

**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)**

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**Rebuttal proof of evidence of**

**ANDREW GREGORY BLANCHARD**

**(Technical Traffic and Highways Engineering – A4130 Widening and Didcot Science Bridge)**

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## **1 SCOPE OF EVIDENCE**

- 1.1 This Rebuttal Proof of Evidence has been prepared regarding Technical Traffic and Highways Engineering – A4130 Widening and Didcot Science Bridge matters relating to
  - 1.1.1 Science Bridge viability raised by Russell Harman on behalf of NPC-JC
  - 1.1.2 the size and location of the site compound raised by Tim Broomhead on behalf of W E Gale Trust, and
  - 1.1.3 bus priority raised by Emma Bowerman (SODC) and Adrian Bulter (VOWHDC).
- 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 of my evidence or to correct misapprehensions within evidence presented by other parties. I have sought to avoid unnecessary repetition of matters already addressed at length, intending to assist the Inquiries. Where I do not respond to a point raised, my lack of response should not be construed nor interpreted as agreement unless explicitly stated so within this Rebuttal Proof of Evidence.

## **2 SCIENCE BRIDGE VIABILITY**

- 2.1 The proof of evidence from Russell Harman on behalf of NPC-JC questions the feasibility and viability of the Science Bridge. I disagree with his criticisms on this subject, for the reasons set out below.
- 2.2 The Science Bridge design was carefully developed by professional bridge engineers within AECOM. They thoroughly considered the risks and constraints, and delivered a design that met all the objectives of the Scheme. In working closely with Network Rail (NR) and an experienced contractor, the design as proposed can be successfully constructed within the HIF1 programme.
- 2.3 On the subject of the bridge design development (section 3.2 of Mr Harman's proof of evidence) and engagement with NR, there was regular liaison with NR Great Western Railway Asset Protection team as a key stakeholder, throughout the development of the design. At least eight meetings were held over a 15 month period between January 2020 and April 2021 to ensure the design would be acceptable to NR.
- 2.4 The diameter of the piles for the intermediate supports was not indicated on the 'DIDCOT SCIENCE BRIDGE STRUCTURES GA AND PROPOSED ELEVATIONS' drawing (DSB\_PD ACM SBR SW\_ZZ\_ZZ\_ZZ DR T 0001) (CD A.20) not because it was unknown or the design was not sufficiently developed, but simply to avoid undue repetition on the drawing – the piles for all the supports are all the same diameter (1200mm). A utilities proving exercise comprising trial pits and slit trenches has been carried out in October 2021 in the locations of both pier foundations within the NR land which confirmed that there are no buried utilities clashes.
- 2.5 Regarding earthing and bonding of the Science Bridge steel girders from the overhead line equipment (OLE), using as built drawings of the OLE provided by NR the clearance beneath the girders to the OLE is sufficient to avoid the need for earthing.
- 2.6 It has been agreed with NR that all elements of the Science Bridge, from installation of the piled foundations to the erection of steel girders can be constructed entirely within a series of 'Rules of the Route' (weekend) possessions (some with OLE isolation), and would not require extensive periods of possession restricting works to Christmas or Easter holidays.
- 2.7 Regarding the construction impact on the local roads (sections 3.3 and 3.4 of Mr Harman's proof of evidence), the designers engaged with an experienced contractor (John Graham Construction Ltd) and through buildability workshops between February and April 2021, the expected construction methodology for the bridge and site constraints as well as risks and opportunities were identified. As indicated by Mr Harman, there would need to be temporary closures of the A4130 and Milton Road, but these would be limited to during crane set up and lifting operations. These closures would be scheduled to minimise impact to the travelling public. Critical lifting operations would not be restricted to public holiday periods, and to mitigate the number and duration of closures required for steel girder installation, the steel girders would be lifted as a pair braced together and with permanent formwork for the deck slab already attached.
- 2.8 For utilities diversions (section 3.8 of Mr Harman's proof of evidence), the designer has engaged with all the known impacted utility providers, including those identified by Mr Harman, see paragraph 2.9. This engagement has followed the process set out in the Manual of Contract Documents for Highway Works Volume 6 Section 2 Part 2 SA10/05 – New Roads and Street Works Act 1991 – Diversionary Work. Utilities information was obtained from the providers and where apparatus was affected, budget estimates and detailed estimates were obtained. The proposed utility diversions from this process are illustrated in the Proposed Utilities Diversion Drawings (CD D.215 to D.233) and the estimated cost captured in the Scheme budget. Tim Mann's proof of evidence paragraph 5.60 provides further general details of this standard approach and cost estimates.

- 2.9 The SSE 11kv HV diversions and corresponding Fibre Communications/SCADA Control cabling (within a Vodafone duct), identified by Mr Harman, are located within the verge of Milton Road and are to be 'Slewed and lowered as required'. The construction method of the Science Bridge pier foundations and the actual location of the utility ducts within the verge (confirmed through trial pits) will determine if the ducts are required to be slewed and lowered.
- 2.10 In its objection to the Compulsory Purchase Order as outlined in their Statement of Case (CD M.06), NR does not raise any concerns or objections whatsoever about the design and construction of the Science Bridge, but states that its objection concerns the process of OCC proposing to compulsorily purchase NR land to build the bridge. As stated in Steven Moon's proof of evidence (paragraph 4.9) it is anticipated that a framework agreement will be in place before the Public Inquiries, which will secure the land and new rights that the Acquiring Authority requires in order to construct the Scheme and will, therefore, remove the need to compulsorily purchase certain land. On the conclusion of the framework agreement, NR has indicated that it will withdraw its objection to the Orders.
- 2.11 The construction works would be carried out under an Asset Protection Agreement (APA). The precursor to this is a Basic APA for the detailed design phase which is currently being negotiated between OCC and NR. The proposals for the construction works would all be subject to review and approval process by NR - all of which is common practice.
- 2.12 Within section 6.1 of Mr Harman's proof of evidence he lists a number of stakeholder objections under design change risks. Those relevant to the Science Bridge include NR which is covered in paragraph 2.10 above, RWE Generation and National Grid Electricity. The RWE Generation objections are covered in paragraphs 2.39, 3.46 to 3.58 in my proof of evidence, while the National Grid Electricity are concerned with access off Milton Road, which will be maintained except for temporary closures of Milton Road for crane installation and lifting of bridge girders.
- 2.13 Comments made on the scheduling and cost escalations (sections 7 and 8 of Mr Harman's proof of evidence) will be addressed as appropriate in Tim Mann's rebuttal.
- 2.14 Under Value Engineering considerations (Section 9.1 of Mr Harman's proof of evidence) he suggests an alternative to constructing the Science Bridge would be to widen the existing A4130 Bridge over the rail line. This alternative is similar to that proposed by Andrew P Jones, which I responded to in my proof of evidence in paragraphs 3.17 to 3.21.

### **3 TEMPORARY SITE COMPOUND ON W E GALE TRUST LAND**

- 3.1 In the proof of evidence from Tim Broomhead (W E Gale Trust), he questions the requirement, size and location of the works area (paragraphs 4c and 35c). In my proof of evidence I had outlined that this land was required temporarily during the construction of the Scheme, but I provide further details on this matter below.
  
- 3.2 Plots 6/3d, 6/3e and 7/1a are required for a temporary construction compound. The size of this compound area must provide sufficient space to include elements such as a site office area, welfare facilities, stores, car parking for staff, material laydown and material storage. The compound location has been chosen as it is adjacent to the Scheme, and critically provides a location that will serve the eastern section of the works area of the Didcot Science Bridge element of the Scheme. The site will also have good access to the existing A4130 Northern Perimeter Road, via which the majority of materials will be transported. The proximity of the compound area to the proposed road alignment will minimise transport distances, programme and cost for the construction.

#### **4 BUS PRIORITY**

- 4.1 In the proofs of evidence from Emma Bowerman (SODC) and Adrian Bulter (VOWHDC) there is reference to delivery of a priority bus lane (paragraph 4.12, paragraph 4.8 respectively). To clarify, while bus priority is proposed, it is unlikely that it will include marked bus lanes in the Scheme as this would require additional road construction in the majority of locations. Instead priority would be in the form of timing priority at traffic signal junctions and, at traffic signal controlled pedestrian and cycle crossings, as explained below. These priority measures will allow faster and more reliable bus journey times than without these facilities, thereby making buses an attractive alternative to those wishing to travel in the local and wider area.
- 4.2 Bus Priority (BP) can be applied to the traffic signal T-Junction at the Valley Park western access using either Automatic Vehicle Location Urban Traffic Management Control (AVL UTMC) or local detection. This prioritisation could include for a hurry call scenario which would immediately call the signals that the bus is approaching on (at the expense of the other approaches) or shorten the signal sequence to reduce the amount of time a bus would wait for the signal to turn green on the approach. In addition, the BP would hold a green signal for a bus approaching the junction (if the approach is already green). All these methods of BP would help in ensuring the bus receives a green signal quicker than a standard traffic signal configuration, reducing overall travel times for buses.
- 4.3 Applying BP to traffic signal controlled pedestrian crossings throughout the Scheme would provide the green hold function, as mentioned above, but not the hurry call or shortened signal sequence functions. This is due to the requirement to operate the pedestrian phase fully for safety reasons, before going to the vehicle (bus) phase. As per the T-junction, the BP can be activated using AVL UTMC or local detection.

**5 STATEMENT OF TRUTH AND DECLARATION**

- 5.1 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.
- 5.2 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
- 5.3 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.
- 5.4 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.
- 5.5 I confirm that I have no conflicts of interest of any kind other than those already disclosed in this rebuttal evidence.

**ANDREW GREGORY BLANCHARD**

**9 FEBRUARY 2024**