

DfT Reference: TWA/24/APP/03
Document Ref: CD26-01-APP-W9-3
The Cambourne to Cambridge Order

Cambridgeshire County Council

Transport and Works Act 1992
Transport and Works (Inquiries Procedure) Rules 2004
Inquiry into:
THE CAMBOURNE TO CAMBRIDGE ORDER

SUMMARY PROOF OF EVIDENCE

of

Jack Southon

of WSP

On behalf of Cambridgeshire County Council

09th August 2025

Planning Inspectorate Reference: DPI/E0535/25/1

1. INTRODUCTION

- 1.1 My name is Jack Southon. I am a Technical Director in the Sustainable Water Management Team at WSP. I hold a BSc (Honours) in Physical Geography and an MSc in GIS and Remote Sensing from Aberystwyth University. I am a Chartered Member of CIWEM, a Fellow of the Royal Geographical Society, and hold multiple charterships including Chartered Environmentalist, Scientist, Water and Environmental Manager, and Geographer (GIS).
- 1.2 I have over 17 years' experience in flood risk consultancy, including modelling and assessment for major infrastructure projects across England and Wales. I have acted as expert witness for Local Plan examinations, planning appeals, and transport schemes. My previous work includes commissions for the Environment Agency and St John's College related to Bin Brook, completed prior to my involvement in this scheme.
- 1.3 This document summarises my Proof of Evidence on behalf of Cambridgeshire County Council, focusing on flood risk matters associated with Bin Brook in relation to the Cambourne to Cambridge Scheme.

2. SCOPE

- 2.1 My evidence addresses the flood risk modelling and assessment of Bin Brook, including:
 - 2.1.1 Baseline and proposed scheme modelling
 - 2.1.2 Predicted impacts and significance
 - 2.1.3 Embedded mitigation measures
 - 2.1.4 Responses to objections, particularly from Clare Hall (OBJ213) and the Environment Agency (OBJ301)
- 2.2 The wider water environment is addressed in the Proof of Evidence of Mr Andy Saunders (Ref CD26-01-APP-W3-1).

3. METHODOLOGY

- 3.1 Flood risk modelling was based on the Environment Agency's 2017 Gough Way Model, adapted to reflect current topography and hydrology. This included:
 - 3.1.1 Updated channel cross-sections and LIDAR data
 - 3.1.2 Revised boundaries and land use mapping
 - 3.1.3 Development of baseline and as-proposed models
- 3.2 The models were submitted to the Environment Agency for review, with iterative refinements made in response to feedback. At the time of writing, final approval is pending, with an addendum to follow.

4. MITIGATION MEASURES

- 4.1 Embedded mitigation includes the raised bridge deck and removal of the existing undersized crossing.
- 4.2 Floodplain compensation is not proposed due to negligible offsite impacts and limited feasibility.
- 4.3 The scheme reduces blockage risk compared to the existing structure.

5. KEY FINDINGS

- 5.1 The proposed scheme introduces a 10m clear span bridge over Bin Brook, replacing a smaller existing structure.
- 5.2 Modelling shows minimal changes in flood extent and depth, with increases of up to 26mm within the Order Limits and less than 10mm elsewhere.
- 5.3 The bridge design includes a soffit set above the 1% AEP event plus 19% climate change allowance, with 300mm freeboard.

6. RESPONSES TO OBJECTIONS

6.1 Environment Agency (OBJ301):

Concerns regarding modelling methodology have been addressed through detailed correspondence and technical updates. Following extensive independent review, the Environment Agency have indicated that they accept the technical evidence base and the conclusions of the FRA and no longer have an objection to the scheme (see CD26-01-APP-W9-2 pdf page 191, Item 9).

6.2 Clare Hall (OBJ213):

Objections focus on perceived increases in flood risk and inadequacy of assessment. My response demonstrates:

- 6.2.1 Conservative modelling approach
- 6.2.2 Minimal and localised impacts
- 6.2.3 Disproportionate nature of objector's alternative proposals
- 6.2.4 Provision of raw model data and transparency in methodology

6.3 Other Third Parties:

Flood risk concerns raised by other objectors are either general or less detailed. The evidence presented here is considered sufficient to address these.

7. CONCLUSION

- 7.1 It is my professional opinion that the Cambourne to Cambridge Scheme has been subject to a robust and proportionate flood risk assessment. The modelling is conservative and has undergone extensive review. The proposed bridge design mitigates flood risk effectively, and no significant adverse effects are predicted outside the Order Limits.
- 7.2 The scheme is acceptable in flood risk terms and does not present a barrier to the grant of consent