



Frome LCWIP
Telematics Analysis
04.03.23

Telematics Traffic Analysis

In lieu of 'strategic' modelling data, Telematics data is used to understand the distribution of general traffic flows, and also 'through-traffic' flows. It is often used by PJA to inform design strategies, specifically related to low-traffic + neighbourhood analysis. The results were also used to inform the development of the LCWIP design's recommendations.

The outputs from the Telematics analysis from Frome provide an overview of:

- Strategic Traffic Flows
- Strategic Through-Traffic Flows
- Local Through-Traffic Flows

The Telematics data is validated against local Department for Transport (DfT) AADT flows to ensure the data is accurate.

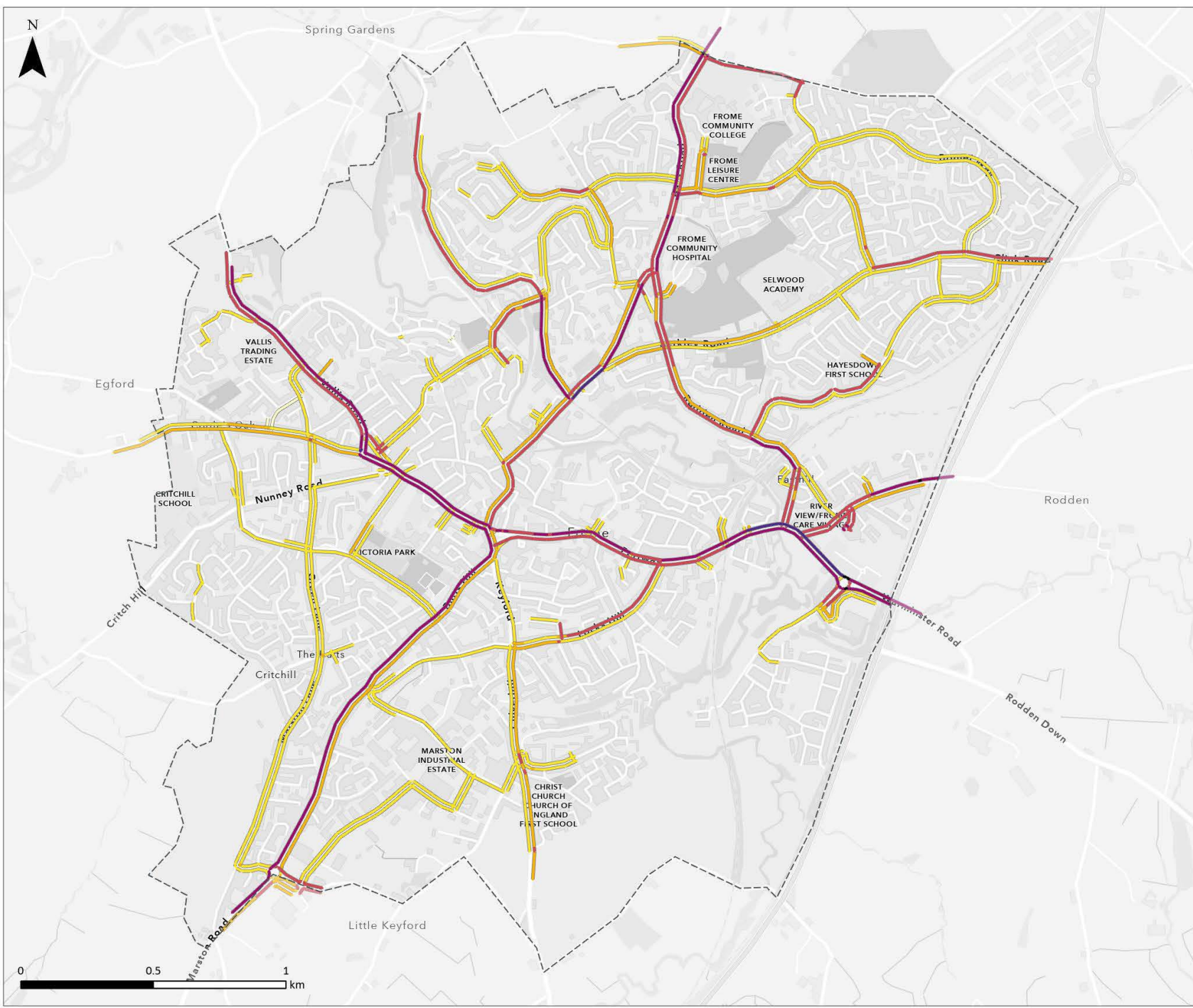


Telematics Analysis

AM Peak: General Traffic Flows

The plan summarises the distribution of general vehicular traffic across Frome during the AM Peak. An average hourly figure is calculated derived from an average of the AM peak between 7-10am.

The plan illustrates that a the town's main road network generally has the higher vehicular flows, namely: Portway/Vallis Road (A362), Bath Road/The Butts (B3090), and Rodden Road.



--- Frome Town Boundary

Estimated General Traffic Flows (Weekday AM Peak, 7-10am)

Approx. no. of vehicles per hour

- 10
- 11 - 50
- 51 - 100
- 101 - 200
- 201 - 400
- 401 - 600
- 601 - 1000

Traffic Data supplied by The Flow. The Flow collected the raw traffic data using telematics technology between July 2021 and June 2022. Excluded roads with general traffic flows of fewer than 10 vehicles per hour.

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TITLE
Estimated General Traffic Flows (Weekday AM Peak)

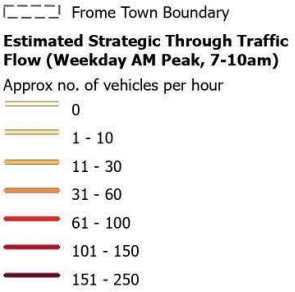
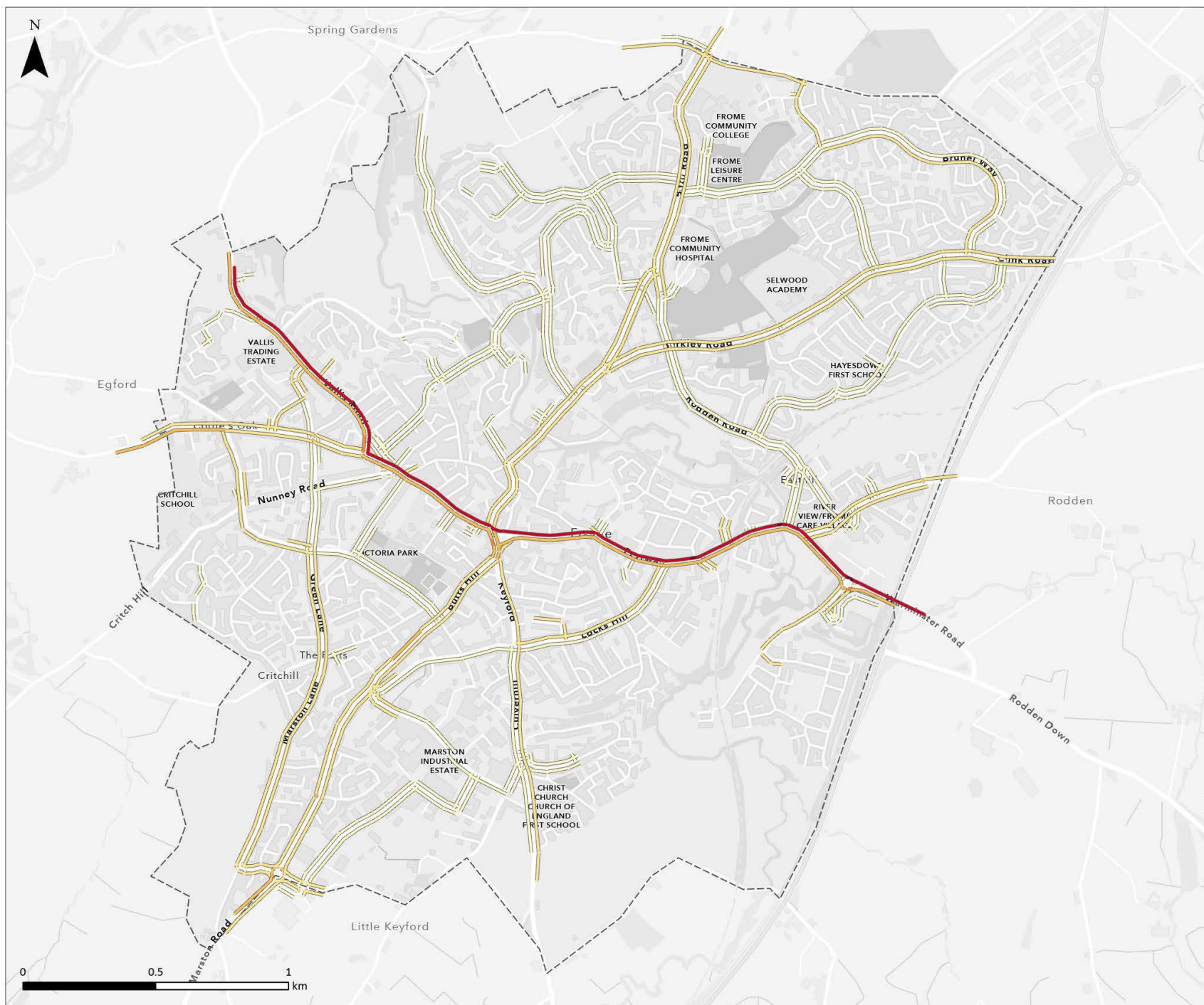
FIGURE NUMBER	REVISION		
FL8	A		
SCALE	DRAWN	REVIEWED	DATE
A3 @ 1:13,000	DB	BC	21/11/2022

Telematics Analysis

AM Peak: Strategic Through-Traffic Flows

The plan summarises 'strategic' through-traffic flows across the town. These trips are identified as any trips which pass entirely through the town centre without stopping.

During the AM Peak, the plan highlights that eastbound traffic along the Vallis Road/Portway corridor is the key strategic route for trips.



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TITLE
Strategic Through Traffic Flows (Weekday AM Peak)

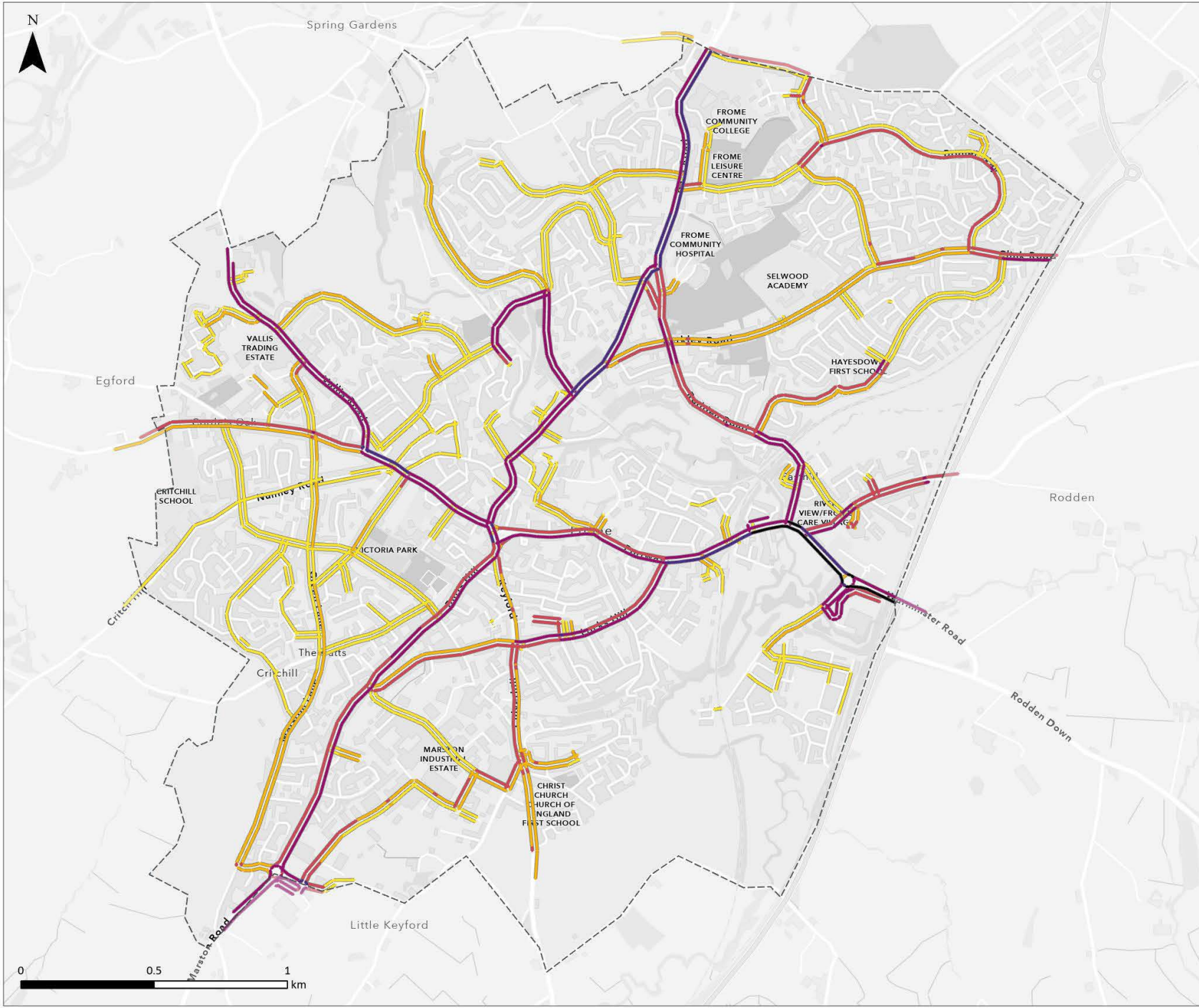
FIGURE NUMBER	REVISION		
FL12	A		
SCALE	DRAWN	REVIEWED	DATE
A3 @ 1:13,000	DB	BC	21/11/2022

Telematics Analysis

PM Peak: General Traffic Flows

The plan summarises the distribution of general vehicular traffic across Frome during the PM Peak. An average hourly figure is calculated derived from an average of the AM peak between 4-7pm.

Overall traffic volumes are higher during the PM peak period, with particular increases in flows on Broadway, Locks Hill/Rossiter's Road, Culver Hill (B3092), and Warminster Road.



--- Frome Town Boundary

Estimated General Traffic Flows (Weekday PM Peak, 4-7pm)

Approx. no. of vehicles per hour

- 10
- 11 - 50
- 51 - 100
- 101 - 200
- 201 - 400
- 401 - 600
- 601 - 1000

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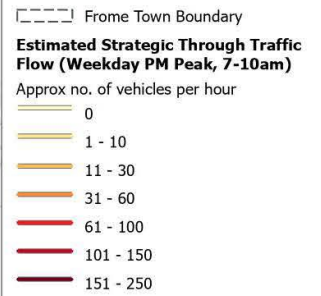
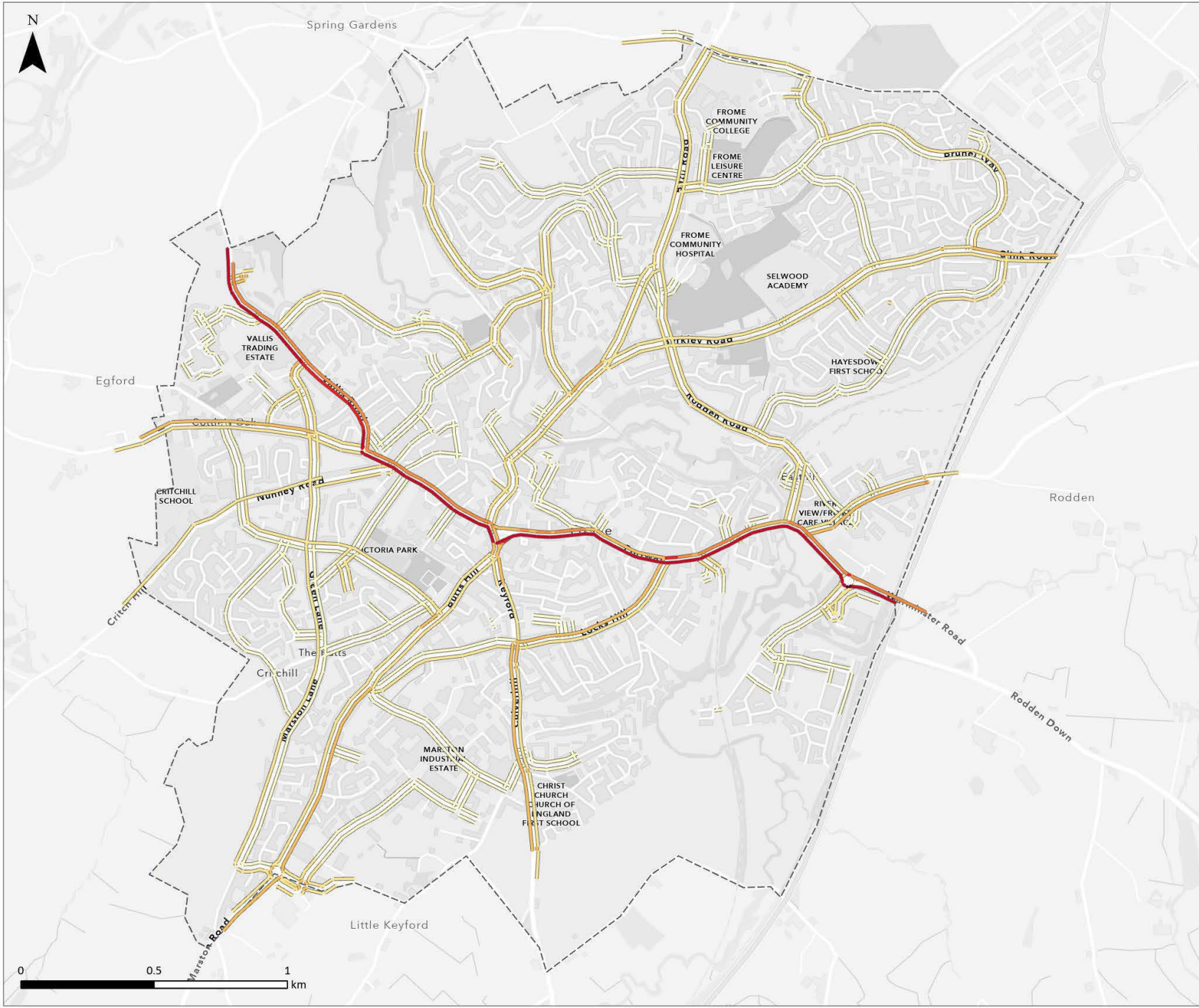
TITLE
Estimated General Traffic Flows (Weekday PM Peak)

FIGURE NUMBER	REVISION		
FL9	A		
SCALE	DRAWN	REVIEWED	DATE
A3 @ 1:13,000	DB	BC	21/11/2022

Telematics Analysis

PM Peak: Strategic Through-Traffic Flows

During the PM Peak, the plan suggests that strategic traffic flows are reversed with westbound traffic along Vallis Road/ Portway (A362) acting as the key strategic route.



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TITLE
Strategic Through Traffic Flows (Weekday PM Peak)

SCALE	DRAWN	REVIEWED	DATE
A3 @ 1:13,000	DB	BC	21/11/2022

Telematics Analysis

Movement Cells

To provide a more detailed understanding of through-traffic flows, Frome was divided into a series of 'movement Cells' as shown in the opposite plan. The labelling of the cells has been used purely for identification.

The cells were identified by defining areas which were surrounded/severed by key severance features, such as main roads, railway line, and the river.

The method for identifying local through-traffic is the same as the method for analysis strategic traffic.



Frome Movement Cells

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TITLE
Movement Cell Boundaries

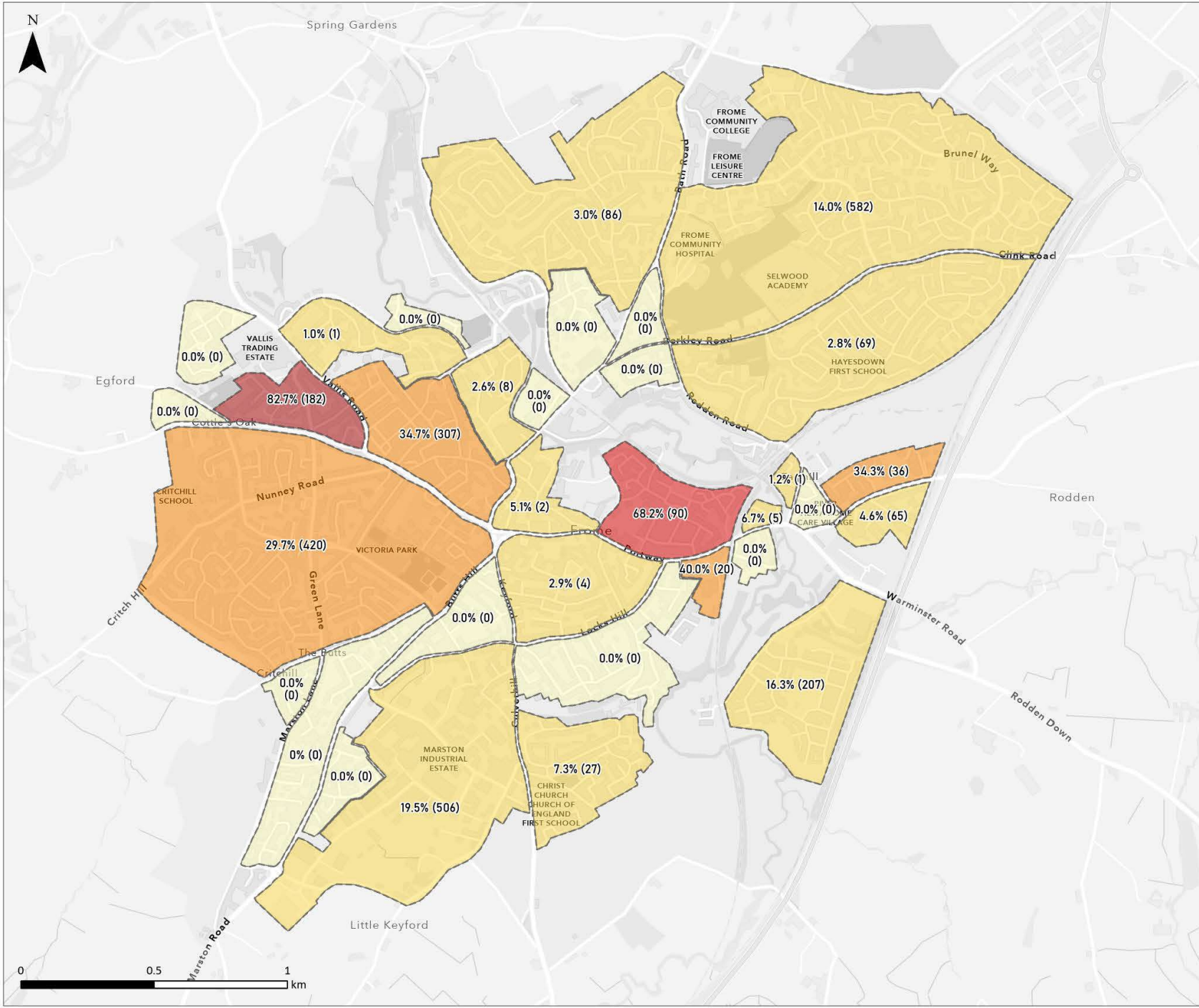
FIGURE NUMBER	REVISION
FL1	A
SCALE	DRAWN
A3 @ 1:13,000	DB
REVIEWED	DATE
BC	15/11/2022

Telematics Analysis

AM Peak – Local Through-Traffic %

The local through-traffic analysis summarises the proportion of all vehicular trips within a movement cell area which pass entirely through and therefore identified as a 'through-traffic'. For each cell, the plan presents the % and also the total number of vehicular trips record (in brackets). The total number of trips is a key consideration in contextualising the through-traffic flows.

The plan highlights cells in the south-west of Frome (Cells C3, C4 + B3) where both the proportion of through-traffic and volumes of general traffic are both higher. Beyond this area, the plan also highlights B7 (north of Portway) with a high proportion of through-traffic (although the overall traffic volumes are low)



Frome Movement Cell Boundary

Cell-Based Through Traffic (Weekday AM Peak)

Percentage of Total Traffic within Cell*

- 0%
- ≤ 20%
- ≤ 40%
- ≤ 60%
- ≤ 80%
- ≤ 100%

*Sum of total through traffic across all links within cell included in brackets

Traffic Data supplied by The Flow. The Flow collected the raw traffic data using telematics technology between July 2021 and June 2022. Excluded roads with general traffic flows of fewer than 10 vehicles per hour.

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TITLE

% Through Traffic per Cell (Weekday AM Peak)

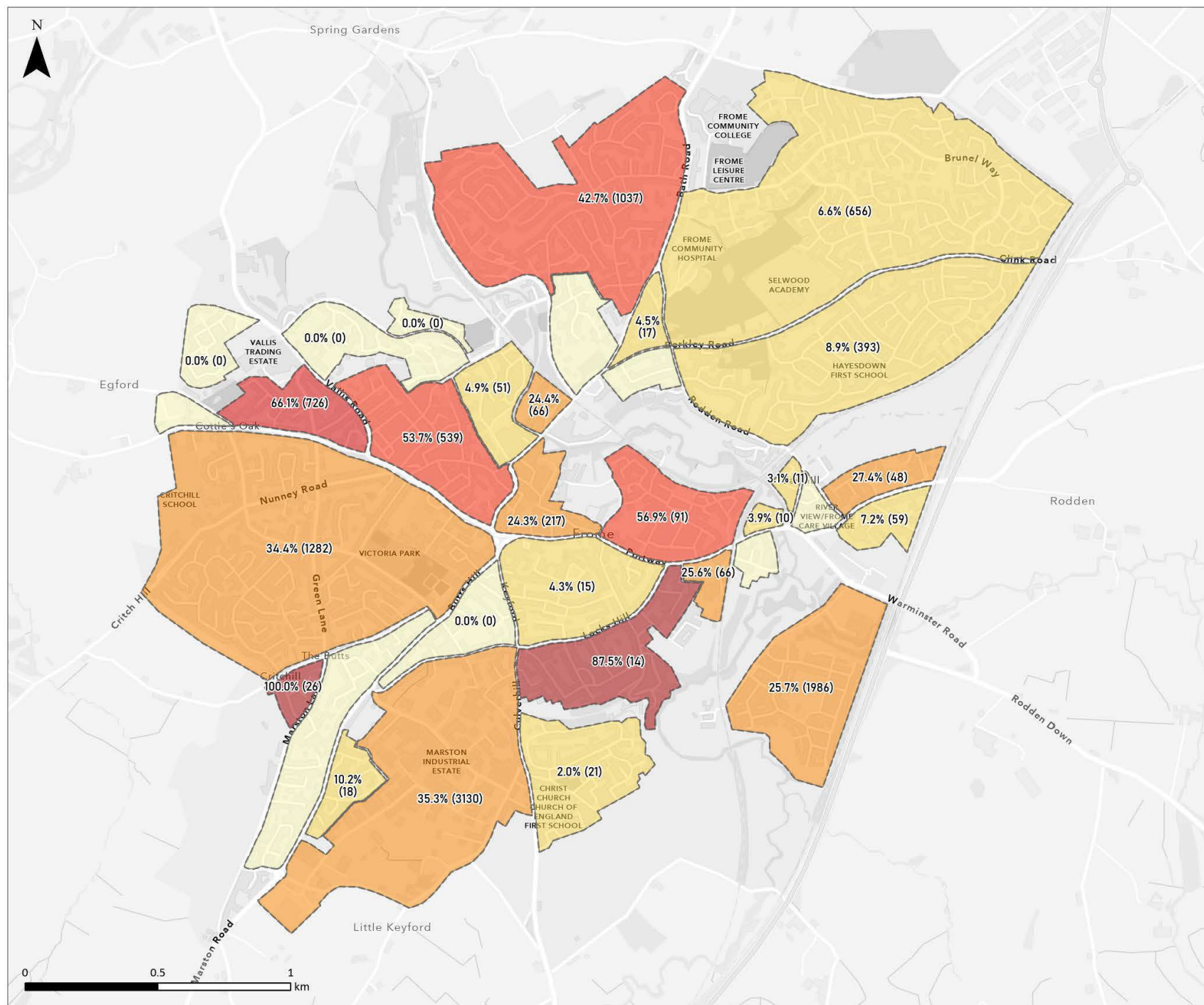
FIGURE NUMBER		REVISION	
FL4b		A	
SCALE	DRAWN	REVIEWED	DATE
A3 @ 1:13,000	DB	BC	21/11/2022

Telematics Analysis

PM Peak – Local Through-Traffic %

As with the PM strategic through-traffic figures, the PM local through-traffic figures are consistently higher throughout Frome.

The plan highlights several areas in the town where the proportion of through-traffic is above 30% combined with reasonably high volumes of general traffic. The most notable increases compared to the AM peak are around the town centre (Cells B5 + B6), the north-west of the town (between Bath Road + Innock Hill), and to the south (Cells C8 + C11)



--- Frome Movement Cell Boundary

Cell-Based Through Traffic (Weekday PM Peak)

Percentage of Total Traffic within Cell*

- 0%
- ≤ 20%
- ≤ 40%
- ≤ 60%
- ≤ 80%
- ≤ 100%

*Sum of total through traffic across all links within cell included in brackets

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TITLE

% Through Traffic per Cell (Weekday PM Peak)

FIGURE NUMBER	REVISION		
FL5b	A		
SCALE	DRAWN	REVIEWED	DATE
A3 @ 1:13,000	DB	BC	21/11/2022

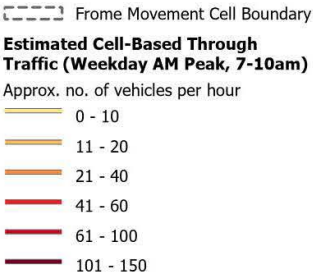
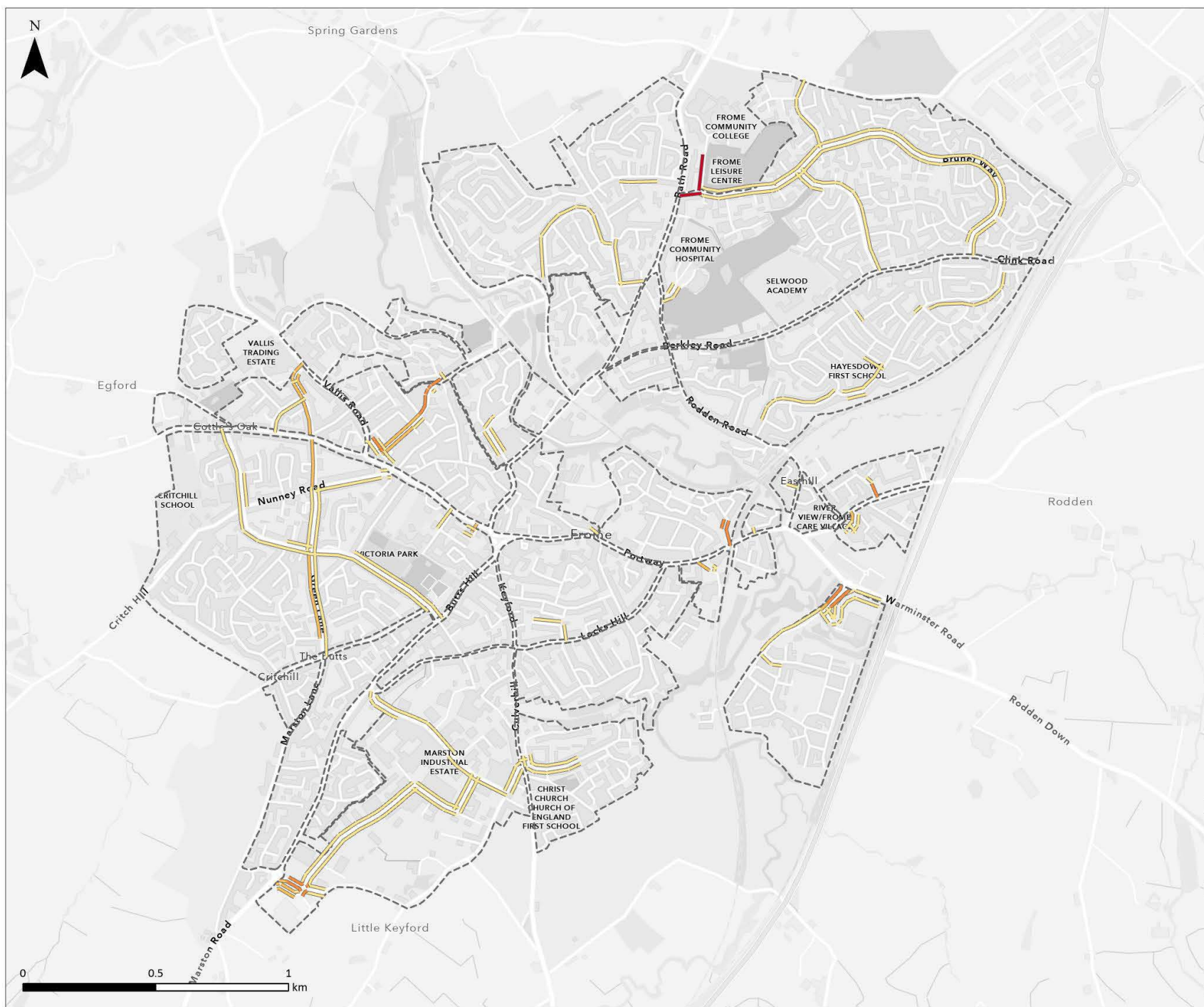
Telematics Analysis

AM Peak – Local Through-Traffic Routings

The local through-traffic routings identifies routes within the Movement Cells which generated the highest proportions of through-traffic. The analysis is useful for understanding through-traffic routes which pass through multiple movement cells.

This analysis should be read separately from the area-based approach as it only focusses on through-traffic alignments and therefore does not necessarily align with the area-based approach.

The analysis identifies several through-traffic routings, including: Selwood Road, Portland Road/Green Lane, Somerset Road/Oakfield Road, Stonebridge Drive/Brunel Way and Wessex Fields/ Manor Furlong/Manor Road.



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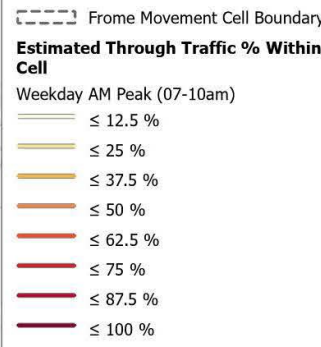
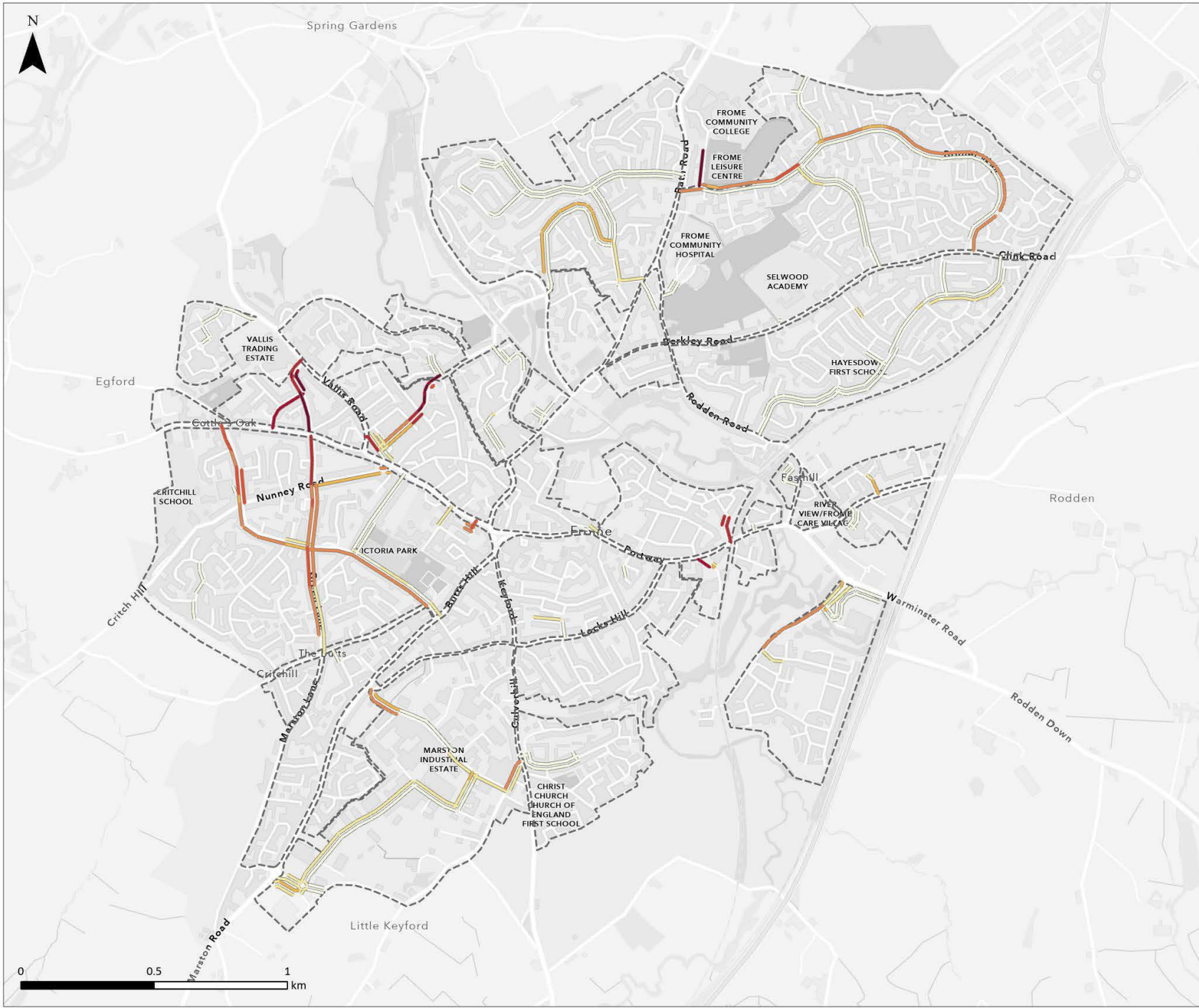
TITLE
Cell-Based Through Traffic Flows (Weekday AM Peak)

FIGURE NUMBER	REVISION
FL6	A
SCALE	DRAWN
A3 @ 1:13,000	DB
REVIEWED	DATE
BC	16/11/2022

Telematics Analysis

AM Peak - Local Through-Traffic Routings %

Further to the previous plan, the % analysis illustrates the proportion of traffic on individual routes which is considered 'through-traffic'.



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TITLE
**Cell-Based Through Traffic %
(Weekday AM Peak)**

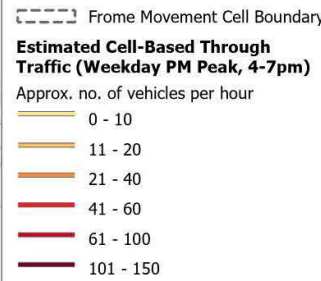
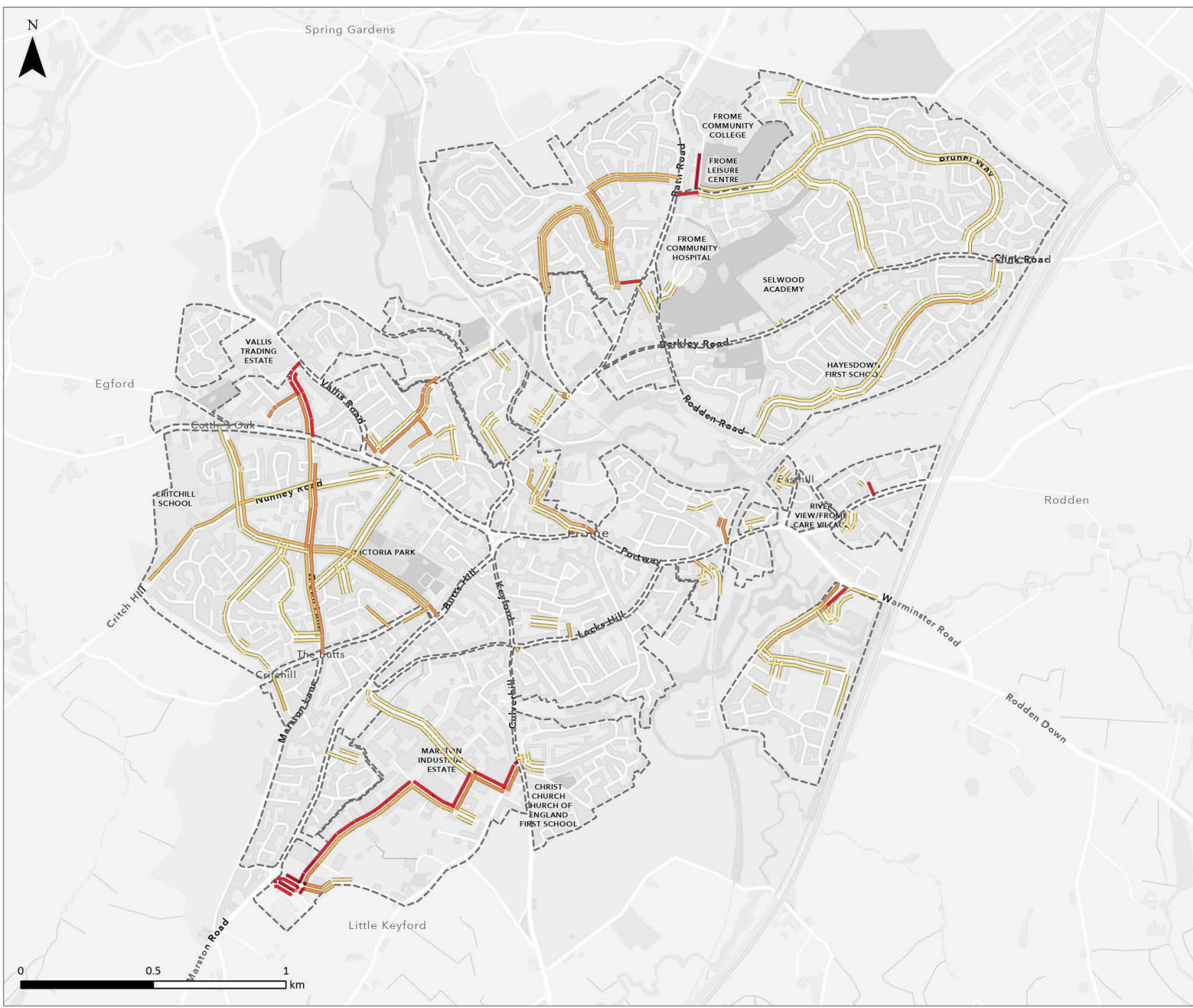
FIGURE NUMBER		REVISION	
FL2		A	
SCALE	DRAWN	REVIEWED	DATE
A3 @ 1:13,000	DB	BC	15/11/2022

Telematics Analysis

PM Peak – Local Through-Traffic Routings

There is a general increase in the PM route-based analysis, with increases on the through-traffic routes already identified in the AM peak: Selwood Road, Portland Road/Green Lane, Somerset Road/Oakfield Road, Stonebridge Drive/Brunel Way and Wessex Fields/ Manor Furlong/Manor Road.

The plan also identifies additional through-traffic routings on: Leys Lane/Park Hill Drive/Grange Road, Robins Lane, Manor Road, Wyville Road and Critch Hill/Nunney Road.



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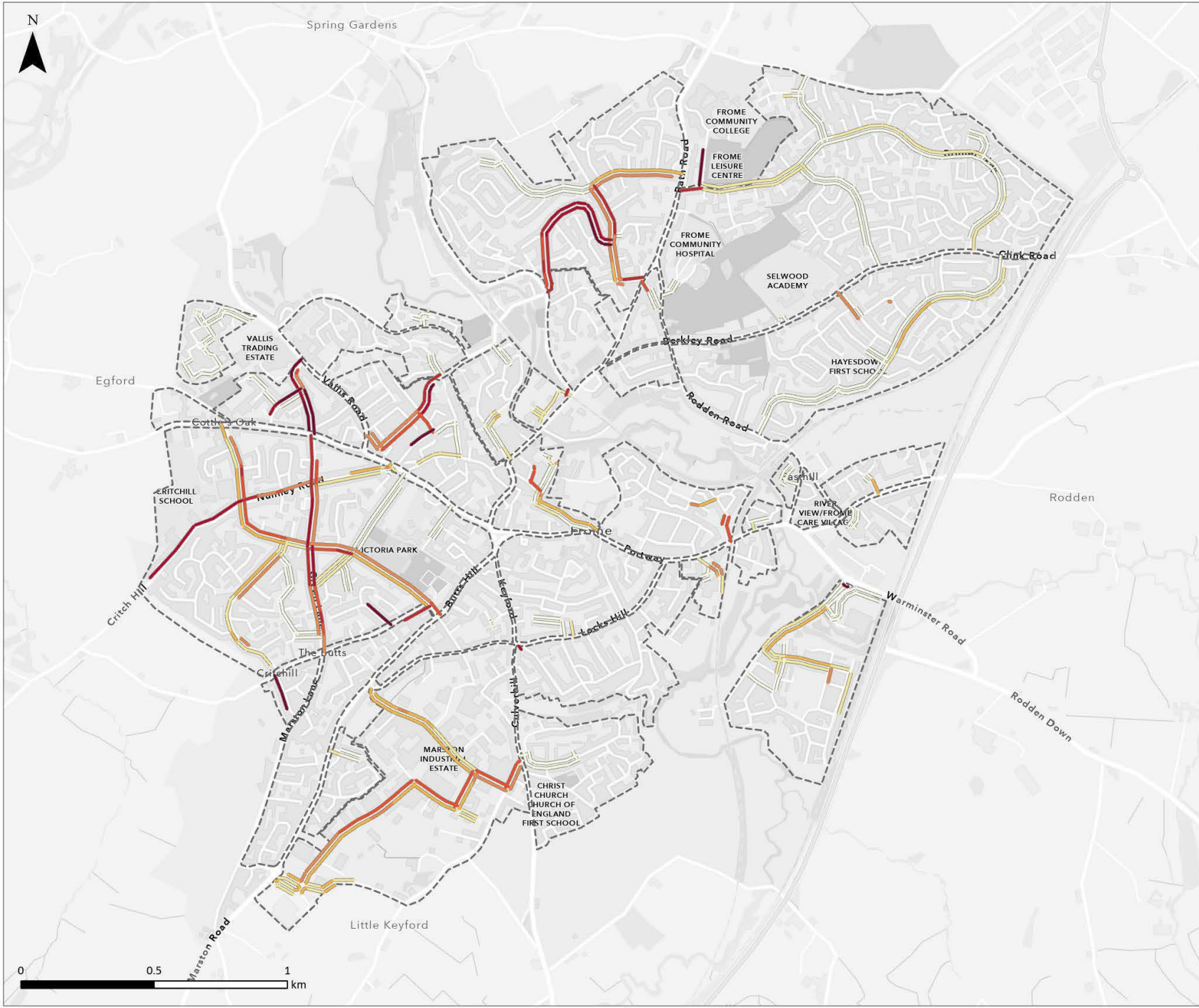
TITLE
Cell-Based Through Traffic Flows (Weekday PM Peak)

FIGURE NUMBER		REVISION	
FL7		A	
SCALE	DRAWN	REVIEWED	DATE
A3 @ 1:13,000	DB	BC	16/11/2022

Telematics Analysis

PM Peak – Local Through-Traffic Routings %

Further to the previous plan, the % analysis illustrates the proportion of traffic on individual routes which is considered 'through-traffic'.



--- Frome Movement Cell Boundary

Estimated Through Traffic % Within Cell

Weekday PM Peak (4-7pm)

- ≤ 12.5 %
- ≤ 25 %
- ≤ 37.5 %
- ≤ 50 %
- ≤ 62.5 %
- ≤ 75 %
- ≤ 87.5 %
- ≤ 100 %

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TITLE
**Cell-Based Through Traffic %
(Weekday PM Peak)**

FIGURE NUMBER		REVISION	
FL3		A	
SCALE	DRAWN	REVIEWED	DATE
A3 @ 1:13,000	DB	BC	15/11/2022

Key Findings

The results from Frome Telematics analysis identified several points for further discussion/development:

- Overall traffic volumes were higher in the PM Peak Period (4-7pm) compared to the AM Peak (7-10am)
- The key general traffic flows through the town are concentrated on the main road network of Portway/Vallis Road (A362), Marston Road/Market Place/Bath Road (A3090), Rodden Road, and Locks Hill
- 'Strategic Through-Traffic' flows (i.e. trips which pass entirely through the town) are concentrated predominantly on Portway/Vallis Road (A362) and account for between 30-50% in the PM peak period
- The 'Local Through-Traffic' analysis identified several areas in the PM peak where through-traffic accounted for >40% of all recorded trips.
- The analysis also identified several through-traffic routings which accounted for a majority of that through-traffic, including: Robins Lane, Portland Road/Green Lane, Critch Hill, Selwood Road/Welshmill Lane, Park Hill Drive, and Handlemaker Road/Manor Furlong/Manor Way/Manor Road/Mount Pleasant.

