



Proposed Development at Mountfield
Park:
Response to RGP Technical Note 39
on behalf of the South Canterbury
Alliance

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1. INTRODUCTION

1.1. This report responds to the points raised in RGP's Technical Note 39, 'Response to SCA' (TN39) which comprises Appendix P of RGP's Transport Assessment Addendum (TAA), August 2016. TN39 deals with the content of Railton TPC's Report 01B Final, 'Transport and Highways Review on Behalf of the South Canterbury Alliance' dated 25/05/16 (referred to subsequently as the Railton Report).

1.2. Paragraph 1.2 of TN39 states that, '*The exact scope of works that Railton TPC has been commissioned to undertake is not known*'. The scope of the work is clearly identified in paragraph 1.2 of the Railton Report and this paragraph is reproduced below for the avoidance of any doubt:

1.2 The purpose of this work is to assess the reliability of the transport supporting information and identify whether there are any risks that the proposed transport and access strategy will lead to unacceptable (severe) impacts. (p1, Railton Report)

1.3. It is noted that the Non-Technical Summary of TN39 that has been presented by RGP seeks to discredit the author and the work rather than to consider each of the important issues that have been raised. It is concerning that RGP has misrepresented, mis-quoted and misunderstood a number of the points raised in the Railton Report. Given the critical importance of the issues, this approach is considered to be inappropriate and unacceptable.

The Author

1.4. The author, Bruce Bamber, the Director of Railton TPC Ltd, has worked in transport planning for over 25 years, typically preparing Transport Assessments and Travel Plans for a wide range of land uses and has worked on and developed transport strategies for major developments similar to the one being proposed at Mountfield Park. He has considerable experience dealing with Highway Authorities and the Highways Agency/Highways England and has given evidence at Public Inquiries and Local Plan Inquiries.

1.5. The author has visited the site and the key parts of Canterbury City Centre during the peak hours and has been shown areas of concern by local residents. He has cycled the two key routes north and south of New Dover Road between the site and the city centre. He has previous experience of working in Canterbury around the Ring Road and in the Thanington/Wincheap area.

The Approach

- 1.6. The purpose of the work undertaken by Railton is to assess the technical work that has been undertaken. The fact that Kent County Council Highway Authority and Canterbury City Council have not objected on specific aspects of the assessments does not necessarily indicate that those assessments are robust, reliable or correct. The work is an independent review of the transport technical assessments that is not influenced by past agreements, planning aspirations or commercial interests.
- 1.7. This report should be read in conjunction with the Railton Report.
- 1.8. A summary and conclusion is set out at the final section of this report.

2. TRIP GENERATION, DISTRIBUTION AND ASSIGNMENT

General

- 2.1. Car trip generation rates can vary for a number of reasons. Higher car trip generation rates are found in less accessible locations since there are fewer opportunities to walk, cycle and use public transport to access facilities. It is reasonable to make adjustments to car trip generation rates to reflect the availability of sustainable modes and the proximity of a range of key facilities but care should be taken to avoid over-estimating the overall reduction in car trip rates by adopting an initial level of car trip generation that implicitly assumes a relatively accessible location and then applying further reductions to reflect the accessibility credentials of the site.
- 2.2. Concerns about the methodology adopted to derive car trip generation rates are set out in the Railton Report. TN39 has responded on a number of these points but the concern remains that the residential car trip generation for the site over-estimates the likely level of transfer from car to sustainable modes. These concerns are detailed in the following paragraphs.

Under-Estimate of Peak Hour Residential Car Trip Rates

- 2.3. Starting point residential trip generation has been derived from three hour trip generation rates used by Amey in the VISUM model.
- 2.4. The Railton Report pointed out the lack of any justification for the factor applied to three hour trip generation rates to convert them to peak hour trip generation rates. TN39 states that the factor that has been applied (0.385) is 'industry standard' (para. 2.7 of TN39). If this factor is industry standard it would be possible to provide a reference to the source that is presumably available to support the factor. No such reference is provided. Given the critical importance of this factor in assessing the highways impact of the proposed development it is not acceptable for the technical work to be lacking in this respect.
- 2.5. A general assessment of the relationship between 1 hour and 3 hour peak period vehicle trip rates based on private housing in the south and midlands contained in the TRICS database indicate that the AM peak hour comprises 42% of the three hour peak period and the PM peak hour comprises 40% of the three hour PM peak period. This suggests that the AM peak hour trip rate should be 9% higher than has been assumed. In the PM peak hour the trip rate should be 4% higher. This is a significant increase in the assumed trip rates. RGP provides no evidence for the base assumption for deriving

peak hour trip rates. The **evidence** indicates that the trip rates should be between 4% and 9% higher than has been assumed.

- 2.6. Notwithstanding the obvious source that is available to derive a suitable conversion factor (the TRICS database), TN39 seeks to justify the three hour to one hour residential trip conversion factor by reference to DfT data relating to variations in link flows during hours of the day. However, it is not justifiable to apply link flow data to residential trip generation data in the way that RGP has applied the data. For example, peak hour link flows include longer trips that do not start or end in the peak hours, link flows include trips that are not to or from residential dwellings, such as business trips, bus trips, delivery trips and linked trips such as those from school to work or shopping. Although there is a general pattern of link flows and residential trip generation increasing in the peak hours, there is no direct relationship in terms of the level to which link flows and residential generated trips increase in the peak hours. It is concerning that RGP suggest that any credence should be given to such an approach. It is also concerning that RGP appears to believe that Railton TPC has suggested the use of DfT factors (para. 2.11 of TN39). This is not true and indicates a cursory and cavalier approach in RGP's response to the Railton Report.

Over-Estimate of Reductions in Car Trip Generation Rates

- 2.7. The Railton Report points out that the residential trip generation rates that have been adopted as a starting point for assessment fall at the lower end of typical residential trip generation rates as would be extracted from the TRICS trip generation database for developments of various types, locations and sizes.
- 2.8. RGP states that the typical peak hour residential car trip rates identified in the Railton Report are for '*small groups of privately owned houses in rural locations*' (para. 2.4). RGP goes on to state that the rates that have been adopted by RGP as a starting point for assessment in relation to Mountfield Park '*do not make an allowance for the site's accessibility credentials, internalisation or the effect of mitigation*' (para. 2.5). However, the relatively low starting point for car trip generation does make allowance for a certain level of accessibility, opportunities for internalisation and the presence of some mitigation measures. The starting point for the trip generation used in the assessments should therefore be in a range that is appropriate for a location that lacks the accessibility credentials, opportunities for internalisation and mitigation **if** adjustments are then to be applied to make allowance for these locational characteristics. To start with trip rates that already reflect an accessible urban location with internalisation and

mitigation and then to apply further adjustments is to over-estimate the potential for mode shift.

Transfer of Trips to Non-Car Modes

- 2.9. The access strategy proposed by RGP relies upon some fundamental assumptions that have been made about the likely degree to which it will be possible for residents in the proposed development to use modes other than the private car. The Railton Report identifies concerns over the robustness of these assumptions and TN39 responds on some of the points raised.
- 2.10. The level of transfer of car trips to non-car modes for city centre trips is assumed by RGP to be between 45.0% and 70.1%. This information is set out in Appendix BB of the Transport Assessment and is summarised in Table 2.3 of the Railton Report. The information is mathematically and factually correct. Despite this, TN39 states that, '*This is either misleading or there is a significant misunderstanding relating to the assessment undertaken*' (para. 2.12 of TN39). The information is neither misleading, since it is factually correct, and there is no misunderstanding.
- 2.11. Paragraph 2.15 of TN39 states that, '*the suggestion that Corinthian is expecting a transfer of trips from the car of between 45% and 70% is disingenuous and does not reflect the assessment undertaken*'. There is no suggestion in the Railton Report that Corinthian expects an **overall** reduction in car travel of between 45% and 70%. The Railton Report is quite explicit in paragraph 2.6 that the figures referring to transfer of car trips to non-car modes relate to journeys to the **city centre** and all subsequent calculations that relate to the assumptions set out in Appendix BB of the Transport Assessment make it quite clear that the focus is only in relation to trips to and from the **city centre**. RGP has not understood the criticisms that have been made about the assumed level of trip transfer away from car and is seeking to undermine the work in the Railton Report on the basis of an assumed but incorrect interpretation. RGP's blasé approach to this issue is not acceptable, particularly given the critical nature of the assumptions to the assessment of the proposed development's highways impact.

Incorrect use of Outer Barton Ward Travel Patterns for the Entire Development

- 2.12. The level of transfer of trips from car to other modes assumed by RGP assumes a progressively greater overall reduction in car trip rates as the development progresses. The starting point is the Phase 1 situation where it is assumed that the level of car use

will reflect the observed pattern of movement in the outer Barton ward and this situation is then assumed to carry forward for the whole of the proposed development despite the development progressively being developed further from the city centre.

- 2.13. TN39 state, at paragraph 2.16 that, 'The true comparison which should be made is how the Phase 2 and Phase 4 trip rates relate to the Baseline (or Phase 1) trip rate'. In order to assist understanding the issues, Figure 6.9 of TN39 is reproduced below with assumed car mode share reductions expressed as percentages:

Table 2.1: Two-Way Peak Hour Car Trip Rates

		Generic trip rate	Phase 1 trip rate	Phase 2 target trip rate	Phase 4 target trip rate
Figure 6.9 of TN39	AM Peak	0.438	0.344	0.306	0.266
	PM Peak	0.543	0.426	0.379	0.329
% reduction from Baseline	AM Peak	-	-21.5%	-30.1%	-39.3%
	PM Peak	-	-21.5%	-30.2%	-39.4%
% reduction from Phase 1	AM Peak	-	-	-11.0%	-22.6%
	PM Peak	-	-	-11.0%	-22.8%

- 2.14. It has been assumed by RGP that the trip generation of Phase 1 of the proposed development will be 21.5% lower than the generic trip generation rates for the district on the basis that car driver trips within the outer Barton ward are 21.5% lower than in the district as a whole.
- 2.15. The assessments undertaken by RGP assume that the starting point for the **whole** of the proposed development (i.e. the level of car trip generation that would be expected in the absence of any mitigation) is the pattern of travel observed in the Outer Barton Ward. This is clearly unreasonable since the proposed development does not have the same locational characteristics as the outer Barton ward, most obviously being significantly further from the city centre and thus making walking far less attractive.
- 2.16. Technical Note 30 that is attached as Appendix C of the Travel Plan compares travel patterns for the inner and outer Barton wards. This shows that 10% fewer people walk to work from the outer Barton ward compared with the inner. In terms of driving, 11% more people drive from the outer Barton ward as from the inner. These data show very clearly that the pattern of travel is heavily influenced by the distance from the city centre. The following table summarises the observed mode shares for walking and car driver

and distances of the inner and outer Barton wards from the city centre as well as the distance of the proposed development from the city centre:

Table 2.2: Relationship of Mode share with Distance from City Centre

	Inner Barton Ward	Outer Barton Ward	Proposed Development
Distance from City Centre	850m	1,750m	2,500m
% walk mode share	39.2%	29.4%	Assumed in TA to be same as Outer Barton Ward
% car driver mode share	33.2%	44.7%	

- 2.17. The data show that there is a very significant increase in car mode share moving further from the city centre. The Transport Assessment assumes that the proposed development will have the same travel profile as the outer Barton ward. However, this makes no allowance for the clear shift from walking to car driver mode share as distance from the city increases. Indeed, if the pattern of observed data is extrapolated to the centre of the proposed development, the baseline car mode share would be 52.9%, similar to that observed for the district as a whole. Although it is unlikely that the change in walk and car mode share will be as great as this, it cannot be rationally argued that the baseline mode share for the proposed development will mirror that observed for the outer Barton ward. This supports the assessments set out elsewhere in this report and the previous Railton Report that provide evidence that the potential for mode shift for the proposed development has been significantly over-estimated.
- 2.18. It is noted that a comparison is made, in Technical Note 32, between the observed pattern of travel within the Barton ward since 1991 and observed changes in travel patterns in Oxford and Cambridge over the same period. Notwithstanding the leap of faith required to accept that it is possible to believe that the Barton ward will mirror mode shift changes observed in the cities of Oxford and Cambridge, the data shown in the table above show quite clearly that the pattern of travel in the Barton ward will not reflect the pattern of travel in the proposed development. It is not, therefore, justifiable to use data from Oxford and Cambridge to justify the predicted changes in mode share at the proposed development.

Trip Generation and Trip Distribution

- 2.19. RGP has alleged that the Railton Report confuses trip generation with trip distribution with the implication that the RGP assessment has not been properly understood.
- 2.20. Paragraph 2.18 of TN39 states that, '*There is a suggestion from Railton that Appendix BB relates to the traffic generation, which is incorrect*'. Appendix BB sets out the methodology that has been used to estimate mode transfer from car to other modes. It includes a subjective weighting or distribution for a number of trip types but these subjective percentages are provided as part of a calculation of mode shift from car to other modes. This is confirmed by paragraph 6.3.23 of the Transport Assessment that states, '*To determine which off-site attractors are likely to experience a transfer of vehicle trips, a separate likelihood of accessibility matrix has been established as attached at **Appendix BB***.' The fact that Appendix BB deals with trip generation is even acknowledged in TN39 at paragraph 2.36 that states, '*the TA assessment at Appendix BB converts generic trip rates which are assumed for all developments across the district as a whole to site specific trip rates*'. The level of mode transfer is based on a ranking for 'Distance', a ranking for 'Opportunity for mode change' and a ranking for 'Car parking availability at destination'. These measures are used to identify a change in car trip generation. It is blatantly clear that Appendix BB constitutes a methodology for adjusting car trip generation rates. The statement at paragraph 2.18 of TN39 is therefore incorrect. ***The Railton Report does not confuse traffic distribution with traffic generation.***

Incorrect Distribution of Work Trips

- 2.21. It appears that TN39 accepts that the distribution of work trips should be based on 2011 census data as suggested in the Railton Report. TN39 acknowledges at paragraph 2.30 that the adoption of the work trip distribution based on 2011 census data leads to a 5% reduction in overall trips to the city centre. TN39 suggests that this is not a significant difference but does not go on to identify what this would mean in terms of additional car trips using junctions accessing the A2. Neither does TN39 consider the other important implication of adopting the 2011 census distribution of work trips that is a significant change in the distribution of traffic travelling east and west on the A2. The census distribution shows that the percentage of trips travelling east would be more than double that assumed in the Transport Assessment (19.4% of work trips compared with 9.6% of work trips).
- 2.22. TN39 suggests that data for area Canterbury 015 have been removed from the table in Appendix 2 of the Railton Report. If RGP had checked these data it would be known

that no area with this designation exists. TN39 also queries why working at home is not included. The reason is that the purpose of the data is to identify modes of active travel and working from home does not constitute active travel to and from work.

Misrepresentation of Assumptions about Mode Transfer

- 2.23. The Railton Report sets out a carefully considered critique of the method that has been used to identify the target level of mode transfer together with an alternative calculation that adopts more realistic assumptions.
- 2.24. It is a matter of some concern that the assumptions that are adopted in Appendix BB of the Transport Assessment are not justifiable and the methodology is biased and unsupported. However, the result of the calculations is, by happy coincidence, a mode transfer from car of 23%, in line with the Canterbury District Transport Strategy 2014-31 (Draft) target mode share reduction for driving a car or van from 55.0% in 2011 to 42.3% in 2031, an overall reduction of 23.1% from 2011 to 2031 (see Table 14.1 of Canterbury District Transport Strategy 2014-31). It therefore appears that the RGP work is deliberately contrived to reproduce this level of mode transfer in order to present a pseudo justification for the adoption of significantly reduced trip generation rates.
- 2.25. Whether a level of mode transfer is realistic and achievable is not a function of targets but a function of the genuine opportunities available to people wishing to undertake journeys to key facilities and a range of other factors that influence mode choice. There is an absurd simplicity to the methodology adopted to derive predicted levels of mode transfer and this methodology does not stand up to scrutiny.
- 2.26. Paragraphs 2.37-2.42 of TN39 misrepresents the information presented in Appendix 4 of the Railton Report. This is surprising given that the methodology is that developed by RGP. Indeed, RGP's comments reveal a fundamental confusion on the matter of mode transfer. The bullet points in paragraph 2.37 are meaningless. The first bullet point states, '*The site would generate 75% of trips to the Kent and Canterbury Hospital by car, compared with another site in the Borough, perhaps in Whitstable*'. This is nonsense. The information in Appendix 4 indicates that it would be reasonable to assume that the car trip generation between the site and the hospital could be reduced by 25% as a result of opportunities to travel by modes other than the car. It does not mean that it is expected that 75% of employees will drive to the site and it is not comparing the site with another site, perhaps in Whitstable. It is suggesting that there is some potential to influence commuting car trips to this destination. It is again unacceptable that RGP should demonstrate both an inability to understand the principle of mode transfer and

should misrepresent what are genuine concerns over the assessment process that has been undertaken.

Under-Estimate of Impact on City Centre Roads

- 2.27. Paragraphs 2.46-2.49 of TN39 set out a reworking of the impact on the city centre roads based on the results of the Railton Report revised level of mode transfer set out in Appendix 4. The results are set out in Table 3.1 of TN39 and the calculation is set out in Appendix C of TN39. The RGP conclusion is that there is no significant difference between adopting RGP and Railton assumptions.
- 2.28. Figure 3.1 of TN39 identifies a 'best case' and a 'worst case' for the Railton Assessment. Although the former may be the 'best case' as far as RGP is concerned, no such case is identified in the Railton Report. RGP has applied the DfT link flow data factors to the peak hour trip generation to manufacture a 'hybrid' level of trip generation. As explained above, this method has no justification and the 'best case' therefore has no relevance as far as the Railton work is concerned and no credence as far as technical assessment is concerned.
- 2.29. It is agreed that the Railton Assessment, based on its more realistic assumptions about mode transfer, does indicate that the number of vehicle trips between the residential element of the site and the city centre is in line with the sensitivity assessment undertaken by RGP. The sensitivity assessment has been undertaken by RGP, at the request of the Highway Authority, to test the implications of achieving a lower level of trip transfer from car. It is therefore considered reasonable to treat the sensitivity assessment as the **most likely** outcome of the proposed development in terms of the number of car trips between the site and the city centre. An uplift in employment trips will also need to be added to this level of residential trips (see below) and further allowance made for trips to areas to the north that will route around the city centre (see below).
- 2.30. RGP does not consider the overall point, made in the Railton Report, that the application of more reasonable assumptions about mode transfer leads to overall increases in car trip generation in the peak hours of between 353 and 678 vehicle movements. A proportion of these additional vehicle trips will be to and from the city centre (accounting for the uplift in movement to the RGP 'sensitivity' levels'). The remainder of the additional trips will appear on routes to non-city centre destinations. The implication is that the impact on the A2 will be greater than has previously been assumed and the operational assessment of the proposed A2 junction needs to be updated.

Failure to Consider Non-City Centre Trips using City Centre Roads

- 2.31. Appendix B of TN39 contains two printouts from Google Maps showing the distances and times of routes between the site and Whitstable and Herne Bay. The information is used to justify allocating all non-city centre traffic to the A2, and in particular allocating all trips to areas to the north and north-east of the development to the A2 west, i.e. using a longer but less congested route via Brenley Corner and the Thanet Way.
- 2.32. The routes shown in Appendix B have been reproduced using Google Maps and the results are attached as **Appendix 1** of this report. The following table summarises the results shown in TN39 and those obtained by Railton:

Table 2.2: Journey Times and Distances to Whitstable and Herne Bay

Journey to	via	RGP		Railton	
		distance	time	distance	time
Whitstable	A2 west	17.6 miles	26 min (23 min)	17.5 miles	24 min (21 min)
	A290	9.7 miles	30 min (25 min)	9.5 miles	26 min (22 min)
Herne Bay	A2 west	22.0 miles	27 min (25 min)	21.9 miles	26 min (24 min)
	A291	10.3 miles	34 min (26 min)	10.2 miles	29 min (22 min)

(...) figures in brackets show journey time without traffic

- 2.33. It is not surprising that there are some discrepancies between the results obtained by RGP and those obtained by Railton since the journey time tool on Google Maps is not entirely reliable. However, it is clear from the results that the journey length to Whitstable from the site via the A290 is just over half the journey length via the A2 west and the journey length to Herne Bay via the A291 is less than half the journey distance via the A2 west. In terms of journey times, without traffic the journey time to Whitstable via the A2 is 1-2 minutes shorter than the route via the A290. With traffic the journey is 4 minutes shorter via the A2 using the RGP data and 2 minutes shorter using the Railton data. For the journey to Herne Bay with traffic the journey time via the A2 is 7 minutes shorter using RGP data and 3 minutes shorter using Railton data.
- 2.34. Although there are some modest savings in travel time to be achieved by travelling on the A2 west these are not sufficient to entirely outweigh the very significant differences in journey length via the A2 compared with routes through the centre of Canterbury. It is entirely unreasonable to base all the assessments of traffic impact on an assumption that all trips to locations around Whitstable, Herne Bay and Thanet will use the A2 west.
- 2.35. The 2011 census data indicates that over 10% of work trips are to locations to the north and north-east of Canterbury. If this figure is applied to the total site trip generation it

equates to between 150 and 200 vehicle trips in the peak hours. These are longer distance trips that are not easily transferred to non-car modes. The Transport Assessment is deficient in that it makes no allowance for any proportion of these trips travelling through Canterbury.

Under-Estimate of Employment Trips

- 2.36. TN39 does not deal with the points raised in the Railton Report in paragraphs 2.23-2.25 that indicate that the Transport Assessment has underestimated the number of employment car trips by up to between 253 and 350 trips in the peak hours. Given that no argument is offered in TN39 to support the level of employment car trip generation assumed as a basis for the assessments there remain very serious concerns over the robustness of the work that has been undertaken.
- 2.37. Paragraph 2.25 of the Railton Report points out that Highways England did not support the use of low employment car trip generation rates combined with an assumed level of internalisation of trips. It is noted that further assessments have been undertaken at the junctions at the A2 in response to Highways England's concerns. However, RGP has stated that since the Highway Authority has not raised the same issue there is no reason to repeat any of the assessments that have been undertaken at other junctions between the site and Canterbury city centre. There is clearly a contradiction with this since the issue will affect all junctions and not only those that are the responsibility of Highways England.

3. TRAFFIC GROWTH

Under-Estimate of Background Traffic Growth

- 3.1. TN39 points out that the New Dover Road park and ride site opened in 2000 and attributes changes in traffic flows along the New Dover Road corridor between 2000 and 2005 to the increased popularity of the park and ride. The increase in daily flows on the Old Dover Road corridor between 2000 and 2006 was around 3,000 vehicles per day. The park and ride site was already operating in 2000 so any increase in the use of the Old Dover Road corridor could only be attributable to year on year marginal increases in popularity. The site had only 600 parking spaces and the parking schedule greatly favours long-stay parking. It is inconceivable that anything but a very small proportion of the growth in traffic observed on the Old Dover Road corridor between 2000 and 2005 could be attributable to an increase in popularity of the park and ride site. TN39 fails to explain why, if this is the reason for variations in flow on the Old Dover Road corridor, that the popularity of the park and ride declined after 2009 and then increased after 2012.
- 3.2. TN39 combines observed traffic flow data for the sites along the Old Dover Road corridor. The combined data demonstrate very clearly that traffic flows on the corridor have been increasing since 2012. This is a very clear trend and one that has been ignored in the assessments undertaken by RGP. The graph presented in TN39 indicates that traffic flows have increased over the most recent three year period by over 6%. There is no suggestion, even by RGP that changes in the use of the park and ride have influenced this increase. If this rate of increase were to continue the level of growth allowed up to 2031 would materialise by 2024.
- 3.3. The Railton Report presents evidence of traffic growth between 2012 and 2014 of 2% per year. The data presented in TN39 indicates traffic growth on the Old Dover Road corridor between 2012 and 2015 of 2% per year. It is concluded that there is strong evidence to indicate that the level of background traffic growth that has been assumed is a significant under-estimate of what is likely to materialise over the assessment period.

Failure to Account for Effect of New A2 Junction

- 3.4. The Railton Report raises the issue of the increased attractiveness of the new A2 junction compared with the existing junction. This issue was originally raised in the

Amey Report (March 2016). Although the issue is clearly identified in the quote from the Amey Report at paragraph 3.13 of TN39 there is no comment on this issue.

- 3.5. It remains a fact that the technical assessment work is blind to this issue and the possibility that the construction of the new junction will further accelerate traffic growth on the New Dover Road corridor.

Failure to Allow for Committed Development Traffic

- 3.6. Paragraph 3.17 of TN39 provides a further example of a cursory or deliberately misleading interpretation of the points raised in the Railton Report. The Railton Report correctly identifies those developments that have been taken into account in the VISUM model. TN39 selects three of these developments and states that the Railton Report considers that these three developments will lead to growth on the New Dover Road corridor above 17% to 18%. This assumption has no rational basis and the argument is disingenuous and unprofessional.
- 3.7. The fact of the matter is that no allowance has been made in the assessments for the local impacts of committed development. The approach adopted in the Transport Assessment in relation to Site 10 and Thanington Park is to look at the level of background growth predicted on the key links associated with these developments and if the predicted increases in background growth are in excess of or similar to the predicted traffic generation of the committed developments then it is assumed that background traffic growth accounts for the committed development flows. This approach is logically inconsistent, failing to properly take account of cumulative traffic growth and the approach is at odds with normal industry practice. The underlying assumption is that all background traffic growth on adjacent links can be assumed to be related to the committed development. This is clearly incorrect.
- 3.8. In the case of Howe Barracks, although TEMPRO may include trip ends associated with the development, TEMPRO does not make allowance for the uneven distribution of new trips on the network. The Transport Assessment makes no attempt to consider what the local effects of the development might be. This further undermines the overall approach adopted in the assessments in considering the effects of committed development.
- 3.9. TN39 does not deal with the point raised at paragraph 3.21 of the Railton Report relating to growth in student numbers within the city and other possible local impacts of other committed developments.

4. JUNCTION OPERATIONAL ASSESSMENTS

Failure to Calibrate Junction Models

- 4.1. TN39 does not deal with the concerns about the calibration of junction models based on queue length observations or the lack of them. This is surprising given that the issue is fundamental to understanding the impact of the proposed development and the assessment of junction delays forms the basis of the assertion that delays will be less after development than before. The latter point is considered further below. The issues raised in the Railton Report at paragraphs 4.1 to 4.3 remain.
- 4.2. Despite TN39 clarifying some issues relating to individual junction modelling the following concerns remain:

Junction 5 – St Lawrence Road/New Dover Road: Capacity Concerns

- 4.3. TN39 makes no comment on the concerns raised in the Railton Report about the future operation of this junction. It should be noted that these concerns are increased if the results of the sensitivity test operational assessments are considered. Figure 11.5 of the Transport Assessment indicates very significant increases in delay at the junction compared with the non-sensitivity test. No mitigation is proposed at this junction.
- 4.4. It is noted that St Lawrence Road is identified as a possible alternative route for those unable to make the proposed right turn from Old Dover Road into Oaten Hill. Given the predicted long delays at the St Lawrence Road/New Dover Road junction this alternative route strategy appears to be ill-conceived. The alternative route using the ring road will further exacerbate congestion on and around the ring road.

Junction 6 – St George's Place/ Upper Chantry Lane/Lower Chantry Lane/New Dover Road: Adverse Impacts on Pedestrians and Cyclists

- 4.5. It appears that there have been some significant changes in the proposed treatment of this junction. The TAA states at paragraph 3.14.5 that the proposals are shown on Drawing Number 2013/1749/036 attached although no appendix appears to contain the drawing.
- 4.6. It is proposed by RGP to maintain sufficient capacity at this junction and provide for necessary bus movements by removing the pedestrian crossing point on the Upper Chantry Lane arm. The alternative pedestrian crossing point is 55m from the junction. It is also proposed to remove the signalised pedestrian crossing point from the St George's Place arm of the junction. The nearest alternative crossing point is 70m

from the junction. Guard railing is proposed to deter those who are inconvenienced by the removal of the crossing from crossing at the junction.

- 4.7. These are significant dis-benefits for pedestrians in an area that has very high pedestrian flows. Paragraph 3.14.1 of the TAA suggests that the proposed changes will not represent a barrier to movement for pedestrians from Mountfield Park but entirely ignores the very significant adverse impact that the proposals will have on existing pedestrians in the area.
- 4.8. The revised junction layout also removed cycle advance areas since these increase intergreen times. The safety and amenity of cyclists has therefore been reduced at this location.

Junction 9 – Oaten Hill/Nunnery Fields/Old Dover Road: Concerns over Enforcement of Banned Right Turns

- 4.9. The concern about the problem of enforcing right turn bans at this junction remains. The need to enforce right turn bans at this junction and at the St George's Place/Upper and Lower Chantry Lane junction forms a fundamental part of the proposed access strategy, both in terms of avoiding severe highways impacts in terms of congestion and in terms of being able to deliver the proposed public transport strategy. The effectiveness of camera enforcement has not been demonstrated. Given the critical importance of being able to guarantee a long-term strategy, the lack of a robust and convincing approach to the problem remains a concern.

Unreliability of Journey Time Assessments

- 4.10. The Non-Technical Summary repeats RGP's statement that the proposed development will lead to '*a level of delay no greater than that which occurs at present*'. This statement is a selective interpretation of the information set out in Appendix KK of the Transport Assessment. The data show that the journey time between the A2 and the city centre via the New Dover Road, the main route into the city from the A2, increases in both directions as a result of the proposed development. This fact is not acknowledged in the summary statement. It should be noted that the results have no credibility since base year models have not been calibrated against observed queue lengths. Further, the journey time assessments have not been undertaken for the sensitivity situation and evidence suggests that the trip generation of the proposed development should be increased due to an under-estimate of employment trips, background growth should be increased and traffic associated with committed development should be added. All of these factors will increase delay for road users.

- 4.11. The statement that the development will lead to ‘*a level of delay no greater than that which occurs at present*’ is not technically justifiable, relies on a partial reading of the results, omits any reference to the sensitivity situation and does not take account of additional traffic associated with the employment uses or the effects of increased background traffic growth and traffic associated with committed development.

5. SUSTAINABLE TRAVEL

Failure to Acknowledge Distance Barrier to Walking

- 5.1. Paragraph 5.2 of TN39 states that Railton considers that the appropriate walking mode share for the development is set out in Appendix 2. This is another example of a flagrant misrepresentation of data on the part of RGP. Appendix 2 is entitled, 'Work Destinations for Existing Residents in south Canterbury'. There is no suggestion in any part of the Railton Report that the walk mode share is appropriate for Mountfield Park. Existing residents in south Canterbury are located significantly closer to the vast majority of destinations than residents in the Mountfield Park development. There is no justification for applying the walk mode share for existing residents to residents in the proposed development since walk distances to key destinations are longer for residents in the proposed development.
- 5.2. Table 5.1 of the Railton Report clearly demonstrates that the vast majority of key destinations are not within convenient walking distance of the site. Paragraph 5.4 of TN39 states that a significant proportion of walk distance is within the site boundary. People do not distinguish between walk distance within a development and outside a development when deciding whether to make a walk journey. Table 5.1 considers distances from the centre of the north and south parts of the site. This is a perfectly reasonable and rational approach to adopt. For every journey that may be shorter than the average there will be one that is longer.
- 5.3. The clear inverse relationship between the level of walking and distance from the city centre has been described above. TN39 fails to deal with the overall point that walk distances from Mountfield Park are not conducive to encouraging a high level of walking to the vast majority of key destinations.

Failure to Acknowledge Barriers to Cycling

- 5.4. The author of the Railton Report has cycled routes 1 and 4 that constitute the key cycle routes between the parts of the site north and south of New Dover Road and the city centre. Both routes are subject to significant gradients (TN39 identifies a 35m level difference between the city centre and the Gate Roundabout). The author, despite being a competent and frequent cyclist, did not find the routes attractive in terms of negotiating the hills. TN39 quotes Sustrans design criteria about maximum gradients (para. 5.6) but fails to acknowledge the reality of the situation which is that

the routes do not offer a realistic opportunity to achieve a significant shift in mode from car to bicycle.

- 5.5. It is noted that SPOKES support the proposed enhancements to cycle infrastructure. This support is, of course, unsurprising as any improvements to cycle infrastructure will be welcomed. However, the important point to consider in the context of the overall access strategy is whether there is an opportunity to offer a significant proportion of residents within the proposed development, an attractive cycle alternative to the private car. The level difference alone significantly limits the potential for mode shift to bicycle. The quality of the routes is also not ideal and despite some opportunities for improvements there will remain a number of issues relating to safety, amenity and delay that will deter cyclists.

Over-Ambitious Bus Use Targets

- 5.6. It is acknowledged that the VISUM modelling has not taken into account the proposed bus priority measures along the New Dover Road and it is not possible to draw a clear conclusion from the VISUM modelling work whether or not the proposed bus mode share is realistic and achievable.
- 5.7. The target of 9.3% of all trips by bus remains very ambitious, representing a 70% increase in bus use for residents in Mountfield Park compared with existing residents living in south Canterbury.
- 5.8. The bus access strategy remains highly dependent on a number of changes in junction configuration and operation in the centre of the city, some of which have significant adverse impacts on pedestrian movement and some of which are questionable in terms of their feasibility and safety. There therefore remains doubt as to the deliverability of the bus access strategy as suggested in the Transport Assessment and Addendum.
- 5.9. TN39 has misunderstood the reference to 1.8% of travel to work places in Canterbury 016 area. It has been assumed that the figure of 1.8% is derived from Appendix 2. However, Appendix 2 shows travel **from** area 016 rather than **to** area 016. The relevant Census table is Table WP7701EW. The relevant data are reproduced below:

Table 5.1: Travel to Work in Area Canterbury 016

	All modes	PT	drive	bicycle	walk
Less than 2km	1,877	53	456	151	1,145
2km to less than 5km	1,178	129	686	77	179

5km to less than 10km	1,532	135	1,223	42	19
10km to less than 20km	2,469	278	1,997	30	34
20km to less than 30km	2,168	303	1,705	11	28
30km to less than 40km	209	26	176	0	3
40km to less than 60km	197	30	155	0	6
60km and over	251	59	149	5	30
Total	9,881	1013	6547	316	1,444

5.10. The figure of 1.8% derives from the number of people travelling up to 5km by public transport (53+129) (i.e. those living within Canterbury) divided by the total number of people travelling into the area to work (9,881). This provides evidence, based on existing patterns of travel, that the prediction of 9.3% of commuting journeys to workplaces within the new development being by bus is a significant over-estimate of what is likely to happen.

Lack of Credible Measures to Support Rail Use

5.11. TN39 provides no further information that would suggest that the accessibility of rail services by sustainable modes can be successfully achieved at the proposed development.

Lack of Travel Plan Sanctions

5.12. It is proposed that *'improvements to the most sensitive junctions identified could then form the basis for Travel Plan sanctions if parts of the Travel Plan were not to achieve the predicted mode change'* (TA, para. 11.1.4). It is clear from the work that has been undertaken that no additional improvements are available at the most sensitive junctions (if they were available they would have been proposed already). There is therefore a significant risk that there will be no way to mitigate unacceptable highways impacts if/when the mode share targets are not achieved. The evidence set out in this report and the previous Railton Report suggest that the likelihood is that the targets will not be achieved.

Conclusion on Sustainable Travel

5.13. Railton has raised serious concerns about the ability of residents and workers in the proposed development to travel on foot or by bicycle. TN39 provides no convincing

evidence that walking and cycling can provide for the vast majority of trips to and from the proposed development. Although improvements are proposed to bus routes and services, the target mode share for bus use is very ambitious.

6. ENVIRONMENTAL IMPACT

- 6.1. TN39 does not deal with the issues of the sensitivity of the city centre to changes in air quality.

7. FAILURE TO ASSESS IMPACT ON NACKINGTON ROAD

- 7.1. TN39 presents data to demonstrate that the route via the A2 is shorter and quicker than the route via Nackington Road to access Folkestone. Folkestone lies at the most easterly part of Shepway District. Junction 11 of the M20, that has been used as a basis for comparing route lengths in the Railton Report, lies at a point where the Nackington Road route meets the A2 route for journeys to more than half of the Shepway District. Nackington Road remains an attractive route for those driving between the proposed development and Hythe and areas to the south and west of Hythe. It is not reasonable to assume that no traffic from the proposed development will travel south on Nackington Road as is the case in the Transport Assessment.

8. SUMMARY AND CONCLUSION

- 8.1. This This report responds to TN39 prepared by RGP in response to Railton TPC's Transport and Highways Review on Behalf of the South Canterbury Alliance.
- 8.2. The Non-Technical Summary of TN39 largely comprises an attempt to discredit the author and approach of the Railton Report and mis-represents, mis-quotes and misunderstands a number of the points raised in the Railton Report. This report deals with the data, evidence and arguments set out in the body of TN39 and concludes that there is convincing evidence that the transport impact of the proposed development has been significantly under-estimated.
- 8.3. The following conclusions are drawn from the assessment of the content of TN39 set out above.

Under-Estimate of Peak Hour Residential Car Trip Rates

- 8.4. The assumed one-hour trip generation rates adopted in the Transport Assessment are supported in TN39 with reference to DfT data relating to variations in flows on links. There is no logical connection between variations in flows on links and variations in residential trip generation so the approach has no validity. The basis for converting three hour trip generation rates to peak hour trip generation rates remains unjustified. The most appropriate data source for converting three hour to peak hour trip generation, the TRICS database, indicates that peak hour trip rates should be between 4% and 9% higher than assumed by RGP.

Over-Estimate of Reductions in Car Trip Generation Rates

- 8.5. The outcome of a detailed assessment of the assumptions that have been adopted to derive trip generation rates leads Railton to believe that the most robust estimate of the number of additional car trips travelling between the residential element of the site and the city centre is in line with the sensitivity assessment that has been undertaken in the Transport Assessment. This should not, therefore, be considered a sensitivity assessment, but the most likely outcome in relation to residential trip generation.

Under-Estimate of Employment Trips

- 8.6. Evidence suggests that up to between 253 and 350 additional employment car trips will be generated in the peak hours. TN39 provides no evidence that the level of employment car trip generation assumed in the Transport Assessment is robust.

Failure to Consider Non-City Centre Trips using City Centre Roads

- 8.7. It is clear from an examination of the available data that it is unreasonable to assume that all car trips to areas to the north (Whitstable, Herne Bay, Thanet) will use the A2

west and some proportion will use routes around the city centre. The Transport Assessment is lacking in this respect.

Under-Estimate of Impact on A2 Junctions

- 8.8. Evidence suggests that the number of car trips between the site and non-city centre destinations is significantly higher than anticipated in the Transport Assessment. The ability of the proposed new A2 junction and junctions between the site and the A2 to accommodate a higher level of future generated traffic therefore needs to be tested.

Under-Estimate of Background Traffic Growth

- 8.9. Evidence presented by both Railton and RGP indicates that traffic growth on the New Dover Road corridor has increased by an average of 2% per year over the last three years. The assumed growth of 17%-18% to 2031 could therefore materialise by 2024. There is therefore a significant risk that future year baseline traffic flows adopted in the Transport Assessment under-estimate background traffic growth.
- 8.10. Evidence shows that the presence of the New Dover Road park and ride does not account for the changes in Traffic on New Dover Road since 2000.

Failure to Allow for Committed Development Traffic

- 8.11. The approach adopted to take account of committed development flows is severely lacking. No allowance is made for traffic associated with any committed development, even on links that are most affected by those committed developments.

Failure to Account for Effect of New A2 Junction

- 8.12. No allowance is made in the assessments for the effect of the new A2 junction on traffic flows on the New Dover Road corridor, in particular the likelihood that the new junction will attract new trips onto this corridor, thus accelerating background traffic growth.

Failure to Calibrate Junction Models

- 8.13. It is not possible to derive meaningful conclusions on the results of future year operational assessments since base year assessments have not been calibrated against observed queues during the peak periods.

Unreliability of Future Year Junction Models

- 8.14. Predicted future year flows are unreliable since they do not take into account additional employment traffic, possible additional traffic growth, the routing of some longer distance car trips around the city centre and committed development traffic.

The results of the future year operational assessment of key junctions therefore under-estimate queues and delays.

Unreliability of Statement on Future Year Delays

- 8.15. The statement that the development will lead to '*a level of delay no greater than that which occurs at present*' is not technically justifiable, relies on a partial reading of the results, omits any reference to the sensitivity situation and does not take account of additional traffic associated with the employment uses or the effects of increased background traffic growth and traffic associated with committed development.

Concerns over Enforcement of Right Turn Bans

- 8.16. In relation to the operation of individual junctions Railton remains concerned that the success of the proposed highway strategy relies heavily on being able to enforce bans on right turn movements using cameras and on alterations to the St George's Place signalised junction that adversely impact on pedestrian movement.

Concerns over St George's Place/ Upper Chantry Lane/Lower Chantry Lane/New Dover Road Junction

- 8.17. The revised layout of this junction includes measures that will have significant adverse impacts on pedestrian and cycle movement.

Weaknesses in Sustainable Travel Strategy

- 8.18. The success of the proposed transport strategy depends heavily on the ability to provide realistic and attractive alternatives to travel by private car. Travel on foot to the vast majority of key destinations will not be attractive due to the distances involved. Travel on bicycle will not provide a realistic alternative mode of travel for most due to the gradient of the two main routes north and south of the New Dover Road and the quality of the routes. Measures are proposed to encourage bus use but the target bus mode share is very ambitious and relies on the ability to attract a very significant number of those wishing to travel to the city centre. It is therefore concluded that the level of reduction in car trip generation predicted as a basis for the assessments is unlikely to materialise and the highways impact of the development will be increased.

Failure to Assess Impact on Nackington Road

- 8.19. Evidence shows that the route to the south via Nackington Road will be used by a proportion of those wishing to travel to parts of Shepway District. The Transport Assessment does not allow for any additional traffic on this route.

Lack of Travel Plan Sanctions

- 8.20. No realistic additional sanctions are identified that could be implemented in the event that the mode share targets are not achieved and the level of highways impact is greater than anticipated. This is a significant concern since there may be no feasible ways to mitigate severe (unacceptable) impacts.

Overall Conclusion

- 8.21. In summary, there remain serious concerns about trip generation, traffic growth, the assignment of car trips, the ability to deliver, and the impact of, key junction improvements and the assumed level of sustainable travel that is achievable. These are genuine concerns based on evidence and indicate a significant risk that the adverse impact of the proposed development will be significantly greater than predicted in the supporting transport technical work and may be severe and therefore unacceptable in planning terms.

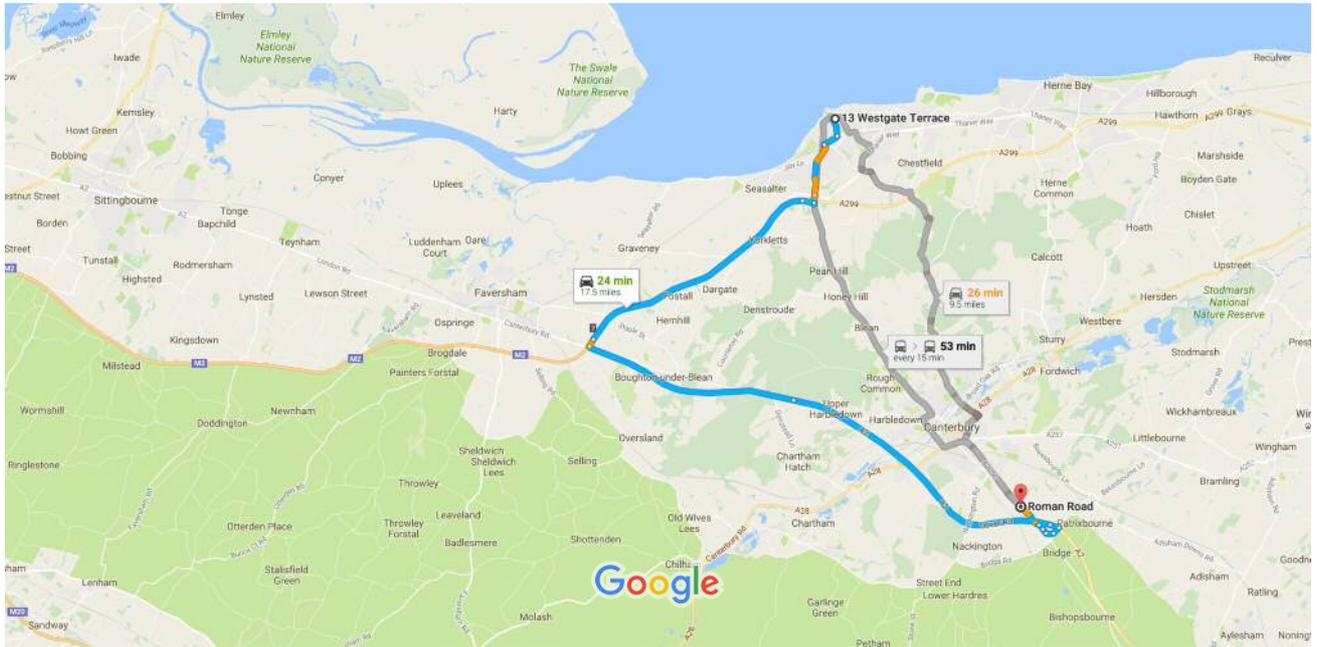
Appendices

Appendix 1: Google Maps Routes to Whitstable and Herne Bay



13 Westgate Terrace to Roman Rd,
Canterbury CT4 5DL

Drive 17.5 miles, 24 min



Map data ©2016 Google 2 km

via Thanet Way/A299 and A2
21 min without traffic

24 min
17.5 miles

via Hackington Rd
22 min without traffic

26 min
9.5 miles

9:01 AM–9:54 AM

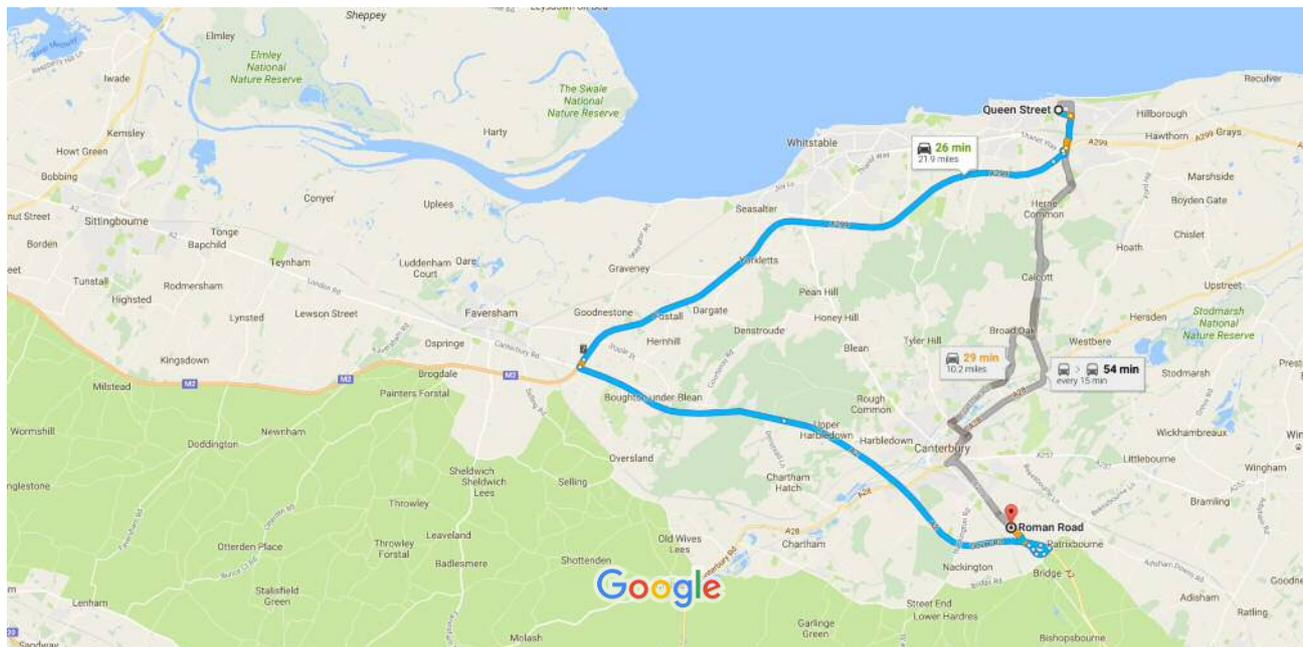
53 min





Queen Street, Herne Bay CT6 5BT, UK
to Roman Rd, Canterbury CT4 5DL

Drive 21.9 miles, 26 min



Map data ©2016 Google 2 km

via Thanet Way/A299 and A2

24 min without traffic

26 min

21.9 miles

via A291

22 min without traffic

29 min

10.2 miles

9:00 AM–9:54 AM

54 min

