AP3

THE OXFORDSHIRE COUNTY COUNCIL (DIDCOT GARDEN TOWN HIGHWAYS INFRASTRUCTURE – A4130 IMPROVEMENT (MILTON GATE TO COLLETT ROUNDABOUT), A4197 DIDCOT TO CULHAM LINK ROAD, AND A415 CLIFTON HAMPDEN BYPASS) COMPULSORY PURCHASE ORDER 2022

THE OXFORDSHIRE COUNTY COUNCIL (DIDCOT TO CULHAM THAMES BRIDGE) SCHEME 2022

THE OXFORDSHIRE COUNTY COUNCIL (DIDCOT GARDEN TOWN HIGHWAYS INFRASTRUCTURE – A4130 IMPROVEMENT (MILTON GATE TO COLLETT ROUNDABOUT), A4197 DIDCOT TO CULHAM LINK ROAD, AND A415 CLIFTON HAMPDEN BYPASS) (SIDE ROADS) ORDER 2022

THE CALLED-IN PLANNING APPLICATION BY OXFORDSHIRE COUNTY COUNCIL FOR THE DUALLING OF THE A4130 CARRIAGEWAY, CONSTRUCTION OF THE DIDCOT SCIENCE BRIDGE, ROAD BRIDGE OVER THE APPLEFORD RAILWAY SIDINGS AND ROAD BRIDGE OVER THE RIVER THAMES, AND ASSOCIATED WORKS BETWEEN THE A34 MILTON INTERCHANGE AND THE B4015 NORTH OF CLIFTON HAMPDEN, OXFORDSHIRE (APPLICATION NO: R3.0138/21)

PLANNING INSPECTORATE REFERENCE:

APP/U3100/V/23/3326625 and NATTRAN/SE/HAO/286 (DPI/U3100/23/12)

Rebuttal proof of evidence of

ANDREW JOHN PAGETT

(Noise and Vibration)

---

1 SCOPE OF EVIDENCE

1.1 This Rebuttal Proof of Evidence has been prepared regarding noise matters relating to Appleford, raised by Adrian Butler (VoWHDC), Chris Hancock (NPCJC), Dr Angela Jones (NPCJC) and CRPE.

1.2 The aim of this Rebuttal Proof of Evidence is to respond to a number of points that have not already been addressed in my main proof of evidence, to provide further clarification and to correct misunderstandings within evidence presented by other parties. I have sought to avoid unnecessary repetition of matters already addressed at length, with the ultimate intention of assisting the Inquiries. Where I do not respond to a point raised by another party, my lack of response should not be construed nor interpreted as agreement, unless explicitly stated so within this Rebuttal Proof of Evidence.

2 RESPONSE TO ADRIAN BUTLER (VOWHDC)

2.1 Adrian Butler discusses the noise impact of the Scheme, and there are two points to which I add clarification below.

2.2 Paragraph 4.12 of Mr Butler's Proof of Evidence states that *"In responding to consultation, the council considered tree and hedge planting is necessary to provide tree lined streets reflecting principles of core policies 44 and 45 of the LPP1 and the DGTDP vision for a "super green town prioritising green infrastructure including tree lined streets" and paragraph 136 of the NPPF, to screen the road in views from proposed housing on the southern side of the A4130, to act as a noise buffer and to visually separate the road from cycle and pedestrian paths" (emphasis added)*

2.3 I need to clarify that whilst trees may be a benefit in visually separating a road from cycle and pedestrian paths, I have not assumed that there is any noise reduction from tree planting acting as a noise buffer. Generally, the noise reduction from trees (unless a considerable depth is provided) is negligible. There can be some benefit, however, if the space required for the planting would increase the distance between the noise source (road) and receptors – in this case the reduction on noise is due to the increase in distance rather than the presence of the trees. There can also be some benefit from tree planting in that the reduced visibility of the noise source can have the potential to alter residents' response to the noise.

2.4 Paragraph 4.25 of Mr Butler's Proof of Evidence states that *"Condition 6 proposes exploring relocating noise barriers closer to the carriageway although there is no guarantee this would fully address noise impacts. I note that the minutes for the 27 September Planning and Regulation Committee (CD.F.6), advise one of the council's environmental health officers attended the meeting and explained "Moving the barrier would have an effect but calculations in decibels had not yet been completed and it would be misleading to speculate. Moving the barrier would have a negative effect on 19 properties and 79 properties would benefit significantly"." (emphasis added)*

2.5 I believe there to be a misunderstanding in the minutes for the 27 September 2023 committee meeting. I believe that the numbers 19 and 79 relate to that fact that with the currently proposed barrier location there are 19 properties predicted to have a significant adverse effect, and 79 a significant benefit, within Appleford (as detailed in Paragraph 3.5 of my Proof of Evidence). These effects are therefore not a result of moving the barrier (as this effect has not been calculated) but are the effects predicted in Appleford based on the currently proposed barrier location.

3 RESPONSE TO CHRIS HANCOCK (NPCJC)

3.1 In Section 4.1 of his Proof of Evidence, Mr Hancock raises concerns regarding the noise impact of the Scheme. The majority of the points raised are already addressed in my Proof of Evidence and therefore my responses are not repeated here, however below I respond to points raised that are not already addressed.

3.2 Section 4.1.1 of Mr Hancock's Proof of Evidence refers to a response provided by NPCJC in May 2023 (the **May 2023 Noise Objection**) (Appendix 2 Tab 7 of his proof). Also within Section 4.1.1, 11 numbered points are raised, most of which replicate or closely align with points raised in the May 2023 Noise Objection. Where there is alignment between the May 2023 Noise Objection and Mr Hancock's Proof, I have addressed the corresponding points together.

3.3 Paragraph 1.1 of the May 2023 Noise Objection and point 1 (in part) of section 4.1.1 of Mr Hancock's Proof of Evidence relate to:

3.3.1 Compliance with SODC Policies ENV12 and DES6. This is addressed in paragraphs 2.56 to 2.57 of my Proof of Evidence.

3.3.2 Compliance with WOWHDC Policy 23. This is addressed in paragraphs 2.52 and 2.53 of my Proof of Evidence.

3.3.3 Alleged underestimation of the noise impacts in Appleford. This is addressed in paragraph 3.29 of my Proof of Evidence.

3.3.4 The investigation of alternative alignments, which is addressed in Aron Wisdom's Proof of Evidence.

3.4 Paragraph 1.2.1 of the May 2023 Noise Objection and point 1 (in part) of section 4.1.1 of Mr Hancock's Proof of Evidence relate to compliance with paragraph 185 of the NPPF (as of December 2023 the relevant paragraph is 191, and the text remains unchanged from the previous version). Paragraph 1.2.3 of the May 2023 Noise Objection and point 2 of section 4.1.1 of Mr Hancock's Proof of Evidence relate to compliance with the NPSE (which supports paragraph 191 of the NPPF). Compliance with the NPPF and NPSE is addressed in paragraphs 2.24 to 2.51 of my Proof of Evidence.

3.5 Paragraph 1.2.2 of the May 2023 Noise Objection and point 3 of section 4.1.1 of Mr Hancock's Proof of Evidence relates to the consideration of alternatives to the road, and to its alignment. The consideration of alternatives is addressed in Aron Wisdom's Proof of Evidence.

3.6 Paragraph 1.2.4 of the May 2023 Noise Objection and point 4 of section 4.1.1 of Mr Hancock's Proof of Evidence state that *"The scheme fails to match the requirements of Government Planning Practice Guidance 2019 on Noise as it fails to take account of "how the noise (source) relates to the existing sound environment" and "the local arrangement of buildings, surfaces and green infrastructure, and the extent to which it reflects or absorbs noise" and fails to recognise that "In cases where existing noise sensitive locations already experience high noise levels, a development that is expected to cause even a small increase in the overall noise level may result in a significant adverse effect occurring even though little to no change in behaviour would be likely to occur"* (emphasis added)

3.6.1 The consideration of existing noise sources is addressed in Paragraph 3.21 of my Proof of Evidence.

3.6.2 As detailed in paragraph 10.4.28 of the Environmental Statement (CD C.1 Annex 4), predicted traffic noise levels have been generated using noise modelling software. The noise model also includes the ground topography, ground type (reflective or absorptive) and buildings, to form a 3D representation of the study area. Further detail on the data and assumptions used is presented in Appendix 10.4 of the ES (CD C.1. Annex 4 Appendix 10.4).

3.6.3 With regard to existing high noise levels, in paragraph 2.15 of my Proof of Evidence I refer to "*the absolute noise level relative to the Significant Observed Adverse Effect Level (SOAEL)"* as one of the factors in consideration of significant effects. More detail is given in Paragraph 10.4.2 of the ES (CD C.1 Annex 4), which states that "*If the* [with scheme] *traffic noise levels are high i.e. above the SOAEL, a traffic noise change in the short-term opening year of 1.0 dB or more may be more appropriate to be considered as a likely significant effect.*"

3.6.4 Therefore, the requirements of the 2019 Planning Practice Guidance on Noise have been covered in the assessment of the noise impacts of the Scheme.

3.7 Paragraph 1.2.5 of the May 2023 Noise Objection and point 5 of paragraph 4.1.1 of Mr Hancock's Proof of Evidence relate to the consideration of Noise Important Areas (NIA). The NIA in Appleford specifically is addressed in paragraphs 3.10 and 3.11 of my Proof of Evidence. NIA elsewhere in the study area are addressed in Paragraph 3.32 of my Proof of Evidence.

3.8 Paragraph 2.1 of the May 2023 Noise Objection relates to "induced" traffic (and its effect on the estimated noise impact. The robustness of the traffic modelling is addressed in Claudia Currie's Proof of Evidence.

3.9 Paragraph 2.2 of the May 2023 Noise Objection and points 6 and 7 of paragraph 4.1.1 of Mr Hancock's Proof of Evidence relate to noise monitoring, the adequacy of which is addressed in paragraph 3.12 of my Proof of Evidence.

3.10 Paragraph 2.3 of the May 2023 Noise Objection relates to:

3.10.1 The noise impact at the eastern end of the Scheme. The paragraph states that *"The noise report fails to emphasise the increased traffic noise, that will be generated by the scheme, for properties at the eastern end of the proposed route. Para 10.10.64 [of the ES noise chapter] in describing the significant increase in noise for properties along the B4015 up to the Golden Balls Roundabout, dismiss it as "remote from the scheme" and "due to anticipated traffic growth on the B4015 from other developments in the area, not the scheme directly".* This paragraph does not dismiss this impact in this location, but explains that noise barriers within the Scheme design would not be a sustainable mitigation option in this location, as due to the factors quoted, they would not change the impact at this location remote from the Scheme.

3.10.2 The noise impact upon Nuneham Courtenay, which is addressed in paragraph 3.20 of my Proof of Evidence.

3.11 Paragraph 2.4 of the May 2023 Noise Objection elates to compliance with the first and second aims of the NPSE (during Scheme operation), which is addressed in paragraphs 2.39 to 2.49 of my Proof of Evidence.

3.12 Paragraph 2.5 of the May 2023 Noise Objection states that "*the assessment underestimates the increased effect of HIF1 road noise by overestimating the reduction in predicted traffic*

through Appleford due to the HIF1 road.". The robustness of the traffic modelling is addressed in Claudia Currie's Proof of Evidence.

3.13 Paragraph 2.6 of the May 2023 Noise Objection point 8 of section 4.1.1 of Mr Hancock's Proof of Evidence relate to:

3.13.1 *"the noise impact of forming a tunnel bridge… over a commercial railway sidings, directly facing dwellings in Appleford".* This is addressed in paragraphs 3.33 and 3.35 of my Proof of Evidence.

3.13.2 The consideration of cumulative noise levels. This is addressed in paragraph 3.35 of my Proof of Evidence.

3.13.3 The reflection of noise back from the noise barrier towards properties in Appleford. This is addressed in Paragraph 3.52 of my Proof of Evidence.

3.13.4 The consideration of alternative road alignments. This is addressed in Aron Wisdom's Proof of Evidence

3.14 For clarity, I note that there is no paragraph 2.7 in the May 2023 Noise Objection.

3.15 Paragraph 2.8 of the **May 2023 Noise Objection** states that "*British Standard BS 8233:2014 'Sound Insulation and noise Reduction' recommends that "For traditional external areas that are used for amenity space, such as gardens and patios, it is desirable that the external noise level does not exceed 50 dB LAeq,T, with an upper guideline value of 55 dB LAeq,T which would be acceptable in noisier environments. No attempt has been made to assess the total noise environment in Appleford in comparison to recommended limits*." (emphasis added)

3.16 The noise impact assessment presented in the ES (CD C.1 Annex 4) was carried out according to DMRB LA 111, the UK standard methodology for assessing the noise impact of road schemes. This methodology is primarily based on assessment of the change in noise levels rather than absolute noise levels. Nevertheless, from Figures 10.2 and 10.5 of the ES (CD C.1 Annex 4 Figures 10.2 and 10.5), although the distribution differs slightly between the without-scheme and with-scheme scenarios in the opening year, the majority of gardens in Appleford would experience daytime road noise levels of 55 dB $L_{A10,18hour}$ (roughly 53 dB $L_{Aeq,16hour}$) or lower in both scenarios, which is within the guideline values quoted.

3.17 Paragraph 2.9 of the May 2023 Noise Objection and point 9 of section 4.1.1 of Mr Hancock's Proof of Evidence relate to the consideration of alternative road alignments, which is addressed in Aron Wisdom's Proof of Evidence

3.18 Point 10 of section 4.1.1 of Mr Hancock's Proof of Evidence relates to noise mitigation, and states that "*The need for noise mitigation measures demonstrates an inappropriate alignment of this road scheme. The proposed mitigations are inadequate and inappropriate. The proposed low noise road surface addresses only tyre noise and is ineffective for speeds below 75km/hr. Noise from engines, acceleration and aerodynamic sources are not mitigated. The response from the planning team of the Vale of White Horse District Council (22 December 2022 ref P22/V2475/CM) confirms that the proposed "acoustic barriers are visually intrusive". Moreover "a Green barrier," as proposed to soften the appearance, " will be viewed against the sky and will stand out making it more intrusive*". *(emphasis added)*

3.19 Mitigation, including the consideration of additional mitigation and the balance between noise and landscape/visual effects is addressed in paragraphs 2.47 to 2.49 of my Proof of Evidence. The effectiveness of low noise surfacing at various speeds is addressed in paragraph 3.61 of

my Proof of Evidence. The landscape and visual impact of the noise barriers is covered in Jane Ash's Landscape and Visual Impact Proof of Evidence.

3.20 With regard to the specific point of low noise surfacing addressing only tyre noise, it is indeed true that low noise surfacing only addresses tyre noise, and not engine noise (including acceleration), and aerodynamic noise. Where tyre noise is dominant (the dominance of tyre noise increases with speed), reducing tyre noise from a given road does however have the effect of reducing the overall road traffic noise from that road and it is this overall road traffic noise level that is considered in the predictions and assessment. Therefore this effect is accounted for in the prediction method. Where noise barriers are included, they *do* affect the overall road traffic noise level, and again this is accounted for in the prediction and assessment.

3.21 Point 11 of section 4.1.1 of Mr Hancock's Proof of Evidence refers to the NPCJC Noise Objection (May 2022), which is addressed in full in paragraph 3.17 to 3.63 of my Proof of Evidence

3.22 Section 4.1.1 of Mr Hancock's Proof of Evidence concludes with the statement that "*Appleford is a community under noise duress. A survey of residents commissioned in 2022, see Appendix 2 tab 6, shows that existing noise from industrial activity at Appleford sidings negatively affects 78% of respondents. The proposed HIF1 road will provide a further noise source in the same location. 95% of Appleford respondents consider this will adversely affect noise levels in the community." (emphasis added)*

3.23 The presence of the Scheme on embankment will offer some screening of existing noise sources beyond it to the west, to receptors in Appleford.

3.24 Figure 1 from my Proof of Evidence shows the change in road traffic noise levels in Appleford in the opening year (comparing with-scheme to without-scheme), and it can be seen from this figure that a greater number of properties are located in areas where road traffic noise levels are predicted to decrease as a result of the Scheme, than increase. Paragraph 3.5 of my Proof of Evidence summarises the impacts and effects in Appleford, concluding that 79 properties are predicted to experience a significant benefit compared with 19 properties on Main Road at the South end of Appleford, and one standalone property, predicted to experience a significant adverse impact (noting that many of these properties are also predicted to experience benefits of a similar magnitude, but are identified as a significant adverse effect as a conservative approach). At the remaining receptors significant effects were not identified.

3.25 Sections 4.1.2 and 4.1.3 of Mr Hancock's Proof of Evidence relate to the noise impact in Nuneham Courtenay and conclude that "*Failure to include a proper assessment of the scheme on the historic fabric of Nuneham, Courtenay is a breach of Development Plans SODC ENV6(2), ENV7(3i), ENV8(1vii), and NPPF paragraph 199.*" Noise impacts in Nuneham Courtenay are not specifically referred to in the ES as no potential for significant adverse traffic noise effects was identified in this location, as described in paragraph **Error! Reference source not found.** of my Proof of Evidence.

4 RESPONSE TO DR ANGELA JONES (NPCJC)

4.1 Paragraph 11 of Dr Angela Jones's Proof of Evidence states that "*The WHO has identified traffic noise as second only to air pollution as a cause for ill health in Western Europe*".

4.2 Whilst the referenced extract from the European Environment Agency (EAA) website does indeed make this statement, the publication "*Burden of disease from environmental noise – Quantification of healthy life years lost in Europe*" (WHO / JRC 2011), referenced on the quoted EAA webpage, makes clear that: "*According to preliminary results from the Environmental Burden of Disease (EBD) in Europe project in six European countries reported at the WHO Ministerial Conference held in Parma in March 2010, traffic noise was ranked second among the selected environmental stressors evaluated in terms of their public health impact in six European countries.*" .

4.3 The EBD project was simply a pilot project reported in the 2011 report "*European perspectives on Environmental Burden of Disease: Estimates for nine stressors in six countries*" (Hänninen / Knol 2011) which studied the burden of disease associated with nine selected environmental stressors, one of which was traffic noise (defined to include road, rail and air traffic).

4.4 This clarification is not to downplay the importance of considering the impact on health from road traffic noise, and noise in general, but to ensure the statement regarding noise as a cause of ill health is read within its proper context.

4.5 Paragraph 13 of Dr Jones's Proof of Evidence states that "*Traffic noise is worse downwind and exacerbated by elevation of the road, with the attendant difficulties in mitigation, meaning that the positioning of current proposed road and flyover will impact unduly on residents of Appleford. Furthermore, it has been pointed out that the construction of the flyover risks exacerbating existing sources of noise pollution to which Appleford is already subjected, by reflecting and enhancing noise from the quarrying and stone-moving activities at Appleford Sidings*." *(emphasis added)*

4.6 The prediction method in CRTN assumes noise propagation "*consistent with moderately adverse wind velocities and directions*", that is to say, the fact that traffic noise is worse downwind is already accounted for in the prediction method. The 3D alignment of the Scheme is also included within the computer model of the Scheme. With regard to exacerbating existing sources of noise pollution, the presence of the Scheme on embankment will offer some screening of existing noise sources beyond it to the west, to receptors in Appleford.

4.7 Paragraph 15 raises concerns about children from age 4-18 at the European School in Culham. Table 10.4 of the ES (CD C.1 Annex 4 Table 10.4) states that a significant effect (beneficial or adverse) is not expected at this school, with no more than a minor increase in road traffic noise levels anticipated. More generally, with the exception of Culham Science Centre Nursery, significant adverse operational traffic noise effects are not anticipated at any educational buildings within the study area. In the case of the Culham Science Centre Nursery, whilst, following a conservative approach, a significant adverse effect is identified, the UK Atomic Energy Association has planning permission to replace the nursery. The receptor as assessed is not likely to exist, therefore, in the same location when the Scheme is operational. In addition the significant adverse effect is only identified in the long term, when large increases in traffic on the access road into the Science Centre are anticipated, not in the opening year.

5 RESPONSE TO CPRE

5.1 Paragraph 1.1 of Nicholas Moon's Proof of Evidence concerns Appleford Bridleway No.3, and states that "*Most of Appleford BR3 currently follows a relatively quiet private road from the edge of Didcot to Appleford Crossing and as such provides a pleasant route for horseriders, cyclists and walkers. Unfortunately, however, the line of the proposed new road would largely obliterate this route and so the scheme proposes to replace it with a roadside cycle track and footway. As the new road would be likely to carry a significant number of HGVs, this cycle track would be likely to be noisy and so using it would no longer be a pleasant experience and there is the risk that a nervous horse might be startled and react badly".* (emphasis added)

5.2 It is acknowledged that the road traffic noise levels along much of this short route will be higher than at present. Given the linear nature of public rights of way (PRoW), the range of noise impacts along the network of PRoW including bridleways, the absolute traffic noise levels and their transient usage, a material change in the experience of using the PRoW network as a whole, which could affect people's health or quality of life, as a result of road traffic noise, is not anticipated, and no significant adverse or beneficial effects on have been identified. [CD C.1 Annex 4 paragraph 10.10.43]

6 STATEMENT OF TRUTH AND DECLARATION

6.1 I confirm that, insofar, as the facts stated in my rebuttal evidence are within my own knowledge, I have made clear what they are and I believe them to be true and that the opinion I have expressed represent my true and complete professional opinion.

6.2 I confirm that my rebuttal evidence includes all facts that I regard as being relevant to the opinions that I have expressed and that attention is drawn to any matter which would affect the validity of those opinions

6.3 I confirm that my duty to the Inquiry as an expert witness overrides any duty to those instructing or paying me, and I have understood this duty and complied with it in giving my evidence impartially and objectively, and I will continue to comply with that duty as required.

6.4 I confirm that, in preparing this rebuttal evidence, I have assumed that same duty that would apply to me when giving my expert opinion in a court of law under oath or affirmation. I confirm that this duty overrides any duty to those instructing or pay me, and I have understood this duty and complied with it in giving my evidence impartially and objectively, and I will continue to comply with that duty as required.

6.5 I confirm that I have no conflicts of interest of any kind other than those already disclosed in this rebuttal evidence.

ANDREW PAGETT

9 FEBRUARY 2024