

A14
Cambridge to Huntingdon
improvement scheme
Development Consent Order Application

HE/A14/EX/86

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Response to ExA's Second Written Questions:
Principal Issue 8 Environmental Impact Assessment

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8 Environmental Impact Assessment

Question 2.8.1

Cambridgeshire County Council has suggested that further work to assess the archaeological significance of the borrow pit sites is necessary, in order to establish that all of the mineral is winnable and is not sterilised by archaeological remains. Could HE comment on the need for further archaeological investigations at the borrow pit sites, and the fall back position should sterilisation by archaeological remains occur in the existing proposed borrow pit sites. Could the fall back position result in additional adverse effects?

Response

1. Paragraph 9.6.6 of chapter 9 of the *Environmental Statement* (ES) (Applicant reference 6.1, PINS reference APP-340) notes the requirement for additional geophysical survey and trial trenching at borrow pit 5. The borrow pits have been subject to a range of surveys including analysis of air photographs to identify cropmarks, Unmanned Aerial Vehicle survey, geophysical survey and trial trenching. The information from these surveys is summarised in chapter 9 of the ES and is presented in full in appendix 9.4 *Archaeological fieldwork reports* of the *ES Appendices* (Applicant reference 6.3, PINS reference APP-681). The work has identified the character and form of the buried archaeological remains across the scheme footprint, and has provided sufficient information to develop mitigation and identify all likely significant effects. The assessment reported in the *ES* complies with guidance on heritage assessment including:
 - a. The *Design Manual for Roads and Bridges* – vol. 10, section 6, part 1, HA75/01 and vol. 11, section 3, part 2 HA 208/07;
 - b. The *Setting of Heritage Assets* (English Heritage 2011) and;
 - c. The *Institute for Archaeologists Standard and Guidance for Historic Desk Based Assessment* (2010).
2. The mitigation has been developed following section 12 of the National Planning Policy Framework, specifically items 135 and 141, and 11.47 and 11.48 of the Cambridgeshire and Peterborough Minerals and Development Plan (adopted July 2011). The identified archaeological remains can be mitigated by preservation by record; they are not of sufficient value to require preservation *in situ*. The proposal is to undertake archaeological excavation in these areas to record the archaeological remains present, therefore decreasing the risk of sterilisation of the minerals to be extracted.

3. The archaeological remains identified are common types of archaeological sites in the East of England. Similar types of archaeological sites have been excavated across the county including the nearby A428 Caxton to Hardwick Scheme; excavation of a well preserved Bronze Age landscape at Must Farm Quarry, Cambridgeshire is another example. It is extremely unlikely that the borrow pits will be sterilised by archaeological remains.
4. Should this extremely unlikely situation occur, sterilisation would probably affect only a section of the borrow pit, not the pit in its entirety. Minerals could be worked from the remainder. Chapter 13, (Materials) of the *ES* (PINS reference APP-344) discusses the sourcing of imported materials should there be insufficient material. Section 13.7.11 notes that the choice of site would be driven by a number of factors including "*source, specification, production and transport of available materials*". As a result no additional adverse effects are envisaged.

Question 2.8.2

The applicant has commented on the local authorities' concerns about archaeology which are summarised in paras 9.2.15-9.2.20 of the JLIR (REP2-184). Can the applicant confirm what progress has been made on these matters and confirm whether the additional information referred to in its comments in para 9.2.20 has been provided to CCC.

Response

5. Highways England is progressing the points raised by Cambridgeshire County Council through discussion and revisions to the *Written Scheme of Investigation (WSI)*. For ease of reference, the key points from paragraphs 9.2.15-9.2.20 are set out below along with Highways England's response.
6. Paragraph 9.2.15 of the Joint Local Impact Report (JLIR) notes: "*we are not yet able to agree to the mitigation strategy as it does not include all borrow pit areas (borrow pit 5 is omitted from the WSI) nor how they would be specifically examined, or what the research objectives of examination would be.*"
7. Highways England has addressed this point in both the *Environmental Statement (ES)* (Applicant reference 6.1, PINS reference APP-340) and through preparation of the WSI. Paragraph 9.6.6 of Chapter 9 of the *ES* recommends a phase of geophysical survey and trial trenching at borrow pit 5 and the flood compensation areas. Paragraph 9.6.6 of the *ES* also notes that it is likely that Highways England will undertake archaeological excavation at borrow pit 5. The areas noted above would be subject to a separate WSI to address the specific requirements for archaeological evaluation; this includes the Chartered Institute for Archaeologists *Standard and Guidance for Archaeological Field Evaluation (2014)*. The WSI would be based on the WSI produced for trial trenching and geophysical survey undertaken in 2014 that Cambridgeshire County Council has provided comment on. The specific research aims for archaeological mitigation works are presented in Table 3.1 of the WSI and are aligned with *Research and Archaeology: A Framework for the Eastern Counties, 2. research agenda and strategy* (eds Brown, N and Glazebrook, J 2000) and *Research and Archaeology Revisited: a revised framework for the East of England* (Medlycott, M 2011).
8. The WSI was issued to Cambridgeshire County Council on 20 April 2015 as a draft for comment. Comments were received on 1 May, and revised text was provided to Cambridgeshire County Council for discussion on 15 May 2015. Comments were received from Cambridgeshire County Council, and the WSI was amended accordingly and resubmitted on 31 July 2015. It is anticipated that a final draft will be placed before a meeting with the County Council on 21 August 2015 for discussion prior to submission to the Secretary of State for approval pursuant to paragraph 8 of Part 1 of Schedule 2 of the draft Development Consent Order.

9. Paragraph 9.2.16 of the JLIR states: *“In order for the local authorities to be satisfied that the extensive archaeological excavations required at each of the borrow pits take place sufficiently ahead of the establishment of the borrow pits so that archaeological areas are not compromised by timetabling restrictions or lack of resources, we would require assurance from the scheme’s promoter and their agents that excavations in the borrow pits, following a preliminary stage of evaluation, would occur prior to the commencement dates listed in Table 3.1 of ES Appendix 3.2.”*
10. Highways England has addressed this point in the *Code of Construction Practice (CoCP)* (Applicant reference HE/A14/EX/64, PINS reference REP-026). This identifies the requirement to develop a programme of archaeological work to be undertaken pre-construction and during construction. The requirements are presented in paragraph 7.1.3 of the CoCP :
- *“a programme detailing the implementation of cultural heritage investigation works prior to and during construction will be prepared;*
 - *the main contractors will ensure that the cultural heritage investigation works are properly programmed by its contractors; and*
 - *the main contractors will monitor compliance against the programme of cultural heritage investigation works using appropriately qualified environmental management staff.”*
11. Paragraphs 9.2.18 and 9.2.19 of the JLIR state that there is *“no vision statement regarding outreach”*, and that *“restoration and legacy works for archaeology have not yet been considered”*.
12. Highways England has addressed this point through the WSI. This includes a programme of outreach with a range of activities including school visits with information linked to key stages in the National Curriculum, newsletters, ‘pop-up’ exhibitions and a publication of the results of the work. The programme of outreach addresses the topic of legacy through dissemination of the results of the archaeological investigations. It would provide information and support to local community groups through open days, newsletters and talks. The final publication(s) of the results of the archaeological excavations would also contribute to the overall legacy of the project. Restoration is addressed in the method statement for the conservation and restoration of mile posts and milestones. Restoration is also presented as landscape mitigation identified in 9.6 of Chapter 9 Cultural Heritage of the *ES* and in Section 10.4 of Chapter 10 Landscape of the *ES*.
13. Paragraph 9.2.20 states: *“It is not unreasonable to state concern that the impact of construction upon archaeological remains will be considerable if the individual site mitigation schemes are not precisely scoped and if they lack the research objectives that will aid their design, implementation and, ultimately, resourcing. In view of the above, the strategy to deal with the archaeological of the borrow pits is not compliant with the relevant planning policy CS36 Archaeology & the Historic Environment and requires significant revision to enable its approval.”*

14. Highways England has addressed this in the updated WSI. Following the Chartered Institute of Archaeologists *Standard and Guidance for Archaeological Excavation* (2014) the areas where mitigation is proposed have been identified and selected on the basis of specific aspects or themes relating to defined research interests. As noted above, the specific research aims are presented in Table 3.1 in the WSI, and are aligned with Research and Archaeology: A Framework for the Eastern Counties, 2. research agenda and strategy (eds Brown, N and Glazebrook, J 2000) and Research and Archaeology Revisited: a revised framework for the East of England (Medlycott, M 2011).
15. Highways England can confirm that the additional material referred to in its comments on paragraph 9.2.20 of the *Comments on Joint Local Impact Report* (Applicant reference HE-A14-EX-57, PINS reference REP-019) was discussed with Cambridgeshire County Council on 1 May 2015, and revised text was provided to Cambridgeshire County Council for discussion on 15 May 2015. The additional material to be provided comprised more detail on research aims, tied into the regional research framework. Comments were received from Cambridgeshire County Council, and the WSI was amended accordingly and resubmitted on 31 July 2015. It is anticipated that a final draft will be placed before a meeting with Cambridgeshire County Council on 21 August 2015.

Question 2.8.3

How is the applicant responding to requests from EA to change the detailed design of the proposed viaduct across the River Great Ouse and the location of Borrow Pit 7? What would be the impact on the ES of any changes made?

Response

16. Highways England is continuing to consult with the Environment Agency regarding the location and orientation of the piers of the proposed River Great Ouse viaduct as stated in a *Statement of Common Ground* between the two parties which has been submitted at Deadline 7. Highways England has reviewed the potential impact of changing the design to provide sufficient access along the river for the Environment Agency to undertake their maintenance activities.
17. The Environment Agency has also requested that the viaduct piers are rotated to reduce their obstruction to the flow in the river (and when it floods). The impact of such a change to the pier orientation would need to be considered during the detailed design phase following the making of the DCO (if the application is granted). This is because there are a number of other considerations and potential impacts on the environmental impact of the crossing.
18. A change to the piers may result in an impact upon the visual appearance of the viaduct. When viewed from a distance, on the flood plain and perpendicular to the crossing, rotating the piers by 10 degrees to match the direction of flow would make them appear considerably wider. This would be contrary to the requirement to minimise the visual impact of the crossing. However it is recognised that the change to the piers would be reduced as the observer turned to look along the structure. This would minimise the discrepancy in the appearance of the rotated piers.
19. The introduction of rotated piers may influence the choice of joints available for the viaduct as there would be a requirement for increased movement across the joint as it would be skewed to the line of traffic. Detailed design following the making of the DCO (if the application is granted) would determine the scale of the movement to be accommodated and type of joints to be utilised, so it is not possible to say at this stage if noise of vehicles passing over the joints would be increased. The choice of joints could also impact upon maintenance frequency which in turn could impact upon lane availability and worker safety.
20. The implications of amending the proposed River Great Ouse crossing for the *Environmental Statement* (ES) (Applicant reference 6.1, PINS reference APP-340) are:
 - a. Potentially a localised reduction in the increase in peak water levels;

- b. Potential change upon the visual impact of the crossing;
 - c. Potential joint changes could revise the noise impact of the crossing
21. However, Highways England considers at this stage that the proposed changes would not be environmentally worse than what was assessed in the *ES*.
22. The exact extent of Borrow Pit 7, would be determined during the detailed design phase after the making of the DCO (if it is granted). This would be subject to the limits of deviation permissible under the DCO. The Environment Agency requires a minimum nine metre strip along at least one bank of designated Main Rivers, such as the Ellington Brook, for them to undertake their maintenance responsibilities following construction of the scheme, and a five metre strip during construction. These maintenance requirements are included in a Statement of Common Ground between Highways England and the Environment Agency. Highways England does not anticipate that this will have any impact upon the *ES*.
23. The Environment Agency would have a plan approval role in respect of these works under the protective provisions proposed to be included in the Development Consent Order. Please see Highways England's response to written question 2.2.2 (*Principal Issue 2 Biodiversity and Ecological Conservation*, Applicant reference HE/A14/EX/81).

Question 2.8.4

The applicant has indicated (Response to Relevant Representations page 67, REP1-035) that it is anticipated that between 2017 and 2020 there would be sufficient on-site accommodation for 500 workers. Please provide a detailed explanation of how accommodation for workers would be provided and in what locations. Are any adverse effects on community cohesion anticipated?

Response

24. As far as is reasonably practicable, construction staff will be employed from the local and surrounding areas (refer to paragraph 16.6.36 of the *Environmental Statement* (ES) (Applicant reference 6.1, PINS reference APP-347)). The figures presented within Chapter 16 of the *ES* indicate that between a quarter and a third of direct jobs may be provided from within the local area (not including displaced activity). This is between 633 and 1,205 jobs over the period 2016 to 2021 (refer to paragraph 7.5.12 of Highways England's *Comments on the Written Representations, Report 1: Local Authorities* (Applicant reference HE/A14/EX/49, PINS reference REP4-011)).
25. However, due to the size of the project the local labour force would be supplemented by a non-local workforce (refer to paragraph 16.6.27 of the *ES*). As per paragraph 16.6.23 of the *ES*, the total construction workforce is anticipated to be between 2,530 and 3,520 individuals. Once the estimated local workforce is taken into consideration, this leaves between 1,897 and 2,315 non-local workers. As there is capacity to house 500 workers in on-site accommodation (refer to paragraph 4.9.1 of Appendix 3.2 of the *ES*), there would be between 1,397 to 1,815 non-local workers either commuting in from other nearby areas or moving into the area for the duration of the construction period. It is anticipated that the urbanised areas of Cambridgeshire have sufficient accommodation availability to house these additional non-local workers (refer to the *Response to Relevant Representations* (Applicant reference HE/A14/EX/25, PINS reference REP1-035)).
26. The on-site accommodation would be self-sufficient with plumbed-in mobile housing sleeping accommodation with central welfare and canteen facilities available.
27. Paragraphs 5.2.1 and 5.5.1 of the *Code of Construction Practice* (CoCP) (Applicant reference HE/A14/EX/64, PINS reference REP4-026) state that the exact location of on-site accommodation would be confirmed once the main contractors have been appointed but would avoid overlooking residential properties. However, it is anticipated that the location of the facility will be centred on the main compound areas at the South East and adjacent to the proposed Swavesey Junction and either side of the existing Boxworth Road.

28. More specifically it is anticipated that land plots 18/6e, 20/2b and 20/6b identified in Table 3B of the *Statement of Reasons* (Applicant reference HE/A14/EX/16, PINS reference APP-780) will be used for the purpose of accommodating the workforce.
29. The *Design Manual for Roads and Bridges* Volume 11 (Section 3, Part 8) *Environmental Assessment techniques – Pedestrians, Cyclists, Equestrians and Community Effects* does not specifically define community cohesion. However, during the process of determining the scope for the *ES*, other potential community effects during construction were considered including access to key community facilities and assets, community severance and construction impacts (including noise, dust and visual). During this scoping exercise, the accommodation of construction workers was not identified as a matter likely to give rise to significant effects on the community or community cohesion. During subsequent consultation, no comments on potential impacts to community cohesion were raised by local authorities. As such, community cohesion was not included in the community and private asset assessment (Chapter 16 of the *ES*).
30. Given the size of the anticipated non-local workforce, the semi-urban nature of much of the surrounding area, the extent of proposed on-site accommodation and mitigation measures included within the *CoCP*, it is not anticipated that there would be adverse effects on community cohesion as a result of non-local construction workers.
31. As per paragraph 4.1.1 of the *CoCP* Highways England and its main contractor will maintain effective community engagement throughout the construction period to build on existing relationships with the communities alongside the scheme. There will be ongoing community engagement on this matter in accordance with Section 4 of the *CoCP*. Refer also to the proposed Community and Environment Forum mentioned in reply to Question 2.6.4.
32. Additional detail in regards to on-site accommodation would be provided during detailed design and would be developed in consultation with local authorities.

Question 2.8.5

The residual impact of the proposals on All Saints' Church, Church, Lolworth (Grade II*) has been assessed in the ES as slight adverse. Should the impacts of the proposed scheme on the church and its setting be mitigated and if so, how? If not, why not?

Response

33. The impact on All Saints' Church is identified in paragraph 9.5.18 of chapter 9 in the *Environmental Statement* (ES) (Applicant reference 6.1, PINS reference APP-340) as:

'The presence of Robin's Lane Bridge c.0.5km to the north of the Church of All Saints in Lolworth (asset 96) would intrude on views towards the church tower from the north and the A14 corridor. This would detract from the landmark role of the church tower which contributes to the asset's value.'

34. Mitigation for impacts of the scheme in this location is provided by the landscaping proposals including the planting of belts and trees to screen the road, and the planting of trees and shrubs on bridge embankments to soften and screen the bridge. The proposals are presented on Figure 3.2 sheet 16 of 24 (Applicant reference HE/A14/EX/18, PINS reference APP-781). After implementation of this mitigation, the residual effects on All Saints' Church are from the proposed scheme through the addition of elevated infrastructure in the skyline, detracting from the tower as a landmark feature; the tower will still remain visible in the skyline. The immediate setting of the main body of the church will not be materially changed by the scheme as it is screened and additional planting will enhance this.

35. As noted the significance of effect is slight adverse, which acknowledges that there is an impact on the setting during the operation of the scheme; there would be no substantial harm to the asset as defined by the *National Planning Policy Framework* (NPPF) and in paragraph 9.2.21 of chapter 9 of the ES.

36. In accordance with paragraph 134 of the NPPF the harm to the setting of the asset has been weighed against the public benefits of the proposal. It is not possible to further mitigate the slight adverse effect on the setting of the tower church as a landmark. The inclusion of any new elements in the skyline detracts from the church's tower as a focal point. The design of the gantries and bridge cannot be altered to reduce their height in order to create lower forms in the skyline. As a result the impact on the tower as a single feature in the skyline cannot be mitigated. The elements of the scheme that would create the impact are required for both safety reasons and local access. Based on this, it is considered that the slight adverse effect on the church's status as a landmark, which it would retain, is outweighed by the public benefit of the gantries and bridge.

Question 2.8.6

In response to Q1.8.1 (REP2-190) and in their WR (REP2-147), SCDC has stated that not all development sites along the route have been addressed in the applicant's cumulative impact assessment, including Darwin Green 2 and Cambridge Northern Fringe East. SCDC also note that a number of development sites have been incorrectly identified on ES Figure 2.2 (sheets 5 & 6). The applicant has responded to the Council's WR. Does SCDC wish to comment further?

Response

37. This question is not directed to Highways England and a response is therefore not provided.

Question 2.8.7

The DCO would permit the contractor to reduce the headroom of the viaduct across the River Great Ouse to below 3000mm, which is of concern to the EA because of the potential effects on navigation. The EA suggest in their WR (para 2.2.1) (REP2-154) that their concerns could be overcome by a suitable DCO Requirement. What progress has been made towards agreeing wording for an additional requirement?

Response

38. Highways England does not consider this matter is appropriate for a requirement. This would not be usual practice. Instead, it is considered more appropriate to deal with the matter in the power to deviate article, namely article 7 of the *draft Development Consent Order*. This is recorded as a matter under discussion in the latest Statement of Common Ground between Highways England and the Environment Agency and it is hoped agreement can be reached shortly, when a change to the draft DCO will be proposed.

Question 2.8.8

What would be the consequences of the omission of the removal of the existing A14 Huntingdon viaduct and the associated road works from the scheme in terms of the ES?

Response

39. This response is covered in the *Huntingdon Viaduct Response Collated report (Response to ExA's Second Written Questions: Huntingdon Viaduct, Applicant reference HE/A14/EX/93)*.

Question 2.8.9

In response to the ExA's questions on the DCO (REP5-028) the applicant has made reference to section 7.4.5 of the CoCP (APP-752) to describe measures to be implemented should unexpected archaeological remains be identified. Why is this not addressed as part of Requirement 8 to follow established precedent in DCOs?

Response

40. Highways England does not consider that extra wording is necessary in the requirement contained in paragraph 8 of Part 1 of Schedule 2 to the *draft Development Consent Order (DCO)* (Applicant reference HE/A14/EX/59, PINS reference REP4-022). This is on the basis that where unexpected archaeological remains are identified, these are dealt with in section 7.4.5 of the *Code of Construction Practice (CoCP)* (Applicant reference HE/A14/EX/26, PINS reference REP4-022).
41. Practice in this regard varies between DCOs and Highways England considers that the wording in the CoCP reflects the approach taken on other DCOs. As the obligations contained within the CoCP are themselves secured by the requirements in the DCO, extra wording in the 'archaeological requirement' is considered unnecessary as the obligations are secured through the CoCP.