

**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**

**AND**

**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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**Proof of evidence of**

**ANDREW GREGORY BLANCHARD**

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

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**Note: This proof of evidence is of primary relevance to the Inquiries into the Orders, but also of relevance to the Inquiry in the called-in Planning Application in relation to the Scheme design process that informed the Planning Application (Section 2), and the response to representations made on the Planning Application (Section 3).**

## 1 INTRODUCTION AND QUALIFICATIONS

- 1.1 I am Andrew Gregory Blanchard, I am an Associate Director at AECOM, and have worked for the company for the past eight and a half years. I have a Bachelor's Degree in Civil Engineering and a Masters in Transport Planning and Engineering. I am a Chartered Member of the Chartered Institution of Highways and Transportation.
- 1.2 I have 26 years' experience in traffic and highways engineering. I manage the delivery of traffic, transportation and highways schemes in the UK and overseas. Through my projects, I coordinate multi-discipline teams in the completion of feasibility, preliminary and detailed designs.

### Scope of Evidence

- 1.3 This proof of evidence has been prepared regarding highways engineering matters relating to:
- 1.3.1 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) (the **Planning Application**)
- 1.3.2 The Oxfordshire County Council (Didcot Garden Town Highways Infrastructure – A4130 Improvement (Milton to Collett Roundabout), A4197 Didcot to Culham Link Road, and A415 Clifton Hampden Bypass) Compulsory Purchase Order 2022 (the **CPO**);
- 1.3.3 The Oxfordshire County Council (Didcot Garden Town Highways Infrastructure– A4130 Improvement (Milton to Collett Roundabout), A4197 Didcot to Culham Link Road, and A415 Clifton Hampden Bypass) (Side Roads) Order 2022 (the **SRO**) (the CPO, SRO and Bridge Scheme taken together as referred to as the Orders).
- 1.4 The Planning Application was submitted, and the Orders were made, to facilitate the delivery of the Access to Didcot Garden Town Highway Improvements (“the Scheme”) which consists of a highway scheme approximately 11km in length, including converting 1.8km of single carriageway to dual carriageway, 6.8km of new single carriageway and approximately 20km of new and/or improved off-carriageway cycling and pedestrian infrastructure. Connections into the existing public rights of way network will also be provided. The Scheme also includes three over bridges.
- 1.5 The Orders were made by Oxfordshire County Council in its capacity as acquiring authority (the **Acquiring Authority**) on 21 December 2022 and submitted to the Secretary of State for Transport on 26 January 2023.
- 1.6 The Planning Application was submitted by Oxfordshire County Council in its capacity as applicant (the **Applicant**) to Oxfordshire County Council in its capacity as Local Planning Authority (**LPA**) on 4 October 2021 and called-in by the Secretary of State for Levelling Up, Housing and Communities for his determination on 25 July 2023.
- 1.7 The Planning Application and the Orders are now due to be considered by an Inspector at conjoined Public Inquiries scheduled to open on 20 February 2024. This proof of evidence has been prepared in connection with those Inquiries.
- 1.8 The purpose of my evidence is to explain the process of Scheme design, the components of the Scheme, the design considerations for the Side Roads Order and to provide a response to design criticisms of the Scheme that have been raised in objections and representations. My evidence focuses on the A4130 Widening and Didcot Science Bridge elements of the Scheme, whilst my colleague Karl Chan's proof of evidence will focus on

the Didcot to Culham River Crossing and Clifton Hampden Bypass elements of the Scheme. I led and managed the preparation of the design for my elements, coordinating input from multiple specialist disciplines from Summer 2019 to Autumn 2021. I have also supported the initial Planning Application submission and subsequent revised submissions in November 2022, April 2023 and June 2023.

- 1.9 My proof of evidence should be read in conjunction with other separate but interrelated proofs of evidence submitted on behalf of the Applicant and the Acquiring Authority, including:
- 1.9.1 Strategic Need and Benefits, Highway Issues, Scheme Selection and Alternatives, prepared by Aron Wisdom of Oxfordshire County Council;
  - 1.9.2 Local Transport and Connectivity Plan, prepared by John Disley of Oxfordshire County Council;
  - 1.9.3 Technical Traffic and Highways Engineering - Culham River Crossing and Clifton Hampden Bypass, prepared by Karl Chan of AECOM;
  - 1.9.4 Traffic Modelling, prepared by Claudia Currie of AtkinsRéalis;
  - 1.9.5 Environmental Impact Assessment, prepared by Alex Maddox of AECOM;
  - 1.9.6 Noise and Vibration, prepared by Andrew Pagett of AECOM;
  - 1.9.7 Air Quality, prepared by Anna Savage of AECOM;
  - 1.9.8 Climate Change, prepared by Chris Landsburgh of AECOM;
  - 1.9.9 Landscape and Visual Impact, prepared by Jane Ash of AECOM;
  - 1.9.10 Planning, prepared by Bernard Greep of Stantec;
  - 1.9.11 Negotiations and Acquisition prepared by Steven Moon of Gateley Hamer; and
  - 1.9.12 Compulsory Purchase Justification prepared by Timothy Mann of Oxfordshire County Council.
- 1.10 I confirm that the evidence that I have prepared in respect of the Inquiries is given in accordance with the guidance of my professional institution and I can confirm that the opinions expressed are my true and professional opinions.

## 2 SCHEME DESIGN

- 2.1 This section introduces the design work completed to date, outlines the steps undertaken to complete the design, and the key standards and guidance followed in preparing it. It then details the important parts of the A4130 Widening and Didcot Science Bridge elements of the Scheme, and how and why they were developed as shown in the General Arrangement drawings.

### Summary of the Design Process

- 2.2 For the design processes, the Scheme was separated into four elements:
- 2.2.1 A4130 Widening (**WID**), which duals the existing road between Milton Gate and the link to the new Science Bridge, with several new junctions into adjacent proposed developments (the subject of this evidence);
  - 2.2.2 Didcot Science Bridge (**DSB**), a new bridge over the Great Western Railway Mainline and a new link road through the former Didcot A Power Station site, re-joining the A4130 Northern Perimeter Road north of the Purchas Road/Hawksworth roundabout; (the subject of this evidence)
  - 2.2.3 Didcot to Culham River Crossing (**CRX**), providing a new road connecting the A4130 at Didcot with the A415 at Culham, including a bridge over the River Thames and another bridge over a private rail line, and connections to Appleford and Sutton Courtenay via the B4016;
  - 2.2.4 Clifton Hampden Bypass (**CHB**), a new relief road north of the village, between the A415 at Culham Science Centre and the B4015 Oxford Road, north of Clifton Hampden.
- 2.3 Following identification of the need for the Scheme, assessment of alternatives and scheme selection completed by others (see the proof of evidence of Aron Wisdom), a Feasibility Design of the Scheme was undertaken. AECOM took over the partially complete Feasibility Design in 2019 and completed it in late Spring 2020. I led delivery of this design stage between Summer 2019 and Spring 2020, managing the team preparing the design. This phase of Scheme development sought to deliver a conceptual design, that is, an outline design where the key elements had been considered in sufficient detail to give a good degree of confidence that the proposed design would deliver on the objectives of the Scheme.
- 2.4 The Scheme was then advanced into the Preliminary Design Stage, with the design work moving onto a topographical survey, adding further details to the design and ensuring that it complied with the National and Local Standards and followed relevant guidance. Similar to the Feasibility Design stage, I undertook the design lead and coordination role for this stage of the design, between Summer 2020 and Autumn 2021.
- 2.5 The design was developed to its current form in a well thought through and thorough process, which was sufficient to allow the land and rights requirements to be clearly defined for the Scheme's construction and operation. This allowed for the necessary Statutory Orders (Side Road Order and Compulsory Purchase Order) to be prepared, with the justification for these orders documented in Section 14 of the Orders Statement of Case.
- 2.6 The next design phase is the preparation of the Detailed Design. During this phase, additional details will be added to the design, such as specification of materials, to allow a contractor to construct the Scheme.

### Details of the Design Process

- 2.7 The geometric layout of the road has been prepared in accordance with the Design Manual for Roads and Bridges (DMRB) for the main road element of the scheme. Some

of the key sections included DMRB CD<sup>1</sup> 109 Highway link design, DMRB CD 116 Geometric design of roundabouts, DMRB CD 123 Geometric design of at-grade and signal-controlled junctions and DMRB CD 143 Designing for walking, cycling and horse-riding. Although significant effort was undertaken to comply with these and other standards, a number of Departures from Standards were identified in the design. These Departures were discussed with the Local Highway Authority and accepted in all but one case. The Manual for Streets (**MfS**) and Manual for Streets 2 (**MfS2**) were also used in the development of the whole design, main road and sides streets/accesses.

- 2.8 As well as following Oxfordshire County Council's Walking Design Standards (2017) and Oxfordshire County Council's Cycling Design Standards (2017), which provide technical solutions to support walking and cycling use of the Scheme, a Walking, Cycling and Horse-Riding Assessment and Review (WCHAR) was completed for both elements (CDA.7, Appendix A to the Transport Assessment) as defined by DMRB GG<sup>2</sup> 142. This process helped identify the walking and cycling networks, including the Public Rights of Way in the area, and the opportunities that the Scheme could bring to integrating and enhancing the attractiveness of walking and cycling for existing and future users.
- 2.9 During the initial phase of the preparation of the Preliminary Design, a guidance note on designing high-quality safe cycle infrastructure - Local Transport Note (LTN 1/20) Cycle infrastructure design was published outlining the design requirements for cycling. At this point the design was reviewed to ensure that it complied with this guidance note.
- 2.10 Throughout the Feasibility and Preliminary Design stage, engagement with major stakeholders and developers was undertaken, to understand how their objectives and those of the Scheme could deliver a coordinated design that strived to work for all parties.
- 2.11 A Stage 1 Road Safety Audit (**RSA**) (CD A.7 Transport Assessment, Appendix D) has been carried out as part of the design process, in accordance with DMRB GG 119 Road Safety Audit, to provide an independent review of the road safety implications of the Scheme. AECOM (the Design Organisation) and Local Highway Authority (the Overseeing Organisation), reviewed the problems raised and recommendations before agreeing RSA actions and necessary amendments to the design. The agreed actions are recorded in the RSA Report.
- 2.12 A contractor (John Graham Construction Ltd) was engaged during the Preliminary Design stage to advise on the constructability of the designs and provide recommendations for design amendments. This process of Early Contractor Involvement (**ECI**) is common practice in the industry to minimise the risk of changes later in the design process or during construction, when changes can become more costly. The ECI also advised on the likely size and locations of site compounds required, as well as the land areas required, in order to construct the Scheme.

### Traffic Regulation Orders

- 2.13 Traffic Regulation Orders (**TRO**) will be required for the Scheme to introduce prohibitions, restrictions and regulations on the use of roads by traffic. For the Scheme, this includes: new speed limits or amendments to existing speed limits; prohibiting and restricting the use of a road; prohibiting or restricting waiting of vehicles or the loading and unloading of vehicles; and restrictions on overtaking. TROs will be drafted, consulted and notices published in a local newspaper. The TROs will be made following due process.
- 2.14 The TROs for the Scheme are in the process of being drafted and are not considered to represent an impediment to the delivery of the Scheme. However, the TROs cannot be promoted until it is known that the Scheme is to go ahead and due to open.

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<sup>1</sup> DMRB CD = Design Manual for Roads and Bridges: Civil engineering Design

<sup>2</sup> DMRB GG = Design Manual for Roads and Bridges: General principles and scheme governance, General Information

2.15 The following speed limit changes proposed as part of the A4130 Widening and Didcot Science Bridge elements of the Scheme will require TROs; additional TROs may be identified as the Scheme passes through the detailed design process.

2.15.1 The A4130 between Milton Gate and circa 260m west of the Great Western Park currently operates at the national speed limit for a single carriageway of 60mph. The Scheme will reduce this section to 40mph including the proposed dualled section and proposed A4130 single lane carriageway between the two proposed roundabouts linking the existing A4130 to the new Didcot Science Bridge.

2.15.2 It is expected that most side roads into proposed development sites will be 20mph, subject to local circumstances.

2.15.3 The new A4130 single carriageway from the proposed Science Bridge roundabout over the A4130, Great Western Mainline and Milton Road through the former Didcot A Power Station site connecting to the existing Northern Perimeter Road will be subject to a 30mph speed limit.

2.15.4 The existing Purchas Road / Hawksworth roundabout and associated single carriageway arms will be reduced from a 50mph to a 30mph speed limit.

### **A4130 Widening**

2.16 The A4130 Widening (WID) is one of four elements that makes up the Scheme. This part of the Scheme comprises widening a single carriageway to a dual carriageway from a point approximately 250m east of Milton Interchange (at the junction with Milton Gate), eastwards for approximately 1.8km to the proposed eastern roundabouts, where a new single carriageway link road will connect into the future development at Valley Park and the Didcot Science Bridge element of the Scheme. Comprehensive walking and cycling facilities are proposed as a key part of the Scheme. The proposed location of the WID element is shown in Figure 1.

2.17 For the general arrangement layout of the A4130 Widening, see CD D.1 to CD D.3.



*Figure 1: A4130 Widening Location Plan*

2.18 The existing A4130 is the main access between Didcot and the strategic road network at the A34 Milton Interchange. It is a dual carriageway from this interchange but reduces down to single carriageway east of the Milton Gate junction, and then continues parallel to the Great Western Mainline into the centre of town. This alignment forms the Didcot Gateway Spine in the Didcot Garden Town Plan (CD G.6).

- 2.19 Where the existing road narrows to a single carriageway, the design includes for this to be made a dual-carriageway, requiring land to the south of the existing road to allow for a new median island, an additional carriageway and improved walking and cycling paths that tie into existing shared use facilities to the west (see Figure 2).

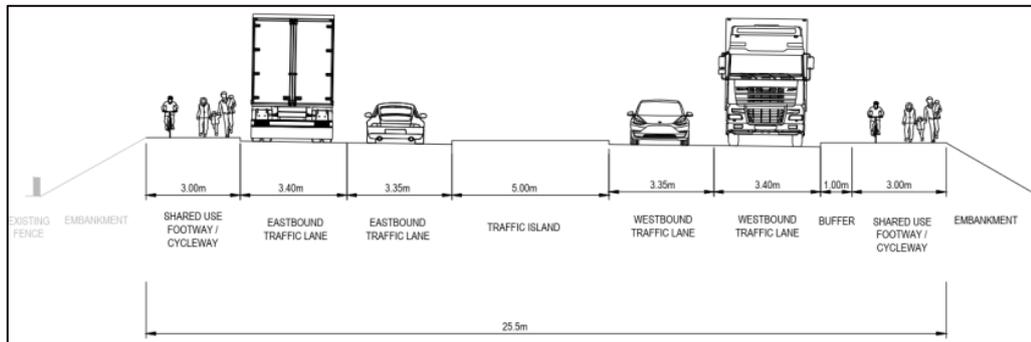


Figure 2: A4130 Widening typical cross section, west of Backhill Lane Tunnel

- 2.20 A new, at grade, four-arm roundabout (Backhill roundabout, see Figure 3) is proposed approximately 200m east of the Milton Gate junction. This 80m (Inscribed Circle Diameter (ICD)) roundabout will include two lanes on its circulatory carriageway, with the two A4130 entry and exits having two lanes. Two further arms will be provided on this roundabout, and these will provide access to planned developments on land to the south-west and south-east of the roundabout. Single lane entry and exits will be provided on these arms. The comparatively large size of the roundabout is required to safely accommodate the four arms and comply with the relevant section of DMRB CD 116 Geometric design of roundabouts. Providing a single roundabout access to the development lands to the south avoids the need to provide two or more separate accesses along the A4130, which would interrupt and delay the principal movement along the A4130 for all users including those walking and cycling.

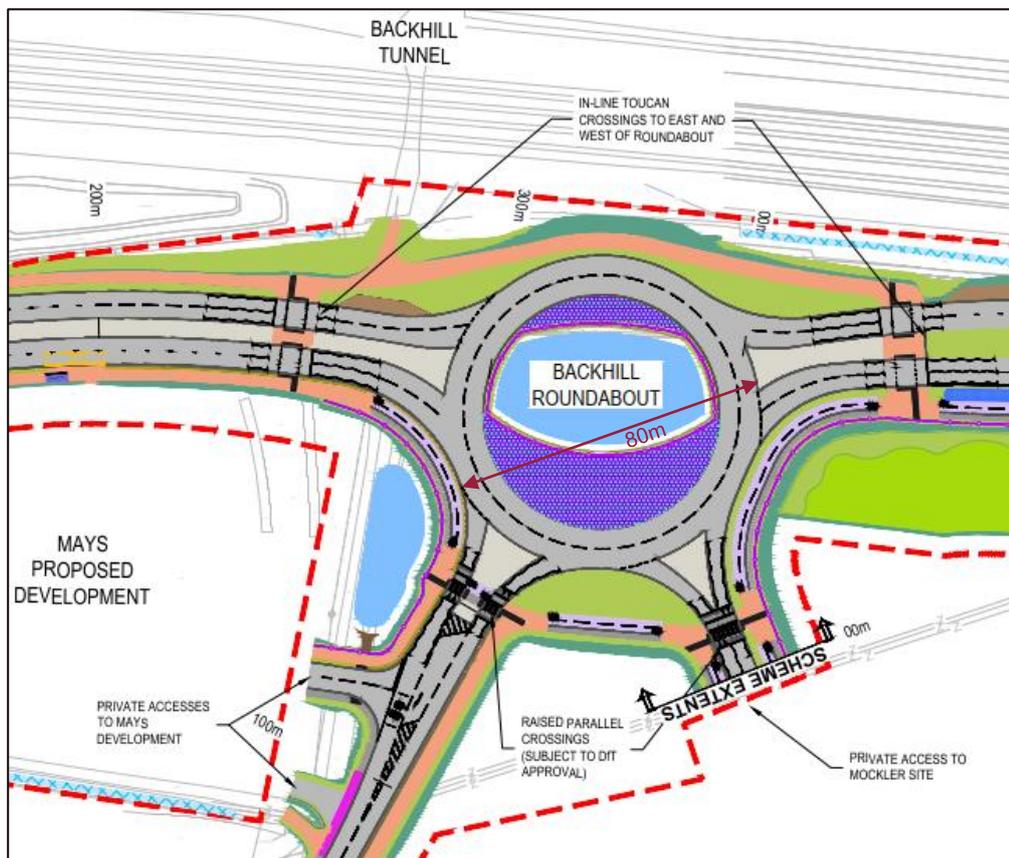


Figure 3: Proposed Backhill Roundabout

- 2.21 A shared use cyclist and pedestrian facility is to extend around the northern side of Backhill roundabout. This shared use instead of segregated facility will provide consistency for users and link to the existing Non-Motorised User (NMU) only Backhill Lane Tunnel (also shared use) which provides access to Milton Park. The existing toucan crossing by Backhill Lane Tunnel will be replaced by a two stage in-line Toucan crossing over the new dual carriageway; another two stage in-line Toucan crossing will be provided east of the roundabout allowing users to safely cross both carriageways and reach all destinations via the shortest practical route. Segregated cycling and walking facilities and raised parallel crossings will be included around the southern side of Backhill roundabout, giving priority to these vulnerable road users.
- 2.22 The design of the south-western arm has been prepared in coordination with the developers of the land to the south-west of the proposed roundabout, and to connect with the proposed Milton Heights foot and cycle bridge over the A34, 500m to the south. The south-eastern arm provides for a future access to the 'North West of Valley Park' strategic housing allocation site, to the south and east. Despite efforts by the Acquiring Authority coordination with the landowner of this potential development has been limited (see the proof of evidence of Steven Moon).
- 2.23 The existing ditch and hedgerow south of the existing carriageway will be removed in the vicinity of this new roundabout, in order to provide a safe layout, including for the required visibility requirements on the approaches, exits and around the circulatory carriageway.
- 2.24 East of the new Backhill roundabout, the A4130 will be dualled to two lanes in each direction. Much of the existing single carriageway, adjacent grass verges, ditches, hedgerows and trees will be retained, and those ditches, hedgerows and trees to the south of the existing carriageway will be incorporated into the new central reserve between the two carriageways where practical. The existing single carriageway will become the eastbound carriageway of the new dualled road. A new two-lane carriageway will be constructed south of the existing carriageway and will form the westbound carriageway of the improved road. The highway infrastructure in this location will be approximately 35m wide but may vary where the width of the existing ditch varies, with the design seeking to retain as much of the existing mature vegetation as possible (see similar typical cross-section in Figure 5). A segregated two-way cycle track and adjacent pedestrian path will be provided to the south of new carriageway, and offset from the carriageway edge to provide improved comfort for users.
- 2.25 Further east, an access into the western part of the Valley Park housing development is included (see Figure 4), although it is noted that a smaller version of the signalised junction is currently being constructed under the approved planning permission. Under the Scheme, this junction will be remodelled, with a dedicated right turn lane included on the eastbound carriageway and a dedicated left turn included on the westbound carriageway. This layout allows a higher quality provision to be given to those walking and cycling along the southern side of the road, as vehicles turning into the development can be held with priority given to crossing pedestrians and cyclists. Much of the existing ditch and hedgerow south of the existing carriageway has already been removed in the vicinity of this junction by the recent junction works associated with the development, in order to provide a safe layout, including for the required visibility. The access will have a single exit lane and two approach lanes providing separate left turn and right turn lanes onto the new dualled A4130. Two bus stop lay-bys will be provided in this location, one east of the junction on the eastbound carriageway, and one to the west of the junction, on the westbound carriageway. Safe crossing facilities will be provided to both bus stops within the traffic signal layout.

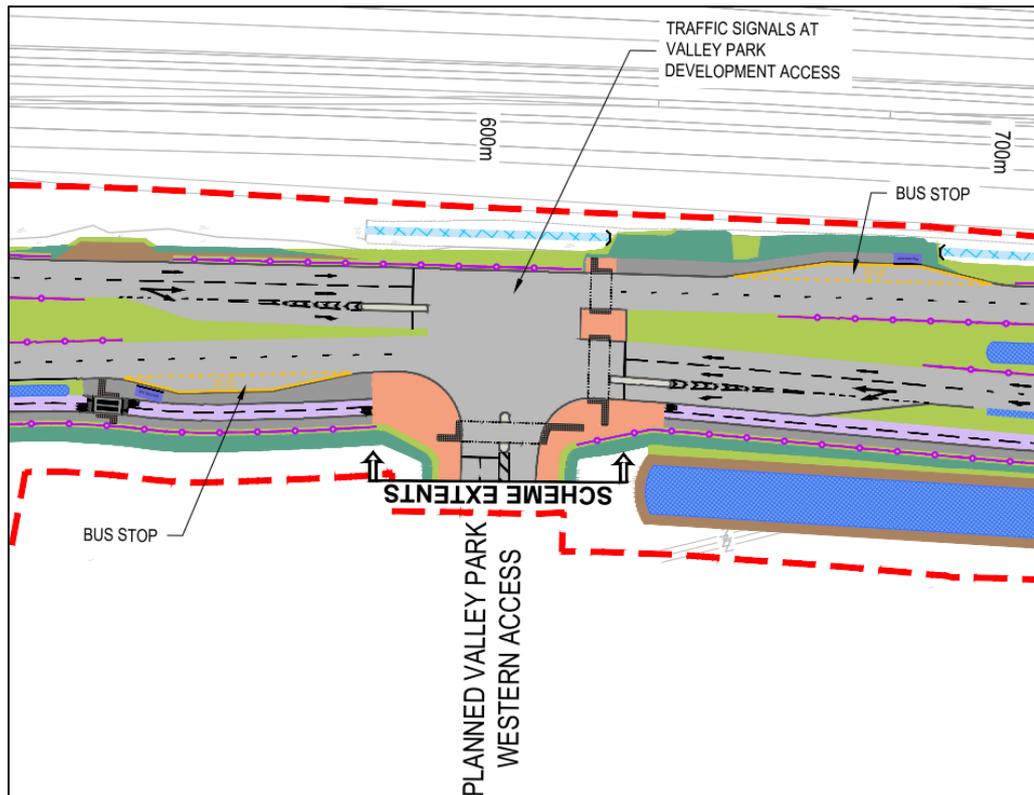


Figure 4: Proposed signalled junction at the western access to Valley Park development

- 2.26 East of the access into Valley Park, the dualling of the A4130 follows a similar approach to that outlined in Paragraph 2.24, seeking to retain as much of the existing highway ditch and vegetation as practical. The main difference along this section is the addition of drainage basins to the south of the footway (see Figure 5). These basins are required to provide adequate drainage for the proposed dualled road. It is noted though that through coordination with the developer of the Valley Park development, these swales are likely to be combined into the larger basins to be provided as part of the housing development.

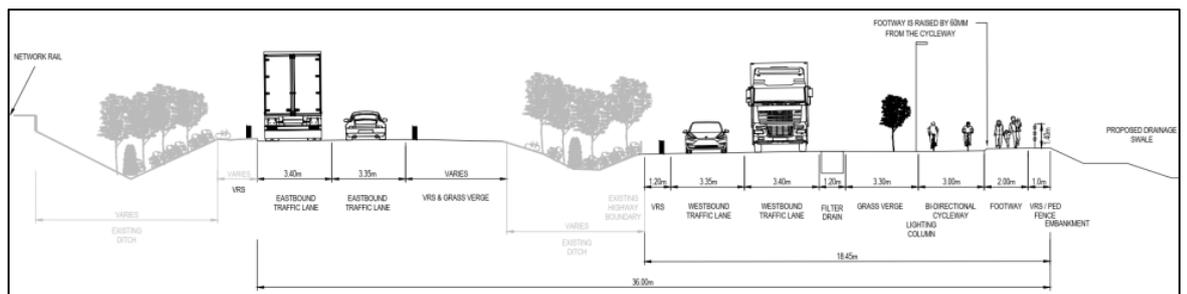


Figure 5: A4130 Widening typical cross section, east of the western access to Valley Park

- 2.27 A second roundabout (Old A4130 roundabout) will be created further east. This will be an at grade, three-arm 50m ICD roundabout with two lanes on its circulatory carriageway (see Figure 6). It will provide access to the current alignment of the A4130 towards Didcot and to a new single carriageway link road, which will connect with a third roundabout (the Science Bridge roundabout) to the southeast. All three arms will be marked as two-lane entries, the eastern and south-eastern arms flaring from a single lane approach. The western arm will be marked as a two-lane exit, while the other two arms will provide only a single lane exit as they link to single carriageway roads. This layout at the Old A4130 roundabout reflects the traffic modelling (discussed in Claudia Currie's proof of evidence), which predicts the split of motorised vehicle volumes to the east of this location. On this basis, the road capacity is maintained to the east and west of this

roundabout, with two single carriageways to the east, and a two lane dual-carriageway to the west.

- 2.28 A Toucan crossing will be included across the new A4130 link road immediately south of the Old A4130 roundabout. Walking and cycling facilities will be consistent to the west and south-east of the crossings, while the toucan provides continuity to the existing shared facility for cyclists and pedestrians along the current alignment of the A4130 linking to Didcot.

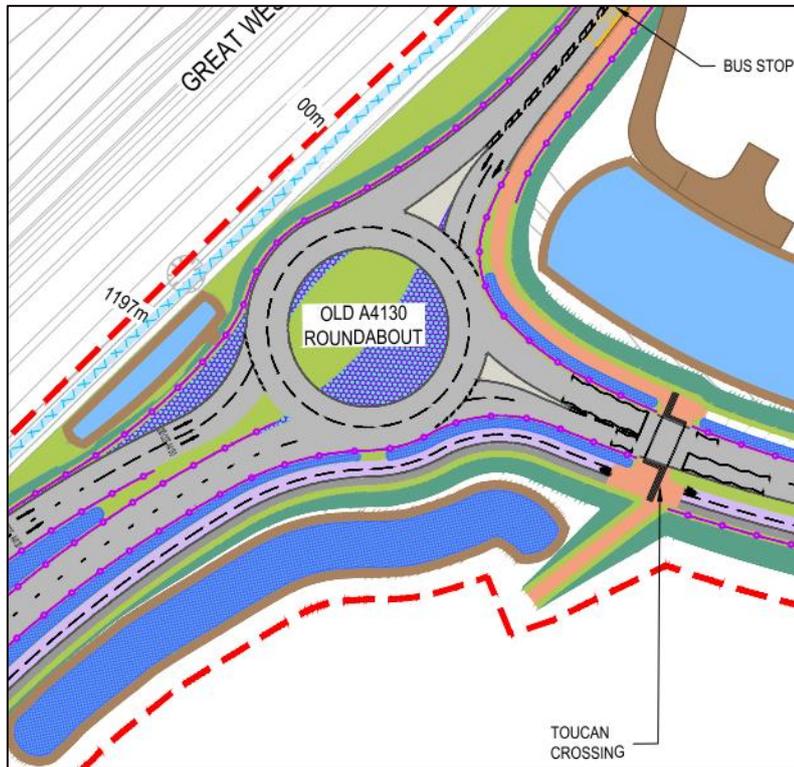


Figure 6: Proposed Old A4130 Roundabout

- 2.29 To the east of this roundabout, two bus stops will be created in the main traffic lanes, on the alignment of the existing A4130. The eastern link road section between the proposed Old A4130 roundabout and the Science Bridge roundabout will be a single carriageway and will provide the commencement length of what is to become the new A4130, from where it departs from existing A4130 at the Old A4130 roundabout. The Scheme corridor is approximately 28m in this location, including NMU provision (see Figure 7). Along this new link, a segregated two-way cycle track and adjacent pedestrian path will be provided up to and including the Science Bridge roundabout.

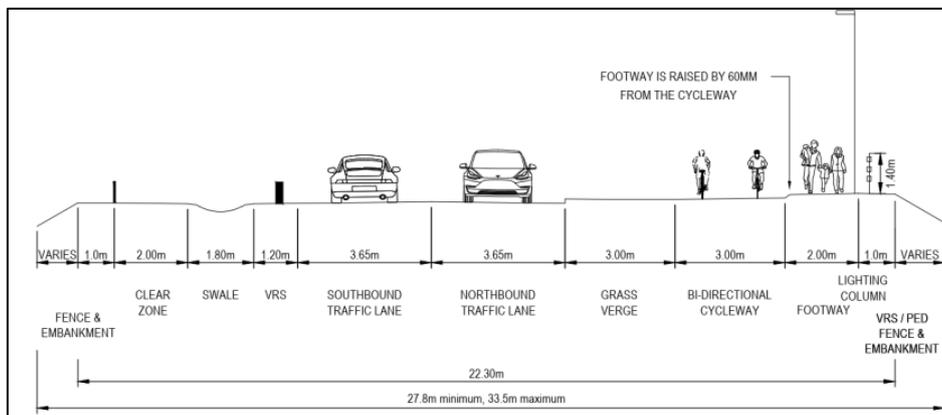


Figure 7: A4130 eastern link road typical cross section

- 2.30 The Science Bridge roundabout will be an at grade, three-arm 50m ICD roundabout, which will provide access between the A4130 and the Didcot Science Bridge, and to the planned development at Land to the West of Great Western Park (known as Valley Park - see Figure 8). All approaches will be single lanes flaring to two entry lanes, while all exits will provide only single lanes. Priority will be given to those walking and cycling through a new parallel crossing on the Valley Park arm of the roundabout. There is no public access to the north-western frontage of the roundabout, so no crossing facilities are proposed.

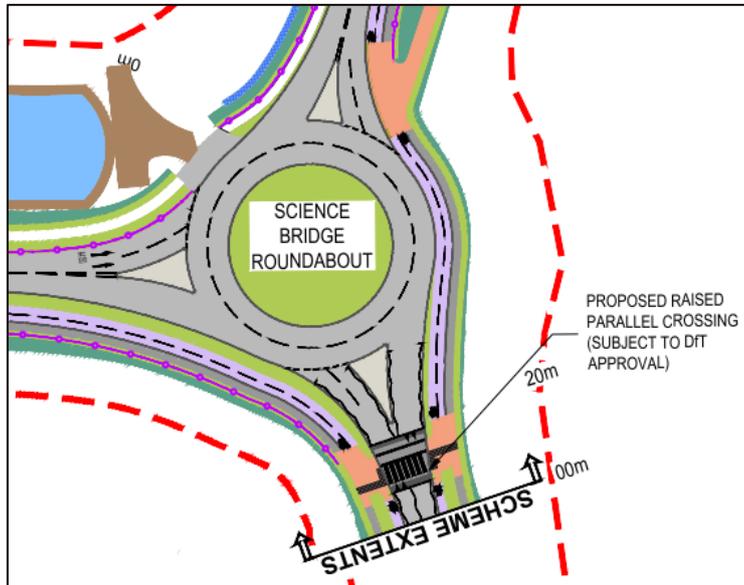


Figure 8: Proposed Science Bridge Roundabout

- 2.31 The A4130 will be subject to a reduced speed limit of 40 mph from the junction with the roundabout at the A34 Milton interchange, continuing along the dual and retained single carriageway sections. This reflects the future more urban nature of the Scheme in this area, with the allocated North West of Valley Park and Valley Park housing developments along the road, and planned improved walking and cycling facilities. The Science Bridge roundabout and its approaches will have a 30 mph speed limit to reflect the increasing urban setting and the geometric restrictions of the nearby Science Bridge.
- 2.32 Four Departures from Standard were applied for on the A4130 Widening element of the Scheme. The first of these Departures included narrower lane widths for the dual-carriageway section to encourage drivers to travel at or below the new 40 mph speed limit. The second Departure involved the below standard longitudinal separation between a bus lay-by and a junction. The justification for this Departure was that the upstream left turn manoeuvre was provided for in a dedicated left-turn lane, so the risk of confusion by following drivers was considered low.
- 2.33 The third Departure related to a below Standard longfall, proposed as this was an existing situation, and to avoid extensive reconstruction of the existing carriageway. The final Departure from Standard requested was at a culvert where an ordinary watercourse crosses under the new westbound carriageway of the widened A4130. The Departure was for a reduced height culvert in order to avoid raising the carriageway levels in the vicinity of the culvert. While the first three Departures were accepted by the Highway Authority, the final one regarding the culvert height was not approved. This was a relatively minor level issue (200mm) and I am confident that this Departure will either be approved or designed out in the next design stage for the Scheme.

### Didcot Science Bridge

- 2.34 The Didcot Science Bridge (DSB) is one of four elements that makes up the Scheme. This part of the Scheme comprises a single carriageway from the Didcot Science Bridge roundabout, over the Great Western mainline railway, through the former Didcot A Power Station development site and connecting with the existing A4130 Northern Perimeter Road north of the Southmead Industrial Estate. The proposed location of the DSB element is shown in Figure 9.
- 2.35 For the general arrangement layout of the Didcot Science Bridge, refer to CD D.4 to CD D.6.



Figure 9: Didcot Science Bridge Location Plan

- 2.36 The Didcot Science Bridge will consist of a new single carriageway passing over the existing A4130, the Great Western Mainline railway and Milton Road, landing in the former Didcot A Power Station site (see Figure 10). The bridge will be approximately 15m in width, including a segregated two-way cycle track and adjacent pedestrian path on the eastern side of the bridge, as an integral facility of the new road.

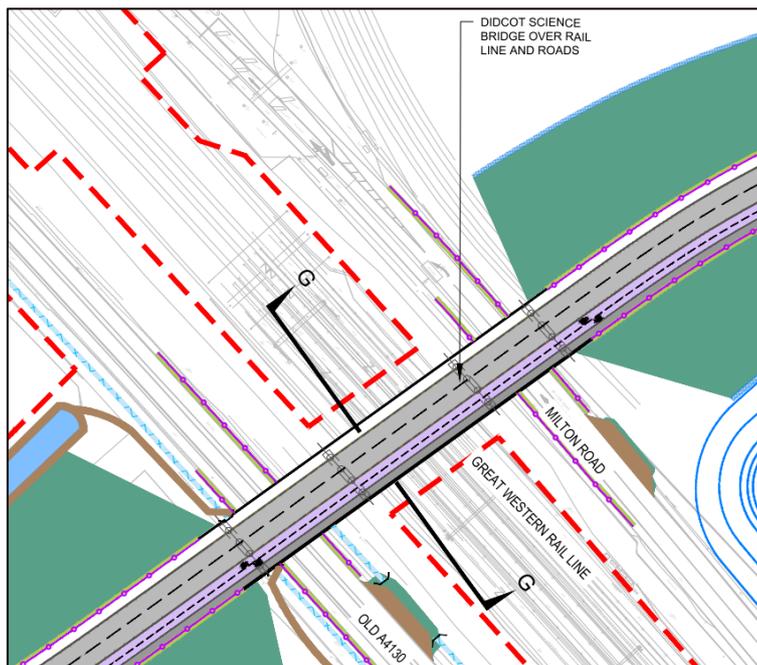


Figure 10: Proposed Didcot Science Bridge over the Great Western Railway

- 2.37 The single carriageway road will continue as the Didcot Science Bridge Link Road, extending through the allocated development areas of the former Didcot A Power Station site. This part of the Scheme will be approximately 18.3m in width, including segregated cycle tracks and pedestrian paths on both sides of the new road (see Figure 11). Three parallel crossings will allow users to cross the Science Bridge Link Road. Two bus stops will be created in each direction in the main traffic lanes through the central part of the Scheme. The link road passes over Moor Ditch a watercourse within the power station site. A new replacement structure will be constructed at this location to shorten the length of this river tunnel.
- 2.38 Throughout the Scheme extents, there are multiple side roads, which will provide direct access points into adjacent land located to the north and south of the Scheme. Part of the link road and the side roads that lie within the former Didcot A Power Station and in the Clowes Developments (UK) Limited (**Clowes**) development site are to be provided by Clowes; all other side roads are to be provided as part of the Scheme.

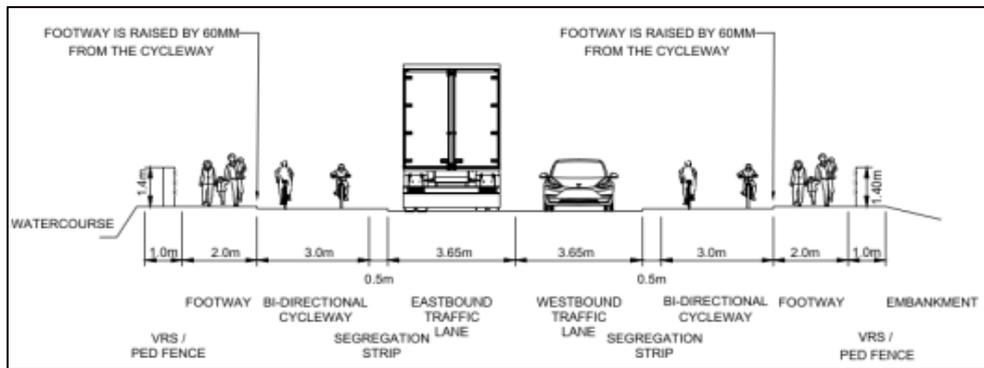


Figure 11: Science Bridge Link Road typical cross section

- 2.39 As the link road conflicts with one of the existing drainage lagoons in the power station site, this lagoon (see black rectangle in Figure 12) must be demolished, and a replacement lagoon (top green/blue area in Figure 12) constructed north of the link road. Additionally, this work requires the construction of a new access road. Multiple coordination workshops were held during the design development with RWE Generations UK Plc who own and operate the power station site. The proposed design reflects these workshops.



Figure 12: Layout of the new RWE access road, new lagoon and existing lagoon

- 2.40 The new link road ties-in with A4130 Northern Perimeter Road, north of the Purchas Road / Hawksworth roundabout, continuing into the Didcot to Culham River Crossing element of the Scheme. The northern arm of the roundabout (A4130 Northern Perimeter Road) connects to the link road, forming a new T-junction (see Figure 13) with a ghost right turn pocket provided on the new link road. A parallel crossing will allow users to cross the old A4130 leading to the Purchas Road / Hawksworth roundabout. Where the Scheme ties in with the existing A4130 Northern Perimeter Road, a Toucan crossing will be provided to allow those using the north-south public right of way (Bridleway 373/24/40 (Sutton Courtenay) and National Cycle Network 5 (NCN5)) to safely cross the new road on a new alignment. In this locality, a segregated two-way cycle track and adjacent footway will be located away from the carriageway to provide a continuous walking and cycling link to the southern end of the Didcot to Culham River Crossing element of the Scheme west of the Collett roundabout. The existing footway on the southern side of the A4130 will be realigned to the new carriageway.

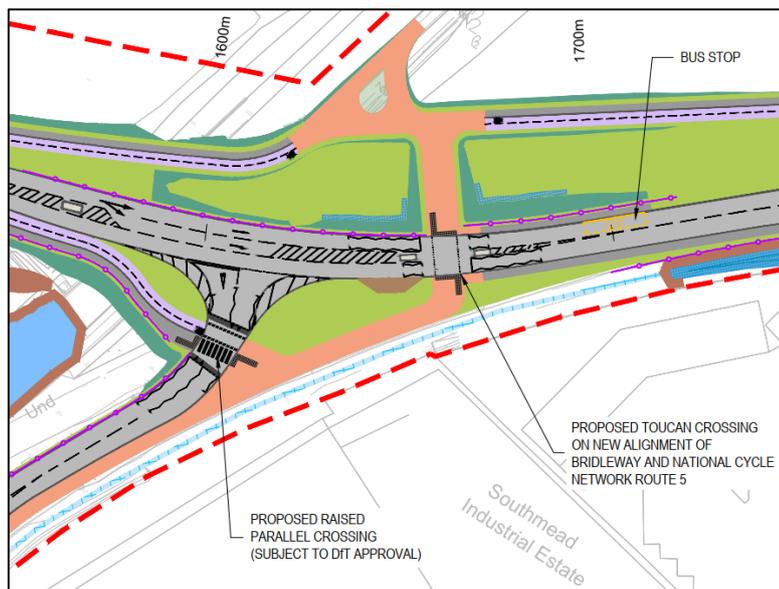


Figure 13: Proposed Old A4130 Priority Junction north of Purchas Road/Hawksworth Roundabout

- 2.41 There was only one Departure from Standard identified for the Didcot Science Bridge element of the Scheme. This related to the vertical alignment of both the northern and southern approaches to the bridge which has a gradient of 5% for a distance of 125m for the southern approach, and 180m for the northern approach, this exceeds the maximum length of this gradient for cyclists under DMRB CD 195 Designing for cycle traffic. The overall vertical alignment could not be altered, as the low points of the bridge approaches were fixed to the north and south, while the required clearance above the rail overhead power lines dictated the height of the bridge. The Departure was accepted, but mitigations had to be added to the design. These mitigations were flatter sections and rest areas on both bridge approaches.

### Summary

- 2.42 The above section has outlined the designs for the A4130 Widening and Didcot Science Bridge elements of the Scheme, and set out the reasons for key design decisions along the route.

### 3 RESPONSE TO DESIGN REPRESENTATIONS AND OBJECTIONS RELEVANT TO THE A4130 WIDENING AND DIDCOT SCIENCE BRIDGE

3.1 This section sets out the response to criticisms in representations to the design (CD D.1 to CD D.6) under the Planning Application and also to objections to the Orders prepared in support of the Scheme. As in the previous Section, the content below only applies to those representations and objections received relating to the design of the A4130 Widening and Didcot Science Bridge elements of the Scheme.

#### Called-in Planning Application Issues

##### Science Bridge Design Criticism

3.2 The following provides a response to the objections raised by a number of interested parties in which they suggest that the Didcot Science Bridge is not of adequate design for a gateway feature to Didcot, and does not meet the requirements of national and local planning policies. These parties include:

##### Interested Parties

- Neighbouring Parish Councils Joint Committee
- Victoria Shepherd
- Christopher Owen

3.3 In preparing the design of the bridge (see Figure 14), it is necessary first to ensure the engineering design is appropriate in order to meet structural design requirements, before looking to identify potential aesthetic enhancements. In essence, numerous engineering constraints had to be overcome first, before aesthetic enhancements could be considered.

3.4 The designers also had to balance requirements for the bridge design which were capable of pulling in different directions. On the one hand the bridge was to be a part of improving the arrival experience into Didcot along 'The Gateway Spine' under the Didcot Garden Town Delivery Plan (CD G.6), i.e., it should stand out, but on the other hand it needs to be ensured that the scale, height, density, grain, massing, type, details and materials are appropriate for the site and surrounding area (Vale of White Horse Local Plan, Policy 37 – CD G.2.1).

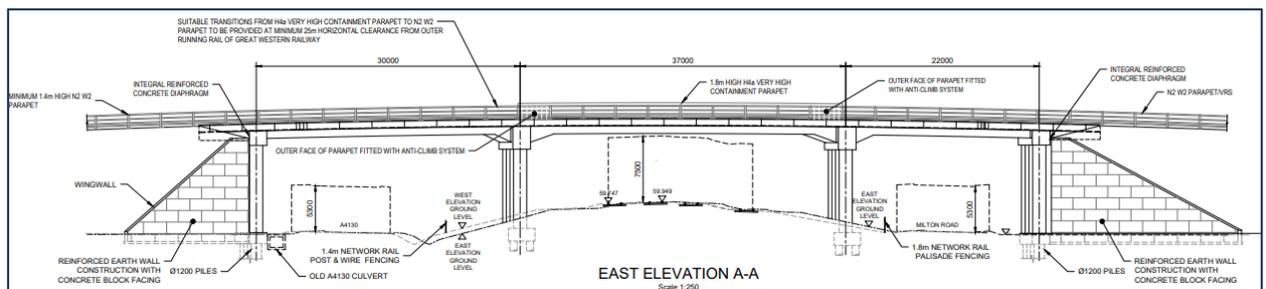


Figure 14: Proposed Science Bridge elevation

3.5 The Science Bridge has been designed in accordance with DfT's Design Manual for Roads and Bridges (DMRB) and in consultation with Network Rail (NR). NR has given its approval to this stage of the design signing a Document Review Notice of the Approval in Principle and a Letter of Non-Objection both dated 22 October 2021, although further approval will be necessary before final sign off.

3.6 In designing the bridge, the AECOM structures team drew upon their recent experience of designing bridges over railways, and applied many lessons learned with regards to engineering but also the appearance of bridges during the design development of the Science Bridge.

- 3.7 The following aesthetic enhancements would be feasible with the prevailing Science Bridge design, and may help to make the bridge appear more of a prominent/landmark feature:
- Structure illumination (up-lighting). This would be subject to Network Rail approval, to ensure that there are no adverse effects on the railway operational safety.
  - Cast-in textures on concrete substructures (i.e., pier columns and abutments) could add visual interest and an individual character to the Science Bridge. The ends of the pier crossheads could also have architectural features on.
  - The internal faces of the solid bridge parapets could provide a unique canvas to showcase artwork contributed by local school children, with a science-led theme.
- 3.8 Certain architectural enhancements would be unsuitable for the Didcot Science Bridge, largely because they would introduce potential health and safety risks and/or make carrying out routine structural inspections more challenging. This includes cladding/façades and faux structural elements, such as arched beams suspended above the railway and/or highway, which would obscure structural elements of the bridge which then cannot be readily inspected.
- 3.9 Inclined abutments with vertical or V-shaped piers would be feasible but would be more expensive and may make inspections more difficult as they would introduce 'harder-to-reach' areas of the structure, particularly at height, when using a mobile elevated working platform (MEWP). These areas may need to be inspected using specialist techniques e.g., drones instead.
- 3.10 As set out in the Statement of Common Ground between the Applicant and the LPA (paragraph 1.6, page 4; Reason 7) dated September 2023, prior to the commencement of construction of the Didcot Science Bridge structure (taking into account the constraints of the Network Rail design requirements, and including enhancements to the design), it is recommended that details of the external appearance of the structure including the colour of parapets shall be submitted to and approved in writing by the LPA.

### **Other Design Criticisms**

- 3.11 The following provides a response to criticisms raised by a number of interested parties on design matters within the A4130 Widening and Didcot Science Bridge elements, other than those associated with the adequacy of design of the Science Bridge - these parties include:

#### Rule 6 Parties

- East Hendred Parish Council

#### Interested Parties

- Andrew P Jones
- Christopher Owen
- Graham Smith

#### **East Hendred Parish Council (EHPC)**

- 3.12 EHPC asserts in its Statement of Case to the called-in Planning Application (CD L.9) that the Walking Cycling Horse Riding Assessment and Review (WCHAR) (CD A.7, Appendix A) merely identified opportunities for walking and cycling, without pursuing hardly any of them, whilst walking and cycling measures on the bridges are over-engineered, so that costs could be reduced.
- 3.13 Contrary to the EHPC assertions, many of the opportunities identified in the WCHAR have been incorporated into the Scheme as the design has evolved through the Feasibility and Preliminary Design stages. These include the following in the A4130 Widening and Didcot Science Bridge elements of the Scheme:

- Provision of segregated bi-directional cycle tracks and footways directly linking the A4130 with future development areas (through working with developers)
  - Provision of a direct link into the centre of Didcot through the provision of new cycle tracks linking (via a new toucan crossing) to the existing A4130 shared use facility at the eastern limit of the A4130 Widening element
  - Provision of convenient crossing facilities over the main road and on key desire lines
  - Provision of priority for cyclists at crossings of access roads
  - Connections of cycle and pedestrian facilities to the existing Public Right of Ways
  - Improvements to footway surfacing within the scheme
  - Provision of bus stops within the design
- 3.14 Opportunities that were identified in the WCHAR but not incorporated, were generally outside of the Scheme extents or not within the influence of the Scheme, such as provision of walking and cycling networks within developments. It was determined that although segregated facilities would ideally be provided on all desire lines, in order to avoid a confusing mix of inconsistent facilities (both segregated and shared use facilities), some sections of the design would include shared use facilities. This approach was predominately to tie in with existing facilities at the boundaries of the Scheme, or where the volumes of cyclists are expected to be low.
- 3.15 Rather than being over-engineered as suggested by EHPC, the walking and cycling facilities are proposed to be as prominent, appealing and comfortable as possible for both pedestrians and cyclists, in order to encourage their use as an attractive alternative to the private car. The Didcot Science Bridge is proposed as a 15m wide bridge and has been designed to be a simple structure. In this way, it can be constructed quickly (requiring fewer closures of the rail line) and with reduced future maintenance requirements; a key objective for any bridge that crosses a rail line. By designing a simple bridge, it will be easier to achieve the extensive approvals required.

**Andrew P Jones**

- 3.16 Andrew P Jones, in a representation dated 3 October 2023 (CD N.19), suggests an alternative location for the A4130 crossing of the Great Western mainline, with associated different alignment of the A4130 for the entire length of the Didcot Science Bridge element of the Scheme. He requests that safe cycling routes should be provided from Didcot to Milton Park and to the former Didcot A power station site.
- 3.17 The decision to cross the Great Western mainline at the proposed location and not further east where the rail line is in a cutting was made during the Options Appraisal stage (dealt with further in the proof of evidence of Aron Wisdom, paragraphs 8.62, 8.63 and 13.19). Providing a bridge at the location suggested by Mr Jones (see Figure 16) would be unworkable as it would still require the structure to be raised above the surrounding ground level (albeit not as high as the Scheme), but higher than the existing Manor Bridge as it would need to clear the overhead electrical power wires (7.5m above the level of the rails in accordance with Network Rail requirements). Manor Bridge is lower as it is located in a gap between power zones. The area around the alternative bridge site is also very constrained by surrounding road network, meaning that it would be impractical to fit in the necessary road links south of rail line and north of the existing A4130.
- 3.18 Safe cycle facilities are proposed within the Scheme, alongside all the existing and proposed road alignments. The construction of the Scheme could allow the existing A4130 from the Manor Bridge roundabout north to be down-graded, the speed limit reduced and, walking and cycling facilities improved along this alignment. These proposals including 'shared use cycleway and footpath' are included in the recently

published Didcot Local Cycling and Walking Infrastructure Plan (LCWIP) (CD G.4.1) (prepared for SODC and VWHDC – see Figure 15).

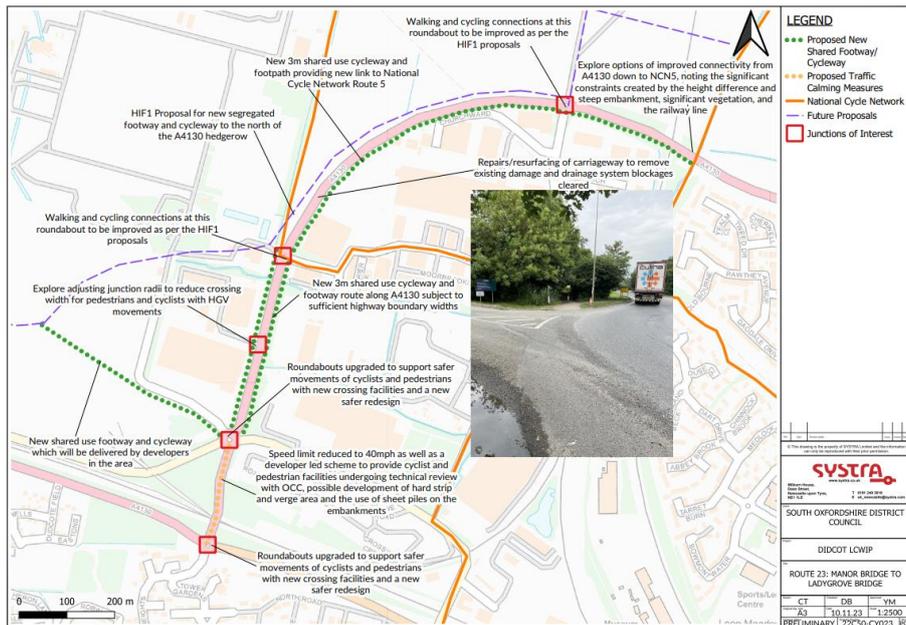


Figure 15: Route 23: Manor Bridge to Ladygrove Bridge (Dwg no. 22C50-CY023, Didcot LCWIP)

3.19 Cycle route connections are proposed as part of the Scheme between the new Science Bridge Link Road and Milton Road, and onto Milton Park, which can also be accessed along the A4130 and through the Backhill Lane tunnel under the rail line. To the south of the rail line the new Science Bridge will also be linked to the existing A4130 towards Didcot through the Valley Park development, in order to provide for an improved cycle network to the west of Didcot.

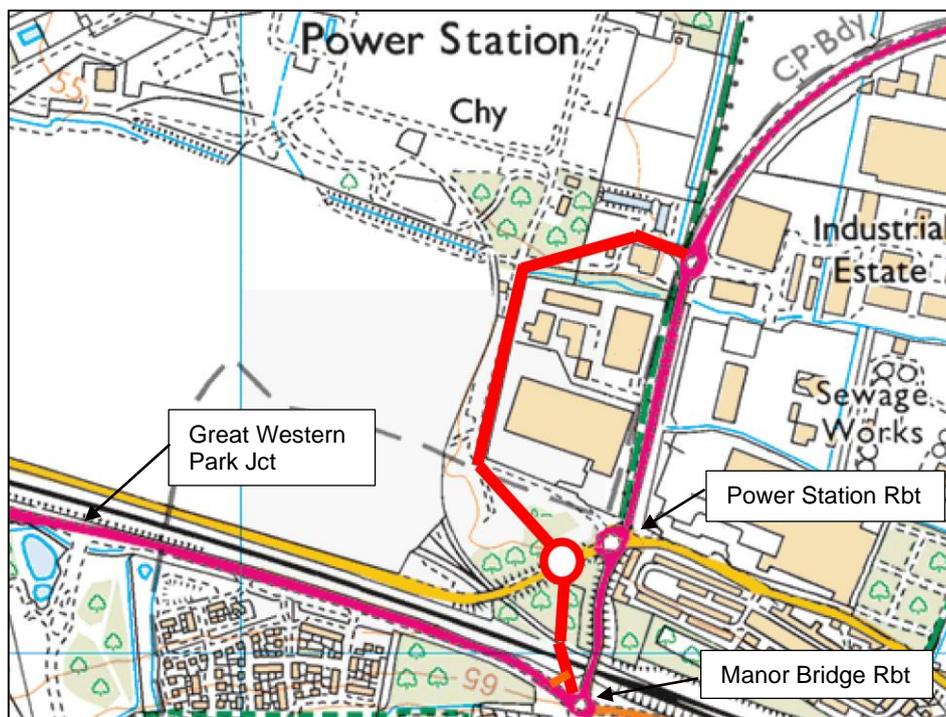


Figure 16: Mr Jones' alternative route indicated by the red line (labels added by author)

3.20 Mr Jones' option of widening the A4130 further into Didcot, as far as the Manor Bridge roundabout would require the loss of tress/habitat both southwest of Manor Bridge

roundabout and southwest and northwest of Power Station roundabout. These are well established groups of trees/woodlands, with the woodland to the southwest of Manor Bridge roundabout being protected by a Tree Preservation Order (TPO number 23/2006) (see Figure 17).



Figure 17: Tree Preservation Order 23/2006, source: <https://maps.southoxon.gov.uk/gis/>

- 3.21 It would also focus all the traffic through the Great Western Park signalised junction (see Figure 16) and into the Manor Bridge area, which would become more congested than under existing conditions.
- 3.22 The one-way proposals by Mr Jones, from the Manor Bridge roundabout, adjacent to Manor Bridge across the rail line do not provide for a direct connection to the north for northbound vehicles or provide a good link to the developments at the former Didcot Power Station (some of which have already been built) and would actually conflict with those proposals in this area.

**Graham Smith**

- 3.23 In a representation dated 6 October 2023 (CD N.29), Mr Smith suggests that the wrong design guidance has been used in the preparation of the Scheme. Mr Smith proposes that MfS guidance should have been used to encourage reduced car use, better public transport and enable active travel.
- 3.24 MfS is intended for application on lightly-trafficked residential streets, but many of its key principles may be applicable to other types of streets, for example high streets and lightly-trafficked lanes in rural areas (MfS, Status and application, page 5). But the Scheme does not fall into these road types so MfS is not considered appropriate.
- 3.25 However, MfS2 which seeks to apply the principles from MfS to busier streets and non-trunk roads, is more relevant to the Scheme. These principles were used in preparing the Scheme design, alongside the more traditional Design Manual for Roads and Bridges Standard. For example:
  - Footways and cycle facilities were at the forefront of the design, and are proposed to be safe, well connected, direct, comfortable and with priority at crossing points, and straight signalised two-stage crossings are proposed over the dual carriageway links.

The Scheme is in compliance with the latest cycling standards (LTN 1/20) except the Science Bridge which has long 5% gradient approaches, where flatter rest areas are proposed.

- Bus facilities were considered in collaboration with the main local bus operator, with new bus stops provided throughout the Scheme. These are typically located in the traffic lane, allowing buses to stop and move off without impediment. But where bus laybys are proposed these are immediately downstream of traffic signals which will enable buses to rejoin the traffic lane in gaps in traffic flows generated by the signals.
- Bus priority will be possible at the signalised junction and signalised crossings through selective vehicle detection – allowing changes to the traffic signal timings when buses are detected, giving priority to the approach where a bus is detected.
- A low design speed was used in preparing the design of the new roads throughout the A4130 Widening and Didcot Science Bridge, more in line with the principles of MfS2 than DMRB – 40mph for the dual carriageway sections and generally 30mph for the single carriageway sections. 20mph speed limits are proposed on some of the side streets.
- Narrow lane widths are proposed along the dual carriageway links, in line with MfS2 to encourage slower traffic speeds, and is a departure from DMRB standards.

### **Orders Objections**

3.26 The following provides a response to the objections raised by a number of objectors related to the A4130 Widening and Didcot Science Bridge elements only - these parties include:

- Network Rail (CD J.1)
- Mays Properties Ltd (CD J.6)
- Sutton Courtenay Parish Council (CD J.9)
- New Farm occupiers (CD J.16)
- WE Gale Trust (CD J.24)
- RWE (CD J.28)

### **Network Rail – *Objection to CPO (CD J.1 and CD M.6)***

3.27 In its Statement of Case dated 15 December 2023 (CD M.6), Network Rail set out its objection to the CPO, which it states would give the power to carry out works and acquire land without securing appropriate protections for Network Rail.

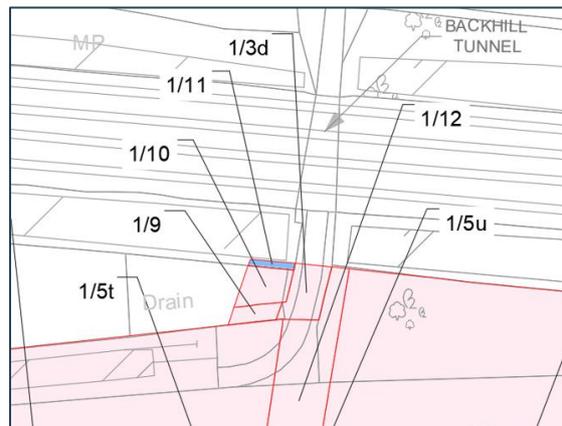


Figure 18: Extract from CPO Sheet 1 (GH-132861001-CPO-1-FINAL): Backhill Tunnel

3.28 In the A4130 Widening element, the CPO affects Network Rail land immediately adjacent to the Backhill tunnel. This land was included in the order to facilitate the re-construction of the adjacent shared use facility (see Figure 18).

3.29 In the Didcot Science Bridge element, the CPO affects Network Rail land in relation to the location of two proposed bridge piers as part of the Science Bridge, the requirement to construct these piers and associated bridge spans, and allow periodic access to these elements for inspection and maintenance purposes (see Figure 19).

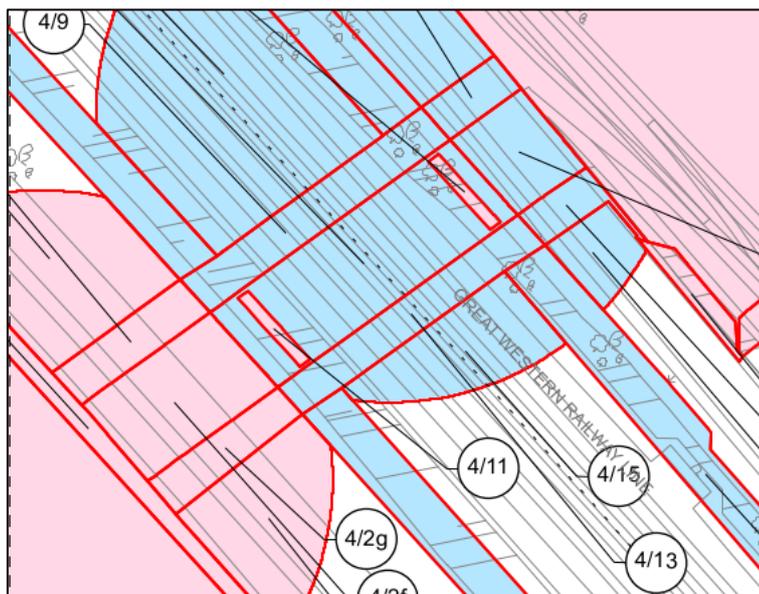


Figure 19: Extract from CPO Sheet 4 (GH-132861001-CPO-4-FINAL): Didcot Science Bridge

- 3.30 Network Rail notes that it and the Acquiring Authority are in the process of negotiating private agreements, pursuant to which the Acquiring Authority will make a request to the Secretary of State for Transport for the modification of the CPO to remove or amend plots of land owned or occupied by Network Rail or over which Network Rail have rights (or the relevant parts of those plots), as may be necessary. These modifications are currently being finalised and will be discussed in the modifications session of the Inquiries, with a table of modifications being presented to the Inquiries in advance of that session.

**Mays Properties Ltd – Objection to CPO and SRO (CD J.6 and CD M.2)**

- 3.31 Mays Properties Ltd (**Mays**) raise a number of concerns about the Orders (see Statement of Case dated December 2023, CD M.2). It should be noted that the design team and consultants engaged by Mays held a number of workshops to coordinate Mays’ plans and the Scheme design. This resolved many of the conflicts between the two proposals, and there are still ongoing negotiations between the Acquiring Authority and Mays, as noted in Steven Moon’s proof of evidence.
- 3.32 It is noted that there is an objection to the inclusion of plot 1/6a in the CPO. This plot is a 10m wide strip of land along the frontage of the proposed widened A4130 (see Figure 20). There is no intention to permanently retain this plot as part of the public highway (see Figure 21), but rather the Acquiring Authority’s intention is to use it temporarily as working space during the construction phase.
- 3.33 The level of the widened road and the adjacent shared use facility is higher than the land within plot 1/6a (see cross-section in Figure 2 on page 7), and in order to construct the path it was identified that it would be safer and more efficient to use plot 1/6a. If this plot is not available then the lack of working space in this area will present significant challenges during construction, for example temporary retaining structures may be required to prevent works from impinging on plot 1/6a. This will have the effect of increasing the construction costs and the period of construction for this section of the Scheme.
- 3.34 Additionally, it is intended that the plot 1/6a strip would be used as a temporary haul road to minimise the impact on users of the A4130 or to provide a temporary route for those walking, wheeling and cycling, as it would allow a NMU facility to be maintained to the south of the A4130 throughout the construction period.

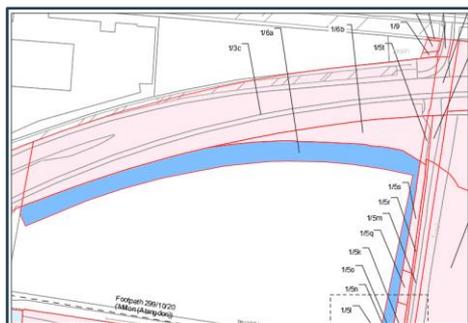


Figure 20: Extract from CPO Sheet 1 (GH-132861001-CPO-4-FINAL), Plot 1/6a

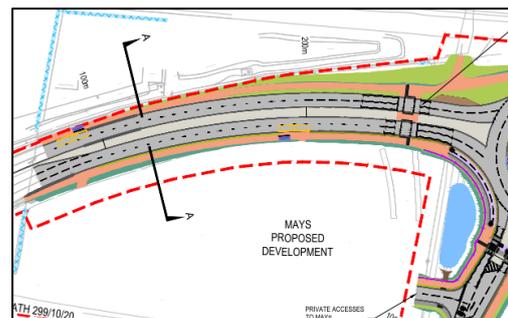


Figure 21: Proposed road widening at Mays Property

- 3.35 In relation to the objection to the stopping up of Backhill Lane private access road and removing the existing rights of access to the Mays’ land (see Figure 22), the SRO provides for a new private means of access from the new south-west arm of the proposed Backhill roundabout, as part of the Scheme (see Figure 23). It is necessary to stop up the Backhill Lane as without this action, the Scheme cannot be built and operate safely. The Scheme provides for a reasonably convenient alternative route to the Backhill Lane access, through the provision of a high-quality paved alternative (south-west arm of the new Backhill Lane roundabout) to the existing track that is undefined on site.

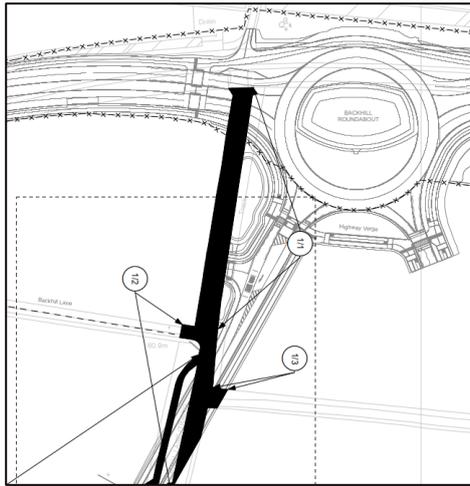


Figure 22: Extract from SRO Sheet 1 (CD H.4) Backhill Lane

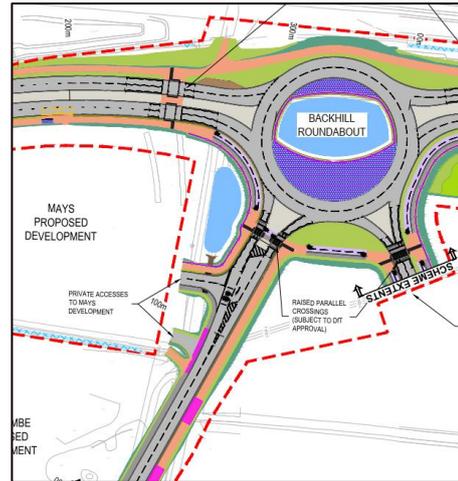


Figure 23: Backhill Roundabout

**Sutton Courtenay Parish Council (SCPC) – Objection to CPO and SRO (CD J.9)**

- 3.36 SCPC in an objection dated 7 March 2023 (CD J.9) has voiced concerns about the delivery of the construction strategy for the Didcot Science Bridge.
- 3.37 Whilst it is acknowledged that the bridge will have to have a significant elevation (13m and 11m above existing ground levels for the northern and southern approaches respectively) in order to safely clear the existing Great Western Rail line and its overhead electrical power wires (by 7.5m in accordance with Network Rail requirements), it is not considered, as SCPC state, to be an ‘*extreme layout*’ (see Figure 14 on page 15). Instead, it poses construction challenges that can be overcome with careful planning and through the use of tried and tested techniques, as described below.
- 3.38 The design team together with Network Rail have agreed a design that can be safely built. Input from an experienced contractor (ECI) identified a feasible construction phasing approach, that will allow the three proposed spans to be constructed. The northern two spans could be installed by cranes from the northern side of Milton Road, while the southernmost span could be installed by a crane to the south of the existing A4130. Careful consideration has been applied to minimise the likely number of rail line closures to avoid excessive numbers of temporary possessions of the rail line. The elevation of the bridge would not have a significant impact on the number or duration of closures. The approach ramps to the either side of the bridge can be constructed independently of the bridge structure, and offline from the existing roads on both sides of the rail line, meaning that impact on the A4130 to the south and Milton Road to the north would be minimised.

**The occupiers of New Farm – Objection to CPO (CD J.16)**

- 3.39 The occupiers of New Farm objected to the Orders on 17 March 2023 (CD J.16) on the grounds of unacceptable disruption as a result of the construction activities, specifically the impacts on noise and safety in proximity of the farm (see Figure 24).
- 3.40 Although it is acknowledged that there will be some unavoidable disruption during the construction of the Scheme, suitable traffic management measures will be put in place by the contractor. Additionally, safety and operational procedures will minimise impacts on safety and noise. These will be enforced by the proposed planning condition for the planning application, through the following documents, the Construction Environmental Management Plan (including a Noise and Vibration Management Plan), and the Construction Traffic Management Plan (CTMP) (further detail is provided in the proof of evidence of Andrew Paggett).

- 3.41 The traffic management measures will include the safe provision for those walking and cycling along the A4130. Depending on the phasing of the construction, it is possible to allow the walking and cycling facilities to the south of the new road, and closer to New Farm to be built early in the construction, allowing benefits to the pedestrians and cyclists to be realised much sooner than the completion of the main carriageway construction. Ultimately the Scheme will significantly improve the facilities for those walking, wheeling and cycling, providing wider and segregated facilities, as well as much greater separation from motorised traffic.

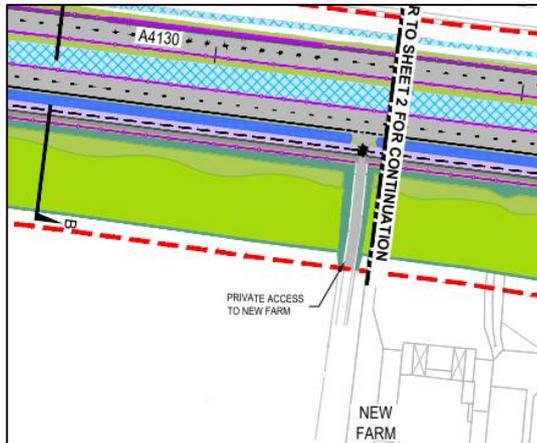


Figure 24: Proposals near New Farm

**The Trustees of the W E Gale Trust – objection to CPO & SRO (CD J.24 & CD M.1)**

- 3.42 In their objection (see Statement of Case dated December 2023, CD M.1), the trustees have queried the purpose for which the land under the CPO (see Figure 25) is required and why it has been included within the CPO. All identified W E Gale plots within the Order are required permanently for the construction of the road and associated areas and infrastructure except for plots 6/3d, 6/3e and 7/1a which would only be required temporarily during construction. In respect of these three plots, they are required for the siting of a construction compound for the Scheme and access to that land off the A4130. It is noted that there are ongoing negotiations between the Applicant and this landowner, as recorded in Steven Moon’s proof of evidence).

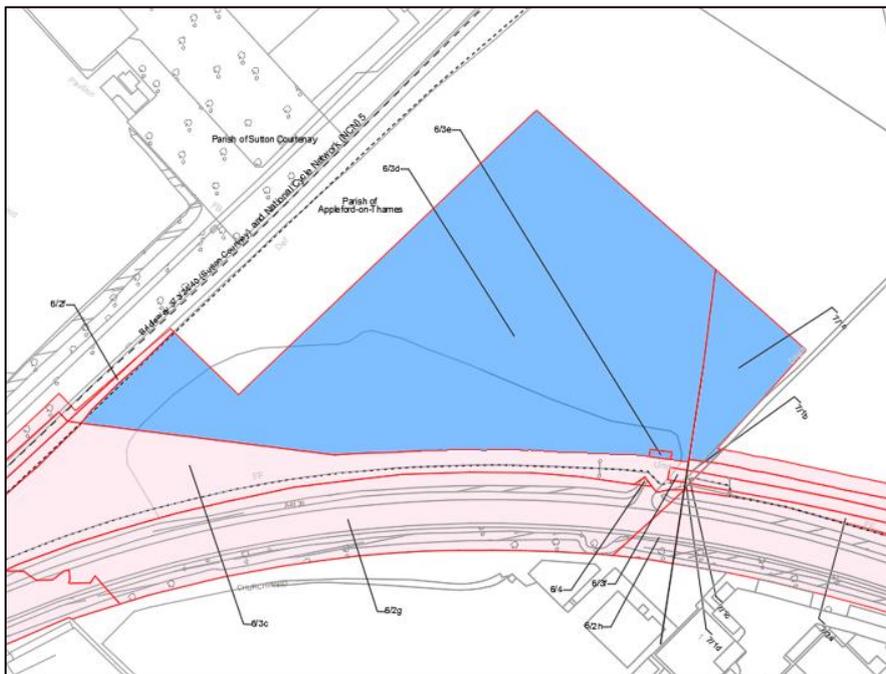


Figure 25: Extract of CPO plans 6 & 7, Plots 6/3d, 6/3e and 7/1a

3.43 The northeastern section of the Didcot Science Bridge element of the Scheme (i.e., away from the main bridge over the Great Western main line) construction is complicated by the presence of the Moor Ditch watercourse, the main access into the former power station site and the associated drainage lagoons (see Figure 26). These issues limit the practical location of a construction compound, with plots 6/3d, 6/3e (access) and 7/1a having been identified as the preferred choice. Consideration has been given to the trustees' alternative proposal for a site compound, (although I have not seen a location plan) it has been concluded that it would not be suitable on account of its distance (1.5km) from the Scheme. It is typical for the construction compound to be located adjacent to the Scheme, to avoid increased financial and carbon costs, and delays associated with transportation between a remote compound and the Scheme construction works. On the basis of the above, the existing location of the works compound is considered the best solution available to deliver the Scheme and the public benefits proposed.

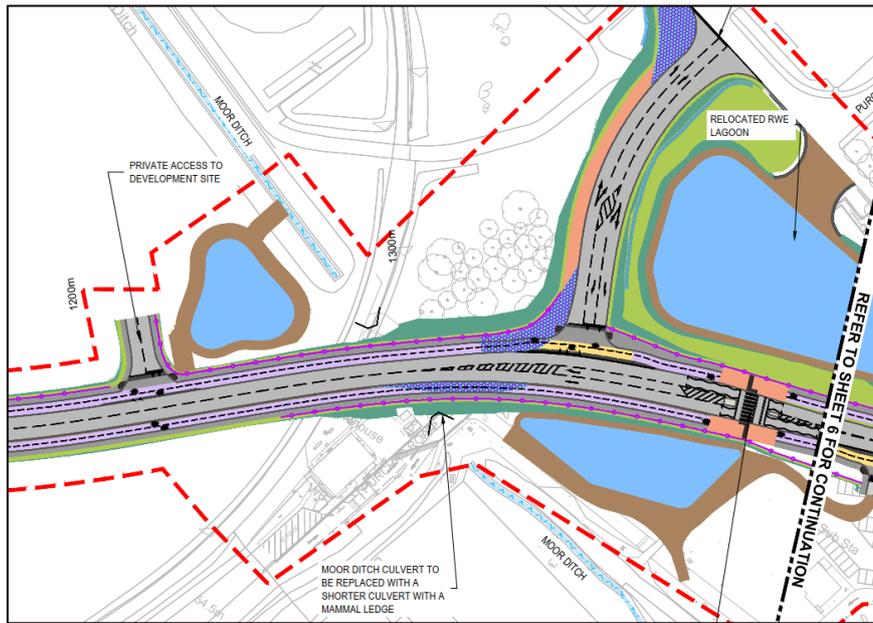


Figure 26: Moor Ditch and Drainage basins/lagoons in former power station site

3.44 The trustees have also suggested that an alternative configuration of the Scheme could provide an appropriate access from the proposed highway to the trustees' retained land. They have pointed out that the Scheme presently does not provide such an access as the whole of the frontage to the land is to be acquired. In doing so they have suggested that the retained land would become land-locked.

3.45 In relation to the access proposals, during the construction phase, a right of access through plots 6/3d and 7/1a would be granted to the objector's retained land to the north of plots 6/3d and 7/1a. On completion of the construction it is anticipated that the trustees would repurchase plots 6/3d and 7/1a, which would have an equivalent access (see Figure 27), in a similar location to the existing access. In the event that the land was not re-purchased by the trustees and all of the land comprising plots 6/3d and 7/1a remained in the Acquiring Authority's ownership then the Acquiring Authority would grant a right of access to the trustees over the land in its ownership to re-provide a suitable access to the retained land.

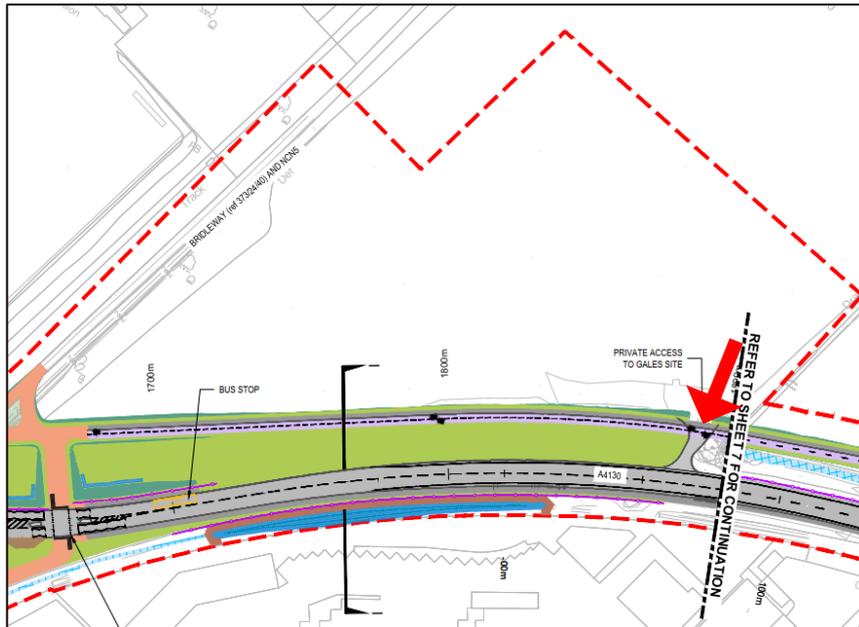


Figure 27: Access to WE Gale's site

**RWE Generation UK plc – Objection to CPO and SRO (CD J.28 and CD M.7)**

- 3.46 RWE has objected to the Orders on a number of grounds. These include concerns over new access and drainage arrangements. It should be noted that the design team and RWE held a number of workshops in 2020 and 2021 to coordinate the landowner's operations, development plans and the Scheme design. This resolved many of the conflicts between the two parties, but RWE notes that not all issues are resolved, including maintaining access to the RWE site, ensuring operational drainage lagoons are provided at all times, and agreement on a replacement gatehouse. There are still ongoing negotiations on heads of terms between the Acquiring Authority and RWE, as detailed further in the proof of evidence of Steven Moon.
- 3.47 During the construction period, access to RWE's premises and the National Grid Substation will be provided at all times by the proposed contractor for the works. This access will be through the construction site and will remain in place until such time as the new road and the permanent replacement means of access to RWE premises is constructed and available for use (see Figure 26). Conditions will be included within the construction contract documents to confirm this requirement, including access for the proposed data centre campus. It is understood that RWE requires access to former Didcot A Power Station site on a 24/7 basis for operational and safety reasons. Through phasing of the construction works, round the clock access can be maintained.
- 3.48 It is my opinion that with the Scheme, future access arrangements to the former Didcot A Power Station site are equivalent to those already existing in terms of heavy and wide loads. The design of the new site access has been developed with RWE in 2020 and 2021, and will provide a ghost right turn lane on the Science Bridge Link Road and, separate left and right exit lanes from the RWE site, to provide capacity for reasonable future development within the site.
- 3.49 As the Scheme development is only at the end of the Preliminary Design, the exact drainage requirements and construction period have not been finalised. However, the detailed designer, the contractor and the Acquiring Authority will work with RWE to ensure that the drainage design, and sequencing of the construction works minimise the impact on RWE's site. The Scheme requires that one of the drainage lagoons will need to be demolished in order to construct the Science Bridge Link Road. But it is recognised that before that can happen a replacement lagoon would need to be constructed. The

location for this replacement lagoon sits on the existing main access road into the former power station site, so the proposed sequencing of works would be the construction of a new access road, followed by construction of the replacement lagoon, demolition of the existing lagoon and construction of the link road (see Figure 12 on page 13).

- 3.50 The design will allow for statutory apparatus (utilities) identified beneath the main access road to be protected, diverted to the new access road or stopped up. The amendment to the statutory apparatus will be sequenced in collaboration with RWE once a contractor is appointed.
- 3.51 The current RWE Gatehouse is located on RWE's frontage land (see Figure 28), which will be severed by the Scheme (through the stopping up of the main access road), making the gatehouse redundant. Under the Scheme, access into the RWE site would be from the proposed link road. An outline application was granted planning permission (reference P22/V2467/O) on 29 November 2022 for a replacement gatehouse to allow the site to be secure with a managed entrance and exit north of the link road. The decision notice is included as Appendix AB2.1 to this proof of evidence.

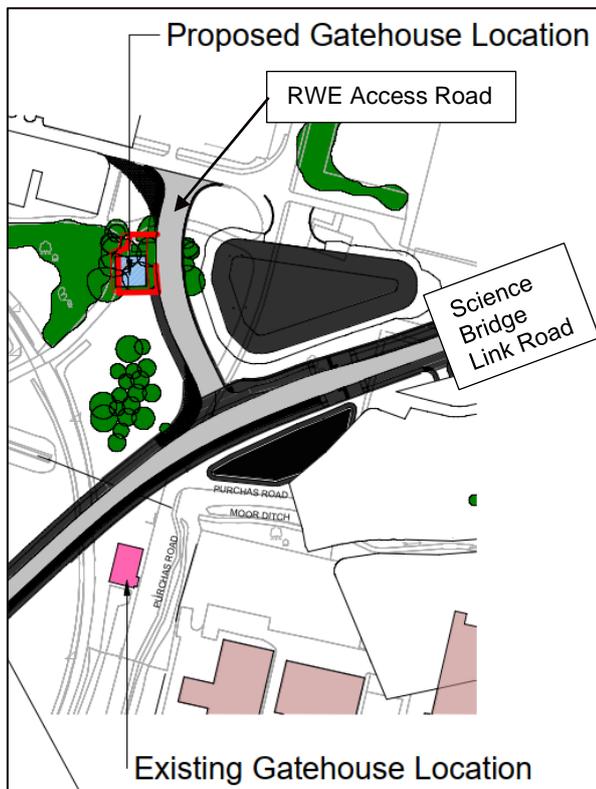


Figure 28: Existing and Proposed Gatehouse locations

- 3.52 For Plot 4/3a, the main access point to Didcot B Power Station, this road will only be used to access the northern construction site for the Didcot Science Bridge structure, so construction vehicle movements are expected to be minimal, and no works are proposed within this land parcel (see blue area in Figure 29). An alternative to the CPO would be a voluntary agreement with RWE where RWE will grant the Acquiring Authority licences to allow use of this road by the construction contractor.

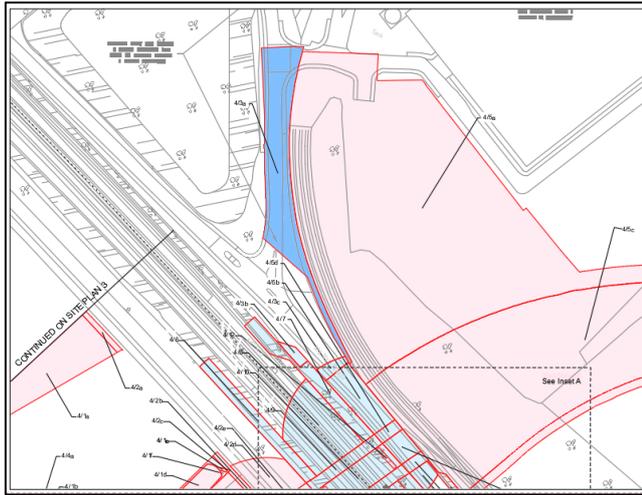


Figure 29: Extract of CPO plan 4, Plot 4/3a

- 3.53 Plot 5/2d will form the new private access road to Didcot Power Station site (see blue area in Figure 30) and on completion of the Scheme, including this access road, the intention is that ownership will be passed back to RWE for potential installation of a security gate and gatehouse. Alternatively, a voluntary agreement could be reached with RWE, where RWE will grant the Acquiring Authority licences to allow occupation of the land and construction of the Scheme, after which the land could be returned to RWE.

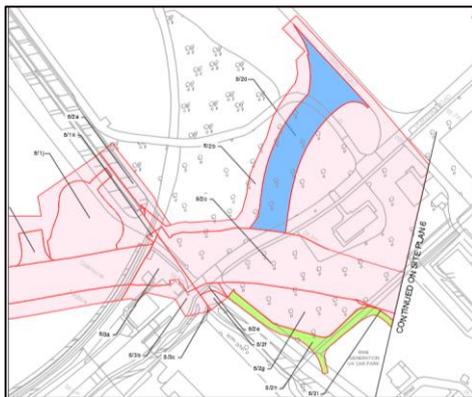


Figure 30: Extract of CPO Plan 5, Plots 5/2d (blue), 5/2h (green)

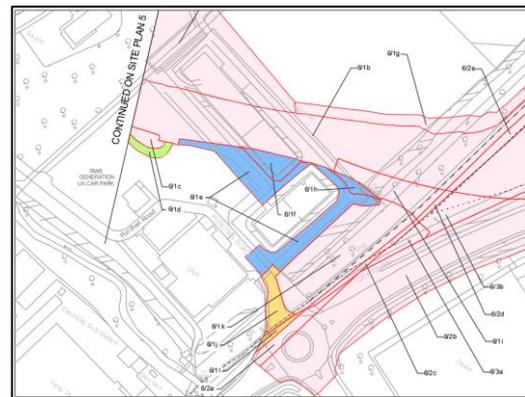


Figure 31: Extract of CPO Plan 6, Plots 6/1d (green), 6/1e, f & h (blue), 6/1i & 6/1j (orange)

- 3.54 Plot 5/2h and Plot 6/1d (see green area in Figure 30 and Figure 31) are required to construct a maintenance access route to the proposed highways drainage basin in plot 5/2g. On completion of the Scheme construction, the intention is that ownership would be passed back to RWE, as they would only be required for occasional future maintenance access. A permanent right of access for highway drainage maintenance would be required for these plots, but as it is likely to be secured, appropriate control measures will need to be agreed. Alternatively, a voluntary agreement could be reached with RWE where RWE will grant the Acquiring Authority licences to allow occupation of the land and construction of the Scheme after which the land could be returned to RWE, subject to the maintenance access rights.

- 3.55 Plots 6/1e, 6/1f and 6/1h are included to allow construction of revised drainage lagoon accesses and the removal of the existing northern drainage lagoon (see blue area in Figure 31). On completion of the Scheme construction, the intention is that ownership of these plots would be passed back to RWE, in order for RWE to maintain the remaining lagoon for operational purposes. Alternatively, a voluntary agreement could be reached with RWE where RWE will grant the Acquiring Authority licences to allow occupation of the land and construction of the Scheme, after which the land could be returned to RWE.

- 3.56 Plot 6/1i and Plot 6/1j are required to allow construction access to the neighbouring plots in the vicinity of the RWE's Technology Support Centre site. It is intended that on completion of the construction ownership of the plots would be passed back to RWE (see orange area in Figure 31). Alternatively, a voluntary agreement could be reached with RWE where RWE will grant the Acquiring Authority licences to allow occupation of the land and construction of the Scheme, after which the land could be returned to RWE.
- 3.57 There were also a number of challenges to the Transport Assessment (CD A.7) from a consultant commissioned by RWE; these included challenges to the traffic modelling completed as part of the Scheme. These points were responded to in the 'EIA Regulation 25 Response' in November 2022, within 'Appendix J RWE Transport Assessment response' (CD B.2), therefore I do not repeat them in my proof of evidence.
- 3.58 The consultant engaged by RWE also questioned if the recommendations from the Road Safety Audit completed during the Preliminary Design Stage had been incorporated into the design submitted for Planning Permission. The majority of the recommended actions were included within the Scheme design as submitted (see RSA which details those recommendations included and those not included in the design (CD A.7 Transport Assessment, Appendix D)), and were as follows:
- the change in speed limit east of toucan crossing was moved 90m from the crossing stop line as per DMRB CD 109 and in line with the auditor's recommendation;
  - at side road junctions, the give way lines were positioned at the bottom of the raised entry treatment ramps and visibility splays checked, in line with the auditor's recommendation. In order to reduce sign clutter the junction warning signs are not proposed, but coloured surfacing was included to highlight the potential presence of cyclists on the cycle track across the side accesses;
  - the parallel crossing warning signs were relocated in the design to be closer to the crossings, in line with the auditor's recommendation;
  - suitable signs were provided where segregated sections of cycleway/footway commence, in line with the auditor's recommendation;
  - street lighting was included throughout the design but is to be delivered by others.

### **Summary**

- 3.59 The section above covers the criticisms to the design under the Planning Application and also the objections to the Orders prepared in support of the Scheme. I have considered the design concerns and objections raised about the A4130 Widening and Didcot Science Bridge elements of the Scheme, and responded to them. In my view the submitted design for these elements is the most appropriate in highway engineering terms.

#### **4 MODIFICATIONS**

- 4.1 The Acquiring Authority has established that it no longer requires Plot 1/11 in the CPO, which is an area of land lying to the west of the northwards approach to Backhill Tunnel and sitting at the southern curtilage of the Great Western Railway Line corridor (see Figure 18). This land was, along with Plots 1/9 and 1/10 (which are to remain), included in the CPO as operational working space and to provide a temporary alternative means for pedestrians and cyclists to access the tunnel whilst works are undertaken to the east on the existing tunnel approach, and which is to be brought within the extent of the A4130 improvement.
- 4.2 The Acquiring Authority is satisfied that use of Plots 1/9 and 1/10 provide the more expedient use of land for the above purpose, and that Plot 1/11 should be removed from the CPO.
- 4.3 Modifications across the Scheme are also detailed in the proof of evidence of my colleague, Karl Chan. Modifications will be dealt with in more detail in the modifications session of the Inquiries and a full table of modifications will be provided to the Inspector in advance of that session.

## **5 SUMMARY AND CONCLUSION**

- 5.1 This proof of evidence covers the technical traffic and highways design of the A4130 Widening and the Didcot Science Bridge elements of the Scheme only.
- 5.2 Section 1 sets out a brief introduction to my background, the purpose of this proof of evidence, then lists the other separate but interrelated proofs of evidence covering the Scheme.
- 5.3 Section 2 begins with a brief summary of the steps undertaken in preparing the design, then details some of the key standards and guidance documents used to prepare the design. The remainder of this section covers the A4130 Widening and Didcot Science Bridge components of the Scheme, explaining how and why the main parts of each of the designs was prepared.
- 5.4 In Section 3, response is provided to criticisms of the design focused on the adequacy of the Didcot Science Bridge to be a gateway feature for Didcot. Engineering constraints around the requirements by Network Rail dictated much of the design approach. It is considered that any enhancements to the appearance of the bridge can be covered through planning conditions.
- 5.5 Apart from the Didcot Science Bridge adequacy, criticisms in respect of the called-in Planning Application concentrate on the walking and cycling elements of the design, alleging both not enough facilities and over-engineered structures. I explain that these criticisms are without merit. Another interested party criticises the location of the Science Bridge and suggests an alternative alignment for the Didcot Science Bridge element of the Scheme; however, this alternative conflicts with other development proposals in the area and is considered impractical due to various constraints. The final criticism focuses around the view that the wrong design guidance has been used in the preparation of the Scheme. My response explains that a broad range of guidance had been utilised, resulting in a design that has active travel and bus improvements as key elements of the Scheme.
- 5.6 Responses have been provided to six parties objecting to the Orders. These include three landowners, one occupier, one Parish Council and Network Rail. The landowners' objections focus on the amount of land being compulsorily purchased and concern over operations of their business and potential development on their land. All three are, in principle, supportive of the Scheme, and it is hoped that the objections can be overcome through negotiation. The occupier is concerned about the general disruption of the Scheme construction, and safety of walking and cycling between their home and school, both of which can be addressed through imposing conditions on the contractor building the Scheme. Finally, the Parish Council is concerned about the constructability of the Didcot Science Bridge, but the bridge has been carefully designed in coordination with Network Rail and an experienced contractor to ensure that it will receive the necessary approvals and can be built safely and efficiently.
- 5.7 There is a single modification to the CPO in the A4130 Widening and Didcot Science Bridge elements of the Scheme, to remove plot 1/11 to the southwest of Backhill Tunnel and relates to an objection from Network Rail, which is no longer considered to be required for working space during construction of the Scheme.
- 5.8 For the reasons outlined above and detailed further in my proof of evidence, the design of the Scheme, and the requisite detail that have translated through into in the Planning Application and the Orders, is the most appropriate design in accordance with highway standards including DMRB, MfS2, LTN 1/20.

**6 STATEMENT OF TRUTH AND DECLARATION**

- 6.1 I confirm that, insofar, as the facts stated in my proof 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 proof of 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 proof of 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 proof of evidence.

**ANDREW GREGORY BLANCHARD**

**30 January 2024**