

Frome Town Centre Traffic Management Assessment

Review of journey times and potential for diversion

Non-Technical Summary Report

July 2013

Revision	Purpose	Summary of changes	Originator	Date
0.1	Draft		RWS	25/06/2013
0.2	Draft	Comments from PTB	RWS	04/07/2013
0.3	Draft	Comments from MC	RWS	08/07/2013
1.0	Approved		MC	08/07/2013

Traffic Modelling Team

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1 Introduction

Frome Town Council has asked Somerset County Council (SCC) to examine the effect that traffic calming measures in the Market Place could have on journey times and routing. Parsons Brinckerhoff (PB) has produced the attached Technical Note discussing the findings, which are summarised in this review.

The proposed re-modelling proposals are described in detail at www.frome-tc.gov.uk/town-centre-re-modelling-feasibility-study/ with 'Option 3' being the preferred option. One of the effects would be to reduce speeds through the Market Place. This study therefore aims to determine:

- current travel time through Frome Town Centre;
- current travel time on alternative routes; and
- traffic speeds and travel time through Frome Town Centre should the proposals be introduced, and thus whether diversion of traffic is likely.

Section 2 identifies the study area and describes how data was collected; this is then analysed in Section 3. Section 4 considers the possible impact of traffic calming measures on journey times and the likelihood of diversion before conclusions and recommendations are presented in Section 5.

2 Study area and data collection

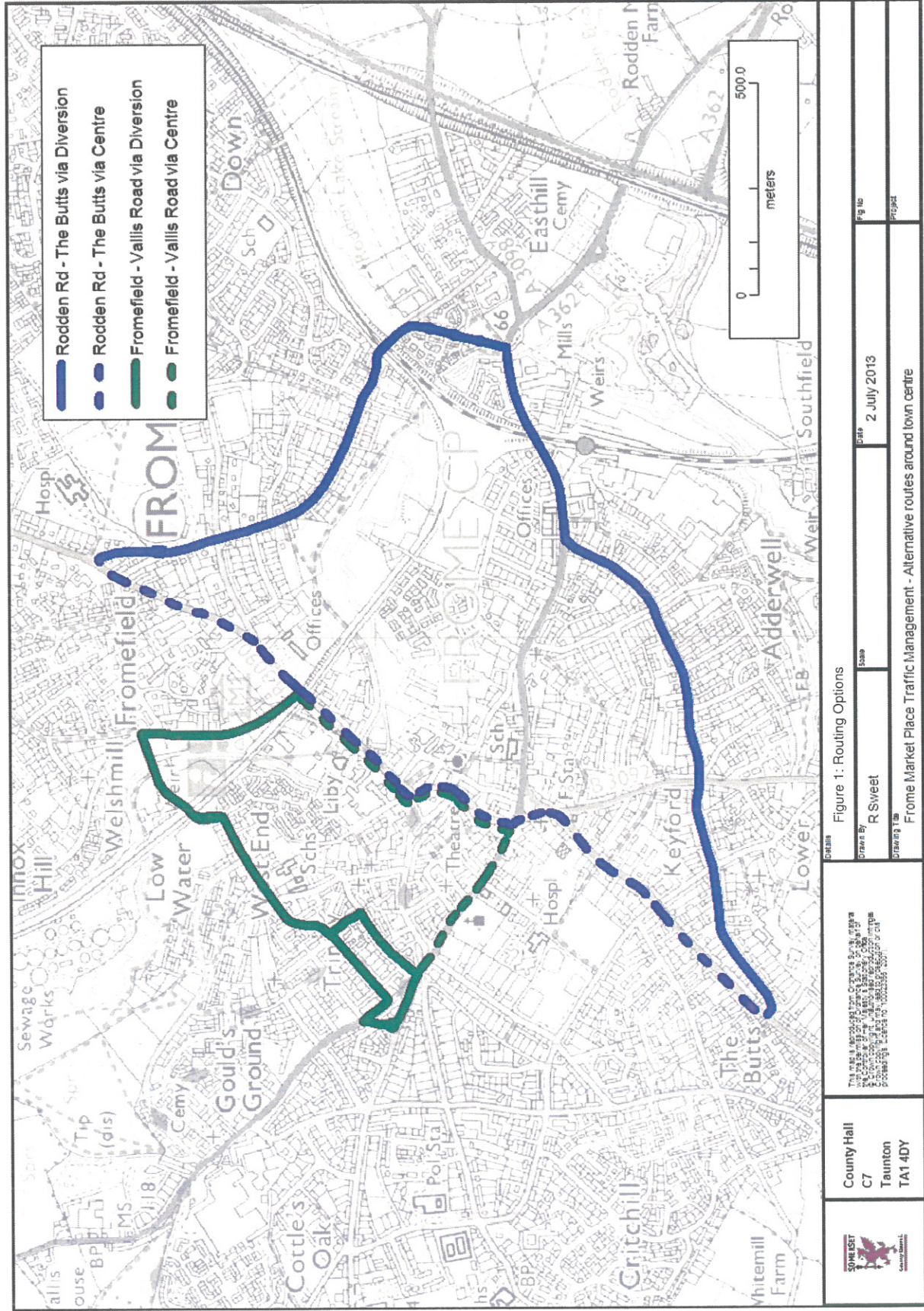
The first step was to identify potential diversion routes for traffic, should town centre delays increase making the direct route unattractive. It was considered that routes from north to south (and vice versa), either starting or finishing in Frome, are most likely to be affected by any additional delay in the town centre. Longer distance (through-) trips would generally bypass the town on the A361 whilst east-west movements would use the A362 and be unaffected by the traffic management.

The journey time data was collected using traffic surveyors in cars travelling the routes across three days (Wednesday 24 April, Thursday 25 April and Saturday 27 April 2013). Four time periods were considered: the AM Peak (7:30-9:30), Interpeak 1 (IP1, 10:00-12:00), Interpeak 2 (IP2, 13:00-15:00) and the PM Peak (16:00-18:00). Each car carried a GPS unit; the data recorded allowed calculation of total journey times, whilst particular areas of interest could also be examined more closely.

Problems with one of the GPS units meant that some data was unavailable for analysis; nonetheless it was considered that the available figures provided plenty of information to meet the objectives of the investigation. Two routes were analysed in detail:

- Bath Road/Rodden Road to Rossiter's Road/The Butts
 - Via the town centre
 - Alternative route via Rodden Road and Rossiter's Road
- Fromefield/Welshmill Road to Vallis Road/Vallis Way
 - Via the town centre and Christchurch Street
 - Alternative route via Welshmill Road, Welshmill Lane and Selwood Road

These are illustrated in Figure 1.



3 Results

3.1 Rodden Road – The Butts

The graphs overleaf (Figure 2 and Figure 3) compare travel times between the Rodden Road/Bath Road and The Butts/Rossiter's Road junctions. It is clear that travel along the alternative route takes longer (typically by 1-2 minutes) than through the town centre.

The difference is however slightly reduced on Thursdays. It was thought possible that this could be due to the weekly Market taking place. Further investigation – examination of the individual runs and discussion with the enumerator who drove on the day – suggests, however, that the Market does not have a significant impact and this difference should instead be put down to natural day-to-day variability.

3.2 Fromefield – Vallis Way

Figure 4 and Figure 5 compare travel times between the Welshmill Road/Fromefield and Vallis Way/Vallis Road junctions. Whilst the same patterns are apparent in general (including longer town centre journey times on the Thursday), the difference is less marked than for The Butts to Bath Road. There are some periods (particularly the 'IP2' period – the 'interpeak' on a Thursday afternoon) when the alternative route is marginally quicker in both directions than travel via the town centre.

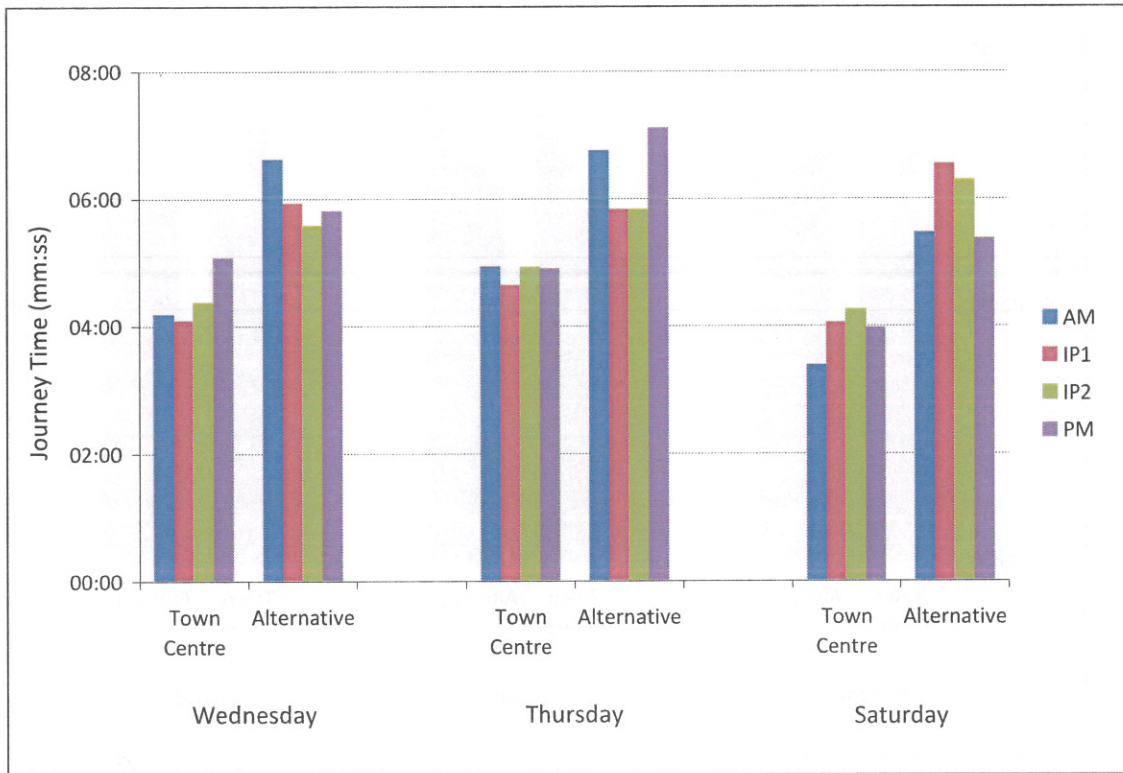


Figure 2: Observed Journey Times from Bath Road to The Butts (southbound)

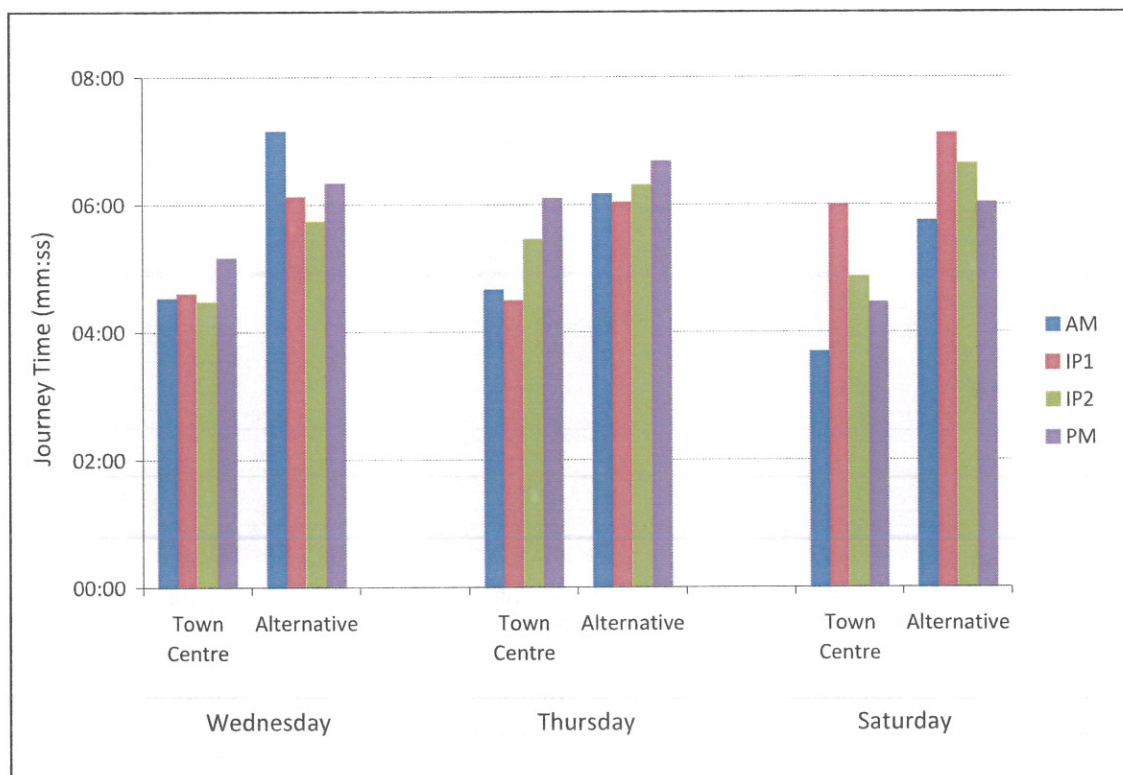


Figure 3: Observed Journey Times from The Butts to Bath Road (northbound)

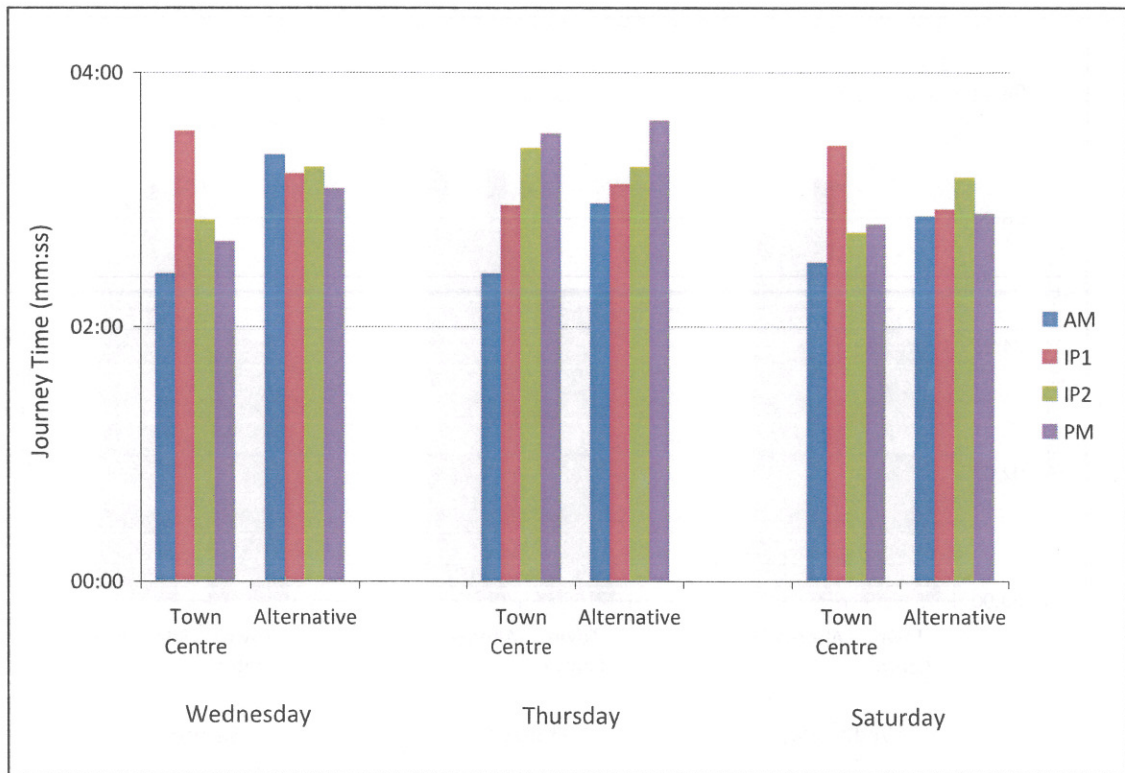


Figure 4: Observed Journey Times from Fromefield to Vallis Way (southbound)

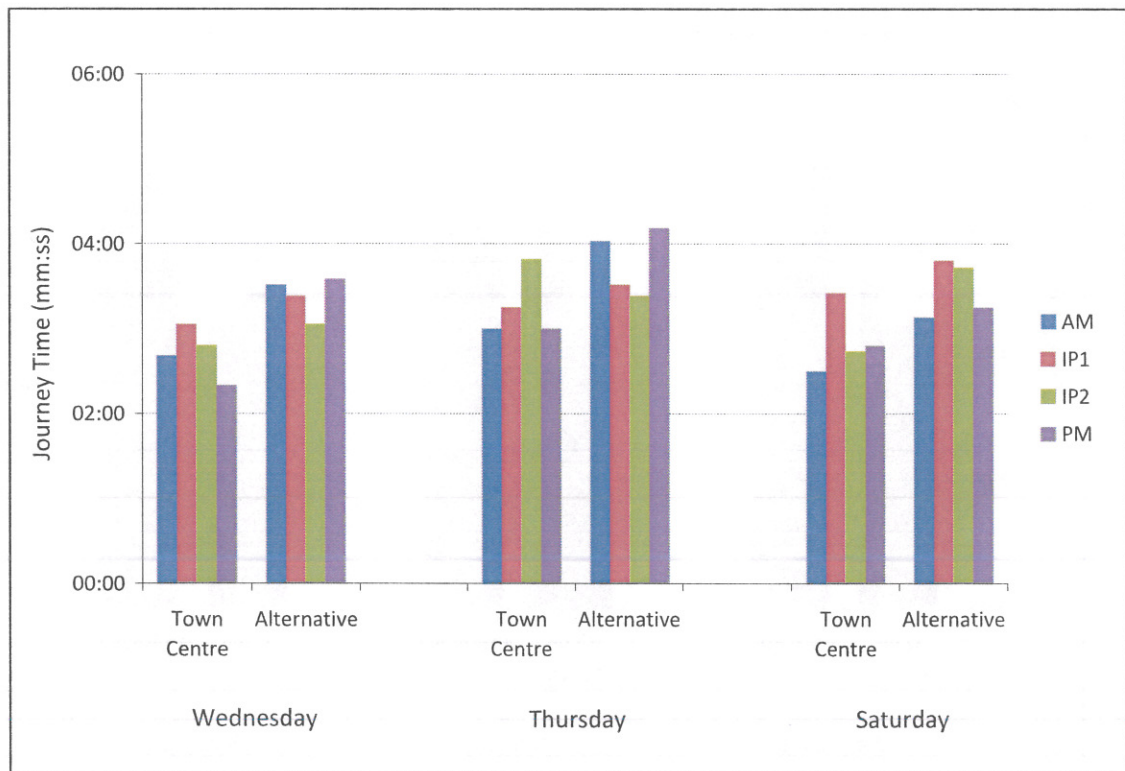


Figure 5: Observed Journey Times from Vallis Way to Fromefield (northbound)

4 The impact of traffic management

It is proposed that the Market Street section of the town centre would be subject to traffic management measures. The section over which speeds would reduce is assumed to be approximately 200m long (see Figure 7, overleaf), and observed speeds varied between 10 and 20 mph.

It is assumed that speeds along Market Street would reduce to a maximum of 11 mph¹. It has been further assumed that at times when the average speed is already below 11 mph, the additional delay would remain. Having done this, the extra time to travel through the town centre can be identified as shown in Figure 6. It can be seen that the worst additional delay is on a Saturday (up to 19 seconds), and that at some times there is no additional delay beyond that already experienced.

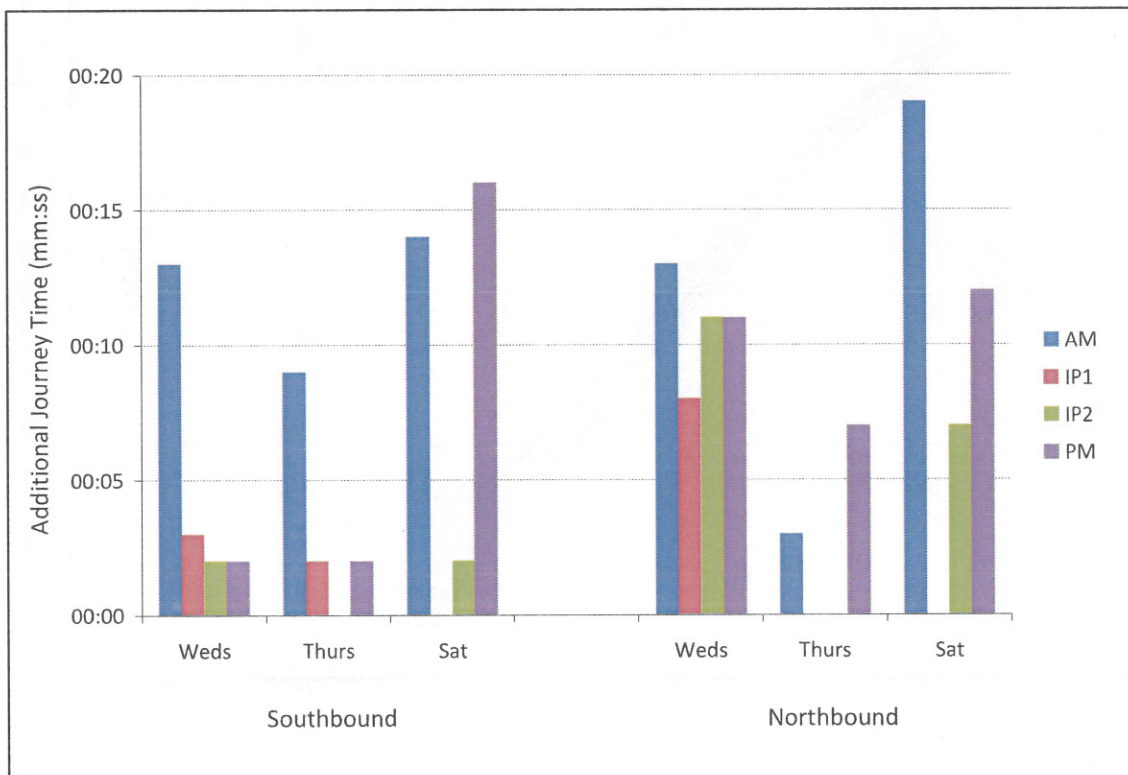


Figure 6: Estimated additional journey time through town centre with traffic management in place

¹ Frome Town Centre Remodelling consultation documentation. This is a similar, albeit slightly slower level of speed suggested as being achievable by a speed table in Table 3 of Traffic Calming Techniques, Institution of Highways & Transportation, January 2005.

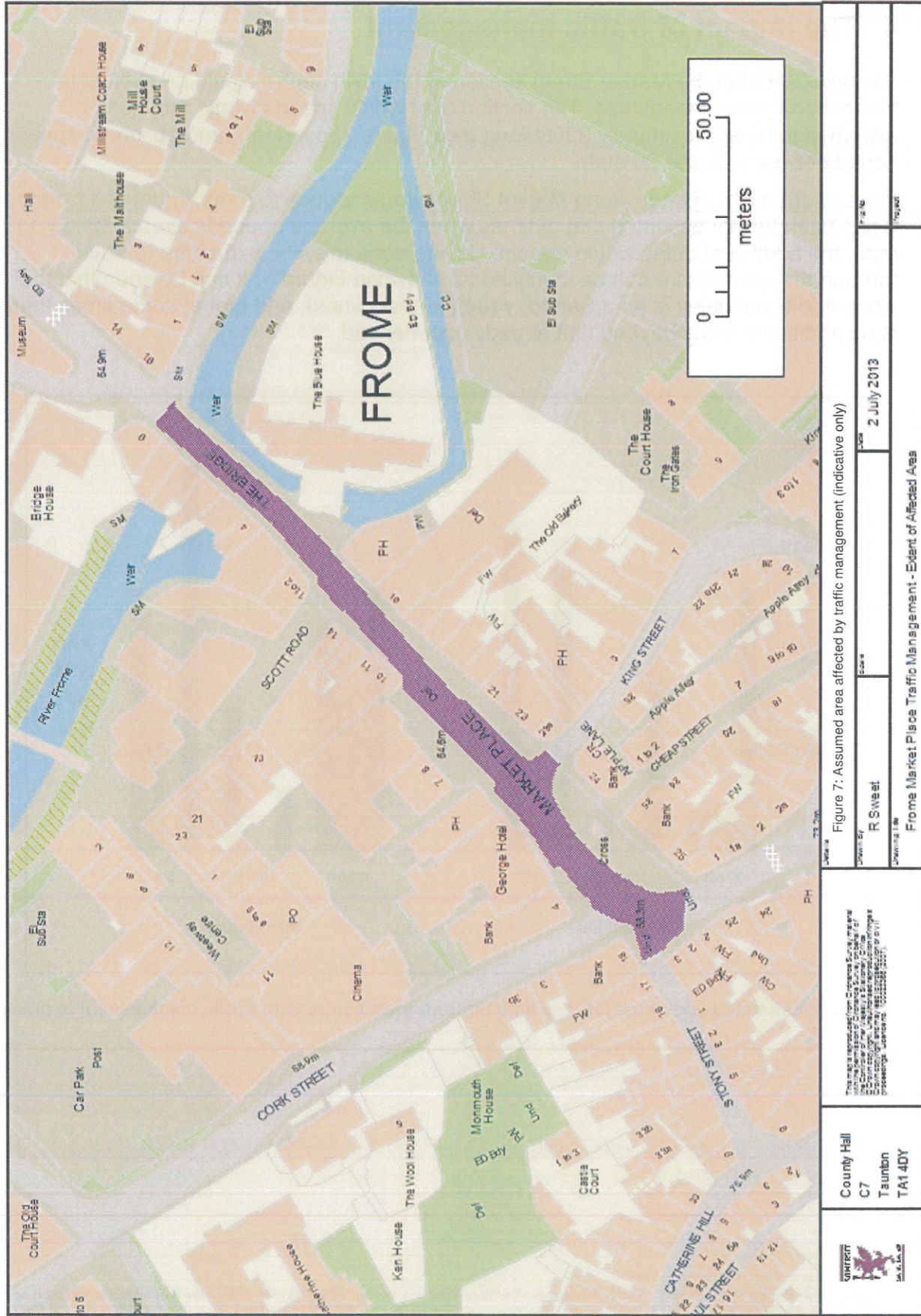


Figure 7: Assumed area affected by traffic management (indicative only)

	County Hall C7 Taunton TA1 4DY	The map is reproduced from Ordnance Survey data with the permission of Ordnance Survey. It is not to be used for navigation purposes. Ordnance Survey is not responsible for any errors or omissions in this publication.	Drawn by R Sweet	Date 2 July 2013	Project Frome Market Place Traffic Management - Edent of Affected Area
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Figure 8, below, adds this additional delay to Wednesday journey times and compares the Wednesday forecast with the observed times on Thursday which were slightly longer. This is a useful comparison because it shows that, in general, the difference is within the bounds of normal day-to-day variation.

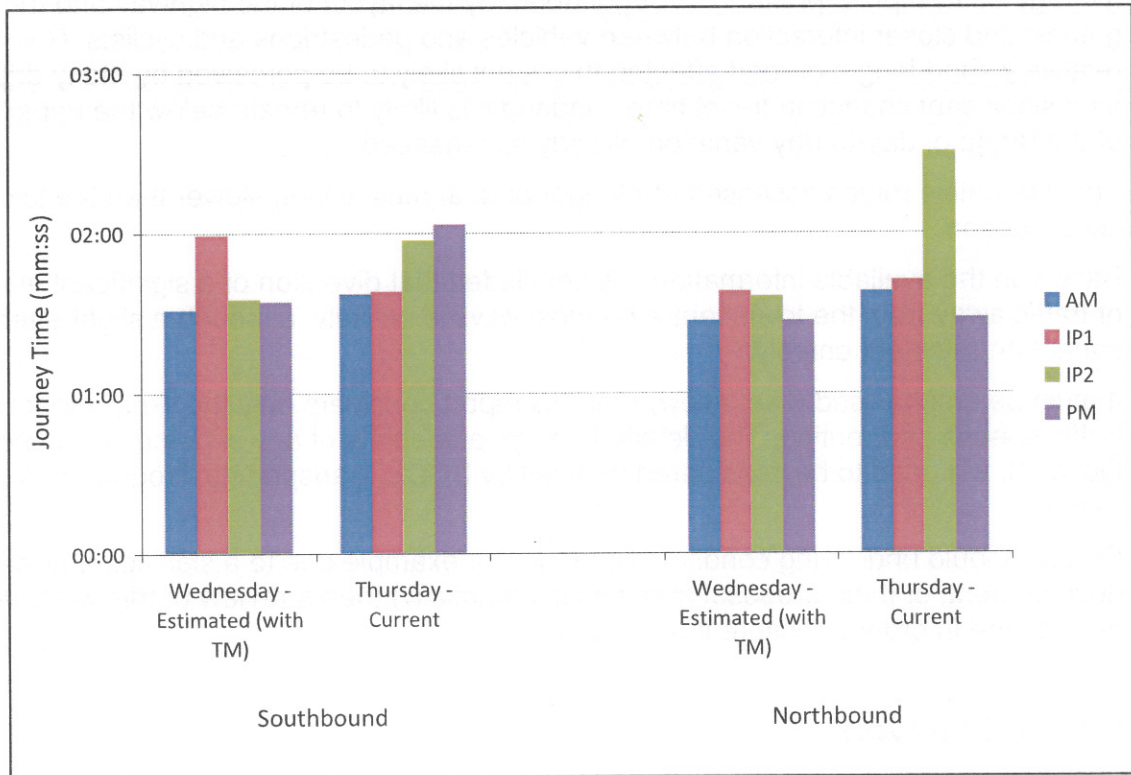


Figure 8: Potential Weekday journey times through Town Centre on Wednesday (with traffic management) compared with current Thursday journey times

Finally, it can be expected that traffic unfamiliar with the area is likely to continue using signed routes, and/or those determined using journey planners and sat-nav units, and so are unlikely to divert along minor roads.

5 Conclusion

The introduction of the proposed Traffic Management Option 3 would be a step change in the physical layout and look of Frome Town Centre. It is hoped that the proposal will result in vehicle speeds of around 11mph through the Market Place (reduced from an average of 15 mph at present), brought about by the layout of the highway and the greater and closer interaction between vehicles and pedestrians and cyclists. **Given the relatively short length of road affected this is not likely to be perceived by many drivers as a significant change in travel time** – indeed it is likely to remain below the upper end of the range of day-to-day variation already experienced.

The alternative routes assessed are longer and, at most times, slower than the town centre option.

Based on the available information it is concluded that diversion of a significant amount of traffic away from the town centre on most days is unlikely, although a slight effect cannot be ruled out entirely.

It must be emphasised (see below) that this report considers only the likely impact on traffic speeds and routing. The detailed design and safety of any scheme, including Option 3, will need to be considered in detail by SCC's Transporting Programmes Team.

Finally, should underlying conditions change (for example due to a significant new development, or if the proposal changes substantially) then a review of this work would be required in order to ensure it is still valid.

5.1 Further work

In the attached Technical Note a number of suggestions are made with regard to possible future work to add further detail to the likely impact. Given the conclusions above, most of these are considered unlikely to be of significant benefit and would be expensive to undertake.

It is however likely to be cost-effective to carry out monitoring if any planned disruptions (such as roadworks) occur on Market Street or the immediate vicinity. Such works would probably have a far more significant impact than traffic calming, and so would represent an absolute 'worst case', whilst monitoring the effects need not be expensive.

If this report satisfies Frome Town Council that the impact would be acceptable, then it should approach SCC's Transporting Programmes Team to discuss the details of any preferred option. As stated previously there is a substantial volume of studies and tasks that need to be undertaken prior to any scheme being acceptable, these studies and tasks include drainage, archaeology, heritage, safety, maintenance agreements, etc. This list should not be considered exhaustive at this stage.

It should also be borne that the results of this study does not infer Somerset County Council's support for such scheme. The county council does not have any resources to undertake any of the required feasibility studies or to implement the scheme being promoted by Frome Town Council.