



Summary Proof of Evidence – Traffic and Transport

(Mr Kamran Haider)

**The Cambourne to Cambridge Order
Inquiry reference (TWA/24/APP/03)**

Transport and Works Act 1992:

Transport And Works (Applications and Objections Procedure) (England and Wales) Rules 2006

Objector Number (OBJ213)

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1 INTRODUCTION

- 1.1 My name is Kamran Haider. I am the Founding Director of Pulsar Transport Planning with over 30 years' of transport planning and highway engineering experience.
- 1.2 I have been retained by Clare Hall (College), Cambridge to provide specialist advice on Traffic and Transport matters pertaining to the Cambridge to Cambourne (CtoC) scheme.

2 SCOPE OF EVIDENCE

- 2.1 My evidence deals with the following transport matters focusing on the section of the CtoC scheme between West Cambridge and Grange Road. It includes:
 - An overview of the proposed scheme and relevant policies
 - A review of the consultation and decision making process
 - A description of the key elements of the scheme design and highway safety issues
 - The impacts of the scheme on the current operation of Clare Hall and on their future plans
 - Alternative route options using Adams Road instead of Rifle Range Road
 - An appraisal of both the Rifle Range Road and Adams Road options using the Applicant's appraisal tool

3 SCHEME AND POLICY OVERVIEW

Proposed Development

- 3.1 The Applicant, Cambridgeshire County Council (CCC), has applied for an Order to authorise works and purchase of land to allow the implementation, operation and maintenance of a guided busway between Cambourne and Cambridge.
- 3.2 The guided busway will pass through major development sites at Bourn Airfield and West Cambridge. The busway will also pass through a section of the Green Belt (West Fields), over the Bin Brook and will travel along an existing track known as Rifle Range Road (RRR) passing adjacent to the southern boundary of Clare Hall.
- 3.3 The Order would authorise CCC to construct, operate and maintain:
 - a two-way guided busway commencing at Sterling Way, Cambourne and terminating at Grange Road, Cambridge;
 - intermediate bus stops along the route and an emergency and maintenance access track running alongside the two-way guided busway for most of the

length of the guided busway which would be accessible to pedestrians and cyclists. Most of the length of the track will also function as a bridleway or permissive bridleway;

- a new travel hub building and Park and Ride site at Scotland Farm, Dry Drayton with access for the buses over the existing bridge carrying Scotland Road over the A428;
- new bridges over the M11 and at Bin Brook to provide for the two-way guided busway and adjoining emergency and maintenance track.

Policy Framework

- 3.4 The NPPF seeks to promote and facilitate sustainable development through the provision of sustainable transport infrastructure. These aims are also reflected in local policy that has been developed in the Cambridge area.
- 3.5 The Greater Cambridge City Deal signed in 2014 provided impetus and funding commitments for transport infrastructure to support growth in Cambridge and the wider area. The accompanying transport strategy promoted the provision of high quality public transport along various corridors, including the St Neots – Cambourne – Cambridge corridor.
- 3.6 To support growth, policy objectives included the provision of busways and segregated bus links from Cambourne up to the M11, however, there are no policies specifically requiring a segregated bus link from Cambridge City Centre to West Cambridge.
- 3.7 The Cambridgeshire Autonomous Metro scheme (CAM) was put forward in 2017 by the Cambridge and Peterborough Combined Authority (CPCA) mayor. CAM became a key transport priority and the CtoC proposals were incorporated within the proposed wider CAM network.
- 3.8 The relevant CAM sub-strategy policy noted that the default assumption for CAM was to include segregated routes.
- 3.9 It was envisaged that CtoC would be delivered first and some sections of the CtoC would be utilised later by CAM, and hence would need to be segregated routes. However, from Cambridge city centre to West Cambridge, the CAM scheme would involve underground tunnels. Therefore, the CtoC section between Cambridge and West Cambridge would not be needed for CAM, and would not need to be segregated.
- 3.10 In any case, the CAM sub-strategy was developed specifically for CAM with the assumption that CAM is the centrepiece of the strategy. Once CAM was cancelled in 2021, the sub-strategy became obsolete.
- 3.11 There are no local policies that I am aware of that specifically require a segregated bus route from West Cambridge to Cambridge. Where a segregated bus route is

mentioned as an option, the policy notes that the bus route should link to the A1303 junction with Queens Road.

4 DECISION MAKING PROCESS

Optioneering

- 4.1 The optioneering process involved a review of both on-road and off-road options.
- 4.2 On-road options were the preferred options for respondents in the public consultation process but were ultimately not taken forward following an option appraisal process using the INSET tool, which is a multi-criteria appraisal framework tool.
- 4.3 The public consultation process does not appear to have been influential in the decision making, whereas the INSET option scoring provided the main reasoning for progressing (and discarding) various options.
- 4.4 The INSET tool provided higher scores for the off-road options.
- 4.5 Initially, in the first appraisal report (OAR 1), the Rifle Range Road option was awarded the higher score. With additional information prior to OAR 3, the scoring was updated and Adams Road achieved a higher score.
- 4.6 Following further discussions with cycle and residents groups between January and June 2020, the decision changed back to RRR. The reasons provided for changing back to RRR have been inconsistent and varied depending on the report or event.
- 4.7 In the June 2020 Greater Cambridge Partnership meeting it was stated that the Adams Road route did not comply with the (now obsolete) CAM sub-strategy, and the preferred route changed to RRR.
- 4.8 No formal INSET rescoring was undertaken. I find this inconsistent with the previous processes that focus on the INSET scoring for the purposes of decision making.
- 4.9 I find the decision making and consultation process to be selective and inconsistent. A robust justification for selecting the RRR route has not been provided by the Applicant, and from the information available to me, the Adams Road route would score higher using the criteria chosen to assess the CtoC scheme.

5 APPLICANT'S PROPOSED ROUTE

Scheme Description

- 5.1 The CtoC scheme proposed by the Applicant would provide a two-way bus route from Cambourne to Cambridge using a combination of new and existing roads.
- 5.2 The proposed route would start at Sterling Way (in Cambourne) and would pass via the Bourn Airfield development, Hardwick, Coton and the West Cambridge site before reaching Grange Road. Buses would then travel into Cambridge city centre along local streets.
- 5.3 The bus only sections would generally consist of a 7.3m wide carriageway and a 3.5m wide emergency/maintenance (EM) track separated by a margin strip or planted swale. From the Brian Pippard Building to Grange Road, there is no margin strip proposed. For the last 65 metres of the bus route (up to Grange Road), the EM track narrows down to a width of 3m.
- 5.4 The purpose of the EM track is to:
- enable maintenance teams to access the Scheme without disrupting bus services
 - provide a utility corridor
 - reduce the risk of pedestrian and cyclist incursions providing them with a safe dedicated shared path
 - provides a safe evacuation route allowing passengers to quickly reach safety on the track. Emergency vehicles would also use this track as their backup route if the main busway becomes blocked.
- 5.5 The EM track would reduce but not eliminate cyclists using the busway.

Bus Route Lengths

- 5.6 I measure the total length of the bus route from Cambourne (Sterling Way) to Grange Road as 12.93 km. The distance from Grange Road to Cambridge rail station is a further 4.05km.
- 5.7 A review of the RRR bus route shows that it would be shared/unsegregated for approximately 44% of the total bus route from Cambourne to Cambridge rail station.

Adams Road Route Level of Segregation

- 5.8 The Adams Road route is a more direct route to Grange Road compared with the RRR route. It is approximately 220m shorter.
- 5.9 The bus route length from Adams Road/Grange Road to Cambridge rail station is approximately 4.50km.

- 5.10 Adams Road route will be shared with other vehicles for 49% of the route compared with 44% for the RRR route.
- 5.11 Both routes are segregated for the majority of the route. Whilst the RRR route has a higher proportion of segregation, the difference is relatively small.
- 5.12 As noted above, the OAR 3 acknowledged that RRR would need to be shared with other road users. If the RRR section is included as a shared route, this would reduce its segregated route percentage further.
- 5.13 This minor difference is at odds with the importance placed on the segregated nature of RRR in the decision-making process undertaken by the Applicant.

6 RIFLE RANGE ROAD DESIGN ISSUES

Road Safety Audit

- 6.1 A Stage 1 Road Safety Audit (RSA) has been undertaken by CCC's RSA team on the CtoC scheme. Five problems have been identified at the proposed signal junction arrangement at Grange Road, with a series of recommendations suggested by the auditors.
- 6.2 The Designer's Response from the Applicant accepts most of the recommendations but does not demonstrate that the recommendations can be achieved. The Applicant acknowledges that there are land constraints around this junction and notes that the recommendations will be taken forward within subsequent design stages. It is my view that without additional landtake (outside the limits of the draft Order), the Applicant is unable to act upon a number of the recommendations.
- 6.3 A key highway safety problem is an existing vehicular access into Clare Hall at the corner of the junction. The proposed junction design would require vehicles to overrun the shared use path and tactile paving to gain access whilst also having to negotiate the traffic signal equipment. The recommendations notes that the design should maintain a safe or alternative access arrangement into Clare Hall.
- 6.4 The Applicant agrees that the design should maintain a safe or alternative access but does not put forward a solution, instead stating that this will be taken forward as part of subsequent design stages. In recent discussions the Applicant has stated the Clare Hall access will be retained.
- 6.5 There is no certainty that a solution can be found to address the safety concerns raised by the auditors. I consider the current junction proposals to be unacceptable in terms of highway safety, and contrary to NPPF paragraphs 116 and 117, CCC's Highways Development Management (HDM) document and Policy 80 of the Cambridge Local Plan.

- 6.6 The RSA issues do not appear to be resolvable without acquiring land outside the limits of the Order applied for by the Applicant.

Substandard shared cycleway/footway widths on RRR

- 6.7 The bus route consists of a 7.3m wide carriageway, and an emergency/maintenance (EM) track. The EM track is also proposed to be used as a shared cycle/footway.
- 6.8 The 3m (or 3.5m in sections) EM track width would not meet Cambridgeshire's HDM guidance for pedestrian/cycle facilities.
- 6.9 It is also highly likely that future cycle demand would exceed 300 cyclists per hour during peak periods, meaning that it would not comply with the DfT's Cycling Guidance LTN 1/20.
- 6.10 There is also no scope to increase the width of the EM track adjacent to Clare Hall in the future to allow for a higher number of pedestrians/cyclists, unless additional land is acquired from the Rugby Club or Clare Hall.
- 6.11 It is also contrary to the NPPF (paragraph 117), which states that development should give priority to pedestrians and cycle movements first. The scheme incorporates substandard cycle/pedestrian facilities along the bus route and particularly along the section adjacent to Clare Hall.

Cycle/Pedestrian Conflicts along EM Track

- 6.12 The EM track is also intended to be used for routine servicing/maintenance of the busway and emergency vehicle use. The intention is for maintenance vehicles to drive along the EM track.
- 6.13 There will be conflict between vehicles using the EM track and pedestrians/cyclists. As noted above, the EM track width does not meet standards for pedestrians/cyclists, which would result in conflict between these two users. The introduction of vehicles (even occasional vehicles) would result in further conflicts.
- 6.14 The Applicant has not demonstrated how pedestrians, cyclists and vehicles will be managed along the EM track. The EM track has the potential to be a busy pedestrian/cycle route but allowing vehicles to drive along the EM track would lead to unacceptable highway safety impacts.

7 CLARE HALL IMPACTS

- 7.1 Clare Hall requires vehicular access to their workshop and greenhouses, which support their ongoing operations as well as maintenance of their southern boundary along RRR. This vehicular access occurs at the junction of Grange Road/RRR.

- 7.2 Continued vehicular access from this point, would have safety implications for road users following implementation of the busway. Access to the skip would also result in the blockage of the proposed EM track on RRR, as discussed previously.
- 7.3 Clare Hall requires continued vehicular access along its southern boundary on RRR. To avoid an unsafe highway arrangement in terms of conflict with pedestrians and cyclists, Clare Hall's maintenance vehicles will need to share the carriageway with buses.
- 7.4 The applicant proposes that maintenance vehicles stop and park on the EM track. Pedestrians and cyclists would then need to be diverted around the stationary vehicle, potentially on to the carriageway. This would also have an impact on bus journeys.
- 7.5 Clare Hall also has future development plans including a new auditorium building and a student accommodation block along its southern boundary adjacent to RRR. Both of these will require construction access from RRR.
- 7.6 In addition, the auditorium will also require ongoing operational access from RRR, for deliveries of bulky equipment.
- 7.7 Again, I do not consider construction and delivery vehicles driving along the EM track to be an acceptable arrangement in terms of highway safety. These vehicles will need to share the carriageway with buses.
- 7.8 These vehicles will either need vehicles to reverse on or off the carriageway into the Clare Hall site, or if considered preferable by the Applicant, load/unload from the EM track. The latter arrangement will require vehicles to drive from Charles Babbage Road to Grange Road. Depending on the applicant's preferred arrangement, pedestrians and cyclists would need to be diverted around the stationary vehicle, potentially on to the carriageway.
- 7.9 Some cyclists that are required to join the carriageway (even for a short section) may decide to carry on using the carriageway. Other cyclists travelling from West Cambridge to Grange Road may decide to use the section of the carriageway from Charles Babbage Road to the point where the EM track joins the carriageway (or beyond).
- 7.10 The above highlights that there are likely to be a range of users of the bus route carriageway. These could include cyclists, maintenance vehicles (for Clare Hall and for the busway) and the users that already have rights to use RRR (Jesus College, St John's College, Kings College School and the Rugby Club). The route will be shared and is not segregated. This was reflected in the last Option Appraisal Report.
- 7.11 The applicant has noted that they do not object in principle to construction access on the RRR route but have stated that this should not interfere with the operation of the busway and would be considered as part of the planning application process. It is unclear what would be construed as interference.

- 7.12 Clare Hall requires a legally enforceable agreement with the Applicant to allow it appropriate access via RRR to their future developments.
- 7.13 Without a suitable legal agreement, the current CtoC scheme has the potential to restrict Clare Hall's future development plans. The consequences of this are described in Professor Alan Short's proof.

8 ADAMS ROAD OPTIONS

- 8.1 I have put forward two options.
- 8.2 Option 3 includes a segregated bus route running from Charles Babbage Road (as per the Applicant's scheme) which then heads towards Adams Road by running parallel to the Coton Path. The existing cycle path and footpath along the Coton Path would be retained in its current form.
- 8.3 Option 3 includes further segregation at the Adams Road junction with Wilberforce Road, and priority to cyclists travelling between Adams Road and the Coton Path. The proposed layout also provides improved pedestrian connections from the Adams Road southern footway on to the Coton Path, and introduces additional pedestrian crossing facilities at the junction.
- 8.4 On Adams Road, on-street parking would be removed through the introduction of double yellow lines and 2m wide advisory cycle lanes would be provided in both directions along Adams Road.
- 8.5 A Stage 1 RSA for option 3 has been undertaken and a Designer's Response prepared. The auditor did not raise any significant safety problems associated with the proposals, demonstrating that a CtoC scheme involving Adams Road is both technically possible and acceptable in highway safety terms. In contrast, the RSA for the Applicant's scheme raises a number of fundamental safety concerns, and the Applicant has not demonstrated that these can be resolved.

Comberton Greenway

- 8.6 GCP has prepared plans for a scheme on Adams Road as part of the Comberton Greenway proposals.
- 8.7 The proposals on Adams Road are described as a "Cycle Street" and will create a more cycle dominant arrangement but will not remove all conflict between cyclists and motorised vehicles, as the central cycle path would still be used by other vehicles.
- 8.8 It is understood that construction works for the Adams Road Cycle Street are scheduled to start in mid-September 2025.
- 8.9 I have produced an Option 4, which is a further alternative bus route scheme on Adams Road, which incorporates the principles of the Cycle Street. This includes a central path for cyclists using coloured surfacing and incorporates planters within the footway. The proposed carriageway width is wider than GCP's Cycle Street proposals, to allow for two buses to pass along Adams Road.
- 8.10 To improve safety for cyclists, further speed reducing measures including ramps have been incorporated into the design. Planters/verges are also retained in the design to provide localised narrowings to further reduce speeds.

- 8.11 A Stage 1 RSA has been undertaken on Option 4 and a Designer's Response has been prepared.

Overall Traffic Reduction on Adams Road

- 8.12 On Adams Road, the increase in traffic as a result of the new bus route would be offset by a reduction in traffic volumes by commuter vehicles no longer seeking a parking space.
- 8.13 As well as the associated reduction in traffic, the removal of on-street parking on Adams Road would improve cycle safety by eliminating:
- vehicles waiting along Adams Road to enter a parking space;
 - vehicles parallel parking into spaces; and
 - vehicle doors opening on to the carriageway.

Journey Time Impacts

- 8.14 I recognise that a segregated free flowing route would be quicker than a route that is shared.
- 8.15 I have estimated that as a worst case (for Adams Road), journey times could be 45 seconds longer. Over a distance of 17km, this is not considered to represent a significant difference.
- 8.16 I have reviewed bus journey times from Grange Road to Cambridge rail station in the evening peak using the U services. These are in the order of 25 minutes. Again, an additional 45 seconds for a journey that would then take a further c.25 minutes into Cambridge is likely to be imperceptible to passengers.

Increased Routing Flexibility

- 8.17 The Adams Road/Grange Road junction can be amended to allow buses to turn from Adams Road towards Madingley Road. These amendments are shown on both the Adams Road route options I have put forward.
- 8.18 This provides greater flexibility in terms of routing buses, as it would be possible to route buses north along Grange Road via Madingley Road and/or south along Grange Road.
- 8.19 Even if it is decided that bus services should be routed to the south (as per the Applicant's proposals for RRR), the Adams Road junction layout provides greater resilience for bus services in the event that there are road closures along the southern route.

9 OPTIONEERING AND SCHEME COMPARISON

- 9.1 The Applicant relied heavily on the INSET (multi-criteria assessment framework) tool for the decision-making process up until January 2020.

Option Appraisal

- 9.2 The Options Appraisal assessment utilised a scoring system (INSET) developed by Mott McDonald. In their final options appraisal report, the Applicant recommended that Adams Road form part of the preferred route, however, the decision was changed a few months later, following further stakeholder feedback and a review of the scheme against the CAM sub-strategy, the Applicant reverted back to RRR as the preferred route. No INSET analysis was undertaken to justify this decision.
- 9.3 In the Environment Statement Addendum 2 document, the Applicant has stated that if the INSET were to be revisited, RRR would score higher than Adams Road. Their calculations are incorrect.
- 9.4 I have undertaken an INSET analysis and have made reference to other experts on non-highway matters. I score Adams Road at 3.29 and RRR at 2.06. A higher score representing a better route when reviewed against scheme objectives.
- 9.5 There will always be a degree of subjectivity but in my view, the scores are sufficiently far apart to justify Adams Road as the preferred route.

Route Option Cost Comparison

- 9.6 Gleeds have prepared cost estimates, on behalf of Clare Hall, for the Applicant's scheme and as a comparison, costings were also prepared for the two Adams Road options that I have proposed.
- 9.7 The costings were for the section between Charles Babbage Road to Grange Road for all three cost estimates.
- 9.8 The estimated project cost for the RRR route was estimated at £23.9M, whilst Option 4 Adams Road scheme was estimated to cost £13.2M, and Option 3 Adams Road at £12.2M.
- 9.9 The difference in cost between the RRR and Adams Road options is estimated at c.£10.7M or £11.7M depending on the Adams Road option.

10 SUMMARY & CONCLUSIONS

Consultation and Decision-Making Process

- 10.1 The consultation and decision-making process that led to the selection of the off-road route via RRR has been flawed and inconsistent.
- 10.2 The public consultation results appear to have had very little influence in determining whether to proceed with a route option.
- 10.3 The Applicant has primarily used a bespoke multi criteria appraisal framework tool called INSET to provide scores for each option and then provided recommendations based on these scores.
- 10.4 After three options appraisal reports and three rounds of using INSET, Adams Road was considered part of the preferred off-road route.
- 10.5 The preferred route was changed to RRR in June 2020 without an updated INSET analysis. The reasoning provided for the change has not been justified.

Level of Segregation

- 10.6 The RRR route from Cambourne to Cambridge rail station would be shared for 44% of its route.
- 10.7 The Adams Road route would be shared for 49% of its route. This represents a relatively minor increase of 5% compared to the RRR route. The importance attached to incorporating a segregated section of route in this area has also been overstated.
- 10.8 RRR will be used by at least four other parties that currently enjoy rights of access along this route. Some cyclists may also use the carriageway rather than the EM track. The carriageway may also be used by maintenance and construction vehicles associated with Clare Hall. The Applicant has acknowledged that the RRR would be a shared route, and will have an impact on the bus service's journey time reliability.

RRR Design Issues

- 10.9 Highway safety issues have been raised by safety auditors on the design of the Applicant's Grange Road/RRR junction layout, which in my view do not appear to be resolvable without acquiring additional land outside the limits of the Order.
- 10.10 The EM track is intended for shared cycle/pedestrian use. It is below the minimum width set out in local and national guidance.
- 10.11 The EM track would also be used by maintenance vehicles associated with the CtoC, and potentially also by Clare Hall. Given the level of pedestrians and cyclists that could use the EM track, this poses significant highway safety issues.

Impact on Clare Hall

- 10.12 Additional development is essential for Clare Hall to maintain their world-class reputation. The Applicant has not confirmed that either construction or any other access to allow the existing operation or future development will be allowed along RRR. Clare Hall seeks a legally enforceable agreement to allow them appropriate access along RRR.

Adams Road Route Options

- 10.13 I have put forward two busway options that involve routing via Adams Road. It has been demonstrated that there is a safe and viable alternative option that can utilise Adams Road rather than RRR.

Option Testing

- 10.14 I have used INSET to score the Adams Road and RRR options. My results show that Adams Road scores higher and therefore, should form part of the preferred route.

Summary

- 10.15 It is concluded that there would be unacceptable highway safety impacts associated with the RRR scheme. Furthermore, the case for the scheme has not been justified when assessed against scheme objectives and a safe and viable alternative bus route is achievable via Adams Road.

11 DECLARATION

- 11.1 I confirm that the evidence presented in this statement is true and given in accordance with the guidance of my professional institution, the Chartered Institution of Highways and Transportation.



Kamran Haider

19/08/25



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