

**TRANSPORT AND WORKS ACT 1992: APPLICATION FOR THE
PROPOSED ROTHER VALLEY RAILWAY (BODIAM TO
ROBERTSBRIDGE JUNCTION) ORDER**

PINS REF: APP/K3605/W/19/323526

HIGHWAYS ENGLAND

**SUMMARY PROOF OF EVIDENCE DAVID ALBERT BOWIE,
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Date: 07 June 2021

**IMPACT OF THE PROPOSED DEVELOPMENT ON THE A21 TRUNK
ROAD**

TECHNICAL MATTERS

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1. Introduction

Qualifications & Experience

1. My name is David Albert Bowie and I am an Associate Director in the Development & Development Management Team of Systra, an established independent multi-national consultancy specialising in transport infrastructure. I hold an honours degree of Bachelor of Science in Civil and Structural Engineering from Cardiff University.
2. I am a member of the Chartered Institution of Highways and Transportation and hold a Highways England Certificate of Competency for Road Safety Audit with over 30 years post graduate experience in Traffic, Highway and Road Safety engineering as well as transportation planning.
3. I have acted as an expert witness at a number of Planning Inquiries and Local Plan Examinations in Public.
4. I have detailed knowledge and experience in Highway Design, Traffic Engineering, Road Safety Engineering, Traffic Calming, Accident Investigation & Reduction and Road Safety Audit.
5. I am familiar with the site and its surroundings, the local and strategic road networks in the vicinity and insofar as they relate to highway matters.

2. Scope of Evidence

6. Paragraphs 5 to 10 of Mr Harwood's evidence (OBJ782/W1/1) explain the role and responsibilities of Highways England in respect of the Strategic Road Network (SRN) and the A21 Trunk Road where the proposed development crosses that road.
7. My evidence on behalf of Highways England's will therefore focus on those technical design and road safety aspects of the application relating to the impacts of the crossing proposals on the SRN. It will set out Highways England's position regarding the application, and our current views on any material technical considerations.

3. The Design Manual for Roads and Bridges

8. The Design Manual for Roads and Bridges (DMRB) (Appendix B, OBJ782/W2/2) is a suite of documents which contains requirements and advice relating to works on motorway and all-purpose trunk roads for which Highways England is highway and road authority.

9. Para 31 of Mr Harwood's evidence (OBJ782/W1/1) explains that the Secretary of State's policy as set out in paragraph 9 of Department for Transport Circular 02/13 (RVR/HE/07) is that The Design Manual for Roads and Bridges sets out details of the Secretary of State's requirements for access, design, and audit, with which proposals must conform.
10. Para 1.1 of DMRB document GG 101 '*Introduction to the Design Manual for Roads and Bridges*' (Appendix B, OBJ782/W2/2) states that 'The DMRB provides requirements which shall be applied to the appraisal, design, maintenance, operation and disposal of motorway and all-purpose trunk roads' for which Highways England is highway or road authority'.
11. Para 2.4 of DMRB document GG101 (Appendix B, OBJ782/W2/2) states that '*Where requirements of the Overseeing Organisations are not met, a departure application shall be submitted in accordance with the procedures required by the relevant Overseeing Organisation and approved:*
 - 1) *before the design is finalised; and*
 - 2) *prior to their incorporation into the works.*
12. Departures may be applied for in a variety of situations, including where an aspect not covered by requirements is identified.
13. Clause 2.7 of GG101 (Appendix B, OBJ782/W2/2) reiterates that '*Where an aspect of the works is not covered by existing requirements, a departure application for an aspect not covered by requirements shall be submitted*'. In this context 'shall' represents a mandatory requirement of the Overseeing Organisation (Highways England).
14. Departures from DMRB are considered independently within Highways England by the Safety, Engineering and Standards (SES) Division. The acceptability of a design incorporating a Departure cannot be accepted until the Departure is assessed and approved by SES any subsequent DMRB requirements are completed such as the Stage 1 Road Safety Audit process.
15. The RVR proposals include the provision of a Level Crossing on the section of the A21 Robertsbridge Bypass between the A21 Northbridge Street roundabout and the River Rother. Level Crossings are not covered by DMRB because they are not a common feature on the all-purpose trunk road network. For design guidance, the designer has used the Office of Road and Rail (ORR) document '*Level Crossings: A guide for managers, designers and operators (2011)*'. Accordingly, DMRB requires a Departure Application for 'an aspect not covered by requirements'. This includes the use of the ORR document. The outline design cannot be completed until the Departure process itself is completed and approved.

4. Departure Submission

16. The initial departure application was opened on the 13th November 2020 by consultants Arup on behalf of the applicants. The Departure was completed and submitted for consideration on the 17th March 2021. After several rejections for rework it was resubmitted on the 20th April 2021 and was approved for internal review on the 21st April 2021.
17. Following internal review by SES the Departure application was again returned for rework on the 26th May 2021. The internal response to the Departure Application lists some 33 items that require further consideration and response (RVR/HE/02, Core Document Library) before the Departure Application can be reconsidered by SES.
18. Whilst it can be reasonably agreed that some of those 33 items listed in the SES review of the Departure can be resolved relatively simply with further rework and correction, there are other matters which will need more detailed consideration, design and review.
19. The position as it stands is that there is further necessary work to be undertaken on the Safety Risk Assessment (SRA) to the requirements of GG104. There are numerous safety matters which have either been missed or not sufficiently considered.
20. The Technical Assessments and modelling of the queue lengths arising from the crossing, whilst there are some discrepancies, all show significant lengths of queuing vehicles north and southbound to the crossing whereby the queuing will increase the risk of road traffic injury collisions on the affected lengths of the A21 as well as the Robertsbridge Roundabout. The current submission does not provide details of suitable robust mitigations to reduce risk to a tolerable level.
21. The figures within the Cost Benefit Analysis technical note submitted with the Departures Submission to Highways England (Appendix L, OBJ782/W2/2) used to estimate the Benefit/Cost Ratios, indicate an increased accident rate on the A21 from current 0.783 accidents per annum (average) to a 3.151 accident per annum average (Page 1, para 1.5). This indicates that the current accident occurrence of 4 injury accidents in 5 years is likely to rise to 16 injury accidents in 5 years with the inclusion of the level crossing. Further detail and working is required to demonstrate that this increased level of injury accidents is as low as reasonably practicable as required by the Safety Risk Assessment.

5. Conclusion

22. At this time the Departure and Design process have not been completed to a sufficient level to enable Highways England to take an informed view of whether or not the provision of a Level Crossing on the A21 (T) Roberts Bridge Bypass pass will be tolerable from a safety perspective

or that the design of the proposed railway where it crosses the A21 Trunk Road will conform to the Design Manual for Roads and Bridges.

23. For these reasons Highways England continues to object the proposals and recommends that the Order should not be granted due to the safety impacts on the operation of the A21 (T) Roberts Bridge Bypass.

24. Highways England gives an undertaking to continue to work with the applicants and their consultants in order to assist the Inquiry.

David Albert Bowie BSc (Hons) MCIHT
Associate Director

7th June 2021

