South West Milton Keynes Consortium

SOUTH WEST MILTON KEYNES

Rebuttal Proof of Evidence re NLPC & WBC of Martin J Paddle BSc CEng CWEM MICE FCIHT MCIWEM, in regard to Transport, Highway and Accessibility Matters: PINS ref: APP/Y0435/W/20/3252528 LPA ref: 15/00619/FUL

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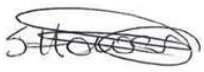
Signature				
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1 INTRODUCTION AND SCOPE OF EVIDENCE

1.1 This Rebuttal Evidence addresses points raised in evidence in relation to transport, highway and accessibility matters Mr Burbridge on behalf of Newton Longville Parish Council and West Bletchley Council (NLPC & WBC) in relation to the Appeal Development at South West Milton Keynes, as described in my Main Proof. In producing this rebuttal evidence, I have also had regard to the evidence of Mr McKechnie on behalf of Milton Keynes Council (MKC) and Mr Bedingfeld on behalf of Buckinghamshire Council (BC) in relation to highways matters and in relation to planning matters of Mr Hyde for the Appellant, Mr Keen for MKC and Ms Bayley for BC.

1.2 For clarity, and contrary to paragraph 2.5 of Mr Burbridge's main Proof, the Updated TA is not superseded by TRN3. Elements of the Updated TA[1] are superseded by the TRN1[2], TRN2[3] and TRN3[4], as set out in the Transport Evidence Directory.[5]

1.3 My Rebuttal Evidence is structured as follows:

- Introduction and Scope of Evidence;
- Policy & Guidance
- Modelling Methodology
- Proposed Mitigation; and
- Conclusions.

[1] Updated Transport Assessment, 2020, WSP (CD10/H/A)
[2] Transport Response Note 1, September 2020, WSP (CD16/A)
[3] Transport Response Note 2, December 2020, WSP (CD16/B)
[4] Transport Response Note 3, January 2021, WSP (CD16/C)
[5] Transport Evidence Directory, March 2020, WSP (CD16/E)

2 POLICY & GUIDANCE

2.1 I refer paragraph 2.7 of Mr Burbridge's main Proof which suggests in that paragraph 109 of the NPPF (CD/8) states:

> *"unacceptable impacts on highway safety or severe residual cumulative impacts on the road network would result in the development being refused on highway grounds"*

In fact, paragraph 109 of the NPPF states that highway reasons should only [my emphasis] be used when the impact on safety is unacceptable or when the residual cumulative impact is severe. The paragraph does not state that development would/should be refused [my emphasis] if the impact was unacceptable/severe as the planning balance with other elements of the proposals has to be considered before determination. In any event, for the reasons set out in my transport evidence, the residual cumulative impacts of the Proposed Development will not be severe and the impacts on road safety will not be unacceptable.

3 MODELLING METHODOLOGY

TRAFFIC DATA

3.1 Traffic data collection was completed in February 2020, the scope of which was agreed with both BC and SMT for MKC prior to commencement (MJP4 of my main Proof). Road closures in place to the north of Milton Keynes were highlighted and subsequently discussed with BC, with the conclusion was that they would have no effect on the data collection for the purposes of the Proposed Development. I refer to Mr Burbridge's main Proof where at paragraph 3.67 he asserts that both BC and MKC advised WSP not to complete the surveys as they would not be representative; this is not correct. Furthermore, BC have confirmed in their comments on the Updated TA[6] that the surveys were unaffected by the roadworks and

> *"has provided robust values to allow sufficient analysis of the projected traffic impact of the Salden Chase development will have on the surrounding network."*

3.2 A technical note in relation to the traffic surveys (MJP8) was produced following which Mr McKechnie also agreed that the surveys were representative of existing traffic conditions, as stated in the draft Transport SoCG with MKC (paragraph 20).

TEMPRO

3.3 In regard to the use of TEMPro for calculating a growth factor for the years 2020 to 2033, I have applied a reduction to the 'planning assumptions' for the number of households expected to be completed to take account of the developments at Tattenhoe Park and Kingsmead South which I have assessed directly as committed developments. At paragraph 3.65 of Mr Burbridge's main Proof he asserts that he spoke to the marketing suite on-site at Tattenhoe Park/Kingsmead South who advised him of a lower number of completions than was contained within the MKC Housing Trajectory[7] which I used to inform my assessment. With no evidence to support the statistics presented by Mr Burbridge, I do not accept the anecdotal commentary and rely instead on the official Housing Trajectory published annually by MKC, as used within my assessment.

[6] Transport Response Note 1, September 2020, WSP Appendix A (CD16/A)
[7] Updated Transport Assessment, 2020, WSP Appendix U (CD10/H/A)

TRAVEL PLANNING

3.4 I refer to paragraphs 3.63 of Mr Burbridge's main proof, where he discusses what he calls the 'double counting' of the discount applied to travel planning in the DS2 scenario.

3.5 Scenario DS2 accounts for a 12% reduction in car mode share as a result of the introduction of travel planning measures. Mr Burbridge asserts at paragraph 3.63 of his main Proof that the reduction double counts the travel planning discount because some of the TRICS sites chosen for the trip generation analysis also have travel plans in place. As a result, Mr Burbridge states that the DS2 scenario should be dismissed in its entirety.

3.6 Regardless, the trip generation is based on total person trips from TRICS, which are unaffected by the presence of a site including a travel plan. The mode shares used within the Updated TA and TRNs are generated from Census data which is then applied to the total person trips[8], as agreed during scoping with both MKC and BC. Mr Burbridge's point is therefore irrelevant. Furthermore, scenario DS2 has not been used to determine whether mitigation is required at a junction. Mitigation is proposed to address the impacts which arise absent the travel plan and is therefore particularly robust.

INTERNALISATION

3.7 The calculation of secondary school trips used within the Updated TA and TRNs is the same as presented in the August 2016 TA[9] as agreed with both BC and SMT on behalf of MKC at the scoping stage in early 2020 (MJP4). An internalisation factor of 50% was applied to the total number of pupils expected at the school, to account for those living on the Site. The remaining pupils are those considered to come from off-site, which are then assigned a travel mode in appropriate proportions, as agreed with BC and MKC in 2015/2016. Mr Burbridge's assertion at paragraph 3.62 of his main Proof that 50% internalisation was taken off all modes is misleading.

[8] Updated Transport Assessment, 2020, WSP, paragraph 5.2.11 (CD10/H/A)
[9] Revised Transport Assessment, 2016, Mouchel (CD2/E)

TRAFFIC FLOW DIAGRAMS

3.8 I refer to Mr Burbridge's main Proof at paragraph 3.64 where he states that the Buckingham Road Site Access is shown as a three arm junction and that the traffic flow diagrams are not appropriate in the Updated TA and that despite requesting the information for the four arm roundabout, this has never been provided. The traffic flow diagrams in Appendix B to both TRN2[10] and TRN3[11] provide an inset plan which shows the Buckingham Road Site Access as a four arm roundabout, with the distribution between the two internal arms clearly shown. Mr Burbridge's point is factually incorrect: the access is shown as a four arm roundabout and he has been provided with the relevant traffic flow diagrams that show this.

GEOMETRIC MEASUREMENTS

3.9 Geometric measurements for input to the junction capacity models have been taken from OS mapping at 1:1250 scale using aerial photography for verification purposes, following a site visit to check that junction layouts had not changed from either the mapping or the photography, as is usual at outline planning application stage. It would be highly unusual to have access to topographical survey data covering 18 off-site junctions for outline mitigation design.

3.10 Mr Burbridge also suggests that a build-up of gravel towards the kerbs at some junctions reduces the effective width of the lanes and should be taken into account so as to not overestimate capacity within the junction models. This is not standard practice, as the full width of the lane is usable by vehicles and should be measured[12]. If maintenance is required to remove some gravel that has built up, both local authorities could easily put that in place, however the width of the lane should not be discounted because of this.

3.11 Within Mr Burbridge's main Proof at paragraph 3.66 he states that he has taken on-site measurements and that they differ from those taken from the OS mapping, however Mr Burbridge provides no specific details of where he took measurements, what those measurements are, or how they differ from my measurements.

3.12 Nonetheless, the measurements within the models are amended in some instances in relation to calibration of the models, as discussed and agreed by BC prior to the release of TRN2 and TRN3, therefore they do not always reflect the existing measurements taken from the OS mapping. The

[10] Transport Response Note 2, December 2020, WSP, Appendix B (CD16/B)
[11] Transport Response Note 3, January 2021, WSP Appendix B (CD16/C)
[12] Junctions9 User Guide, 2018, paragraph 23.1.2 (CD13/I)

measurements within the geometric models are therefore agreed by BC and are not disputed by MKC (Mr McKechnie's main Proof paragraph 6.3.3).

REDISTRIBUTION ASSESSMENT AND MICROSIMULATION MODELLING

3.13 I refer to paragraphs 3.7 and 3.44 of Mr Burbridge's main proof, where he discusses the failure to assess the redistribution of traffic via creation of a dynamic microsimulation model. I have dealt with this point in my main Proof at paragraph 6.21 and in MJP14.

3.14 In relation to the suggested need to consider the impact of peak spreading within the Environmental Statement, the Addendum considers both AADT traffic flows and as a worst case peak hour traffic flows. Peak spreading would not affect the total AADT traffic flows, i.e. the total daily flow would remain the same but with a different hourly profile. With peak spreading, the flows assessed in the peak hour would only reduce, not increase, therefore the peak hour assessments completed account for the worst case. As such, the assessments within the ES are robust and appropriate.

3.15 Mr Burbridge suggests at paragraphs 3.59 and 3.60 of his main Proof that an isolated junction model of the Buckingham Road Site Access roundabout is not appropriate and that a microsimulation model or a linked model should have been provided instead, given the potential interaction of queuing from the access roundabout back to Junction 5 Tattenhoe Roundabout. This is entirely unnecessary given that the proposed access roundabout is predicted to operate well within capacity in both peak hours, with minimal queuing and delay.

LANE SIMULATION MODE IN ARCADY9

3.16 I refer to paragraphs 3.8 to 3.12, 3.20 to 3.21 and 3.23 of Mr Burbridge's main Proof. The use of lane simulation mode is discussed in my Rebuttal Proof to the evidence of Mr McKechnie at paragraphs 6.4 to 6.7 and by Mr Bedingfeld at paragraph 8.30 of his main Proof. Lane simulation mode is an alternative methodology for modelling roundabouts where lane usage is unequal and it is a legitimate methodology suggested for use by TRL[13], and one requested to be used by BC in relation to junctions 1 and 6.

3.17 Regarding the application of engineering judgement to a lane simulation model, any junction modelling is always a tool to assist professionals to make a judgement on the results, as stated in the Junctions9 User Guide[14] at Section 14.1:

[13] Junctions9 User Guide, 2018, section 14 (CD13/I)
[14] Junctions9 User Guide, 2018, section 14.1 (CD13/I)

"Therefore you should (as always) apply engineering judgement to both the application of the model and the interpretation of the results."

TATTENHOE ROUNDABOUT

3.18 Paragraphs 3.47 to 3.54 of Mr Burbridge's Proof relate to the model setup for the part time signalisation mitigation at Junction 5 Tattenhoe Roundabout. Mr Burbridge suggests that queuing will occur blocking the roundabout exits. I have dealt with this point in my Rebuttal Proof to Mr McKechnie's evidence at paragraph 6.8. The Road Safety Audit completed has not raised any issues with regarding blocking the roundabout exits or visibility with the proposed improvements.

3.19 With reference to paragraph 3.47 of Mr Burbridge's main Proof, the link lengths on the A421 Standing Way approaches calculated by Mr Burbridge are taken from the point where the width of the lanes become 3m. However, as a flare lane can be marked out from the point where the lanes become 2.5m in width the length of flare is longer than Mr Burbridge has calculated and could be further refined if necessary. There is width available within the extent of the highway boundary to reconfigure both the A421 Standing Way approaches to provide a longer flare lane to increase capacity at the junction if required by MKC at detailed design.

3.20 With reference to paragraphs 3.51 and 3.52 of Mr Burbridge's main Proof, the LinSig modelling has been refined with the de-sliver values reduced to their minimum to remove any opportunity of sliver queues occurring. The rerun of the model does not make a significant difference and the junction will still operate better in the DS1 with mitigation scenario compared with the 2033 Do Nothing scenario, with no blocking back on the circulatory arms.

3.21 In regard to paragraphs 3.53 and 3.54 of Mr Burbridge's main Proof, the approach to the junction is a two lane dual carriageway and the Linsig model allocates traffic to the available movements of the lane, which therefore provides two lanes for straight ahead traffic. In a congested network, traffic will queue in both lanes to make the straight ahead movement especially given that the whole corridor of A421 between Bottledump Roundabout and Junction 13 of M1 is a two lane dual carriageway. The flow assignment within the Linsig model is therefore representative and correct.

3.22 Furthermore, the guidance quoted by Mr Burbridge refers to Chris Kennett's Merging Traffic at Signalled Junctions document (August 2015) published as part of the JCT Consultancy 2015 Symposium and holds no specific research status. As the document title indicates, the research relates to how traffic merges into a reduced number of lanes downstream from a traffic signalised junction. However, in the case of both of the A421 Standing Way exits from the junction, the traffic

does not need to merge, as A421 Standing Way is a dual carriageway with two lanes in each direction. The research note is therefore irrelevant.

4 PROPOSED MITIGATION

QUEUE BLOCK BACK

4.1 I refer to paragraphs 3.17 to 3.19 of Mr Burbridge's main Proof where he discusses queues blocking back at Junction 1 Sherwood Drive/B4034 Buckingham Road across Selwyn Grove and Bletchley Rail Station in the AM peak and the Saxon Street/Duncombe Street roundabout in the PM peak. Mr Burbridge asserts that the Proposed Development is creating a problem at these locations that did not previously exist. I do not accept this. The modelling in the 2033 DN scenario shows queuing back to Selwyn Grove in both peak hours, to under the rail bridge in the AM peak hour, and beyond the Saxon Street/Duncombe Street roundabout in the PM peak, as referenced in the main Proof of Mr Bedingfeld on behalf of BC at paragraph 8.38. The overall delay through the junction is improved with the proposed mitigation when compared to the Do Nothing scenario.[15]

DRAWINGS AND VEHICLE TRACKING

4.2 I also note there are consistent references by both Mr McKechnie and Mr Burbridge (at paragraphs 3.22 and 3.46 of his main Proof) to the level of detail made on the outline mitigation plans. I disagree with the comments made that the plans would be inadequate for *"planning determination purposes*" and are in my opinion (and that of BC who have not requested further detail) satisfactory to demonstrate the extent of improvements required to mitigate the impact of the Proposed Development. Notwithstanding, I have provided further detail to assist the Inquiry in my Rebuttal Proof to Mr McKechnie's evidence to indicate where exiting street furniture would be relocated and considered further during the detailed design stage.

DESIGN STANDARDS

4.3 The evidence submitted hitherto by both Mr Burbridge and Mr McKechnie consistently refers to the DfT's Design Manual for Roads and Bridges as an appropriate design standard for urban roads. However, the roads within the study area where mitigation is proposed are not trunk roads. The DfT's Manual for Streets 2 (CD13/B) aims to provide a more relevant and appropriate standard for urban roads such as A421, the MK grid road network and B4034 Buckingham Road. MfS2 (page 4) states:

[15] Transport Response Note 3, January 2021, WSP paragraphs 5.22 to 5.25 (CD16/C)

"DMRB is the design standard for Trunk Roads and Motorways in England, Scotland, Wales and Northern Ireland. The strict application of DMRB to non-trunk routes is rarely appropriate for highway design in built up areas, regardless of traffic volume."

4.4 In essence, both Mr Burbridge and Mr McKechnie are trying to assert that if a design is not DMRB compliant then it cannot be delivered, however they have disregarded the purpose of DMRB which is to design new trunk roads and motorways, and not to retrofit capacity improvements to the non-trunk local highway network. As with any junction improvement scheme on the local highway network, compliance with DMRB is not mandatory and a degree of flexibility is required along with experienced engineering judgement.

4.5 Nonetheless, I have provided a response in my Rebuttal Proof to Mr McKechnie's evidence regarding the application of DMRB design standards to the proposed mitigation schemes in relation to circulatory widths at paragraphs 6.48, 6.55 and 6.60.

4.6 In relation to entry arm widths, as highlighted in Mr Burbridge's main Proof paragraphs 3.26 to 3.27, 3.32 to 3.33, 3.38, 3.42 and 3.59 to 3.60, junctions 6, 15, 16 and 17 all have existing entry lane widths that do not comply with the DMRB current standard of a maximum of 7m for two lanes and 10.5m for three lanes. At junction 6, all three existing approaches have two lanes which are measured at 7.4m, 7.5m and 7.7m; at junction 15, A421 has entry widths for two lanes of 7.6m and 8.4m; at junction 16, A421 East has an entry width for two lanes of 8.7m and on Watling Street North at 8.3m; and at junction 18, Fulmer Street has two lanes of 7.8m, Shenley Road has two lanes of 7.9m, and A421 West is 10.6m wide for three lanes.

4.7 The existing non-compliance with the DMRB serves to illustrate my earlier point, that the strict application of this standard to the local highway network is inappropriate when attempting to retrofit highway improvements. In my opinion, the proposed mitigation can be delivered on site, without compromising safety on a network that is already non-compliant.

4.8 Within paragraph 3.27 of his main Proof, Mr Burbridge acknowledges that checking designs against standards is not within the scope of an RSA, however he then goes on to question the credibility of the RSA because departures from standard and measurements are not shown on the scaled drawings. Compliance with standards is not the purpose of an RSA, but rather to determine whether a design is safe and acceptable.

5 CONCLUSIONS

5.1 I note that Mr Bedingfeld concludes at paragraphs 8.127 and 8.128 of his main Proof that the residual impacts after mitigation would not be significant and that:

> *"the proposed mitigation package is considered to be deliverable (whilst being subject to detailed design and further Road Safety Audit process), cost effective and proportionately related to the forecast impacts."*

5.2 I remain of the opinion that my evidence before this Inquiry submitted hitherto, and this Rebuttal Proof, demonstrate that the impacts of the Appeal Development and the Proposed Development would be acceptable in 2033 and the proposed mitigation is deliverable in accordance with national and local planning policies.

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