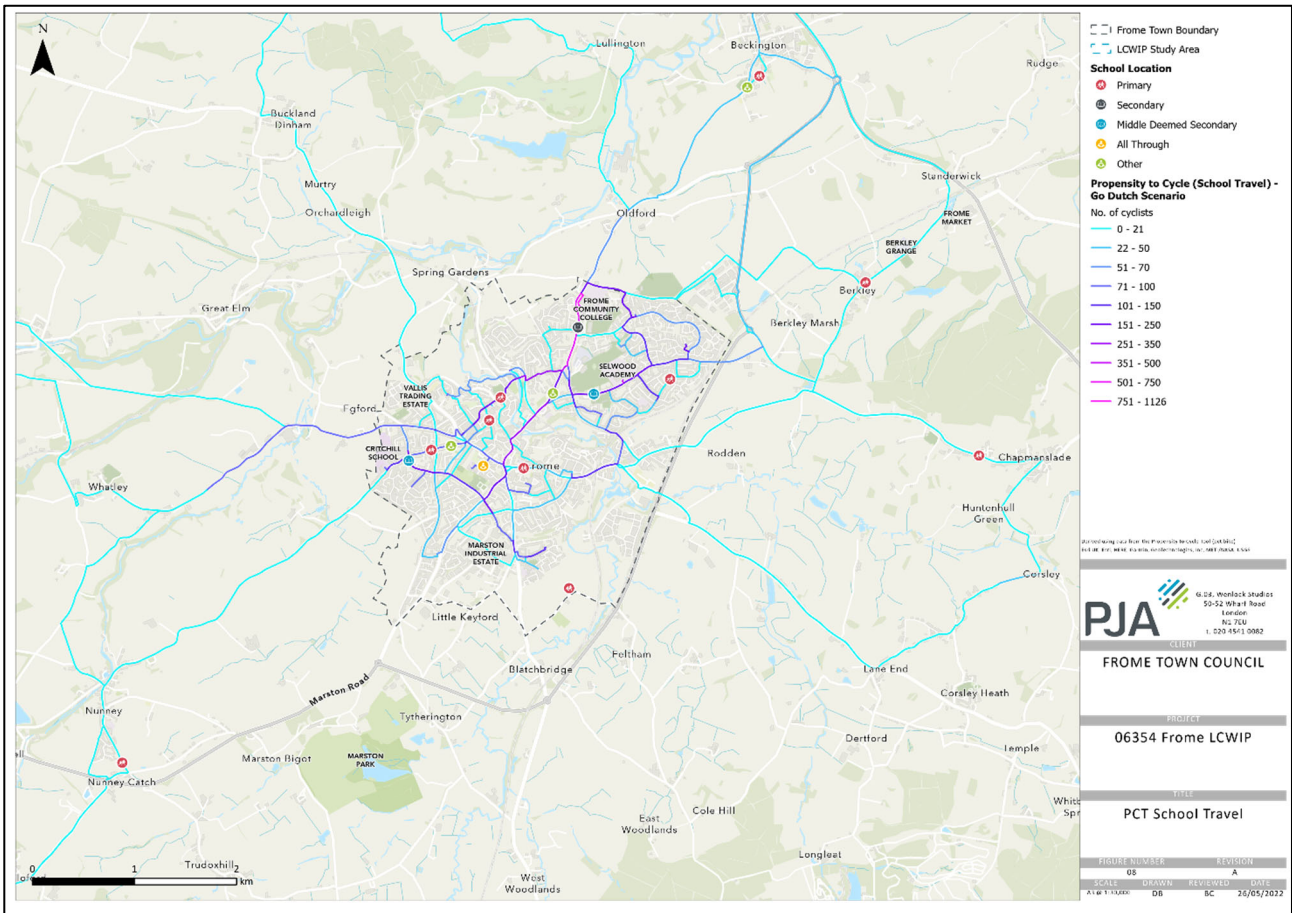


**Figure 5-9: PCT Applied Network**

The PCT tool also provides a school travel scenario using the travel to school results from the 2011 Census. Figure 5-9 presents the school travel results for the 'Go Dutch' scenario (the plan also includes school locations in the Borough). This scenario assumes that there is the same mode share for cycling trips to school as the Netherlands, which is 41%. The plan highlights the location of several clusters of routes which are anticipated to have significant increases in the number of cycling trips to school, including:

- B3090 Bath Road
- B3090 Marketplace and North Parade
- Spring Road

It is evident from the data that the Community College, located in the north of the town, is having a strong influence on the demand for school travel in the town.



**Figure 5-10: PCT School Travel – ‘Go Dutch’ Applied Network**

A limitation of the PCT is its focus on commuting and school trips which tends to produce outputs focussed on key employment and education sites. For the purpose of the LCWIP, the PCT results were used alongside an analysis of non-commuting and leisure trips to enable the development of a network that covers a wide range of trip purposes.

**5.2.2 Strava Data**

To help supplement the PCT results, Strava data was used to provide additional information on trips ‘on foot’ (including walking, running, hiking etc.) and trips ‘on bike’. The Strava data was extracted from the Strava Metro website and is gathered from Strava users recording walking, running or cycling trips on their Strava app.

Strava data is available in batches of three consecutive months, data was therefore obtained for June – August 2021, which represented the three months of data with the highest levels of activity from the previous year. Strava data consists predominantly of leisure and recreational trips, however it also includes commuter trips which generally account for c.5-10% of entries.



By comparing the patterns of ‘on foot’ and ‘cycling’ trips, it is possible to understand where there are similarities and differences in the preferred routes being used in and round Frome.

The June – August 2021 results highlight several alignments where daily cycle trip volumes were higher comparatively to the rest of the town. The distribution of cycle routes is predominantly focused on on-carriageway routes out to the rural areas surrounding Frome, with flows on off-carriageway routes such as the River lower in comparison. The routes with the highest daily cycling flows were as follows:

- A362 Portway (near the railway station)
- Clink Road (heading north-east out of the town)
- Coalash Lane (through Spring Gardens)
- B3090 Bath Road (north to Oldford)
- Feltham Lane (part of NCN 24)

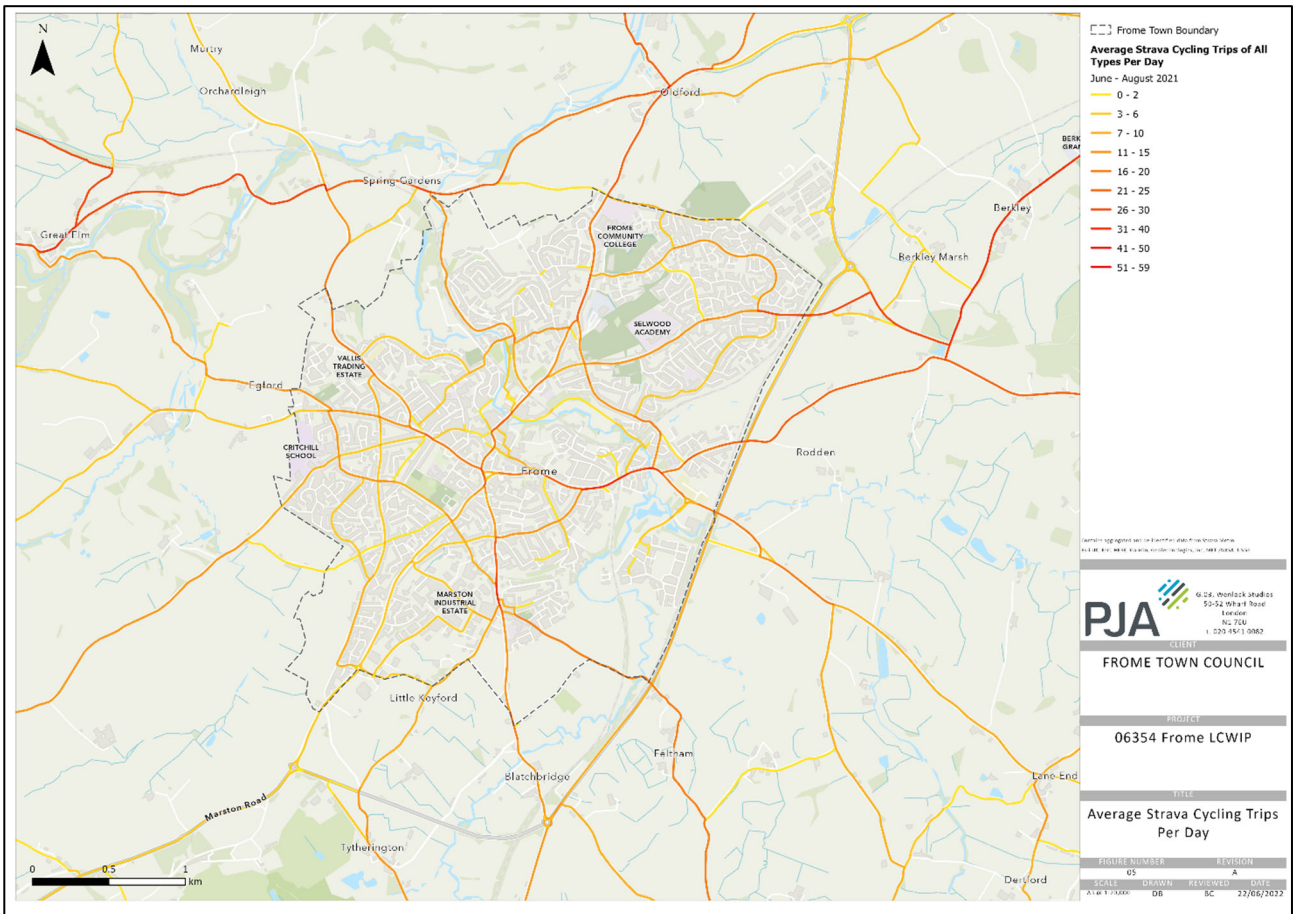


Figure 5-11: Strava Daily Cycling Trips (June – August 2021)







### 5.2.3 'Everyday Trips'

The PCT outputs provided indicative cycling networks based on commuting and school trips, whilst the Strava data is generally focussed on trips for recreation and/or exercise. The purpose of the Desire Line Clustering therefore was to provide an additional layer of analysis that focussed on 'Everyday' cycling trips which would include: leisure and recreation, trips to local centres and amenity trips. Combining the 'Everyday' trips, Strava and PCT outputs provided a comprehensive demand model for developing the LCWIP network. It should be noted that desire lines that were longer than 8km were removed from the analysis for consistency with the LCWIP approach.

Developing the Desire Lines required the identification of all Origins and Destinations within a 5km catchment of Frome town centre. The catchment area was divided into a hexagon grid using 0.25km<sup>2</sup> hexagons.

For the purposes of the analysis, all hexagons which currently contain an LSOA population weighted centroid and/or are anticipated to include >100 residential dwellings in the future were included as Origins. Figure 5-13 shows the identified origin clusters.

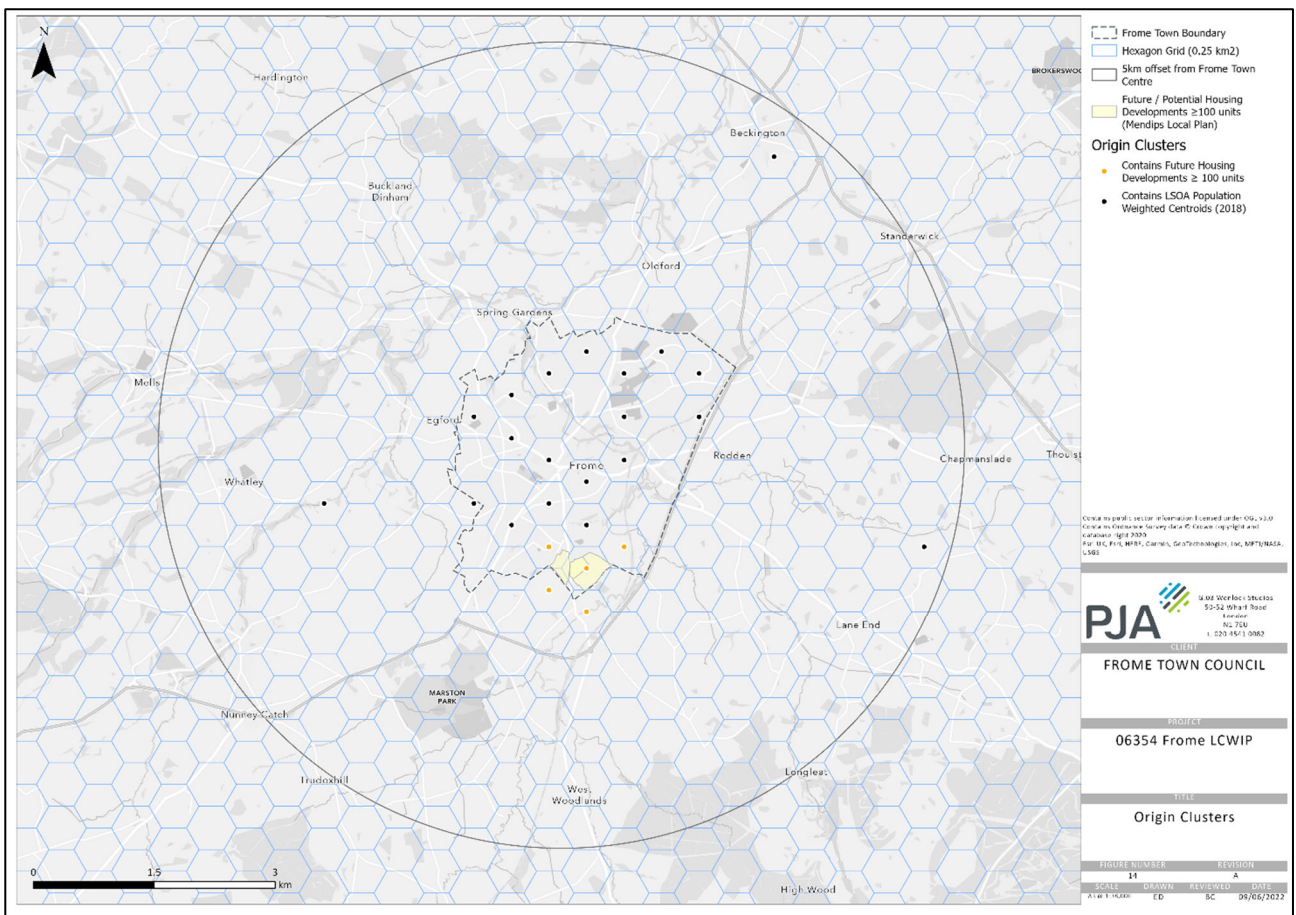
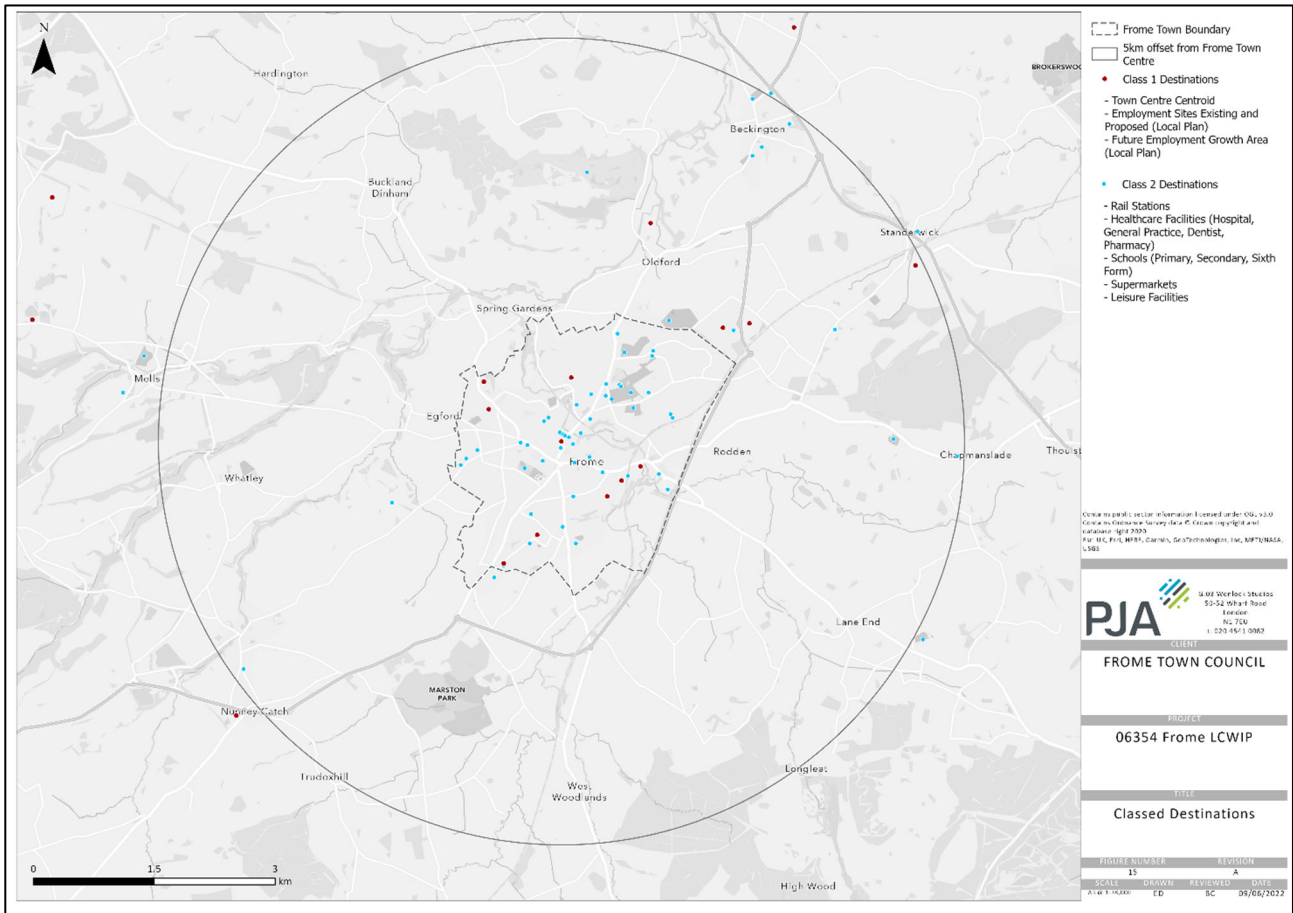


Figure 5-13: Origin Clusters

Having identified the Origins, Destinations were identified based on data provided by Mendip District Council. All destinations were categorised as below:

- Class 1: Town, Village and Local Centres; Key Employment Sites.
- Class 2: Bus Stops, Schools, Railway Stations, Healthcare Facilities, Supermarkets, Leisure Centres and Libraries.



**Figure 5-14: Classed Destinations**

The combined Origin and Destination datasets were used to develop the walking and cycling networks in Stages 3 and 4. The origin-destination analysis provides an important non-commuting dataset which was compared against the Propensity to Cycle Tool (PCT) outputs to provide a comprehensive review of desire lines both within Frome and to surrounding areas.

To determine the key desire lines for Frome’s LCWIP, the spatial relationship between Origin and Destinations was analysed. ‘Everyday’ Origin-Destination desire lines were created from each origin centroid to its nearest Class 2 destination, and then also to all Class 1 destinations in the Study Area



(all desire lines >8km were excluded from the analysis). This was based on the assumption that the Class 1 destinations would generate a higher number of trips and that they are also likely to have a larger catchment area of trips from across the study area, compared to Class 2 destinations which would generate more locally based trips. Figure 5-15 provides an indication of the volume of desire lines that were considered in the development of the LCWIP network.

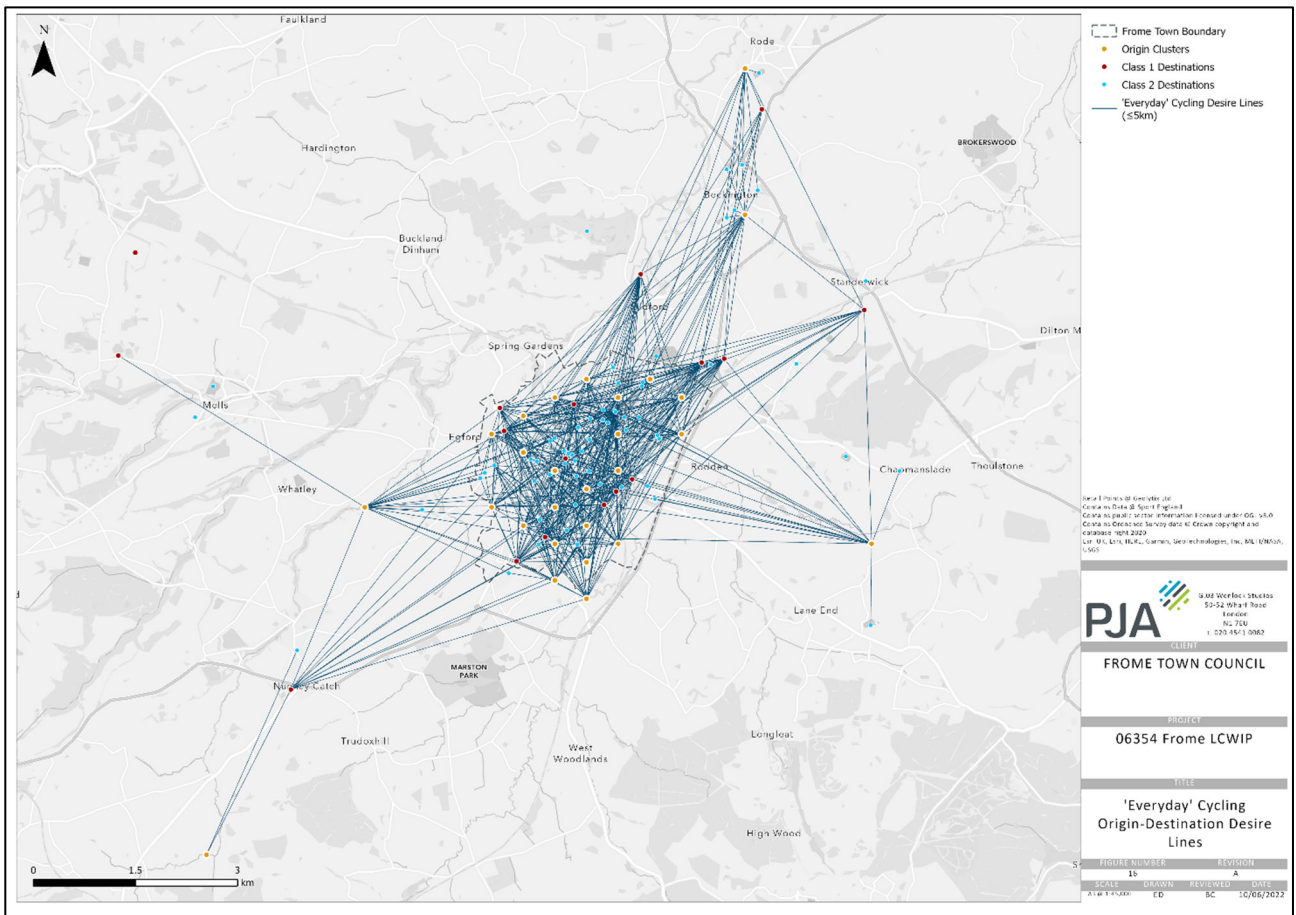
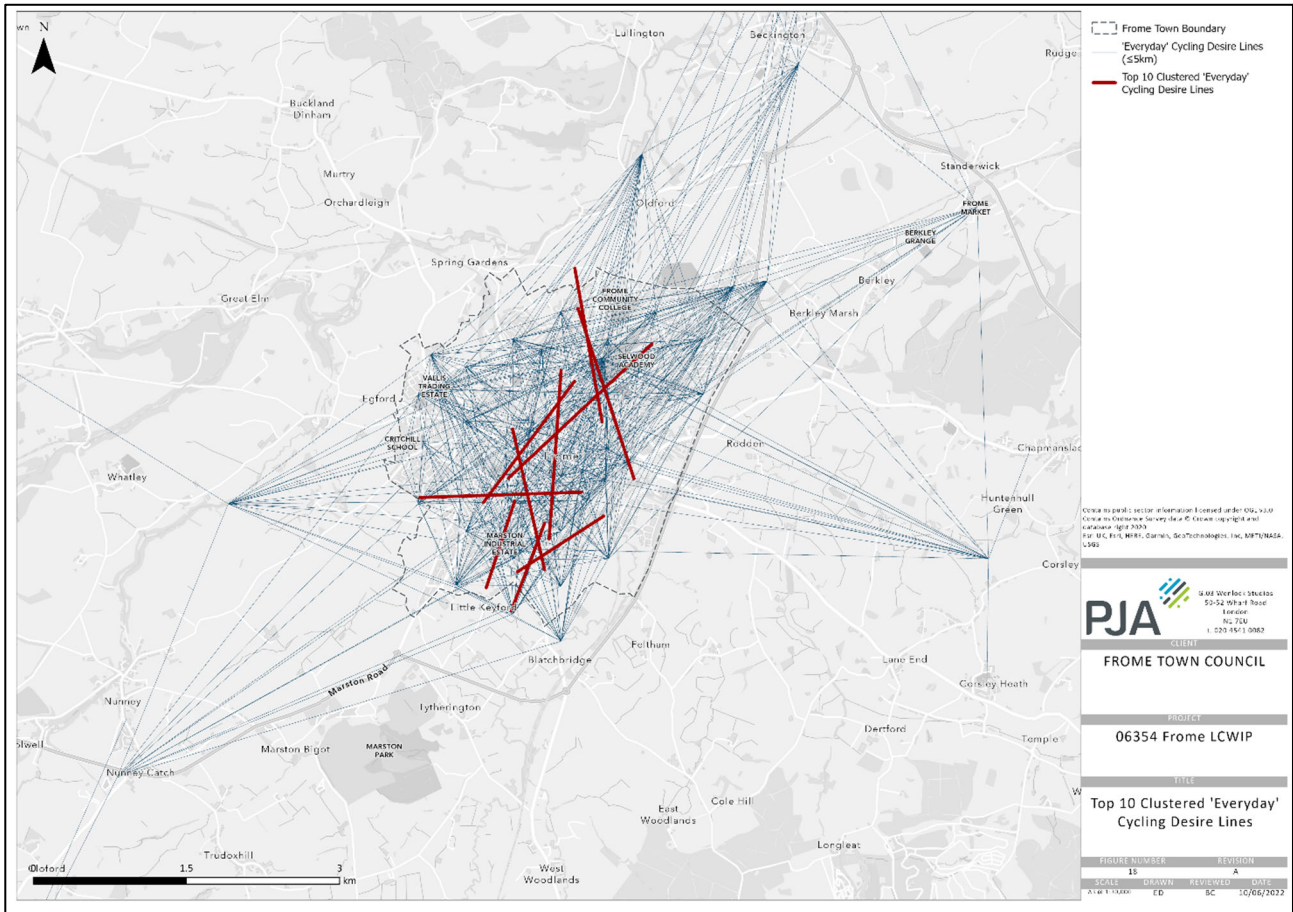


Figure 5-15: Origin – Destination Pairs

Having identified all available desire lines, a “Density Based” clustering analysis was used to cluster the above desire lines into a more refined plan which identified the top 10 desire line clusters. First, all desire lines were converted to centroids. Clusters of desire lines were identified using the Density Based Clustering tool in ArcGIS, which identifies clusters of point features within surrounding noise based on their spatial distribution. Once each cluster had been identified, the clusters of points were matched with the corresponding groups of desire lines and the linear directional mean of each group was identified. The cluster groups were then ranked based on the number of desire lines in each cluster. The top 10 lines on the plan below therefore represent the general alignments which are most likely to generate the highest number of everyday trips.

As can be seen in Figure 5-16, the top 10 everyday desire lines are all located within the town boundary, clustered primarily in the centre of the town. Alignments are generally north-south movements, with the exception of one east to west desire line identified in the south of the town.



**Figure 5-16: Top 10 Desire Line Clusters**

To help compare the results from the PCT, Strava and Everyday Trip analyses, Figure 5-16 was prepared which highlights where the results overlapped. The study area was first split into a grid of hexagons, which were assigned a colour if they contained a certain type of desire line. Hexagons containing a Strava link with high demand were coloured yellow, a top 20 PCT desire line blue, and a top 20 everyday desire line (comprising the top 10 walking and cycling desire lines) green. The hexagons outlined in black are key areas where demand from more than one dataset was identified. The key areas of demand identified on the plan are described in further detail below.

The plan demonstrates that the highest levels of overlap between the three datasets are in the centre of Frome, with some hexagons containing all three types of desire line. This is unsurprising, given that the town centre is home to dense cluster of commercial, employment and also residential land uses. Desire lines are also evident connecting to the “Safer School Streets” area in



the west of Frome, to the Frome Community Hospital, Commerce Park and also from various residential areas within the town.

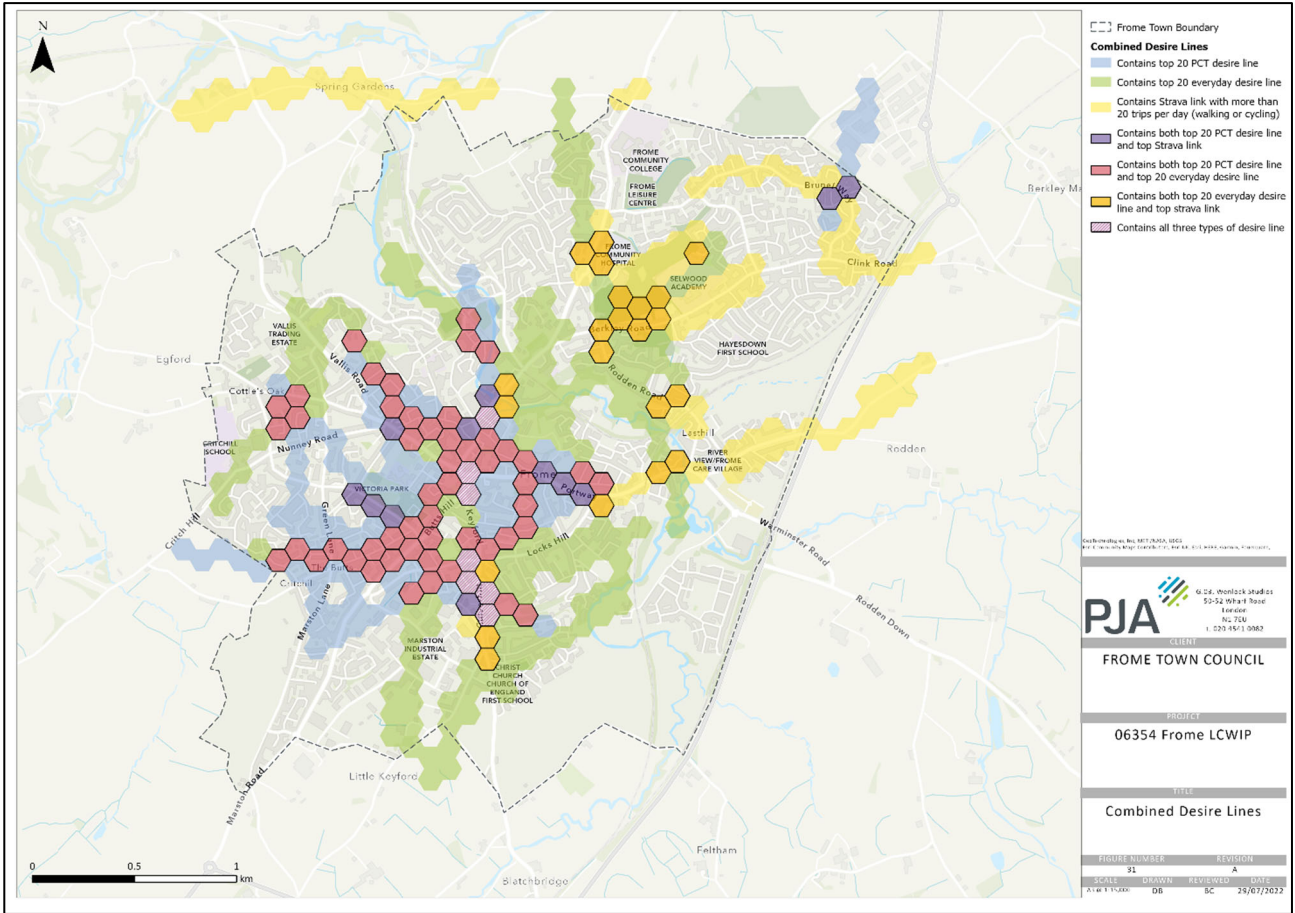


Figure 5-17: Comparison of Everyday Desire Lines, PCT Commuting Desire Lines and Links with High Strava Flows

### 5.3 Consultation

#### 5.3.1 Commonplace Feedback

In 2020, FTC launched the ‘Walk Ride Frome’ project - provided an interactive map using the Commonplace platform. Respondents were able to add pins to areas that they wished to comment on and highlight constraints, issues and opportunities relating to walking, wheeling and riding in Frome. The data provides useful context for the development of the LCWIP and has been a useful validation exercise when preparing the route alignments and design recommendations.

A summary of the feedback has been extracted from Commonplace and is presented in Figure 5-18 below. The plan identifies the 20 locations where the most comments were received. Some of the areas with the most comments include the Gorehedge junction, Nunney Road, the crossing of

Marketplace between Bridge Street and Willow Vale and the crossing of the A361 along Feltham Lane.

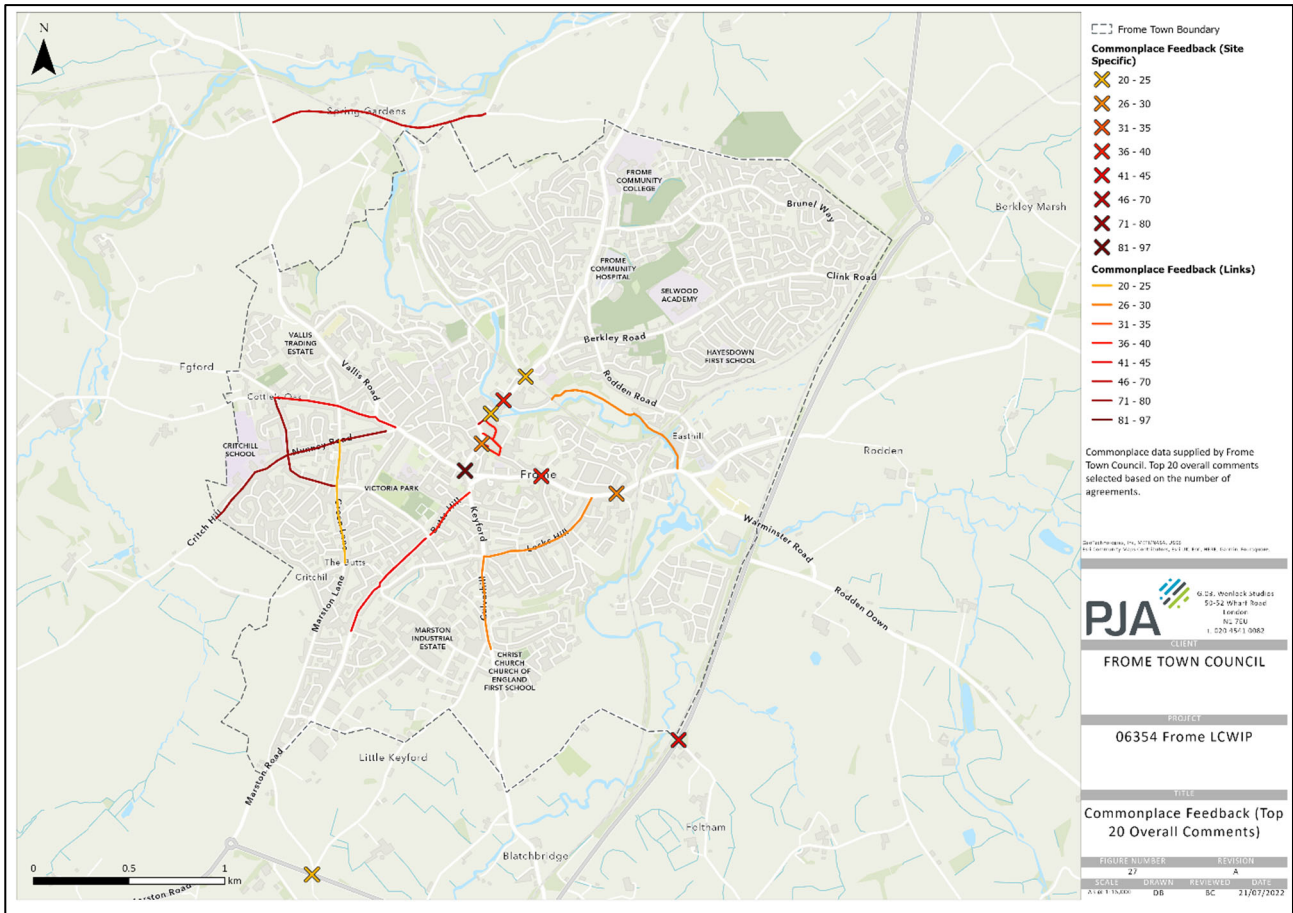


Figure 5-18: Commonplace Feedback

### 5.3.2 LCWIP Network Recommendations

A workshop was held with the LCWIP Working Group to present the findings from Stage 2 and to recommend the LCWIP walking and cycling networks. For the purposes of the network development, the LCWIP methodology recommends developing ‘routes’ which form the basis of the auditing in Stages 3 and 4. The network therefore represent indicative routes which might be followed for walking and cycling, however they are not intended to be routes that will necessarily be followed from beginning to end. A mixture of route types was selected, ranging from main routes into the town centre, routes through residential areas, and routes that provided onward connectivity to the development sites on the edge of the town.

To inform this workshop, the following plan in Figure 5-19 was produced. This uses the outputs from Stage 1 and Stage 2, particularly the combined plan in Figure 5-19 to identify “Main Corridors”



where there was the highest potential demand for walking and cycling routes. These corridors were shown as straight lines for the purposes of discussion.

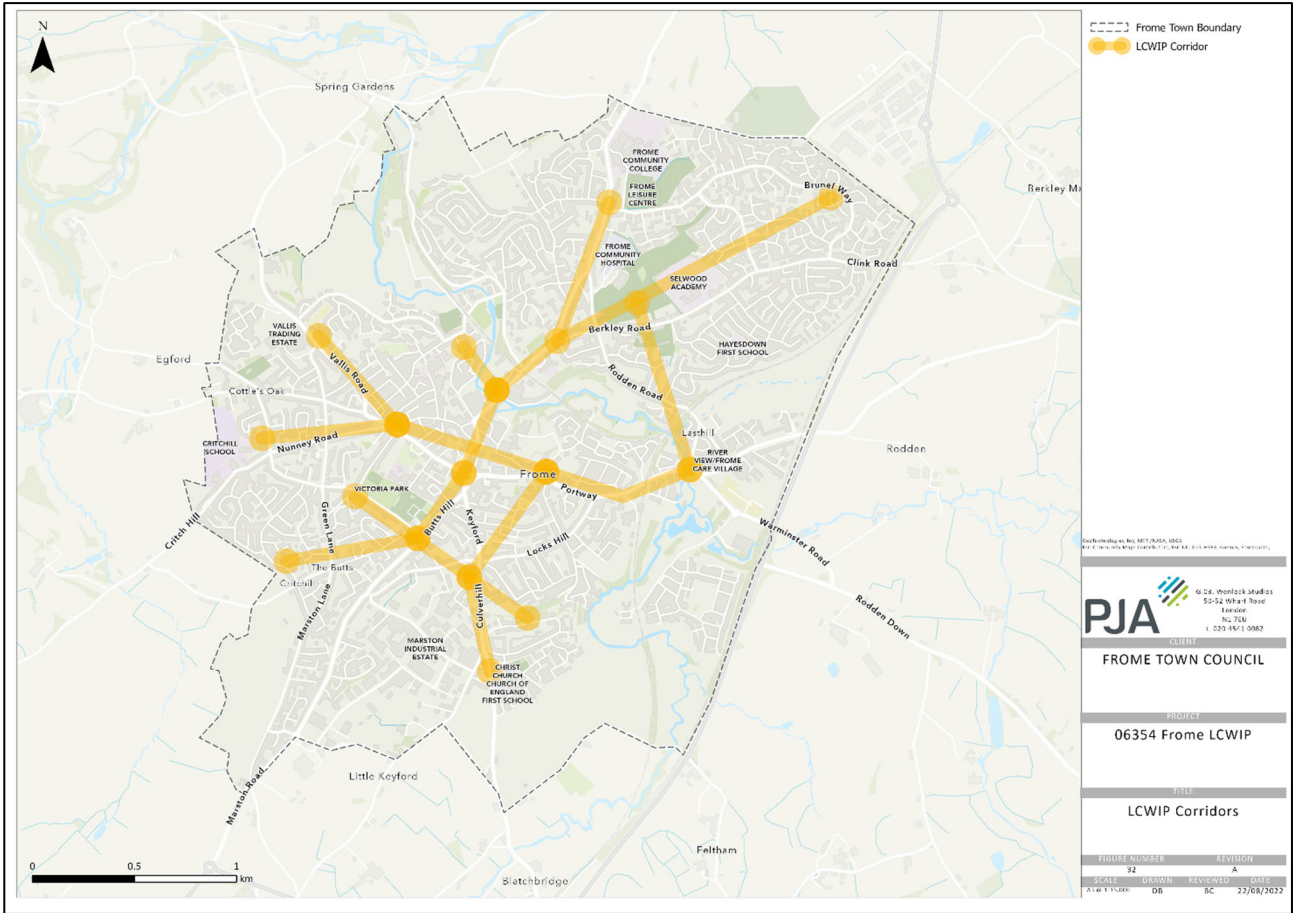


Figure 5-19: Main Corridors identified through Stage 1 + Stage 2 analysis

The recommended LCWIP walking and cycling routes overlapped with each other at several points in the town and a ‘whole street’ approach was therefore adopted. It was felt this would provide the most effective means to respond to conditions for both walking and cycling would be the most beneficial for the LCWIP where routes overlapped.





## 6 LCWIP Stage 3 and 4: Network Planning for Walking and Cycling





## 6.1 Walking and Cycling Network

Stage 3 used the outputs from Stage 2 to develop a preferred walking and cycling network for site auditing. As previously described, given the compact scale of Frome, the routes identified were treated as both walking and cycling routes.

Frome town centre contains the highest density of walking and cycling destinations, and much of the town within a 20-minute walk of the town centre. As such, the entirety of Frome has been considered as being within a “Core Walking Zone”, as defined by the LCWIP guidance.

The site audit results were then informed to develop a programme of infrastructure improvements, benefitting both walking and cycling. The recommended LCWIP network consisted of ten routes as shown in Figure 6-1.

This network was developed with the LCWIP working group who provided feedback on the route alignments and provided recommendations for additional routes too. Following feedback from the working group and FTC, Route 10 which runs along Marston Lane and Green Lane was added as an LCWIP route. Although a specific desire line was not identified along this route by the baseline analysis, this route was deemed appropriate for inclusion given that it provides an important connection to the Selwood Garden Community site and Marston Industrial Estate.

It has also been ensured that the LCWIP complements existing initiatives in the town, such as the northern “Missing Link”, the Safer School Streets zone and the Adderwell Bridge scheme.

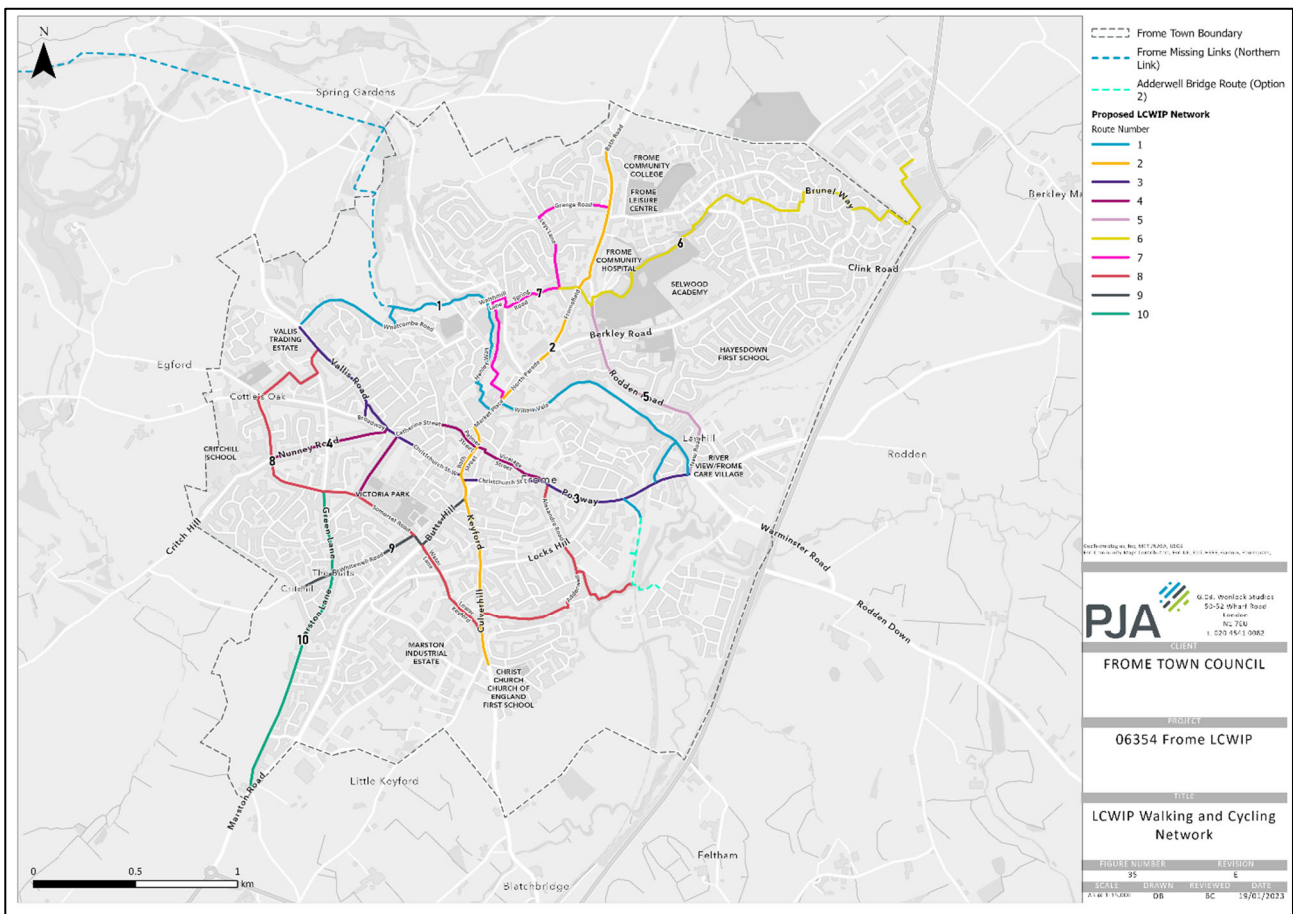


Figure 6-1: Map of Recommended LCWIP Network

## 6.2 Auditing Tools

### 6.2.1 Route Selection Tool (RST)

Each route was audited using the “Route Selection Tool” as set out in the LCWIP guidance. 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 the six important criteria that determine the quality of a cycling 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 are 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 a given cycle route where the section shares similar characteristics (max 1km in length). Routes are scored down where the gradient exceeds 5% for at least 50m.
- **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 critical junction design issues including: vehicle flows, protection from vehicular traffic, wide junction splays, and junction geometries

#### 6.2.2 Walking Route Audit Tool (WRAT)

Having confirmed the LCWIP network, each route was then audited on site using the Walking Route Audit Tool (WRAT) methodology set out in the DfT LCWIP process guidance. Walking audits were undertaken over a two-way period in September 2022 by PJA, with the support of Frome Town Council and members of the LCWIP Working Group.

The Walking Route Audit Tool (WRAT) 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:** 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



## 6.3 Auditing Results

### RST Audit Results

#### 6.3.1 Summary of RST Results by Route

The RST results across the seven routes ranged from 50% (Route 2) to 81% (Route 9), as shown in Figure 6-2. There was a high level of variance between the scores, indicating that cycling level of service in Frome is mixed. Unsurprisingly, the LCWIP routes following the main vehicular routes through the town (Route 2 and Route 3) were the two lowest scoring routes. The highest scoring routes (Route 9 and Route 6) generally followed alignments through quieter residential areas, or in the case of Route 6, made use of an existing network of traffic-free routes.

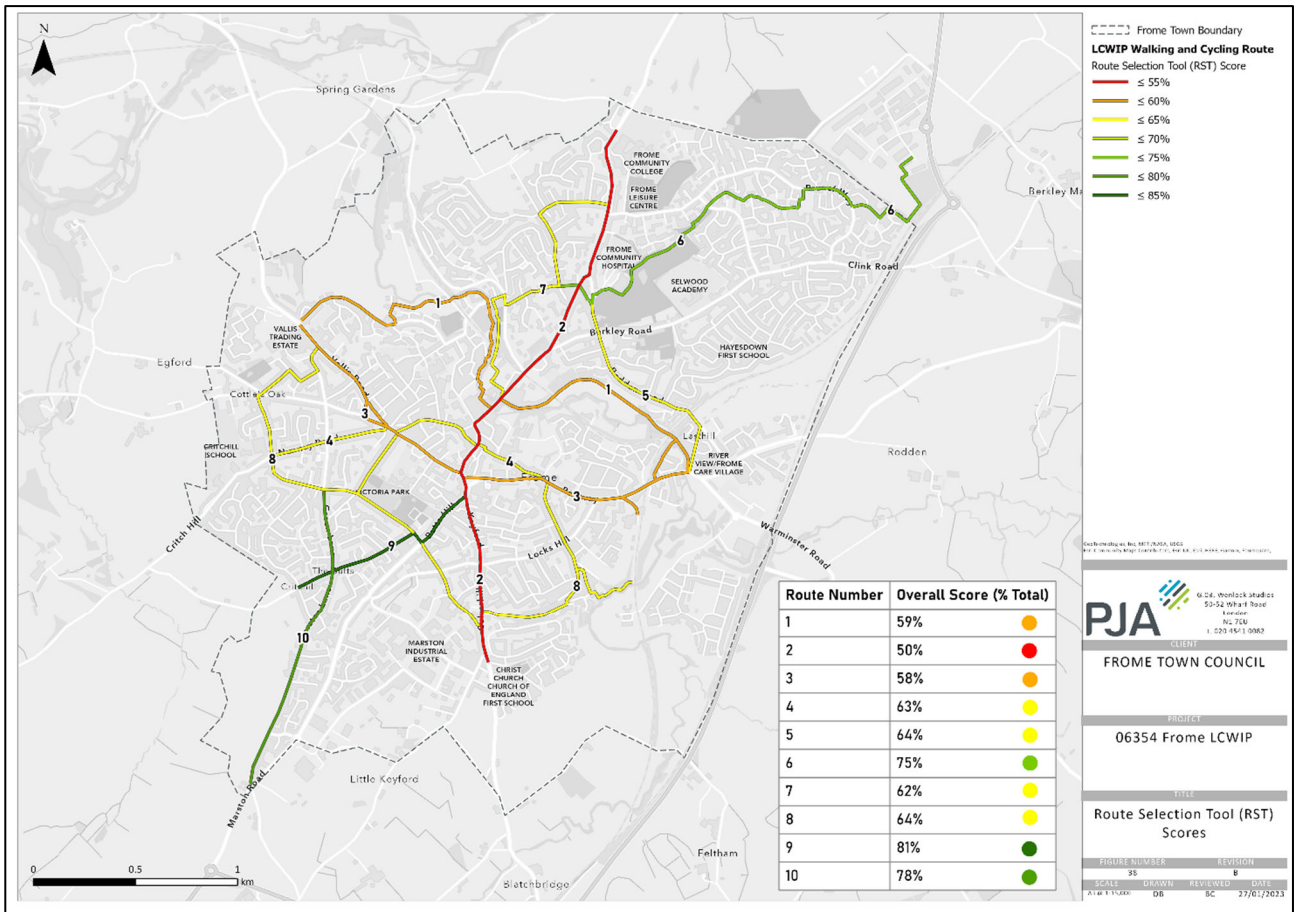


Figure 6-2: Route Selection Tool (RST) Overall Route Scores

The critical junctions identified through the RST audits have been presented in Figure 6-3. Junctions which failed against the greatest number of critical junction categories included the Gorehedge junction, Portway / Locks Hill, Vallis Road / Broadway and Broadway / Egford Lane / Oakfield Road.

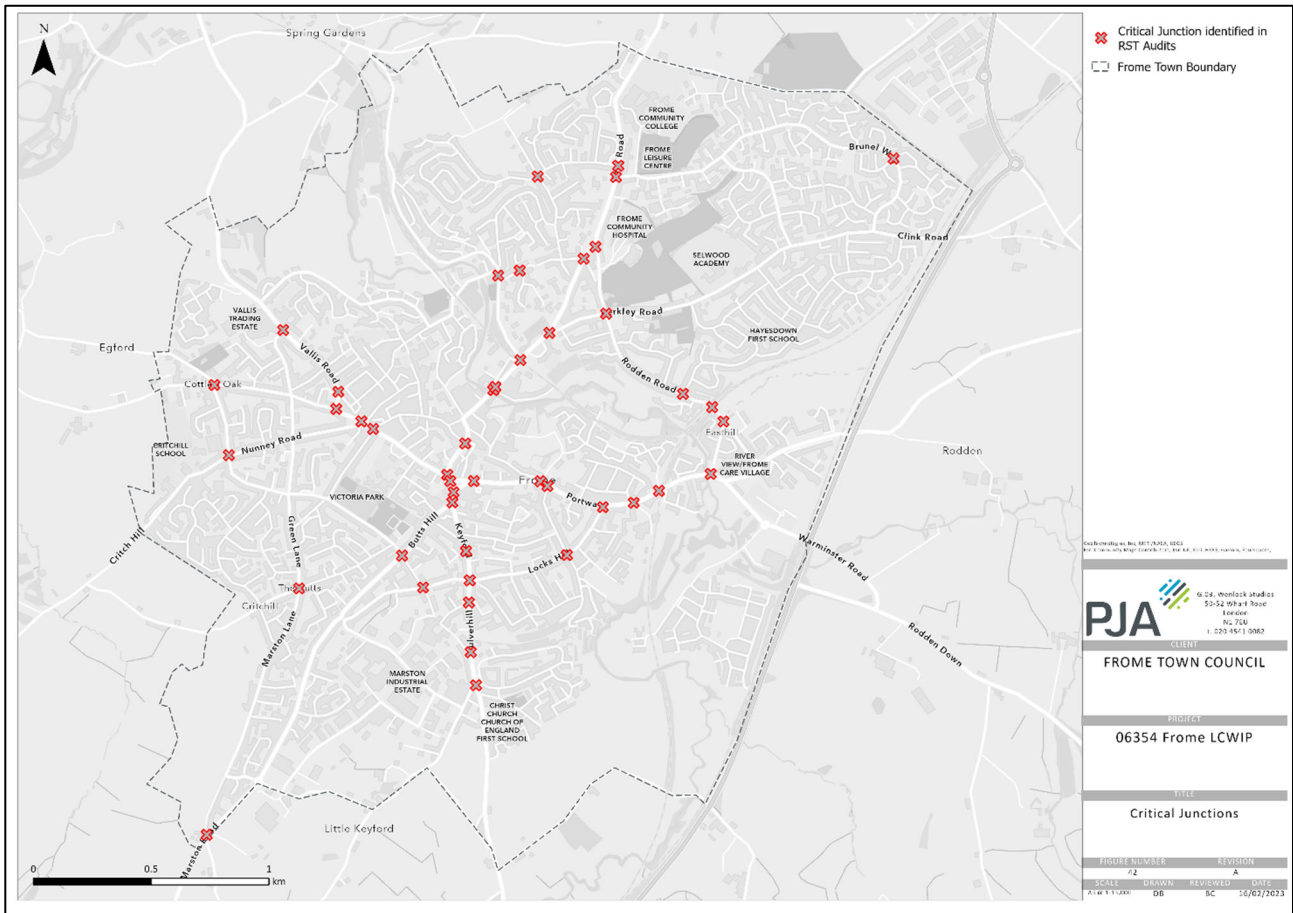


Figure 6-3: Critical Junctions identified in RST Audits

The Route Selection Tool consists of five scoring criteria (Directness, Gradient, Comfort, Connectivity, Safety) and the Critical Junctions assessment. The average overall RST score across the LCWIP routes was 65%, and the average scores for each of the five criteria are presented below in Table 6-1.

Table 6-1: RST Summary Table

Criteria	Highest Score (%)	Lowest Score (%)	Average Score (%)
Directness	100%	11%	78%
Gradient	97%	25%	64%
Safety	67%	24%	51%
Connectivity	100%	71%	87%
Comfort	100%	0%	47%

The average criteria score for **Connectivity** (87%) was the highest amongst the RST’s scoring criteria. This shows that many of the proposed LCWIP routes make use of a dense street network within Frome and demonstrate the permeability of the town for walking and cycling. The score for



**Directness** (78%) is also reasonably high and this suggests that the proposed LCWIP routes are usually following direct alignments compared to equivalent vehicle routes, and in some cases the cycle routes are shorter.

The average score for **Comfort** was 47%, however scores ranged between 0% and 100% across Frome which suggests that there was a large variance in scores against this criterion. The low average score of 47% indicates that the lack of protected cycling infrastructure along routes with high levels of motor traffic in Frome is contributing to low Comfort results. This results in cyclists often having to mix with general traffic flows of >2500 vehicles per day which automatically scores a zero score in the Comfort criteria. It should also be noted that much of the dedicated cycling infrastructure within the town, particularly the traffic-free routes, comprises two-way shared use facilities where cyclists and pedestrians mix, which also results in reduced scores for the Comfort criteria.

The **Safety** criteria assesses average vehicle speeds and flows and whether cyclists are protected from vehicular traffic. It is therefore unsurprising that the proposed LCWIP cycle routes in Frome also scored fairly low for this criterion (51%), which corresponds with the low average score for **Comfort** (47%), although not to the same degree. As well as demonstrating that cyclists are often required to mix with high volumes of motor traffic, the lower than average score for safety reflects the fact that there are many streets in Frome where reducing the speed limit from 30mph would improve conditions for cyclists. Moreover, some sections of traffic-free routes within the town are unlit and lack passive surveillance, which reduces users' perception of safety, particularly outside of daylight hours/in winter months.



**Figure 6-4: Cyclist mixing with high traffic volumes (Gorehedge, left) and cyclists mixing with pedestrians on shared-use path (River Path, right)**

The **Critical Junctions** factor assessed all junctions against nine different criteria, including vehicle speeds and volumes, junction geometries and visibility. The assessment records the number of junctions along a route which satisfy at least one of the criteria.



**Figure 6-5: Examples of cyclists navigating a busy roundabout (Portway/Vicarage Street, left) and a wide flared side-road junction (Station Approach, right)**

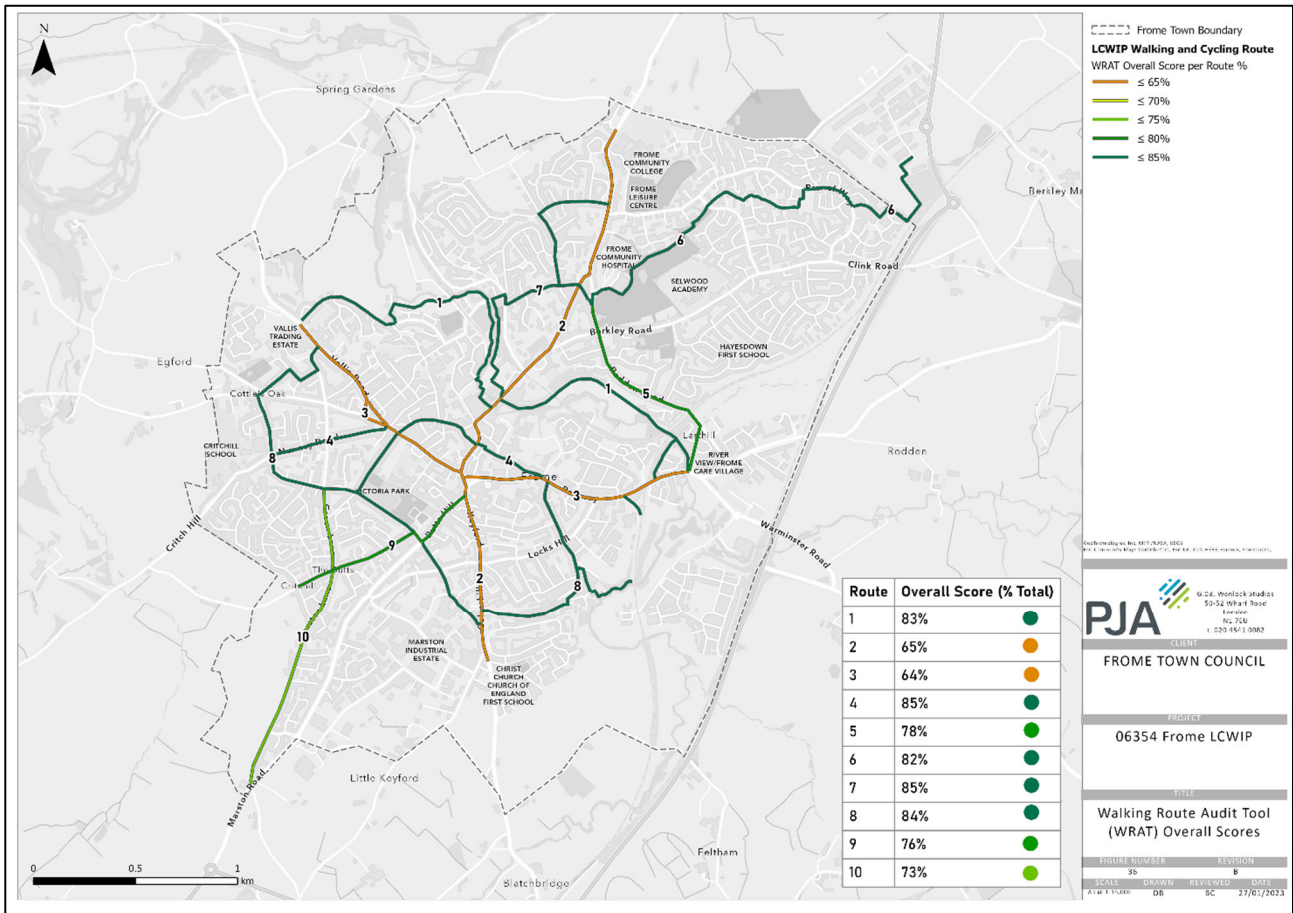
The results from the Critical Junction element of the RST were closely related to the volume and speeds of vehicular traffic at junctions, which corresponds with the results of the RST audits. The majority of these junctions were located along the primary vehicular routes through the town, namely Portway, Broadway, Vallis Road, Christchurch Street and Bath Road. The audits also highlighted the many side-road junctions in Frome with wide/flared junction entries, and also several junctions where the quality and condition of surfacing materials, which were frequently poor.

## **WRAT Results**

### 6.3.2 Summary of WRAT Results by Route

Figure 6-3 summarises the results from the on-site assessments, focusing on the overall score of each route based on how it scored against the 20 WRAT scoring factors. This provides a useful indication of particular locations on Frome’s walking network where improvements are required, or conversely where there are existing examples of high-quality walking environments.





**Figure 6-6: WRAT Overall Scores by Route**

The WRAT guidance recommends that the aim should be for walking routes to achieve a minimum overall score of 70%.

The results in Figure 6-4 demonstrate that the proposed LCWIP routes generally scored well in the WRAT assessments, with seven out of the nine routes scoring higher than the recommended 70% benchmark score. This suggests that Frome’s walking network is generally to a high, or satisfactory quality. There were two routes that scored below 70% (Routes 2 and 3). Again, this is unsurprising given these two routes follow roads that carry a high volume of vehicular traffic, and also navigate a number of busy junctions.



Figure 6-7: Members of the LCWIP Working Group supported the WRAT site audits

Figure 6-5 shows the WRAT score for each section of each LCWIP route. This allows us to identify particular strong points of the walking network, or where there may be localised issues.

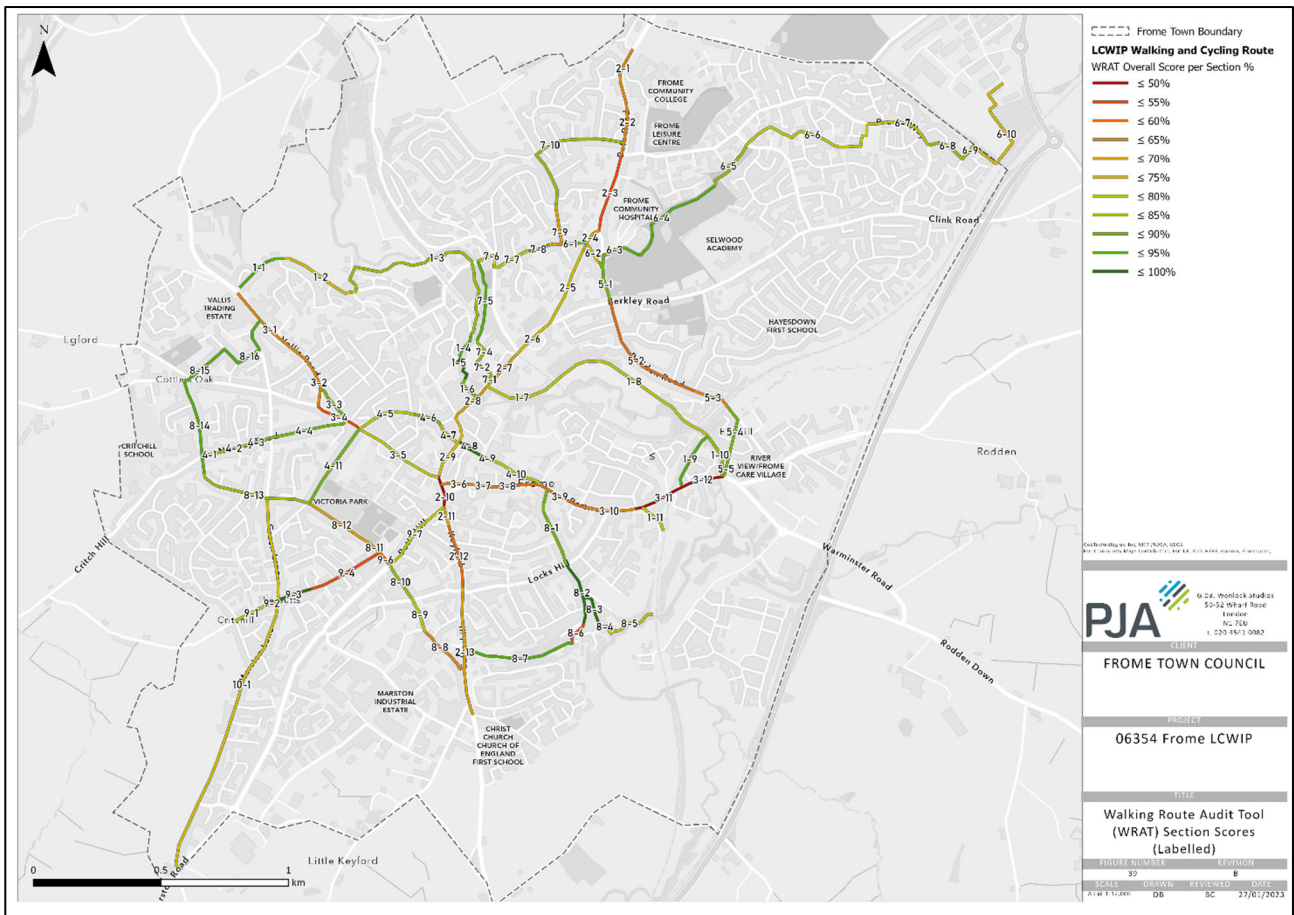


Figure 6-8: WRAT Overall Scores by Section

Figure 6-7 demonstrates that the routes with the lowest scores are generally concentrated on routes alongside busier roads, where there is less separation between pedestrians and motor



traffic. In particular, sections along Portway, Gorehedge, Bath Road and Rodden Road score low - generally below 60%. Low scores were also recorded along Whitewell Road, which although lightly trafficked, was a particularly prominent example of “missing footways” within Frome.

The highest scoring sections were recorded either along traffic-free routes such as the River Path or the recreation ground east of Rodden Road. Routes through quieter residential areas also tended to score higher – for instance the majority of links through the proposed Safer School Streets area scored in excess of 80%.

### 6.3.3 Summary of WRAT Results by Theme

This section summarises the results from the on-site assessments focussing particularly on the performance of the walking routes against the 20 WRAT scoring factors. Analysis of the factors’ results provides a useful indication of the key strengths and weaknesses of Frome’s walking network, and helps to identify the areas for improvement.

**Table 6-2: Summary of WRAT Results by Theme**

Theme	Criteria	Average score (out of 2)	Average score (%)
Attractiveness	Maintenance	1.65	82%
	Fear of crime	1.61	80%
	Traffic noise and pollution	1.52	76%
Comfort	Condition	1.34	67%
	Footway width	1.22	61%
	Width on staggered crossings / pedestrian islands/refuges	1.85	92%
	Footway parking	1.73	87%
	Gradient	1.69	85%
Directness	Footway provision	1.46	73%
	Location of crossings in relation to desire lines	1.46	73%
	Gaps in traffic (where no controlled crossings present or if likely to cross outside of controlled crossing)	1.54	77%
	Impact of controlled crossings on journey time	1.81	91%
	Green man time	1.80	90%
Safety	Traffic volume	1.45	73%
	Traffic speed	1.58	79%
	Visibility	1.65	82%
Coherence	Coherence	0.93	46%

The above table illustrates that many of the factors scored highly in Frome, with only three factors scoring below 70%. Some of the highest scoring factors were related to crossing facilities (Impact of Controlled Crossings on Journey Time (91%), Green Man Time (90%) and Width on Staggered Crossings/Pedestrian Islands/Refuges (92%)). However, given the limited provision of controlled crossings in Frome, these scores are probably not the best reflection of the town’s walking network.



Moreover, there were many locations within Frome where crossings were either not provided, or not provided along key desire lines, and therefore improvement of crossing provision forms a key component of many of the design recommendations in this LCWIP.

Other factors that achieved particularly high scores were Footway Parking (87%), Maintenance (82%), Gradient (85%), Visibility (82%) and Fear of Crime (80%). Notwithstanding this, it should be noted that there were locations within the town where these factors scored low, for instance footway parking was prevalent in some areas of the town despite this factor scoring well on average.

The images below show examples from Frome of a clear, well-maintained footway of sufficient width to allow two pedestrians to comfortably pass one another, and an example of a staggered pedestrian crossing with sufficient width to enable two-way pedestrian crossing.



**Figure 6-9: Example clear and sufficiently wide footway (Christchurch Street East, left) and a staggered pedestrian crossing on Culverhill (right)**

The lowest scoring factors were: Coherence (46%), Footway Width (61%) and Condition (67%). The low scores related to Coherence and Footway Width are particularly important as these factors suggest the basic functionality of the walking network is poor in places. Narrow footways combined with inconsistent provision of tactile information and dropped kerbs is ultimately not conducive to creating a comfortable and consistent walking network. The score for Condition was below 70% on average, which demonstrates that there are several locations across the town which would benefit from resurfacing to ensure that footways are smooth and free of trip hazards.



**Figure 6-10: Example of flared side-road junction with no tactile information (left) and example of narrow and abruptly ending footway on a busy road (right)**

## 6.4 Design Recommendations

The key issues highlighted in the walking and cycling audits and in the site visits related to comfort (footway and cycleway widths, exposure to vehicular traffic), safety (location of crossings, speed and volume of vehicular traffic, isolation and perception of safety) and coherence (dropped kerb and provision of tactile information). This section presents recommendations for improving conditions for walking and cycling based on the audit results, observations from site visits and feedback on local issues experienced by the working group.

### 6.4.1 Junctions and Crossings

The RST audits scored poorly on the Critical Junctions assessments due to the lack of protected facilities at the main junctions in the town. The recommendation at major junctions is to incorporate dedicated cycle crossing facilities which protect cyclists from vehicular traffic. In some locations, such as the Gorehedge / A363 / B3090 junction, a redesign of the junction would be required in order to ensure that pedestrian and cycling provision is improved to a sufficient standard. As well as improving facilities at major junctions, parallel pedestrian + cycle crossings could be considered in quieter locations.

The WRAT assessments reviewed the 'Directness' of walking routes and the scores for these assessments were generally acceptable, however there were several important locations in the town where crossings were either missing or not on the natural desire line, for example: A362 / B3090 Bath Street, Portway / Locks Hill and Portway / Great Western Street.

Similar to the recommendations for cycle crossings, the LCWIP will need to consider improving the provision of controlled crossing points on the main walking routes particularly around the town centre and at key junctions along the main vehicular routes through the town. This will help to enhance the continuity of key walking routes and prioritise the walking network over vehicular



traffic. The below images provide examples of where the streetscape design embeds the natural pedestrian desire line over the carriageway.



**Figure 6-11: Richmond Road Parallel Crossing (Left) and Lea Bridge Road, Parallel Ped/Cycle Crossing (Right)**

#### 6.4.2 Side-Road Junctions

One recurring issue highlighted in both the WRAT and RST audits, was the presence of wide, flared side-road junctions within Frome. The wide junction radii result in an increased crossing distance for pedestrians and cyclists, while the sweeping bends also encouraging higher vehicle speeds on the junction approach.

It is therefore recommended to focus on improving side-road junctions along the LCWIP routes. Improvements should include tightening up the junction radii to reduce crossing distance and reduce vehicle speeds.

It should also be ensured that dropped kerbs and tactile information is provided as a minimum at each side-road junction. Along routes with a higher footfall, it should be investigated whether continuous footway surfacing can be provided, in combination with raised table crossings. These measures enforce pedestrian priority in line with the Highway Code.





**Figure 6-12: Devon Gardens Raised Table Crossing (left), Sans Walk Informal Crossing (right)**

6.4.3 Protected Cycle Facilities

The RST audits highlighted Comfort and Safety as the lowest scoring factors, indicating that cyclists in Frome are often required to mix with motor traffic, with limited protection.

Frome’s historic streetscape means that there is very limited scope for segregated cycle facilities through the town, owing to narrow carriageway widths and highway boundary constraints. As such, improvements along strategic routes through the town should focus on corridor-wide improvements which aim to increase the overall conditions for walking and cycling. Alternative solutions such as light segregation might also be appropriate in some locations.

Corridor wide schemes should focus on reduction of vehicle speeds through 20mph speed limits, treatment of side-road junctions included tightened geometry, centre-line removal, footway widening where feasible and improved crossing facilities to reduce the severance effect of major roads through the town. To complement this, advisory cycle lanes may also be considered alongside these measures, ensuring a minimum width of 2m in line with LTN 1/20 (or 1.5m as the absolute minimum in more constrained locations).

The porous nature of the town also means that there are often quieter alternatives to using the major roads through the town. Wayfinding solutions would therefore help to direct less confident cyclists onto quieter routes.



**Figure 6-13: Wide ‘Dutch Style’ advisory cycle Lanes Magdalen Bridge, Oxford (left) and light segregation on Royal College Street, Camden (right)**

6.4.4 Footway Provision

The WRAT audits highlighted a number of locations in the town where footways were narrow, or in some cases not provided at all.

It is therefore recommended that footways could be brought up to a satisfactory provision, or enhanced by: widening to 2m width where feasible, removing street clutter, prohibiting footway parking, providing recessed loading/parking bays to enable local footway widening and resurfacing footways to ensure they are level and free of trip hazards or ponding.

Footway improvements should be implemented alongside public realm improvements, in order to create a more desirable walking environment. This could involve incorporating SuDS (Sustainable Drainage Systems) alongside footways to create a greener environment and provide drainage solutions where footway ponding occurs.

In the town centre, it is particularly important that footway clutter is reduced so that adequate footway width is maintained. This issue was particularly prevalent in the town centre, where A-boards and cluttered footway widths forced users onto the carriageway.

As noted above, there were many locations in the town where footways were missing, or abruptly ended, leaving pedestrians stranded on one side of the carriageway without crossing provision. In these locations, it should be investigated whether new sections of footway can be provided to ensure a continuous provision. Where this isn't possible, it should be ensured that crossing points are provided to the opposite footway, or on-carriageway solutions could be explored, such as advisory footway markings on carriageway, or over-runnable footways.



**Figure 6-14: Example of a recessed loading/parking (Clapham Old Town, left) and example of clear footway space incorporating SuDS (Crossway, London, left)**

#### 6.4.5 Low-Traffic Alternatives

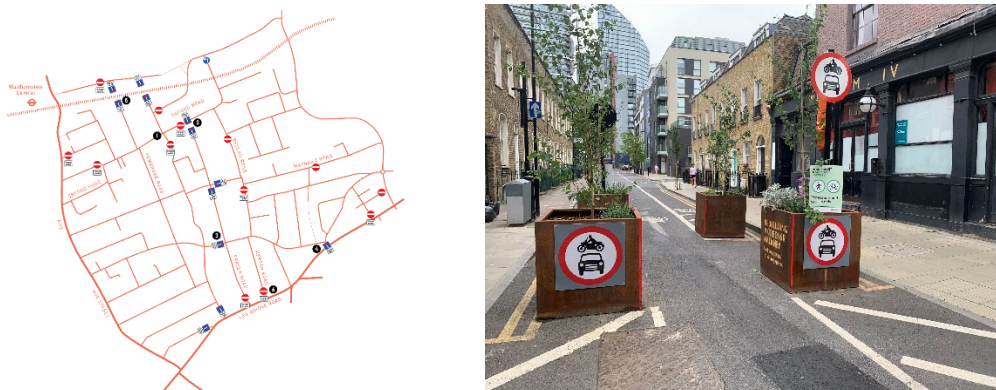
The Fflow analysis highlighted a number of neighbourhoods in Frome which are currently prone to higher proportions of through-traffic. To address these issues, 'Low Traffic' arrangements are an increasingly popular tool for reducing flows of vehicular traffic which in turn enables area-wide improvements to walking facilities and cycling facilities. 'Modal filters' are used to remove vehicle



access whilst retaining access for all other users. This approach significantly reduces volumes of vehicular traffic and therefore improves local conditions for cycling. Typically, modal filters are enforced using bollards, ANPR cameras, planters or even outdoor seating to physically prevent vehicle access.

The below images help illustrate that modal filters already exist in Frome (including Spring Lane, Lower Keyford, Marston Lane and Rodden Road), and therefore there is precedent for these types of interventions.

The development of low-traffic environments requires extensive data collection and stakeholder engagement to ensure that proposals do not adversely affect streets in surrounding areas and to maximise the benefits beyond focussing only on traffic flows. Creating a series of low-traffic environments can help to increase network coverage at a lower cost than installing protected facilities. LTNs also have useful benefits for public realm, as they free up public space which can be re-purposed to provide pocket parks and improved public realm, contributing to greener neighbourhoods within the town. Frome's Safer School Streets programme will act as a lite-test of the low-traffic concept with general access for through-traffic being reduced by the proposed scheme for short periods at either end of the school day.



**Figure 6-15: Example 'Low Traffic Neighbourhood layout (Walthamstow Village, left) and modal filter using planters (Micawber Street, right)**

Should the Safer School Streets scheme be successful, it would provide an opportunity to build on these improvements and roll out similar restrictions on motor traffic in adjoining neighbourhoods.



**Figure 6-16: Examples of existing modal filters in Frome (Spring Lane, left and Lower Keyford, right)**

The LCWIP also recommends investigating the role of traffic in Frome Town Centre. During each site visit, vehicles idling and footway parking was noted on Catherine Hill and Palmer Street, reducing accessibility for pedestrians. On a wider scale, the volume of motor traffic along Marketplace creates severance within the town centre and severs a key pedestrian desire line between Catherine Hill and Cheap Street.

It should therefore be considered whether motor traffic along Marketplace could be restricted, for instance through the implementation of a bus gate. As part of this, the role of town centre car parking would need to be reviewed in detail.

#### 6.4.6 Traffic-Free Routes

There are a number of existing traffic-free routes in the town. Although many of these are already provided to a good standard, there are additional improvements that could be implemented to maximise the usability of these routes.

The majority of traffic-free routes in Frome are shared-use. It should therefore be ensured that a minimum width of 3m is achieved, where feasible, to ensure no conflict between pedestrians and cyclists. Given the shared-use nature of these routes, it should also be ensured that appropriate signage is provided to highlight the shared nature of the route and enforce pedestrian priority and reduce the speed of cyclists. One way in which this could be done is to provide prominent surface markings along the route, as per the example below, left. A key example in Frome where these improvements should be implemented is the shared-use path through Rodden Meadow.



**Figure 6-17: London Fields Pedestrian Priority (left), Swinton Greenway, Salford (right)**

It should also be ensured that suitable crossing provision is provided where traffic-free routes bisect roads – for instance where the river path crosses Welshmill Lane, or the crossing between Bridge Street and Willow Vale which facilitates the traffic-free route following the River Frome.

Also important to address is the transition onto traffic-free routes. At present, many traffic free routes are inaccessible to some due to metal guard railing and bollards. As part of the LCWIP, the removal or reconfiguration of bollards should be looked at to ensure that all users (such as wheelchair users and cargo bikes) are able to access the towns network of traffic-free routes.

Finally, much of the traffic-free network in Frome is unlit and lacks passive surveillance at present. This limits the usability of these routes and reduces perception of safety. Therefore, in order to improve the year-round usability of routes, lighting should be provided where feasible. Lighting solutions which reduce the impact on wildlife could be considered such as sensor operated lighting, low level lighting on bollards or solar LED studs.



## 7 Prioritisation



The purpose of Stage 5 is to establish a prioritised programme for the delivery of the walking and cycling measures identified in Stages 3 and 4 of the LCWIP. The prioritised list of measures should aid future network development by outlining the top priority schemes for delivery. The results can also be used as a mechanism for funding applications or seeking developer contributions towards new walking and cycling infrastructure. As noted previously, LCWIPs are considered to be ‘live’ documents by the DfT and local authorities therefore should consider updating/revising the prioritisation table to reflect latest developments. The LCWIP methodology includes a suggested approach for prioritising measures however it also emphasises that the methodology should be tailored to the local context.

## 7.1 Walking and Cycling Measures

Building on the design principles and best practice examples established in Section 6.4, the following section presents the walking and cycling design recommendations for each of the LCWIP routes.

Based on the results from the site audits, design measures were prepared for each of the LCWIP routes following the design principles previously described. Whilst the recommendations are focussed on the LCWIP routes, many of them are applicable to the remaining streets within the study area. For example, addressing side-road junctions would be a key issue to address across the majority of the town.

Table 7-1 provides an overview of the recommended design interventions. It should be noted that this is not an exhaustive list and that the design measures are listed in full in **Appendix B**, along with a design commentary for each route.

**Table 7-1: Design Recommendations**

Route	RST Score and WRAT Score (%)	Recommended Design Interventions
Route 1:	RST: 59% WRAT: 83%	<ul style="list-style-type: none"> <li>• Improve crossing provision for pedestrians and cyclists where traffic-free sections intersect with roads i.e. at A362, Welshmill Lane and Marketplace</li> <li>• Reconfigure/remove railings to improve accessibility of traffic-free sections</li> <li>• Review width of traffic-free sections to ensure minimum of 3m where feasible- particularly through Rodden Meadow where widths are currently narrow</li> <li>• Improve shared environment and enforce pedestrian priority through surface markings and removal of delineation on all traffic-free routes</li> <li>• Improve lighting to improve safety and usability of routes</li> <li>• Provide connections to and facilitate creation of Adderwell Bridge proposals and the Frome Missing Links “Northern Link”</li> <li>• Investigate traffic reduction measures through LTN approach, including consideration of 20mph speed limit</li> <li>• Implement traffic calming on Whatcombe Road through additional pedestrian crossings with build outs, footway widening and consideration of 20mph speed limit</li> </ul>
Route 2:	RST: 50% WRAT: 65%	<ul style="list-style-type: none"> <li>• Review layout and crossing points at critical junctions along the route, such as Gorehedge, Bath Road/Rodden Road and B3092/Rossiter’s Hill/Locks Hill. Consider if a</li> </ul>



Route	RST Score and WRAT Score (%)	Recommended Design Interventions
		<p>redesign of the junction is required to bring walking and cycling provision to a sufficient standard.</p> <ul style="list-style-type: none"> <li>• Provide protected facilities for cyclists upgrade pedestrian facilities at Bath Road / Princess Anne Drive to improve access for pedestrians and cyclists to Frome College</li> <li>• Consideration of corridor-wide 20mph limit</li> <li>• Address B3090 Corridor (Bath Road, North Parade) and B3092 (Keyford) corridors to improve conditions for walking and cycling. Improvements should focus on improved crossing facilities, side-road treatments, tighten geometry at side-road junctions, consideration of 20mph speed limit, centre-line removal and footway widening where possible.</li> </ul>
Route 3:	RST: 58% WRAT:64%	<ul style="list-style-type: none"> <li>• Review crossing points at all key junctions along route, including Station Approach, Cornerhouse junction, Badcox, and signalised junctions along Portway. As a minimum, controlled crossing points should be provided on all arms of these junction/crossing points.</li> <li>• Review layout of critical junctions to improve conditions for pedestrians and cyclists – particularly Cornerhouse, Gorehedge, Vallis Way/Broadway and Portway/Vicarage Street. Consider if a redesign of the junction is required to bring walking and cycling provision to a sufficient standard.</li> <li>• Address A362 (Portway), Christchurch Road and Vallis Road corridors to improve conditions for walking and cycling. Improvements should focus on improved crossing facilities, side-road treatments, tighten geometry at side-road junctions, consideration of 20mph speed limit, centre-line removal and footway widening where possible.</li> </ul>
Route 4:	RST: 63% WRAT: 85%	<ul style="list-style-type: none"> <li>• Provide additional controlled crossing point at Catherine St / Nunney Road / Weymouth Road junction and de-clutter footway</li> <li>• Introduce raised table pedestrian crossing on Weymouth Road to facilitate pedestrian crossing into Victoria Park.</li> <li>• Review pedestrian crossing on Bath Road between Palmer Street and Gentle Street to see if there is a solution that follows the desire line.</li> <li>• Improve conditions for walking along route by reviewing side road treatments along route and ensure dropped kerbs + tactile paving at a minimum.</li> <li>• Improve walking routes through town centre by decluttering and widening footways. As part of this, investigate restricting vehicular access to Palmer Street / Stony Street (consideration of servicing/deliveries required).</li> <li>• Consider modal filters between Queens Road and Nunney Road to prevent drivers using this route as a cut-through to/from Somerset Road</li> <li>• Extension of 20mph speed limit to cover entire Safer School Streets area. Also extend 20mph speed limit to cover Catherine Street and Vicarage Street</li> <li>• Install raised table at junction of Vicarage Street/Church Street/steps to church + combined with crossing points.</li> <li>• Investigate feasibility of a modal filter, or restriction of traffic along King Street to enable two-way cycle traffic into the town centre.</li> <li>• Investigate LTN within entire Safer School Streets pilot area.</li> </ul>
Route 5:	RST: 64% WRAT: 78%	<ul style="list-style-type: none"> <li>• Provide pedestrian crossing at Rodden Road - Railway Bridge to get pedestrians from south-western to north-eastern footway.</li> <li>• Increase green man times at Berkley Road junction and provide dedicated facilities for cyclists</li> <li>• Resurface footways and review side road treatments along route and ensure dropped kerbs + tactile paving at a minimum.</li> <li>• Extend Rodden Road shared-use path from Community Hospital to Berkley Road junction + upgrade to LTN compliant facility where peds/cyclists are separated if carriageway width allows. This could link up with Route 2 to provide protected facilities for the length of Bath Road/Rodden Road to improve access to key trip generators.</li> <li>• Reduce vehicle speeds along Rodden Road (south of Berkley Road) by implementing 20mph speed limit and traffic calming through centre-line removal, formalising on-</li> </ul>

Route	RST Score and WRAT Score (%)	Recommended Design Interventions
		street parking with associated public realm improvements + footway widening where possible.
Route 6:	RST: 75% WRAT: 82%	<ul style="list-style-type: none"> <li>• Upgrade unsurfaced section of footpath to Commerce Park to shared-use route at least 3m in width (if possible) - delivered through proposed commercial development.</li> <li>• Provision of raised table crossing point with tactile paving on Forest Road to facilitate walking/cycling route between Showfield and Brunel Way.</li> <li>• Improve transition between Brunel Way and shared use route to Forest Road by introducing dropped kerb + associated signage/road markings.</li> <li>• Improve existing crossing of Fromefield/Spring Road/Rodden Road junction to incorporate controlled pedestrian and cycle crossing of Fromefield.</li> <li>• Widening of shared-use route through Showfield and onwards to Brunel Way to achieve minimum width of 3m (where possible). Provision of surface markings to denote shared use route, enforce pedestrian priority and encourage slower cycling speeds.</li> <li>• Investigate lighting solutions for route through Showfield and north of Stonebridge Drive.</li> <li>• Investigate potential for segregated cycle facilities on Brunel Way, or alternatively traffic calming/speed reduction measures (20mph) to bring in line with LTN 1/20.</li> <li>• Provide wayfinding along route to direct pedestrians &amp; cyclists to town centre and also Commerce Park.</li> <li>• Look at LTN approach for Stonebridge Estate</li> </ul>
Route 7:	RST: 62% WRAT: 85%	<ul style="list-style-type: none"> <li>• Provide controlled crossing point to facilitate route between Spring Road and River Path across Welshmill Road.</li> <li>• Improve transition from Welshmill Lane onto River Path by increasing width of path, widening dropped kerb and raising crossing point to footway level with existing guard railing removed.</li> <li>• Review side road treatments along route and ensure consistency and/or provision of dropped kerbs + tactile paving at a minimum.</li> <li>• Review footway provision along Leys Lane/Grange Road to ensure surface is smooth and footways are continuous (i.e. no gaps in provision), or informal crossing points are provided where footway provision ends.</li> <li>• Investigate potential for lighting solution along River Path to ensure route is usable year-round.</li> <li>• Extend 20mph speed limit to cover Welshmill Road/Welshmill Lane. Introduce 20mph limit within Spring Road/Leys Lane/Grange Road residential area.</li> <li>• Wayfinding to signify quiet alternative route between Bath Road and town centre/River Path.</li> <li>• Look at LTN approach for area surrounding Welshmill Road and Bath Road</li> </ul>
Route 8:	RST: 64% WRAT: 84%	<ul style="list-style-type: none"> <li>• Review and improve crossing provision for peds/cyclists at key severance features (Butts Hill, Rossiters Road, Culver Hill).</li> <li>• Review geometry of Butts Hill / Keyford and Vallis Road / Robins Lane Junctions which are both currently excessively wide.</li> <li>• Permit cycling along Landsdown Place, de-clutter the path and trim back vegetation to ensure maximum width is maintained. Update signage to signify shared-use route.</li> <li>• Introduce crossing points on each arm of the Oakfield Road/Nunney Road crossroads junction with associated traffic-calming measures.</li> <li>• Rationalise existing junction of Egford Lane/Broadway/Oakfield Road to reduce corner radii and introduce controlled crossing point on Broadway/Egford Hill</li> <li>• Review footway provision along route to ensure it is continuous. Where this is not possible ensure pedestrian crossings are provided to opposite footway.</li> <li>• Provide controlled crossing points across Butts Hill (to accommodate NCN route) and across Culverhill (to provide access to the Dippy).</li> <li>• Widen shared use path through The Dippy to achieve minimum 3m width.</li> <li>• Incorporate Alexandra Road/Portway junction into any improvements to Portway/Garsdale/Vicarage Street roundabout</li> </ul>



Route	RST Score and WRAT Score (%)	Recommended Design Interventions
Route 9:	RST: 81% WRAT: 76%	<ul style="list-style-type: none"> <li>Review missing footways on Whitemill Lane/Whitewell Road and provide informal crossing points where footways end.</li> <li>Provide controlled crossing on desire line at Butts Hill / Keyford Road junction - to tie into wider junction upgrade/redesign at Cornerhouse Junction</li> <li>Provide parallel crossing at junction of Water Lane/Somerset Road/Butts Hill to connect existing cycle route onward with Route 9</li> <li>Review side road treatments along route and ensure dropped kerbs + tactile paving at a minimum throughout the route</li> <li>Reduce vehicle speeds along Butts Road/Butts Hill corridor by implementing 20mph speed limit and traffic calming through centre-line removal, formalising on-street parking with associated public realm improvements + footway widening (to 2m) wherever possible.</li> <li>Review scope for low-traffic treatments in area bound by Whitewell Road/Critch Hill/Church Street West</li> </ul>
Route 10:	RST: 78% WRAT: 73%	<ul style="list-style-type: none"> <li>Reconfigure Marston Lane modal filter to enable access for cyclists and improve public realm i.e. through the use of planters.</li> <li>Provide consistent footway on the southern section of Marston Lane between the Masons Arms and Marston Lane modal filter. If not feasible due to highway width, investigate providing a "virtual footway" to designate space for pedestrians in the carriageway.</li> <li>Review missing footways on Green Lane and provide informal crossing points where footways end if a new footway cannot be provided due to highway width.</li> <li>Review side road treatments along route and ensure dropped kerbs + tactile paving at a minimum throughout the route, as well as continuous footway treatments at busier junctions.</li> <li>Improve pedestrian crossing provision at Marston Lane/Green Lane/Whitewell Road junction, looking at continuous footway treatment and raised tables to enforce pedestrian priority.</li> <li>Extend existing 20mph limit from Oakfield Road to also cover Marston Lane/Green Lane and surrounding area.</li> <li>Provide wayfinding to direct users of the route towards key locations, such as the schools along Oakfield Road and Critch Hill.</li> </ul>

Within the design recommendation spreadsheet in **Appendix B**, the proposed design interventions are split into the following three categories:

- **Design Priority (0-3 years)** – measures which should be prioritised over other measures to ensure a satisfactory level of service along LCWIP routes. Typically, these measures should be delivered in the short-term.
- **General Design Recommendations (3-8 years)** – The majority of design measures fall into this category and would be considered less of a priority than measures in “Design Priority”.
- **Design Maximum (8+ years)** – generally more ambitious measures that might require a longer time period for implementation or may require a greater ground swell of public support. For instance, LTNs, town-wide 20mph or removal/reduction of traffic through the town centre.

While each of the categories above outline indicative timescales, it should be noted that these categories are fluid and can be altered through the lifespan of the LCWIP. For instance, it might be



appropriate in some cases to deliver a “Design Maximum” recommendation within a shorter timescale, if the right opportunity arises.

While the LCWIP prescribes a route-based approach to the development and prioritisation of design recommendations, it is also recognised within the methodology that this should be tailored to the local context. The plan below highlights recommended design interventions in Frome that were classed as “Design Priorities”, i.e. measures which should be prioritised over other measures to ensure a satisfactory level of service along LCWIP routes. The purpose of this plan is enable FTC to identify and deliver priority design interventions in the short-term, even if an LCWIP is ranked as a low priority route overall.

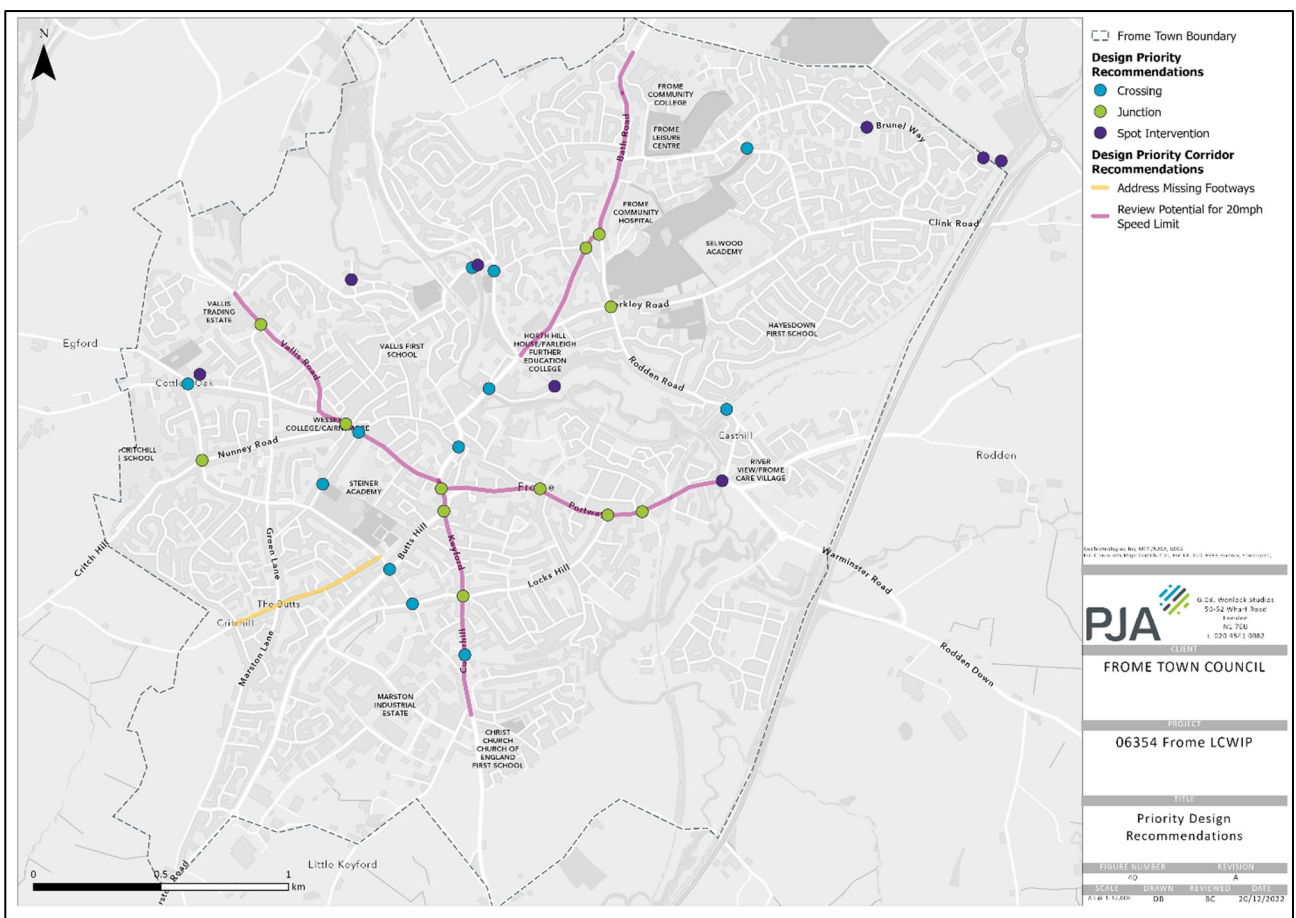


Figure 7-1: Priority Design Recommendations

## 7.2 Prioritisation Approach

The schedule of proposed interventions has been developed in the context of FTC, Mendip and Somerset policies and objectives, and in line with national guidance, including Manual for Streets 1 + 2, ‘Cycle Infrastructure Design’ (LTN 1/20), and the 2022 updates to the Highway Code. The DfT’s



LCWIP methodology includes a suggested approach for prioritising measures, however it also emphasises that the methodology should be tailored to the local context. On this basis, it was agreed with FTC that the recommended design interventions for each route would be prioritised based on the below factors. The schedule is intended to be dynamic, as circumstances change and more information becomes available. The DfT also emphasise that the list of prioritised measures is treated as 'live' and that authorities regularly revisit the list of measures to review their own progress and to identify additional schemes if necessary.

The priorities depend on multiple, sometimes conflicting considerations:

- **Timescale for delivery (Short/Medium/Long)** – this factor recommends a timescale for delivery and is closely related to the design complexity of the individual measure. For example, dropped kerb junctions were generally identified as short-term measures whilst major junction improvements were identified as longer-term interventions.
- **Design Complexity (High/Medium/Low)** – All of the recommended LCWIP measures are considered feasible, however this factor considered the relative complexity and scale of the proposed designs and therefore the individual scheme feasibility. Typically, smaller and more discrete schemes, such as new crossings, were identified with higher feasibility, and schemes with lower feasibility tended to reflect larger, more complex schemes, such as new protected cycle routes.
- **Cost Estimate (£) (<£100k, £100k-£250k, £250k-£500k, £500k-£1m, >£1m)** - High level cost estimates were developed for all routes and were assigned to one of five cost estimate brackets. Higher cost routes include major interventions such as protected cycle provision and/or major junction upgrades.
- **Design Urgency (High, Medium, Low)** – All of the recommended LCWIP measures are considered to be required, however this factor identifies the how urgently the measures are required. For instance, a missing crossing along a key desire line would be identified as high urgency as there would be a highway safety risk associated with there being no crossing provision.
- **Scale of Benefit (Town-wide, neighbourhood/town centre/street specific)** – This factor prioritises routes which have a town-wide benefit i.e. they provide connectivity between a number of locations within Frome.
- **Safer School Streets Connection** – Routes which passed through, or interfaced with the proposed Safer School Streets zone were identified as high priority.

- **Complements / ties in with Frome Initiatives** – Design measures which overlapped/interfaced with other Frome initiatives (such as the Missing Links scheme) were identified as higher priority as these would provide important opportunities for onward connectivity.
- **Funding available (Yes/No)** – Routes which either overlapped with existing proposed route alignments, or fall within other funded projects e.g. S.106 funding available from local developments such as Selwood Garden Community.

All routes were assessed against the prioritisation criteria, providing an overall score for the LCWIP routes. The full list of measures and their prioritisation scores are listed in the appendices. The original prioritisation matrix has been provided to FTC with the intention that they have the ability to update the prioritisation matrix in the future, and to revise the individual weightings if needed.

Table 7-2 summarises these rankings across the study area.

**Table 7-2: Prioritisation Ranking**

Rank	Routes and Score %
1 – Highest Priority Routes	<b>70%:</b> Route 1 Route 8
2	<b>65%:</b> Route 3 Route 9 Route 10
3	<b>60%:</b> Route 2 Route 4 Route 7
4	<b>50%:</b> Route 6
5 – Lowest Priority Route	<b>45%:</b> Route 5



## 8 Recommendations



The LCWIP has developed a comprehensive set of design recommendations which would improve conditions for walking and cycling across Frome, while also integrating with existing initiatives in the town. The recommended measures have also been prioritised and therefore provide a clear strategy for delivery over the next ten years.

It is recommended that the LCWIP is considered in all future developments and applications in the town which either directly impact upon the LCWIP networks or are likely to affect conditions for walking and cycling in general. Whilst the LCWIP has developed measures only for the LCWIP network, a majority of these recommendations could be adopted and applied to sites across Frome to further improve the walking and cycling conditions. In order to help inform the further design development of the LCWIP, it is also recommended that FTC considers undertaking a town-wide parking strategy, which would support the delivery of a number of the design recommendations in this LCWIP. Likewise, an additional “Village to Town” study is also recommended to investigate routes connecting nearby villages into Frome’s LCWIP network.

This LCWIP should be integrated with ongoing strategies and policies in the town and county, as well as the delivery of planned walking and cycling infrastructure through SCC. For instance, the forthcoming Frome Integrated Transport Strategy and the Frome Active Travel Town study provide key opportunities to expand upon and bolster the recommendations outlined in this LCWIP. Frome Town Council will act as the guardian of this LCWIP, however it will ultimately be the responsibility of SCC as the highway authority to implement the schemes.



**Figure 8-1: Cheap Street**





## Appendix A    The Floow

The outputs from the Floow analysis on traffic movement have been separately summarised and provided to Frome Town Council.



## **Appendix B      Design Recommendations Spreadsheet**

It is also recommended that the LCWIP is integrated with ongoing strategies and policies in the town and county, as well as the delivery of planned walking and cycling infrastructure through SCC. Frome Town Council will act as the guardian of this LCWIP, however it will ultimately be the responsibility of SCC as the highway authority to implement the schemes.



