APPLICATION NUMBER 17/P/5545/OUT

C AND M SANDERS

REVIEW OF NORTH SOMERSET D&E HIGHWAYS AND TRANSPORT MEMORANDUM

1. INTRODUCTION

1.1 **cTc** is in receipt of a North Somerset Internal Memorandum dated 10th September 2018 in regard to additional information submitted in support of the above planning application in order to address issues raised in the preliminary Highways and Transport response.

1.2 The **cTc** information considered comprises;

- Transport Assessment
- Technical Note 1; Travel Plan
- Technical Note 2; Response to Highways Comments

1.3 Throughout the process, **cTc** has sought opportunities to discuss the analyses and reports with technical officers of the Local Highway Authority (LHA), on matters including scope of assessment and technical details of the data collected and analyses undertaken. At no time were telephone calls able to be connected to the relevant officer and neither were any telephone messages graced with return calls. Despite numerous efforts it has proven impossible to engage in technical discussions with officers in order to agree any aspects of the analyses (and as a result, all liaisons have been directed through the LPA).

1.4 Further to the Appellant's Planning Consultant, Sutherland PLS seeking confirmation of the Local Highway Authority's (LHA) position in regard to transport and highways, no response being available on the Planning Portal, **cTc** received the LHA's first response on 13th June. This is within only around 1 month of the end of the pre-summer traffic survey period, hence additional traffic surveys are extremely difficult to arrange at that time. The issues raised in this initial response are repeated in the LHA's second response, dated 10th September, hence it is not considered necessary to append this initial document. What is relevant, however, is that **cTc** was aware of the intention to determine the Application over the summer period, hence any repeat surveys were required before the survey blackout period.

1.5 The LHA's second response is discussed in detail, below, which confirms that the majority of the issues raised are of no relevance and those that could be deemed relevant could have been easily resolved in discussion. As identified above, no such discussions were permitted.

2. PROPOSED SITE AND ACCESS ARRANGEMENTS

New Priority Junction with Bridgwater Road

2.1 The LHA's response suggests that ***"…a minimum visibility splay of 215 metres would be required."*** Whilst it is accepted that the location of the proposed site access is within an area of 60mph speed limit it is also noted that the visibility splay to the right for vehicles leaving the site (ie towards the north) extends into the adjacent 50mph speed limit. It is reasonable to conclude therefore that in regard specifically to the splay to the right, a more appropriate comparator would be the splay specified for a 50mph design speed, equating to 160m.

2.2 Notwithstanding the above, the Council's response suggests that the TA "…failed to demonstrate achieved visibility splays…", however, Paragraph 3.2 of the original TA stated;

> ***"3.2 cTc has measured on-site the available visibility from the proposed site main access on the A370. This is:***
>
> - ***To the left (towards westbound traffic) 2.4m x 294m; and,***
> - ***To the right (towards eastbound traffic) 2.4m x 290m."***

2.3 It is accepted that the above visibility splays were not illustrated on a plan, however, the dimensions were clearly set out in the report's text and no suggestion has been made by officers that these stated observations are in any way inaccurate. Indeed, if officers have visited the site (and this is unclear from the responses to date), they would have seen that the verge is extremely wide along the site's A370 frontage. The frontage is largely straight, leading to substantial visibility in both directions, as illustrated in the photographs below.

L; From site access, looking south.

R; From site access, looking north

2.4 It is clear that the TA did contain confirmation that visibility splays in excess of 215m 'y' distance stated in the response are available from the location of the site access. Moreover, the more appropriate DMRB figure of 160m, for a 50mph speed limit as applies at the extent of visibility to the north is even more substantially exceeded by the visibility available on the ground.

2.5 The note then continues to criticise the speed survey undertaken in response to the LHA's initial consultation response. As stated above, this consultation was not issued until mid-June and given the proximity to the survey period shut-down it proved impossible to commission **cTc**'s preferred option of a classified Automatic Traffic Counter (ATC). Instead a manual radar survey was commissioned from a highly respected traffic survey contractor, with many years' experience of conducting these kinds of surveys.

2.6 The consultation response acknowledges that this speed survey identified an 85th percentile speed of 48mph (circa 77kph), hence confirming that the suggestion above of an 85kph design speed is indeed more appropriate than the 100kph design speed identified by the LHA. However and notwithstanding that, as identified in the TA, the visibility achieved at the location of the proposed site access junction very substantially exceeds that required in TD42/95 for a 100kph design speed and indeed broadly meets the stated requirements for a design speed of 120kph (295m).

2.7 The original TA clearly described the above consideration at Paragraph 3.3, which stated;

> ***"3.3 Clearly ample visibility is available from the proposed site access. The speed limit is 60 mph (97 kph) at the site access, having transitioned from a 50 mph (81 kph) speed limit. DMRB (TD42/95) suggests that for a design speed of 100 kph (62 mph) visibility should be provide to 215m, the available visibility at the proposed site access location exceeds this. DMRB also quotes 295m visibility for design speeds of 120 kph (75 mph), which the site access is in the region of achieving."***

2.8 It is very clear from the above that safe visibility splays are available at the location of the proposed site access and that this was clear from the discussions in the TA.

2.9 Notwithstanding the above and in order to put this matter once and for all beyond any further doubt, **cTc** has commissioned a further traffic survey on A370. In this instance the survey will be conducted by means of classified ATC, which would have been the preferred methodology previously had the timing of the LHA's response permitted this. This further survey has confirmed materially similar traffic speeds to those previously stated. The 2019 ATC confirms a marginal increase in traffic speeds of between 2.5kph to 3.5kph (from 77.0 kph in both directions to 79.5 kph for northwestbound traffic and 80.5 kph for southeastbound traffic). This slight increase in speeds is to be expected as the original radar survey was located a short distance north of the National Speed Limit sign, and the ATC was located on it; hence drivers will be accelerating from this point. This confirms that both the radar survey and the ATC are reflecting typical conditions at this location. The resultant MfS2 visibility requirements are proportionately increased a materially insignificant amount: by 5m towards northwestbound traffic and by 7m towards southeastbound traffic, but significant available visibility exists to accommodate this small increase on the previously stated figures. **cTc** has contacted the survey contractor and obtained a response confirming that it is his professional opinion that the LHA's criticism is wholly unfounded. This response is provided at Appendix A.

2.10 Moreover, in undertaking further PICADY analyses based on "2023 with development" traffic flows, the results using the previous traffic data as a base are almost identical to those undertaken using the 2019 ATC traffic survey data. In the AM Peak Hour a difference of +0.07 RFC is seen, and in the PM Peak Hour -0.01. This is materially insignificant and confirms that both sets of base traffic flows validate each other.

2.11 Further criticism is contained in the second consultation response, dated 10th September in regard to the calculations of required visibility splays, which were included in Technical Note 2. The consultation response contains a partial quote from MfS at Paragraph 10.1.3, which the response quotes as ***"provides guidance on SSDs for streets where the 85th percentile speeds are up to 60kph (37mph)"*** and from this it concludes that an inappropriate source document has been used to calculate required visibility splays in **cTc**'s Technical Note 2. In fact this partial quotation from MfS2 misses the first two words of the sentence in question, which are ***"This section…"***. Subsequently in MfS2, following Paragraph 10.1.12, an insert is provided which describes ***"HGV Braking Performance"*** for vehicle speeds ***"…up to 90kph"***. This insert continues to state that ***"A series of real life braking tests were carried out by ROSPA using a wide range of vehicles…the minimum overall braking rate achieved was 0.44g, for a 36 tonne Foden vehicle…"*** and continues to state that the braking rate of a Ford Mondeo was recorded at 1.27g. Further in MfS2, Table 10.1.3 states;

"10.1.3 In summary, recommended values for reaction times and deceleration rates for SSD calculations are given in Table 10.1 below and the resulting SSD values for initial speeds of up to 120kph are shown in the graph beneath.

Design Speed	***Vehicle Type***	***Reaction Time***	***Deceleration Rate***	***Comments***
60kph and below	*Light vehicles*	*1.5s*	*0.45g*	
	HGVs	*1.5s*	*0.375g*	*See 10.9.1*
	Buses	*1.5s*	*0.375g*	*See 10.1.10*
Above 60kph	*All vehicles*	*2s*	*0.375g (Absolute Min SSD)*	*As TD9/93*
	All vehicles	*2s*	*0.25g (Desirable Min SSD)*	*As TD9/93*

Table 10.1 Summary of Recommended SSD Criteria"

2.12 The SSD calculations which were undertaken for **cTc**'s Technical Note 2 used Reaction Time of 2 seconds and deceleration rate of 0.375g, or 3.675ms^2 and hence are compliant with the criteria specified in Table 10.1 of MfS2. Using the above parameters suggests SSD distances of 105.5m (visibility 'y' distance adjusted for bonnet length extending to 107.9m) in each direction, which are very easily achievable at the proposed site access.

2.13 Moreover, should the LHA be concerned about use of absolute minimum SSD, repeating the same calculation using a deceleration rate of 0.25g (2.45ms^{-2}) results in preferred minimum SSD values of 136.7m (visibility 'y' distance adjusted for bonnet length extending to 139.1m). Once again, the splays measured on the ground significantly exceed these lengths.

2.14 The above clearly demonstrates that by selectively editing the quotation from MfS2, the Council's comments are both incorrect and wholly disingenuous. It is very clear that visibility achieved on the ground significantly exceeds the requirements of appropriate National guidance.

2.15 The response questions why no consideration has been given to closing one or both of the existing village access junctions in light of the proposed new junction on the A370. As stated above, discussions have been sought with officers in order to discuss all relevant highway and transport matters, however, no highways officer has been made available for either meetings or telephone discussions. From discussions held with local residents it was made clear to **cTc** that villagers had no wish to see either of the existing junctions closed, although **cTc** is aware of road safety concerns in regard to the southernmost junction of A370 with Bridge Road. A closure or significant downgrading of this junction could form an effective contribution to enhancing local road safety, however, in the absence of LHA officers being available for discussion it was not possible to effectively progress this consideration.

2.16 The reference to altering the design ***"…in order to enable southbound traffic to more easily pull over without impeding through traffic…"*** refers to the increased junction radii and increased width of the site access road, which will permit vehicles to turn off the A370 without sharp braking on entering the site. The reference is correct in regard to southbound, left turning traffic, indeed the LHA's suggestion that this could refer to northbound vehicles is nonsensical, as the design has always included a ghost island right turn lane, hence this is not new.

A new priority junction with Bleadon Road

2.17 The response confirms that the visibility splays specified are appropriate for an access junction in this location.

2.18 Subsequently, it is identified that TA91/05 suggests that ***"…zebra crossings should not be introduced on roads with an 85th percentile speed of 35mph or more."*** This is indeed an accurate quote from TA91/05 (Para 6.32), however, it should be considered in context with the LHA's other request(s) in regard to these proposals. Two paragraphs earlier in the Consultation Response it is stated that ***"Current speeds are in excess of the speed limit and this issue would need to be addressed."***

2.19 Consequently, it is acknowledged that existing speeds are above the recommended maximum for providing a zebra crossing by some 0.6mph in a westbound direction. In an eastbound direction they are 1.4mph below this limit. The proposals comprise not simply a zebra crossing but a flat-top, raised area upon which the crossing will sit. In combination with a second similar facility further south and signage as appropriate (to be agreed with the LHA) this is intended to significantly reduce vehicle speeds on this route. It is likely in any case that simply providing housing on the site, forming the western boundary to the highway will change the perception of drivers and consequently it is considered unlikely that traffic speeds would remain above the specified 35mph even in the absence of additional control measures. Considering the proposal to raise the crossings onto flat top, table-designs, traffic speeds will very clearly drop by a material amount and zebra crossings are certainly appropriate in this instance.

A retained existing priority with Bleadon Road

2.20 The LHA's comments in regard to this proposed access are identical to the above and the same response is provided;

- Existing traffic speeds only exceed the maximum recommended for a zebra crossing by 0.6mph in one direction only;
- Raising the proposed crossing onto a hump will cater better for pedestrians, especially those with impaired mobility and will reduce traffic speeds by more than the 0.6mph necessary to make a zebra crossing appropriate;
- Visibility splays exceeding requirements are available at the proposed access junction.

Road Safety

2.21 The LHA's criticism in this regard appears to rely on two factors;

- The high proportion of traffic turning right across southbound A370 traffic; and,
- The suggestion that the speed survey results are not acceptable.

2.22 The site location will inevitably result in a high proportion of trips heading to and from the north (direction Weston-super-Mare), as occurs at present for the majority of trips associated with Bleadon village. In reality it makes little difference whether traffic will distribute predominantly to / from the north or the south as in either case either the outbound or the inbound journey will be required to cross the opposing southbound flow on the A370. The design of the proposed junction is to modern standards intended to cater for such traffic and this will be available for traffic currently using the two historic Bleadon junctions to re-assign to, should they wish.

2.23 Consideration could be given to closure of one or both of the existing Bleadon junctions, concentrating the existing traffic onto the proposed development access junction and attempts have been made to discuss this with LHA officers, who have not made any opportunities available.

2.24 In regard to the LHA's suggestion that a Road Safety Audit should be undertaken at this stage, it is clear that focusing trips on a new design of junction, to modern standards should ensure safety of operation, especially providing the option for drivers to reassign away from existing historic junctions with questionable road safety records.

Trip Generation and Distribution

2.25 The LPA are critical of **cTc**'s TRICS assessments and imply that the resultant analyses may over-estimate travel by sustainable modes, in view of the site's location. This criticism is not accepted, however, of greater importance than whether or not the forecasts can be agreed is the consequence of the suggested issue.

2.26 The TRICS database comprises the Nationally preferred source of trip generation and attraction data used for forecasting development implications and impact for sites throughout the UK. It contains vast quantities of data, described and categorised according to various of their characteristics including land-use classification and location. The relevance of data within the database can be adjusted according to these characteristics, however, it needs to be borne in mind that each time the data is further constrained, the number of appropriate sites is reduced, hence the statistical reliability is eroded.

2.27 **cTc** stands by the original TRICS analyses and confirms that it is our view that the trip generation presented in the TA and in Technical Note 2 is fit for purpose. Furthermore, the predominant use to which the resultant forecasts have been put is in regard to ensuring that local infrastructure is able to successfully cater for the forecast levels of trips. Technical Note 2 included onerous sensitivity tests which demonstrated that the proposed junction could cater for substantially more traffic than forecast in association with the proposals, plus redirected traffic from the village and still provide a significant proportion of additional spare operational capacity. It is clear that the criticisms presented by the LHA in regard to the trip generation forecasts are not only incorrect, but have no material implications in any case in view of the substantial spare capacity available.

2.28 In order to further support this assertion, **cTc** has undertaken further sensitivity tests of capacity of the proposed site access junction onto the A370. These are discussed below and provide additional support to the above conclusion that this criticism is meaningless in its implication.

Health Centre and Local Shop Trip Generation

2.29 Once again, **cTc** stands by the work previously undertaken, which confirms that no capacity concerns exist in regard to the proposed site access arrangements. Notwithstanding this a further sensitivity test has been undertaken assuming ALL traffic associated with these uses is external to both the site and village. This is very clearly a substantial over-estimate in that it requires an implicit assumption that no trips to or from the health centre or shops will originate from either the proposed residential development of this site or the adjacent village of Bleadon and yet confirms that no capacity concerns result.

Office Trip Generation

2.30 The LHA response has criticised the TRICS assessment by comparing the resultant traffic forecasts with details in the Planning Application, which have identified 96 jobs being created on site. No discussion is presented in regard to how the LHA relates these 96 jobs to the 300m^2 GFA of employment use proposed.

2.31 In fact the 96 jobs specified in the planning application comprise all employment opportunities associated with the developments and include retail and healthcare employees (full and part time) in addition to office jobs. The LHA's suggestion that the trip generation of the proposed office use should reflect the stated 96 jobs would imply an employment density of 1 employee per 3.125m^2. Typical office employment densities in the UK are generally assumed to be between 1 employee per 10m^2 and 1 employee per 12.5m^2, resulting in some 24 to 30 jobs. The LHA will inevitably require a Travel Plan in support of this proposal and indeed, one is proposed by the Appellant in any case. This will have the primary goal of influencing mode choice of journeys to work and reducing car reliance and use. Furthermore, with the growing popularity of flexible working practices, including flexitime and work from home opportunities whereby employees do not need to travel within the highway peak periods, or even at all on some days of the week, peak hour traffic generation rates associated with employment uses are reducing rapidly in comparison with a few years ago.

2.32 Notwithstanding the above, the trip rates quoted for this land use in Technical Note 2 comprise car traffic generation rates of;

Period	Trip rate / 100sqm		Scale (sqm)	Trips	
	Arr	Dep		Arr	Dep
AM Peak Hour	1.868	0.234	300	6	1
PM Peak Hour	0.231	1.962		1	6

2.33 These confirm high traffic generation rates per hundred square metres and clearly represent onerous analyses. Furthermore and in relation to the discussion above, the onerous sensitivity tests undertaken in regard to operational capacity of the proposed site access junction onto the A370, this matter clearly has no material impact on the conclusions of the traffic analyses in any case, as very substantial spare operational capacity exists in the design, even under onerous sensitivity test scenarios.

Vehicle Distribution

2.34 **cTc** notes that the LHA consider ***"The majority of the trip distribution calculations..."*** to be ***"… acceptable."*** This is pleasing.

2.35 Notwithstanding this, criticism is raised in regard to the use of "All or Nothing Assignments" in which trips associated with each Origin / Destination (OD) Pair are assigned to a single route. It is accepted that this is not 100% representative and that variation will occur in route choice for each OD Pair, however, typically these variations are found to broadly cancel one another, hence are not material to the conclusions of the analyses. In any case, All or Nothing Assignment is a commonly used practical methodology for trip assignment used and accepted widely throughout the profession.

2.36 By means of example, if OD Pair A and B are assigned to a route involving a right turn at a given junction and OD Pair C and D assign to a left turn at the same junction, variations in route choices between A/B are likely to be broadly cancelled by similar variations for C/D and so on. This is particularly so when the generator is located immediately adjacent to a major inter-urban route such as the A370, when assignment is simply North or South. Once more, attention is drawn to the substantial spare traffic capacity demonstrated in the proposed site access junction, which confirms that minor variations in trip assignments will have no material implications in any case. It is clear this criticism has neither basis nor impact on the analyses.

Traffic Impact

2.37 The LHA have criticised **cTc**'s Technical Note 2 for its reference to the A38, rather than A370. It is self-evident that this represents a simple typographical error and that would have been easily explained had any officers responded to **cTc**'s repeated attempts to discuss the analyses and reports with the LHA.

2.38 Further criticism is levelled at the lack of consideration of any committed development traffic and once again, repeated attempts were made to discuss this issue with highways officers, but none were made available. **cTc** is aware of a small number of relatively small approved development schemes in the vicinity, however, the traffic volumes associated with these are small. In view of the substantial proportions of spare traffic capacity demonstrated in the proposed site access junction it is very clear that the addition of further base traffic flows, albeit small in number, would not materially change the conclusions of the analyses undertaken. Moreover, any increases in base traffic flows to reflect committed developments would further reduce the proportional impact of the proposed development traffic, thereby reinforcing the conclusion that the proposals do not present a material impact on the operation of local transport infrastructure.

2.39 The LHA have also questioned why no analyses were provided of other junctions, distant from the proposed development site, specifically;

- Bridgwater Road / Bleadon Hill / Uphill Road South; and,
- Bridgwater Road / Broadway / Grange Road.

2.40 As identified above, numerous unsuccessful attempts were made to contact highways officers in order to discuss these proposals, including the appropriate scope of analysis. No officers were made available for these discussions, which could have adequately resolved any concerns in regard to the above.

2.41 Each of the above junctions is distant from the site frontage; Bleadon Hill / Uphill Road South is 1.75km (1.1 miles) and 2.15km (1.3 miles). A370 is a strategic interurban route which carries high volumes of traffic. Referring to the analyses presented in Technical Note 2 it is clear that the proposed development is forecast to generate an increase in traffic heading to and from the north on A370 of less than 7.5% in each peak hour. As more traffic joins this route approaching Weston-super-Mare this percentage will be eroded. Furthermore, generated traffic heading to and from the north will inevitably distribute at the various junctions encountered and will to a degree reduce with distance away from the site. In any case it is clear that the forecast impact is highly unlikely to be noticeable and more than likely will be within normal daily traffic variations on this stretch of road.

2.42 The LHA question the use of DIRECT traffic flow input to the PICADY analyses. Yet again, this is an issue that **cTc** would have wished to discuss with officers, had any been available to either take telephone calls or meet, when this issue could have been very easily and quickly resolved, rather than bringing it before the Inspectorate. It is noted that the LHA do not suggest any alternative method of input which they would have preferred and typically, DIRECT input is considered the most accurate mode of operation, as it reflects the hourly flow broken down into 15 minute segments, enabling appropriate variation between those segments. In this instance a Manual Classified Count (MCC) survey was undertaken at the junction of Bridgwater Road with Bleadon Road and Accommodation Road. All traffic turning movements were counted at this junction in 15 minute time segments and from those, traffic demand both northbound and southbound on A370 across the proposed site access junction was identified. This data was input in 15 minute time segments into the PICADY analyses. The TRICS analyses of trip generation were conducted to develop hourly flows and for the purpose of entering into PICADY, these were proportioned according to the observed 15 minute profiles obtained from the MCC survey.

2.43 Although the LHA has not identified what form of data entry it would have preferred and indeed other than the two written critiques issued to the LPA, no comment on the assessment has been forthcoming from the LHA, **cTc** considers this approach to clearly represent the most accurate, hence appropriate methodology in regards to modelling traffic flow profiles.

2.44 Furthermore, irrespective of whether **cTc**'s assertion above, or that of the LPA is considered the most appropriate and accurate methodology, the PICADY analyses undertaken demonstrated substantial spare operational capacity. Consequently, any variations in the flow profile within the hour analysed are highly unlikely to result in any changes to the conclusion of these analyses, which is that no traffic capacity concerns are attached to these proposals.

2.45 This section of the LHA's critique finally suggests that ***"There is no justification provided to demonstrate that the scheme would not result in severe residual cumulative impact, as stated in the NPPF"*** clearly bears no credibility in light of the maximum Ratios of Flow to Capacity (RFC) in even the most onerous Sensitivity Tests undertaken still remaining less than 0.5. To put that figure fully into perspective it confirms that in broad terms the level of traffic demand is less than half of the maximum which the junction can cater for. In design terms, typically the target maximum level of operation is set to an RFC of 0.85, leaving 15% spare operational capacity to cater for unusual short duration fluctuations in demand. This confirms that the results of the sensitivity test submitted in Technical Note 2 demonstrate a maximum RFC of only 54% of the usual target design maximum (46% below design maximum and 54% below absolute maximum). Combined with the fact discussed above, that the proposals will result in an offsite traffic increase of less than 7.5% it is very clear that there are no conceivable circumstances in which the proposed development could be reasonably be expected to result in a ***"severe residual impact"***.

Further Sensitivity Tests

2.46 As discussed above, in light of the LHA's criticism of **cTc**'s traffic generation forecasts, further sensitivity tests have been undertaken at an analysis year of 2023, taking the most onerous traffic demand previously assessed (ie 50% externalisation of retail and health centre trips, plus all work trips externalised and transfer of village traffic to the proposed new access, then on to this, the forecast traffic generated by the proposed residential development has been doubled in number. This presents a very clearly, highly unrealistic scenario, but serves to demonstrate the amount of spare capacity available in the junction as designed, hence confirms that should the LHA's concerns over **cTc**'s TRICS analyses be given weight by the Inspectorate, the practical implications continue to remain wholly immaterial.

2.47 The results of these extra sensitivity tests show a worst case maximum RFC of only 0.68, with only nominal queue lengths. In this scenario, delays for vehicles wishing to turn right out of the proposed site access onto the A370 exceed 20 seconds per vehicle, however, it should be borne in mind that this refers to the manoeuvre with the heaviest demand and assumes **double** the forecast residential traffic generation, plus high levels of externalisation of trips associated with the proposed facilities within the site which are designed to serve the development site and the wider community of Bleadon (local retail and health centre), plus re-assignment of Bleadon trips to access the A370 via the site. This is very clearly, substantially higher levels of traffic demand than will ever require to use the proposed new junction and demonstrates the high level of flexibility and "spare" operational capacity provided within the design. The results of these PICADY analyses are included herewith at Appendix B.

Parking

2.48 The LHA's response states in this regard that ***"It is accepted that as the application is at an outline stage, car and cycle parking provision cannot be finalised until a schedule of accommodation is provided. However a commitment to providing parking in accordance with local standards should be provided."*** It is implicit in this statement that such a commitment is missing from the documentation provided, however, **cTc**'s Technical Note 2 stated at Section 12, under the Heading ***"CAR AND CYCLE PARKING"***;

> ***"12.1 The Application is in outline with access determined. The Applicant is content to accept a Condition requiring LHA published standards to be complied with in regards car and cycle parking. The site is clearly of sufficient size that these can easily be accommodated."***

2.49 Clearly the commitment requested in regard to meeting car and cycle parking standards is already provided in Technical Note 2 and to imply otherwise is disingenuous. **cTc** is pleased that, in this regard at least, there are no outstanding areas of disagreement.

Site Layout

2.50 It is pleasing to note the LPA's acknowledgement that the Application was in Outline, hence many of the detailed matters requested are inappropriate at this stage and should be submitted subsequently, as Reserved Matters. However, 5 further criticisms are levelled and these are discussed below. It is noted once again that each of these issues could have easily been discussed and resolved had the LHA responded to any of **cTc**'s requests for technical discussions in regard to this Application.

a) **Pedestrian and Cycle Access Strategy**; the LHA's response suggests that no strategy is provided, however, Technical Note 2 undertakes to provide key pedestrian linkages to local facilities including within the village and adjacent bus stops and footpaths at Paragraphs 14.3, 14.4, 14.10, 14.13 and 15.2. A comprehensive pedestrian and cycle access strategy cannot be produced until the internal site layout is agreed and that is a Reserved Matter. Consequently, it is inappropriate to produce a detailed pedestrian and access strategy until it is clear where within the proposed development pedestrians and cyclists will seek to go. The submitted documents contained sufficient commitment to providing this strategy at the appropriate time that it is able to be successfully secured by Condition.

b) **Swept Path Assessments**; the site access arrangements have been designed according to modern design parameters, hence are appropriate to cater for access by vehicles appropriate for a predominantly residential development. Figures 3.1, 5.1 and 6.1 of Technical Note 2 comprised preliminary design Drawings of the three proposed site access junctions. These are also included herewith at Appendix C, where it can clearly be seen that refuse vehicle swept paths are illustrated in each case. It is clear therefore that the statements in the LHA's response, that ***"No swept path assessments have been provided at the proposed site access junction…"*** and ***"TN2 has not provided any swept path assessments"*** is factually incorrect. These have been provided. Unfortunately, this erroneous criticism by the LHA is indicative of the lack of care and diligence exercised by the Authority throughout this process.

c) **Visibility Splays**; this matter has been addressed in some detail above and no further comment is necessary, save for the reference to ***"…a setback of 4.5m, suitable for larger vehicles."*** This is an incongruous statement as the 'x' distance (or ***"…setback…"***) is not defined in regard to vehicle size. Indeed, typically, ***"…larger vehicles…"*** will locate a driver at the front of the vehicle's cab, either on top of or even in front of the engine compartment, hence closer to the front extremity of the vehicle and requiring less ***"…setback…"*** than for conventional cars, where the driver is located behind the vehicle's bonnet. The 'x' distance does not relate to vehicle size but to junction capacity; if a junction is provided with longer ''x' distances the requirement for drivers to slow down and ultimately to stop before seeing if it is safe to continue is reduced.

Consequently a vehicle is able to approach a junction from the minor arm, look in both directions, assess when and whether it is safe to continue and if no conflicting traffic is evident it can pass through the junction without stopping, thereby reducing the transit time through the junction, hence increasing capacity. This is described in detail in TD42/95 at Annex 1, under the heading "***Turning Stream Capacities"***. This lack of understanding of the specific relevance of different design features is symptomatic of many of the issues arising in the LHA's responses, which could easily have been addressed had officers made time available to discuss these issues as **cTc** repeatedly requested.

d) **Northern Access from Bleadon Road**; it is clear from the Drawing provided at Figure 6.1 of **cTc**'s Technical Note 2 that the proposed northern access crosses the existing rhyne. No design of this has been provided and neither is it considered appropriate at this stage as that will be subject to a legal agreement, probably under Sections 38 and 278 (combined) of the Highways Act (1990). From the indicative site layout provided and indeed from the junction Drawing at Figure 6.1 it is clear that this proposed junction will serve vehicular access, pedestrians and cyclists. This would be convenient for residents of the eastern portion of the site wishing to travel into the village and into the countryside beyond.

e) **TROs**; it is inappropriate to describe any proposals for TROs in the absence of detailed discussions with officers of the Highway Authority. Furthermore it is not the intention that any planning permission achieved for this site would be reliant upon achieving any amendments to or implementation of new TROs. The proposals are considered acceptable in the absence of such, however, it is acknowledged that there may be instances where the village of Bleadon may benefit from implementation or modification of TROs and if this is considered desirable the Appellant is willing to assist the LHA to achieve these. This is a matter on which **cTc** has sought discussion with the LHA but as discussed numerous times above, these requests have been repeatedly rebutted.

Policy

2.51 In Technical Note 2 **cTc** acknowledged that the policy environment had changed since submission of the original TA and recent replacement policies were reviewed in detail. It is pleasing to receive the LHA's acknowledgement that ***"...the key determinant is acknowledged as demonstrating sustainable accessibility."***

Travel By Non-Car Modes;

Walking and Cycling

2.52 This section commences with the clear statement in regard to the proposals, that ***"…it is not demonstrated that they are accessible by sustainable modes of travel."*** This is surprising in light of the comment from the previous Paragraph in the same Memorandum, quoted above and demonstrates a clear lack of consistency, hence credibility in the LPA's document. As confirmed by the LPA in regard to **cTc**'s policy assessment, sustainable accessibility is beyond dispute. Further discussion on the sustainable accessibility of the site is presented herewith at Appendix D.

2.53 Notwithstanding their stated acknowledgement of sustainable accessibility, the LPA criticise **cTc**'s suggestion that ***"Details of the integration with Bleadon village will come out of the design process which will be subject to a Reserved Matters Application"***. The agreed sustainable accessibility of this site comprises, amongst other characteristics, proximity and linkage to the existing village facilities. The proposals include pedestrian crossings and measures to reduce traffic speeds on Bleadon Road, thereby improving the environment and safety for both pedestrians and cyclists.

2.54 As repeatedly stated above, **cTc** made numerous attempts to engage in discussion with the LPA in regard to key issues and concerns for these proposals, but on every occasion the LPA declined. Consequently it was not possible to discuss or agree further enhancements of the connectivity between the proposals and Bleadon village. Furthermore and as alluded to above, internal layout and design of the proposal will be subject to a Reserved Matters Application. As part of that Application, the location within the site of various trip generators and attractors will be identified, discussed (should Officers make themselves available) and agreed. Only at that time will it be clear specifically which areas of the development require enhanced linkages, hence which access to connect to. Notwithstanding this, the proposals do indicate pedestrian access at both of the proposed Bleadon Road accesses and the proposed means of crossing incorporates speed control measures.

2.55 The LPA repeat at this point their previous comments in regard to the choice of means of crossing (zebra) and **cTc**'s response to these comments has been provided above (Paras 2.16 - 2.18 above).

2.56 Had Officers of the LPA made time available to discuss these issues, as requested, further detail could have been agreed in regard to the above matters.

Public Transport

2.57 The LPA response identifies that walk distances to existing bus stops were not specified in the TA, however, this is not correct. Paragraph 2.2 included a bullet point list of facilities including ***"Key Bus Stops"*** and their approximate distance from the site, identified as ***"10m, 420m and 900m"***. It is accepted that these comprise distances measured from the proposed development site boundary and until the Reserved Matters Application is complete, hence the distribution of housing within the site and the arrangement of on-site streets and footways is finalised, it is not possible to provide accurate walk distances to these facilities. The proposals do undertake to provide enhanced footway linkages to the closest bus stops on A370.

2.58 The LPA suggest that ***"No details have been provided as to how the proposed scheme would enhance existing public transport services and existing infrastructure to enhance sustainable accessibility of the site"***, however and as identified at Paragraph 2.46 above, the LHA has acknowledged that the site is sustainably accessible. Furthermore, the comment that ***"…there are no direct footways from the site to existing bus stops on the A370 Bridgwater Road"***, although factually correct in regard to the existing scenario is considered incongruous in light of the proposals including commitment to provide new / enhanced pedestrian links to the existing A370 bus stops, these being mentioned at Paragraphs 6.2, 6.13 and 8.1 of the TA and Paragraphs 14.3, 14..4, 14.10 and 15.2 of Technical Note 2.

Residential Travel Plan

2.59 Under this Heading the LHA begin by stating that ***"The submitted 'Skeletal Green Travel Plan' failed to demonstrate that the site is accessible via public transport, walking or cycling"***, however, as quoted at Paragraph 2.46 above, it has already been acknowledged that the site is indeed accessible by sustainable means.

2.60 It is widely acknowledged within the profession that, in order to be effective a Travel Plan will need to be bespoke and targeted to the specific travel demands of its users, or in this example, residents. Such travel demands cannot be confirmed until the proposed development is built, sold and occupied and consequently, what is appropriate to determination of a Planning Application is an assessment of the availability of sustainable means of access, an indication of the kinds of measures likely to be appropriate to a successful Green Travel Plan and a commitment to undertaking a detailed travel survey of future residents of the proposed development to inform the detail of the Travel Plan.

2.61 To produce a detailed Travel Plan pre-Planning serves little purpose as it will inevitably require to be rewritten once a bespoke travel survey has been undertaken. In this regard the Travel Plan submitted in support of this Application comprised a Skeletal Framework of the kind of measures which could influence travel choices along with a commitment to undertake a detailed travel survey.

2.62 It is clearly impossible to create meaningful mode-split targets for future application in the absence of details of the initial mode-split upon occupation of the development. **cTc** maintains that the skeletal Travel Plan submitted, along with the appropriate commitment to detail the plan using detailed travel survey information in due course presents the LHA and LPA with the required level of control over this important issue.

Recommendation

2.63 Clearly in light of the above analyses of the LHA's latest response, their Recommendation drawn from their preceding comments cannot be supported.

2.64 The LHA's response is contradictory in regard to the site's sustainable accessibility, which at one point they accept has been clearly demonstrated before continuing to conclude that it has not.

2.65 Sustainable linkages to the existing pedestrian infrastructure in Bleadon are proposed and yet the LHA appear to consider these as inappropriate. Further detail in regard to connectivity can only be provided once the internal site layout is confirmed in order to ensure that the most appropriate areas of the site are conveniently connected. This can only occur at Reserved Matters stage.

2.66 Trip generation, distribution, vehicle access, safety and highway operation have each been assessed in detail and demonstrate that there are no defensible highways or transportation reasons for objection to the proposed development.

3. CONCLUSION

3.1 It is very clear from the above review of the latest LHA response that the criticisms brought have no sensible or reasonable basis. They are contradictory and in each case could very easily have been resolved in discussion, had the LHA responded positively to **cTc**'s attempts to engage.

3.2 There are no defensible reasons for objection to or refusal of the proposals on transportation of highway grounds. **cTc** will review the stated Reasons for Refusal in regard to transport and highway grounds in a separate document.

Client:		C and M Sanders	
Project Name:		Bleadon	
Project Number:		2017-F-023	
Report Title:		Review of North Somerset D&E Highways and Transport Memorandum	
Created by:	Carl Tonks	**Date:**	January 2019
Proofed by:	Jacqueline Ireland	**Date:**	January 2019
Approved by:	Carl Tonks carl@tonks-consulting.co.uk	**Date:**	January 2019
www.tonks-consulting.co.uk		01179 055 155	

APPENDICES

APPENDIX A

Survey Contractor Response to LHA

Ed Pope

From: carl@tonks-consulting.co.uk
Sent: 29 January 2019 15:29
To: 'Ed Pope'
Subject: FW: Bleadon

Paul Castle <paul.castle@paulcastle.com>
Sent: 11 January 2019 10:30
To: Carl Tonks <carl@tonks-consulting.co.uk>
Subject: Re: Bleadon

Carl

Further to your request and subsequent discussions I can confirm the following regarding the validity of the Radar Speed Survey that we conducted on your behalf:-

The radar speed survey in question was carried out to DMRB standards with regard to the methodology of recording vehicle speeds. Sometimes given the flows, Its not always practical to undertake the recordings in the specific time periods in the guidelines for a many different reasons.

We conduct some 200 speed surveys per year and we have never had a question regarding the validity of the data in the last 30 years of my companies existence from any Local Authorities, Highways England or the likes of Tfl et al.

The speeds will be as representative in the periods that we recorded them as they would have been in other “off peak” times of the day.

Should you require further clarification, please do not hesitate to contact me

Many thanks

Paul Castle
M: 07540 269600
paul.castle@paulcastle.com

APPENDIX B

PICADY

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: Proposed RT Site Access Junction 170119 FURTHER sensi.j9
Path: C:\Users\Owner\Desktop\Projects\Bleadon\Calcs\Jan 19 Further Sensitivity
Report generation date: 17/01/2019 16:40:12

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
	2018 + Dev							
Stream B-C	0.0	5.81	0.01	A	0.0	6.40	0.01	A
Stream B-A	0.2	12.61	0.19	B	0.1	13.59	0.11	B
Stream C-AB	0.0	5.85	0.01	A	0.0	6.82	0.01	A
	2023 + Dev							
Stream B-C	0.0	5.92	0.01	A	0.0	6.58	0.01	A
Stream B-A	0.2	13.35	0.20	B	0.1	14.72	0.12	B
Stream C-AB	0.0	5.94	0.01	A	0.0	7.01	0.02	A
	2023 + Dev + Sensitivity							
Stream B-C	0.0	7.28	0.05	A	0.0	7.35	0.03	A
Stream B-A	0.8	19.98	0.46	C	0.4	19.03	0.28	C
Stream C-AB	0.0	6.13	0.03	A	0.0	7.60	0.04	A
	2023 + Dev + Further Sensitivity							
Stream B-C	0.1	8.34	0.06	A	0.0	7.79	0.04	A
Stream B-A	1.2	24.37	0.56	C	0.5	21.49	0.35	C
Stream C-AB	0.0	6.17	0.03	A	0.0	7.83	0.05	A
	2023 + Dev + Further Sensitivity (2xResi)							
Stream B-C	0.1	10.64	0.09	B	0.0	8.31	0.04	A
Stream B-A	1.9	32.44	0.68	D	0.7	24.65	0.42	C
Stream C-AB	0.0	6.26	0.03	A	0.1	8.08	0.06	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	16/08/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	LAPTOP-7DHPGMOJ\Owner
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perTimeSegment	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2018 + Dev	AM		DIRECT	08:00	09:00	60	15	✓
D2	2018 + Dev	PM		DIRECT	16:45	17:45	60	15	✓
D3	2023 + Dev	AM		DIRECT	08:00	09:00	60	15	✓
D4	2023 + Dev	PM		DIRECT	16:45	17:45	60	15	✓
D5	2023 + Dev + Sensitivity	AM	Sensitivity test putting village traffic and 50% healthcare traffic through site access.	DIRECT	08:00	09:00	60	15	✓
D6	2023 + Dev + Sensitivity	PM	Sensitivity test putting village traffic and 50% healthcare traffic through site access.	DIRECT	16:45	17:45	60	15	✓
D7	2023 + Dev + Further Sensitivity	AM	Sensitivity test putting village traffic, 150% resi and 50% healthcare traffic through site access.	DIRECT	08:00	09:00	60	15	✓
D8	2023 + Dev + Further Sensitivity	PM	Sensitivity test putting village traffic, 150% resi and 50% healthcare traffic through site access.	DIRECT	16:45	17:45	60	15	✓
D9	2023 + Dev + Further Sensitivity (2xResi)	AM	Sensitivity test putting village traffic, 200% resi and 50% healthcare traffic through site access.	DIRECT	08:00	09:00	60	15	✓
D10	2023 + Dev + Further Sensitivity (2xResi)	PM	Sensitivity test putting village traffic, 200% resi and 50% healthcare traffic through site access.	DIRECT	16:45	17:45	60	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2018 + Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site Access / Bridgwater Rd	T-Junction	Two-way		0.67	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Bridgwater Road North		Major
B	Site Access		Minor
C	Bridgwater Road South		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.10		✓	3.50	250.0	✓	15.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare	10.00	4.00	2.75	2.75	2.75		1.00	250	165

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/TS)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	169.634	0.123	0.311	0.196	0.444
1	B-C	218.385	0.133	0.337	-	-
1	C-B	205.108	0.317	0.317	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2018 + Dev	AM	DIRECT	08:00	09:00	60	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A		DIRECT	✓	100.000
B		DIRECT	✓	100.000
C		DIRECT	✓	100.000

Origin-Destination Data

08:00 - 08:15

Demand (Veh/TS)

		To		
		A	B	C
From	A	0.00	6.00	124.00
	B	16.00	0.00	2.00
	C	149.00	1.00	0.00

08:15 - 08:30

Demand (Veh/TS)

		To		
		A	B	C
From	A	0.00	7.00	144.00
	B	17.00	0.00	2.00
	C	159.00	1.00	0.00

08:30 - 08:45

Demand (Veh/TS)

		To		
		A	B	C
From	A	0.00	7.00	141.00
	B	14.00	0.00	2.00
	C	135.00	1.00	0.00

08:45 - 09:00

Demand (Veh/TS)

		To		
		A	B	C
From	A	0.00	6.00	120.00
	B	15.00	0.00	2.00
	C	143.00	1.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	6
	B	0	0	0
	C	5	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
B-C	0.01	5.81	0.0	A	2.00	8.00
B-A	0.19	12.61	0.2	B	15.50	62.00
C-AB	0.01	5.85	0.0	A	1.00	4.00
C-A					146.50	586.00
A-B					6.50	26.00
A-C					132.25	529.00

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2.00	2.00	165.57	0.012	1.99	0.0	0.0	5.501	A
B-A	16.00	16.00	97.01	0.165	15.81	0.0	0.2	11.056	B
C-AB	1.00	1.00	161.73	0.006	0.99	0.0	0.0	5.598	A
C-A	149.00	149.00			149.00				
A-B	6.00	6.00			6.00				
A-C	124.00	124.00			124.00				

08:15 - 08:30

Stream	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2.00	2.00	156.96	0.013	2.00	0.0	0.0	5.807	A
B-A	17.00	17.00	88.25	0.193	16.96	0.2	0.2	12.615	B
C-AB	1.00	1.00	154.72	0.006	1.00	0.0	0.0	5.854	A
C-A	159.00	159.00			159.00				
A-B	7.00	7.00			7.00				
A-C	144.00	144.00			144.00				

08:30 - 08:45

Stream	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2.00	2.00	160.39	0.012	2.00	0.0	0.0	5.681	A
B-A	14.00	14.00	94.18	0.149	14.06	0.2	0.2	11.242	B
C-AB	1.00	1.00	155.72	0.006	1.00	0.0	0.0	5.816	A
C-A	135.00	135.00			135.00				
A-B	7.00	7.00			7.00				
A-C	141.00	141.00			141.00				

08:45 - 09:00

Stream	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2.00	2.00	167.62	0.012	2.00	0.0	0.0	5.433	A
B-A	15.00	15.00	99.56	0.151	15.00	0.2	0.2	10.642	B
C-AB	1.00	1.00	163.06	0.006	1.00	0.0	0.0	5.552	A
C-A	143.00	143.00			143.00				
A-B	6.00	6.00			6.00				
A-C	120.00	120.00			120.00				

2018 + Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site Access / Bridgwater Rd	T-Junction	Two-way		0.35	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D2	2018 + Dev	PM	DIRECT	16:45	17:45	60	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A		DIRECT	✓	100.000
B		DIRECT	✓	100.000
C		DIRECT	✓	100.000

Origin-Destination Data

16:45 - 17:00

Demand (Veh/TS)

		To		
		A	B	C
From	A	0.00	15.00	188.00
	B	8.00	0.00	1.00
	C	133.00	2.00	0.00

17:00 - 17:15

Demand (Veh/TS)

		To		
		A	B	C
From	A	0.00	15.00	193.00
	B	8.00	0.00	1.00
	C	142.00	2.00	0.00

17:15 - 17:30

Demand (Veh/TS)

		To		
		A	B	C
From	A	0.00	16.00	204.00
	B	8.00	0.00	1.00
	C	136.00	2.00	0.00

Demand (Veh/TS)

17:30 - 17:45

		To		
		A	B	C
From	A	0.00	14.00	181.00
	B	7.00	0.00	1.00
	C	123.00	2.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	2
	B	0	0	0
	C	4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
B-C	0.01	6.40	0.0	A	1.00	4.00
B-A	0.11	13.59	0.1	B	7.75	31.00
C-AB	0.01	6.82	0.0	A	2.00	8.00
C-A					133.50	534.00
A-B					15.00	60.00
A-C					191.50	766.00

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	1.00	1.00	147.59	0.007	0.99	0.0	0.0	6.138	A
B-A	8.00	8.00	80.06	0.100	7.89	0.0	0.1	12.451	B
C-AB	2.00	2.00	139.43	0.014	1.99	0.0	0.0	6.547	A
C-A	133.00	133.00			133.00				
A-B	15.00	15.00			15.00				
A-C	188.00	188.00			188.00				

17:00 - 17:15

Stream	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	1.00	1.00	145.66	0.007	1.00	0.0	0.0	6.220	A
B-A	8.00	8.00	76.64	0.104	7.99	0.1	0.1	13.108	B
C-AB	2.00	2.00	137.81	0.015	2.00	0.0	0.0	6.626	A
C-A	142.00	142.00			142.00				
A-B	15.00	15.00			15.00				
A-C	193.00	193.00			193.00				

17:15 - 17:30

Stream	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	1.00	1.00	141.70	0.007	1.00	0.0	0.0	6.396	A
B-A	8.00	8.00	74.23	0.108	8.00	0.1	0.1	13.588	B
C-AB	2.00	2.00	133.93	0.015	2.00	0.0	0.0	6.821	A
C-A	136.00	136.00			136.00				
A-B	16.00	16.00			16.00				
A-C	204.00	204.00			204.00				

17:30 - 17:45

Stream	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	1.00	1.00	150.73	0.007	1.00	0.0	0.0	6.012	A
B-A	7.00	7.00	84.44	0.083	7.03	0.1	0.1	11.630	B
C-AB	2.00	2.00	142.02	0.014	2.00	0.0	0.0	6.429	A
C-A	123.00	123.00			123.00				
A-B	14.00	14.00			14.00				
A-C	181.00	181.00			181.00				

2023 + Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site Access / Bridgwater Rd	T-Junction	Two-way		0.67	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D3	2023 + Dev	AM	DIRECT	08:00	09:00	60	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A		DIRECT	✓	100.000
B		DIRECT	✓	100.000
C		DIRECT	✓	100.000

Origin-Destination Data

08:00 - 08:15

Demand (Veh/TS)

		To		
		A	B	C
From	A	0.00	6.00	131.00
	B	16.00	0.00	2.00
	C	156.00	1.00	0.00

08:15 - 08:30

Demand (Veh/TS)

		To		
		A	B	C
From	A	0.00	7.00	151.00
	B	17.00	0.00	2.00
	C	167.00	1.00	0.00

08:30 - 08:45

Demand (Veh/TS)

		To		
		A	B	C
From	A	0.00	7.00	148.00
	B	14.00	0.00	2.00
	C	142.00	1.00	0.00

Demand (Veh/TS)

08:45 - 09:00

		To		
		A	B	C
From	A	0.00	6.00	127.00
	B	15.00	0.00	2.00
	C	150.00	1.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	6
	B	0	0	0
	C	5	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
B-C	0.01	5.92	0.0	A	2.00	8.00
B-A	0.20	13.35	0.2	B	15.50	62.00
C-AB	0.01	5.94	0.0	A	1.00	4.00
C-A					153.75	615.00
A-B					6.50	26.00
A-C					139.25	557.00

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2.00	2.00	162.82	0.012	1.99	0.0	0.0	5.595	A
B-A	16.00	16.00	93.27	0.172	15.80	0.0	0.2	11.587	B
C-AB	1.00	1.00	159.38	0.006	0.99	0.0	0.0	5.681	A
C-A	156.00	156.00			156.00				
A-B	6.00	6.00			6.00				
A-C	131.00	131.00			131.00				

08:15 - 08:30

Stream	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2.00	2.00	154.07	0.013	2.00	0.0	0.0	5.917	A
B-A	17.00	17.00	84.31	0.202	16.96	0.2	0.2	13.352	B
C-AB	1.00	1.00	152.38	0.007	1.00	0.0	0.0	5.944	A
C-A	167.00	167.00			167.00				
A-B	7.00	7.00			7.00				
A-C	151.00	151.00			151.00				

08:30 - 08:45

Stream	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2.00	2.00	157.67	0.013	2.00	0.0	0.0	5.780	A
B-A	14.00	14.00	90.44	0.155	14.06	0.2	0.2	11.795	B
C-AB	1.00	1.00	153.38	0.007	1.00	0.0	0.0	5.905	A
C-A	142.00	142.00			142.00				
A-B	7.00	7.00			7.00				
A-C	148.00	148.00			148.00				

08:45 - 09:00

Stream	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2.00	2.00	164.90	0.012	2.00	0.0	0.0	5.524	A
B-A	15.00	15.00	95.82	0.157	15.00	0.2	0.2	11.137	B
C-AB	1.00	1.00	160.72	0.006	1.00	0.0	0.0	5.634	A
C-A	150.00	150.00			150.00				
A-B	6.00	6.00			6.00				
A-C	127.00	127.00			127.00				

2023 + Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site Access / Bridgwater Rd	T-Junction	Two-way		0.36	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D4	2023 + Dev	PM	DIRECT	16:45	17:45	60	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A		DIRECT	✓	100.000
B		DIRECT	✓	100.000
C		DIRECT	✓	100.000

Origin-Destination Data

16:45 - 17:00

Demand (Veh/TS)

		To		
		A	B	C
From	A	0.00	15.00	198.00
	B	8.00	0.00	1.00
	C	140.00	2.00	0.00

17:00 - 17:15

Demand (Veh/TS)

		To		
		A	B	C
From	A	0.00	15.00	203.00
	B	8.00	0.00	1.00
	C	149.00	2.00	0.00

17:15 - 17:30

Demand (Veh/TS)

		To		
		A	B	C
From	A	0.00	16.00	215.00
	B	8.00	0.00	1.00
	C	144.00	2.00	0.00

Demand (Veh/TS)

17:30 - 17:45

		To		
		A	B	C
From	A	0.00	14.00	190.00
	B	7.00	0.00	1.00
	C	130.00	2.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	2
	B	0	0	0
	C	4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
B-C	0.01	6.58	0.0	A	1.00	4.00
B-A	0.12	14.72	0.1	B	7.75	31.00
C-AB	0.02	7.01	0.0	A	2.00	8.00
C-A					140.75	563.00
A-B					15.00	60.00
A-C					201.50	806.00

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	1.00	1.00	143.98	0.007	0.99	0.0	0.0	6.294	A
B-A	8.00	8.00	75.46	0.106	7.88	0.0	0.1	13.296	B
C-AB	2.00	2.00	136.19	0.015	1.99	0.0	0.0	6.706	A
C-A	140.00	140.00			140.00				
A-B	15.00	15.00			15.00				
A-C	198.00	198.00			198.00				

17:00 - 17:15

Stream	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	1.00	1.00	142.02	0.007	1.00	0.0	0.0	6.381	A
B-A	8.00	8.00	72.04	0.111	7.99	0.1	0.1	14.050	B
C-AB	2.00	2.00	134.57	0.015	2.00	0.0	0.0	6.788	A
C-A	149.00	149.00			149.00				
A-B	15.00	15.00			15.00				
A-C	203.00	203.00			203.00				

17:15 - 17:30

Stream	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	1.00	1.00	137.68	0.007	1.00	0.0	0.0	6.584	A
B-A	8.00	8.00	69.11	0.116	7.99	0.1	0.1	14.724	B
C-AB	2.00	2.00	130.36	0.015	2.00	0.0	0.0	7.010	A
C-A	144.00	144.00			144.00				
A-B	16.00	16.00			16.00				
A-C	215.00	215.00			215.00				

17:30 - 17:45

Stream	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	1.00	1.00	147.50	0.007	1.00	0.0	0.0	6.145	A
B-A	7.00	7.00	80.15	0.087	7.03	0.1	0.1	12.315	B
C-AB	2.00	2.00	139.10	0.014	2.00	0.0	0.0	6.563	A
C-A	130.00	130.00			130.00				
A-B	14.00	14.00			14.00				
A-C	190.00	190.00			190.00				

2023 + Dev + Sensitivity, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site Access / Bridgwater Rd	T-Junction	Two-way		2.04	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D5	2023 + Dev + Sensitivity	AM	Sensitivity test putting village traffic and 50% healthcare traffic through site access.	DIRECT	08:00	09:00	60	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A		DIRECT	✓	100.000
B		DIRECT	✓	100.000
C		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

08:00 - 08:15

		To		
		A	B	C
From	A	0.00	14.00	131.00
	B	32.00	0.00	5.00
	C	156.00	4.00	0.00

Demand (Veh/TS)

08:15 - 08:30

		To		
		A	B	C
From	A	0.00	18.00	151.00
	B	38.00	0.00	6.00
	C	167.00	2.00	0.00

08:30 - 08:45

Demand (Veh/TS)

		To		
		A	B	C
From	A	0.00	17.00	148.00
	B	33.00	0.00	4.00
	C	142.00	3.00	0.00

08:45 - 09:00

Demand (Veh/TS)

		To		
		A	B	C
From	A	0.00	15.00	127.00
	B	36.00	0.00	6.00
	C	150.00	3.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	6
	B	0	0	0
	C	5	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
B-C	0.05	7.28	0.0	A	5.25	21.00
B-A	0.46	19.98	0.8	C	34.75	139.00
C-AB	0.03	6.13	0.0	A	3.00	12.00
C-A					153.75	615.00
A-B					16.00	64.00
A-C					139.25	557.00

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	5.00	5.00	148.64	0.034	4.97	0.0	0.0	6.262	A
B-A	32.00	32.00	90.93	0.352	31.47	0.0	0.5	15.009	C
C-AB	4.00	4.00	156.85	0.026	3.97	0.0	0.0	5.887	A
C-A	156.00	156.00			156.00				
A-B	14.00	14.00			14.00				
A-C	131.00	131.00			131.00				

08:15 - 08:30

Stream	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	6.00	6.00	129.68	0.046	5.99	0.0	0.0	7.276	A
B-A	38.00	38.00	82.44	0.461	37.71	0.5	0.8	19.983	C
C-AB	2.00	2.00	148.90	0.013	2.01	0.0	0.0	6.129	A
C-A	167.00	167.00			167.00				
A-B	18.00	18.00			18.00				
A-C	151.00	151.00			151.00				

08:30 - 08:45

Stream	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	4.00	4.00	139.94	0.029	4.02	0.0	0.0	6.621	A
B-A	33.00	33.00	88.30	0.374	33.21	0.8	0.6	16.402	C
C-AB	3.00	3.00	150.22	0.020	2.99	0.0	0.0	6.112	A
C-A	142.00	142.00			142.00				
A-B	17.00	17.00			17.00				
A-C	148.00	148.00			148.00				

08:45 - 09:00

Stream	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	6.00	6.00	145.95	0.041	5.99	0.0	0.0	6.429	A
B-A	36.00	36.00	93.77	0.384	36.00	0.6	0.6	15.574	C
C-AB	3.00	3.00	157.87	0.019	3.00	0.0	0.0	5.812	A
C-A	150.00	150.00			150.00				
A-B	15.00	15.00			15.00				
A-C	127.00	127.00			127.00				

2023 + Dev + Sensitivity, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site Access / Bridgwater Rd	T-Junction	Two-way		0.94	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D6	2023 + Dev + Sensitivity	PM	Sensitivity test putting village traffic and 50% healthcare traffic through site access.	DIRECT	16:45	17:45	60	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A		DIRECT	✓	100.000
B		DIRECT	✓	100.000
C		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

16:45 - 17:00

		To		
		A	B	C
From	A	0.00	32.00	198.00
	B	20.00	0.00	3.00
	C	140.00	3.00	0.00

Demand (Veh/TS)

17:00 - 17:15

		To		
		A	B	C
From	A	0.00	36.00	203.00
	B	15.00	0.00	3.00
	C	149.00	5.00	0.00

Demand (Veh/TS)

17:15 - 17:30

From \ To	A	B	C
A	0.00	41.00	215.00
B	18.00	0.00	4.00
C	144.00	4.00	0.00

Demand (Veh/TS)

17:30 - 17:45

From \ To	A	B	C
A	0.00	34.00	190.00
B	18.00	0.00	1.00
C	130.00	3.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

From \ To	A	B	C
A	0	0	2
B	0	0	0
C	4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
B-C	0.03	7.35	0.0	A	2.75	11.00
B-A	0.28	19.03	0.4	C	17.75	71.00
C-AB	0.04	7.60	0.0	A	3.75	15.00
C-A					140.75	563.00
A-B					35.75	143.00
A-C					201.50	806.00

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	3.00	3.00	133.18	0.023	2.98	0.0	0.0	6.912	A
B-A	20.00	20.00	72.92	0.274	19.63	0.0	0.4	16.780	C
C-AB	3.00	3.00	130.81	0.023	2.98	0.0	0.0	7.040	A
C-A	140.00	140.00			140.00				
A-B	32.00	32.00			32.00				
A-C	198.00	198.00			198.00				

17:00 - 17:15

Stream	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	3.00	3.00	134.00	0.022	3.00	0.0	0.0	6.869	A
B-A	15.00	15.00	68.11	0.220	15.08	0.4	0.3	16.998	C
C-AB	5.00	5.00	127.92	0.039	4.98	0.0	0.0	7.320	A
C-A	149.00	149.00			149.00				
A-B	36.00	36.00			36.00				
A-C	203.00	203.00			203.00				

17:15 - 17:30

Stream	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	4.00	4.00	126.36	0.032	3.99	0.0	0.0	7.354	A
B-A	18.00	18.00	65.11	0.276	17.92	0.3	0.4	19.031	C
C-AB	4.00	4.00	122.45	0.033	4.01	0.0	0.0	7.600	A
C-A	144.00	144.00			144.00				
A-B	41.00	41.00			41.00				
A-C	215.00	215.00			215.00				

17:30 - 17:45

Stream	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	1.00	1.00	137.65	0.007	1.03	0.0	0.0	6.587	A
B-A	18.00	18.00	77.24	0.233	18.06	0.4	0.3	15.228	C
C-AB	3.00	3.00	132.77	0.023	3.01	0.0	0.0	6.938	A
C-A	130.00	130.00			130.00				
A-B	34.00	34.00			34.00				
A-C	190.00	190.00			190.00				

2023 + Dev + Further Sensitivity, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site Access / Bridgwater Rd	T-Junction	Two-way		2.91	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D7	2023 + Dev + Further Sensitivity	AM	Sensitivity test putting village traffic, 150% resi and 50% healthcare traffic through site access.	DIRECT	08:00	09:00	60	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A		DIRECT	✓	100.000
B		DIRECT	✓	100.000
C		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

08:00 - 08:15

		To		
		A	B	C
From	A	0.00	17.00	131.00
	B	40.00	0.00	6.00
	C	156.00	4.00	0.00

Demand (Veh/TS)

08:15 - 08:30

		To		
		A	B	C
From	A	0.00	21.00	151.00
	B	46.00	0.00	7.00
	C	167.00	2.00	0.00

08:30 - 08:45

Demand (Veh/TS)

		To		
		A	B	C
From	A	0.00	20.00	148.00
	B	40.00	0.00	5.00
	C	142.00	3.00	0.00

08:45 - 09:00

Demand (Veh/TS)

		To		
		A	B	C
From	A	0.00	18.00	127.00
	B	44.00	0.00	7.00
	C	150.00	3.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	6
	B	0	0	0
	C	5	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
B-C	0.06	8.34	0.1	A	6.25	25.00
B-A	0.56	24.37	1.2	C	42.50	170.00
C-AB	0.03	6.17	0.0	A	3.00	12.00
C-A					153.75	615.00
A-B					19.00	76.00
A-C					139.25	557.00

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	6.00	6.00	138.67	0.043	5.96	0.0	0.0	6.780	A
B-A	40.00	40.00	90.53	0.442	39.24	0.0	0.8	17.305	C
C-AB	4.00	4.00	155.90	0.026	3.97	0.0	0.0	5.924	A
C-A	156.00	156.00			156.00				
A-B	17.00	17.00			17.00				
A-C	131.00	131.00			131.00				

08:15 - 08:30

Stream	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	7.00	7.00	114.91	0.061	6.98	0.0	0.1	8.338	A
B-A	46.00	46.00	82.02	0.561	45.56	0.8	1.2	24.369	C
C-AB	2.00	2.00	147.95	0.014	2.01	0.0	0.0	6.166	A
C-A	167.00	167.00			167.00				
A-B	21.00	21.00			21.00				
A-C	151.00	151.00			151.00				

08:30 - 08:45

Stream	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	5.00	5.00	130.00	0.038	5.02	0.1	0.0	7.204	A
B-A	40.00	40.00	87.90	0.455	40.34	1.2	0.9	19.065	C
C-AB	3.00	3.00	149.27	0.020	2.99	0.0	0.0	6.152	A
C-A	142.00	142.00			142.00				
A-B	20.00	20.00			20.00				
A-C	148.00	148.00			148.00				

08:45 - 09:00

Stream	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	7.00	7.00	134.84	0.052	6.99	0.0	0.1	7.038	A
B-A	44.00	44.00	93.36	0.471	43.99	0.9	0.9	18.215	C
C-AB	3.00	3.00	156.92	0.019	3.00	0.0	0.0	5.848	A
C-A	150.00	150.00			150.00				
A-B	18.00	18.00			18.00				
A-C	127.00	127.00			127.00				

2023 + Dev + Further Sensitivity , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site Access / Bridgwater Rd	T-Junction	Two-way		1.25	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D8	2023 + Dev + Further Sensitivity	PM	Sensitivity test putting village traffic, 150% resi and 50% healthcare traffic through site access.	DIRECT	16:45	17:45	60	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A		DIRECT	✓	100.000
B		DIRECT	✓	100.000
C		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

16:45 - 17:00

		To		
		A	B	C
From	A	0.00	40.00	198.00
	B	24.00	0.00	3.00
	C	140.00	4.00	0.00

Demand (Veh/TS)

17:00 - 17:15

		To		
		A	B	C
From	A	0.00	43.00	203.00
	B	19.00	0.00	4.00
	C	149.00	6.00	0.00

17:15 - 17:30

Demand (Veh/TS)

		To		
		A	B	C
From	A	0.00	49.00	215.00
	B	22.00	0.00	5.00
	C	144.00	5.00	0.00

17:30 - 17:45

Demand (Veh/TS)

		To		
		A	B	C
From	A	0.00	41.00	190.00
	B	22.00	0.00	1.00
	C	130.00	4.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	2
	B	0	0	0
	C	4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
B-C	0.04	7.79	0.0	A	3.25	13.00
B-A	0.35	21.49	0.5	C	21.75	87.00
C-AB	0.05	7.83	0.0	A	4.75	19.00
C-A					140.75	563.00
A-B					43.25	173.00
A-C					201.50	806.00

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	3.00	3.00	127.84	0.023	2.98	0.0	0.0	7.208	A
B-A	24.00	24.00	71.48	0.336	23.51	0.0	0.5	18.581	C
C-AB	4.00	4.00	128.28	0.031	3.97	0.0	0.0	7.238	A
C-A	140.00	140.00			140.00				
A-B	40.00	40.00			40.00				
A-C	198.00	198.00			198.00				

17:00 - 17:15

Stream	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	4.00	4.00	129.17	0.031	3.99	0.0	0.0	7.189	A
B-A	19.00	19.00	66.79	0.284	19.08	0.5	0.4	18.900	C
C-AB	6.00	6.00	125.71	0.048	5.98	0.0	0.0	7.517	A
C-A	149.00	149.00			149.00				
A-B	43.00	43.00			43.00				
A-C	203.00	203.00			203.00				

17:15 - 17:30

Stream	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	5.00	5.00	120.53	0.041	4.99	0.0	0.0	7.788	A
B-A	22.00	22.00	63.66	0.346	21.90	0.4	0.5	21.486	C
C-AB	5.00	5.00	119.92	0.042	5.01	0.0	0.0	7.832	A
C-A	144.00	144.00			144.00				
A-B	49.00	49.00			49.00				
A-C	215.00	215.00			215.00				

17:30 - 17:45

Stream	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	1.00	1.00	132.96	0.008	1.04	0.0	0.0	6.822	A
B-A	22.00	22.00	75.93	0.290	22.09	0.5	0.4	16.751	C
C-AB	4.00	4.00	130.55	0.031	4.01	0.0	0.0	7.114	A
C-A	130.00	130.00			130.00				
A-B	41.00	41.00			41.00				
A-C	190.00	190.00			190.00				

2023 + Dev + Further Sensitivity (2xResi), AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site Access / Bridgwater Rd	T-Junction	Two-way		4.39	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D9	2023 + Dev + Further Sensitivity (2xResi)	AM	Sensitivity test putting village traffic, 200% resi and 50% healthcare traffic through site access.	DIRECT	08:00	09:00	60	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A		DIRECT	✓	100.000
B		DIRECT	✓	100.000
C		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

08:00 - 08:15

		To		
		A	B	C
From	A	0.00	20.00	131.00
	B	47.00	0.00	7.00
	C	156.00	5.00	0.00

Demand (Veh/TS)

08:15 - 08:30

		To		
		A	B	C
From	A	0.00	25.00	151.00
	B	55.00	0.00	8.00
	C	167.00	3.00	0.00

08:30 - 08:45

Demand (Veh/TS)

From \ To	A	B	C
A	0.00	24.00	148.00
B	47.00	0.00	6.00
C	142.00	4.00	0.00

08:45 - 09:00

Demand (Veh/TS)

From \ To	A	B	C
A	0.00	21.00	127.00
B	51.00	0.00	7.00
C	150.00	4.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

From \ To	A	B	C
A	0	0	6
B	0	0	0
C	5	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
B-C	0.09	10.64	0.1	B	7.00	28.00
B-A	0.68	32.44	1.9	D	50.00	200.00
C-AB	0.03	6.26	0.0	A	4.00	16.00
C-A					153.75	615.00
A-B					22.50	90.00
A-C					139.25	557.00

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	7.00	7.00	127.31	0.055	6.94	0.0	0.1	7.473	A
B-A	47.00	47.00	89.68	0.524	45.95	0.0	1.1	20.139	C
C-AB	5.00	5.00	154.95	0.032	4.97	0.0	0.0	5.998	A
C-A	156.00	156.00			156.00				
A-B	20.00	20.00			20.00				
A-C	131.00	131.00			131.00				

08:15 - 08:30

Stream	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	8.00	8.00	92.50	0.086	7.96	0.1	0.1	10.642	B
B-A	55.00	55.00	81.00	0.679	54.14	1.1	1.9	32.442	D
C-AB	3.00	3.00	146.68	0.020	3.01	0.0	0.0	6.264	A
C-A	167.00	167.00			167.00				
A-B	25.00	25.00			25.00				
A-C	151.00	151.00			151.00				

08:30 - 08:45

Stream	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	6.00	6.00	116.35	0.052	6.04	0.1	0.1	8.162	A
B-A	47.00	47.00	86.92	0.541	47.68	1.9	1.2	23.320	C
C-AB	4.00	4.00	148.00	0.027	3.99	0.0	0.0	6.249	A
C-A	142.00	142.00			142.00				
A-B	24.00	24.00			24.00				
A-C	148.00	148.00			148.00				

08:45 - 09:00

Stream	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	7.00	7.00	121.84	0.057	6.99	0.1	0.1	7.836	A
B-A	51.00	51.00	92.52	0.551	51.00	1.2	1.2	21.684	C
C-AB	4.00	4.00	155.98	0.026	4.00	0.0	0.0	5.921	A
C-A	150.00	150.00			150.00				
A-B	21.00	21.00			21.00				
A-C	127.00	127.00			127.00				

2023 + Dev + Further Sensitivity (2xResi), PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site Access / Bridgwater Rd	T-Junction	Two-way		1.60	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D10	2023 + Dev + Further Sensitivity (2xResi)	PM	Sensitivity test putting village traffic, 200% resi and 50% healthcare traffic through site access.	DIRECT	16:45	17:45	60	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A		DIRECT	✓	100.000
B		DIRECT	✓	100.000
C		DIRECT	✓	100.000

Origin-Destination Data

16:45 - 17:00

Demand (Veh/TS)

		To		
		A	B	C
From	A	0.00	47.00	198.00
	B	27.00	0.00	4.00
	C	140.00	5.00	0.00

17:00 - 17:15

Demand (Veh/TS)

		To		
		A	B	C
From	A	0.00	51.00	203.00
	B	23.00	0.00	4.00
	C	149.00	7.00	0.00

17:15 - 17:30

Demand (Veh/TS)

		To		
		A	B	C
From	A	0.00	57.00	215.00
	B	26.00	0.00	5.00
	C	144.00	6.00	0.00

17:30 - 17:45

Demand (Veh/TS)

		To		
		A	B	C
From	A	0.00	48.00	190.00
	B	25.00	0.00	2.00
	C	130.00	4.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	2
	B	0	0	0
	C	4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
B-C	0.04	8.31	0.0	A	3.75	15.00
B-A	0.42	24.65	0.7	C	25.25	101.00
C-AB	0.06	8.08	0.1	A	5.50	22.00
C-A					140.75	563.00
A-B					50.75	203.00
A-C					201.50	806.00

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	4.00	4.00	123.04	0.033	3.97	0.0	0.0	7.556	A
B-A	27.00	27.00	70.17	0.385	26.40	0.0	0.6	20.301	C
C-AB	5.00	5.00	126.06	0.040	4.96	0.0	0.0	7.430	A
C-A	140.00	140.00			140.00				
A-B	47.00	47.00			47.00				
A-C	198.00	198.00			198.00				

17:00 - 17:15

Stream	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	4.00	4.00	123.11	0.032	4.00	0.0	0.0	7.555	A
B-A	23.00	23.00	65.35	0.352	23.05	0.6	0.6	21.307	C
C-AB	7.00	7.00	123.18	0.057	6.98	0.0	0.1	7.745	A
C-A	149.00	149.00			149.00				
A-B	51.00	51.00			51.00				
A-C	203.00	203.00			203.00				

17:15 - 17:30

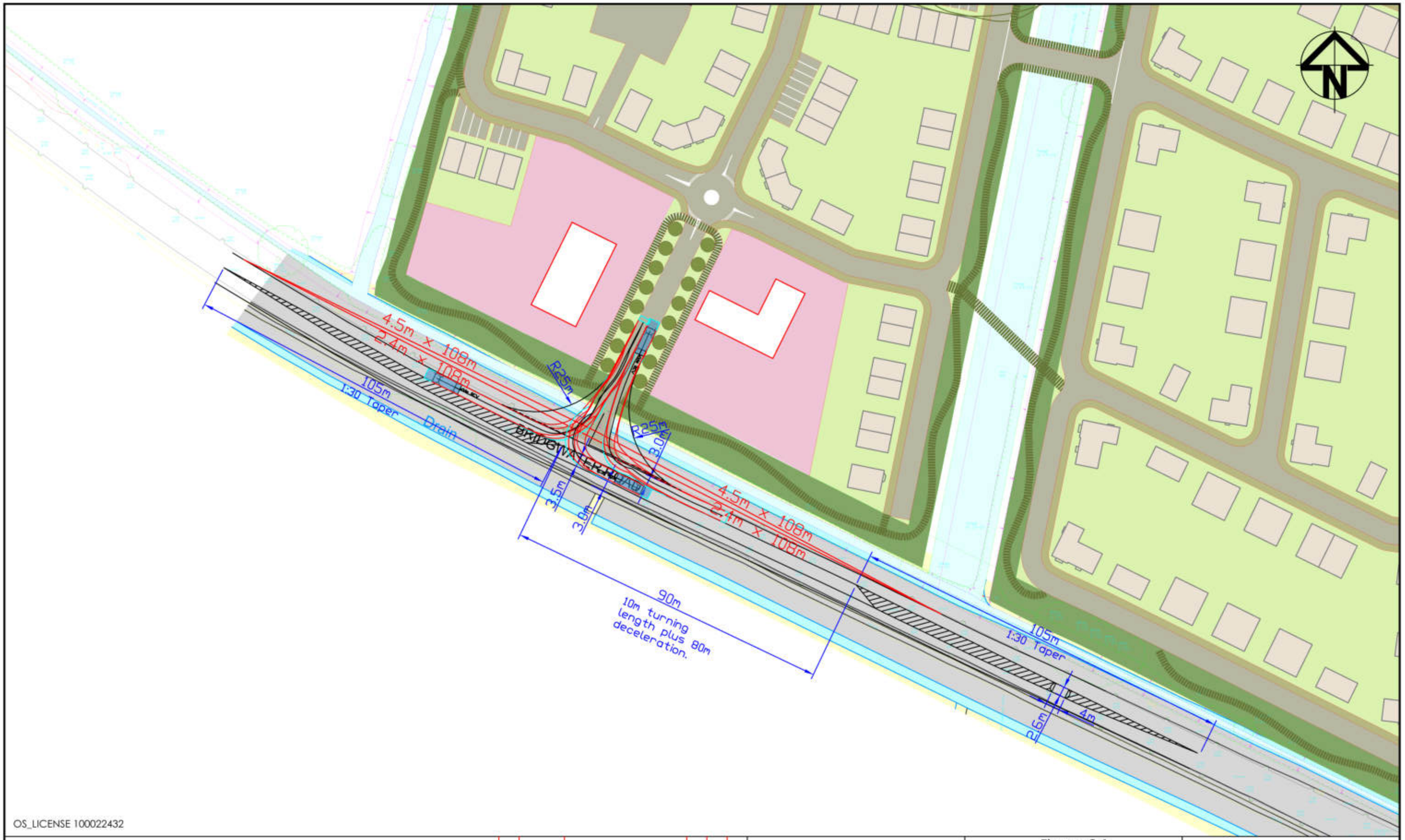
Stream	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	5.00	5.00	113.25	0.044	4.99	0.0	0.0	8.312	A
B-A	26.00	26.00	62.22	0.418	25.87	0.6	0.7	24.650	C
C-AB	6.00	6.00	117.39	0.051	6.01	0.1	0.1	8.080	A
C-A	144.00	144.00			144.00				
A-B	57.00	57.00			57.00				
A-C	215.00	215.00			215.00				

17:30 - 17:45

Stream	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2.00	2.00	128.74	0.016	2.03	0.0	0.0	7.103	A
B-A	25.00	25.00	75.06	0.333	25.18	0.7	0.5	18.109	C
C-AB	4.00	4.00	128.34	0.031	4.02	0.1	0.0	7.239	A
C-A	130.00	130.00			130.00				
A-B	48.00	48.00			48.00				
A-C	190.00	190.00			190.00				

APPENDIX C

Proposed Access Junctions



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Rev	Date	Description	Drn	Chk	App
-	23.07.18	ORIGINAL ISSUE	EP	CT	CT

Sutherland Legal and Property Services Ltd.

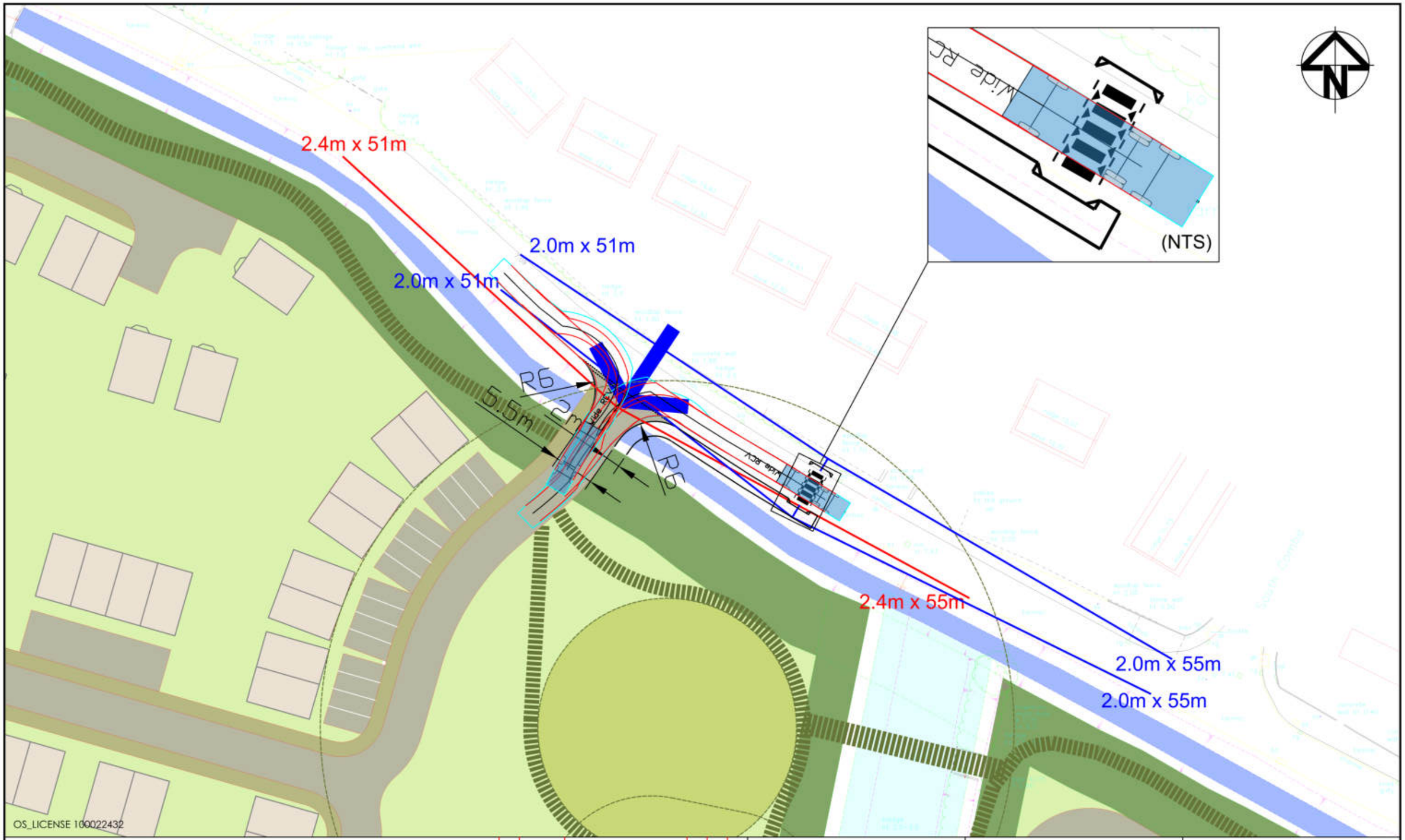
Bleadon.

Figure 3.1
Proposed Access Arrangment and Visibility on Bridgwater Road.

SCALE: 1:1000 @A3 | REV -

2017-F-023-015

cTc
carl TONKS consulting
523 Horizon, Broad Wier, Bristol BS1 3DJ
T - 0117 382 0507 M - 07866 543939
www.tonks-consulting.co.uk



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Key

Site access visibility

Pedestrian crossing visibility

Rev	Date	Description	Drn	Chk	App
-	23.07.18	ORIGINAL ISSUE	EP	CT	CT

Sutherland Legal and Property Services Ltd.

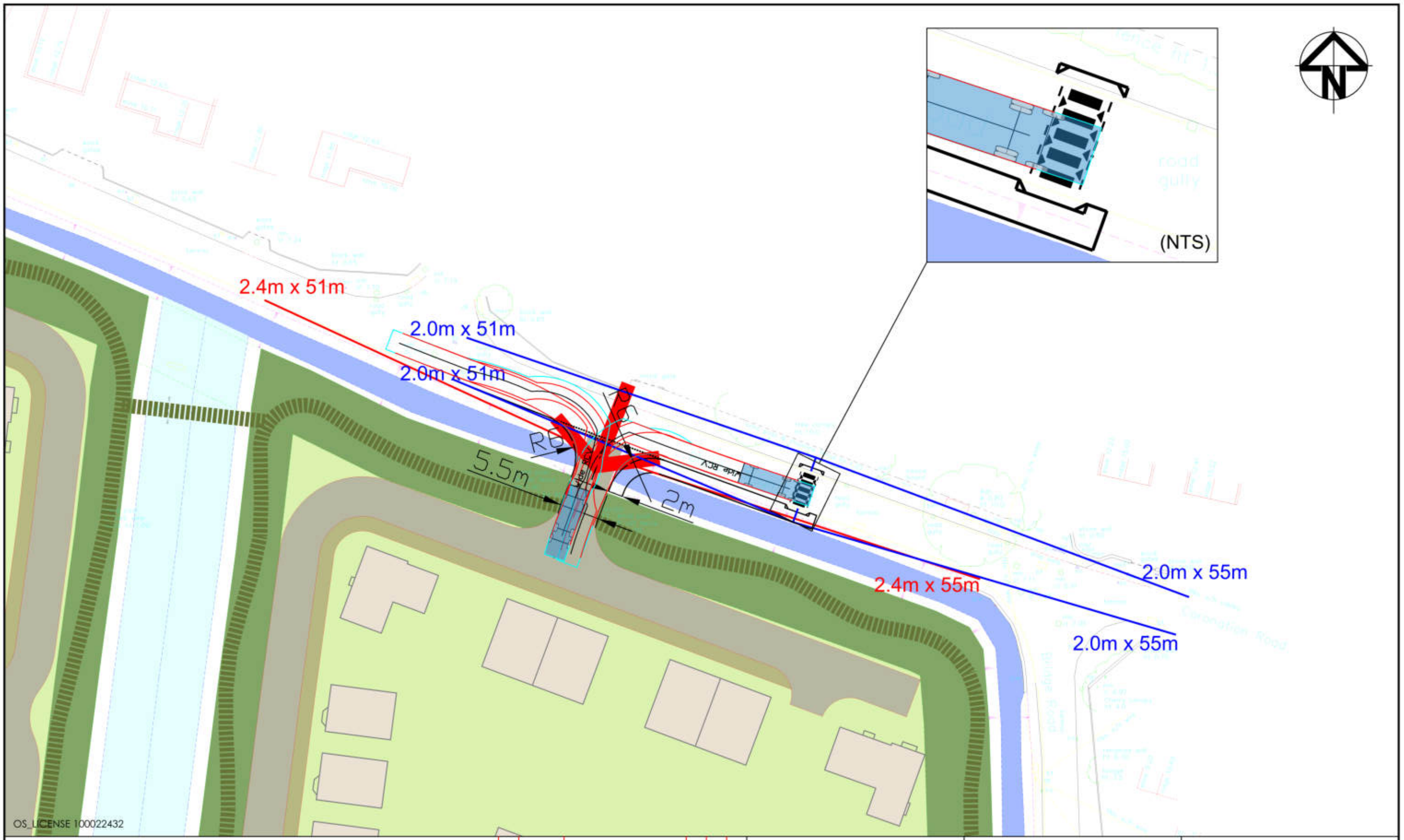
Bleadon.

Figure 5.1
Proposed Northern Access Arrangment on Bleadon Road.

SCALE: 1:500 @A3 | REV -

2017-F-023-011

carl TONKS consulting
523 Horizon, Broad Wier, Bristol BS1 3DJ
T - 0117 382 0507 M - 07866 543939
www.tonks-consulting.co.uk



Key

Site access visibility

Pedestrian crossing visibility

Rev	Date	Description	Drn	Chk	App
-	23.07.18	ORIGINAL ISSUE	EP	CT	CT

Sutherland Legal and Property Services Ltd.

Bleadon.

Figure 6.1
Proposed North-Eastern Access Arrangment on Bleadon Road.

SCALE: 1:500 @A3 | REV -

2017-F-023-012

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APPENDIX D

Local Facilities and Amenities Review

Sutherland Property and Legal Services Limited

carl TONKS consulting

Bleadon

Appendix D;

Local Facilities and Amenities Review

1. INTRODUCTION

1.1 Within the section of the North Somerset Internal Memorandum headed ***"Accessibility"*** and dated 10th September 2018 it is claimed that within the **cTc** technical analyses, which comprise:

- Transport Assessment
- Technical Note 1; Travel Plan
- Technical Note 2; Response to Highways Comments

that ***"no reference is made to the proximity of the site to local nurseries and schools, health care facilities, and employment opportunities".*** It also states that walking and cycling distances are not included in the reviews.

1.2 In fact and contrary to the LHA's assertion, information has been provided in this regard, however and for the avoidance of doubt, further clarification of this matter is clarified below.

2. ACCESSIBILITY

2.1 The **cTc** Transport Assessment made explicit reference to a number of local facilities in the vicinity of the site. These are reproduced here:

- Hutton's Motors; for car services and employment (760m);

- Public House (380m);

- WsM Croquet Club (520m);
- Key Bus Stops (10m, 420m and 900m);
- Post Office (720m);
- Farm Shop (720m);
- Purn House Farm (small industrial estate); for employment and services (700m)
- Youth Centre and Play Park (160m); and,
- Church (250m).

2.2 Furthermore, in the **cTc** document "Technical Note 2; Response to Highways Comments" Figure 17.1 illustrated the location of sites pertaining to the following uses and activities:

- Employment;
- Retail;
- Social / Leisure; and,
- Education.

2.3 These facilities were shown with the relevant bus route connecting them to the proposed development site, and were located in nearby local centres including:

- Weston-Super-Mare;
- Uphill;
- Bleadon;
- Lympsham;
- Brean; and,
- Burnham-on-Sea.

2.4 Additionally, health care, retail and employment uses are included in the proposals and will thus be provided on site.

2.5 Clearly the suggestion that ***"no reference is made"*** regarding local amenities and facilities is demonstrably incorrect, however further reassurances regarding additional sustainably accessed amenities and facilities are provided below. This should be read in conjunction with the explanations in **cTc** Technical Note 2 and in particular Figure 17.1 thereof.

Local Day-care Nursery

2.6 "The Honeytree Day Nursery and Preschool" is located a 2.4km travel distance north of the site. It can be accessed by bus, with a 9 minute journey time.

2.7 "Lympsham preschool" is situated 3.3km south of the site and can be accessed via a 10 minute bus journey.

Primary Schools

2.8 Bleadon previously had a primary school, which was closed in 1964. Nearby primary schools serving the area currently include;

- Lympsham C of E VC First School" is accessible via a 16 minute bus journey from the site. It is located 3.9km to the south; and,

- "Oldmixon Primary School" is located 3.1km from the site. It is accessible by bus then foot for a total journey time of 21 minutes.

Secondary Schools

2.9 "Broadoak School" is located 3.2km north of the site. It is accessible by bus, the journey time is 4 minutes.

Healthcare Facilities

2.10 A local Healthcentre is included within the proposals, however, in addition, existing healthcare facilities are located at;

- "The Waterside Suite" is a GP surgery located on the same site as "Weston General Hospital". These are located 2.4km north of the site and are accessible from the site via 9 minute bus journey; and,

- "SJ Edworthy" is a dentist located 3.9km from the site via a 16 minute bus journey.

3. CONCLUSION

3.1 It is clear that the issue of accessibility has been addressed in the previous **cTc** technical reports, and that further clarifications regarding further facilities and amenities have been made in this Appendix.

3.2 The proposed development site is demonstrably sustainably located and the presumption of favour in NPPF should be applied.