

TRANSPORT AND WORKS ACT 1992

TRANSPORT AND WORKS (INQUIRIES PROCEDURES) RULES 2004

NETWORK RAIL (CAMBRIDGE SOUTH INFRASTRUCTURE ENHANCEMENTS) ORDER

MAIN PROOF OF EVIDENCE ON MATTERS OF TRANSPORT

GRAHAM HUGHES ON BEHALF OF THE UNIVERSITY OF CAMBRIDGE

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Author	Graham Hughes
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1 QUALIFICATION AND EXPERIENCE

- 1.1 I am Graham Peter Hughes. I hold a BA (Hons) degree in Geography/Economics, an MSc in Transport Planning and Economics, and a Diploma in Town Planning. I am a Fellow of the Chartered Institute of Highways and Transport.
- 1.2 I have 33 years' experience working in both consultancy and Local Government, all working on highways and transport issues. Most recently, I have held several senior leadership positions at Cambridgeshire County Council including Service Director for Highways and Transport and Executive Director for Place and Economy.
- 1.3 During my career, I have led the development and implementation of many major transport schemes and have provided professional evidence to a number of Public Inquiries. I am familiar with the Transport and Works Act 1992 ("**TWA**") and procedures around it and was Cambridgeshire County Council's key witness in the 12-week Cambridgeshire Guided Busway TWA Order Inquiry in 2005. More recently, I have advised internally within Cambridgeshire County Council on process around TWA for a range of new Busways.
- 1.4 Since April 2021, I have worked for Stantec as a Strategic Adviser on transport, highways and planning matters and am qualified to give evidence to this Inquiry.

2 INTRODUCTION

Scope of Evidence

- 2.1 This proof covers the highways and transport aspects of the proposed Network Rail (Cambridge South Infrastructure Enhancements) Order (“**Order**”) which is the subject of this Inquiry. It considers the current proposals as part of the Order scheme (“**Scheme**”) from Network Rail for haul roads and access to construction sites for the proposed new station and implications for parking in relation to University of Cambridge (“**University**”) uses and buildings. It considers the adequacy of the information presented by Network Rail to date and requirements of the University to overcome its objections.

The University’s Interest

- 2.2 The University’s interest which is the subject of this proof is the Anne McLaren Building (“**AMB**”) and its associated car parking and an area of undeveloped land referred to as Plot 9.
- 2.3 The proposed location of the haul roads and the working methodology could have an impact on some or all of these interest areas and that impact is the subject of this proof of evidence.

Summary of the University’s Case

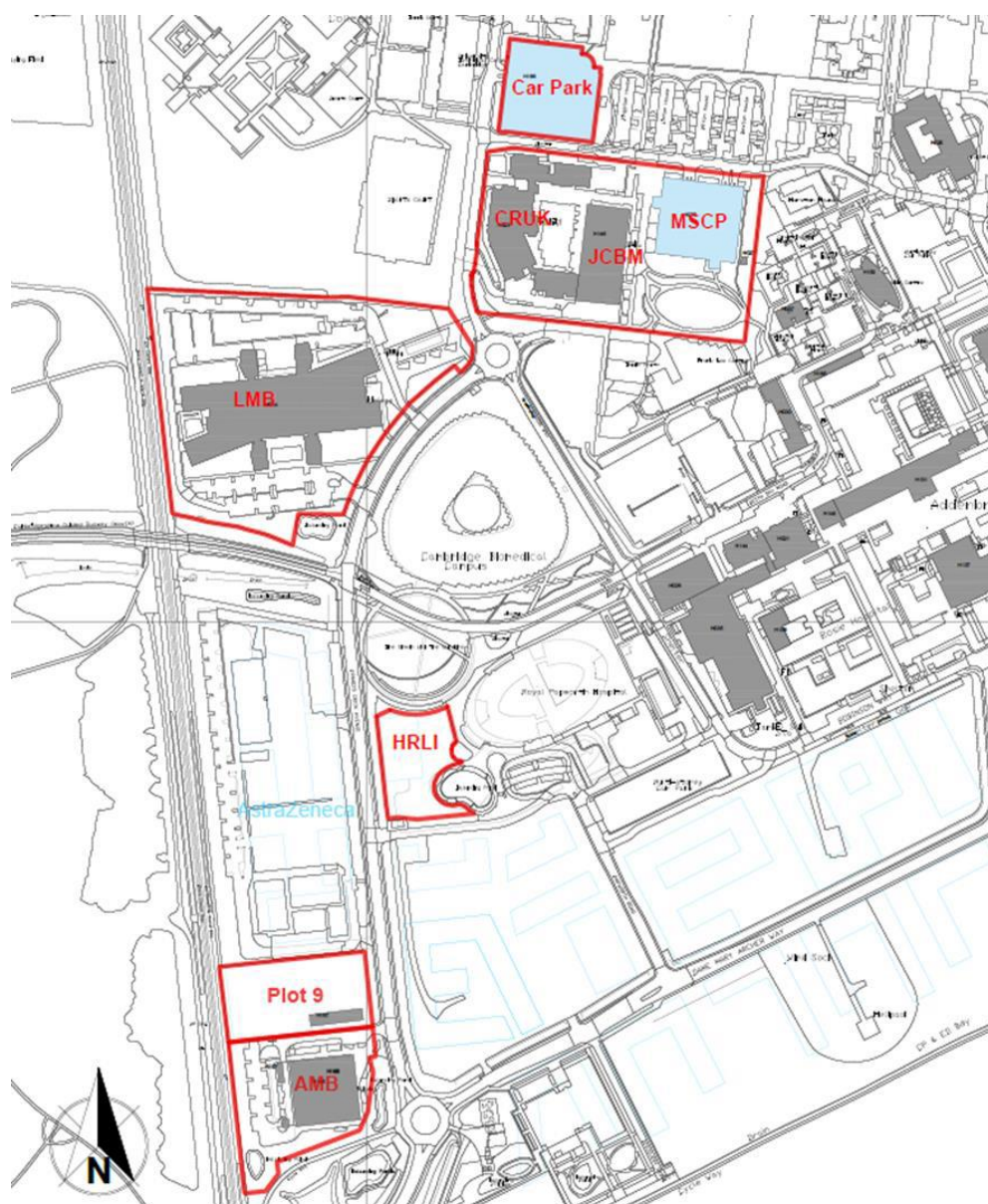
- 2.4 The University’s case on transport and access relates to the impacts of the construction and operation of the new station and the inadequacy of mitigation measures proposed.
- 2.5 Through both the construction and operational phases of the proposed new station, there will be impacts that unless mitigated, will affect the operation of the AMB and potential future uses on Plot 9. This is based on the proposed construction access points as noted in Chapter 17 of the Environmental Statement (“**ES**”) which also contains details of and quantifies the number of vehicles proposed to access the site during construction.
- 2.6 From the ES, the track works and the station building works will be on both sides of the existing rail line and so compounds and haul roads will be on both sides of the existing track. This means that during the construction phase, works and access which will cause noise and vibration will be in close proximity to the AMB and Plot 9.

- 2.7 From the ES, operational impacts will be significantly less than the construction phase given that, in the short term at least, the number of train services will not increase significantly and the majority of access to the station will be by sustainable modes, but nonetheless, there is still the potential to cause disruption to the AMB and Plot 9 through noise and vibration.
- 2.8 The University's case is that although these impact areas are identified, there is insufficient information in the ES to satisfy the University that those impacts will not affect its operations in the AMB and potential operations on Plot 9.
- 2.9 The University's case is also that the proposed mitigation in terms of access to the site during construction amounts, in reality, to just what is generally good practice and does not acknowledge the special circumstances of the AMB or other site occupiers. The ES contains no discussion of alternatives to the proposed haul roads that have been considered and alternative forms of mitigation beyond good operational practice. I consider these points further below.

3 CONTEXT

- 3.1 The AMB and Plot 9 are adjacent to each other, and both are accessed from Francis Crick Avenue to the east. Both are bounded to the west by the Cambridge to London Rail line on which the new Cambridge South Station is proposed. Parking is contained within the AMB site.
- 3.2 Francis Crick Avenue provides a link from Long Road to Hauxton Road. Both are adopted highways and lie to the north and southwest of the AMB respectively. Whilst well used by traffic, Francis Crick Avenue does not provide a through route between Long Road and Hauxton Road as camera enforcement, backed up by penalty notices, is in force. This is to prevent the Biomedical Campus internal road network being used as a 'rat run'.
- 3.3 The Cambridge to London rail line is a high-capacity line consisting of two tracks with passenger services running in excess of 18 hours per day and freight operations operating longer. South of the AMB, the rail line splits with one branch running to London Liverpool Street and the other to London Kings Cross.
- 3.4 The location of the AMB and Plot 9 and the surrounding transport infrastructure can be seen in the following figure (**Figure 1**). Access rights held by the University in this area are identified in the evidence of Paul Milliner.

Figure 1



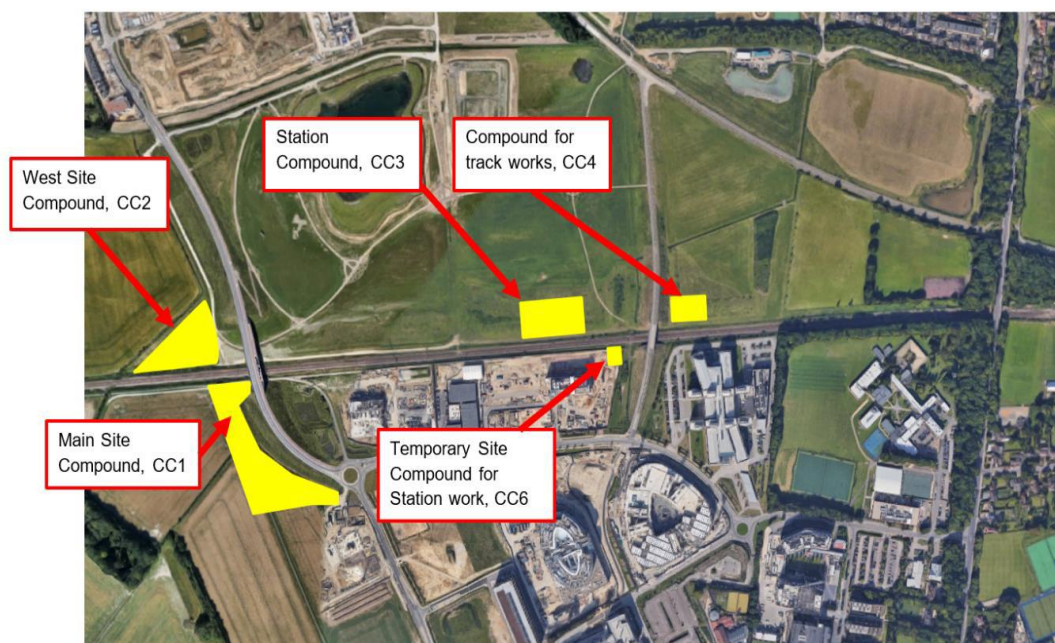
4 THE UNIVERSITY'S CONCERNS

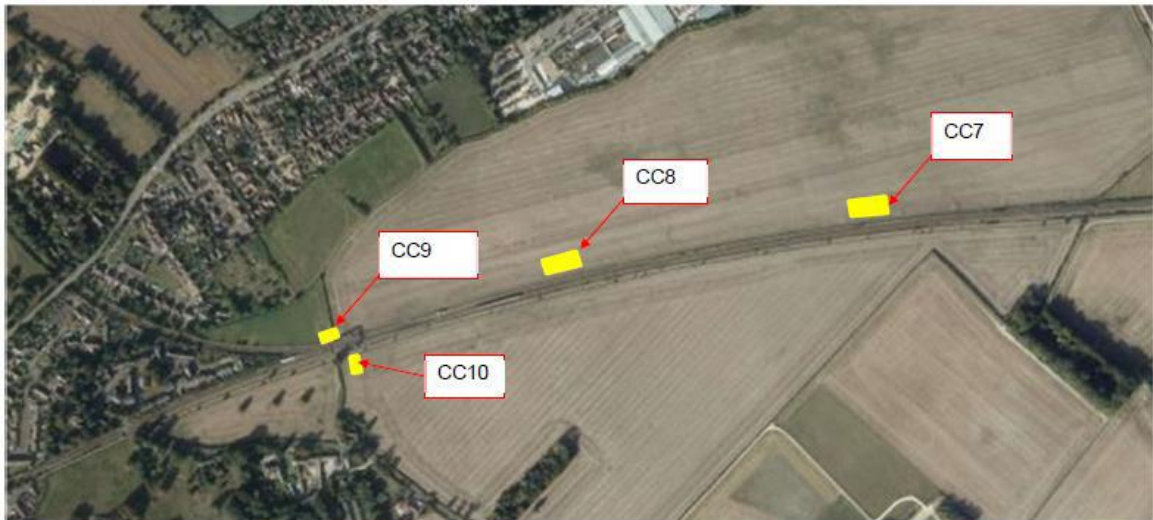
- 4.1 The University's main concerns in relation to the Scheme are the noise and vibration impacts on the AMB and potential occupiers of Plot 9 through the construction and operation of the proposed rail station. The University is also concerned to maintain its access (including its access rights) to the AMB and Plot 9.
- 4.2 The University submitted its objection to the proposed Order on the 30 July 2021. In terms of noise and vibration, this identified that there are likely to be significant impacts during the construction of the proposed new station. The University's objection did not make specific reference to the location and operation of access roads (including the access rights held by the University), haul roads and the construction compounds, but it is clear that where these are located and the form they take will, in turn, impact on the noise and vibration impacts of the Scheme proposals.
- 4.3 As noted in the University's objection to the Order, these impacts are important because they have the potential to disrupt the essential and very sensitive research that takes place in the AMB and, depending on the occupier, could take place in a building situated on Plot 9.
- 4.4 Construction access is an ancillary activity to the main construction and operation of the proposed rail station. The noise and vibration impact of construction is the subject of another proof of evidence, presented to this inquiry on behalf of the University by Mr Rupert Thornely-Taylor. Therefore, in this proof of evidence, I deal with how the construction, maintenance and operation of the access roads (including the access rights held by the University), haul roads and construction compounds will impact on the noise and vibration impacts.
- 4.5 I explain these concerns below by reference to a review of the ES submitted in support of the Scheme, as regards transport-related matters that are relevant to the University's objection.

5 REVIEW OF ENVIRONMENTAL STATEMENT

- 5.1 Chapter 17 of the ES contains details of the proposed construction access roads and quantifies the number of vehicles proposed to access the site and the routes they will take, with an estimated peak in numbers occurring in 2023, subject to if and when approval to the Order is granted. It also shows the proposed construction compounds to build the station and the proposed haul roads from the highway network to access the construction compounds. As expected, given that the track works and the station buildings will be on both side of the existing rail line, construction compounds and haul roads are on both sides of the existing track. The proposed arrangements are shown in the following figures (**Figures 2 to 5**) taken from the ES.

Figures 2 and 3: Site construction compounds
(taken from Environmental Statement)





Figures 4 and 5: Haul Roads (taken from Environmental Statement)





- 5.2 Paragraphs 17.4.3 – 17.4.24 of the Environmental Statement outline the proposed approach to assessing construction impacts and mitigation based upon the proposed locations of haul roads and site compounds. This contains measures for managing the impacts during construction as a result of activities. In reality, these proposals amount to no more than good practice and what would be adopted on any major construction site to manage impacts. The proposals for management and mitigation do not reflect the special circumstances of the AMB and potential uses on Plot 9 (as set out in the evidence of other experts for the University, including Mr Karl Wilson and Mr Paul Milliner) and in particular, the extremely sensitive nature of the research that takes place there.
- 5.3 The Proof of Evidence of Mr Rupert Thornely-Taylor deals with the specifics of the impacts of noise and vibration, including from construction traffic, on the AMB. The purpose of my proof is to consider the proposed infrastructure that forms the access roads, haul roads and construction compounds.
- 5.4 In my view, whilst the access roads, haul roads and construction compounds all appear to be sensible from a construction perspective, there is no meaningful discussion in the ES of alternatives that have been considered and alternative forms of mitigation that could be adopted beyond good operational practice for responsible contractors to minimise impacts. Given the significance of the receptors in the AMB, I would have expected that options would have been considered to demonstrate that in Network Rail's view, the suggested approach has an acceptable level of impact and that level of impact can be maintained throughout the construction period for the proposed Scheme. This, in my view, is an omission and given the sensitivity of the AMB, until resolved, will remain an objection of the University to the proposed Order.

- 5.5 I do acknowledge that given the rail line is a linear piece of infrastructure and the station buildings are proposed on both sides of the track, construction access and site compounds are likely to be required on both sides of the tracks; constructing from one side only, is likely in my opinion to not be feasible. However, that does not in my view, remove the responsibility for Network Rail, through the ES to effectively and accurately, assess impacts on key receptors, identify and assess alternative methodologies or management strategies to those proposed and identify how best as a result, those impacts can be mitigated. I would expect that to be a key part of the ES and in my opinion, that has not been adequately covered.
- 5.6 The key point here is that any assessed noise and vibration impacts from the use of the access roads, haul roads and construction compounds, will depend not only on their proximity to individual receptors and how they are constructed and operated but also on the way in which they are maintained through the life of the works for the proposed Scheme.
- 5.7 I would therefore expect the following elements to be included in the ES:
- 5.7.1 identification of any alternatives that had been considered for the proposed access roads, haul roads and construction compounds currently identified and why those selected have been chosen;
 - 5.7.2 for both the current and any alternatives proposed, considerations of any further mitigation that could be applied to reduce the noise and vibration impacts to acceptable levels on key receptors such as the AMB. In particular, I would wish to see details of how any assessed impacts in terms of noise and vibration can be guaranteed to be maintained so the University can have confidence that the impacts will not change and potentially become unacceptable throughout the period of the construction. In this regard, I would expect to see full details of how the haul roads and construction compounds will be constructed including materials used and any measures in the construction methodology to reduce impacts. However, just as important as this is how those haul roads and construction compounds will be maintained in their original state, and this applies to the wider access network too. This is because the likely noise and vibration impacts from roads that are poorly maintained will be greater and so to minimise the likely impacts, they need to be maintained well;

- 5.7.3 for the wider access network, I would therefore expect Network Rail to identify the extent of the area where construction vehicles could cause noise and vibration impacts on the AMB, and to survey the state of the roads in that area to create a baseline condition survey. Any significant defects should, following agreement with the University, be repaired at that point. I would also expect Network Rail to prepare a monitoring regime to show how they will regularly check the ongoing state of that wider access network and how any defects will be corrected. This regime should overall ensure that the quality and dimensions of the highway surface is maintained having regard to applicable highway construction standards and any other relevant guidance. Because correction of any defects in itself could create noise and vibration impacts, I would expect the University to have to agree any works before they are completed;
- 5.7.4 for the haul roads and construction compounds, I would expect a similar approach. These will be created specifically for the works and so I would expect to see details of how they will be constructed, and the materials used and a similar monitoring regime and process for repair of any defects that occur, to be agreed by the University prior to works commencing; and
- 5.7.5 I would also expect to see a detailed construction management plan that explains the types of vehicles that will be accessing the site, their weight, times of arrival and routing. For example, lighter vehicles will have a lesser impact on the road surface than heavier vehicles and so will have less potential to cause damage that could increase the noise and vibration impacts. Therefore, details of the types of vehicles accessing the site and what measures will be taken to encourage use of smaller rather than larger vehicles should be provided.
- 5.8 As these points are not adequately addressed in the ES, the University objects to the current form of the proposals for the construction phase of the proposed new station and to remove that objection, would expect to see a package of mitigation addressing the details noted above.
- 5.9 Operational impacts are also assessed in the ES. It is assumed that by the operational phase of the Scheme, temporary site compound land will have been returned to the landowners although confirmation of this would be needed to allay the University's concerns.

5.10 As matters stand, I am also unaware of Network Rail seeking to secure the provision of any such mitigation that I have identified above as part of the Order, or otherwise. I anticipate that further evidence or discussions with Network Rail may require further rebuttal evidence, which I will provide as and if necessary.

6 DISCUSSIONS WITH NETWORK RAIL

- 6.1 At the time of writing this Proof of Evidence, no direct discussions have taken place on construction access issues with Network Rail and no workshops have been offered by Network Rail despite requesting such meetings and workshops, which were initially suggested by Network Rail. Accordingly, the objections contained herein have not been discussed and potential resolutions have not been put forward by Network Rail.
- 6.2 I am aware that discussions have been held with other members of the University team (see the evidence of Mr Paul Jenkin) and that these have touched on transport, in particular the meeting between Mr Colin Smith representing the University and Network Rail plus contractors Murphy, on 25 November 2021. I have seen the notes from that meeting and whilst a reference was made to moving most of the construction activity to the other side of the railway tracks which would be welcome, I have not seen a formal commitment to this from Network Rail and so remain of the view that, as no definitive statements were made, and no commitments offered as to how such impacts could be mitigated satisfactorily, that the University's objections on this point must remain until satisfactorily addressed.
- 6.3 Had more detailed discussions taken place with the Network Rail team as requested, to move towards resolving the University's objections, I would have at least been looking for commitments to a Construction Management Plan that demonstrated when and how the haul roads and construction site compounds will be used and details of a monitoring and management regime for the wider network and haul roads and construction compounds. A level of detail that could satisfy the University on this has yet to be provided.

7 SUMMARY AND CONCLUSIONS

- 7.1 In summary, the Environmental Statement has not adequately addressed the University's concerns in relation to how the access roads, haul roads and construction compounds for the proposed Scheme will be maintained and operated throughout the construction period.
- 7.2 Given the likely impacts on the AMB, the Environmental Statement should have considered (beyond matters addressed by other witnesses):
- 7.2.1 alternative locations for the haul roads and site compounds and thus demonstrated why those chosen are the most appropriate;
- 7.2.2 a detailed construction management plan and a monitoring and management regime for the wider access roads, haul roads and construction compounds to ensure noise and vibration impacts are minimised and kept within acceptable limits.
- 7.3 These points have not been considered in the Environmental Assessment and in my opinion, they should have been. Until they are adequately addressed, the University maintains its objection to the proposed Order.

8 WITNESS DECLARATION

8.1 I hereby declare as follows:

8.1.1 This proof of evidence includes all facts which I regard as being relevant to the opinions that I have expressed and that the inquiry's attention has been drawn to any matter which would affect the validity of that opinion.

8.1.2 I believe the facts that I have stated in this proof of evidence are true and that the opinions expressed are correct.

8.1.3 I understand my duty to the inquiry to help it with matters within my expertise and have complied with that duty.

Graham Peter Hughes BA (Hons) MSc PGDip FCIHT

Stantec