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Dear Madams

CTC AND SPLS RESPONSE TO ISSUE SPECIFIC HEARING 2 DEALING WITH ENVIRONMENTAL MATTERS

The following concerns the CTC and SPLS responses to action point 23 of 11/01/21 and action point 34 of 12/01/21.

If any further queries arise as a result of the enclosed both CTC and SPLS would be happy to clarify matters either via ExQ2 of the 26 January 2021 or via an issue specific hearing on 1 March 2021.

Yours faithfully

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ENC1: CTC Response to action point 23 (11/01/21)
ENC2: SPLS Response to action point 34 (12/01/21)

Enc 1

ETM Recycling and Manheim Ltd
carl TONKS consulting

Ashton Vale Industrial Estate

Technical Note 3;

Response to

**“9.18 ExA.CWR.D3.V1 – Appendix 2 to Applicant’s
responses to Written Representations
submitted at Deadline 2”**

1. INTRODUCTION

- 1.1 **cTc** is commissioned jointly by two businesses currently located in the Ashton Vale Business Park, South Bristol. Plans being promoted jointly by Bristol City Council and North Somerset Council (the latter being formally “The Applicant”) for the Bristol Metro include running on the former heavy rail line between Portishead and Bristol City Centre, which crosses the only point of access to the Ashton Vale Business Park and will thereby require an increased frequency of closures of the level crossing, each time temporarily closing the only access to / egress from the business park.
- 1.2 Womble Bond Dickenson, on behalf of the promoters of the Metro scheme have presented a response to **cTc**’s joint submission with Sutherland Planning and Legal Services’ (SPLS) Written Representations submitted at Deadline 2. This Technical Note provides a response to the Applicant’s response at Deadline 3 and takes the opportunity to pick up on matters raised verbally during the Hearing on Monday 11th and Tuesday 12th January 2021.
- 1.3 Although submitted as a Womble Bond Dickenson (UK) LLP document, the response actually comprises a Memorandum by Jacobs, formally ch2m. **cTc**’s earlier submissions, including jointly with SPLS were in response to ch2m submissions.

- 1.4 In their response at Deadline 3, the Jacobs memorandum discussed three matters from **cTc**'s earlier submissions. These comprised;
- Traffic Data;
 - Model Validity; and,
 - Impact of Closure.
- 1.5 In addition, at the Hearing of 12th January, the Applicant questioned whether **cTc** had considered the Applicant's submission at Appendix N of the Transport Assessment. From **cTc**'s earlier submissions it is clear that the model is seriously flawed. The letter from Carl Tonks of **cTc** to Amanda Sutherland of SPLS, dated 7th March 2018 clearly states that no forensic analyses of the model is appropriate unless and until fundamental issues are addressed. Those fundamental issues have not been addressed, hence **cTc**'s position remains that the model is demonstrably unfit for purpose, hence no weight can be given to conclusions drawn from it.
- 1.6 The above issues are addressed in turn, below, where it will be demonstrated that Jacobs have still failed to address the fundamental issues with the model which have been raised by **cTc** consistently since early 2018.
- 1.7 To be clear, the position of **cTc**, SPLS and our joint clients is and always has been that the Metro is needed in Bristol and should provide a positive input to the City, from which all should benefit, including local employers. However, it must be delivered in such a way as not to harm existing businesses and business areas within the City, including particularly those identified in Policy as important to the City's well-being, hence protected. The modelling submitted by Jacobs on behalf of the Applicant is unreliable and currently fails to demonstrate this.
- 1.8 **cTc** has repeatedly stated that the experience of our clients using the junction of Ashton Vale Road with Winterstoke Road on a daily basis is different from that suggested in the submitted modelling. The junction is already congested and it is not unusual for queues on Ashton Vale Road not to clear the junction in a single signal cycle. This is not reflected in the submitted models and **cTc**'s previous representations have suggested likely causes of the clear problems with the traffic models upon which the Applicant relies.

2. Traffic Data

- 2.1 In response to cTc's criticism that the traffic models had been constructed on the basis of traffic data collected at a time when a critical lane was closed to traffic due to substantial road works within the junction, Jacobs have sought to rely on Transport Analysis Guidance (TAG) Unit M1.2 (Data Sources and Surveys).
- 2.2 The thrust of Unit M1.2 is to ensure that data collected for construction of traffic models is fit for purpose. This is an appropriate source of guidance and in reality, much of what is contained within Unit M1.2 comprises common sense. The purpose of Unit M1.2 is to ensure that the collected traffic data accurately represents typical traffic conditions, in order to ensure that what the subsequent traffic model is attempting to replicate is in fact appropriate and representative. In order to reflect on the importance of acquiring not only accurate, but relevant base data, it is helpful to consider the basics of the traffic modelling process. In simple, non-technical terms, the process comprises;
1. Collect data of representative traffic demand across a network;
 2. Create a model network of the existing physical transport infrastructure within the study area;
 3. Apply the collected demand data to the modelled network;
 4. Compare the modelled traffic characteristics with independent observations and adjust the model to reduce any discrepancies (*calibration*);
 5. Compare the modelled output with independent observations to confirm accuracy and relevance (*validation*);
 6. Forecast future year changes to demand;
 7. Apply future forecast demand to the existing network to provide a future baseline;
 8. Modify the network to reflect future proposals; and,
 9. Re-apply the same demand matrices to forecast future network operation.

- 2.3 From the above summary it is clear that both the accuracy and relevance of the baseline data collection is critical if the model is to provide a reliable tool for forecasting. Data which is inaccurate or reflects a scenario which is not relevant will clearly and inevitably harm the reliability of the model.
- 2.4 The data collected for use in the traffic models compiled and relied upon by the Applicants comprised a mixture of Manual Classified Counts (MCC) and Automatic Traffic Counts (ATC). The MCC comprise short-term detailed data collection of individual vehicle turning movements, whilst the ATC comprises longer term data indicating traffic flows on a link. Whilst cTc agrees that a combination of MCC and ATC data sources is appropriate, it is essential to ensure that neither technique is compromised by external influences, or the residual reliability of the model will be compromised.
- 2.5 At Section 2.1.2, the Jacobs memorandum confirms that the ***“Traffic data employed in the Linsig modelling and the calibration of the VISSIM model was based on a survey carried out on Tuesday 9th May 2017.”*** Previous submissions have identified that the VISSIM matrices were constructed based on this survey data, hence it would appear to have been used for more than simply calibrating the model, but constructing it. Much has been made by Jacobs (and formerly by ch2m) in regard to the model calibration and validation and, whilst acknowledging that these are critical components of creating and confirming relevance of a model, cTc is of the view that many of the comments submitted to PINS in this regard have been misleading.
- 2.6 In order to provide confidence in a model’s accuracy and reliability, calibration and validation should be undertaken using independent data sets. From the claims made by Jacobs, this does not appear to have been the case and it appears the model has been constructed from, calibrated against and validated against the same turning count. It is acknowledged that ATC data has been sourced to back up the modellers’ claims of relevance of this data, but from the data submitted there appears to have been no independent check of traffic turning counts undertaken and, despite cTc’s representations, the model continues to rely on a single turning count of 9th May 2017, when the junction was subject to substantial traffic management due to construction works. This is wholly inappropriate.

- 2.7 The summary above, at Paragraph 2.2, confirms that the approach to traffic modelling is to ensure a model's accuracy by collecting as much verified and verifiable data as possible, in order to ensure that assumptions, adjustments and forecasts represent a smaller influence on the modelled output than observed and verified data. The process comprises modelling a "normal" situation against which the model is verified, whereas in this instance it is confirmed that Jacobs have modelled an abnormal situation comprising a junction operating under abnormal constraint due to a critical lane being closed due to roadworks. That has required an additional step to be introduced into the modelling process in order to "create" a representative model scenario, hence adding in uncertainty. In view of the considerable congestion typically experienced by cTc's clients when leaving the Ashton Vale Estate and this not being portrayed in the submitted model, no credence or reliability can be placed upon the model results.
- 2.8 cTc identified and Jacobs acknowledge that a northbound left turn lane into the Ashton Vale Industrial Estate was closed at the time of their surveys and this was initially dismissed on the basis that the enumerators considered it had no impact on traffic flows or junction usage. Key questions arise here;
- Who were the enumerators?
 - What knowledge or experience did the enumerators have of the operation of this junction outwith times of substantial roadworks? And consequently;
 - How are the enumerators qualified to make this judgement?
- 2.9 cTc finds it more than simply surprising that Jacobs continue to claim that these road works were of no impact. At Photograph 1, below is an image extracted from Google Streetview at April 2017; broadly the time of the surveys on which the VISSIM and Linsig models have relied. It is unconscionable that roadworks on this scale, requiring left turning Ashton Vale traffic to share a lane with ahead traffic, towards Long Ashton could not have impacted upon the convenience of accessibility of Ashton Vale Industrial Estate. This therefore adds significant doubt as to the reliability of traffic survey data, either counts or journey times, collected during these roadworks.



Photograph 1; Google Streetview extract from the time of the MCC survey, illustrating the significant roadworks in situ at that time

2.10 In the first Paragraph of Section 2.1.2, Jacobs identify that they had sought to validate the MCC data collected on Tuesday 19th May 2017, with data from **“...an ATC carried out between 15 – 28 March 2018 inclusive.”** This statement triggers a number of important questions. Amongst which are specifically;

- Given that individual movements through the junction in question are quite heavily segregated and the ATC can only have surveyed one movement, how has Jacobs ensured that the validation against ATC data has confirmed validity of all turning movements at the junction? And,
- Were traffic conditions at the time of the ATC survey normal and representative?

2.11 Similarly, Photograph 2, below is of the same location, but at July 2018, some 3 – 4 months after the ATC survey was undertaken to “validate” the above MCC survey. Although the substantive construction works requiring the lane closure prominent in Photograph 1 were complete, the fencing still present on the Direction Island confirms that some works remain ongoing.

2.12 If any credibility is to be given to these subsequent ATC surveys, it is essential that confirmation is provided of the mode in which the signals were operating. In particular, the location of the areas of works fencing suggest that work may have been ongoing in regard to either controller or detector works. **CTC** would wish to see definitive confirmation of the signal controller specification and operation at the time of the surveys in March 2018. In particular, were these representative of “normal conditions”. Evidence of this should be available from the Highway Authority, Bristol City Council.



Photograph 2; Google Streetview extract from 3 – 4 months following the ATC survey

2.13 A further close-up of the same junction, also at July 2018 is provided at Photograph 3, below and confirms that at that time the signal poles were only temporary installations, as road works were continuing at this location. **CTC** considers it unlikely that at this time the junction was operating in its fully optimised state, given the clear ongoing presence of works and this makes it essential that the full and detailed operation of this junction is confirmed before any weight is given to the model output, as, for the reasons discussed above and previously presented to the DCO Hearing, **CTC** believes that the junction operation at the time of data collection was unlikely to have been reflective of normal conditions, hence the model should not have been based on this flawed data.

2.14 In regard to Jacobs’ selected extracts from TAG, firstly, reference to TAG UNIT M1.2 as updated in May 2020 identifies different paragraph numbering from that quoted by Jacobs, which begs the question whether Jacobs is relying on an up to date copy of Government guidance. **CTC** accepts, however, that irrespective of this, the contents of TAG M1.2 are largely logical and sensible, hence minor discrepancies in paragraph numbering are not of themselves critical. Much is made by Jacobs of TAG’s guidance in order to ensure that survey data is representative, including use of Monday to Thursday data in order to avoid potential Friday bias and validating single day MCC data with ATCs.



Photograph 3; Google Streetview extract from 3 – 4 months following the ATC survey – further close-up

2.15 Given these discussions in TAG are targeted at ensuring that collected survey data is representative of “normal” traffic conditions, however, it is essential that, irrespective of survey methodology, traffic surveys are only carried out when traffic flows are unimpeded or not impacted in any way by unusual events or conditions. If the operating conditions under which traffic surveys are undertaken are not representative of “normal” conditions, then clearly, the collected data cannot be relied upon.

- 2.16 Jacobs claim that ***“CTC’s objection implies concern over the ‘validity’ of the May 2017 survey which is ‘acknowledged’ by Jacobs. This is not true.”*** However, and to quote from the bottom of Page 2-1 (unnumbered para) of ch2m’s Transport Assessment Appendix P (previously quoted in my letter of 7th March 2018, ***“Due to traffic management at the junction associated with the Ashton Vale to Temple Meads Metrobus scheme bridge construction, the left turn filter lane for Ashton Vale Road on the Winterstoke Road northbound carriageway was closed. Consequently, traffic entering Ashton Vale Road shared the ‘Ahead’ lane for Ashton Vale Underpass. This will have impacted on queue lengths and journey times for vehicles on this arm.”***
- 2.17 **cTc** understands that Jacobs acquired ch2m during the promotion of this scheme and perhaps a difference of opinion is likely. However, ch2m undertook the modelling work now being defended by Jacobs and clearly acknowledged in regard to traffic turning from Winterstoke Road to Ashton Vale Road, that the 9th May 2017 surveys were not representative of ***“...queue lengths and journey times for vehicles on this arm”***.
- 2.18 This presents a clear acknowledgement that traffic conditions on this movement were not representative of “normal” conditions and yet now Jacobs claim not to have acknowledged this. That a subsequent ATC survey, also apparently undertaken at a time when junction operation may not have been optimal due to the roadworks still being incomplete and temporary signal installations continuing to be employed at this junction, may have suggested little change in total vehicles entering the junction on a single through movement, does not validate the collected data sufficiently to rely on in regard to the critical matter of potentially cutting off a major employment asset.
- 2.19 **cTc** made clear by letter in March 2018 that the only credible solution was to repeat the MCC at the Ashton Vale / Winterstoke Road junction in order to permit the model matrices to be reconstructed using valid and representative data. Almost two years later, this has not been done and the highly questionable traffic surveys continue to be relied upon. Whilst it is accepted that implications of numerous COVID lockdowns have in recent months made traffic survey work questionable, and continue so to do, it is not the case that survey windows have been unavailable since **cTc**’s first representation on this matter, in March 2018. Indeed, ch2m’s further ATC survey was undertaken following submission of **cTc**’s first critique and there is therefore no logical reason for Jacob’s continued reliance on clearly compromised data in this model.

- 2.20 In order to 'address' the above issue, Jacobs has constructed a model with the dedicated left turn lane (Winterstoke Road to Ashton Vale Road) closed, calibrated and validated this, then subsequently adjusted to reflect the normal situation; with a dedicated left turn lane and an ahead lane. This manual adjustment clearly acknowledges that, contrary to Jacobs' assurance discussed above, traffic characteristics during the surveys were not normal and the matter has sought to be addressed by manual adjustment of the model, subsequent to validation against an abnormal dataset. cTc maintains that that is a wholly inappropriate approach, which has resulted in a model on which no reliance can be placed. That TAG M1.2 places such emphasis on ensuring collection of traffic data from neutral periods confirms the importance of this issue.
- 2.21 There can be no doubt that the collected traffic data was flawed and Jacobs' efforts to justify and adjust to account for this are wholly inappropriate in light of the grave concerns expressed by occupiers of the Ashton Vale Industrial Estate; a key employment site on which Bristol is reliant.

3. MODEL VALIDITY

- 3.1 Jacobs criticise cTc for not having provided hard evidence for traffic conditions which vary from those claimed as prevalent in the Do Nothing model, however and as discussed at the DCO Hearing on 11th January, it is for the Applicant to provide information which adequately supports any submission. The Applicant is the "Agent of Change", whereas cTc's clients are simply seeking to protect their businesses against potentially significant loss if the Applicant's scheme were to go ahead in a manner which is inadequately controlled. It is inappropriate for the businesses occupying the Ashton Vale Industrial Estate to be required to fund consultants' reports for submission in rebuttal of clearly erroneous submissions in proposing the Agent of Change works, particularly at a time of unprecedented business pressure due to the combined impact of the COVID pandemic and BREXIT. However, and this notwithstanding, they have been required to do so. To suggest that further significant costs should have been encountered in regard to collection of reliable survey data when in fact it was entirely incumbent upon the Applicant to amass such reliable data is inappropriate in the extreme.

- 3.2 **cTc** attempted on numerous occasions to contact by telephone members of the Applicant's (NSC's) team, but each and every attempt was rebutted. Consequently attempts were made to contact the modelling team at ch2m, but once again, nobody was found willing to either meet or even enter into telephone discussions in regard to the submitted modelling. Further to these rebuttals, attempts were made to discuss the important issues arising with Planning and/or Transportation Officers of Bristol City Council. Once again, neither discussions nor meetings were made available. The intention had been to discuss the details of **cTc**'s view in regard to the model's failings and included in those discussions would have been reference to the levels of queuing typically experienced on leaving the estate. However, in the absence of such a meeting, or telephone discussion and in the absence of considerably increasing client expenditure collecting data which should have been provided by the Appellant, it was inappropriate to expand further on **cTc**'s entirely relevant and reasonable concerns.
- 3.3 Suffice to say for the purposes of this submission that occupiers of the Ashton Vale Industrial Estate report frequently encountering significant queuing on exiting the estate. Colloquial evidence suggests that it is not unusual for vehicles to wait for more than one signal cycle before reaching the give way line and it should come as no surprise therefore that concern is expressed in regard to a proposal to increase the level crossing closure frequency.
- 3.4 Much is made by Jacobs of the model's calibration and validation, according to TAG criteria. However, these claims should be viewed with a degree of caution. At Section 2.2.2, Jacobs confirm that ***“Operational conditions in the base VISSIM model were validated to journey times collected via moving car surveys carried out on 9th and 10th May 2017.”*** This statement raises several significant causes for concern.
- 3.5 Firstly and as discussed above, on Page 2-1 of Transport Assessment Appendix P, ch2m confirm that ***“traffic entering Ashton Vale Road shared the ‘Ahead’ lane for Ashton Vale Underpass. This will have impacted on queue lengths and journey times for vehicles on this arm.”*** Clearly, validating a model against journey time surveys which the modellers themselves have confirmed unrepresentative is not only careless, but wholly removes any weight which could otherwise have been given to the model's validity, had these surveys been undertaken at a representative time. The acceptability criteria stated in TAG M3.1 require journey-time surveys to have been representative and the above quotation from the Transport Assessment accepts they were not. The model validation is therefore faulty.

- 3.6 Jacobs continue to state that ***“...the base model outputs compare well with observed turning count and journey time data, in accordance with national guidelines on highway assignment modelling, these checks confirm that the models used in the assessment of Metrowest Phase 1 scheme at Ashton Vale Road reflect typical conditions at the site.”*** Unfortunately, this sentence introduces a raft of new conflicting and erroneous statements, which simply do not stand up to even cursory scrutiny. Each of these is considered in turn, below.

“...the base model outputs compare well with observed turning count and journey time data...”

- 3.7 As discussed in some detail above, the Transport Statement accepts that the journey time data was impacted by the lane closure at the time of the survey and consequently, stating that the model compares well with it implies that the model reflects abnormal traffic conditions (at time of significant roadworks).

“... in accordance with national guidelines on highway assignment modelling...”

- 3.8 The model actually constructed is a fixed assignment model. There is no route choice available between any pair of origin and destination points in this model, hence no traffic assignment is in fact modelled. It is fixed in quantum by the input demand data and in route by the network specification.

- 3.9 This observation raises a number of issues in regard to the validation. Looking back to the issue addressed above, at Paragraph 3.7, Jacobs rely on the validation against turning counts, however, and for one moment ignoring the questionable data sourced during roadworks, given that no route choice is available in the model, every vehicle assigned to every origin-destination pair in the model has only one route which it can take and consequently, the model should ALWAYS validate PERFECTLY against surveyed turning and link flows. There are no opportunities for traffic to assign to routes other than the correct one, hence if data was collected at the same time there can never be a consequent misalignment between surveyed flows and modelled. To claim that this “validation” confirms the accuracy of the modelling is clearly nonsense.

“...these checks confirm that the models used in the assessment of Metrowest Phase 1 scheme at Ashton Vale Road reflect typical conditions at the site.”

- 3.10 This is a critical statement, which is relied upon in regard to the model’s dependability and yet it conflicts with the earlier acknowledgement that the data sourced is valid only in terms of junction operation at times of substantial roadworks, when capacity of one movement was severely reduced, hence signal optimisation would have been wholly atypical. At this stage and until the model is adjusted to reflect the completion of the works **and** reopening of all available lanes for all available movements **and** the signals are fully, permanently installed **and** the signal controller is running in full optimised mode, will traffic have returned to “...**typical conditions**...” Despite Jacobs’ assurance to the contrary, no such analysis appears to have been undertaken, or if it has, **cTc** has seen no reliable survey data with which it could have been calibrated and/or validated.
- 3.11 Jacobs conclude this section with further reference to TAG, supporting the reliance on a single day’s MCC for acquiring matrix data. This approach is accepted per se, however, the single day on which the survey is undertaken must be representative of a neutral day, on which traffic patterns will be normal and not unduly influenced by any external influence. Furthermore, the traffic surveys must be recent and reflective of relevant levels of demand. In this instance, Ashton Vale Road exhibits some specific traffic characteristics, which vary from day to day and it is essential that the model reflects a day on which these characteristics are at their busiest. In addition, in the almost 3 years since the original traffic demand surveys were undertaken, the operation of various of the Estate occupiers has changed dramatically and in light of recent changes to Town and Country Planning Act (1990) Use Class Order and Permitted Development specification, there is a likelihood of further employers within the estate undertaking similar changes. These changes are able to be accommodated at present, albeit with the potential for a modicum of additional congestion, however, it is incumbent upon the Applicant, as Agent of Change, to demonstrate that the proposals will not reduce the opportunity for such businesses to develop to fulfil their market potential, without requiring a costly relocation due to the impact of the Application works on the accessibility of the Industrial Estate. For the reasons discussed above, **cTc** maintains that no reliance can be given to this model, hence the required demonstration has not been provided by the Applicant.

4. AUCTION DAY TRAFFIC

- 4.1 The reference to Manheim's auction programme, which changes traffic demand of that single user very substantially from day to day, was indicative of a general failing to engage before undertaking the surveys. Such engagement would have enabled a typically busy day to be selected on which to survey the operation of the site access. The MCC and journey time surveys were undertaken on days on which Manheim had no auction, hence its traffic demand was substantially lower than it often is. This will no doubt have added to inability of the models to reflect observed operating conditions at the junction, understating both queues and delays.
- 4.2 In addition to the failure of the modelling team to engage with companies within the Industrial Estate such as to enter into discussions and identify a reasonable, busy day on which to undertake the surveys, it is unfortunate that the data on which the Applicant continues to rely dates from 2017 and is therefore approaching 4 years old.
- 4.3 Much has happened in the intervening time, including one of the Estate's occupiers, ETM, having achieved Planning Permission for and constructed a substantial re-working of their yard. This represents a very significant financial investment in the business in this location and has resulted in a step change in the volume of waste which ETM can process in a given period. At the DCO Hearing on Monday 11th January it was stated that ETM exhibited a typical throughput of 250 – 300 tonnes of waste per day in 2017, whereas now their recent investment has seen this increase to of the order of typically 600 – 700 tonnes per day, a generally 2 – 3 fold increase. Given that the vehicle specification has not changed (and neither is it envisaged to), it follows that the number of Heavy Goods Vehicles (HGVs) visiting the ETM site has increased by typically somewhere between double and treble, since the surveys in 2017. This is not accounted for in the model.
- 4.4 However and returning to the vehicle auction issue; Manheim have provided indicative figures for their traffic throughput, by journey purpose and hence, according to whether this is an Auction Day or not. These are summarised in Table 4.1, below.

Table 4.1; Manheim Auctions Traffic Demand by Journey Purpose

Journey Type	Non-Auction		Auction Day		Increase (%)		
	In	Out	In	Out	In	Out	2-way
Staff	85	85	85	85	0	0	0
Trucks (delivery)	20	20	20	20	0	0	0
Customers (collection)	0	0	130	260	130	260	390
TOTAL	105	105	235	365	+130 (+124%)	+260 (+219%)	+390 (+186%)

4.5 The above demonstrates an increase of almost doubling Manheim’s traffic demand during an Auction day, compared with a non-auction day, as was the day of the traffic surveys. This simply considers what is currently happening at Manheim, but hasn’t been allowed for in the Applicant’s analyses. Add to this, the expansion of ETM’s operation which has taken place since the Applicant’s traffic surveys and **CTC**’s concerns become very clear.

4.6 In addition, new Permitted Development regulations, further to the changes to the Use Class Order described at Paragraph 3.11, above, provide an opportunity for occupiers of the estate to effect a change in use of their site, under Permitted Development Rights. Amongst the changes could be, for example, a change from B8, storage, of which there is much currently within the estate, to B1, Office. Implications of this in regard to proportional impact on traffic generation have been investigated using the TRICS database and these are summarised in Table 4.2, below, with the TRICS Reports provided at Appendix **CTC-A**.

Table 4.2; Implications on Traffic Generation of Permitted Development Change from B1 to B8 use

Period	Two-way Traffic Generation Rate /100sqm		
	B8	B1	Change (%)
AM Peak	0.361	2.123	+1.762 (+488%)
PM Peak	0.359	1.800	+1.441 (+401%)
12 hour	3.527	11.712	+1.185 (+232%)

- 4.7 The compiled model input data has assumed no traffic growth for either Ashton Gate Road or Marsh Road traffic. In regard to the matters discussed above, this comprises a significant understatement of the current traffic demand on Ashton Gate Road and also leaves no allowance for existing businesses to develop, or grow their enterprise as they are entitled to do. Clearly, this will result in a significant under-estimate of traffic demand and consequently by extension, potential for queues and delays on the approach to the junction to or from the Industrial Estate. It is likely that these errors could well contribute to the model's inability to replicate the traffic conditions which the occupiers of the Estate observe on a regular basis.
- 4.8 The Jacobs response dismisses the above issues with reference to demand sensitive Vehicle Actuated signal controllers and identifying that these have the ability, indeed are specifically designed to, reallocate green time as required throughout a junction. However, the role of the controller is to balance available green time between movements within the junction in order to optimise available capacity in a manner which will maximise operational efficiency of the junction as a whole. As such, minor arms of the junction exhibiting lower flow than the through-put on the major arms will have considerably less influence on the controller settings. This will therefore compromise the influence the industrial estate egress is likely to have on the controller operation.
- 4.9 This fact is illustrated in the Jacobs response, which identifies traffic variation on Ashton Vale Road of between 172 vehicle per hour and 290 vehicles per hour, which is dismissed as “...**not significant.**” Whilst in absolute terms and in comparison with the substantial volume of commuter traffic into and out of central Bristol which uses Winterstoke Road, whether the flow on Ashton Vale Road is 172 vehicles or 290 vehicles is undoubtedly lost in the bigger picture of peak hour commuter traffic. It is worthy of note, however, that Jacobs on one hand suggest traffic increases on Ashton Vale Road will receive greater green time through the vehicle actuated signals, whilst simultaneously acknowledging that an increase in flow of 118 vehicle, or 69% on an already congested part of the network is “...**not significant.**” If not significant, it cannot expect to influence any increased green time at the signals and increased congestion, broadly in proportion to the increased demand must be expected. Such an outcome would be catastrophic for the occupiers of this important employment site.

5. IMPACT OF CLOSURE

- 5.1 The Applicant's response expresses a lack of understanding of how cTc's values for periods of increased congestion are arrived at. This is surprising, as the quotation at 2.4.1 of the Jacobs response sets out quite clearly how the figures are arrived at and that these are all obtained from information provided in the ch2m report. There would appear to be an element of misunderstanding of the relationship between junction congestion and individual delay and this appears likely to be where Jacobs' confusion has arisen.
- 5.2 Firstly, to consider the figures quoted in the Jacobs' response. At Section 2.4.2, it is stated that **"...the maximum extent of the queue on Ashton Vale Road is only expected to increase from 12 to 20 vehicles..."** This is an astounding and revealing statement. Jacobs are suggesting that an increase in queue length of 40%, after their proposed mitigation and on the already congested link is acceptable. Moreover, the cTc analyses of Jacobs' data and which they claimed not to understand identified an impact on capacity of between 30 and 50%. Although it is acknowledged that increases in queue lengths do not necessarily relate directly to decreases in capacity, as other issues are also complicit, it is undeniably the case that in general terms, as capacity decreases, queuing increases, hence Jacobs' calculation of a 40% increase in queuing validates well with cTc's statement that capacity decreases by of the order of 30 – 50%.
- 5.3 It is suggested that, with **"...two passenger trains per hour and even an intervening freight service..."** that the signal cycles **"...have sufficient duration between them to ensure 'full compensation' and returning to normal traffic operation is achieved between each event..."**, however, this makes the very rash assumption that the three events described are equally spread during the hour. There is no basis for this assumption, as trains may arrive consecutively, doubling closure time, or they may arrive sufficiently spaced to enable re-opening of the gates for only a short period before re-closure. The implication that the queues will always clear between closures is without any basis therefore.
- 5.4 The response continues to describe the Linsig results, which it suggests validate the VISSIM results and cTc's observations from the summaries in the response itself would tend to support the assertion that indeed, this comparison does confirm that queue lengths on Ashton Vale Road are seen to experience very severe impact; from 50-60m to 100m (broadly doubling) and from 68 to 113m (66% increase).

- 5.5 What is clear from **cTc**'s above review of Jacobs' response to the earlier submissions is that the same data (both input and output) is being considered by different consultants and reaching wholly different conclusions. Perhaps the relevant questions in this regard for consideration in the DCO Hearing are these;
- Why are two wholly different conclusions evident from the same models?
And;
 - Which conclusion is appropriate?
- 5.6 Given that the numbers being considered by both parties are the same, the difference can only be satisfactorily explained by considering the differing priorities of the parties.
1. Jacobs are representing the Applicant and seeking to demonstrate that the proposal can be delivered without causing undue harm to neighbouring properties, residents and companies.
 2. **cTc** is representing two occupiers of the Industrial Estate and seeking to identify if unacceptable harm can be prevented in the delivery of the Application scheme.
- 5.7 Both parties seek the same outcome, but with differing emphasis on what comprises acceptable impact and what does not. **cTc**'s clients in preparing this review are ETM and Manheim, however, other occupiers of the site have expressed grave concern regarding the impact of the proposals on their business by means of reduced accessibility. Appendix **cTc-B** comprises a letter from Flynn, Appendix **cTc-C** comprises a similar letter from Beyond the Bean and Appendix **cTc-D** from Avonline. Each of these expresses grave concerns and in light of these statements, along with **cTc**'s clients' (ETM and Manheim) having been sufficiently concerned to choose to fund consultants' representation in the DCO process confirms that the statement from the Applicant's team that doubling of maximum queue lengths on Ashton Gate Road are of no material consequence woefully misreads the experience of this who will be directly affected.
- 5.8 Contrary to Jacobs' assertion, that the traffic impact would not be severe in the terms of NPPF, the above clearly demonstrates that without additional mitigation and tight controls on frequency of services, hence closures of the level crossing, the DCO scheme as it stands could potentially make continued occupancy of this key employment site untenable.

6. APPENDIX N

6.1 At the Appeal Hearing on Tuesday 12th January, NSC openly criticised Carl Tonks for an alleged lack of consideration of the data submitted at Appendix N of the Transport Assessment, however, reference to the initial letter submitted in representations to the DCO, via SPLS and on behalf of occupiers of the Ashton Vale Industrial estate identifies the following statement;

“I have not undertaken a forensic analysis as my preliminary consideration has identified a number of potential issues on which I would like more data from the modelling team. Although I could continue to effectively dismantle the report further in order to confirm whether or not the model is fit for purpose, my initial review has identified some significant questions arising. I think it reasonable to provide the traffic modellers (ch2m) with an opportunity to respond to these initial questions and hopefully thereby move discussion forward in a positive manner. It may be that some of my current questions are able to be answered by the modellers and that may enable me better to focus my consideration, avoiding the need to investigate in detail potential dead-end issues.”

6.2 The above quotation is before the Hearing and has been since March 2018. It acknowledges the substantial volume of analyses which have been submitted, however, the majority of these exhibit significant concerns in regard to its fitness for purpose or validity. The above quotation confirms that this was highlighted almost 2 years ago and that cTc’s review of the large volumes of technical data submitted had been halted in order to limit our clients’ exposure to fees which rightly should not accrue. Instead in that letter, cTc invited the Applicant to undertake further survey work by way of MCC turning count(s) in order to create more effective and representative model demand matrices. The Appellant chose not to take up this option and instead sought to rely on substantial amounts of analyses based on the initial, compromised data.

6.3 In view of the verbal criticism cTc received from NSC Officers on Tuesday 12th January, despite the above acknowledgement that the data was not fit for purpose, a further review has been undertaken and this has confirmed the conclusions above, namely;

- In 2021, despite the lack of growth applied to Ashton Vale Road traffic from the surveyed 2017 base, traffic queues are shown to increase during the AM Peak hour from 43m to 65m (+51%) with 1 train per hour;
- During the PM Peak, the equivalent comparison indicates a queue which increases from 98m to 118m (+20%);

- Assuming 45 minute frequency, the equivalent comparison indicates an increased queue length, from 43m to 67m (+56%); and,
- During the PM Peak, the same 45 minute frequency results in an increase in queue lengths from 98m to 142m (+45%).

6.4 Again, the above increases in forecast queue lengths, taken directly from the model's output, have validated cTc's statement from much earlier, suggesting a reduction in capacity of the order of 30 – 50%. It is incongruous that Jacobs claim no understanding of where cTc's suggested impacts arise, when their own model clearly mirrors the same conclusions.

6.5 However, and notwithstanding the above correlation between cTc's forecasts and those distilled from Jacobs' model. cTc stands by the initial submission, that the model is based on inappropriate and invalid data. Consequently, cTc's earlier assertion, that the model should have been corrected, using valid survey data before detailed review was undertaken, is vindicated and as stated in the letter of March 2018, the time required to review the extremely large volume of data submitted should not have been necessary.

6.6 It is suggested that the large volume of data generated from compromised data may have been submitted in order to obfuscate and deter detailed consideration of the flawed model; to coin a colloquialism; ***“never mind the quality, feel the width.”*** The time and cost of reviewing this flawed data should not have been required and cTc's clients have suffered additional expense as a result.

7. CONCLUSION

7.1 In conclusion, the above presents a detailed response to the Jacobs' submission (via Womble Bond Dickinson) in response to cTc's earlier representations. The submission is critical of cTc's comments, however, demonstrates a clear lack of understanding of the key issues raised. Moreover and despite ch2m having acknowledged the flaws in the collected data, Jacobs are now seeking to distance themselves from this acknowledgement, despite it being in writing before the Hearing that the roadworks were considered by the Applicant's modelling team to have compromised the validity of queue lengths and journey time surveys undertaken. This data is not representative and cannot be relied upon.

- 7.2 The above notwithstanding, **CTC** has, as suggested by the Applicant, presented a technical review of the output from the Applicant's flawed model and this has confirmed a substantive impact on the access to and egress from the Ashton Vale Industrial Estate. This is most certainly of a scale which would justify refusal of the Application as it stands, under the terms of Paragraph 109 of the NPPF.
- 7.3 In addition to the demand matrices having been compiled on data collected during a period of substantial roadworks and critical lane closures, the models confirm a highly significant impact on the operation of the sole access to and egress from the industrial estate. The level of impact identified by the model output is of a similar order to that suggested in **CTC**'s earlier submission, yet criticised by the Applicant's representative as having no basis. **CTC**'s manual assessment is clearly vindicated by the Applicant's model output.
- 7.4 The above damning conclusions notwithstanding, the traffic model has failed to account for substantial business growth by several of the Business Park's current occupants, who have invested heavily in the site since the date of the traffic surveys relied upon in the model. Furthermore, other operators currently and have historically exhibited cyclic traffic demand profiles, with certain days typically exhibiting substantially greater traffic demand than others. No contact was made with occupiers of the Estate in planning the survey programme for this model and the key surveys were undertaken on days not reflecting high levels of demand.
- 7.5 As has been consistently stated throughout this process, occupiers of Ashton Vale Industrial Estate experience levels of congestion on Ashton Vale Road which consistently exceed those indicated in the model and this could have been readily addressed by repeating the MCC survey at a time more representative of normal traffic conditions, however, the Applicant has consistently resisted this.
- 7.6 As a result of the above, no weight can be given to the results of this clearly flawed model.
- 7.7 The occupiers of the Estate are not opposed in principle to the proposed Metro, indeed, any measures which could reasonably be expected to benefit the City of Bristol are to be welcomed, however, these must be introduced at a scale and with appropriate mitigation, such that in combination the occupiers of this key business area are not disadvantaged. At present, the faults in the traffic modelling do not support any assertion that this is the case.

Client:		ETM, Manheim	
Project Name:		Ashton Vale	
Project Number:		2018-F-008	
Report Title:		Technical Note 3 – Response to “9.18 ExA.CWR.D3.V1 – Appendix 2 to Applicant’s responses to Written Representations submitted at Deadline 2”	
Created by:	Carl Tonks	Date:	January 2021
Proofed by:	Jacqueline Ireland	Date:	January 2021
Approved by:	Carl Tonks carl@tonks-consulting.co.uk	Date:	January 2021
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APPENDICES

APPENDIX A

TRICS REPORTS

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
 Category : F - WAREHOUSING (COMMERCIAL)
 TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	EX ESSEX	1 days
	KC KENT	1 days
03	SOUTH WEST	
	DV DEVON	1 days
04	EAST ANGLIA	
	SF SUFFOLK	1 days
06	WEST MIDLANDS	
	WM WEST MIDLANDS	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	WY WEST YORKSHIRE	2 days
09	NORTH	
	CB CUMBRIA	1 days
	TW TYNE & WEAR	1 days
10	WALES	
	BG BRIDGEND	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Gross floor area
 Actual Range: 190 to 31000 (units: sqm)
 Range Selected by User: 190 to 80066 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/12 to 03/04/19

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	3 days
Tuesday	1 days
Thursday	1 days
Friday	5 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	10 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.

Selected Locations:

Edge of Town Centre	1
Edge of Town	9

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Industrial Zone	8
Commercial Zone	1
Built-Up Zone	1

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

B8 10 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Filter by Use Class Breakdown:

All Surveys Included

Population within 500m Range:

All Surveys Included

Population within 1 mile:

1,000 or Less	1 days
1,001 to 5,000	1 days
5,001 to 10,000	4 days
10,001 to 15,000	1 days
15,001 to 20,000	2 days
25,001 to 50,000	1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

5,001 to 25,000	2 days
25,001 to 50,000	1 days
75,001 to 100,000	1 days
125,001 to 250,000	3 days
250,001 to 500,000	2 days
500,001 or More	1 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	4 days
1.1 to 1.5	6 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No 10 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present 10 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	BG-02-F-01 PARC CRESCENT BRIDGEND WATERTON IND. EST. Edge of Town Industrial Zone Total Gross floor area: 3050 sqm <i>Survey date: MONDAY 13/10/14</i>	LOGISTICS COMPANY BRIDGEND	<i>Survey Type: MANUAL</i>
2	CB-02-F-01 COWPER ROAD PENRITH GILWILLY IND. ESTATE Edge of Town Industrial Zone Total Gross floor area: 2950 sqm <i>Survey date: TUESDAY 10/06/14</i>	DOMINO'S PIZZA CUMBRIA	<i>Survey Type: MANUAL</i>
3	DV-02-F-01 ALDERS WAY PAIGNTON Edge of Town Industrial Zone Total Gross floor area: 190 sqm <i>Survey date: FRIDAY 29/03/19</i>	OPTICS WAREHOUSE DEVON	<i>Survey Type: MANUAL</i>
4	EX-02-F-01 BRUNEL WAY COLCHESTER SEVERALLS INDUSTRIAL PK Edge of Town Industrial Zone Total Gross floor area: 6560 sqm <i>Survey date: FRIDAY 18/05/18</i>	SPORTS SUPPLEMENTS ESSEX	<i>Survey Type: MANUAL</i>
5	KC-02-F-02 MILLS ROAD AYLESFORD QUARRY WOOD Edge of Town Industrial Zone Total Gross floor area: 11200 sqm <i>Survey date: FRIDAY 22/09/17</i>	COMMERCIAL WAREHOUSING KENT	<i>Survey Type: MANUAL</i>
6	SF-02-F-03 CENTRAL AVENUE IPSWICH WARREN HEATH Edge of Town Industrial Zone Total Gross floor area: 4700 sqm <i>Survey date: FRIDAY 18/09/15</i>	ROAD HAULAGE SUFFOLK	<i>Survey Type: MANUAL</i>
7	TW-02-F-01 MANDARIN WAY WASHINGTON PATTISON IND. ESTATE Edge of Town Industrial Zone Total Gross floor area: 31000 sqm <i>Survey date: FRIDAY 13/11/15</i>	ASDA DISTRIBUTION CENTRE TYNE & WEAR	<i>Survey Type: MANUAL</i>
8	WM-02-F-02 SOVEREIGN ROAD BIRMINGHAM KINGS NORTON Edge of Town Commercial Zone Total Gross floor area: 3625 sqm <i>Survey date: MONDAY 09/11/15</i>	LOGISTICS FIRM WEST MIDLANDS	<i>Survey Type: MANUAL</i>
9	WY-02-F-01 MORTIMER STREET CLECKHEATON Edge of Town Centre Built-Up Zone Total Gross floor area: 1507 sqm <i>Survey date: MONDAY 19/09/16</i>	ELECTRONICS DISTRIBUTION WEST YORKSHIRE	<i>Survey Type: MANUAL</i>

LIST OF SITES relevant to selection parameters (Cont.)

10	WY-02-F-02	DISTRIBUTION COMPANY	WEST YORKSHIRE
	STAITHGATE LANE		
	BRADFORD		
	NEWHALL		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	10446 sqm	
	Survey date: THURSDAY	14/03/19	Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)

TOTAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	3	4529	0.294	3	4529	0.132	3	4529	0.426
06:00 - 07:00	3	4529	0.464	3	4529	0.199	3	4529	0.663
07:00 - 08:00	10	7523	0.219	10	7523	0.120	10	7523	0.339
08:00 - 09:00	10	7523	0.225	10	7523	0.136	10	7523	0.361
09:00 - 10:00	10	7523	0.177	10	7523	0.104	10	7523	0.281
10:00 - 11:00	10	7523	0.124	10	7523	0.136	10	7523	0.260
11:00 - 12:00	10	7523	0.134	10	7523	0.138	10	7523	0.272
12:00 - 13:00	10	7523	0.136	10	7523	0.120	10	7523	0.256
13:00 - 14:00	10	7523	0.156	10	7523	0.141	10	7523	0.297
14:00 - 15:00	10	7523	0.124	10	7523	0.153	10	7523	0.277
15:00 - 16:00	10	7523	0.128	10	7523	0.158	10	7523	0.286
16:00 - 17:00	10	7523	0.125	10	7523	0.217	10	7523	0.342
17:00 - 18:00	10	7523	0.110	10	7523	0.249	10	7523	0.359
18:00 - 19:00	9	8191	0.060	9	8191	0.137	9	8191	0.197
19:00 - 20:00	3	4529	0.118	3	4529	0.236	3	4529	0.354
20:00 - 21:00	3	4529	0.103	3	4529	0.096	3	4529	0.199
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.697			2.472			5.169

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

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Parameter summary

Trip rate parameter range selected:	190 - 31000 (units: sqm)
Survey date date range:	01/01/12 - 03/04/19
Number of weekdays (Monday-Friday):	10
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)

TAXI S

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	3	4529	0.000	3	4529	0.000	3	4529	0.000
06:00 - 07:00	3	4529	0.007	3	4529	0.007	3	4529	0.014
07:00 - 08:00	10	7523	0.005	10	7523	0.005	10	7523	0.010
08:00 - 09:00	10	7523	0.000	10	7523	0.000	10	7523	0.000
09:00 - 10:00	10	7523	0.000	10	7523	0.000	10	7523	0.000
10:00 - 11:00	10	7523	0.001	10	7523	0.001	10	7523	0.002
11:00 - 12:00	10	7523	0.000	10	7523	0.000	10	7523	0.000
12:00 - 13:00	10	7523	0.000	10	7523	0.000	10	7523	0.000
13:00 - 14:00	10	7523	0.000	10	7523	0.000	10	7523	0.000
14:00 - 15:00	10	7523	0.000	10	7523	0.000	10	7523	0.000
15:00 - 16:00	10	7523	0.000	10	7523	0.000	10	7523	0.000
16:00 - 17:00	10	7523	0.004	10	7523	0.004	10	7523	0.008
17:00 - 18:00	10	7523	0.003	10	7523	0.003	10	7523	0.006
18:00 - 19:00	9	8191	0.000	9	8191	0.000	9	8191	0.000
19:00 - 20:00	3	4529	0.000	3	4529	0.000	3	4529	0.000
20:00 - 21:00	3	4529	0.000	3	4529	0.000	3	4529	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.020			0.020			0.040

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)

OGVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	3	4529	0.059	3	4529	0.088	3	4529	0.147
06:00 - 07:00	3	4529	0.081	3	4529	0.125	3	4529	0.206
07:00 - 08:00	10	7523	0.041	10	7523	0.069	10	7523	0.110
08:00 - 09:00	10	7523	0.060	10	7523	0.073	10	7523	0.133
09:00 - 10:00	10	7523	0.051	10	7523	0.045	10	7523	0.096
10:00 - 11:00	10	7523	0.057	10	7523	0.061	10	7523	0.118
11:00 - 12:00	10	7523	0.055	10	7523	0.058	10	7523	0.113
12:00 - 13:00	10	7523	0.061	10	7523	0.039	10	7523	0.100
13:00 - 14:00	10	7523	0.056	10	7523	0.052	10	7523	0.108
14:00 - 15:00	10	7523	0.044	10	7523	0.036	10	7523	0.080
15:00 - 16:00	10	7523	0.066	10	7523	0.052	10	7523	0.118
16:00 - 17:00	10	7523	0.069	10	7523	0.052	10	7523	0.121
17:00 - 18:00	10	7523	0.066	10	7523	0.045	10	7523	0.111
18:00 - 19:00	9	8191	0.035	9	8191	0.028	9	8191	0.063
19:00 - 20:00	3	4529	0.015	3	4529	0.088	3	4529	0.103
20:00 - 21:00	3	4529	0.022	3	4529	0.059	3	4529	0.081
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.838			0.970			1.808

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
CYCLISTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	3	4529	0.000	3	4529	0.000	3	4529	0.000
06:00 - 07:00	3	4529	0.007	3	4529	0.000	3	4529	0.007
07:00 - 08:00	10	7523	0.003	10	7523	0.000	10	7523	0.003
08:00 - 09:00	10	7523	0.013	10	7523	0.000	10	7523	0.013
09:00 - 10:00	10	7523	0.000	10	7523	0.000	10	7523	0.000
10:00 - 11:00	10	7523	0.000	10	7523	0.000	10	7523	0.000
11:00 - 12:00	10	7523	0.000	10	7523	0.000	10	7523	0.000
12:00 - 13:00	10	7523	0.000	10	7523	0.000	10	7523	0.000
13:00 - 14:00	10	7523	0.001	10	7523	0.001	10	7523	0.002
14:00 - 15:00	10	7523	0.001	10	7523	0.004	10	7523	0.005
15:00 - 16:00	10	7523	0.008	10	7523	0.005	10	7523	0.013
16:00 - 17:00	10	7523	0.003	10	7523	0.001	10	7523	0.004
17:00 - 18:00	10	7523	0.001	10	7523	0.008	10	7523	0.009
18:00 - 19:00	9	8191	0.000	9	8191	0.004	9	8191	0.004
19:00 - 20:00	3	4529	0.000	3	4529	0.000	3	4529	0.000
20:00 - 21:00	3	4529	0.000	3	4529	0.000	3	4529	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.037			0.023			0.060

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)

CARS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	3	4529	0.206	3	4529	0.037	3	4529	0.243
06:00 - 07:00	3	4529	0.339	3	4529	0.044	3	4529	0.383
07:00 - 08:00	10	7523	0.130	10	7523	0.023	10	7523	0.153
08:00 - 09:00	10	7523	0.134	10	7523	0.025	10	7523	0.159
09:00 - 10:00	10	7523	0.077	10	7523	0.023	10	7523	0.100
10:00 - 11:00	10	7523	0.037	10	7523	0.035	10	7523	0.072
11:00 - 12:00	10	7523	0.040	10	7523	0.043	10	7523	0.083
12:00 - 13:00	10	7523	0.045	10	7523	0.056	10	7523	0.101
13:00 - 14:00	10	7523	0.064	10	7523	0.057	10	7523	0.121
14:00 - 15:00	10	7523	0.056	10	7523	0.096	10	7523	0.152
15:00 - 16:00	10	7523	0.040	10	7523	0.082	10	7523	0.122
16:00 - 17:00	10	7523	0.032	10	7523	0.128	10	7523	0.160
17:00 - 18:00	10	7523	0.029	10	7523	0.179	10	7523	0.208
18:00 - 19:00	9	8191	0.015	9	8191	0.092	9	8191	0.107
19:00 - 20:00	3	4529	0.052	3	4529	0.140	3	4529	0.192
20:00 - 21:00	3	4529	0.044	3	4529	0.022	3	4529	0.066
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.340			1.082			2.422

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)

LGVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	3	4529	0.000	3	4529	0.007	3	4529	0.007
06:00 - 07:00	3	4529	0.029	3	4529	0.015	3	4529	0.044
07:00 - 08:00	10	7523	0.036	10	7523	0.021	10	7523	0.057
08:00 - 09:00	10	7523	0.027	10	7523	0.036	10	7523	0.063
09:00 - 10:00	10	7523	0.044	10	7523	0.031	10	7523	0.075
10:00 - 11:00	10	7523	0.025	10	7523	0.032	10	7523	0.057
11:00 - 12:00	10	7523	0.039	10	7523	0.033	10	7523	0.072
12:00 - 13:00	10	7523	0.025	10	7523	0.024	10	7523	0.049
13:00 - 14:00	10	7523	0.029	10	7523	0.029	10	7523	0.058
14:00 - 15:00	10	7523	0.023	10	7523	0.019	10	7523	0.042
15:00 - 16:00	10	7523	0.021	10	7523	0.023	10	7523	0.044
16:00 - 17:00	10	7523	0.020	10	7523	0.024	10	7523	0.044
17:00 - 18:00	10	7523	0.012	10	7523	0.013	10	7523	0.025
18:00 - 19:00	9	8191	0.003	9	8191	0.008	9	8191	0.011
19:00 - 20:00	3	4529	0.007	3	4529	0.007	3	4529	0.014
20:00 - 21:00	3	4529	0.015	3	4529	0.015	3	4529	0.030
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.355			0.337			0.692

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)

MOTOR CYCLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	3	4529	0.007	3	4529	0.000	3	4529	0.007
06:00 - 07:00	3	4529	0.000	3	4529	0.000	3	4529	0.000
07:00 - 08:00	10	7523	0.001	10	7523	0.000	10	7523	0.001
08:00 - 09:00	10	7523	0.003	10	7523	0.000	10	7523	0.003
09:00 - 10:00	10	7523	0.000	10	7523	0.000	10	7523	0.000
10:00 - 11:00	10	7523	0.000	10	7523	0.000	10	7523	0.000
11:00 - 12:00	10	7523	0.001	10	7523	0.001	10	7523	0.002
12:00 - 13:00	10	7523	0.004	10	7523	0.000	10	7523	0.004
13:00 - 14:00	10	7523	0.001	10	7523	0.000	10	7523	0.001
14:00 - 15:00	10	7523	0.000	10	7523	0.003	10	7523	0.003
15:00 - 16:00	10	7523	0.000	10	7523	0.000	10	7523	0.000
16:00 - 17:00	10	7523	0.000	10	7523	0.001	10	7523	0.001
17:00 - 18:00	10	7523	0.000	10	7523	0.003	10	7523	0.003
18:00 - 19:00	9	8191	0.000	9	8191	0.000	9	8191	0.000
19:00 - 20:00	3	4529	0.000	3	4529	0.000	3	4529	0.000
20:00 - 21:00	3	4529	0.000	3	4529	0.000	3	4529	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.017			0.008			0.025

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
 Category : A - OFFICE
 TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST		
	BD	BEDFORDSHIRE	1 days
	ES	EAST SUSSEX	2 days
	HF	HERTFORDSHIRE	2 days
03	SOUTH WEST		
	WL	WILTSHIRE	1 days
04	EAST ANGLIA		
	CA	CAMBRIDGESHIRE	1 days
	NF	NORFOLK	3 days
	SF	SUFFOLK	1 days
05	EAST MIDLANDS		
	DS	DERBYSHIRE	1 days
06	WEST MIDLANDS		
	WO	WORCESTERSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	NY	NORTH YORKSHIRE	1 days
	WY	WEST YORKSHIRE	1 days
08	NORTH WEST		
	GM	GREATER MANCHESTER	1 days
	MS	MERSEYSIDE	1 days
09	NORTH		
	CB	CUMBRIA	1 days
	DH	DURHAM	2 days
10	WALES		
	CO	CONWY	1 days
	MT	MERTHYR TYDFIL	1 days
	PS	POWYS	1 days
	SW	SWANSEA	2 days
11	SCOTLAND		
	DU	DUNDEE CITY	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Gross floor area
 Actual Range: 280 to 11250 (units: sqm)
 Range Selected by User: 190 to 80066 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/12 to 13/11/19

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	4 days
Tuesday	6 days
Wednesday	6 days
Thursday	7 days
Friday	3 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	26 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.

Selected Locations:

Edge of Town Centre	18
Edge of Town	8

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Industrial Zone	2
Commercial Zone	6
Development Zone	4
Residential Zone	2
Built-Up Zone	6
No Sub Category	6

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

B1	26 days
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This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Filter by Use Class Breakdown:

All Surveys Included

Population within 500m Range:

All Surveys Included

Population within 1 mile:

1,001 to 5,000	3 days
5,001 to 10,000	5 days
10,001 to 15,000	2 days
15,001 to 20,000	4 days
20,001 to 25,000	3 days
25,001 to 50,000	9 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

5,001 to 25,000	1 days
25,001 to 50,000	4 days
50,001 to 75,000	1 days
75,001 to 100,000	3 days
100,001 to 125,000	2 days
125,001 to 250,000	11 days
250,001 to 500,000	2 days
500,001 or More	2 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	13 days
1.1 to 1.5	12 days
1.6 to 2.0	1 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

Yes	3 days
No	23 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	26 days
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This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	BD-02-A-03 BROMHAM ROAD BEDFORD	OFFICES		BEDFORDSHIRE
	Edge of Town Centre No Sub Category Total Gross floor area:		1469 sqm	
			<i>Survey date: MONDAY 14/10/13</i>	<i>Survey Type: MANUAL</i>
2	CA-02-A-06 LYNCH WOOD PETERBOROUGH	OFFICES		CAMBRIDGESHIRE
	Edge of Town Commercial Zone Total Gross floor area:		4040 sqm	
			<i>Survey date: WEDNESDAY 19/10/16</i>	<i>Survey Type: MANUAL</i>
3	CB-02-A-02 PORT ROAD CARLISLE	OFFICE		CUMBRIA
	Edge of Town Centre Industrial Zone Total Gross floor area:		925 sqm	
			<i>Survey date: FRIDAY 24/06/16</i>	<i>Survey Type: MANUAL</i>
4	CO-02-A-01 NARROW LANE LLANDUDNO JUNCTION	GOVERNMENT OFFICES		CONWY
	Edge of Town Commercial Zone Total Gross floor area:		6186 sqm	
			<i>Survey date: WEDNESDAY 28/03/18</i>	<i>Survey Type: MANUAL</i>
5	DH-02-A-02 DURHAM ROAD NEAR DURHAM BOWBURN	CONSTRUCTION COMPANY		DURHAM
	Edge of Town Industrial Zone Total Gross floor area:		2000 sqm	
			<i>Survey date: TUESDAY 27/11/12</i>	<i>Survey Type: MANUAL</i>
6	DH-02-A-03 ALDERMAN BEST WAY DARLINGTON	ENGINEERING COMPANY		DURHAM
	Edge of Town No Sub Category Total Gross floor area:		3530 sqm	
			<i>Survey date: THURSDAY 18/10/18</i>	<i>Survey Type: MANUAL</i>
7	DS-02-A-01 PRIME PARK WAY DERBY	REAL ESTATE DEVELOPERS		DERBYSHIRE
	Edge of Town Centre No Sub Category Total Gross floor area:		594 sqm	
			<i>Survey date: WEDNESDAY 25/09/19</i>	<i>Survey Type: MANUAL</i>
8	DU-02-A-01 GREENMARKET DUNDEE	OFFICES		DUNDEE CITY
	Edge of Town Centre Development Zone Total Gross floor area:		3200 sqm	
			<i>Survey date: THURSDAY 27/04/17</i>	<i>Survey Type: MANUAL</i>

LIST OF SITES relevant to selection parameters (Cont.)

9	ES-02-A-12 VICARAGE LANE HAILSHAM	COUNCIL OFFICES		EAST SUSSEX
	Edge of Town Centre Built-Up Zone Total Gross floor area:		3640 sqm	
			<i>Survey date: THURSDAY</i>	<i>Survey Type: MANUAL</i>
10	ES-02-A-13 ROMAN ROAD HOVE	OFFICES	26/11/15	EAST SUSSEX
	Edge of Town Centre Residential Zone Total Gross floor area:		280 sqm	
			<i>Survey date: WEDNESDAY</i>	<i>Survey Type: MANUAL</i>
11	GM-02-A-09 NEW MOUNT STREET MANCHESTER	LEASED OFFICES	04/07/18	GREATER MANCHESTER
	Edge of Town Centre Built-Up Zone Total Gross floor area:		2500 sqm	
			<i>Survey date: MONDAY</i>	<i>Survey Type: MANUAL</i>
12	HF-02-A-03 60 VICTORIA STREET ST ALBANS	OFFICE	26/09/16	HERTFORDSHIRE
	Edge of Town Centre Built-Up Zone Total Gross floor area:		610 sqm	
			<i>Survey date: WEDNESDAY</i>	<i>Survey Type: MANUAL</i>
13	HF-02-A-04 STATION WAY ST ALBANS	OFFICES	16/10/13	HERTFORDSHIRE
	Edge of Town Centre Residential Zone Total Gross floor area:		5000 sqm	
			<i>Survey date: THURSDAY</i>	<i>Survey Type: MANUAL</i>
14	MS-02-A-02 MOUNT PLEASANT LIVERPOOL	SCIENCE PARK OFFICES	02/10/14	MERSEYSIDE
	Edge of Town Built-Up Zone Total Gross floor area:		11250 sqm	
			<i>Survey date: TUESDAY</i>	<i>Survey Type: MANUAL</i>
15	MT-02-A-02 CASTLE STREET MERTHYR TYDFIL	COUNCIL OFFICES	13/11/18	MERTHYR TYDFIL
	Edge of Town Centre Built-Up Zone Total Gross floor area:		5250 sqm	
			<i>Survey date: THURSDAY</i>	<i>Survey Type: MANUAL</i>
16	NF-02-A-02 NORTH QUAY GREAT YARMOUTH	FINANCIAL PLANNERS	17/10/13	NORFOLK
	Edge of Town Centre Commercial Zone Total Gross floor area:		894 sqm	
			<i>Survey date: MONDAY</i>	<i>Survey Type: MANUAL</i>

LIST OF SITES relevant to selection parameters (Cont.)

17	NF-02-A-03 NORTH QUAY GREAT YARMOUTH	OFFICES		NORFOLK
	Edge of Town Centre Commercial Zone Total Gross floor area:		5500 sqm	
	<i>Survey date: TUESDAY</i>		<i>12/09/17</i>	<i>Survey Type: MANUAL</i>
18	NF-02-A-04 WHITING ROAD NORWICH	BUILDING CONSULTANT		NORFOLK
	Edge of Town Commercial Zone Total Gross floor area:		500 sqm	
	<i>Survey date: WEDNESDAY</i>		<i>13/11/19</i>	<i>Survey Type: MANUAL</i>
19	NY-02-A-02 STATION ROAD RICHMOND	DISTRICT COUNCIL OFFICES		NORTH YORKSHIRE
	Edge of Town Centre No Sub Category Total Gross floor area:		1930 sqm	
	<i>Survey date: THURSDAY</i>		<i>14/03/19</i>	<i>Survey Type: MANUAL</i>
20	PS-02-A-01 SEVERN ROAD WELSHPOOL	COUNCIL OFFICES		POWYS
	Edge of Town Centre No Sub Category Total Gross floor area:		3920 sqm	
	<i>Survey date: TUESDAY</i>		<i>12/05/15</i>	<i>Survey Type: MANUAL</i>
21	SF-02-A-02 BATH STREET IPSWICH	OFFICES		SUFFOLK
	Edge of Town Centre Commercial Zone Total Gross floor area:		6505 sqm	
	<i>Survey date: FRIDAY</i>		<i>19/07/13</i>	<i>Survey Type: MANUAL</i>
22	SW-02-A-01 LANGDON ROAD SWANSEA	OFFICES		SWANSEA
	Edge of Town Centre Development Zone Total Gross floor area:		6630 sqm	
	<i>Survey date: FRIDAY</i>		<i>25/10/13</i>	<i>Survey Type: MANUAL</i>
23	SW-02-A-02 KINGS ROAD SWANSEA	OFFICE		SWANSEA
	Edge of Town Centre Development Zone Total Gross floor area:		2225 sqm	
	<i>Survey date: THURSDAY</i>		<i>24/10/13</i>	<i>Survey Type: MANUAL</i>
24	WL-02-A-01 THE CRESCENT AMESBURY SUNRISE WAY	PET INSURANCE COMPANY		WILTSHIRE
	Edge of Town Development Zone Total Gross floor area:		2500 sqm	
	<i>Survey date: TUESDAY</i>		<i>18/09/18</i>	<i>Survey Type: MANUAL</i>
25	WO-02-A-02 MOOR STREET WORCESTER	OFFICE		WORCESTERSHIRE
	Edge of Town Centre Built-Up Zone Total Gross floor area:		2000 sqm	
	<i>Survey date: MONDAY</i>		<i>14/11/16</i>	<i>Survey Type: MANUAL</i>

LIST OF SITES relevant to selection parameters (Cont.)

26	WY-02-A-05	OFFICES	WEST YORKSHIRE
	PIONEER WAY		
	CASTLEFORD		
	WHITWOOD		
	Edge of Town		
	No Sub Category		
	Total Gross floor area:	1230 sqm	
	Survey date: TUESDAY	23/05/17	Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

TOTAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	26	3243	0.772	26	3243	0.135	26	3243	0.907
08:00 - 09:00	26	3243	1.875	26	3243	0.248	26	3243	2.123
09:00 - 10:00	26	3243	1.002	26	3243	0.270	26	3243	1.272
10:00 - 11:00	26	3243	0.334	26	3243	0.222	26	3243	0.556
11:00 - 12:00	26	3243	0.275	26	3243	0.212	26	3243	0.487
12:00 - 13:00	26	3243	0.356	26	3243	0.458	26	3243	0.814
13:00 - 14:00	26	3243	0.414	26	3243	0.378	26	3243	0.792
14:00 - 15:00	26	3243	0.270	26	3243	0.338	26	3243	0.608
15:00 - 16:00	26	3243	0.209	26	3243	0.380	26	3243	0.589
16:00 - 17:00	26	3243	0.206	26	3243	0.894	26	3243	1.100
17:00 - 18:00	26	3243	0.184	26	3243	1.616	26	3243	1.800
18:00 - 19:00	25	3323	0.051	25	3323	0.613	25	3323	0.664
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			5.948			5.764			11.712

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

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Parameter summary

Trip rate parameter range selected:	280 - 11250 (units: sqm)
Survey date date range:	01/01/12 - 13/11/19
Number of weekdays (Monday-Friday):	26
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	2
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

TAXI S

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	26	3243	0.009	26	3243	0.009	26	3243	0.018
08:00 - 09:00	26	3243	0.028	26	3243	0.025	26	3243	0.053
09:00 - 10:00	26	3243	0.014	26	3243	0.017	26	3243	0.031
10:00 - 11:00	26	3243	0.007	26	3243	0.009	26	3243	0.016
11:00 - 12:00	26	3243	0.008	26	3243	0.007	26	3243	0.015
12:00 - 13:00	26	3243	0.006	26	3243	0.006	26	3243	0.012
13:00 - 14:00	26	3243	0.007	26	3243	0.006	26	3243	0.013
14:00 - 15:00	26	3243	0.007	26	3243	0.008	26	3243	0.015
15:00 - 16:00	26	3243	0.006	26	3243	0.006	26	3243	0.012
16:00 - 17:00	26	3243	0.006	26	3243	0.005	26	3243	0.011
17:00 - 18:00	26	3243	0.024	26	3243	0.025	26	3243	0.049
18:00 - 19:00	25	3323	0.004	25	3323	0.004	25	3323	0.008
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.126			0.127			0.253

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

OGVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	26	3243	0.001	26	3243	0.001	26	3243	0.002
08:00 - 09:00	26	3243	0.005	26	3243	0.002	26	3243	0.007
09:00 - 10:00	26	3243	0.005	26	3243	0.006	26	3243	0.011
10:00 - 11:00	26	3243	0.004	26	3243	0.004	26	3243	0.008
11:00 - 12:00	26	3243	0.005	26	3243	0.005	26	3243	0.010
12:00 - 13:00	26	3243	0.002	26	3243	0.002	26	3243	0.004
13:00 - 14:00	26	3243	0.002	26	3243	0.002	26	3243	0.004
14:00 - 15:00	26	3243	0.002	26	3243	0.001	26	3243	0.003
15:00 - 16:00	26	3243	0.006	26	3243	0.004	26	3243	0.010
16:00 - 17:00	26	3243	0.001	26	3243	0.002	26	3243	0.003
17:00 - 18:00	26	3243	0.001	26	3243	0.004	26	3243	0.005
18:00 - 19:00	25	3323	0.000	25	3323	0.000	25	3323	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.034			0.033			0.067

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

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TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
PSVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	26	3243	0.000	26	3243	0.000	26	3243	0.000
08:00 - 09:00	26	3243	0.000	26	3243	0.000	26	3243	0.000
09:00 - 10:00	26	3243	0.000	26	3243	0.000	26	3243	0.000
10:00 - 11:00	26	3243	0.000	26	3243	0.000	26	3243	0.000
11:00 - 12:00	26	3243	0.001	26	3243	0.001	26	3243	0.002
12:00 - 13:00	26	3243	0.000	26	3243	0.000	26	3243	0.000
13:00 - 14:00	26	3243	0.000	26	3243	0.000	26	3243	0.000
14:00 - 15:00	26	3243	0.000	26	3243	0.000	26	3243	0.000
15:00 - 16:00	26	3243	0.000	26	3243	0.000	26	3243	0.000
16:00 - 17:00	26	3243	0.000	26	3243	0.000	26	3243	0.000
17:00 - 18:00	26	3243	0.000	26	3243	0.000	26	3243	0.000
18:00 - 19:00	25	3323	0.000	25	3323	0.000	25	3323	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.001			0.001			0.002

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

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TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
CYCLISTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	26	3243	0.015	26	3243	0.004	26	3243	0.019
08:00 - 09:00	26	3243	0.069	26	3243	0.000	26	3243	0.069
09:00 - 10:00	26	3243	0.026	26	3243	0.000	26	3243	0.026
10:00 - 11:00	26	3243	0.014	26	3243	0.004	26	3243	0.018
11:00 - 12:00	26	3243	0.006	26	3243	0.001	26	3243	0.007
12:00 - 13:00	26	3243	0.006	26	3243	0.012	26	3243	0.018
13:00 - 14:00	26	3243	0.012	26	3243	0.013	26	3243	0.025
14:00 - 15:00	26	3243	0.005	26	3243	0.013	26	3243	0.018
15:00 - 16:00	26	3243	0.005	26	3243	0.013	26	3243	0.018
16:00 - 17:00	26	3243	0.004	26	3243	0.020	26	3243	0.024
17:00 - 18:00	26	3243	0.002	26	3243	0.068	26	3243	0.070
18:00 - 19:00	25	3323	0.004	25	3323	0.016	25	3323	0.020
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.168			0.164			0.332

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

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APPENDIX B

LETTER FROM FLYN



48 Ashton Vale Road
Ashton
Bristol
BS3 2HQ
Telephone: 0117 963 6141
Facsimile: 0117 963 1954

Doc Ref: 210115-Metrowest-RJH

15th January 2021

To whom it may concern

Re: Metrowest – Portishead Branch Line – Rail Crossing @ Junction with Ashton Vale Road

We write to express our concerns regarding the proposals to increase the rail activity that will directly affect the number of times the level crossing (at the junction with the A38 from Ashton Vale Road) will operate, causing serious delays to traffic. Our business will be further impacted by the delays, every additional time the level crossing is closed for a train to pass.


Our prime activity is Civil Engineering and Groundworks, our maintenance centre for our plant and transport operations is situated at the end of Ashton Vale Road. We have frequent deliveries and transport movements to and from our workshops and consequently require easy access for our vehicles, vans and staff every weekday between 6.00am to 18.30pm.

Each occasion we have a vehicle delayed at the crossing has a serious impact on the company both financially and logistically, any increase in the frequency of trains passing over the crossing will, without doubt increase this financial burden.

In addition to our vehicle movements being affected there are serious concerns regarding congestion particularly at the junction with Carla Trading Estate which increases significantly when there is activity at the car auction site. This obviously has a serious impact on the safety and associated risks particularly to pedestrians and cyclists.

It would be irresponsible not to record our concerns and we hope they will be taken into consideration when any future decision is made.

Yours faithfully
For Flynn Limited


Richard J Hunt
Group Production Director.



APPENDIX C

LETTER FROM BEYOND THE BEAN

Unit 6, Cala Trading Estate
Ashton Vale Road
Ashton Vale
Bristol
BS3 2HA
United Kingdom

t: +44 (0)117 953 3522
f: +44 (0)117 953 3422
beyondthebean.com

18 January 2021

Ref: MetroWest – Portishead Branch line

To whom it may concern,

Our business which is a manufacturing and wholesale distribution business to the cafe and bar industries both in the UK and abroad. We require deliveries of raw materials and finished goods to our business on a daily basis as well as collections by couriers and customers alike. We have been located on the Cala Trading Estate for over 20 years and the level of traffic even in lockdown is such that we will not be able to operate efficiently if we are subject to the level crossing being shut for upwards of 40 minutes in every hour. We currently provide good paying jobs to some 40 employees, many of which have been with us for over 10 years. This last year has challenged us to survive the Covid impacts and now we face additional challenges maintaining our international business due to Brexit regulations. The further threat of limited access to the estate may be a step too far and could result in us relocating the business and its tax contributions outside of Bristol.

While wishing to be supportive of any and all plans to add to options for public transport, safe cycling and walking routes, we can't support this proposal for adding additional passenger trains to the line unless there is an alternative entry/exit point to the estate, added to the plan.

Sincerely,



Terry Osborn

General Manager

APPENDIX D

EMAIL FROM AVONLINE

From: White, Sandra <Sandra.White@avonline.co.uk>

Sent: 15 January 2021 11:21

To: Amy McCormack <Amy@ETM-Group.co.uk>

Subject: ETM / Metro

Email sent on behalf of Richard Hale, Managing Director of Avonline Network Services Ltd

Dear Amy

The proposed volume of trains coming through the level crossing on Ashton Vale Road will have a large

impact on our business due to traffic holdups especially first thing in the mornings with our engineers

coming onto the depot for job packs and materials to leave again to their work destinations.

Our business has tripled in the last 18 months and is expected to increase again in 2021. We currently

run a fleet of 60 plus vehicles from Ashton Vale Road as well as contractors and material deliveries throughout the day the traffic to and from the depot is constant.

Regards

Richard Hale

Managing Director

Avonline Network Services Ltd

Phone 0117 9022085

Mobile XXXXXXXXXX

Email rich.hale@avonline.co.uk

www.avonlinenetworks.co.uk

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Registered in England. Company Number 10201726

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Enc 2

Sutherland Property and Legal Services (SPLS) provided oral submission to the hearing on 12/01/21 under agenda item 6. The submission was based on the written submission provided to the Examination on 23 November 2020 at Deadline 2.

The oral submission set out that:

- The site is a *Principal Industrial and Warehousing Areas* as adopted within Bristol City Council's Planning Policy. Local policy recognises the limited supply of employment land and the need to retain it (Core Strategy 4.8.17); and
- The NPPF provides two tests, these are Para: 108c and 182. Neither test is passed by the application based on its current evidence base.

Principal Industrial and Warehousing Areas

The thrust of the submission is that the estate is a Principal Industrial and Warehousing Area and therefore the existing businesses are afforded a degree of protection with regard to the continued use and expansion of their operations.

Such protection is secured via NPPF 108c) which is explicit in ensuring that any significant highways impacts can be cost effectively mitigated to an acceptable degree. As per the evidence provided by Mr Tonks of CTC at ENC1 of this submission and throughout the process of this DCO Examination, it is not felt such impacts have been mitigated to an acceptable level, providing a direct impact to the operation of the Principal Industrial and Warehousing Area.

It is also pertinent to note NPPF para 80:

“Planning policies and decisions should help create the conditions in which businesses can invest, expand and adapt. Significant weight should be placed on the need to support economic growth and productivity, taking into account both local business needs and wider opportunities for development.”

Within Mr Tonks response at ENC 1 three further business have provided letters of concern with regard to MetroWest's plans and the possible frequency of operation. These are businesses that support the local economy and that wish to invest in their continued operation and expansion. It is advanced via the evidence of Mr Tonks that insufficient information has been provided to guarantee no impact on their business and their plans for future growth.

Agent of Change

Within the applicant's response to Deadline 2 submissions (9.18 ExA.CWR.D3.V1) it is advanced that the agent of change would not apply as no planning permission of development consent would be required to increase the number or frequency of service of the existing freight operation.

Throughout the two days of the hearing, it was advanced that a total of 40 movements could be achieved per day (20 in each direction) under current permits. It was also noted that a number of speakers at the hearing stated that the current number of freight movements are infrequent, and this coincides with comments made to us by both ETM and Manhiem.

For a fall back position to exist it must be a realistic prospect, it is not realistic to assert that there may be up to 40 closures a day as it does not appear that there is demand for this level of freight movement.

It would also appear the applicant has ignored the other major point with regards to the '*Agent of Chance*' principle. The businesses on the estate will change, expand and increase. The businesses are located on a *Principal Industrial and Warehousing Area* where policy supports their use and continued growth, this is evidenced in Mr Tonks evidence via the email letter provided by Avonline Networks (which sets out a tripling of their business output in 18 months) and the increase in activity of ETM, providing for a large investment in their business and subsequent increase in vehicular traffic on the site (via virtue of application 17/06938/F which was approved on 21 August 2018). Within the deadline 2 submission table 4.1 sets out a hypothetical increase in traffic movements via the permitted use change of B8 to B1¹, though accepted only 500m² of each building could change, this still sees an am peak impact of +488% and a pm peak impact of +401%.

Following Mr Tonks review of all the modelling provided by the applicant it does not appear that any increase in business activity has been considered from the original (though flawed) base data that the applicant is relying on.

It is conceivable that due to the impact of junction closures that do not currently exist (and that there is no realistic prospect of occurring) business may have unreasonable restrictions placed upon them with regard to their future expansion. Such a position is contrary to NPPF paragraph 182.

Summary

It is advanced that the failure to correctly model the junction has provided the applicant with incorrect base data that means no accurate assessment of the junction and the proposed impacts can be determined.

It is also argued that the applicant's reliance on a fall back of 40 closures a day is unlikely as demand for such a prospect is unrealistic, even if such a position is maintained the stress testing has failed to take into account the expansion of business within the estate.

It is put to the applicant that there is a realistic prospect that business within the estate will see an impact on their ability to operate and that future applications to the Local Planning Authority to expand may be refused based on the failure of the current model and that of the stress testing to ascertain correctly the impacts of future expansion.

¹ GPDO 2015 (as amended) Schedule 2 Part 3 Class I.