

Department for Transport
Transport Infrastructure Planning Unit
Great Minster House 33 Horseferry Road
LONDON
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Our ref: AC/2024/132485/01-L01
Your ref:
Date: 08 January 2025

Dear Planning Unit

**TRANSPORT AND WORKS ACT 1992
TRANSPORT AND WORKS (APPLICATIONS AND OBJECTIONS
PROCEDURE) (ENGLAND AND WALES) RULES 2006
THE CAMBOURNE TO CAMBRIDGE ORDER**

We have reviewed the submitted documents. We object to the Order application as submitted on flood risk grounds, as set out in the flood risk section below. We have also provided comments on the draft Order, biodiversity, and groundwater and contaminated land.

Draft Order
Disapplication

The scheme seeks to disapply provisions of the Environmental Permitting (England and Wales) Regulations 2016 (S.I. 2016 No. 1154) in relation to the carrying out of a flood risk activity.

We consider this is acceptable in principle provided that relevant Protective Provisions are included in the Order.

Appendix TR-13.2 section 4.1.1 states that “further WFD assessment and mitigation will be provided as part of a Stage 3: Impact Assessment to demonstrate WFD Compliance as part of the Flood Risk Activity Permit (FRAP) application.” We assume this will be submitted to the Environment Agency under Protective Provision 68.

Protective Provisions

We have reviewed the draft Provisions for the Protection of the Environment Agency. We have attached our standard protective provisions and request that these are used in place of the provisions proposed by the applicant.

We have the following concerns with the current wording:

- The definition of “specified work” in paragraph 67(2) should:
 - refer to 8 metres rather than 16 metres to reflect the fact that non-tidal main river is impacted. This reflects the position in Paragraph 3 in Part 1 of Schedule 25 of the Environmental Permitting (England and Wales) Regulations 2016 (“EPR 2016”).
 - include any distance of a drainage work that is likely to-

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Cont/d..

- (i) affect any drainage work or the volumetric rate of flow of water in or flowing to or from any drainage work;
 - (ii) affect the flow, purity or quality of water in any main river or other surface waters;
 - (iii) cause obstruction to the free passage of fish or damage to any fishery;
 - (iv) affect the conservation, distribution or use of water resources; or
 - (v) affect the conservation value of the main river and habitats in its immediate vicinity; or which involves
 - include any activity that includes dredging, raising or taking of any sand, silt, ballast, clay, gravel or other materials from or off the bed or banks of a drainage work (or causing such materials to be dredged, raised or taken), including hydrodynamic dredging or desilting.
- Paragraph 68(3)(b) should be changed from “deemed given” to “deemed refused” if approval by the Agency is neither given nor refused within 2 months of the submission of the plans etc. This reflects the position in Paragraph 15 of Schedule 5 of EPR 2016.
- The arbitration clause at paragraph 79 refers any matters that can’t be agreed between the Agency and the undertaker to Defra and Cambridgeshire County Council acting jointly as arbitrator. Given the undertaker is Cambridgeshire County Council, in our view it is not appropriate for them to also act as joint arbitrator and we object to this.

Flood Risk

Review of the Flood Risk Assessment

In our previous pre-application review of the hydraulic model from 15th November 2023 we provided the following summary to the applicant alongside detailed technical feedback:

- *The model is currently unsuitable for the intended use. There are queries relating to the 1D model, 2D model and 1D2D linking that require addressing. The representation of the bank lines and structures needs reviewing. The 1,000-year 19% CC event glasswalls against the model boundary.*
- *Additional information/clarification is required to increase confidence in the model outputs and some elements of the models (especially clarification around the elevation values being used at structures) need revisiting. The provision of a model log with all modelling decisions would aid the review procedure along with a standard model user report.*
- *As a minimum, all amber and red comments throughout must be addressed and it is recommended that green comments are addressed to ensure the model is in line with best practice. Furthermore, comments, such as the need to represent the post-development scenario, may require revisiting following the proposed updates, as they may result in change the flood mechanisms.*

The model will need to be re-submitted to the Environment Agency to ensure that these issues have been addressed. We therefore **object** until an acceptable model is submitted.

The primary concern regarding flood risk for the proposed development is the crossing of the Bin Brook. The proposed scheme has the potential to elevate flood risk both

upstream and downstream, depending on the extent to which the channel and floodplain capacity are affected by the introduction of the new bridge and embankment. It must be clearly demonstrated that any increase in flood risk is confined within the red line boundary of the site and does not adversely impact third parties.

Setting the design soffit level at the 1% Annual Exceedance Probability (AEP), incorporating a 19% allowance for climate change and a 300mm freeboard, is considered appropriate.

The Flood Risk Assessment (FRA) concludes that the development will have a minimal impact on flood risk, with negligible changes in predicted flood extents for the 1% Annual Exceedance Probability (AEP) event, incorporating a 19% climate change allowance. The assessment indicates increases in peak flood depth ranging from 10mm to 50mm over an existing flood depth of approximately 900mm. Importantly, this potential increase in flood risk is confined within the red line boundary, with no resulting change in risk to third parties.

To satisfy the exception test, the development should ideally be constructed without increasing flood risk elsewhere and, where feasible, contribute to an overall reduction in flood risk. A thorough model review will therefore be necessary to validate the accuracy of the FRA conclusions.

Fisheries, Biodiversity and Geomorphology

Documents reviewed:

- CtoC -03 Explanatory Memorandum
- Environmental Statement NTS CtoC-9-00 Nov 2024
- CtoC- 10-ES0-00 Environmental Statement
- CtoC- 10-ES4-00 ES Scoping Report and Opinion
- CtoC-11-TR05 Environmental Statement Volume 2 Technical report 5 – Ecology
- CtoC TR5.11 Statement to inform HRA
- CtoC- 11-TR13-00 Water
- CtoC- 14 Request for Deemed Planning Permission
- CtoC- 26-00-00 Code of Construction Practice
- CtoC-16-DP6-00.pdf

Planning Permission

We consider that planning permission could be granted to the proposed development with the inclusion of the conditions 15 (Biodiversity Net Gain Plan) and 19 (Location, layout, scale and external appearance – guided busway and its associated structures) as set out in the Request for Deemed Planning Permission. We ask to be consulted on the details submitted to discharge these conditions and on any subsequent amendments/alterations.

Detailed Design

The crossing of the Bin Brook is referred to as a clear span bridge. CtoC-16-DP6-00.pdf details the bridge design.

We recommend that otter ledges are included in the bridge design.

This is because the area of the Bin Brook crossing has been identified as being of high flood risk. When water levels are high otters are known to cross roads rather than use the water course below a bridge, leading to an increased risk of mortality through traffic collision. Although the Bin Brook crossing is clear span, the drawing CtoC-16-DP6-00.pdf shows a narrow area of bank on either side of the Bin Brook (1.5m) within the

functional floodplain. When this floods, otters will be forced over the busway.

We expect this to be addressed at the detailed design stage (condition 19) and would likely object to any discharge of condition or FRAP application that did not address this matter.

Technical comments and advice/information for the applicant

Otters

C2C-11-TR05-00 Section 5.7 Nature / 6.4 Mammals / Page 59 Otter / Construction / Site and Vegetation Clearance

This section states that “Construction is not therefore expected to lead to any perceptible impacts on suitable habitat given that no confirmed activity was recorded through surveys.”

Otter should be assumed to be present, given the results of the desk studies. Otter are known to present on the Bin Brook and it is not unreasonable given their known range to expect them to use the brook for commuting and foraging. The survey noted footprints that had been partially washed away, indicating that water levels had been high or there had been rainfall; given these survey constraints it should be assumed that otters are present.

We recommend that the potential impact of site and vegetation clearance on the commuting and foraging habitat for otters on the Bin Brook should be assessed.

Standard mitigation measures should be put in place to avoid disturbance to otters during construction and operation, e.g. no/minimal lighting at night, cover any holes/allow exit route.

SuDS

Regarding the pollution mitigation measures listed in paragraph 7.2.4 of CTOC-11-TR05-01, we would like to see any road run off (including e.g. salting residue) discharging into managed SUDS systems to reduce pollution of water courses.

Surface water attenuation features designed to enhance biodiversity are supported and encouraged (section 7.3.3).

Native species

We support the use of native species of preferably local origin (section 7.3.4).

Monitoring

Water vole

If water vole displacement is required, part of the licensing requirements include monitoring of the displacement site for 3 years or until water vole signs are found to be present. At present water vole monitoring is not included in this section (CTOC-11-TR05-01, section 10. Monitoring).

Groundwater and Contaminated Land

Site-Specific Information

From Cambourne to Coton, the route is underlain by superficial geology of Oadby Member, which is designated as a Secondary (undifferentiated) aquifer. No superficial deposits are present between Coton and Cambridge, at the eastern end of the route in Cambridge there are River Terrace Deposits, designated as a Secondary A aquifer.

The bedrock geology across the largely consists of Mudstone (Kimmeridge Clay

Formation at Cambourne and Gault formation across the rest of the route) which is designated as unproductive. However, there are two localized Principal aquifers present; Sandstones (Woburn Sands Formation) located beneath Bourne Airfield, and Chalk (West Melbury Marl Chalk Formation) located from Madingley Mulch to Coton Orchard.

There are no source protection zones crossed through by the proposed route.

Documents Reviewed

We have reviewed the following reports for this consultation:

- CtoC- 10-ES0-00 Environmental Statement
- CtoC- 10-ES4-00 ES Scoping Report and Opinion
- CtoC- 11-TR11-00 Soil, Geology and Land Contamination
- CtoC- 11-TR13-00 Water
- Appendix TR13.1 – FRA
- CtoC- 14 Request for Deemed Planning Permission
- CtoC- 26-00-00 Code of Construction Practice

Planning Permission

We consider that planning permission could be granted to the proposed development with the inclusion of the conditions as set out in the Request for Deemed Planning Permission. We are in support of Conditions 4 (Site investigation Strategy), 5 (Submission of Site Investigation Report and Remediation Strategy), 6 (Unexpected Contamination), 14 (Surface Water Drainage Scheme) and 26 (Implementation and completion of Remediation Strategy works – Verification/Validation Report) in relation to contaminated land and groundwater protection. We ask to be consulted on the details submitted to discharge these conditions and on any subsequent amendments/alterations.

We note that Condition 9 (Local Environment Management Plans), mentions a requirement for the submission of details for piling or other penetration methods in relation to noise and vibration. We would recommend the inclusion of a separate piling condition with wording relating to the possibility of a loss in groundwater quality or the creation of preferential pathways if deep foundational structures are installed in areas of contaminated land. Please see below:

PILING CONDITION

Piling or any other foundation designs and investigation boreholes using penetrative methods shall not be permitted other than with the express written consent of the Local Planning Authority, which may be given for those parts of the site where it has been demonstrated that there is no resultant unacceptable risk to groundwater. The development shall be carried out in accordance with the approved details.

Reason

To protect and prevent the pollution of controlled waters from potential pollutants associated with current and previous land uses in line with National Planning Policy Framework (NPPF), paragraphs 180, 189, 190 and relevant Environment Agency Groundwater Protection Position Statements.

Advice to LPA / Applicant

Piling or other foundation designs using penetrative methods pose potential risks to

groundwater including pollution/turbidity, risk of mobilising contamination, drilling through different aquifers and creating preferential pathways.

Groundwater and Contaminated Land Site Specific Technical Comments

Contamination Assessment

We understand that several potentially polluting land uses have been identified along the intended development route, including Bourne Airfield, roads/highways, agricultural land, and commercial and industrial developments. We are particularly concerned in regard to Bourne Airfield as a potential PFAS producing site which sits over a Principal aquifer.

We understand that further intrusive investigations are intended to assess ground conditions and the extent of any contamination present. Land contamination investigations should be undertaken by suitably qualified and experienced professionals and in accordance with BS 5930: [Code of practice for ground investigations](#) and BS 10175: [Investigation of potentially contaminated sites – code of practice](#). Soil and water analysis should be fully MCERTS accredited. Investigation, demolition, remediation, or construction works must not create new pathways or linkages to controlled waters. Clean drilling techniques may be required for boreholes that penetrate contaminated ground.

Consideration should be given to the inclusion of contaminants in the analysis suite which are appropriate to the identified land uses, for example: PFAS, TPHs, BTEX, PAHs, PBCs etc.

We note that the Code of Construction Practice includes Section 8 on Land Quality. We are in agreement with the measures as set out to reduce potential impacts to soils during intrusive investigations and construction works.

Drainage Strategy

We understand that the intended drainage strategy will discharge surface water to existing ditches and watercourses. Runoff from highways has the potential to be contaminated, we are therefore in support of the inclusion appropriate pollution prevention measures in the design, including filter strips, swales, detention basins and ponds, oil interceptors and underground geocellular attenuation systems.

The FRA and Water Technical Report highlight that infiltration drainage features are not included within the drainage strategy, and all attenuation features will be lined, due to insufficient infiltration rates identified during testing. Given the potential contamination at the site, we would be in agreement with this on a groundwater protection basis. Should the design change to include infiltration then the applicant should provide appropriate details. Soakaways and other infiltration SuDS must comply with statements G1 and G9 to G13 of our [Groundwater Protection Position Statements](#) and should be constructed in line with good practice and guidance documents including the [CIRIA C753](#) SuDS Manual and the [Susdrain website](#). They must not be constructed in contaminated ground where infiltration could re-mobilise contaminants to pollute groundwater. All infiltration SuDS should be designed to maintain a minimum 1.2m clearance above peak seasonal groundwater levels. We do not consider deep infiltration systems (>2.0m below ground level) to be routinely acceptable. Only clean roof water can be directly discharged to infiltration SuDs or watercourses.

We note that the Code of Construction Practice includes Section 13 on Water, we are in agreement with the measures as set out to reduce potential impacts to ground and surface waters during construction works and the storage and control of oils and

chemicals.

Piling

As highlighted above, piling and other penetrative foundation methods have the potential to adversely affect groundwater conditions. This may include pollution, increased turbidity, mobilising contaminants and creating preferential pathways. We recommend that the applicant provide appropriate details of foundation designs prior to the commencement of works.

Further advice to the applicant is available in Appendix 1 of this letter.

We hope this information is of assistance. If you have any queries, please do not hesitate to contact us.

Yours faithfully

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Appendix 1 – General Groundwater Advice to Applicant

1. Management of Waste during Development

Developers should ensure that all contaminated materials are adequately characterised both chemically and physically, and that the permitting status of any proposed on site operations are clear. Excavated materials recovered via a treatment operation can be re-used on-site under the CL:AIRE Definition of Waste: Development Industry Code of Practice subject to certain conditions being met. However, contaminated materials that are / must be disposed of are waste and therefore subject to waste management legislation which includes: Duty of Care Regulations 1991, Hazardous Waste (England and Wales) Regulations 2005, Environmental Permitting (England and Wales) Regulations 2010, The Waste (England and Wales) Regulations 2011. If the total quantity of waste material to be produced at or taken off site is hazardous waste and is 500kg or greater in any 12 month period the developer will need to register with us as a hazardous waste producer.

We recommend that developers:

- Refer to our [Groundwater Protection](#) webpages, which include our [Groundwater Protection Position Statements](#)
- Refer to our [Land Contamination Technical Guidance](#), including our [Land contamination risk management \(LCRM\)](#) guidance, when dealing with land affected by contamination and for the type of information required in order to assess the risks to controlled waters. The Local Authority can advise on management of risks to human health.
- Consider using the [National Quality Mark Scheme for Land Contamination Management](#) which involves the use of competent persons to ensure that land contamination risks are appropriately managed.
- Refer to British Standards BS 5930 [Code of practice for ground investigations](#) and BS 10175 [Investigation of potentially contaminated sites – code of practice](#)
- Refer to our [Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination](#) National Groundwater & Contaminated Land Centre Project NC/99/73. The selected method, including environmental mitigation measures, should be presented in a Foundation Works Risk Assessment Report, guidance on the production of which can be found in Table 3 of [Piling Into Contaminated Sites](#)
- Refer to [Position Statement on the Definition of Waste: Development Industry Code of Practice](#)
- Refer to our [Good Practice for Decommissioning Boreholes and Wells](#)
- Refer to our [Dewatering building sites and other excavations: environmental permits](#) guidance when temporary dewatering is proposed.

2. Pollution Prevention

Materials and chemicals likely to cause pollution should be stored in appropriate containers and in accordance with relevant guidance. Any above-ground facilities for the storage of oils, fuels or chemicals shall be sited on impervious bases with impervious bund walls. The volume of the bunded compound should be at least equivalent to the capacity of the tank plus 10%. All filling points, vents, gauges and sight glasses must be located within the bund. The drainage system of the bund shall be sealed with no discharge to any watercourse, land or underground strata. Associated pipework should be located above ground and protected from accidental damage. All filling points and tank overflow pipe outlets should be detailed to discharge into the bund.

Prior to being discharged into any infiltration system, watercourse or surface water sewer, all surface water drainage from areas susceptible to oil contamination should be passed through an oil separator (or equivalent device) with appropriate capacity and performance. Areas susceptible to oil contamination include: lorry parks; car parks with a surface area exceeding 800m² or with 50 or more parking spaces; vehicle maintenance areas; refuelling facilities; roads. Roof water shall not pass through the interceptor/device.

Appropriate procedures, training and equipment should be provided so that environmental pollution from routine operations or incidents on the site can be prevented. The Environmental Permitting Regulations make it an offence to cause or knowingly permit any discharge that will result in pollution of groundwater or surface waters.