



RCMD/21069/Let01a

31 March 2021

Arun District Council,
Arun Civic Centre,
Maltavers Road,
Littlehampton,
West Sussex, BN17 5LF

Att: Ms. Amy Myer

**Nursery Fields land North of Chalcraft Lane (225 dwellings)
Planning Application BE/148/20/OUT
Independent Opinion on Transportation Matters**

I refer to the Brief from Arun District Council (ADC) dated 1st March 2021 in respect of transportation planning matters associated with the above application, and write to outline the findings of my assessment of these matters.

Background

My name is Robin Duncan, I am a chartered engineer (CEng), a member of the Institution of Civil Engineers (ICE), and of the Chartered Institution of Highways and Transportation (CIHT). I have some 34 years' experience in all aspects of the fields of Transportation Planning, Traffic Engineering and Travel planning, particularly focused on Transportation Assessment.

I have been appointed by Arun District Council (ADC) to provide an independent assessment of the transportation matters pertaining to the above planning application for 225 dwellings on the Nursery Fields site on Chalcraft Lane, West Bersted. I can confirm that I have no interest or association with any of the parties involved in or making representations on the application, and have no conflict of interest with respect to the application or any associated parties.

Approach

I have reviewed all relevant papers, submissions, representations and objections submitted with or made to ADC in the course of the planning application process to date. Within this statement, I outline my assessment of matters that I consider—based on the submitted material and my experience and knowledge of Transportation Assessment best practice—are relevant to an appropriate consideration of the traffic and transportation impact of the proposed residential development.

The findings of my assessment are set out under the following main headings. Any matters not covered under these headings can be considered to be acceptable by my assessment, or not coming under its scope (for example engineering design matters).

1. Accessibility by Sustainable travel modes;
2. Local junction traffic impact;
3. Spine road through application site (connecting to the remainder of SD3); and
4. Contributions to traffic impact mitigation

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1. Accessibility by Sustainable travel modes

- a. ADC highlighted in pre-application advice the need for comprehensive planning of the development of strategic sites, and the need to provide for connectivity of sustainable transport modes. This has been acknowledged by the applicant in respect of BE/148/20/OUT, through the design of the site access route to accommodate buses.
- b. The Transport Assessment (TA) for BE/148/20/OUT sets out the assessment of sustainable transport accessibility of the development. TA 3.4.1 identifies that the closest bus stops to the site are on the B2259 Chichester Road, at some 800m walking distance. It is not specified what proportion of the site is within 800m walking distance of these bus stops. In my assessment, some 25% of the site area of BE/148/20/OUT is outwith 800m walking distance of these bus stops by the various pedestrian connections to the site.
- c. The TA (5.2.4) confirms The Manual for Streets (MfS) assessment that walkable neighbourhoods are “*characterised by having a range of facilities within 10 minutes’ (up to about 800 m) walking distance of residential areas which residents may access comfortably* (my emphasis) *on foot.*” The TA notes PPG13’s assertion that this distance is not an upper limit, quoting that short-distance car trips of up to 2km may be replaced by walking. I consider however that 800m is the upper limit of what is a ‘comfortable’ walking distance, and therefore most attractive to pedestrians.
- d. The TA goes on to identify the walking distances to local facilities (5.3.1, Table 6.2). It is notable that, in this assessment, the bus stops on B2259 Chichester Road at The Royal Oak are identified at a distance of 1,050m from the site, not the distance of 800m quoted earlier. Furthermore, local retail facilities range from 900m to 1,950m from the site; healthcare from 900m to 1,750m; education from 1,150m to 1,550m; indoor leisure from 950m (The Royal Oak pub, a different walking distance again from the 800m and 1,050m quoted previously) to 1,150m; and employment from 2,350m to 2,850m. In my assessment, very few local facilities are within what would be considered a comfortable walking distance, i.e. a walking distance that residents of development on the BE/148/20/OUT are likely to walk to on a regular basis.
- e. I also note that it is clear that the development of community facilities within the wider SD3 allocation, in the form of a new primary school, planned new employment, shops, healthcare and library, will represent the closest local facilities to the BE/148/20/OUT development, and that these are the facilities that Nursery Fields residents will find it most comfortable to walk to in terms of the guidance of both MfS and PPG13. I consider that the attractiveness of these facilities local to the BE/148/20/OUT site will most effectively be maximised by providing full modal access, including a two-way vehicular link between the sites.
- f. The TA (3.4.4) refers to it being ‘likely’ that there will be an improved bus provision through the SD3 development. In my assessment the public transport accessibility of the BE/148/20/OUT development would most effectively be maximised—in accordance with the requirement of NPPF, paragraph 108 to ensure that opportunities for sustainable transport modes have been taken up—if a two-way link road is provided connecting BE/148/20/OUT to the SD3 spine road.
- g. Plans have been submitted showing the potential for a future connection to the remainder of the SD3 site to the north, however reference also is made to the potential for a bus connection to be created through BE/148/20/OUT in the event of operator desire to bring a bus service into the site(s). I consider that the presentation of plans which show the potential future road link through BE/148/20/OUT to SD3 stopping short of the site boundary, and the statement that a bus connection only would be provided subject to operator demand, does not represent a proactive and receptive attitude towards improving public transport accessibility of the development site, which would be substantially improved by a through bus service, significantly

reducing walking distances to bus services, and making sustainable travel much more attractive to residents of BE/148/20/OUT, given the existing walking distances.

- h. Given that SD3 includes a primary school, and community hub expected to comprise local retail, healthcare, library and new employment, it should be considered a requirement of the overall SD3 allocation that a through bus service is provided to connect those important new community facilities to the wider Bersted area, and maximise sustainable travel to that new community hub.

2. Local Junction Traffic Impact

- a. NPPF, paragraph 109 states that *“development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impact on the road network would be severe”*. The need for the applicant to consider: cumulative impacts of adjacent development; traffic flows generated by the wider development; comprehensive planning with regard to the masterplan; and holistic development with regard to adjoining landowners, are set out by ADC in its pre-app. advice, appended to Barton Wilmore’s Planning Statement.
- b. In the absence of any cumulative assessment of the traffic impact of the SD3 allocation on local highway junctions, I consider that the residual cumulative impact is unknown, and therefore ADC does not have sufficient information on traffic impact to determine if the BE/148/20/OUT development meets the test set out in NPPF. I believe this is the case since, regardless of the impact of BE/148/20/OUT in isolation, that application properly would be bound to contribute to the overall traffic impact of the SD3 allocation on local highway junctions, which are not considered by the Arun Transport Study, or reflected in the Heads of Terms set out in the Planning Statement for BE/148/20/OUT, or the Transport Assessment for the application.
- c. The BE/148/20/OUT Transport Assessment (i-Transport, 11 November 2020) refers to the Arun Transport Study (ATS) and Table 2.1 lists ten junctions where either capacity or road safety improvements are required to mitigate ‘severe’ highway impact from planned growth, to which SD3 (and therefore BE/148/20/OUT) will contribute. The table sets out the overall contribution from SD3, and share of that contribution due from BE/148/20/OUT. In the absence of costings for the safety improvements to the Comet Corner and Oystercatcher junctions on the A259, the overall contribution due from BE/148/20/OUT is not yet known. Also, the TA confirms (2.3.9) that this does not represent the full cost of highway mitigation, as local junctions are excluded.
- d. It is noted that the TA’s assessment of Personal Injury Accidents (PIA, TA 3.6.2, Table 4.4) identifies that B2259 Chichester Road / Chalcraft Lane / North Bersted Street double mini roundabout junction shows greatest concentration of PIAs during the assessment period, and that the most concentrated ‘severe’ PIAs occurred on Chichester Road in proximity to the local shops.
- e. In considering the traffic impact of the BE/148/20/OUT development on the local junction network, the TA (7.5.9-13, Tables 7.6 and 7.7) sets out analysis results for the B2259 Chichester Road / Chalcraft Lane / North Bersted Street double mini roundabout. The results indicate a maximum Ratio of Flow to Capacity (RFC) of 0.86 (0.856) in the Weekday PM peak. Therefore, the results demonstrate that traffic generated by BE/148/20/OUT brings the double mini roundabout to the limits of practical capacity. The obvious conclusion to be drawn from this is that any further development of the SD3 site will take the operation of the junction over capacity.
- f. Thus, any combined traffic impact analysis of the SD3 allocation as a whole (including BE/148/20/OUT, BE/81/20/OUT, and BE/103/19/OUT), and the committed development BE/142/15/OUT, and committed developments in Pagham—a total of some 3,694 dwellings—would result in the practical capacity of the junction being exceeded, perhaps significantly.

- g. In the absence of a combined assessment of the impacts of these developments, the scale of junction improvement required to offset the combined impact (to which cost BE/148/20/OUT properly would contribute) cannot be known. Any planning decision made in the absence of this knowledge would not, in my opinion, represent comprehensive and cohesive planning of a strategic development. As a result, I do not consider that the transport modelling of BE/148/20/OUT is in accordance with policy HSP2, or that it demonstrates accordance with NPPF 109 in that there clearly would be an unacceptable cumulative residual impact of the overall SD3 allocation.
- h. In addition, however, I have reviewed in detail Appendix G of the TA, containing the analysis output summaries from the modelling. In addition to the '2031 +CD (committed development) +D (development)' scenario reported in the main TA document, there are analysis results for a '2031 +CD +D ST' scenario. I have not reviewed the traffic flow input to this model scenario, however it is of particular interest to note that a maximum RFC for the B2259 Chichester Road / Chalcraft lane / New Bersted Street double mini roundabout of 0.935 is identified in the PM peak, and there are two addition arms to the junction shown to experience RFCs of 0.926, well in excess of the 0.850 RFC limit of roundabout practical capacity.
- i. Not only this, but the 'D ST' scenario analysis results for the Hewart's Lane / Chalcraft Lane roundabout show a maximum RFC of 0.847 in the Weekday PM peak, and the West Meads Drive / Chalcraft Lane crossroads junction shows a maximum RFC of 0.879 in the AM peak. I consider that it is important for ADC to understand the context of this analysis that is not reported in the TA text, but is contained in the appendix to it, and whether in fact this analysis labelled 'D ST' represents test modelling of the combined SD3 strategic development allocation as a whole.
- j. I have reviewed the detailed comments of Pell Frischmann on the TA analysis, and WSCC's response to both the TA itself, and Pell Frischmann's assessment. This additional modelling does not alter the conclusions that I have drawn on the traffic impact of the BE/148/20/OUT development, and therefore I do not comment on the specific issues in Pell Frischmann's assessment.

3. Spine Road through the application site

- a. Considering the various statements in relation to the connection of the BE/148/20/OUT development to the wider SD3 allocation by means of a full vehicular, public transport, cycle and pedestrian link (or not), I consider that the most effective means to maximise the sustainable public transport accessibility of the BE/148/20/OUT development—and therefore the uptake by residents and visitors of sustainable transport modes— and also of the proposed new community facilities within the remainder of the SD3 site, is for a full, two-way vehicular and active travel connection to be formed between BE/148/20/OUT and SD3.
- b. Furthermore, I consider that the future year traffic flows at the 'critical' B2259 Chichester Road / Chalcraft Lane / North Bersted Street double mini roundabout junction would most effectively be minimised through local traffic redistribution by the creation of a full two-way transport link between the BE/148/20/OUT and SD3 development sites.

4. Contributions to Traffic Impact mitigation

- a. I consider that there are a number of issues relating to the scale, scope and application of contributions to improvements of the strategic and local highway network that must be considered by ADC in deciding the planning application.
- b. Local Plan site SD3 West of Bersted is identified (in Council policy HSP2a) for 'up to 2,500 dwellings' and a range of other uses. Discussion of the contribution of BE/148/20/OUT to highways mitigation, set out in the TA for the application, does not acknowledge the potential that the planning application for the balance of SD3 may

contain fewer than 2,255 dwellings (2,500 minus 225, minus 20 units under BE/81/20/OUT). In fact, Lichfields' letter of 12 February 2021 (page 1) notes that an application is being prepared for 'up to 2,200 units' on the remainder of the SD3 land. As a result, the 225 units proposed under BE/148/20/OUT would not represent 9% of the SD3 residential development, but 9.2%, thus increasing the contribution due from BE/148/20/OUT to highway impact mitigation works.

- c. The Heads of Terms referred to in relation to a Section 106 agreement for BE/148/20/OUT, relate to the strategic and primary highway network identified by the Arun Transport Study, as confirmed by WSCC in their response of 23 February 2021. As such, these Heads of Terms do not capture any contribution to local highway improvements, which I consider relevant to BE/148/20/OUT, as a result of my conclusions on Traffic Impact, above. WSCC also acknowledge the need for a suitable mechanism for the sharing the cost of local highway improvements resulting from the combined impact of the SD3 allocation as a whole.
- d. The TA for the BE/148/20/OUT development (7.5.14) states that fourteen junctions require impact mitigation as a result of development within the ADC Local Plan. Notwithstanding this figure, the TA notes earlier (2.3.8, Table 2.1) a list of ten junctions to which BE/148/20/OUT is due to make contribution to the cost of traffic impact mitigation, numbered 1, 2, 7, 17, 18, 20, 21, 22, 23, and 45. At TA 7.5.17 (Table 7.8) however, only seven junctions are identified, omitting junction 1 (A27 Whyke Roundabout), junction 22 (A259/Church Road, Climping) and junction 45 (B2145 / B2166 roundabout, Hunston). Indeed there is an incompatibility between the junctions shown in TA Image 7.1 and the list in TA Table 7.8, which must be reconciled, and costs for the safety improvements at junctions 20 and 21 known, and the contribution of BE/148/20/OUT to the cost of mitigating combined local traffic impact of the SD3 allocation at the B2259 Chichester Road double mini roundabout, and any other local junction impacted by the combined SD3 development, before the contribution of BE/148/20/OUT to mitigating its own traffic impact can be known.
- e. Furthermore, until the final content of the balance of the SD3 development is known, the final percentage contribution of BE/148/20/OUT to its overall traffic impact will not be known, as noted in 4.b, above.
- f. I note that Highway England (HE) identify a contribution from BE/148/20/OUT to strategic highway network improvements of £102,131.10. As I note in 4.b, above, if SD3 is developed for a total of 2,445 dwellings, as suggested by Lichfields' response for the developers of the balance of SD3, this figure alone for BE/148/20/OUT's contribution to strategic and primary highway improvements would rise by 2% to £104,173.72, before the additional junction are included, and before the cost of local highway traffic impact mitigation is included. It is noted that WSCC, in their response of 13 January 2021, identify that the contribution from BE/148/20/OUT should be reassessed, referring to the Local Plan Transport Mitigation Apportionment Study of June 2020. Based on my review, a more extensive reassessment of BE/148/20/OUT's highway impact contribution is required.

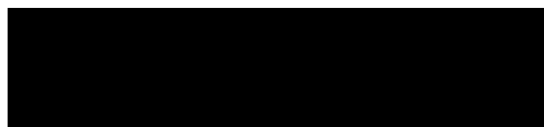
5. Conclusions

- a. I consider that many local facilities would not be comfortably accessible from the BE/148/20/OUT development on foot, as they are located beyond 800m walking distance of the site. In my assessment, some 25% of the site is beyond 800m walk of the B2259 Chichester Road bus stops at The Royal Oak, and indeed within the TA itself, three different walking distances are quoted. I consider that a two-way vehicular link between BE/148/20/OUT and remaining SD3 site would be required to maximise the attractiveness of new local facilities within the SD3 development, and to minimise walking distances from BE/148/20/OUT to local facilities.

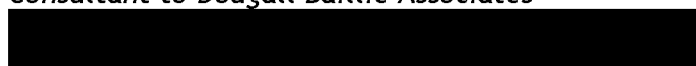
- b. I do not consider that the BE/148/20/OUT development meets the requirements of Council policy or of NPPF Section 109 with respect to mitigation of cumulative traffic impact. It is evident from the TA that the analysis of BE/148/20/OUT development traffic impact alone, at best, brings the B2259 Chichester Road / Chalcraft Lane / New Bersted Street double mini roundabout junction to the limit of its practical capacity. As a result, I consider it clear that the further traffic impact from the remainder of the SD3 allocation will result in capacity improvements being required at this junction. If BE/148/20/OUT were to be approved prior to the TA for the remainder of the SD3 allocation being reviewed and accepted by ADC, the result maybe be that the BE/148/20/OUT development would not make contribution to those local traffic impact improvements, or the scale of any contribution taken would not be correct in terms of proportionality.
- c. I consider that the Council must understand the context of the analysis presented in Appendix G of the TA for BE/148/20/OUT, and the junction analysis results shown in that appendix labelled '2031 +CD +D ST'. If in fact, as could be surmised, this analysis represents a test of the cumulative impact of the SD3 strategic allocation as a whole, this would indicate that, in addition to traffic impact mitigation being required at the B2259 Chichester Road / Chalcraft Lane / North Bersted Street double mini roundabout junction, potentially, the SD3 allocation as a whole should be undertaking traffic impact mitigation at the Hewart's Lane / Chalcraft Lane roundabout, and the Chalcraft Lane / West Meads Drive priority crossroads junction, to which BE/148/20/OUT also would be required to contribute, in proportion to its share of the overall SD3 site, as applied for (as opposed to the allocation total).
- d. For the purposes of achieving a cohesive, compatible and full integrated masterplan of development within the SD3 allocation area, I considered that a full accessible two-way multi-modal link should be formed between the BE/148/20/OUT and SD3 remainder sites, in accordance with the masterplan endorsed by ADC.
- e. I consider that there is a range of information in respect of highway mitigations works on the strategic, primary and local highway and transport network that is not yet known, making confirmation of the scale and scope of contribution from BE/148/20/OUT impossible to confirm at this point, and that ADC should satisfy itself that a suitably robust mechanism is or can be put in place to ensure that all relevant highway contributions are captured for the purposes of contributions from BE/148/20/OUT, and the remainder of SD3 allocation. There appear to be inconsistencies in the BE/148/20/OUT TA in terms of which junctions are included in the SD3 / BE/148/20/OUT highways contribution package, and I consider that the contribution of BE/148/20/OUT to local traffic impact has not been identified.

I trust that this assessment addresses the scope of matters included in the brief, and would be pleased to answer any queries, or provide any clarification that you may require.

Yours faithfully,



Robin Duncan
Consultant to Dougall Baillie Associates



c.c. Mr Stuart Harrow - Dougall Baillie Associates