# Technical Note

**Project: Southern Access Road, Chichester**

**Subject: Additional Highways Information Review**

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| **Client:** | Chichester City Council | **Version:** | A |
| **Project No:** | 06683 | **Author:** | JS |
| **Date:** | 20/02/2023 | **Approved:** | AL |

## 1 Introduction

1.1.1 This Technical Note has been prepared by PJA on behalf of Chichester City Council (CCC) and is intended as a document of professional opinion in relation to the proposed Chichester Southern Access Road which forms part of the planning application associated with the Land West of Chichester development (planning application reference: 22/01485/OUTEIA).

1.1.2 The Southern Access Road (SAR) forms the southern access to Phase 2 of the Land West of Chichester development. The proposed scheme constitutes a single carriageway two-way road, which connects to the existing road network at Sherbourne Drive opposite the junction with Westgate.

1.1.3 A report was initially prepared by PJA in November 2022. This Technical Note should be read in conjunction with the November 2022 report.

1.1.4 Subsequent documentation has been submitted by the applicant in response to comments from the Local Highway Authority (LHA) at West Sussex County Council and National Highways (NH), responsible for the Strategic Road Network (SRN). Critique of this new documentation is included within this Technical Note.

### 1.2 Report Structure

**1.2.1** This Technical Note has been prepared to provide a concise layman's summary of the pertinent issues. The Technical Note is structured in two halves, first critiquing the proposed junction arrangement on a number of different measures and then goes on to outline alternative options for the SAR junction arrangement.

# 2 Proposed Junction Arrangement Review

## 2.1 Overview

2.1.1 This section of the report summarises the changes and arguments put forward by the applicants highways consultant in relation to the proposals for the junction between the Southern Access Road/Westgate/Sherbourne Road. The section has been split into three key areas:

- Highways Safety
- Junction Capacity
- Design and Feasibility

## 2.2 Highways Safety

2.2.1 Highways safety needs to be considered in detail when assessing proposals for new highways infrastructure. This will typically consist of a review of collision history in the immediate vicinity of the proposals, consideration of relevant design standards and guidance and the undertaking of Road Safety Audits.

**Collision History**

2.2.2 Section 4.9 of the Transport Assessment (TA) examines Highway Safety examining Personal Injury Collision (PIC) data.

2.2.3 It explores some of the PIC clusters and, relative to the A27 Fishbourne Roundabout (part of the SRN) concludes "... there is not a significant pattern of accidents at this junction." It is entirely reasonable to consider collision rates relative to traffic flows and apply some judgement but there are three significant factors to the PIC rate at this junction:

- Sub-standard entry deflection, on A27 approaches;
- Excessive visibility; and
- Poor Gap acceptance – linked to capacity.

2.2.4 Other clusters exist that cannot easily be dismissed due to traffic flows. One must therefore conclude the development proposal have not been appropriately considered in relation to highway safety concerns.

2.2.5 It is stated in the UK Government Guidance document for Travel Plans, Transport Assessments and Statements that there is a requirement to undertake:

*"an analysis of the injury accident records on the public highway in the vicinity of the site access for the most recent 3-year period, or 5-year period if the proposed site has been identified as within a high accident area"*

2.2.6 The applicant states that they deliberately did not use the most up-to-date data on account of the effects of the COVID-19 pandemic, excluding data post March 2020. PJA do not agree with the methodology employed as it ignores trends which may have arisen following changing transport behaviours in recent years.

2.2.7 Analysis conducted by PJA has identified that, since March 2020 there is a trend in poor cycle safety on the local highway network in recent years. For example:

- Two serious collisions occurred involving child cyclists and cars. One at the junction of Fishbourne Road East and Clay Lane and one on the western arm of the Westgate/Sherbourne Road roundabout adjacent to the proposed new junction of the SAR.
- A further two collisions causing the slight injury of a cyclist (one a child) are recorded on the existing Westgate/Sherbourne Road roundabout.

2.2.8 In addition to the above, two collisions causing serious injury to a cyclist are recorded in 2019, with no such collisions occurring prior to this. This emergent trend may be related to the recent extension of the Centurion Way and highlights the importance of assessing the most recent highway safety data to ensure that the design optimises safety for all transport modes.

2.2.9 Although it is generally considered that cycle safety has been considered to some degree by the applicant, it is advisable that further highway safety analysis is conducted, and that any amendments to the proposal consider the most recent collisions.

**Design Standards and Guidance**

2.2.10 The applicant disputes the RSA claim that the road would need to comply with standards set out in DMRB guidance due to the speed limit on the road. Whilst this is ultimately a decision for West Sussex County Council (WSCC) or National Highways (NH) close to the Strategic Road Network, PJA agree that the use of Manual for Streets (MfS) standards should be applied given the existing 20mph speed limit along the local highway network and urban context. As LTN 1/20 is specifically referenced in the latest Department for Transport (DfT) Circular, proposals must also comply with this.

2.2.11 Of particular concern is the provision for pedestrians and cyclists and the conflict that they are required to negotiate through the currently proposed staggered crossroads on Sherborne Road. The design of this junction is particularly key given that it accommodates the Centurion Way

cycle route (which forms part of the National Cycle route) as well as school children arriving and departing from the Bishop Luffa School. As previously noted the design must respond to Chapter 6 of the Traffic Signs Manual (as it replaces LTN 1 & 2/95) for the assessment of crossings.

**Road Safety Audit**

2.2.12 A Road Safety Audit was submitted as part of the previous application material and has since been commented upon by WSCC. The comments have requested that all problems identified within audit be dealt with at the planning stage. Whilst the highway authority can ask for all of the comments to be addressed at this stage, there are items within the requests that PJA consider to be matters for detailed design and would be reasonable to be addressed in the next stage of design as suggested by the applicants highways consultant.

2.2.13 The most significant issue raised by WSCC is in relation to the staggered junction arrangement. WSCC have requested that the applicant address the audits request to provide an analysis of queuing using junction modelling to demonstrate that queuing would not cause a safety issue at the junction. PJA agree with this conclusion and note that there are a number of issues associated with the modelling exercise undertaken to date that must also be addressed as discussed in the November 2022 report and further within this report, expanded in 2.3 below.

2.2.14 Following the RSA comments, the applicant persists with the staggered junction arrangement. In the context of the 20mph speed limit locally, a staggered junction arrangement may be suitable provided adequate visibility can be provided and suitable swept path analysis is provided. Issues still remain regarding capacity, which is discussed in the following section.

2.2.15 Whilst a staggered junction arrangement may be acceptable, the arrangement does introduce an increased risk of conflicts, both between vehicles and between vehicles and pedestrians and cyclists. This is particularly true in this instance as the development proposals would result in significant increases in vehicle flows and consequently risk of collisions occurring. It is therefore PJA's position that alternative arrangements should be considered further to establish the potential to reduce conflicts with pedestrian and cyclists and provide an arrangement that prioritises pedestrian and cycle movements.

**Summary**

2.2.16 Any design solutions must of course respond to the physical, environmental and capacity considered further in Section 2.3. The following key highway safety points need to be addressed before the access proposals can be considered suitable:

1 A review of up-to-date collision data would enable the applicants to review PIC patterns and clusters. Where clusters are apparent a COBALT assessment could be used to inform the extent to which these are likely to be material and require additional mitigation.

2 Alternative junction arrangement options considered to support forecast mode shares, queues and delays (explored further below).

3 Crossings should be examined relative to Chapter 6 of the Traffic Signs Manual, considering visibility and crossing for any uncontrolled crossings.

4 Design speeds should be considered relative to the Department for Transport circular and measures to support these relative to LTN 1/ 07, 1/08, 3/08, particularly where the SAR interfaces with the existing network.

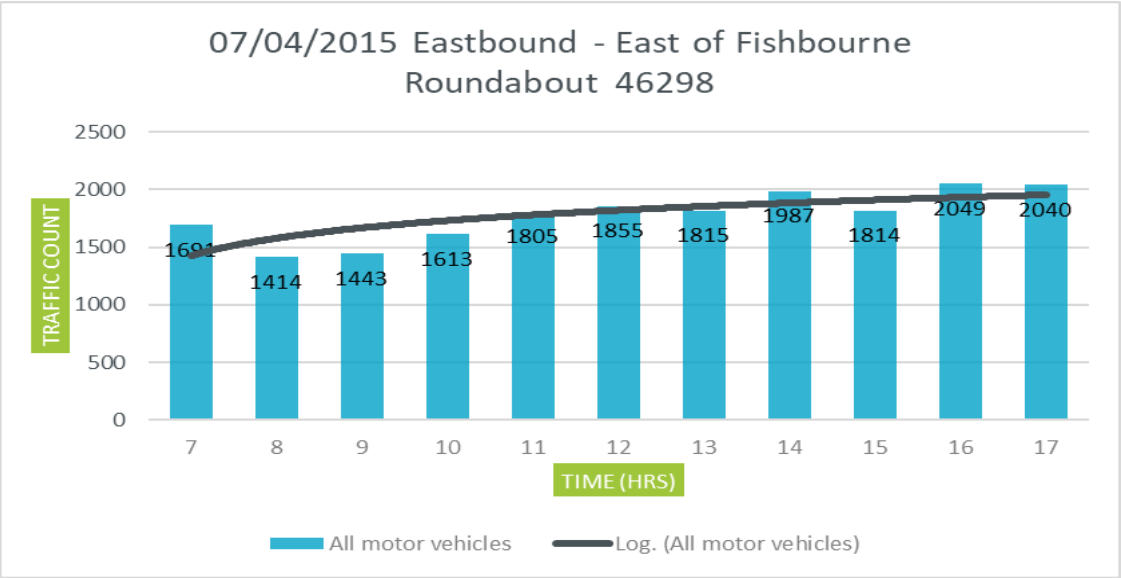
5 Design decisions should be recorded relative to DMRB, LTN, MfS or other design guidance or examples in the Road Safety Audit Brief, not currently submitted with the application. The Audit Brief could be made available, or a summary provided to record how/why decisions vary from a consistent approach.

## 2.3 Capacity

### Network conditions

2.3.1 To the west of Chichester the A27, A259 and B2178 effectively creates a screen line, which constrains traffic from the Solent area. Examining this more closely enables users to see that the network is operating close to capacity with elements of the network exhibit signs of peak spreading, resulting in peak periods, depicted in Figure 1 & 2.

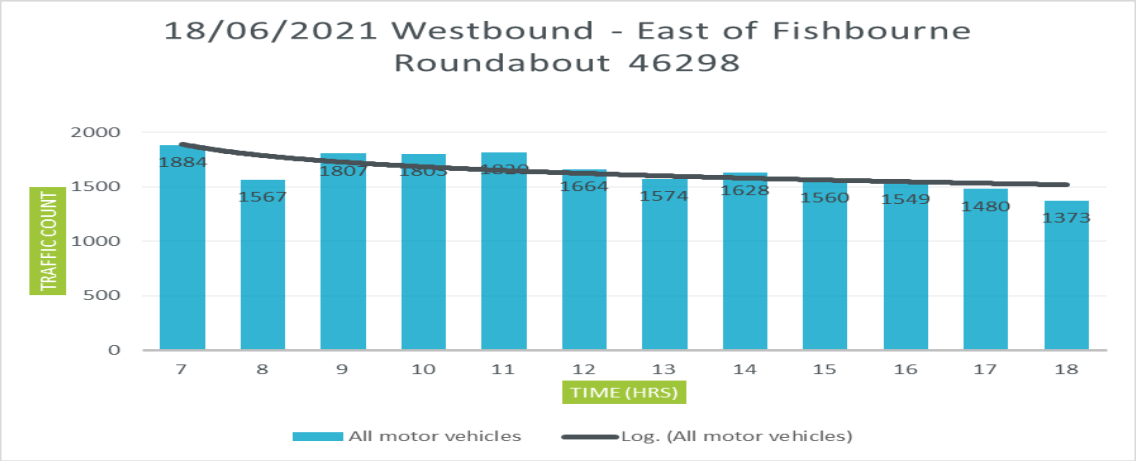
**Figure 1: A27 East of Fishbourne Roundabout - Eastbound**



2.3.2 Similar to Figure 1 in the evening, Figure 2 highlights that traffic flows in the 7-8am period are higher than other times indicating traffic is higher before the traditional peak, indeed Figure 2

2.3.3 Figure 2 reveals that traffic in the 8-9am period is lower, suggesting that the congestion in the pre-peak period reduces network capacity.

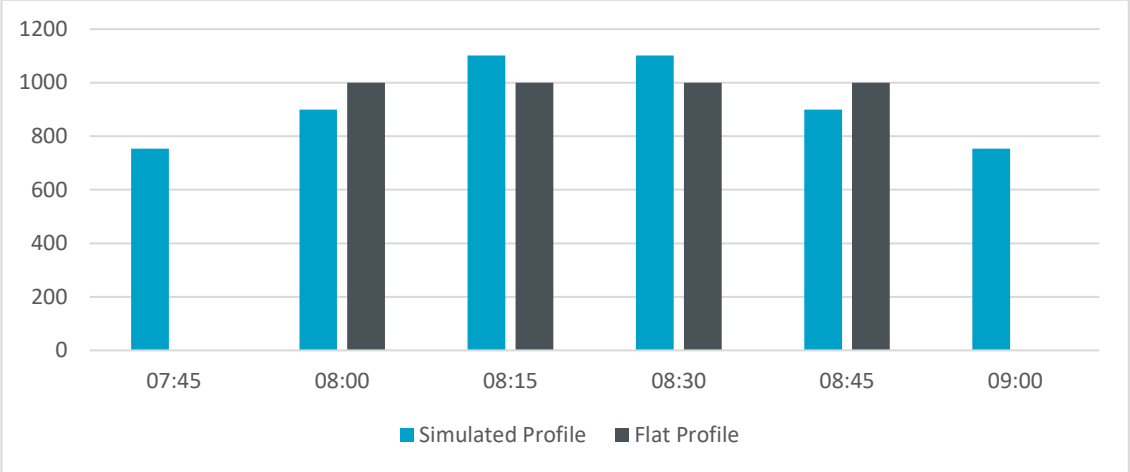
**Figure 2: A27 East of Fishbourne Roundabout - Westbound**




**Junction Assessments**

2.3.4 The TA examines existing and forecast traffic flows and completes junction assessments across west Chichester. Most adopt the simulated peak hour profile depicted in Figure 3 (based on the TRL guidance for 1000 vehicles per hour (vph)), forecasting traffic becomes busier for the peak 30-minute interval in the middle of the peak hour. This approach is generally regarded as more robust where junctions are operating within capacity and the resultant queues and delays are more concentrated in a shorter period.

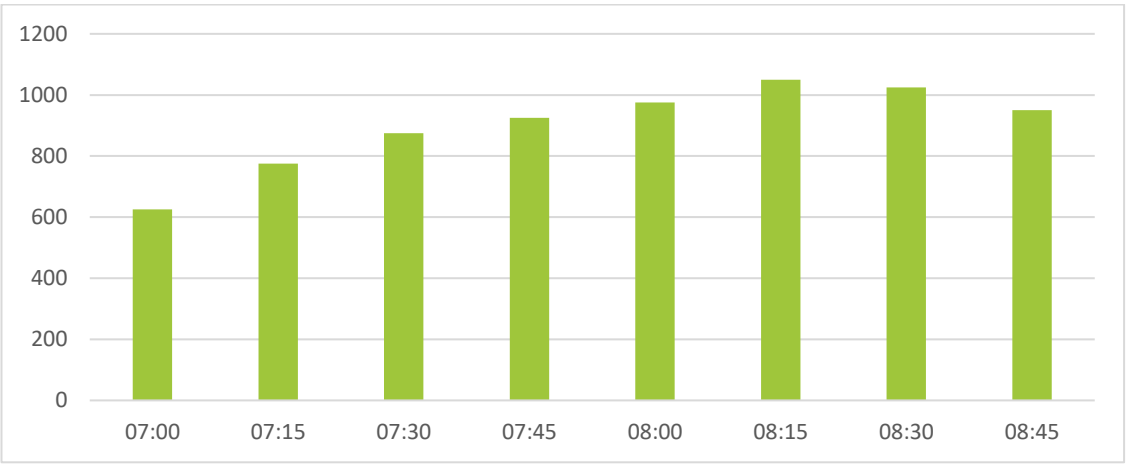
**Figure 3: Modelling Peak Profiles**




2.3.5 As the TA acknowledges traffic flows have remained similar for many years. Indeed, traffic flows in some parts of Chichester have fallen, whilst others have increased. These patterns are consistent with network constraints when parts of the network are at or above capacity.

2.3.6 Consistent with Policy it is sensible to embrace these network constraints to influence mode shift, but when considering the cumulative effect of development and network changes, one must also traffic redistribution and peak spreading as this can be more significant, adversely affecting network capacity as identified in Figure 4 depicts how peak spreading, quite unlike the profiles in Figure 3, where this is significant is at junctions where the flows in one location contribute to redistribution or further peak spreading.

**Figure 4: Traditional Peak Spreading profile**




2.3.7 Figure 2 highlights the build-up of traffic in 7-8am period in Chichester affects network capacity it is important to explore these cumulative effects ahead of the A27 corridor improvement.

2.3.8 As some of the junction assessments in the TA reveal that some junction arms will operate above theoretical capacity (85%) some of the junctions forecast a significant and sudden build-up of traffic queues (e.g. + 6 vehicles in 15 minutes) during the first peak interval (8:15-8:30, Figure 3

2.3.9 refers). Whilst the build of queues in Figure 4 might be markedly slower, the junction maybe unable to clear residual queues from a preceding period resulting in adverse network effects as demonstrated in Figure 2.

2.3.10 Based on the evidence provided within the Transport Assessment, PJA are unable to conclude that the junction assessments are inadequate to take a view on the cumulative residual effect of conditions or that the proposals are acceptable. Concerns are raised within this section in relation to the assumptions and methods applied in determining traffic flows for the purposes of the junction modelling.

**Validity of Input Data**

2.3.11 PJA have concerns, as outlined within the November 2022 Technical Note, regarding the input data and traffic flows used within the junction modelling presented within the Transport Assessment. The validity of input data was a recurring criticism of the previous TN. With regards to modelling conducted, the additional information submitted fails to address these concerns.

**Traffic Growth Assumptions**

2.3.12 The additional information submitted by the applicant fails to consider traffic growth any further, simply stating that the methodology applied in the Transport Assessment had previously been agreed with the Local Highway Authority. Whilst it is for WSCC and NH to judge the approach taken to assess development, it is incumbent upon both authorities to require sufficient information to judge the residual cumulative effect of development and proposed mitigation. As the traffic survey information was inadequate and the assessments adopt a simple approach when baseline conditions clearly indicate otherwise, PJA are unable to agree with the conclusions being drawn.

2.3.13 Limited traffic growth has been applied within the modelling on the basis that a traffic counter on Westgate has shown very limited growth. PJA do not agree with this approach. Upon investigation of the modelling results, it is evident that there is a capacity constraint on the Sherborne Road arm of the Cathedral Way Roundabout under the 2014 modelling. The constraint is likely to limit the number of vehicles using Westgate thereby supporting a view that as the western screen-line is operating at or close to capacity so any subtle change is likely to be variations of traffic redistribution.

2.3.14 The applicant justifies the decision not to use TEMPro to identify a growth factor as it states that "*given that the trend is for broadly flat or negative traffic changes currently even when considering for committed development being constructed prior to 2019 it is not considered appropriate to assume further future baseline growth in addition to that provided by nearby committed development*". Instead, housing growth has been considered using Local Plan estimates.

2.3.15 TEMPro makes use of the Department for Transport's (DfT) National Trip End Model (NTEM) database. It derives its results from robust forecasting of the following:

- Population
- Employment
- Housing
- car ownership
- trip rates

2.3.16 PJA acknowledge the argument put forward that committed developments should not be considered in addition to TEMPRO growth, however it would have been entirely reasonable to adjust the TEMPRO growth factors to remove impacts of committed developments. This would have ensured that the impacts of other factors were still accounted for.

**Future Traffic Flows and Sustainable Travel Assumptions**

2.3.17 It is the opinion of PJA that the data and methodology used to determine future traffic flows and mitigate the impact of the development are inadequate and the further information submitted does not alleviate these concerns.

2.3.18 The application of the '*decide and provide'* (D&P) approach can be an effective tool in managing future uncertainty, supporting the implementation of sustainable travel infrastructure over highways schemes and encourage sustainable travel. Similarly, it is reasonable to adopt a 'monitor and manage' approach to mitigation, agreeing a contribution to enable the delivery of mitigation measures, but such a contribution needs to be proportionate and viable.

2.3.19 In consultations with WSCC, it was agreed that the applicant would follow the Decide & Provide approach for trip generation. In recent correspondence from WSCC, they state:

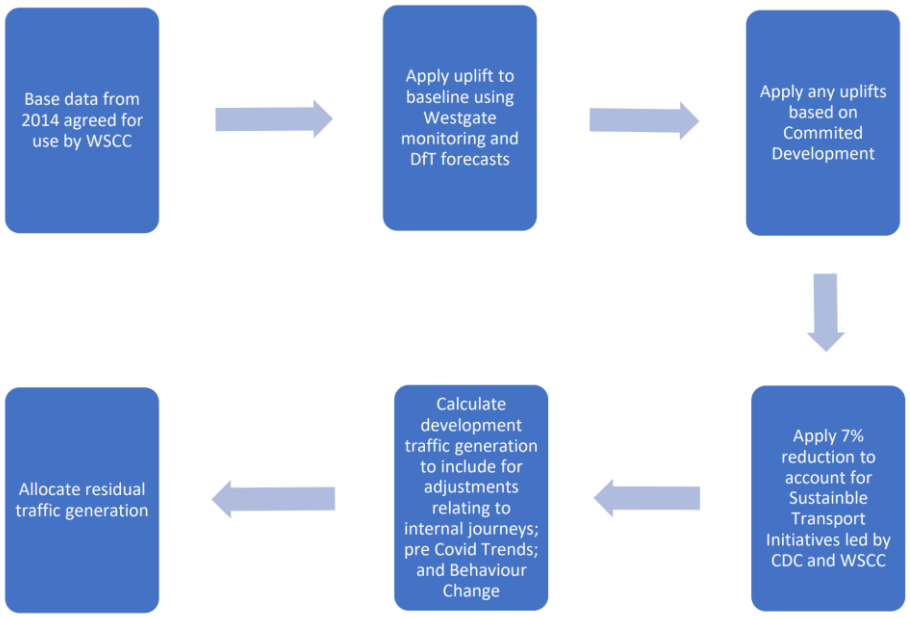
*"The authority's acceptance of the Decide & Provide approach is based on an MEP (Monitoring and Evaluation Plan) and future monitoring taking place and a clear plan of the mitigation proposed that includes future further mitigation, that goes above and beyond what would be*

*secured as part of the granting any permission, should the monitoring demonstrate that the outcomes have not occurred as forecast. The applicant should therefore provide specific details of how the monitoring would take place, what trigger points would require further mitigation and what further mitigation is proposed. The Highway Authority will then review and comment upon this monitoring and mitigation plan."*

2.3.20 Whilst support is stated in the TA, the applicant does not follow the D&P approach as outlined in the TRICS Decide and Provide guidance.

2.3.21 In their recent response, the applicant provided the following diagram to outline the approach to establishing future year traffic flows adopted in the TA.

**Figure 5: Applicant Diagram – Summary of Transport Impact Assessment Methodology**




2.3.22 The proposed approach does not consider the requirements for D&P, however on its own could be a reasonable approach had sufficient supporting evidence been provided. Further evidence is required to sufficiently support assumptions made with additional steps included to ensure all effects have been appropriately addressed and that the data is as accurate as possible.

2.3.23 A reduction factor has been applied to baseline trip generation estimates as it has been assumed that policies included within the Local Plan have and will reduce vehicle trips. There may be evidence to support some reduction but this should be presented in the application.

2.3.24 Applying a blanket 7% reduction assumes that the policies set out within the Local Transport Plan will be successful and will affect every part of the county equally. This is clearly not the case, and any reductions will be highly dependent on what package of measures would be delivered within the local area.

2.3.25 It remains unclear if there will be tangible improvements to walking and cycling conditions in the vicinity of the site and whether these would be targeted at leisure trips or other journey purposes, contributing to a modal shift during the critical peak periods. The applicant has not considered how people would travel sustainably and what improvements would be needed on the local network to facilitate these journeys.

2.3.26 By applying some evidence or at least judgement to the trip purposes one might frame a package of infrastructure and service improvements to achieve them. The 7% target might be reasonable with some improvements, but these are not proposed. In response to LHA and NH comments relating to scenario planning and mitigation, the applicant suggests that they would increase travel vouchers to £200 to try to ensure that the planned mode share is achieved. If a monitor and manage approach were considered acceptable such a measure (£200/dwelling voucher) might be applied to year 1 obligation, escalated relative to the Travel Plan monitoring reports in years 2-5.

2.3.27 The same assumption has been applied to the trip generation assessment of the development. Consequently, it is considered that trip generation forecasts used are an underestimate and not, in fact, representative of a “worst case scenario”. Similarly, for trip internalisation, the applicant applies a 10% reduction factor to employment trips. Neither in the original TA or in the response to comments is this 10% figure sufficiently evidenced.

2.3.28 Considering these criticisms, PJA have outlined an alternative methodological approach, in Figure 6, taking into account the requirements to achieve the D&P approach. It is urged that this methodology is followed to ensure the suitability of the proposed development and adequately address the concerns raised by the LHA and NH.

**Figure 6: Alternative Transport Impact Assessment Methodology by PJA**


2.3.29 The methodology recommend by PJA in Figure 6 follows guidance and incorporates D&P principles, including scenario planning, identification of highway mitigation trigger points and the creation of an Monitoring and Evaluation Plan. It also advocates for the undertaking of new traffic surveys as it is argued that sufficient time has elapsed since COVID-19 restrictions were in place and that travel behaviours have adjusted to a new normal. The methodology would also enable the applicant to consider the impacts of the 7% decrease in vehicular trips but would also identify what would happen under a scenario where a higher or lower shift were achieved and what might be necessary to deliver this.

**Capacity of Fishbourne and Cathedral Way Roundabouts**

2.3.30 Based on the information provided to date, PJA do not believe that the Transport Assessment can reasonably conclude that the developments impact on the A27 is “insignificant” without further assessment and appropriate supporting evidence. It remains the position of PJA that the applicant should obtain up to date traffic survey information and use this to inform modelling work of the Fishbourne Roundabout.

2.3.31 Despite concerns regarding underestimated traffic flows from the development and external traffic using the SAR, the Sherborne Road/Via Ravenna/A259 Cathedral Way Roundabout is

expected shown to exceed its practical capacity. Exceeding practical capacity does not necessarily equate to an unacceptable impact as NPPF requires that developments are only refused on transport grounds if the impact is severe, however, addressing the assumed traffic flow issues identified throughout PJA's ongoing review has the potential to result in a severe impact on the junction.

2.3.32 The current assessment within the Transport Assessment fails to consider the highway network as a network, simply looking at junctions in isolation. The Cathedral Way Roundabout, as a consequence of its proximity to the Fishbourne Roundabout, is also affected by congestion and delays from the A27 Fishbourne Roundabout. The modelling approach used within the TA is likely underestimating queues and consequently congestion at the Cathedral Way roundabout.

**Modelling Approach**

2.3.33 The modelling approach adopted by the Transport Assessment considers each junction in isolation. Whilst this approach allows the absolute capacity of each junction to be determined, it is not considered appropriate in the context of assessing the developments impacts on the network as a whole.

2.3.34 As has been discussed previously, the local highway network is subject to significant amounts of queuing and delay at the Fishbourne Roundabout, which in turn causes queuing back to the Cathedral Way Roundabout. It is therefore clear that the junctions operate as a network, with one influencing the other, and to consider the junctions in isolation will overpredict the capacity of the junctions.

2.3.35 In their recent response to LHA and NH comments, the applicant states

*"A review of traffic impact has also been undertaken in relation to the A27 strategic corridor. This assessment has shown that the impact in terms of traffic would be less than 5% which is typically considered imperceptible in traffic terms and within the range of daily variation."*

2.3.36 It is true that daily and seasonal variations occur and these maybe greater than 5%. The previous report from PJA notes that recent traffic flow counts show the A27 to be operating at capacity. As Figure 2 demonstrates, the existing operation of the A27 is affected by queuing at the Fishbourne roundabout, as such a 5% increase in traffic could reasonably reduce capacity of the SRN further.

2.3.37 The figures overleaf, duplicate Figure 1 & 2, and depict a range of traffic counts per hour at a DfT counter located approximately 300m east of the Fishbourne Roundabout. The figures show significant evidence of peak spreading in each direction, with very little variation in traffic flows

over peak periods. This means that queues accumulating at the Fishbourne roundabout will likely produce a sustained back-log of traffic on the road network around the site, including along Cathedral Way. This has not been considered in the baseline or forecast junction modelling produced by the applicant or addressed in their subsequent response.

2.3.38 To address this issue, PJA consider it appropriate for a microsimulation model to be prepared by the applicant. Microsimulation models allow the network to be modelled in a greater level of detail and allows the interaction between junctions to be assessed. Microsimulation models are complex and have significant costs involved and require significant amounts of data and traffic surveys.

2.3.39 A microsimulation approach may not have been adopted within the Transport Assessment due to concerns relating to the temporary impacts of COVID-19 on traffic flows at the time of preparing the Transport Assessment, which would have made any microsimulation model unreliable. It is generally agreed that impacts of the pandemic are no longer an issue and PJA believe that there is no reason why a microsimulation model couldn't be constructed at this point in time to better assess the impacts of the development.

2.3.40 The Transport Assessment indicates that traffic flows have been derived from data obtained from the Vectos Transport Assessment prepared in support of Phase 1 of the scheme. Upon review of the Vectos Transport Assessment, it is evident that the traffic flows are representative of peak hours of 08:00-09:00 and 17:00-18:00. However, when compared to the traffic counts on the A27, it is evident that peak periods for all years reviewed are typically 07:00-08:00 and 16:00-17:00. This therefore demonstrates that either there has been a significant change in traffic flow since the original surveys were undertaken or the true peak period has not been assessed.

2.3.41 The primary response from the applicant to criticisms of the effect on the A27 are that sufficient contributions have been calculated and agreed from the developer towards highways mitigation. As raised within PJA's report, no scheme has been identified by National Highways and no commitment to the delivery of a scheme is in place yet. It would therefore be inappropriate for the full scheme to come forward without the delivery of the necessary mitigation.

**Summary**

2.3.42 A number of issues remain outstanding that need to be addressed in relation to the traffic flows and capacity assessment, which includes:

- ✓ Traffic surveys should be updated to capture recent data;
- ✓ Junction assessments should be validated against observed conditions;
- ✓ The methodology for background traffic forecasts should be agreed (and if these include forecast reductions, they should be evidenced);
- ✓ Evidence to justify sustainable travel mode share forecasts;
- ✓ Appropriate implementation of D&P approach to forecasts, where appropriate considering sensitivity tests of alternative scenarios and identifying a package of measures to support these; and
- ✓ Assessment of junctions/network to present a residual cumulative effect of conditions.

2.3.43 Once completed it should be possible to devise a monitoring regime so that Travel Plan monitoring reports can inform the need for additional obligations, whether that is vouchers to induce mode shift or deliver additional infrastructure or services to meet future needs.

**Figure 7**

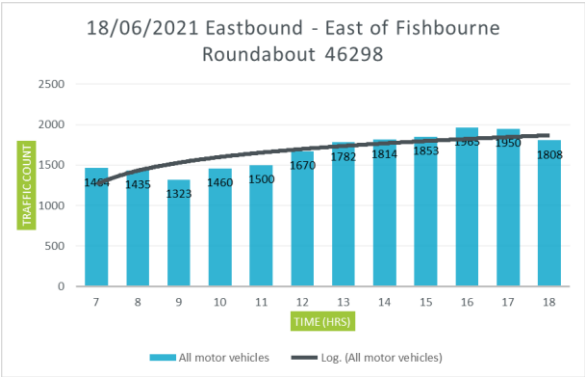



**Figure 8**

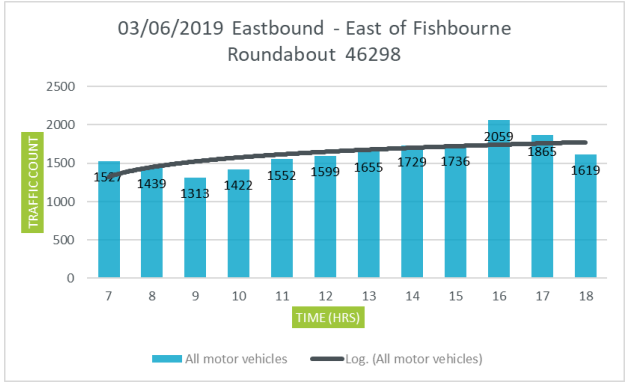



**Figure 9**

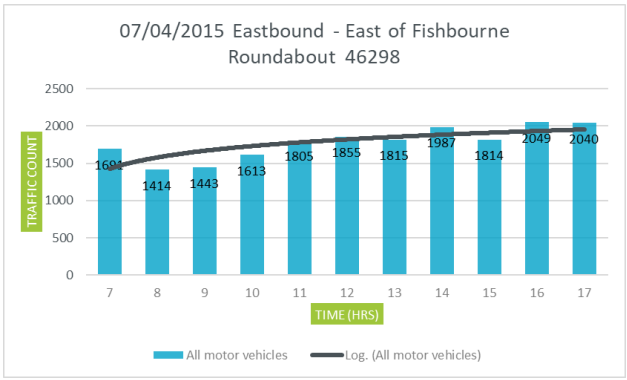



**Figure 10**

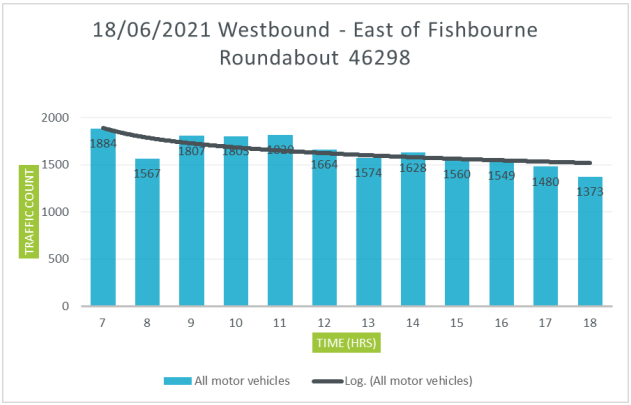



**Figure 11**

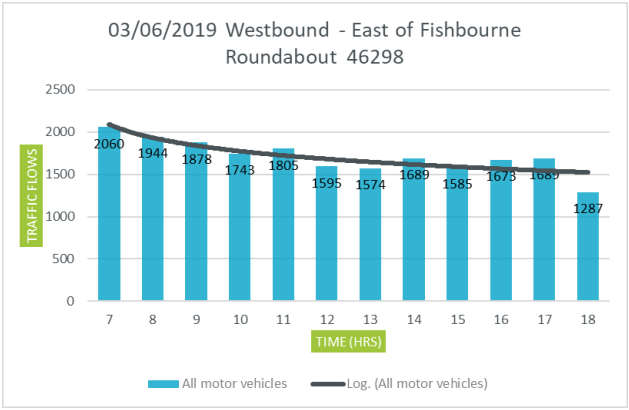
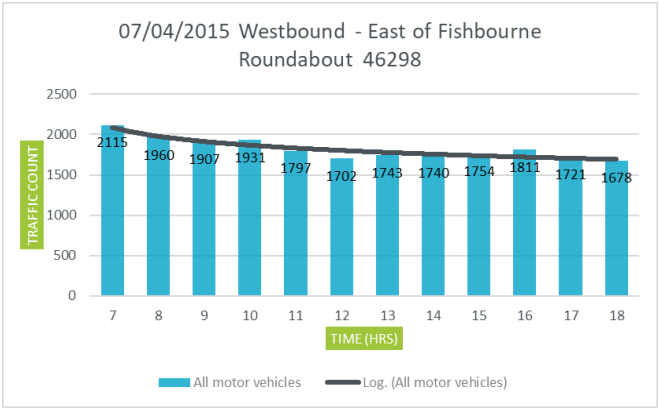



**Figure 12**



## 2.4 SAR Design Changes

2.4.1 The applicants highways consultant has sought to revise the design proposals for the SAR and its associated access junction in response to comments received from WSCC and NH. Upon review of the changes, there are some changes which PJA welcome and consider to be positive changes and other area which remain a concern.

2.4.2 It should be noted that critique is limited by the fact that the revised scheme drawings illustrating the proposed design changes have not been made available on the planning portal.

2.4.3 In summary, the proposed changes which PJA support include:

- A 3.2m dedicated two-way cycleway along the southern side of the SAR. It was previously stated that the choice of shared-use footway/cycleway was non-optimal and is recommended within LTN 1/20 that these should only be used as a last resort. This is therefore considered to be an improvement.
- A new signalised crossing facility is proposed over the SAR to the west of the access junction to the Bishop Luffa School. Formalisation of crossing facilities, particularly outside schools is advisable.
- As previously noted, the carriageway width has been justified on the basis of bus traffic and is therefore deemed acceptable.

2.4.4 However, some concerns remain regarding the proposed design and further issues may be identified if the detailed drawings become available:

- The speed limit increase to 30mph west of Bishop Luffa school is inadequately justified and poses a potential concern for safety without appropriate traffic calming measures in place to ensure vehicle speeds reduce outside of the school. This point is also close to where the Centurion Way crosses the SAR and as such, significant numbers of pedestrians and cyclists as well as school pupils, can be anticipated.
- Relatedly, the excessive, DMRB standard visibility splays have not been addressed. Excessive visibility has been shown to support higher approach speeds and therefore contribute to increase levels of fail to stop/give way and shunt collisions at or approaching junctions.

2.4.5 Where issues remain, it is likely that there are overriding issues impacting the scheme and the design decisions. This could for example include land ownership constraints, however any such issues have not been communicated within the additional information.

2.4.6 In the previous Technical Note prepared by PJA, a number of alternatives were proposed to avoid/address the issues.

2.4.7 Alternative arrangements could see the junction pulled closer to the Cathedral Way roundabout to permit space for the segregated cycleway to be accommodated on the northern side of the SAR. This arrangement would see cyclists crossing Sherborne Road routed northwards using the superior parallel crossing included in the design. Cyclists using the Centurion Way would be guided to cross at the parallel crossing proposed along the SAR. In addition to providing a safer crossing arrangement, this would avoid cyclists having to negotiate the difficult and tight turn proposed on the eastern side of Sherborne Road and would avoid cyclists utilising the narrow section of footway.

## 2.5 Summary

2.5.1 In addition to the wider safety and capacity issues summarised at the end of Sections 2.3 and 2.4, the following a review of the additional information submitted by the applicant, PJA are of the opinion that the following issues remain with the proposals/assessment:

- ✓ If the development forecasts increases in walking and cycle travel, the SAR Design must support the delivery of suitable infrastructure where conditions will encourage greater use by these modes
- ✓ Design speeds should be based on reasonable evidence of existing and forecast conditions, taking account of existing 'feature' spacing and available visibility (particularly where visibility may be excessive)
- ✓ Crossings and visibility must be based on appropriate design speeds to ensure these will not result in excessive delays for pedestrian/cyclists

# 3 Review of Paul Wreyford Option

## 3.1 Overview

3.1.1 Within the Transport Assessment (TA) submitted as part of the planning application (PA ref: 22/01485/OUTEIA), several options were put forward for linkage from Westgate with the SAR as part of consultations with the LHA.

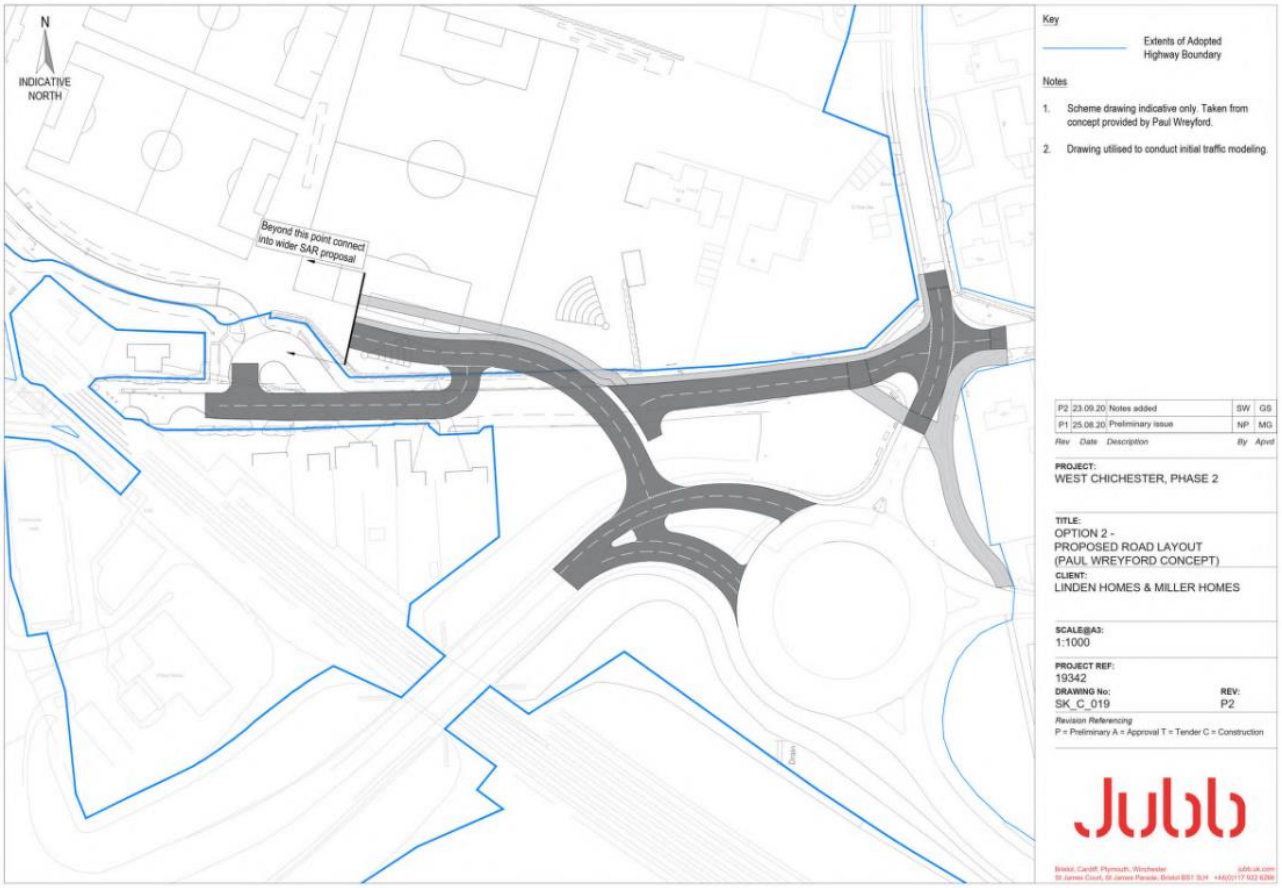
3.1.2 One of these options considered is the Paul Wreyford option, or known as 'Option 2'. The 'Paul Wreyford' option, is a proposed design based on concept of a local resident (Paul Wreyford).

3.1.3 This option would provide a direct link to the A259 Cathedral Way via a priority junction, to the west of the Sherborne Road/Via Ravenna/A259 Cathedral Way Roundabout. This link would cut across the existing western extent of Westgate, cutting off its direct link to the Westgate/Sherborne Road mini-roundabout. The western extent of Westgate becomes the minor arm of a new junction onto the SAR.

3.1.4 The existing Westgate/Sherborne Road mini-roundabout junction would be provided as a crossroads junction, with Sherborne Road becoming the major road approach and Westgate joining Sherborne Road via priority junctions from both east and west points. This junction is also proposed with pedestrian/cycle crossings across all arms of the junction.

3.1.5 A proposed arrangement is shown in Figure 13.

**Figure 13: Paul Wreyford Proposed Arrangement**




3.1.6 The key benefits of the proposed arrangement can be summarised as:

- Provides a direct connection onto the A259 from the SAR and would therefore remove some of this traffic from the local road network.
- The arrangement would reduce the use of the Westgate/Sherbourne road junction. This would reduce potential conflicts between vehicles and pedestrians and cyclists, therefore improving the environment for cyclists along Westgate, enhancing the National Cycle Network Route.
- Access to local facilities, such as Parklands Surgery, would be unaffected.
- Local residents retain easy access to the A27.

3.1.7 The disadvantages of the proposals include:

- This option was reviewed and modelled within the TA by Jubb and was discounted as the arrangement was anticipated to operate above capacity with associated long forecast queues. PJA have concerns, as outlined within the November 2022 Technical Note, regarding

the traffic flows used within the junction modelling presented within the TA. However, these concerns were only that the level of traffic has been underestimated, therefore, it is believed that this junction arrangement would have capacity issues. Signalisation of the junction could have the potential to overcome the capacity issues, but may raise further issues.

- Signalisation of the junction would result in queuing back from the SAR junction to the Cathedral Way roundabout. Further mitigation would then be required at the Cathedral Way roundabout to address the potential queuing back issue.
- Signalisation could also cause queuing back from the junction to the Fishbourne Road East junction or back to the Fishbourne Roundabout. Queuing back to the Fishbourne Roundabout and on to the A27 would not be acceptable to National Highways.
- Management of queues onto the Cathedral Way roundabout would be required as there would be very limited space for vehicles to queue between the SAR junction and the roundabout entry. PJA would question the practicalities of managing the queues in this way, given the limited space available and potential impacts this may also have on the capacity of the junction.

# 4 Review of Alternative Options

## 4.1 Overview

4.1.1 PJA have considered two of the preferred potential alternate proposals in a greater level of detail. The options are considered within this report explore the proposals for modal filters in a greater level of detail. The modal filter options filter traffic allowed to use certain routes, allowing pedestrian and cycle movements to be prioritised over motor vehicles. Two potential modal filter options are considered, which includes:

- A diagonal modal filter at the Sherbourne Road/Westage/SAR junction.
- A modal filter on Westgate to the east of the junction with Parklands Road.

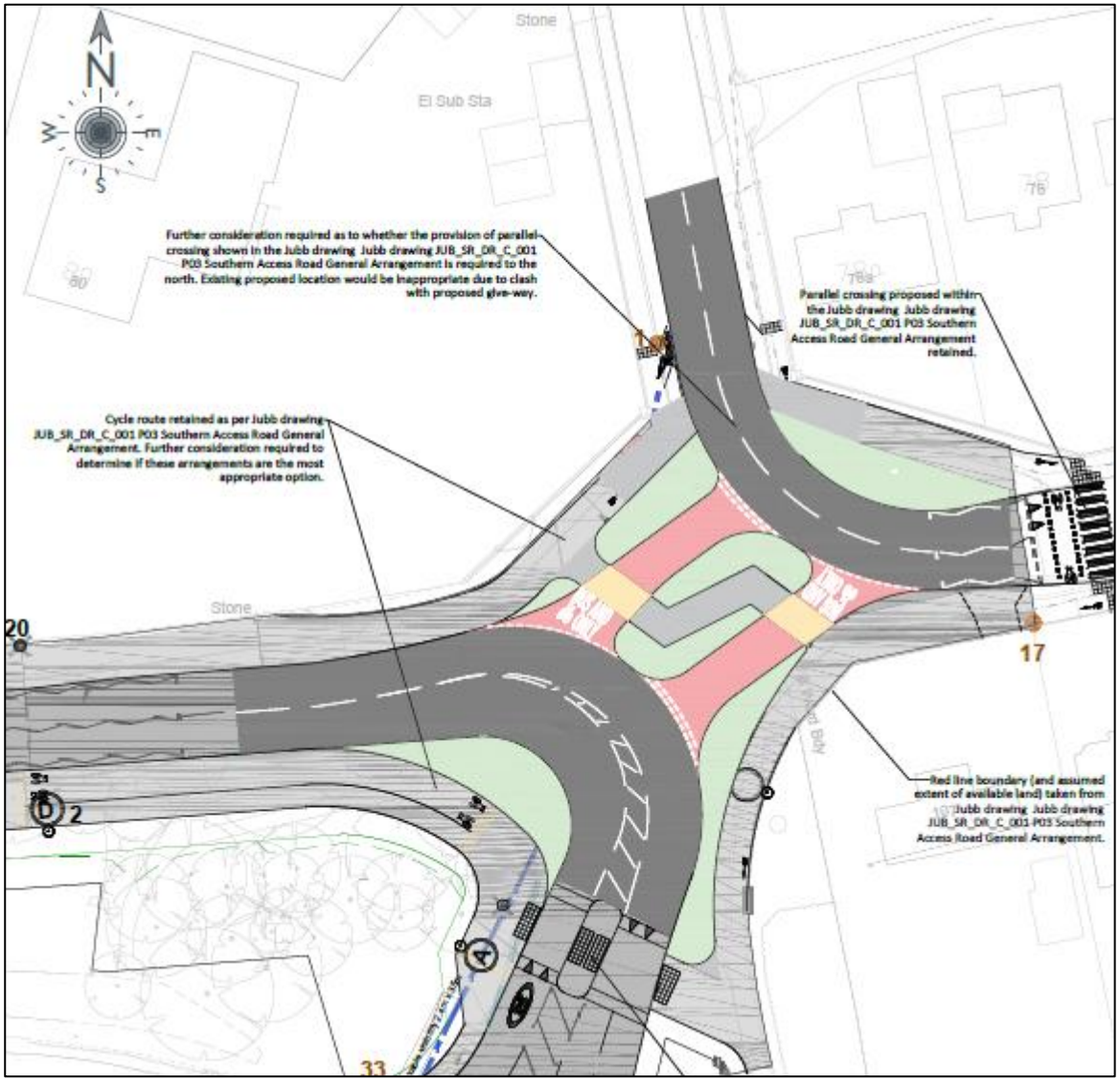
4.1.2 A summary of the key issues and benefits of each of the options is summarised in the following sections.

## 4.2 Sherbourne Road/Westgate/SAR Junction Modal Filter

4.2.1 The proposals under this option would introduce a modal filter at the Sherbourne Road/Westgate/SAR junction that would prevent North-South and East-West movements through the junction. A proposed arrangement is shown in Figure 14 and the full drawing is provided in **Appendix A**. It should be noted that the proposals are illustrative at this stage and will require further design development, including further consideration of cycle infrastructure, linage and signage.

4.2.2 The proposed arrangement consists of a modal filter located diagonally across the junction, although provision remains to accommodate bus movements as buses currently route east-west and south-west through the junction.

**Figure 14: Indicative Sherbourne Road/Westgate/SAR Junction Modal Filter Arrangements**




4.2.3 The key benefits of the proposed arrangement can be summarised as:

- Potential conflicts between vehicles and pedestrians and cyclists are reduced as the complexity of vehicle movements is reduced (general traffic limited to South-West and North – East).
- The arrangement would discourage the use of Westgate as a route into Chichester City Centre, reducing traffic flows and improving the environment for cyclists along Westgate, enhancing the National Cycle Network Route.

- North-south traffic would be forced to utilise the SAR as a relief road, removing traffic from Sherbourne Road.
- Traffic entering Chichester from the south will be forced to utilise the more appropriate Cathedral Way route.
- The number of right turning vehicles at the Sherbourne Road/B2178 junction would be reduced and would have a positive impact on highways safety at the junction.

4.2.4 The disadvantages of the proposals include:

- Some traffic will be redistributed onto other parts of the network,
  - Through traffic will be primarily redistributed to the A259 and SAR
  - Local traffic to/from A27 will be primarily redistributed via Westgate, A286 and A259
- As has been reported within the November 2022 note, the Local Plan modelling did not consider the potential impacts of the SAR operation as a Relief Road. Therefore, the implications of the SAR operating as a Relief Road would require further investigation.
- Encouraging north-south traffic to utilise the SAR will have a negative impact on the access to the Bishop Luffa School and would increase severance (through increase vehicle flows).

## 4.3 Westgate Modal Filter

4.3.1 To address the potential effects of traffic redistribution the introduction of a modal filter to the east of the Westgate/Parkland Road junction would ensure that most traffic to/from the A27 can be accommodated with minimal diversion. The proposals are shown illustratively in Figure 15.

**Figure 15: Westgate Modal Filter**


4.3.2 The benefits of the proposal include:

- Traffic routing to/from the A27 into Chichester City Centre is forced to utilise the more appropriate A286/A259 Cathedral Way route.
- Removal of traffic from Westgate would provide a significant improvement for cyclists on the mixed traffic route (Westgate).
- Access to local facilities, such as Parklands Surgery, would largely unaffected.
- Local residents retain easy access to the A27, whilst local journeys on foot or cycle towards the City Centre are improved.

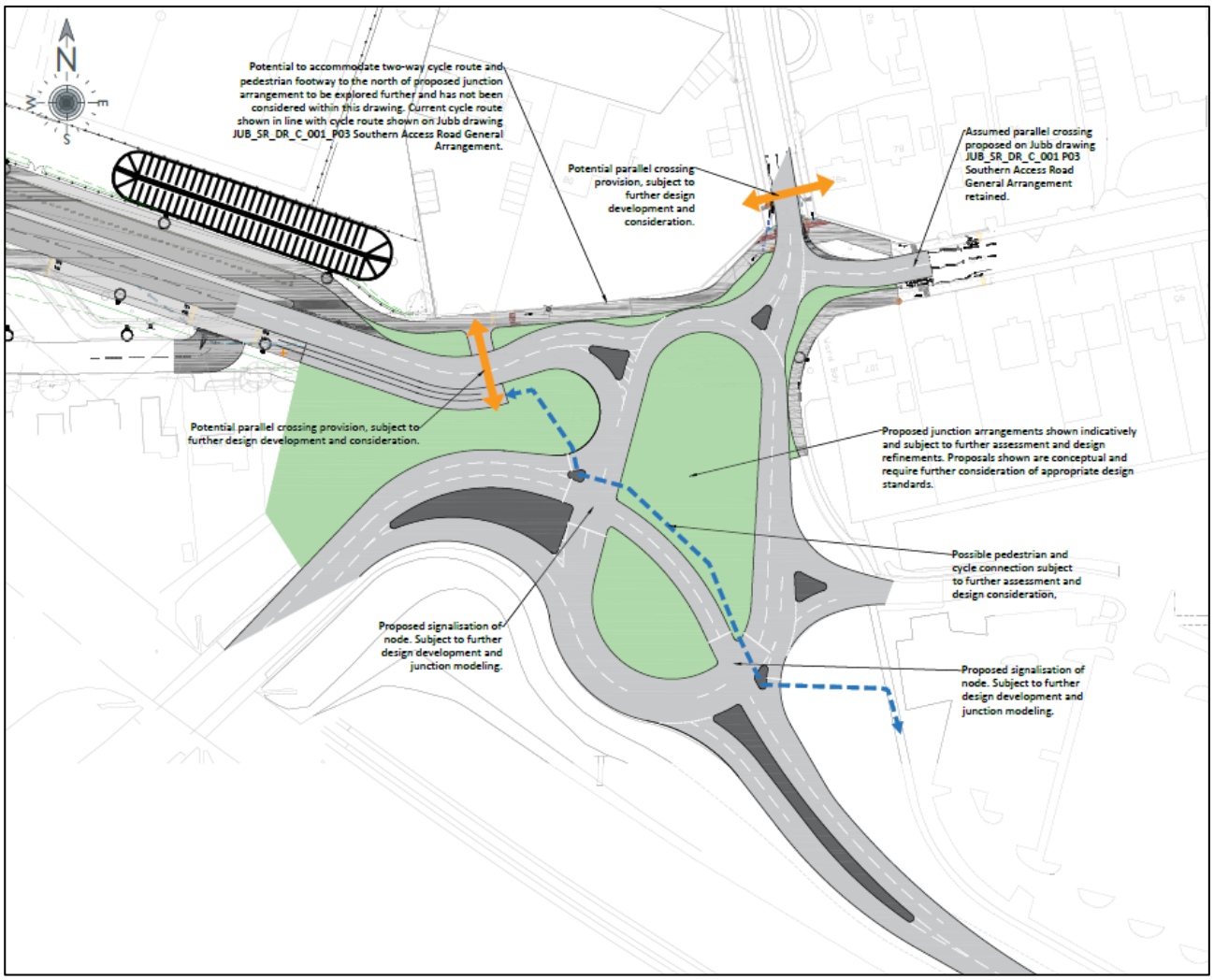
4.3.3 The disadvantages of this option include:

- The scale of traffic reduction on Westgate (to support a mixed traffic cycle route) would not be as great.
- The SAR offers limited benefit to adjacent communities.

- The turning movements at the SAR junction require a carefully considered junction arrangement

4.3.4 Responding to the scheme disadvantages it is likely that a more complex SAR junction could be necessary to respond to the A259 Westgate Link (College) Roundabout, as identified in the Local Plan evidence, shown illustratively in Figure 16 and in the drawing provided in **Appendix B**.

**Figure 16: Potential A259/SAR Junction**



4.3.5 At the Local Plan Examination in Public, it appears the Inspector anticipated a Supplementary Planning Document or Design Code would be advanced to ensure the SAR delivered appropriate infrastructure to meet the needs of existing and planned communities. As this did not happen, it should be reasonable that WSCC work with the applicant to devise the best location to deliver a modal filter on Westgate, potentially consulting the local community to devise the best solution.

4.3.6 If WSCC/NH are minded to support a monitor and manage approach it seems reasonable to identify a mitigation package based on the cost of delivering a modal filter as shown in Figure 15 and junction improvements based on Figure 16 and updated traffic forecasts.

# 5 Summary

5.1.1 This Technical Note has been prepared by PJA on behalf of Chichester City Council (CCC) and is intended as a document of professional opinion in relation to the proposed Chichester Southern Access Road which forms part of the planning application associated with the Land West of Chichester development (planning application reference: 22/01485/OUTEIA).

5.1.2 A review of additional information submitted by the applicant has been undertaken. The additional information has addressed some of the issues raised previously in relation to the design and assessment of the SAR, however a number of key issues remain outstanding. Of these issues the main concerns relate to the following:

- The appropriateness of the traffic survey data used within the assessment.
- The methodology utilised to undertake the traffic impact assessment and junction modelling.
- The considerable over design of the SAR alignment leading that is inappropriate for a 20mph speed limit.
- The continued potential conflicts between motorists and pedestrians and cyclists and the potential impact to the National Cycle Network route along Westgate.

5.1.3 Alternative options for the arrangements at the junction and along Westgate have been considered to set out alternative options that better consider cycle priority along Westgate and seek to manage any potential traffic impacts on Westgate.