



**PLANNING ACT 2008 (AS AMENDED) – SECTION 89 AND THE
INFRASTRUCTURE PLANNING (EXAMINATION PROCEDURE) RULES 2010 (AS
AMENDED) - RULE 8**

**APPLICATION BY HIGHWAYS ENGLAND FOR AN ORDER GRANTING
DEVELOPMENT CONSENT FOR THE A428 BLACK CAT TO CAXTON GIBBET
IMPROVEMENTS**

APPLICATION REF: TR010044

**REPRESENTATIONS OF THE HISTORIC BUILDINGS AND MONUMENTS
COMMISSION FOR ENGLAND (HISTORIC ENGLAND)**

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1. Summary

- 1.1 The project would comprise the construction and operation of a new section of the A428 in Cambridgeshire and Bedfordshire including 16km of new carriageway with crossings over the River Great Ouse, the East Coast Mainline and multiple minor roads, a three level junction with the A1 at the Black Cat roundabout with associated slip roads and an improved junction at the Caxton Gibbet roundabout.
- 1.2 The applicant's assessment of the designated heritage assets within a 1km zone beyond the order Limits and Zones of Theoretical Visibility established around the development is included in Chapter 7 of the Environmental Statement: Landscape and Visual Effects. This considers designated heritage assets which could be affected by the proposed development including 11 scheduled monuments, 1 grade II* registered historic park, 9 grade II* listed buildings, 124 grade II listed buildings and 5 conservation areas along with 406 undesignated heritage assets. Due to the scale of the development there is potential for visual impact on these designated assets which could harm their historic significance. The significance of these assets and the impact on them has been assessed by the applicants. We would defer advice on grade II listed buildings and conservation areas to local planning authorities but will comment on the assessment of the grade I and II* listed buildings, scheduled monuments and the grade II* registered park.





- 1.3 The proposed development has the potential to harm archaeological deposits of interest and the Archaeological Mitigation Strategy submitted by the applicant proposes investigation at 41 sites within the scheme area. Detailed comment and advice on non-designated archaeological remains lies within the remit of the relevant Local Authority Archaeological Advisors, although we offer some comments on the proposed mitigation strategy, including advice from our regional Science Advisor.

2. Introduction

- 2.1 The Historic Buildings and Monuments Commission for England (HBMCE), known as Historic England, are the Government's adviser on all aspects of the historic environment in England - including historic buildings and areas, archaeology and historic landscape – and have a duty to promote public understanding and enjoyment. HBMCE are an executive Non-Departmental Public body sponsored by the Department for Digital Culture, Media and Sport (DCMS) and we answer to Parliament through the Secretary of State for Digital Culture, Media and Sport. Our remit in conservation matters intersects with the policy responsibilities of a number of other government departments – particularly the Ministry of Housing, Communities and Local Government, with their responsibilities for land use planning matters. The National Heritage Act (2002) gave HBMCE responsibility for maritime archaeology in the English area of the UK Territorial Sea.
- 2.2 The Cultural Heritage chapter of the Environmental Statement identifies 11 scheduled monuments, 1 grade II* registered historic park, 9 grade II* listed buildings, 124 grade II listed buildings and 5 conservation areas along with 406 undesignated heritage assets as being within the study area around the development. Construction also has potential to impact on undesignated archaeological deposits. Our interest chiefly focusses on the scheduled monuments and grade I and II* designated assets which could be affected by the proposed development. We would defer advice on grade II listed buildings, conservation areas and non-designated heritage assets to the County Council and local planning authorities. We would, however, comment on four grade II listed buildings which would be physically affected by the development.

Historic Buildings, Parks and Scheduled Monuments

- 2.3 The proposed development follows a route which would bring it into the setting of a number of historic buildings, areas and landscapes and scheduled monuments. This could result in visual impact from the new carriageway as well as associated roads and junctions including elevated bridges. The impact of lighting and traffic noise also needs to be given careful consideration. As noted above, we have considered impact on the setting of grade I and II* listed buildings and the registered historic landscape. In addition, we will comment on the direct physical impact the development would have on four grade II listed buildings.



- 2.4 In particular we will comment on the effect on the setting of the grade II* listed parish church of St Mary in Roxton village, the grade II* listed parish church of St Peter in Tempsford Church End, the grade II* listed parish church of St Denys in Little Barford, the grade II* listed parish church of St John the Baptist and St Pandionia in Eltisley and the grade II* Registered historic park at Croxton which contains the church of St James, Manor Farm house and Croxton park mansion house (all listed at grade II*). We will also comment on four grade II listed heritage assets which are proposed for relocation or demolition: the milestone (NHLE number 1163534) at the junction of the A428 and St Ives Road north of Eltisley, the milepost (NHLE number 1331394) on the Cambridge Road at Eltisley, the milepost south of Pembroke Farm and west of Caxton Gibbet (NHLE 1162760) and Brook Cottages, numbers 1 and 2 Great North Road, Wyboston (NHLE number 1311862).
- 2.5 In terms of Scheduled monuments we will comment on the impact on Round Hill Bronze Age bowl barrow (NHLE 1013521), the moated site at The Lane, Wyboston (NHLE 102076), the medieval village in Croxton Park (NHLE 1006783), Tempsford Bridge (NHLE 1005393), the moated site at Pastures farm, near Caxton (NHLE 1019177), the medieval village at Wintringham (NHLE 1006815), the medieval village at Weald (NHLE 1006849) and Chawston Manor and Fish ponds (NHLE 1010114). We will also comment on non-designated remains in the vicinity of the scheduled Wintringham medieval village.

Archaeology

- 2.6 The Environmental Statement is supported by Desk-based Assessment, Geophysical Survey and the results of a programme of Trial-Trenched Evaluation. It identifies that the scheme will have an impact on multiperiod remains, especially those of Iron-Age and Roman date, reflecting the intensity of landscape use at this time in the wider area within which the scheme sits. The Archaeological Mitigation Strategy submitted by the applicant proposes investigation at 41 sites within the scheme area. In relation to archaeology, the remit for detailed comment and advice on non-designated archaeological remains lies with the relevant Local Authority Archaeological Advisors. However, we offer some comments on the submitted documents, on the proposed DCO wording and some general comments on the overall strategy. Our advice includes comment on the proposed methodology from our regional Science Advisor and includes suggestions of further detail we would like to see considered in the Archaeological Mitigation Strategy in order to ensure the strategy is robust.

3. Historic England Advice: Designated Heritage Assets

Comments in Regard to Environmental Statement Chapter 6, Cultural Heritage and Chapter 7, Landscape and Visual Effects (document 6.1), Environmental Statement Appendices Appendix 6.1 Cultural Heritage Information (document 6.3), Environmental Statement Appendices Appendix 7.5 Representative Viewpoints (document 6.3), Environmental Statement Figures (document 6.2), ES Appendix 6.10



Brook Cottages Heritage Appraisal, document 7.1 case for The Scheme, document 3.1 draft Development Consent Order and 'Further Clarification of Effects on Designated Assets' (document submitted to HE by applicant on 11th August 2021)

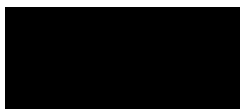
- 3.1 The Environmental Statement (ES) Chapter 6 (Cultural Heritage) summarises the assessment of impact on listed buildings, registered historic parks, scheduled monuments and conservation areas in the vicinity and we would broadly accept the findings. We do not have specific comments to make on the majority of the grade II listed historic buildings assessed in this document. However, we would like to comment on the assessment of the grade I and II* listed and registered historic park and scheduled monuments. We would also like to comment on the assessment of four grade II listed buildings where direct physical impact is proposed.
- 3.2 The grade II* listed parish church of St Mary is situated in Roxton village, an historic settlement which is designated as a conservation area and situated to the south west of the proposed Black Cat junction. The church mainly dates from the 14th and 15th centuries and sits in a churchyard at the northern side of the village. There are large trees in the churchyard and the 15th century west tower is relatively short, but it is still visible from outside the churchyard. The building historically stood on the northern edge of the village with open fields beyond. There are presently some modern houses to the north of the church, but beyond these the land remains open to the present Black Cat roundabout. The tower can also be seen from fields to the east, rising above the village school.
- 3.3 Paragraph 6.9.218 of the ES Chapter 6 notes that the Kelpie Marina access road would involve 'further erosion of the agricultural landscape around the settlement' of Roxton while paragraph 6.9.220 concludes that 'permanent minor adverse magnitude of impact on the conservation area is predicted'. Paragraph 6.3.54 confirms that this would equate to 'less than substantial' harm to the significance of the conservation area in terms of the National Planning Policy Framework (NPPF). We would accept this, but question if the expansion of the Black Cat roundabout, including newly elevated roadways, might also have an impact. Additional lighting and traffic noise from the elevated roadways might also increase the effect of the development within the setting of both village and church.
- 3.4 The ES chapter 6 does not fully address these issues but further assessment has been provided in the document 'Further Clarification of Effects on Designated Assets' (submitted to HE by applicant on 11th August 2021). This acknowledges that the church tower is 'visible in wider landscape views from the A1 to the east' but claims that 'the visibility of the church in the wider landscape does not contribute to this [historical interest]'. However, it is also stated that 'the agricultural landscape around the village contributes [to] its understanding as a small rural settlement.' This seems to suggest a distinction between the contribution setting makes to the significance of a rural historic settlement and the contribution made to the significance of a church which is





part of a rural historic settlement. Not only does this seem to contradict the statement in the ES that ‘the listed buildings in the village ... setting is considered to be the village itself’ but we do not accept this distinction and consider the agricultural setting of the church does contribute to its historic significance.

- 3.5 We consider the increase in size, complexity and height of the Black Cat roundabout to the north of this eastern side of the church’s setting could further erode the rural character and potentially lead to ‘less than substantial’ harmful impact on the significance of St Mary’s church in terms of the National Policy Statement for National Networks (NPSNN) paragraph 5.134. We would accept the ES (paragraph 6.9.22) conclusion that there would be less than substantial harm to the conservation area but contend that this would also be the case for the church. The degree of impact and potential for any mitigation could be established by additional visualisations of the junction from the field east of the church but on the basis of the information available we consider there could be less than substantial harm to the significance of the parish church.
- 3.6 Croxton Park is Registered at grade II* as an historic landscape and is situated immediately to the south of the existing A428 road. Within the boundary of the registered park is the Scheduled remains of the medieval village of Croxton (NHLE 1006783), the grade II* listed Croxton park mansion house as well as number of heritage assets associated with it, Manor Farm house and the parish church of St James, both listed at grade II*. All these designated assets form an historic landscape of high importance and in many ways can be considered as a single, integrated entity.
- 3.7 Paragraph 6.9.271 of the ES Chapter 6 states that to ‘introduce new road infrastructure into the rural surroundings of the park...would also result in road traffic being reassigned onto the new dual carriageway and away from the asset[s], leading to reduced noise and light impact’. We would agree with this assessment and that of paragraph 6.9.272 in as much that the heritage assets within the historic park would ‘experience no change’ amounting to ‘no harm to significance’ and a ‘slight beneficial effect’ overall.
- 3.8 However, the registered park itself and the Scheduled medieval village border the existing A428 and so are closer to the proposed line of the road than some of the listed buildings within the park. The image from viewpoint 44 (Figure 7.15.43.01 - 7.15.46.04 in ES 6.2 Photomontages) looks from the edge of North Lodge Plantation which stands in the fields across the A428 from the registered park. It shows the road partly in a cutting but with the existing Toseland Road crossing it on a bridge and vehicles visible on the main carriageway to the west. The park can still be experienced in views across the A428 from the area in which the photograph was taken and so it forms part of its setting. We have questioned the significance of this part of the setting and the effect the development could have on its rural quality.
- 3.9 The document ‘Further Clarification of Effects on Designated Assets’ (submitted to HE by applicant on 11th August 2021) reviews historic map evidence for the





historic use of the area north of the A428 from Croxton park. The historic boundary of the park appears to have been long-established at the southern edge of the road but by 1887 North Lodge Plantation had been established along the northern side of the road and projecting northwards into an area previously known as Woodway field. This in part defines the existing extent of the park but could also, as the document concludes, suggest 'possible expansion [of the park] in the late Victorian period'. We also note that randomly placed trees are depicted in the field opposite the entrance to Croxton High Street from the A428 on the 1887 map. Some of these trees still survive and could, again, suggest a change from the purely agricultural use of this land to parkland. The results of archaeological evaluation (ES appendix 6.6 Evaluation Trenching Phase I, part I, 5.20.8 and 5.21.5, and figures 5.45 and 5.49) also suggests evidence of ploughed fields from the medieval period in this area. This could suggest an earlier connection with the Scheduled medieval village within the park.

- 3.10 The possibility of this area being a late extension to Croxton park overlaying fields around the medieval village is an interesting one which could increase its historic significance. Regardless of this, it remains part of the setting of the registered park and scheduled medieval village and we would consider the presence of the road seen in viewpoint 44 could reduce the rural quality of this part of the setting and potentially harm the designated heritage assets. Placing this in terms of the National Networks National Policy Statement we conclude this would be 'less than substantial' harm under paragraph 5.134. We would therefore question the conclusion in the ES, chapter 6, 6.9.272 that these heritage assets would 'experience no change' amounting to 'no harm to significance' and that a 'slight beneficial effect' would result overall and also that in document 7.1 Case for the Scheme paragraphs 5.5.10 and 5.5.32 which suggest an overall enhancement to the registered park. To mitigate this effect landscaping is proposed which would reduce the visibility of the road and reduce traffic noise. However, even After 15 years the image from viewpoint 44 suggests the road bridge would still be seen. We would therefore encourage additional landscaping to further reduce the impact, perhaps by a greater depth of planting.
- 3.11 The parish church of St Denys at Little Barford lies to the north of the proposed new carriageway. Listed at grade II* the church originated in the Norman period and still contains important 12th century work, although much of the building dates from the 14th century. The church is set at some distance from the line of the new road and with the existing Barford Road and railway line between them. The road would be a significant development in the wider landscape in which the church sits and might result in increased noise audible from the churchyard. This asset is not assessed in the ES, chapter 6, but based on a site assessment we do not consider it would result in harm to the historic significance of the listed church in terms of the NPSNN.
- 3.12 Tempsford Church End conservation area includes the grade II* listed parish church of St Peter in the Church End area. The historic settlement is set along the old Great North Road to the west of present A1. St Peter's church principally



dates from the 14th and 15th centuries and is a major building in the village. Paragraph 6.9.225 of the ES Chapter 6 states that although the conservation area is 'in proximity to the construction activity' there would be 'no measurable change to significance.' The parish church is not mentioned in this passage nor are the permanent changes to the Black Cat roundabout, but that is considerably further to the north and we would agree with the assessment and do not consider the development would harm the historic significance of the church in terms of the NPSNN.

- 3.13 The Scheduled (NHLE 1005393 and grade II listed) bridge at Tempsford is a three arched stone bridge with a bridle path tunnel on the eastern riverbank, includes flanking flood bridges and was built to the designs of architect J Savage in 1814-20. The bridge carries the northbound carriageway of the A1. Paragraphs 6.9.214-15 of the ES Chapter 6 state that neither the construction or operation of the improved road would result in change to the setting of the bridge and no harm to its significance would result. We would accept that conclusion.
- 3.14 The scheduled bowl barrow at Round Hill (NHLE 013521) is situated west-north-west of College Farm, Roxton some 80 metres westwards of the existing A 428. Paragraph 6.9.192 of the ES Chapter 6 notes how the setting of the Bronze Age barrow is on the gravel terraces above the Great Ouse river where it was 'designed to be visible in the landscape' and that part of its interest 'derives from its association with surrounding Bronze Age barrows as part of a wider landscape of prehistoric features'. We note that the geophysical survey has identified possible tracks leading to this barrow from the north west and south east, adding to information about its context. The landscape setting does already include considerable modern development including the existing A428 road, but the new road would be brought closer to approximately 30 metres. Paragraph 6.9.194 also notes that the new Black Cat junction and the new road on the eastern side of the river Great Ouse would also be visible from the vicinity of the barrow. The assessment concludes that this would result in a slight adverse (not significant) effect, which Paragraph 6.3.54 confirms would equate to 'less than substantial' harm to the significance. We would agree with that assessment, which is repeated in document 7, Case for the Scheme 5.5.18.
- 3.15 Given that Round Hill barrow was not included as a visual receptor in any assessments we raised initial concerns with the applicant that the proposed bund and planting along the A421 could potentially also negatively affect views the from barrow towards the valley to the east. However, further photographic views provided by the applicant in their document 'Further Clarification of Effects on Designated Assets' (submitted to HE on 11th August 2021) confirm the existing landscape in which this change will be made and demonstrates minor effects, which alleviates this concern. A borrow pit is also proposed in the landscape setting of the barrow to the north, although we note that the proposal is to return this to agriculture. We would therefore accept the conclusion of the ES regarding these aspects of the development.





- 3.16 The moated enclosure at The Lane, Wyboston (NHLE 1012076) is situated 80 metres west of the Order Limits extent. Paragraphs 6.9.199-200 of the ES Chapter 6 accepts that the Roxton link road would cause 'very minor changes' to the moated site's setting but that this would have a neutral effect and not harm its significance. Following the applicant's presentation to us of further supporting photographic material (contained in 'Further Clarification of Effects on Designated Assets' submitted to HE on 11th August 2021), we would agree with this conclusion. However, we are pleased to note proposed requirements on the DCO relating to the final lighting, signage and surfacing strategies and would welcome consideration of the setting of the monument in the placement of lighting, signage and screening when designs for these elements of the scheme are finalised.
- 3.17 The scheduled moated site at Pasture Farm (NHLE 1019177) is situated 2 kilometres north west of Caxton. Paragraph 6.9.208 describes how the surrounding farmland historically formed part of the estate of the manor of Brockholt and place it in context of the medieval villages at Caxton and Eltisley. Paragraphs 209-211 of the ES Chapter 6 state that trees around the monument would 'provide a degree of screening to the asset' but that the development of the Caxton Gibbet junction would result in 'permanent impact on the significance of the asset through changes to its setting'. This impact would have a slight adverse effect which paragraph 6.3.54 confirms would equate to 'less than substantial' harm to the significance of the monument in terms of the NPSNN.
- 3.18 Further detail is provided in the Landscape and Visual Effects Chapter (ES Chapter 7), where the asset has been assessed as a residential receptor, R102. This highlights the potential visibility of construction activities (7.9.61), and also the higher 'moderate adverse (significant) possible impacts on views in the first year of operation (Table 7.3), from the junction in short and middle distance views, and also potentially prominent vehicles, signage and lighting columns (7.9.107). However, it is considered that after 15 years, when there is more vegetation, visual effects would not be significant against the existing baseline (7.9.150, and 'Visual Baseline and Visual Effects Schedule' 6.3 ES Appendix 7.4 page 86), partly due to existing dense belts of trees along the boundary of Pastures Farm. A representative viewpoint was not prepared as part of the DCO submission, although images looking towards the A428 were included in the 'Further Clarification of Effects on Designated Heritage Assets' (submitted to HE on 11th August 2021).
- 3.19 These conclusions may be broadly acceptable and a level of harm has been assessed. However, in our view it is difficult to envisage fully how visible the junction in particular would be (and hence how significant potential impacts on the setting will be). We would therefore advise that further visualisation would enable the conclusions of the ES to be evidenced. We also note that operational Traffic noise will also be increased (Chapter 11 Noise and Vibration 11.9.78). We note that no enhancement measures relating to cultural heritage have been incorporated into the design of the scheme (ES Chapter 6 6.8.19), and, if following mitigation there are still residual impacts, further visualisation



may provide a basis for assessment as to whether any S106 or S111 commitments regarding potential offsetting mitigation in relation to residual effects would be appropriate (for example, relating to management of the site). We are pleased to note proposed requirements on the DCO relating to the final lighting, signage and surfacing strategies, and we would welcome consideration of the setting of the monument in the placing of lighting, signage and screening as designs for these elements of the scheme are finalised.

- 3.20 The historic core of Eltisley village is designated as a conservation area and includes the moated site at Pond Farm (NHLE 1019176) and the grade II* listed parish church of St John the Baptist and St Pandionia. The church is situated on the western edge of the village with an open aspect to fields on its western and southern sides which is important in understanding a building which was historically set away from the core of the settlement. Modern housing and the existing A428 stands to its north. The moated site with the grade II listed Pond farmhouse on the moat platform is closer to the green at the centre of the historic core of Eltisley but also has housing and the existing road between it and the proposed location of the new carriageway.
- 3.21 Paragraphs 6.9.236 of the ES Chapter 6 state that construction of the Eltisley link road to the north of the village would cause 'temporary visual and noise intrusion into the setting of the conservation area which would equate to less than substantial harm'. We accept this assessment and the conclusion of the document 'Further Clarification of Effects on Designated Assets' (submitted to HE by applicant on 11th August 2021) that due to buildings, trees and hedgerows the development would not harm the parish church or Pond Farm moated site in terms of the NPSNN.
- 3.22 The deserted medieval village site at Weald (NHLE 1006849) is situated to the south of the existing A428 in agricultural land that contributes to an understanding of the historic settlement site. Paragraph 6.9.256 of the ES Chapter 6 notes how constructing the new road further to the north of the site would 'permanently improve the setting of the asset through a reduction in road traffic noise' and would result in a 'slight beneficial effect'. We would agree with that assessment.
- 3.23 The deserted medieval village site at Wintringham (NHLE 1006815) is situated to the south of the existing A428 in agricultural land that contributes to an understanding of the historic settlement site. Paragraphs 6.9.261-263 of the ES Chapter 6 notes that while constructing the new road further to the north of the scheduled site would result in 'a reduction in traffic and light' 'there may be further effects to the west' associated with the construction of a new junction. However, it is concluded, in paragraph 6.9.263 than landscape planting would reduce that effect and there would be no harm to significance of the scheduled site.
- 3.24 The Desk-Based Assessment notes there are undesignated heritage assets in the vicinity of Wintringham Hall, including the moat around the hall itself and a further moat west of Wintringham Farm. The remnants of ridge and furrow are



also recorded in pasture/parkland to the west of the moat, along with a possible plough headland and drainage ditches (Field 71 in the archaeological assessments, ES Appendix 6.3 'Analysis of Aerial Images' Appendix 4 AP1). As is noted in the archaeological assessment submitted with the application, (Environmental Statement Appendix 6.7 7.2.20) these remains are part of the wider landscape of medieval remains which form the context of the Wintringham deserted medieval village (NHLE 1006815). We would like to comment on them as part of its setting and potentially as contributing to its historic interest.

- 3.25 Paragraph 5.124 of The NPSNN states that non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to Scheduled Monuments should be considered subject to the policies for designated heritage assets', and these assets have significance as part of the wider settlement area, of which the scheduled monument is part.
- 3.26 The scheme brings development closer to these undesignated earthworks, and the slip road would therefore affect the setting of the non-designated asset. This will be screened, as per the planting mitigation for Wintringham Hall and associated buildings (for which impacts are noted to be minor adverse) (ES 6.9.238). Although the archaeological evaluation was negative (trenches 1556, 1590, 1555 and 1372, Appendix 6.7), indicating a low likelihood of impacting remains in the scheme area, the planting may affect the northern remnants of ridge and furrow and the plough headland/route, as identified in the analysis of aerial images (ES Appendix 6.3 'Analysis of Aerial Images' Appendix 4 AP1). We would therefore encourage careful consideration of construction and planting in this area, to avoid impacts on earthworks whilst achieving the desired aims of the mitigation with regards to Wintringham Hall. We are pleased to note proposed requirements on the DCO relating to the final lighting, signage and surfacing strategies, and suggest that the earthworks are considered alongside the Grade II listed Wintringham barn and granary.
- 3.27 We note a possible proposal has been made for community based archaeological work in this area, including hedgerow survey, which could support enhancement of public understanding of the historic environment. For other associated remains (site 17 in the Archaeological Mitigation Strategy), it is proposed to store spoil on the site, with a methodology for appropriate reburial and safeguarding to be proposed under a WSI. The sensitivity of the site to rutting and compaction is noted. We would refer to local authority comments on these matters.
- 3.28 Chawston Manor and Fishponds (NHLE 1010114) lies to the northwest of the Black Cat Roundabout. Paragraph 6.9.4a of the ES Chapter 6 notes that due to its topographic location and the extent of planting surrounding the asset it would have no inter-visibility with the scheme. We would agree with this assessment, which the applicant has also confirmed in their 'Further Clarification' document.
- 3.29 The grade II listed milestone on the Cambridge Road at Eltisley (NHLE 1331394) is assessed in the ES chapter 6, paragraph 6.9.145 where it is concluded that it is thought to survive in the same location as depicted on 19th century maps.



Historic mile markers gain significance from their location relative to the turnpike roads they marked and this is an interesting finding. Unfortunately, the milepost has not been found during survey and it is possible it has already been moved during previous road works. If it is identified it is proposed to relocate it to a position as close to that location as practical. Paragraph 6.9.148 recognises the effect on historic significance from relocating mile markers and concludes that to do this would result in less than substantial harm (in terms of the NPSNN paragraph 5.134). We would agree with that assessment and that in document 7.1 Case for the Scheme paragraphs 5.5.22 and 5.5.25. If the milepost is found an appropriate methodology for its removal, storage and resetting in a precise and agreed location should be produced and agreed, as suggested in paragraph 5.5.21 of document 7.1 Case for the Scheme. Historic England's listing section should also be informed so the listing can be amended. If the milepost is conclusively lost HE should also be informed.

- 3.30 The milestone at the junction of the A428 and St Ives Road (NHLE 1163534) situated north of Eltisley is listed at grade II. It would be affected by the realignment of the B1040 and relocated to a position which the applicants state would be 'as close to the current location as possible'. The relationship between the milestone and the historic turnpike road it marked is important in understanding its historic significance. Although the precise new location has not been established the ES chapter 6, paragraph 6.9.135 concludes this would result in a 'moderate adverse (significant)' impact which paragraph 6.3.54 confirms would equate to 'less than substantial' harm to the significance in terms of the NPSNN paragraph 5.134. We would accept this conclusion and that in document 7.1 Case for the Scheme paragraphs 5.5.22 and 5.5.25. An appropriate methodology for its removal, storage and resetting in a precise and agreed location should be produced and agreed as suggested in paragraph 5.5.21 of document 7.1 Case for the Scheme. Historic England's listing section should also be informed so the listing can be amended.
- 3.31 The milepost south of Pembroke Farm and west of Caxton Gibbet (NHLE 1162760) is listed at grade II. Its location appears to be on a section of the existing A428 which will not be bypassed but might be removed to create the new carriageway so it is proposed to relocate the milepost. The ES chapter 6 paragraph 6.9.157 concludes that this would result in 'less than substantial' harm to its significance in terms of the NPSNN paragraph 5.134. We would accept this and that in document 7.1 Case for the Scheme paragraphs 5.5.22 and 5.5.25. As the relationship between the milepost and the historic turnpike road it marked (the existing A428) is important in understanding its historic significance it should ideally be relocated alongside the old road as close to its current position as possible. If the loss of the existing road in this area would require it to be moved a considerable distance it is possible its significance might be better conserved if it were placed beside the new carriageway. This judgement could be part of agreeing an appropriate methodology for its removal, storage and resetting in a precise location as suggested in paragraph 5.5.21 of document 7.1 Case for the Scheme. Historic England's listing section should also be informed so the listing can be amended.





- 3.32 Brooke Cottages are a pair of traditional, dwellings dating from the 18th century situated close to the western side of the north-bound carriageway of the A1 trunk road. The timber framed construction is largely hidden by external render and covered by half-hipped thatched roofs. They are small, modest dwellings constructed in the vernacular traditional of rural domestic building of the period but date from the latter part of that tradition before the increased use of brick for more humble buildings largely brought timber framed construction for domestic properties to an end. Buildings of this type were once commonplace but are now relatively rare and often overlooked in favour of the more impressive timber framing employed in higher status house in the preceding centuries. That these cottages should have survived this close to the much-widened A1 road is perhaps surprising, but they are also unusual in retaining a number of internal features which illustrate their traditional use.
- 3.33 The current scheme for improving the Black Cat roundabout requires the demolition of Brooke Cottages. The need for the proposed development to clear the Brooke Cottages' site for a vehicular carriageway is summarised in document 7, Case for the Scheme paragraphs 5.5.41-2 and 5.5.46-9 and in Appendix 7.7, Black Cat Design Options. Historic England are not able to comment on the highways engineering issues or the conclusion there is no deliverable design option for the Black Cat roundabout which would enable Brooke Cottages to be retained in its existing location. If, following examination, other options do come forward we would be interested to consider them, but as the proposals stand, we would accept the requirement to demolish the Cottages.
- 3.34 The applicant has helpfully set out the policy context in which demolition of Brooke Cottages should be considered in paragraphs 5.5.34-40 of document 7, Case for the Scheme. We would draw attention to the quotation from the NPSNN paragraph 5.133 which states that in 'developments leading to substantial harm to or total loss of significance of a designated heritage asset the Secretary of State should refuse consent unless it can be demonstrated that the substantial harm or loss of significance is necessary in order to deliver substantial public benefits that outweigh that loss or harm...' It may be that the case for demolishing (i.e. physical dismantling) Brooke Cottages has been made in highways engineering terms and is necessary to deliver such benefits. However, this dismantling might not necessitate 'total loss of significance', a form of impact on designated heritage assets which is clearly distinguished in the NPSNN. We are pleased the applicant recognises this and has explored the possibility that the Cottages might be re-erected at another location in order to avoid total loss of significance of the listed building. However, the process by which this has been done, the quality of the evidence submitted with the application and the conclusions drawn raise a series of issues.
- 3.35 The NPSNN 5.128 states that 'the Secretary of State should seek to identify and assess the particular significance of any heritage asset that may be affected by the proposed development' and to allow this NPSNN 5.127 asks that the applicant 'should describe the significance of any heritage assets affected ...[and]... the level of detail should be proportionate to the asset's



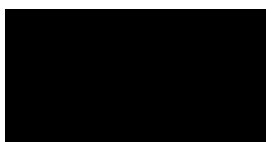


importance and no more than is sufficient to understand the potential impact of the proposal on their significance.’ In the case of Brooke Cottages not only is it a statutorily designated heritage asset but the potential impact of the proposals is profound. We therefore consider that a detailed assessment of significance is required.

- 3.36 Brooke Cottages Heritage Appraisal (ES, appendix 6.10) has been submitted with the application to provide information on the significance of the heritage asset. The evidence from the building fabric on which the appraisal is based is the result of a single visual inspection carried out on 12th March 2018. The Appraisal gives some basic information on the building but is considerably lacking in detail gathered from this inspection. For example, the method of thatching is not suggested, no evidence of construction is reported from the internally visible members of the wall frames, roof and floor structure, the presence of a plinth for the wall framing, or its materials and the brick type and bond and of the chimney stacks are also not mentioned. Several internal features are mentioned but not described or dated.
- 3.37 We appreciate that further site visits have not been possible since the covid-19 epidemic occurred a year after the 2018 inspection. However, it is stated in document 7.1, Case for the Scheme 5.5.52, that the applicants’ consideration of the buildings’ significance, condition and structural properties is ‘based on’ this inspection. We consider the resulting Appraisal inadequate as a basis for assessment, especially considering the impact of dismantling the building (whether for re-erection or not).
- 3.38 Appendix E of the Case for the Scheme, Brook Cottages Statement, sets out details of the applicants’ consideration of the listed building based on the Appraisal. It starts by looking at the structural condition of the building to assess which parts of the fabric might be suitable for dismantling and relocation. It states (paragraph A5.3.4, repeated in A5.6.2) that despite no detailed investigation of the fabric ‘an assumption has been made regarding the structure of the building and the potential for salvage of its historic fabric’ by professional advisors. However, the extent of the surviving structural members, the presence of any replacement work or reused earlier fabric and the historic significance of any of this material cannot be known without investigation. Also, crucially, the condition of the fabric cannot be known. The conclusion that the timber frame ‘in its entirety’, the chimneys, integrated bread ovens and timber staircase are ‘most likely’ to be suitable for removal are not based on evidence of their condition, degree of survival or if their historic significance merits their retention. The following assumption (A5.3.5, repeated in A5.6.2) that the wattle and daub infill, render and other features ‘will not withstand removal due to their fragile nature’ is also not based on evidence. The historic significance, or even existence, of some of these elements is not known nor is their condition. There has also not been any exploration of the range of methodologies which might be employed in dismantling and transportation. This is necessary before conclusions can be drawn about what, if any, significant historic fabric could be relocated.



- 3.39 The Brook Cottages Statement (Appendix E, section A5.6) also addresses the potential impact re-erecting Brooke Cottages following dismantling for either a continuation of its existing and intended use as residences or as a museum exhibit. It repeats the assertions about which fabric might be retained or lost (in A5.3.4-5) but goes on to comment on the impact of refurbishing the Cottages for residential use. A5.5.4 states that ‘the existing plan form of the building could not be retained, as it is not of sufficient size [so] the two dwellings would need to be reconfigured to form one larger property to be viable for sale as residential use in the open market.’ This statement is not supported by any evidence and the degree of harm to historic significance this might entail is also not set out. Paragraph A5.6.5 gives detailed statement about the changes which might be necessary to comply with building Regulations if the Cottages were re-erected. This is also not supported by any evidence and the degree of harm to historic significance this might entail is not set out. Refurbishing accommodation in Brooke Cottages could affect historic significance but the impact of this should be assessed when considerably more information about their historic significance and the impact of the proposals is known.
- 3.40 Section A5.7 of the Brook Cottages Statement explores the criteria for listing which might be considered for Brooke Cottages as re-located residences. In A5.7.1 items a-d are set out. These are appropriate factors to consider, but a series of assumptions are made and no evidence presented to support the conclusions in paragraph A5.7.2 that ‘to make it habitable and viable for residential use on the open market would erode its historic interest to such an extent that it would not meet the criteria for listing’ or in A5.7.3 that ‘the extent of retention of existing fabric [in a museum] could be sufficient to meet the criteria for designation’. We would accept that it is likely any method of relocation for either of the proposed uses would have a major effect on the listed building so considering its listed status is a valid exercise. However, Historic England would be able to do this when the applicant has provided sufficient information about its historic significance and the impact of the proposals for relocation and reuse is known.
- 3.41 In terms of establishing the significance of Brooke Cottages (including the level of survival of significant historic fabric) and assessing the impact of dismantling and relocation for the two potential uses we consider the information submitted with the application at this stage does not satisfy paragraph 5.127 of the NPSNN or allow the assessment required by paragraph 5.128. We would therefore not accept the conclusions about the buildings’ significance and the effect of the proposed demolition and uses contained in the Brooke Cottages Heritage Appraisal (ES, appendix 6.10) and Brook Cottages Statement (of the Case for the Scheme, Appendix E) and reflected in the Case for the Scheme 5.5.43- 63. However, we are aware that the applicant has experienced difficulties in carrying out further investigation of the building and are pleased that section A5.4 of the Brooke Cottages Statement proposes further study. This chiefly suggests a structural survey, but this should also involve a program of detailed investigation of historic fabric to inform detailed statement of significance. We requested this as an initial phase of investigation during pre-application discussions with the applicant and a brief for the work has been prepared.





- 3.42 This further structural, condition and historic building survey would provide evidence on which to draw conclusions about a number of issues which in the current documents are largely assumed. However, this would still leave uncertainty about a number of issues which are important in determining the effect on the significance of the listed building that might result from attempts to relocate it. Following this survey establishing the effect of dismantling, retention, transportation and re-erection of fabric along with the requirements for a renewed residual and/or museum use would give a full, evidence-based picture of the effect on significance of relocation. It would also allow an assessment of the building's listed status by Historic England in light of that impact. Following this a fully informed decision could be made about whether to take forward relocation and if so for what use. Following that, appropriate mechanisms put in place to ensure this is achieved to agreed standards in a specified timescale.
- 3.43 To satisfy the requirements of the NPSNN and make a clear and convincing justification for the total loss of significance of Brooke Cottages we would recommend that this process of investigation and assessment is carried out before the application is determined. However, an alternative approach is set out in a requirement placed on consent (Requirement 16, Vol 3, Draft Development Consent Order, 3.2 Explanatory Memorandum, 5.1.38-5.1.40) which the examining authority may wish to consider. This seeks to put some of the assessment in place under a requirement of consent but we are concerned that it does not address some highly significant issues we have set out in the preceding advice.
- 3.44 The draft Requirement 16 requires that a method for demolition is produced which includes a recording brief and an assessment of 'structural elements' ability to be relocated. If such elements are identified a method for reconstruction is to be produced.
- 3.45 This process seems to exclude the detailed assessment of surviving historic fabric, its condition and historic significance as previously agreed between HE and the applicant and proceeds directly to a demolition strategy. To do so it must assume that the significance of the historic fabric concerned has been established, which we contend it has not. When looking at retaining historic fabric it then contains the assumption that only 'structural elements' could be retained. There is no definition of this term, but it would appear to exclude important features and, again, an assumption is being made about the limitations of dismantling, transportation and re-erection techniques in retaining historic material. As we note above, these techniques have not been explored. Finally, Requirement 16 does not address the future use and location of a re-erected building. In doing so it again makes an assumption about the impact of a residential use which, as we note above, has not been substantiated by evidence. Moreover, should it be accepted that the building would be relocated for either use there is no mechanism to ensure this takes place.
- 3.46 The examining authority may consider that Requirement 16 could offer a valid alternative to the results of further assessment forming part of the application



prior to determination. However, we would advise that as presently drafted the requirement would not secure the information necessary to establish the effect of relocating Brooke Cottages on the significance of the listed building and to decide if relocation should be taken forward or not. If it were concluded that relocation should be taken forward the Requirement would also not secure that outcome. We would therefore recommend that Requirement 16 is amended to achieve those outcomes following the process set out in paragraph 3.42 above.

4. Historic England Advice: Archaeology

Comments in Relation to Environment Statement Chapter 6, Cultural Heritage (document 6.1), Environmental Statement Figures (document 6.2), Historic Environmental, Analysis of Aerial Images, Geophysical Survey and Archaeological Evaluation (Appendices 6.1-9, Document 6.3) and the Archaeological Mitigation Strategy (Document 6.12).

ES Chapter 6: Cultural Heritage

- 4.1 It is clear that the route of the proposed development cuts across a rich and diverse archaeological landscape, with evidence spanning the Palaeolithic to the modern times (Section 6.6 and Table 6-4). The evaluation trenching identified previously unknown archaeological deposits across the Order Limits (Section 6.6.92) dating from the Late Bronze Age (Section 6.6.93) to the Post-Medieval (Section 6.6.96). Some of the sites and features that were discovered are rare for the region and will therefore contribute to our understanding and to addressing questions raised in the Regional Research Frameworks (e.g. Sections 6.6.93, 6.6.94, 6.6.95 and 6.6.97).
- 4.2 It is noted that the superficial geology along the Great River Ouse is dominated by alluvium (clay, silt and sand), contained either side by undifferentiated river terrace deposits (Section 6.6.6). It should be noted that it may be difficult to identify remains in these sorts of deposits with magnetometry if the remains are deeply buried. We are therefore pleased to see that the evaluation trenching targeted areas of archaeological potential as well as areas that appeared to be clear of archaeological remains (Sections 6.6.83 & 6.6.86).
- 4.3 Section 6.6.66 states that LiDAR information was used to identify sites. It should be noted that the resolution of the Environment Agency data is 2m, which is generally inadequate for recording many archaeological features. A resolution of 1m is the basic minimum but where greater detail is required, higher resolution data is preferable (Historic England, *Using Airborne LIDAR in Archaeological Survey*, 2018: <https://historicengland.org.uk/images-books/publications/using-airborne-lidar-in-archaeological-survey/>).
- 4.4 Section 6.7 discusses the potential impacts (temporary and permanent) that the proposed development may have on the historic environment. This can include physical impacts that may occur during construction: the disturbance, damage, compaction or removal of subsurface archaeological remains or on the setting of assets (Section 6.7.3).



- 4.5 In relation to policies regarding sustaining and enhancing the Historic Environment (NPSNN 5.120-5.144), we are pleased to see that avoidance forms the primary (embedded) mitigation approach utilised within the scheme, to avoid potential impacts on buried archaeological remains and to preserve features of potential interest (Section 6.8.1 & 6.8.2). For the features and remains that cannot be avoided mitigation will be undertaken prior to and during construction in line with the strategies presented in the Archaeological Mitigation Strategy (Appendix 6.12; Section 6.8.8). Given the significance of the remains, the strategy will target areas that would maximise knowledge gain in order to address the site-specific research questions (Section 6.8.9). This approach seems sensible and appropriate, utilising the knowledge about the archaeology of the area, particularly in the Iron Age and Roman periods, that has been obtained from previous investigations and research projects to guide the work carried out as part of the A428 scheme. As noted below, however, Local Authority Archaeological Advisors have the primary remit in relation to non-designated remains.
- 4.6 We are pleased to see that the impacts of changes to groundwater levels on the historic environment have been considered (Section 6.9.182 & 6.9.183), which concluded that the impacts would not be significant and would not be felt outside of the Order Limits.

ES Appendix 6.2: Desk-Based Assessment

- 4.7 Section 4.2 states that LiDAR information was used to identify sites, but it does not state the resolution of the data used. It is noted in Appendix 6.3 that both 1m and 2m resolution data was used (Appendix 6.3, Section 2.1.4); 2m resolution data is generally inadequate for recording many archaeological features. A resolution of 1m is the basic minimum but where greater detail is required, higher resolution data is preferable (Historic England, *Using Airborne LIDAR in Archaeological Survey*, 2018: <https://historicengland.org.uk/images-books/publications/using-airborne-lidar-in-archaeological-survey/>).
- 4.8 We are pleased to see that a discussion has been included regarding the limitations of the data used for the assessment (Section 4.6). We are also pleased that a deposit model was developed as part of the works (Annex C; Section 5.2.21).
- 4.9 The archaeological potential of the Order Limits has been summarised in Sections 6.1.2 to 6.1.6, concluding that there is a medium to high potential for previously unrecorded heritage assets to be present across the scheme, with the exception of the potential for Post-Medieval remains, which has been classified as being of low potential. We agree with the assessment.

ES Appendix 6.4 Geophysical Survey Phases 1 and 2

- 4.10 Magnetometry was used to evaluate the route of the proposed scheme, returning some detailed information about the archaeological potential of



surveyed areas (e.g. Figure E.1, E3 and E7). Some parts of the scheme were omitted from the survey for various reasons, such as the presence of unsuitable ground conditions or magnetic interference (Section 4). We are pleased to see that the limitations of the technique used to identify more ephemeral remains has been included in the discussions (Section 6).

ES Appendix 6.6 to 6.8: Phases 1-3 Evaluation

- 4.11 The evaluation excavations have confirmed the presence of complex archaeological sites identified, following the desk-based and survey works (geophysics, aerial photography, LiDAR etc.), which included possible settlements and field systems, kilns, cremated remains and possible waterholes. The remains provide an opportunity to investigate the research themes (Appendix 6.6, Section 3.2; Appendix 6.7, Section 3.5), some of which could be addressed using scientific approaches, complementing the standard approaches used so far. For example, questions were asked about the organisation of the Iron Age and Roman period farmsteads and the activities that may have been carried out in an area (Appendix 6.6, Section 3.2.4; Appendix 6.7, Section 3.8). Techniques such as micromorphology could be used to identify the activities carried out in an area from the microrefuse present, while techniques such as soil chemistry/ lipid analysis could be used to determine if an area was used as an animal pen through the identification of lipid biomarkers associated with faecal remains.
- 4.12 A large number of Iron Age and Roman pottery sherds were recovered as part of the evaluation (e.g. Appendix 6.6, Section 6.3), but it would be useful to know if any residues were observed adhering to the surface of any vessels. This may provide evidence of the materials that were either stored or prepared within the vessels by identifying biomarkers that are characteristic of certain compounds, using techniques such as organic residue analysis. Residues may be present as either charred remains adhering to the vessel, or they may be absorbed into the fabric of the ceramic, but their identification can provide useful information about the activities carried out on site, diet, the function of certain pottery forms, as well as the trade and contact between different populations. It should be noted that if organic residue analysis is being considered, the pottery should not be washed as this can remove the archaeological residues of interest. Further details can be found in the Historic England document, '*Organic Residue Analysis and Archaeology*' (2017), including information about the sort of questions that this approach can address. If significant assemblages of vessels are recovered, it may be useful to discuss the assemblage with a specialist in order to understand the potential.
- 4.13 Several ovens/kilns were found during the evaluations (e.g. Appendix 6.8, Section 5.4.5) as well as an assemblage of fired clay material recorded during the Phase 2 excavations (Appendix 6.7, Section 6.6). This evidence suggests that additional fired features, such as kilns, hearths or furnaces may be present in the development area. A sampling strategy would be required to investigate these sorts of features in order to determine their function and date. Techniques such as archaeomagnetic dating should also be considered to date the remains.



- 4.14 The document does not seem to include a discussion on the conservation requirements for the material recovered, such as the metal objects (Appendix 6.6, Section 6.7; Appendix 6.7, Section 6.8; Appendix 6.8, Section 6.7). For example, will these remains need to be X-rayed? Do any warrant further analysis or stabilisation?
- 4.15 It was stated in Section 6.9 (Appendix 6.6, Phase 1 Evaluation) that the animal bone had been retrieved via hand-collection and from the environmental soil sampling. It is important that this is recorded in these sections as it provides information about the bias included in the dataset towards larger, more visible items. However, this information was not included in the animal bone sections for the Phase 2 and 3 animal bone reports which meant that it was difficult to compare and contrast the data presented across the three phases of evaluation (Appendix 6.7, Section 6.12; Appendix 6.8, Section 6.10). In addition, recommendations were made for further work following the assessment of the Phase 1 animal bone assemblage (Appendix 6.6, Section 6.9), which was good to see, but this information was missing from the discussion of the Phase 2 assemblage (Appendix 6.7, Section 6.12).
- 4.16 We were pleased to see that an overview of the environmental remains recovered from the three phases of evaluation was included in the Phase 3 report (Appendix 6.8, Section 6.11.23), as this put the findings into context. It would have been useful to see this for all the remains recovered from the different phases of work. We would also like to have seen recommendations for further work being made; this was included for some classes of materials but not for all.
- 4.17 It was noted in the appendices of the evaluation reports that the size of the environmental sample was recorded as 'volume processed' (Appendix 6.6, Table Appendix 4.2; Appendix 6.7, Table 10.96; Appendix 6.8, table 10.45). It is not clear if this represents the total volume of the sample, or if a sub-sample was processed as part of the evaluation. It would be useful to include a column in the table for the total sample size to make this point clear.
- 4.18 We are pleased that a chronological modeller will be included in the project team in the future, as this will allow the sorts of questions that could be addressed to be highlighted as well as the level of precision that could be achieved and the number of samples that would be needed to achieve these goals. For example, it is stated that the precise dating of late Bronze Age/early Iron Age remains in Fields 34, 35 and 44 are not yet certain (Appendix 6.6, Section 7.4.4), and so only broad age ranges have been applied so far. It is also stated that radiocarbon dating is being increasingly used to narrow the date between Late Bronze Age and Early Iron Age settlements, but it should be noted that the development of a chronology for these periods needs to be carefully considered due to the presence of a significant plateau in the radiocarbon calibration curve between 800-400 cal BC. In addition, a robust chronology of the closely spaced Iron Age sites identified during the Phase 2 evaluation would provide a





framework for addressing further research questions about how the sites functioned (Appendix 6.7, Section 7.3.2).

- 4.19 We are pleased to see that the features recorded in Field 44 (Phase 3 evaluation, Appendix 6.8, Section 7.5.2) have been highlighted as a focus for further geoarchaeological and palaeoenvironmental work, and that it is recommended that a geoarchaeologist should visit the site regularly during mitigation
- 4.20 We note that some trenches were omitted from the original designs for archaeological evaluation. Historic England were included in updates and discussion as the work progressed, although we refer to comments from Local Authority Advisors on the scope of evaluation for context and agreement of the approach.

Document 6.12 Archaeological Mitigation Strategy

- 4.21 We refer to the local authorities for detailed comment on the wording of Requirement 9, which secures the mitigation. However, we appreciate the logic of the simple requirement which requires development to be carried out, operated and maintained in accordance with the Archaeological Mitigation Strategy (Document 6.12). This approach requires the strategy to be robust. We note that the strategy makes reference to assessment, publication and outreach. In relation to Appendix 1.6.2, the AMS refers to a final AMS – we would seek clarity on when this will be produced, although anticipate that it would be for submission for a future examination deadline.
- 4.22 It is good to see that previous work and experiences on similar linear schemes have been considered to target and investigate archaeology identified within the project corridor, applying the lessons learned to the A428 project. We welcome that the strategy is embedded in local and regional research frameworks, and with input from academic advisors (Archaeological Mitigation Strategy Document 6.12, 1.5.3 and 4.3). We are also pleased to see a focused, research-based approach at the core of the mitigation strategy, but that the strategy can be modified if evidence is discovered to warrant additional analysis and sampling.
- 4.23 We welcome the integration of the AMS with the Environmental Management Plan and note the role of the Clerk of Works. We refer to CCC and CBC for detailed comments on the EMP. However, we also note that the Environmental Management Plan makes provision for dealing with unexpected remains, referring to the AMS, and it would therefore be more sound if the AMS also includes a section on unexpected remains (for example, contingency for cemeteries is noted (AMS pdf page 109).
- 4.24 The AMS refers to a process for site monitoring. 7.2.4 and 7.1.5, We would anticipate acknowledgement that curators and Historic England Science Advisors would be able to visit at key decision points in the process of excavations.



- 4.25 In terms of the scientific approaches that have been proposed, we are pleased to see that a broad range of techniques will be utilised, and that an integrated strategy has been developed. The techniques that have been selected appear to target specific questions, which is good to see, but additional detail would need to be presented in subsequent WSI documents. We would recommend that any specialists are approached as early as possible to discuss the project in order to maximise the opportunities and the potential of the proposed work. We are also pleased to see that contingencies have been put in place to utilise proteomic or biomolecular approaches if an inhumation cemetery is discovered (Appendix C), but would recommend that the techniques should only be applied to address specific questions, in line with the advice provided in the '*Science and the Dead*' publication (Historic England/APABE 2013).
- 4.26 It is stated that the Environment Agency LiDAR data has been used (Section 3.2.1); it should be noted that 2m resolution data is generally inadequate for recording many archaeological features. A resolution of 1m is the basic minimum but where greater detail is required, higher resolution data is preferable (Historic England, *Using Airborne LIDAR in Archaeological Survey*, 2018: <https://historicengland.org.uk/images-books/publications/using-airborne-lidar-in-archaeological-survey/>).
- 4.27 We are pleased to see that an iterative and flexible approach will be used, which will allow research questions to be reviewed and updated throughout the project (Section 4.1.3 & 5.4). For example, it is stated that excavation at one site may lead to different questions being asked for an adjoining site (Section 4.1.3). Section 5.1.2 and Table 5.1 outline the four categories assigned to sites and the differing levels of excavation that will be carried out. It is noted that unexpected discoveries will be discussed in order to allow the site to be investigated appropriately (Sections 5.1.18-5.1.20). We are also pleased to see that sites can move up and down the criteria levels depending on the data obtained from the site: if the site is not answering the expected research questions due to lack of information then the extent and scope of the works can be reviewed. Equally, more intensive sampling strategies can be employed if the evidence suggests that this is warranted (Section 5.4.2). We note that areas for proposed excavation or sampling are proposed in the Archaeological Mitigation Strategy (Document 6.12). We note also that Site Specific Written Schemes of Investigation will be provided, in accordance with the overall strategy, which will set out also levels of proposed sampling for sites, or to put forward approaches to preservation in situ (AMS chapter 11). Whilst some areas are proposed for much more detailed study and research, the strategy reviews the significance of sites (Document 6.3 Appendix 6.9) and proposes that some will receive a lighter touch (AMS Tables 5.1 and 5.2). We note reference to a brief provided by CCC and BCB which is not agreed, so not currently included as an Appendix. It would have been helpful to see the proposed site areas shown against the cropmark, geophysical survey and evaluation results in order to visually understand them. However, the local authority is best placed to discuss and consider the detail of proposed mitigation.



- 4.28 We are pleased to see that Bayesian modelling of radiocarbon dating evidence is being considered to address key research questions (e.g. Sections 4.4.5, 4.4.11), and that a chronological modeller will form part of the project team (Section 5.3.3). However, we would also recommend that a range of techniques area considered to contribute to the chronology, such as the use of archaeomagnetic dating to sample areas of burning, or dendrochronology of suitable wooden remains. For example, the large plateau in the radiocarbon calibration curve between cal 800-400BC can limit the resolution available in the chronology. Alternative techniques may offer better levels of precision in the Late Bronze Age-Early Iron Age.
- 4.29 It is stated that appropriate archaeological specialists will be given access to the site or attend meetings in order to advise on the excavation strategy, which is good to see (Section 8.3.7).
- 4.30 We are pleased to see that features containing in situ burning will not be excavated until the possible recovery of scientific dating samples has been considered (Sections 8.3.7, 9.2.9). This will allow techniques, such as archaeomagnetic dating to be applied.
- 4.31 It is stated that any human remains will be 100% excavated and that spatially distinct samples will be collected from the grave fills, adhering to the Historic England document '*The Role of the Human Osteoarchaeologist in an Archaeological Fieldwork Project*' (2018), which is good to see (Sections 8.3.7, 9.2.9).
- 4.32 It is stated that chemical analysis of soils will be carried out to investigate the use of space (Section 8.4). It is noted that in the first instance phosphates will be used, but that additional techniques will be considered depending on the results obtained (Section 8.4.2 and 8.4.3). This may include faecal lipid biomarkers, soil micromorphology and geochemical analysis (Section 8.4.3). We are pleased to see that an integrated approach will be adopted, as this will allow the information obtained from an area to be maximised. In addition, questions could be addressed about the use of space within the structures as well using several of the geoarchaeological and environmental techniques already cited in this document, if suitable occupation surfaces survive. For example, discrete and spatially distinct environmental samples and micromorphology samples could identify microrefuse from the activities carried out in an area.
- 4.33 It is stated in Section 8.6.3 that the artefacts will be stabilised, conserved and stored in accordance with relevant guidelines. We are pleased to see that a conservator will be given access to visit the site where necessary to undertake 'first aid' conservation treatment.
- 4.34 It is stated in Section 8.7.2 that the environmental samples will be collected to target specific research questions and will follow the methodologies outlined in the Historic England document '*Environmental Archaeology*' (2011), which is



good to see. We are pleased to see that efforts will be made to facilitate on-going finds and eco-fact processing that keeps pace with the excavations, as this will ensure that essential information is fed back to the excavations to guide the strategies going forward (Section 8.7.6).

- 4.35 We are pleased to see that all boreholes, including those taken for geotechnical investigations will be evaluated by a geo-archaeologist and that archaeologists and geo-archaeologists will be involved in the design of the sampling strategy (Section 10.2.1). A geo-archaeologist will be present when the cores are being collected (Section 10.2.4) and recorded (Section 10.2.7), which will allow continuous sequences of deposits to be examined.
- 4.36 It is stated in Section 11.3.3 that the strategy used to preserve sites will be developed in line with the Historic England document '*Preserving Archaeological Sites*' (2016), and that issues of pressure and compaction will be considered (Sections 11.3.3, 11.3.5).
- 4.37 In conclusion, we are pleased to see the range and detail of the questions being addressed through the A428 excavations. We are also pleased to see that a range of scientific techniques will be applied, utilising a question-led approach. We are also pleased to see outreach included in the mitigation.

5. Conclusions

Designated Heritage Assets

- 5.1 We are broadly content with the assessment of the impact on Scheduled Monuments, listed buildings, areas and historic landscapes carried out by the applicant and with their conclusions. We have agreed with the applicant that there would be a measure of harm to the historic significance of the Roxton Barrow and Caxton Pastures Farm due to a change in their setting. We agree that this would be less than substantial harm in terms of the NPSNN (paragraphs 5.131 to 5.134) and our agreement on this issue will be reflected in our joint Statement of Common Ground. As the level of harm would, in our view, be less than substantial in terms of the NPSNN, the public benefits of the proposed development should be weighed against this harm by the Examining Authority (as stated in paragraph 5.134).
- 5.2 However, we would advise that additional information from the applicant may provide further clarity on the specific visual impacts of the junction on Pastures Farm and enable consideration as to whether any offsetting mitigation may be appropriate. The ES 6.8.19 notes that no enhancement measures have been incorporated into the design of the Scheme. We would also seek clarity from the applicant on any offsetting funds, given the residual adverse effects to the historic environment. We would welcome consideration of the monument when the details of lighting and signage are finalised in accordance with DCO requirements, to further reduce the impact.
- 5.3 We have agreed with the applicant that there would be a neutral impact on the Scheduled Tempsford Bridge, Wintringham medieval village and Chawston



Manor and fishponds, and a slight positive impact on Weald medieval village. We also agree with the assessment of a likely neutral effect on the moated site at Wyboston, although would welcome, if relevant, consideration of the monument when the details of lighting and signage are finalised in accordance with DCO requirements, as we would also for the undesignated remains at Wintringham.

- 5.4 We agree with the assessment of less than substantial harm to the three listed mile markers on the A428 (milestone NHLE number 1163534) at the junction of the A428 and St Ives Road north of Eltisley, milepost number 1331394 on the Cambridge Road at Eltisley and milepost 1162760 south of Pembroke Farm and west of Caxton Gibbet) resulting from relocation and to agreeing an appropriate methodology for their removal, storage and resetting in a precise location as suggested in paragraph 5.5.21 of document 7.1 Case for the Scheme. Historic England's listing section should also be informed of the relocations as part of this so the listings can be amended.
- 5.5 We differ from the ES assessment in identifying a harmful impact on three designated heritage assets through development in their setting. At Roxton we consider that the enlarged Black Cat roundabout could have a negative effect on the grade II* listed parish church of St Mary and so do not accept the conclusion in document 7.1 Case for the Scheme paragraph 5.5.12 that there would be no harm to the church as 'listed buildings within the Roxton Conservation Area will not be impacted by the scheme as their setting is considered to be the village itself'. The degree of impact and potential for any mitigation could be established by additional visualisations of the junction from the field east of the church but on the basis of the information available we consider there could be less than substantial harm to the significance of the parish church so the public benefits of the proposed development should be weighed against this harm by the Examining Authority (as stated in paragraph 5.134 of the NPSNN).
- 5.6 We also differ from the assessment of the registered park and Scheduled medieval village at Croxton (in the ES chapter 6, 6.9.272 and 7.1 Case for the Scheme paragraphs 5.5.10 and 5.5.32) that these heritage assets would 'experience no change' with 'no harm to significance' and that a 'slight beneficial effect' would result overall. We consider that while removing traffic from the existing road would reduce the immediate impact on the assets the presence of the new carriageway and Toseland Road bridge in their setting would result in a degree of less than substantial harm to their significance. The public benefits of the proposed development should be weighed against this harm by the Examining Authority (as stated in NPSNN paragraph 5.134) but we would also encourage additional landscaping to further reduce the impact, perhaps by a greater depth of planting.
- 5.7 We are not able to comment on the highways engineering issues that have resulted in the proposed layout for the Black Cat roundabout which would require clearing the site of the grade II listed Brooke Cottages. On the basis of



the present information we would therefore accept the findings of the Black Cat Junction Options document.

- 5.8 NPSNN paragraph 5.133 states that in ‘developments leading to substantial harm to or total loss of significance of a designated heritage asset the Secretary of State should refuse consent unless it can be demonstrated that the substantial harm or loss of significance is necessary in order to deliver substantial public benefits that outweigh that loss or harm...’ If the Examining Authority accepts the case has been made for the removal of Brooke Cottages in highways engineering terms we consider the potential for achieving less than a total loss of significance should still be explored as part of making the required justification that total loss is necessary in order to deliver the public benefits. To do this we agree with the applicants that the possibility that the Cottages might be re-erected at another location should be explored but do not consider the information available is sufficient to understand the significance of the listed building or determine the impact of relocation and reuse and so does not satisfy the requirements of paragraphs 5.127-8 of the NPSNN.
- 5.9 Requirement 16 of the draft DCO seeks to provide more of this information but as presently drafted we do not consider it would furnish the information required by the NPSNN paragraphs 5.127-8 to allow an assessment of the effect of relocation and reuse. Furthermore, should it be decided to proceed with relocation and reuse it does not contain appropriate mechanisms to ensure these outcomes are achieved. We therefore do not consider Requirement 16 as drafted to be sound.
- 5.10 If the Examining Authority wishes to proceed with Requirement 16 as tool for securing this information, we would therefore recommend it is re-drafted to include phased assessment of Brooke Cottages’ significance, condition, methodologies for dismantling and relocation and the requirements of a renewed residential and/or museum use. We consider this would give a full, evidence-based picture of the effect on significance of relocation. We would recommend an assessment of the building’s listed status by Historic England should form part of the Requirement subsequent to these assessments, followed by a decision about whether to take forward relocation and if so for what use. If that were to be taken forward we recommend the Requirement should contain appropriate mechanisms to ensure this is achieved to agreed standards in a specified timescale.

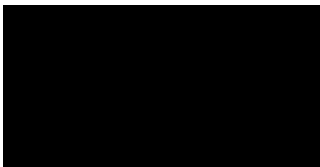
Archaeology

- 5.11 In terms of the potential impact on archaeology, avoidance is proposed as embedded mitigation but the ES concludes that with mitigation, the impact will be a moderate adverse residual effect. The scheme will have an impact on part of several sites in the area and in some cases entire sites. The remains will be destroyed, but there is a research-based strategy proposed to ensure that the significance of the impacted remains is not lost We consider that as part of the work, an Archaeological Mitigation Strategy should be implemented, in accordance with paragraph 5.140 of the NPSNN. We note that common ground has not yet been established between the applicants and local authorities



regarding the Brief for the Works and the Archaeological Mitigation Strategy. We would therefore advise that agree the detail and scope of the works falls within the remit of Local Authority Archaeological advisors. Illustration of the proposed excavation areas showing the geophysical survey results and trench results would be useful.

- 5.12 We suggest that the final AMS includes a note on retaining some finds unwashed where relevant for residue analysis, that it is cross referenced to the EMP in relation to unexpected remains, that it refers to a range of scientific dating techniques, and that curator or Historic England visits are included for key decision points in site excavation strategies. We would envisage that these matters can be reflected in our joint Statement of Common Ground



David Eve
Inspector of Historic Buildings and Areas

