Appendix A: Draft response to Highways England's consultation on the A428 Black Cat to Caxton Gibbet proposals

Introduction **2**

Summary of key issues **3**

Traffic Impacts **6**

Transport modelling 6
Impacts on local roads and rat-running traffic through villages 7
Impacts on St Neots and Little Paxton 8
Impacts on Cambridge, and interaction with the Greater Cambridge Partnership's transport programme 8
Impacts on and opportunities from East West Rail 9
Impacts on the SRN, MRN and other A roads 9
Summary of modelling and traffic concerns 9

Direct impacts on the transport network managed by Cambridgeshire County Council **10**

Caxton Gibbet area 10
Eltisley area 11
St Neots area 11
Strategic provision for Non-Motorised Users 12
Local road and PROW crossings of the new A428 12
Standard of new local roads and de-trunked road to be passed to the County Council 13
Standard of Non-Motorised User facilities 13
Black Cat junction 13

Environmental impacts **13**

Flood Risk 13
Biodiversity 17
Air Quality 24
CO_2 emissions 25
Noise and vibration 25
Landscaping – Red Line boundary and space for mitigation 26

Construction impacts **29**

Phasing 29
Compounds 29
Materials 29
Construction traffic and traffic management 29
Impacts on local communities 30

Public Health impacts **30**

Cultural Heritage Impacts **31**

Archaeology 31
Listed building and monuments 33

Mitigation and Legacy **34**

Ongoing work with Highways England through the scheme development and delivery programme **34**

Introduction

1. This document represents the response of the following Local Authority partners to Highways England's A428 Black Cat to Caxton Gibbet proposals.

   - Greater Cambridge Partnership
   - Cambridge City Council
   - Cambridgeshire County Council
   - Huntingdonshire District Council
   - South Cambridgeshire District Council

2. The response details the issues identified by the Authorities that need to be addressed by Highways England as it takes the A428 project forward, based on the consideration of information published in the consultation. The response includes a high level summary of key thematic issues, followed by greater detail on a range of topics and site specific issues.

3. The following abbreviations are used throughout the response.

The Authorities:	The Greater Cambridge Partnership, Cambridgeshire County Council, Huntingdonshire District Council, South Cambridgeshire District Council and Cambridge City Council
CCC:	Cambridgeshire County Council
CPCA:	Cambridgeshire and Peterborough Combined Authority
DCO:	Development Consent Order
GCP:	Greater Cambridge Partnership
HDC:	Huntingdonshire District Council
HE:	Highways England
NMU:	Non-Motorised Users
PEIR:	Preliminary Environmental Information Report
PROW:	Public Rights of Way
SCDC:	South Cambridgeshire District Council
SRN / MRN:	Strategic Road Network / Main Road Network
SuDS:	Sustainable Drainage Systems
vpd:	Vehicles per Day

Summary of key issues

Firstly, the Authorities wish to restate their continued support for the proposals in principle, subject to the following points below. Our conditional support is on the basis that the proposals will, along with other interventions, provide transport capacity to support the significant levels of growth planned across the Local Authority partners' areas as noted in paragraph 1.

Points of Principle

4. We wish to emphasise the critical importance of the A428 being considered as part of a coherently planned local and regional transport network, that of necessity should interact and integrate with capacity being provided elsewhere. This includes:

- The A1 East of England Study improvements
- The East West Rail Central Section between the Bedford area and Cambridge,
- The Greater Cambridge Partnership's programme in the Cambridge area, and
- The Cambridgeshire and Peterborough Combined Authority and Greater Cambridge Partnership's Cambridge Autonomous Metro proposals.

5. While this represents a significant opportunity, if there is not integration between these schemes and programmes, the net result of the additional highway capacity that is planned may ultimately be counterproductive, as it feeds additional traffic into areas that cannot cope with it, exacerbating congestion in those areas and negating the nominal benefits of the A428 scheme.

6. Given the above, and in the light of clear commitments to achieve net zero carbon by 2050 by both national government and local partners, and concerns by the authorities about traffic impacts on local communities, we seek clarification of the transport impacts of this scheme (especially given the lack of detail provided on page 56 of the consultation booklet).

7. Separate to the transport impacts, the Authorities seek confirmation that the project will achieve a quantified biodiversity net gain. Government has a clearly stated ambition for net gain as set out in its 25 Year Environment Plan; a goal restated for the Oxford-Cambridge 'the Oxford-Cambridge Arc Government ambition and joint declaration between Government and local partners'. The goal of net biodiversity gain is a clear priority shared by the Authorities. It is therefore disappointing that Highway's England is only expecting to "maintain existing levels of biodiversity" (consultation booklet, page 63, column 2) as part of the scheme. This conflicts with the National Planning Policy Framework that seeks development to deliver a measurable biodiversity net gain. The A428 scheme should be an exemplar with a commitment by Highways England to achieve significant biodiversity net gain (minimum of 20% utilising a suitable appropriate Biodiversity Net Gain metric). Opportunities to provide landscape mitigations including infilling with trees between new road, old road and villages should be given significant consideration for the A428 scheme to achieve a net biodiversity gain.

8. Further to the above, it is important there is collaboration between this project and others within the area and that it should fit into the work on Oxford-Cambridge Arc Local Natural Capital Plan, which looks at the growth agenda across the region.

Design, impacts and mitigation

9. Beyond the principle of the project, we wish to note that at this stage in the process there are many areas where there is further detail required to enable a full assessment of the impacts of the project and any necessary mitigation, and there are areas where the Authorities will reserve their position, particularly on the mitigation measures that may be needed. We look forward to working with Highways England to consider these issues and to agree as much as possible prior to submission of the application for a Development Consent Order.

10. Particular points to note include:

- In relation to local partners' net zero carbon ambitions, there is a need for the project to maximise support for Non-Motorised User (NMU) modes between St Neots and Cambourne. Clarification on the approach to this is requested, as the proposal does not include a segregated NMU provision along the route.

- Clarification of the proposed approach to air quality, noise and vibration monitoring and enforcement before, during and after construction.

- Clarification in relation to the environmental and social impacts of the proposed scheme, including the need to ensure the red line boundary (the defined extent of the development consent application) includes sufficient land to mitigate the scheme from a landscape and biodiversity net gain perspective. Experience with the A14 Cambridge to Huntingdon scheme has shown that a tightly drawn red line for the application can leave very little scope for this. The Authorities are concerned to ensure that this mistake is not repeated with the A428 project.

Construction

11. The authorities wish to highlight the following headline concerns regarding construction of the scheme:

- In terms of sourcing materials (for example from reuse of materials and/or sourcing from local borrow pits), there are no areas identified for borrow pits. More detail is required on both the location of any borrow pits and their landscaping once the scheme is finished.

- Careful consideration is needed for the location of any site compounds and materials storage sites, in order to minimise any impacts on local communities. Any potential impacts on communities will need to be properly mitigated.

- How and where the accommodation of road crews is provided during the build programme is not clear. Insufficient provision was made during the A14 construction which led to illegal encampments in Huntingdonshire.

- How will local communities be engaged and kept informed during the delivery of the scheme? The Authorities are keen to avoid the experience of the A14 Development Consent Order and construction which has been that it has generated a significant number of complaints from residents impacted by the construction.

Legacy

12. The Authorities would welcome the establishment of a Legacy Fund by Highways England to allow issues that emerge after the DCO process to be addressed by Highways England in discussion with the Authorities and local communities impacted by the scheme and the construction activities.

13. The proposed scheme should maximise Legacy opportunities including those associated with local communities. Further clarification on potential Legacy opportunities for local communities, similar to those provided by the A14 improvement scheme, should be provided. It would be hoped that non-highway legacy projects, such as drainage improvements in local settlements, projects from the Cambridgeshire Green Infrastructure Strategy and those supporting achievement of biodiversity net gain, have greater consideration in light of the impact on local communities. Legacy projects and their potential implementation need to be considered from an early stage with partners.

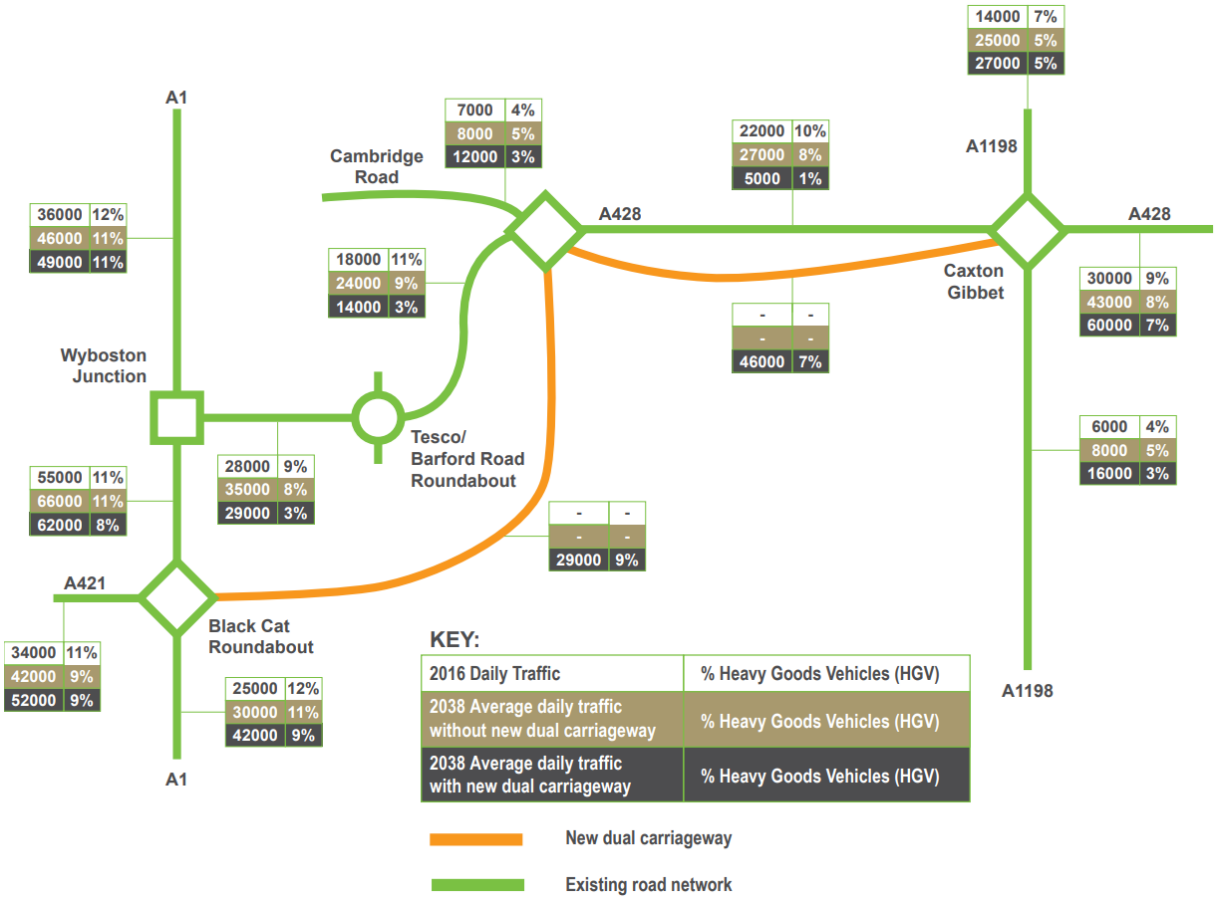
Ongoing work with Highways England through the scheme development and delivery programme

14. The Authorities look forward to working with Highways England to answer the questions raised above and ensure that the applications for a Development Consent Order addresses local concerns and can be supported by the Authorities in detail as well as in principle.

15. In particular, the commitment by Highways England to enter into a Planning Performance Agreement with Cambridgeshire County Council is welcome. However, to ensure that Huntingdonshire and South Cambridgeshire District Councils can contribute effectively to the A428 project, the Authorities wish to see the same commitment to a PPA between Highways England and Huntingdonshire and South Cambridgeshire District Councils – this ideally would be in collaboration with CCC as one PPA.

Traffic Impacts

16. The consultation booklet quantifies the impacts of the scheme on the A428 and a small number of directly connected roads as shown in the figure below from page 56 of the consultation booklet.



Transport modelling

17. We understand that the future traffic figures shown in the diagram above are from initial strategic modelling undertaken some time ago. Scheme modelling using a transport model validated for the detailed assessment of the A428 project had yet to be completed at the time the consultation commenced, and is still ongoing.

18. This modelling will be needed for the DCO submission. It is the detailed consideration of this modelling that will allow the Authorities to assess whether the scheme is meeting national and local objectives, and whether there are impacts of the scheme or residual issues that the scheme does not address that require mitigation.

19. The following paragraphs set out areas where further information is needed in order for the Authorities to fully assess the schemes transport impacts. This includes

- Impacts on the local transport network managed by Cambridgeshire County Council;

- Impacts on communities that the network serves; and
- Impacts on a range of environmental issues associated with traffic, including, noise and air quality.

20. Transport modelling outputs will also inform the assessment of the impact of the scheme on CO_2 emissions and climate change.

21. The diagram under paragraph 6 shows the current A428 between St Neots and Caxton Gibbet taking 27,000 vehicles per day in 2038 in a 'without scheme' scenario, and the old and new roads taking a combined 51,000 vehicles per day in a 'with scheme' scenario. The material presented does not quantify how this increase in traffic flows is derived, although it does state that a significant amount of traffic will transfer to the new dual carriageway from the existing A428 and other routes. The Authorities wish to understand in detail how much of this increase:

    - Is due to future local housing / economic growth?
    - Is due to assumed background growth?
    - Is due to re-routing traffic
        - from strategic longer distance traffic (for example HCV traffic re-routing away from M4, M25 and A12 to the A421, A428 and A14 for trips to Felixstowe and Harwich)?
        - from local A Roads
        - that was previously rat-running on local (B Road or lower) routes?
    - Is due to suppressed demand in Bedford, Central Bedfordshire, Huntingdonshire, South Cambridgeshire and Cambridge?
    - Is abstracted from the local bus network?
    - Might otherwise be catered for by East West Rail?

<u>Impacts on local roads and rat-running traffic through villages</u>

22. The proposals have potential to reduce rat-running on local roads, and the text on page 57 of the consultation booklet specifically references the opportunity for traffic to reroute from the A505 and A603. The County Council would note that the A505 (and A10 for some onward trips to Cambridge) while not optimal in terms of route for some journeys, are MRN routes and their difference in route status from the A428 as part of the SRN is largely artificial. Their use should not be characterised as rat-running. Similarly, the A603 is a busy A Road, and its use does not generally constitute rat-running.

23. In both of these cases, the re-routing of traffic from these routes may be beneficial overall, but in terms of concern over rat-running, it is the more local routes between the B1462 / A603 and the A428 and between the A14 and the A428 that see most rat-running as a result of congestion on the A428. The Authorities would welcome quantification of the impact of the project on traffic flows in the following areas:

    - the B1042 and A603 between Sandy and Cambridge
    - the B1046 between St Neots and the A603
    - in villages in the area between the A428 and the B1042 / A603
    - in villages in the area between the A428 and the new A14(M) / new A1307

24. The Authorities will wish to consider the information on traffic flows in these areas with and without the scheme to inform any consideration of mitigation needed in villages affected by the scheme. These potential impacts will need to be considered during both the Construction Phase and Operational Phase. Rat-running was a common occurrence during the construction phase of the A14, therefore specific traffic flows through villages during the Construction phase need to be given detailed consideration to ensure this problem is not repeated during the A428 construction phase.

25. However, we would note that if the scheme is successful in its stated aims, there should not be a significant need for traffic calming to manage traffic flows in the villages. The Authorities would therefore like to see a 'monitor and manage' approach taken to the traffic impacts of the scheme on villages, with a firm commitment to introduce mitigation measures should the scheme fail to deliver expected reductions in traffic levels, or if other problems occur.

Impacts on St Neots and Little Paxton

26. Other than the quantification of traffic flows on Cambridge Road, St Neots, and on the old A428, the information presented does not provide any information on how the scheme will impact upon traffic flows in St Neots.

27. The old A428 between Great North Road and Barford Road is shown as taking 29,000 vpd in the 2038 'with scheme' scenario, which is 1,000 vpd more than 2016 traffic flows on the road, and only 6,000 vpd less than the 'without scheme' scenario. For the 'with scheme' scenario, this implies a very significant re-routing of traffic from within St Neots, or a very significant degree of induced traffic, or both.

28. The Authorities would therefore welcome quantification of the impacts of the scheme on traffic flows on the following routes in St Neots:

- B1041 Mill Lane, Little Paxton
- B1043 Huntingdon Road north of Priory Hill Road
- B1428 Cambridge Road at railway bridge
- B1046 Potton Road at bridge over railway
- B1043 Barford Road north of its junction with the old A428
- B1428 Great North Road north of its junction with the old A428
- Bushmead Road at bridge over A1
- Duloe Road at A1 bridge
- B1048 Crosshall Road east of its junction with Great North Road
- Great North Road south of its junction with A1 slip roads
- B1428 St Neots Road at the town bridge over the River Great Ouse

Impacts on Cambridge, and interaction with the Greater Cambridge Partnership's transport programme

29. To be added

Impacts on and opportunities from East West Rail

30. To be added

Impacts on the SRN, MRN and other A roads

31. A further significant issue for the Authorities is understanding how the scheme will impact on SRN and MRN routes beyond the immediate vicinity of the scheme, many of which are already operating at or over their nominal capacity and suffer from significant levels of congestion. In this context, the Authorities wish to understand how the scheme will impact on:

- the A14 Cambridge Northern Bypass
- the A14 between Cambridge and Newmarket
- the A1303 between the A428 and the M11
- the M11
- the new A14(M) between Huntingdon and Cambridge
- new A1307 (old A14) between Huntingdon and Cambridge
- the B1042 and A603 between Sandy and Cambridge
- the A10 between Royston and Cambridge
- the A1309 north of the M11
- the A505 between the A1(M) and the A11
- the A1198 between Huntingdon and Royston

32. The data presented in the figure under paragraph 6 shows a doubling in traffic on the A1198 to the south of the Caxton Gibbet junction in 2038 from 8,000 vpd in the 'without scheme' scenario to 16,000 vpd in the 'with scheme' scenario. Where is this additional traffic coming from and going to? Will this result in exacerbated levels of congestion at the junction between the A505 and the A1198 north of Royston?

33. The very high traffic flows shown on the A1198 to the north of the Caxton Gibbet junction in 2038 are also a major concern, as this road is not of a standard that will cope with flows of 25,000 or more vpd. In this context we need to understand the impact of the A428 scheme on the A1198 in Godmanchester and around Papworth Everard and whether the figures presented indicate capacity issues on the old A14 (new A1307) between Huntingdon and the new A14(M) at Fenstanton that are leading to the diversion of trips that would more appropriately be on the new A14(M) using the A1198 and A428 instead.

34. We would also note that in the 'with scheme' scenario, the current dual carriageway section of the A428 east of Caxton Gibbet is shown to take 60,000 vpd in 2038. These flows are significantly above the nominal design capacity of the route, and presumably do not take into account traffic that will join the route between Caxton Gibbet and Cambridge from Cambourne and the Bourn Airfield development.

Summary of modelling and traffic concerns

35. The Authorities support the A428 Black Cat to Caxton Gibbet scheme as part of the solution to the provision of new transport capacity to support growth and address the critical housing cost issues in the Greater Cambridge area. However, while we

appreciate that modelling of the scheme is ongoing, the information on traffic flows presented in the consultation booklet raise many more questions than answers, and lead to very significant concerns that the local road network may suffer major adverse impacts as a result of the A428 scheme.

36. This in turn leads to concerns that the intervention proposed on the A428 has not yet been robustly considered in terms of the transport patterns that are needed in the Greater Cambridge area, and that are being planned for at a local and national level through the transport programmes of the GCP and CPCA, and by East West Rail. With the levels of growth that are planned, travel patterns need to change if we are to avoid major impacts for users and for the environment, and to provide residents, workers and visitors with reliable and efficient alternative transport options into and within what will otherwise be increasingly congested urban areas.

37. This need does not appear to be reflected in the model outputs that are reported in the consultation booklet. The Authorities do not wish to see a situation where improvements on one part of the SRN / MRN release capacity that then results in additional congestion and delay on other parts of those networks or elsewhere on the local transport network, negating the benefits that are sought from the project.

38. While it is possible that the revised and updated modelling will resolve some of these concerns, the information presented highlights the critical need to see changes in travel behaviour for trips if the local and strategic road networks are not to see increasingly damaging levels of congestion and delay, to the detriment of users and the environment. The A428 project needs to be framed in this context and should look to feed traffic into the public transport network to ensure that it does not lead to negative impacts elsewhere on the strategic road network, and in Cambridge, St Neots and other settlements served by and impacted by the route.

Direct impacts on the transport network managed by Cambridgeshire County Council

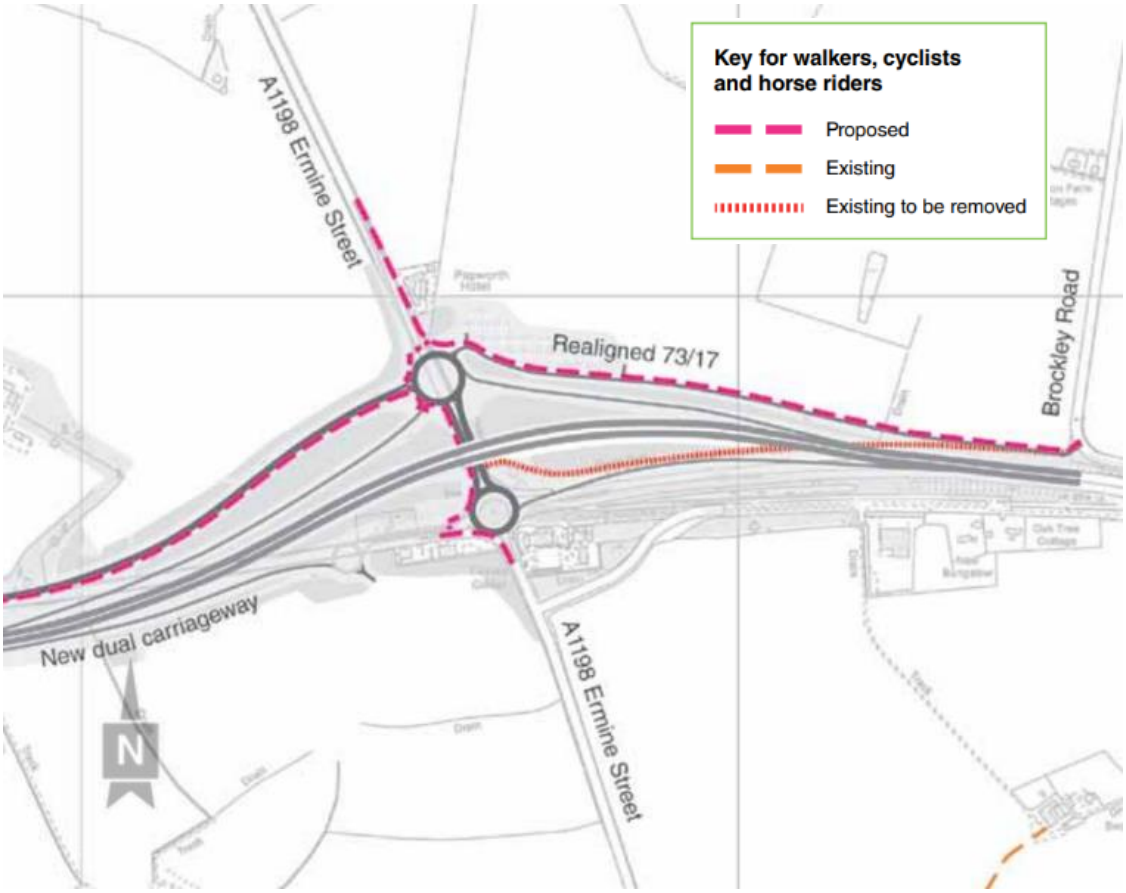
<u>Caxton Gibbet area</u>

39. While the consultation material provides details of daily traffic flows on the new A428, old A428 and the A1198 as they approach Caxton Gibbet, a detailed assessment of the proposed junction layout will require detail of all turning movements and a detailed breakdown of traffic flows by time of day. The County Council is not therefore in a position to comment on the appropriateness of the proposed junction arrangements to cater for the traffic flows shown at this time.

40. As noted in paragraph 25 above, we also need to establish the reason for the very significant increase in traffic on the A1198 in the 2038 with and without scheme scenarios.

41. With reference to the traffic information that has been provided, the County Council has significant concerns relating to the provision for pedestrians, cyclists and horse riders at Caxton Gibbet shown on page 43 of the consultation booklet and reproduced below.

42. The 'with scheme' scenario shows the A1198 taking 27,000 vpd to the north of Caxton Gibbet in 2038, compared to 14,000 vpd that used the route in 2016. The proposals show the cycle route from Cambourne to Eltisley crossing this link, and the cycle route south towards Caxton also crosses the two west facing A428 slip roads at grade.



43. To the south of Caxton Gibbet, flows on the A1198 in the 'with scheme' scenario rise from 6,000 vpd in 2016 to 16,000 vpd in 2038.

44. The provision of pedestrian and cycle facilities linking Cambourne with Papworth Everard, Eltisley and Croxton through this area needs to be fundamentally rethought in this context. At grade pedestrian and cycle crossings of high speed routes taking the volumes of traffic on the A1198 noted above are not acceptable. Detail on traffic flows on the slip roads will also need to be considered in detail, as there is an established north south demand from NMU between Caxton and Papworth Everard that needs to be safely provided for.

Eltisley area

45. The consultation material does not provide details of residual traffic flows on the B1040 in the Eltisley area so it is not possible at this time to comment in detail on the new local road and junction arrangements shown at this time

St Neots area

46. The lack of detail provided on traffic flows in the St Neots area other than for the old A428 and Cambridge Road (as noted in paragraphs 19 to 21 above) means that it is

not possible at this stage to provide comments in detail on the impacts of the proposals in St Neots.

47. The County Council will require detailed traffic information quantifying all future movements at the proposed Cambridge Road junction with the new A428 in order to assess the appropriateness of the proposed junction arrangements and pedestrian and cycle infrastructure.

Strategic provision for Non-Motorised Users

48. Important opportunity to create a St Neots to Cambridge route. The Cambourne to Cambridge scheme will have a cycle route alongside, so for this scheme it's really a Cambourne to St Neots route that ought to be delivered. Opportunities to provide cycling links on to Huntingdon and St Ives should be considered following detailed analysis of traffic forecasts to assess local mitigation requirements and NMU facilities.

49. Important to see some sort of Legacy Fund associated with this scheme, as per the A14, some of which could be used for cycling projects in Huntingdonshire and South Cambridgeshire.

Local road and PROW crossings of the new A428

50. The Key Features list confirms that many of the major impacts will be in the area south of St Neots where works for Black Cat roundabout, bridges over the River Great Ouse and the ECML, plus several other smaller scale bridges and new local roads will result in significant adverse landscape and visual impacts during construction and beyond.

51. Although many of these works will be visible from viewpoints in Huntingdonshire, they will not have the level of impact that will be experienced locally.

52. Works relevant to HDC are the major new junctions at B1428 Cambridge Road [east of Loves Farm, and north east of Wintringham Park], and some new smaller bridges over the new road. The section of dualled A428 will run through Abbotsley parish, then along the southern fringes of Toseland and Yelling parishes. The new junction near Eltisley is just south of the district boundary.

53. Existing PROWs will be severed by the new road – some of these are proposed to be re-connected by bridges or underpasses involving only minor realignment, whilst others will be diverted to link to bridges and involve a more circuitous new route.

54. Further PROW comments awaited.

55. It is important to maintain and improve safety whilst ensuring that links between business and communities are improved.

56. The new arrangements east of Wintringham to produce a circular walk and safe links over and under the new road are welcomed.

57. Note detailed comments on 1km or 5km threshold are provided under Public Health Impacts (paragraphs 166-171).

58. A cycle route from Cambourne to St Neots as part of the scheme – off road/ segregated is requested,

59. There is a significant risk that the new road will be a barrier for many walking and cycling trips, or will add significant distance to many trips. The most important links in this are Papworth to Cambourne and villages south of St Neots into St Neots an onwards north west and also across by Toseland and Yelling. In terms of cycle facilities, the Authorities wish to ensure that facilities are provided for:

- Wintringham via St Neots train station & Mill Lane Bridge over River Ouse continuing North West to Paxton Pits Nature Reserve
- Papworth Everard to Cambourne
- Croxton / Eltisley to Cambourne
- Croxton / Eltisley to Papworth Everard

Standard of new local roads and de-trunked road to be passed to the County Council

60. To follow

Standard of Non-Motorised User facilities

61. Important that HE comply with their own guidance document which is quite recent – Interim Advice Note 1/95 'Cycle Traffic and the Strategic Road Network' which sets out widths for shared use paths, widths for traffic islands that cyclists use etc.

Black Cat junction

62. While the Black Cat junction is in Bedford Borough, we may want to comment, or to support BBC's comments.

Environmental impacts

Flood Risk

63. After reviewing the potential impact of the A428 Road Upgrade on flood risk and drainage, it is clear that the new road may potentially cross over 20 watercourses and a number of areas at risk to flooding.

64. Whilst we have no objection to the proposed scheme, we would like to highlight the following:

- Any alterations to ordinary watercourses that aren't located within an Internal Drainage Board area will require consent from the Lead Local Flood Authority (LLFA) under the Land Drainage Act 1991.
- In areas with known existing flood risk, measures should be implemented wherever possible to reduce the risk to existing communities. This could include incorporating Sustainable Drainage Systems (SuDS) into the development.
- Floodplain compensation may be required on some ordinary watercourses. As

outlined in the report, this will need to be agreed with the LLFA and will need to be on a level for level and volume for volume basis.

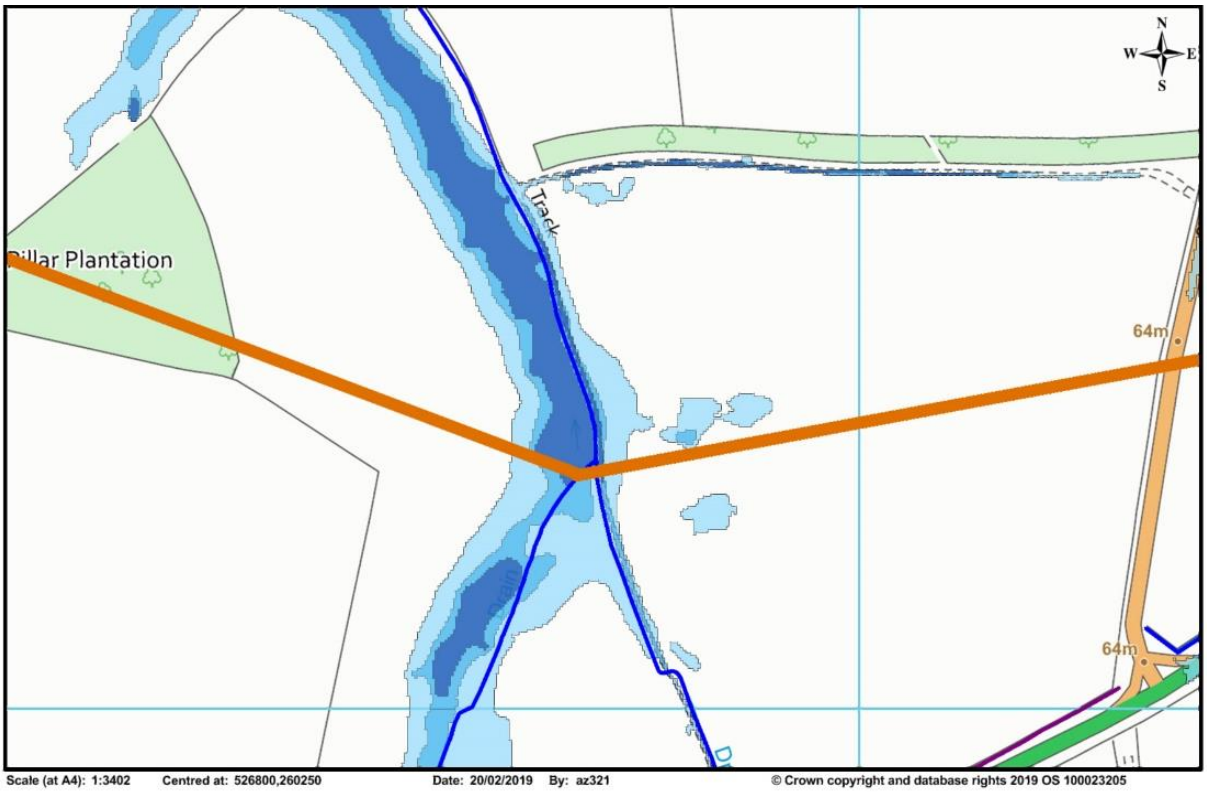
- As with other Highways England road schemes, we would expect drainage from the new road to be limited to greenfield runoff rates through the use of SuDS features.
- The latest climate change allowances will need to be applied to the design of the drainage network for the road.

65. Sections of the proposed road upgrade which are likely to be at particular risk to flooding and drainage are detailed in the maps below.

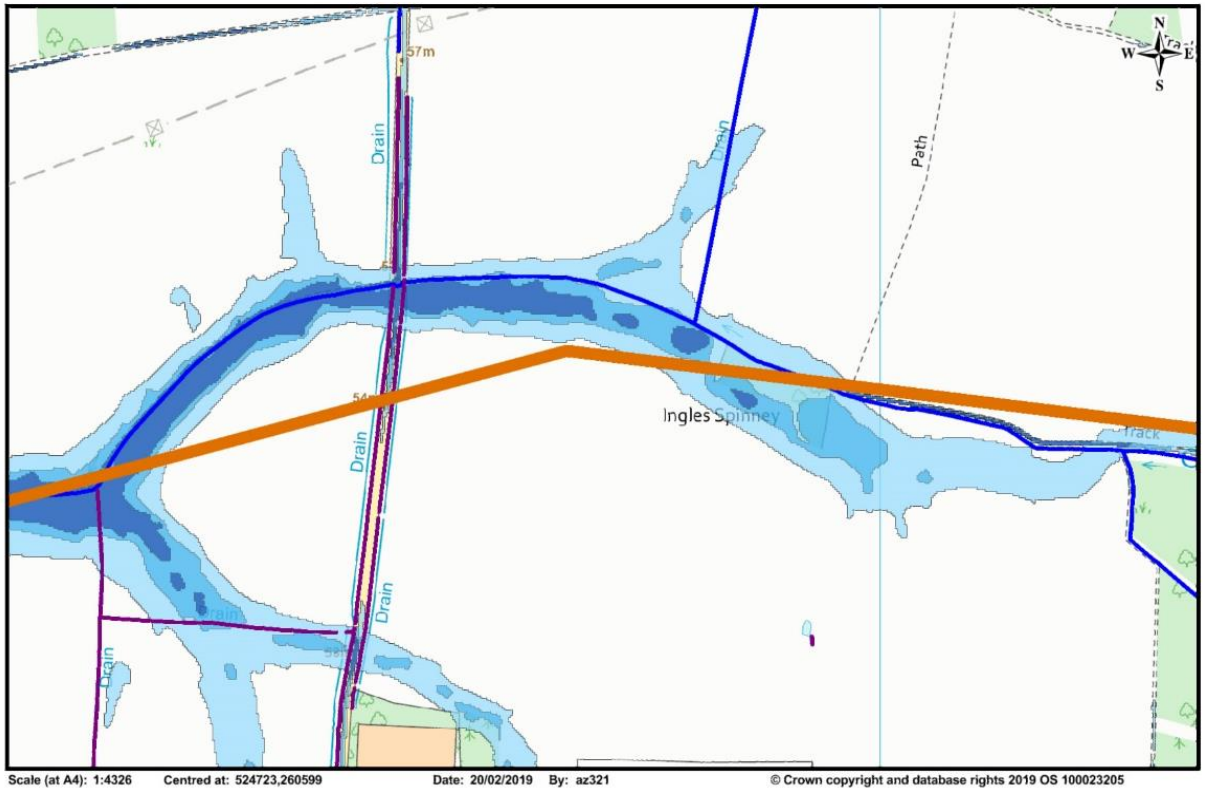
- Map 1: The new road is to cross an ordinary watercourse (possibly at two points) and an area of High Risk to surface water flooding around 450 metres west of the existing B1040.
- Map 2: The proposed route may cross Gallow Brook in two places and again an area of High Risk to surface water flooding.
- Maps 3 and 4: The road is to cross a main drain (blue) and the Hen Brook (red) in St Neots, which are both associated with high surface water flood risk. The road will also cross an area of Flood Zone 3, meaning floodplain compensation will likely be required.

66. Where appropriate, measures should be implemented to reduce the flood risk to existing communities such as those in St Neots and neighbouring villages.

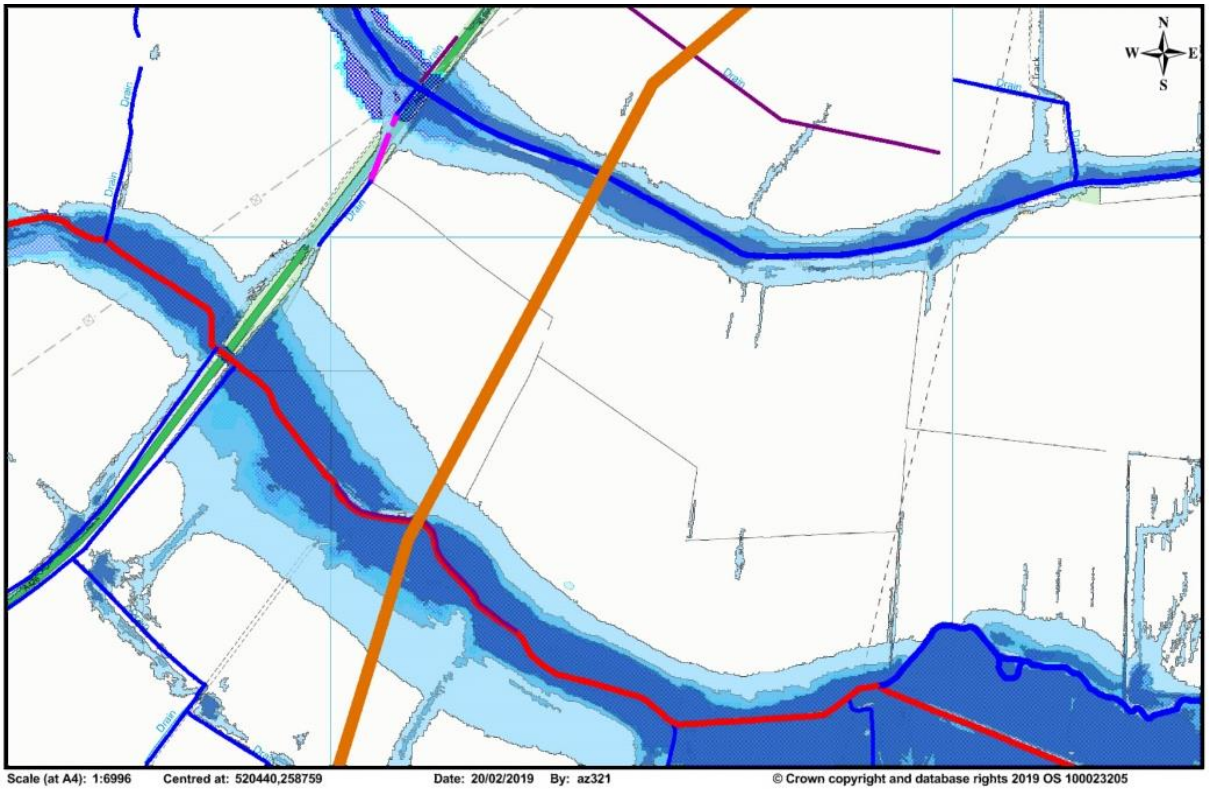
Map 1: Ordinary Watercourse west of B1040 – areas of surface water flood risk



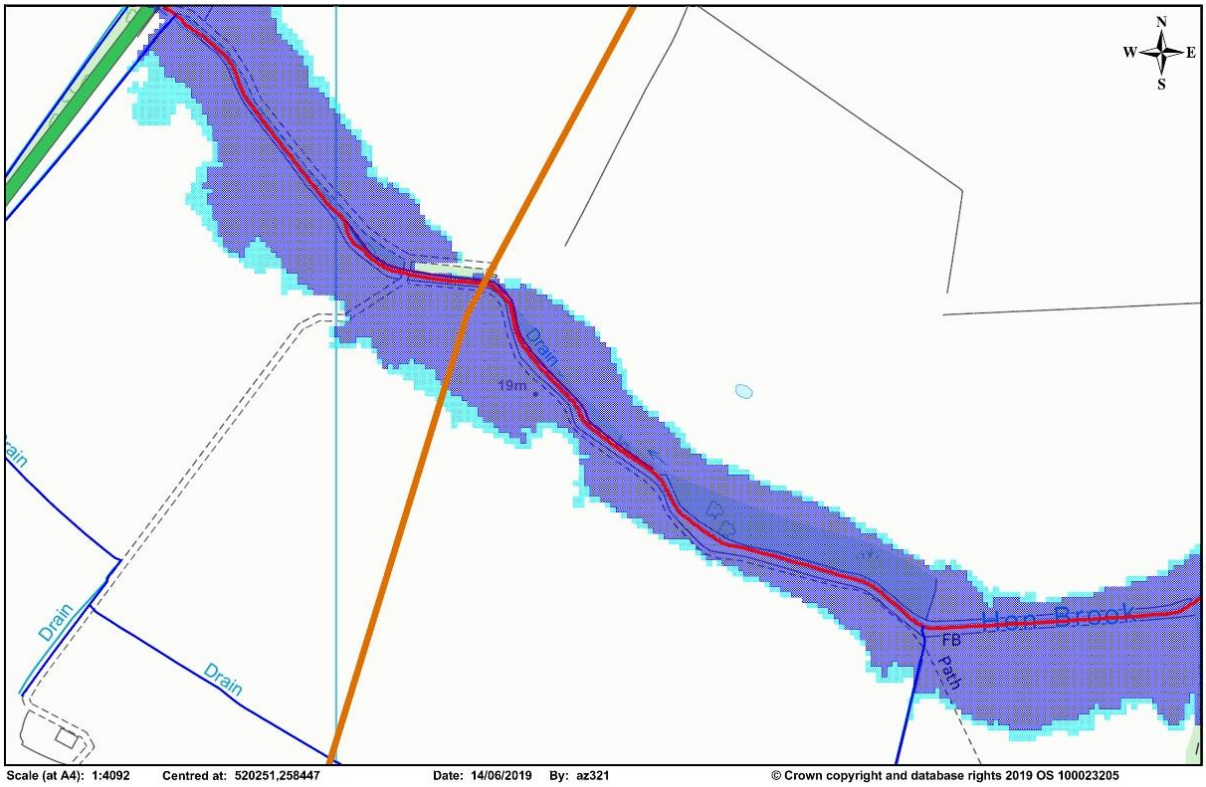
Map 2: Gallow Brook – areas of surface water flood risk



Map 3: Main Drain (blue) and Hen Brook (red) – areas of surface water flood risk



Map 4: Hen Brook – areas in Flood Zone 3 (purple)



Biodiversity

67. It is disappointing that Highway's England is only expecting to "maintain existing levels of biodiversity" (consultation booklet, page 63, column 2) as part of the scheme. This conflicts with the National Planning Policy Framework that seeks development to deliver a measurable biodiversity net gain and the Authorities would expect to see details of how this would be achieved

68. The A428 scheme should be an exemplar with a commitment by Highways England to achieve significant biodiversity net gain (minimum of 20% utilising a suitable appropriate Biodiversity Net Gain metric). This is particularly important given the cumulative adverse impact of this and other major transport schemes (either in progress or delivery) on fragmentation of the landscape and adverse impact on biodiversity – including schemes by Highways England (A1 & A14 improvements), Combined Authority (e.g. expressway), Network Rail (East West Rail), Greater Cambridge Partnership (e.g. new busways & road improvements) and Ox-Cam Arc.

69. The reference to "some beneficial effects relating to improved habitat connectivity once the landscaping and ecological measures are in place" is noted but not considered completely factual. The benefits come when the landscaping and ecological measures have matured. Again this is dependent on the level and efficacy of maintenance works, which is discussed in more detail under Landscaping.

70. It is important there is collaboration between this project and others within the area and should fit into the work on Oxford-Cambridge Arc Local Natural Capital Plan, which looks at the growth agenda across the region.

71. The A428 project also provides excellent opportunities to deliver objectives of Cambridgeshire Green Infrastructure Strategy and the Cambridgeshire and Peterborough Habitat Opportunity Map key areas for grassland, wetland and woodland creation across the county (HOM published in March 2019 - contact Cambridgeshire and Peterborough Biodiversity Partnership for details). We welcome the commitment that the "design includes comprehensive landscaping and biodiversity measures that will help to connect habitats on either side of the new dual carriageway and guide animals safely under, over or away from the area is home the road" and expect this to include consideration of green bridges at key locations across the scheme, such as Black Cat, River Great Ouse and Eltisley/Croxton.

72. The ecological assessment will need to consider impacts on all statutory designated sites, non-statutory designated sites, protected species, priority species and habitats and Cambridgeshire and Peterborough Additional Species of Interest (see cpbiodiversity.org.uk for S41 & CPASI list for the county). Of particular concern is the impact on Eversden and Wimpole Woods SAC (Barbastelle bats), Croxton Park County Wildlife Site (CWS), River Great Ouse (CWS) and impact on breeding / wintering birds located within close proximity to the route. The mitigation hierarchy must be applied, with the scheme designed to avoid adverse impact. Serious consideration must be given to the cumulative adverse impact of transport schemes

and other development (either complete, in progress or in early planning stages) that will result in significant loss of habitat across the county and severe severance of the landscape resulting in reduction in resilience of species to move across the county.

73. Consideration of long-term management of the scheme and any legacy projects must be considered at an early stage to ensure long-term biodiversity mitigation / enhancement will be delivered.

General comments on the Preliminary Environmental Information Report

- The approach to the ecological matters in scheme design and option assessment is welcomed. The proposed route mostly avoids designated sites and is sited close to the existing A428 to reduce additional environmental impacts.
- The road design including pedestrian bridges and underpasses need to allow movement of badger, deer, and other small mammals.
- As detailed in the Specific ecology comments, more detailed work is still required, as follows:

Scope of Baseline Assessment/Survey

74. Eversden and Wimpole Woods Special Area of Conservation (SAC) and the associated population of barbastelle bats: the importance of this roost in relation to the SAC population needs to be established through sufficient surveys;

75. Detailed baseline Phase 1/Habitat Classification surveys, followed by National Vegetation Classification/Phase 2 botanical surveys for any potential Habitats of Principal Importance (HPI) should be completed. Surveys to inform whether hedgerows meet the criteria for an Important Hedgerow under the Hedgerow Regulations 1997 are also needed;

76. If further Phase 1 surveys in 2019-2020 identify potential for protected and notable species to be present, further surveys to establish presence/absence of these species should be completed.

Impact Assessment

77. The impact assessment provided in 'Preliminary Environmental Information Report' (Highways England, June 2019) is premature as baseline surveys have not been finalised. Other detailed assessment such as hydrological information has not been completed to inform potential water pollution issues.

78. The assessment needs to go into more depth, defining the importance of ecological features.

79. Potential impacts of the scheme on the potential barbastelle roost and functionally-linked habitat relating to the Eversden and Wimpole Woods SAC will need to be established through sufficient surveys. Impacts on populations associated with the SAC need to be fully considered and conclusions evidenced to meet the Conservation of Habitats and Species Regulations 2017. Sufficient evidence is required to inform whether or not a Habitats Regulations Assessment (HRA) should be completed.

80. Operational impacts need to consider long-term loss or fragmentation of habitats as a result of land take required to implement the scheme. Operational impacts considered in Table 8-4 have not been clearly defined in the Preliminary Environmental Information Report but appear to comprise mostly impacts as a result of traffic, noise, lighting and water pollution.

81. Reduction of impacts as a result of mitigation measures needs to be clearly detailed in the impact assessment, with quantifiable values. An assessment of whether habitats are irreplaceable or difficult to recreate/restore should be included. Cumulative impact assessment also needs to be completed.

Avoidance, Mitigation and Compensation

82. The commitment in principle to no net loss and net gain of biodiversity should be a minimum requirement with the key objective being to achieve net ecological gain. To start this, avoidance, mitigation and compensation design must be based on extensive and robust surveys. Measures proposed are very generic and high level. It is impossible confirm no net loss being achieved without detail.

83. It needs to be made clear that the mitigation (avoidance, mitigation, compensation, enhancement) hierarchy has been followed.

84. It is stated that Figure 2.4 demonstrates no net loss/net gain. This is not a sufficient evidence-base. No net loss of biodiversity will need to be measurable

85. As well as mitigation/compensation for habitat loss, sufficient avoidance, mitigation and compensation measures for protected and notable species will need to be provided.

Enhancement Measures

86. Clarity is required regarding the objective of the scheme. Is the objective to maintain existing levels of biodiversity/achieve no net loss as stated in Sections 2.1.10 and 4.4.16 or to achieve net ecological gain as stated in Table 8-3?

87. South Cambridgeshire District Council's current position is that opportunities should be taken for schemes of this nature to achieve a measurable net gain in biodiversity of 10% through the form and design of development, unless sufficient justification to the contrary can be provided.

88. It would be recommended that Highways England work with the Wildlife Trust for Bedfordshire, Cambridgeshire and Northamptonshire who are developing a net gain calculator based on the Defra metric specific to the area.

Scope of Baseline Assessment/Survey

89. The broad scope of the ecological surveys is welcomed.

90. Survey information must remain valid to within two years of submission to provide an accurate baseline assessment of the site.

91. The scope of the ecological desk study for designated sites and habitats is acceptable. There is one statutory designated site within 1km in South Cambridgeshire District; Elsworth Wood Site of Special Scientific Interest (SSSI), 850m north-east of Caxton Gibbet roundabout. The scheme does not meet Natural England's Impact Risk Zone criteria in relation to this site. It is recognised in Section 8.3.19 that Croxton Park County Wildlife Site (CWS) is adjacent to the redline boundary of the scheme (the existing A428). Other CWS within the South Cambridgeshire District are relatively distant from the site. In relation to protected and otherwise notable species, records should also be requested from local interest groups and experts.

92. Consideration of Eversden and Wimpole Woods Special Area of Conservation (SAC) and the associated population of barbastelle bats is welcomed. A detailed impact assessment must be based on a robust evidence base. I cannot comment on the sufficiency of the evidence base at this stage as detailed survey methodology has not been provided. It is stated that a barbastelle bat roost may be present within 250m (Table 8-3). Baseline bat tree/building roost assessment, emergence/re-entry surveys and activity surveys must determine whether barbastelle bats are foraging/commuting in the area. The importance of this roost in relation to the SAC population needs to be established through sufficient surveys.

93. Although a detailed survey methodology has not been provided, Table 8-2 indicates that an impact assessment for habitats appears to be based on two days of field surveys in 2016 and three days in 2018 for a 18.9 km route. It is unlikely that a detailed assessment, sufficient to inform a robust Impact Assessment could be completed in such a short space of time. It is stated that surveys are continuing into 2019-2020. Detailed baseline Phase 1/Habitat Classification surveys, followed by National Vegetation Classification/Phase 2 botanical surveys for any potential Habitats of Principal Importance (HPI) should be completed. Surveys to inform whether hedgerows meet the criteria for an Important Hedgerow under the Hedgerow Regulations 1997 are also needed. Loss of unimproved i.e. species-rich grassland is only mentioned in Table 8-1. Unimproved grassland is a HPI and is rare within the Cambridgeshire District.

94. If further Phase 1 surveys in 2019-2020 identify potential for protected and notable species to be present, further surveys to establish presence/absence of these species should be completed. As limited information about the methodology for protected species surveys has been included, I cannot comment in detail on the validity of the approach. The crossing point methodology for linear features has not been mentioned. This needs to be taken into consideration for bat survey transect design (see Berthinussen and Altrincham, 2015).

95. The assumed absence of hazel dormouse is acceptable as the species is almost entirely absent from South Cambridgeshire District.

Impact Assessment

96. The impact assessment needs to be completed in accordance with 'Guidelines for Ecological Impact Assessment in the UK and Ireland' (CIEEM, September 2018), informed by robust and comprehensive baseline surveys. The impact assessment

provided in 'Preliminary Environmental Information Report' (Highways England, June 2019) is premature as baseline surveys have not been finalised. Other detailed assessment such as hydrological information has not been completed to inform potential water pollution issues.

97. The assessment needs to go into more depth, defining the importance of ecological features. Impacts then need to be characterised accurately including positive/negative, extent, magnitude, duration, frequency, timing and reversibility of impacts. Cumulative impacts need to be considered. A detailed definition of construction and operational impacts also needs to be provided. Direct and indirect impacts must be considered. Tables 8-3 and 8-4 are lacking in these details. EcIA requirements need to be fully considered within the impact assessment in the Environmental Statement.

98. Potential impacts of the scheme on the potential barbastelle roost and functionally-linked habitat relating to the Eversden and Wimpole Woods SAC will need to be established through sufficient surveys. Impacts on populations associated with the SAC need to be fully considered and conclusions evidenced to meet the Conservation of Habitats and Species Regulations 2017. Sufficient evidence is required to inform whether or not a Habitats Regulations Assessment (HRA) should be completed. It is stated in Section 8.6.3 that a screening exercise is currently being undertaken for the SAC and that findings 'indicate that there will likely be no adverse impact on this site'. To meet the People over Wind and Sweetman vs Coillte Teoranta (2018) judgement, impacts without mitigation will need to be considered in the HRA screening process.

99. Operational impacts need to consider long-term loss or fragmentation of habitats as a result of land take required to implement the scheme. Operational impacts considered in Table 8-4 have not been clearly defined in the Preliminary Environmental Information Report but appear to comprise mostly impacts as a result of traffic, noise, lighting and water pollution. Section 8.4.10 states: 'The preliminary assessment of potential impacts associated with Scheme operation on identified internationally, nationally or locally designated sites of biodiversity value has identified that there will be no direct impacts on these sites due to their distance from the Scheme and the lack of ecological connectivity.' Croxton Park CWS is within or immediately adjacent to the redline boundary of the scheme. Full justification should be provided demonstrating why impacts on Elsworth Wood SSSI and Croxton Park CWS (and designated sites in other local authority areas) are not anticipated.

100. Although assessment of residual impacts can be made including mitigation measures (see CIEEM EcIA Guidelines Section 5.2), it is best practice to consider impacts without mitigation in order to inform avoidance, mitigation, compensation and enhancement measures. Reduction of impacts as a result of mitigation measures needs to be clearly detailed in the impact assessment, with quantifiable values. An assessment of whether habitats are irreplaceable or difficult to recreate/restore should be included. Cumulative impact assessment also needs to be completed.

101. Table 8-1 is welcomed, but further detail of the quality and composition of these habitats is needed. The table should be expanded to identify which of these are priority/HPI and to include importance in the local context. The table needs to be

updated to clarify how much of these habitats will be retained and protected, temporarily degraded/lost and permanently lost. A habitat map should also demonstrate this information spatially.

Avoidance, Mitigation and Compensation

102. The commitment in principle to no net loss and possible net gain of biodiversity is welcomed. However, avoidance, mitigation and compensation design must be based on extensive and robust surveys. Measures proposed are very generic and high level. It is impossible confirm no net loss being achieved without detail. The difference between mitigation and compensation (off-set for residual impacts) needs to be clearly defined.

103. It needs to be made clear that the mitigation (avoidance, mitigation, compensation, enhancement) hierarchy has been followed. For example, unimproved grassland should be retained in situ in the first instance and mitigation measures such as translocation only considered as a last resort due to the uncertainty of success.

104. Detailed mitigation design will be required. The design will need to include consideration of potential constraints. For example, can watercourses/ponds created for drainage reasons also provide biodiversity value within management requirements? Loss of any Habitats of Principal Importance must be avoided in the first instance and compensated for sufficiently if loss cannot be avoided. This should include native hedgerows.

105. It is stated that Figure 2.4 demonstrates no net loss/net gain. This is not a sufficient evidence-base. No net loss of biodiversity will need to be measurable (see comments below).

106. As well as mitigation/compensation for habitat loss, sufficient avoidance, mitigation and compensation measures for protected and notable species will need to be provided. In particular, further detail is needed regarding compensation for the loss of farmland/wintering bird habitat and appropriate compensation for the loss of barn owl roosts (away from the road due to risk of collision with vehicles). Off-site compensation should be provided if required.

Enhancement Measures

107. Clarity is required regarding the objective of the scheme. Is the objective to maintain existing levels of biodiversity/achieve no net loss as stated in Sections 2.1.10 and 4.4.16 or to achieve net ecological gain as stated in Table 8-3? In accordance with NPPF paragraph 170, 174, and 175, the Adopted South Cambridgeshire District Council Local Plan Policy NH/4 and the UK Government 25 Year Environment Plan, applications should contribute to enhancing and restoring biodiversity. There has been a recent consultation by Defra regarding the roll out of a mandatory 10% net gain target. South Cambridgeshire District Council's current position is that opportunities should be taken for schemes of this nature to achieve a measurable net gain in biodiversity of 10% through the form and design of development, unless sufficient justification to the contrary can be provided. Net gain appears to be

possible within the scheme including woodland, scrub, grassland and wetland creation.

108. A calculation following an approach using the Defra metric should be followed. It would be recommended that Highways England work with the Wildlife Trust for Bedfordshire, Cambridgeshire and Northamptonshire who are developing a net gain calculator based on the Defra metric specific to the area.

109. Section 2.2.28 - 2.2.36 does not mention County Wildlife Sites or other non-statutory designations.

110. For some species e.g. badger, barn owl and invertebrates, Table 8-2 states surveys are completed. Elsewhere ongoing surveys e.g. bait marking is referenced.

111. The document needs to have a consistent manner of referencing habitats and species of conservation importance. Consistency is required in referencing UK/local Biodiversity Action Plan priority habitat and species and NERC Act 2006 Section 41 Habitats and Species of Principal Importance e.g. in Sections 8.3.23, 8.3.25 and 8.3.30. Clarity should be provided regarding criteria for important habitats and notable species. For example, have Birds of Conservation Concern (RSPB, 2015) and Red Data Book species been considered? Have important habitats such as unimproved grassland been assessed against County Wildlife Site designation criteria? An inclusive range of species needs to be considered e.g. common toad. Arable weed surveys are welcomed and arable margins (local BAP) need to be considered.

112. Figure 2.4 does not take account of all species mitigation such as reptile receptor area(s) and compensatory bat roosts.

113. A consistent distance from Eversden and Wimpole Woods Special Area of Conservation (SAC) should be cited. For example, this is stated to be 8.5km in Section 2.2.28 and 7.3km in Section 5.3.5.

114. Section 8.2.12 states that surveys are continuing from 2019-2020. Will the baseline be sufficient for the ES be finalised and submitted in early 2020?

115. Consistency required regarding no net loss/net gain objective. For example, Section 2.1.10d sets out objective to ‘maintain existing levels of biodiversity’. Section 4.4.17 and Tables 8-3 and 8-4 reference net gain.

116. Clarity required regarding avoidance, mitigation, compensation and enhancement. Section 8.2.14 should also mention compensation.

117. Section 8.2.17 (h) should read ‘Local Biodiversity Action Plan Priority Habitats and Species, and Habitats and Species of Principal Importance: up to 1 kilometre from the DCO site boundary’.

118. Fig 2.1 needs to show non-statutory designations including County Wildlife Sites.

119. The number of ponds and watercourses within 500m is inconsistent. Habitat Suitability Index assessments were completed for 51 sites but the number of ponds

and watercourses within 500m varies from 70-84 (S8.3.22). If access to ponds was not possible, sufficient justification should be provided.

120. 'Invasive habitats' in Table 8-2 should read 'non-native invasive species'.

121. Tables 8-3 and 8-4 are not a comprehensive impact assessment; for example in relation to Section 41/BAP species.

122. Table 8-4 states that there will be significant positive impacts on aquatic habitats as a result of operation of the scheme. Without evidence to the contrary, this is very unlikely.

123. Consider impacts of mortality of amphibians and reptile from road drainage infrastructure in Table 8-4.

124. Outline Environmental Management Plan (OEMP) would be welcomed. This should also include creation and establishment of habitats. The OEMP be provided should influence scheme design.

Air Quality

125. It is noted that the scheme is unlikely to contribute to a significant worsening of air quality at sensitive receptors, however detailed modelling of potential air quality impacts has not yet been completed and will need to take place once detailed traffic data is available. This will enable the potential effects of the operational phase of the scheme to be quantified.

126. Current advice from public health experts is that the health impacts of air quality should be minimised, even if there is no risk that air quality standards will be breached. Therefore even if the effect is judged to be insignificant it is advised consideration is given to the application of good design and good practice measures. We note and welcome the proposed mitigation measures which include

- the alignment of new sections of highway to reduce the proximity of new operational traffic flows on sensitive receptors; and
- the siting of construction compounds to reduce the potential impact of construction activities on sensitive receptors, where possible.

127. It should be noted that 2 new tubes have been introduced this year in St Neots, one of which is located on Cambridge Road and may be beneficial for the air quality impact assessment. As is normal practice, early discussions with the air quality consultants regarding the assessment would be welcomed.

128. The report discusses the designated ecological receptors that will be taken into consideration and it is advised local nature reserves, as well as national are considered. Natural England may wish to comment regarding the potential impact on ecological receptors.

129. The impacts on air quality during the construction phase do have the potential to be significant and it is understood the dust and emission control measures will be

covered within the Construction Environmental Management Plan once further details are known.

130. The following is a list of the main points concerning the proposed A428 scheme in relation to air quality: Dust; Odour; Smoke; Fumes.

131. Typically, these impacts that will need to be considered at every stage of the proposed development. Mitigation of these potential impacts will need to be considered during both the Construction Phase and Operational Phase.

132. Any mitigation needs to be site specific and take into account sensitive premises and identify any vulnerable persons.

133. Detailed air quality impact assessment and Mitigation of potential impacts needed during both Construction Phase and Operational Phase.

134. Main areas of concern are residential communities at Cambourne West, Eltisley, Croxton and any other nearby sensitive receptors.

135. Provision of an air quality monitoring scheme is needed to establish the baseline air quality near the above areas;

- at least six month prior to commencement of construction works
- during the construction works
- following the completion of the scheme for a set time limit to ensure no objective levels are exceeded

Climate & CO_2 emissions

136. The assessment of the impacts of the proposals on CO_2 emissions is of necessity informed by the assessment of changes in vehicle mileage that will occur as a result of the project. The Authorities are therefore not in a position to comment on the impacts of the scheme on climate change at this time, as transport modelling information is required to inform this assessment.

137. It is noted that the Preliminary Environmental Information Report has concluded that there are no likely significant effects anticipated for climate. While it is noted that the methodology utilised for the climate assessment is carried out to current best practice and utilises the UK Climate Projections 2018, we would welcome clarification as to whether this has taken into account proposals for the UK to transition to net zero carbon by 2050, and whether this new target has any significant implications for the proposals.

138. There are no issues for land contamination for HDC as there are not contaminant sources along the proposed route in Huntingdonshire.

Noise and vibration

139. Typically, these impacts will need to be considered at every stage of the proposed development. Mitigation of these potential impacts will need to be considered during both the Construction Phase and Operational Phase.

140. It is noted that a Section 61 Notice would be sought from HDC in order to ensure additional local control over noise, where necessary.

141. A map of the noise sensitive receptors with the existing ambient sound level, the predicted sound level without and the predicted sound level with noise abatement (bunds and noise barriers) is required by the Authorities. It would be helpful to have a timetable on when this will be made available.

142. Any mitigation needs to be site specific and take into account sensitive premises and identify any vulnerable persons.

143. Most of the route within SCDC is sparsely populated with the exception of the main residential areas of: Cambourne West (proposed but not completed yet); Eltisley; and Croxton. The area of Huntingdonshire is more populated particularly in and around the St Neots area.

144. Noise from construction and operational phases needs careful modelling/prediction Issues anticipated refer particularly to:

- the Caxton Gibbet junction: (2 tiers - velveted road surface will cause wider noise impacts with existing/proposed barriers becoming less effective, due to increased line of sight.)
- Cambourne West, Eltisley, Croxton and any other nearby villages along the route in HDC, including Abbotsley, Eynesbury and Wintringham, will need protecting from noise impacts during construction
- Need to consider noise insulation measures or temporary rehousing policies
- It is expected that Management Plans will be used to mitigate construction noise.
- These needs to be transparent and open i.e. available for scrutiny.
- Full assessment of the site compounds and storage sites will need to be made (avoiding residential areas).
- A number of relatively isolated farm houses etc. are in the area and need individual consideration.
- Full on-going engagement with public and local authorities is essential.

<u>Lighting</u>

145. Typically, these impacts that will need to be considered at every stage of the proposed development. Mitigation of these potential impacts will need to be considered during both the Construction Phase and Operational Phase.

146. Any mitigation needs to be site specific and take into account sensitive premises and identify any vulnerable persons. Potential impacts on ecology should also be considered and mitigated.

<u>Landscaping – Red Line boundary and space for mitigation</u>

147. Experience with the A14 Cambridge to Huntingdon scheme has shown that a tightly drawn red line for the application can leaves very little scope for landscaping works in mitigation of the scheme. The Authorities are concerned that this mistake is not repeated with the A428 Project. The environmental impacts of the proposed scheme need to be satisfactorily mitigated. Additional landscaping including the planting of trees between the new road, old roads and villages will help to improve the

environmental quality of the proposal including the local landscape affected by the new road. More information is required to fully consider the landscape and visual impacts and the necessary mitigation required.

148. It is noted that effects resulting from the operational phase of the new road will be mitigated by a "comprehensive landscape strategy" - ie earthmounding and new planting. As the PEI states "significant adverse effects" are likely to occur especially at the main new junctions where the works will not only involve extensive new highways with traffic but also much new signage, gantries, lighting etc – all of which will impact adversely on landscape character and visual amenity. The PEI continues "Planting within the landscaping strategy will establish over time and will reduce the significance of some adverse effects."

149. This reduction [but certainly not elimination] of adverse effects will be related to the rate at which new planting matures and begins to fulfil its screening and greening function; and this in turn depends on the level and efficacy of maintenance works. A comprehensive maintenance regime – even better if coupled with advance planting before works commence – will encourage more rapid establishment and growth of new planting. Not only will this result in a quicker reduction in adverse effects, but it will also mean that biodiversity gains associated with new planting are achieved at an earlier stage in the life of the scheme than would otherwise have been the case. A maintenance regime well above the standard normally used for highway schemes should be provided.

General comments on the Preliminary Environmental Masterplan Fig 2.4

- Over bridges and embankments should be better integrated into the landscapes. Embankments should be disguised as strips of woodland in the open landscape and link with other areas of habitat such as woodlands, hedgerows etc. where possible.
- Additional planting and screening are required to reduce the impact of lighting and signage in certain areas, especially where raised above current levels.
- Additional landscape screening is required to the new road where long exposed views are possible over an open landscape, particularly from the north.
- The red line is sometimes very tight to the new road which limits landscape enhancement opportunities.
- Water bodies should be designed as landscape features, not just as flood retention areas.
- Some storage compounds are close to existing dwellings. Their impact on the visual and residential amenity of the nearby residents will need to be adequately assessed.

Specific matters:

150. The following specific points are referenced for consideration. HDC / The Authorities expect Highways England to discuss the masterplanning and landscaping matters in more detail with the relevant authority landscape and design officers.

1) Caxton Gibbet junction

- Some additional tree and woodland planting will be needed to help integrate the large (1,000m long) raised new main road embankments into the landscape.

- The proposed water body north of the junction should be designed as a landscape feature, not just a retention area as it will be highly visible.
- Is the secondary roundabout south west of the junction required just for a farm access? This seems to have priority over the service station/shop access.

2) Caxton Gibbet to Eltisley

- Proposed water bodies north of the new road and on the road north of Eltisley must also have a landscape function in addition to drainage.
- The native hedgerow proposed north of the new road should be intermittent to allow views across the water bodies and of the full width of the landscape corridor.
- The native hedge proposed south of the new road should be augmented with tree planting and linier woodland features, as this area will be exposed in an open landscape.
- More vegetation is required for the area located to the north east of Eltisley to help lessen the impacts of raised lighting and signage.
- The materials storage and compound area south of the new road is approximately 300mm from dwellings at Eltisley village. Their impact on visual and residential amenity should be carefully assessed.

3) Eltisley to Toseland Bridge

- Additional tree/woodland planting is required to help integrate the proposed Toesland bridge embankments into the landscape – a disguised north-south landscape feature.
- Open landscapes around the water bodies west of Toesland bridge are required so that they can be seen.
- Additional planting is needed north and south of the new road where it is passing through an open landscape, and particularly where it is raised over the bridleway and watercourse.

4) West of Toesland Bridge to Cambridge Road Junction

- An additional woodland is required to the north west of the bridleway, linking with existing woodland to the north to integrate embankments into the landscape, particularly on approaches from the west.
- Additional planting to the north of the road is required to help filter views from the bridleway. Preferably the planting will link with existing hedgerows and ditches.
- More trees/landscape is required on the existing Cambridge Road Roundabout west of the new junction and north of the existing road. This is currently a very open and degraded landscape approach to the new developments in St Neots.
- More woodland and avenue planting is required on the proposed bar-bell junction and approaches from the north and south to help integrate this into the landscape, and to help reduce the impact of high level lighting and signage.
- There is a need to develop a parkland landscape around the proposed water bodies.
- It is unclear how the section of existing road from the north part of the bar bell to Wintringham Farm will function – will it be retained as a farm track?

Construction impacts

Phasing

151. It is considered beneficial if the construction of the project starts at the Caxton Gibbet section rather than waiting for other sections to be completed first. This would have the additional benefit of supporting the growth approved and planned close to the scheme and help to minimise impacts on the local community (if the road improvements precede development on Cambourne West).

Compounds

152. Careful consideration is needed for the location of any site compounds and materials storage sites, in order to minimise any impacts on local communities. Any potential impacts on communities needed to be properly mitigated.

153. How and where the accommodation of road crews is provided during the build programme is not clear. Lessons learnt from the A14 construction have shown that not enough accommodation for road crews who prefer to supply their own accommodation, either onsite or at caravan sites was planned for in advance which led to unauthorised change of use of land to caravan park for A14 workers in various locations in Huntingdonshire; this will need to be properly considered early in the process to ensure sufficient range of temporary accommodation is available to meet the needs of workers.

Materials

154. Consideration needs to be given to sourcing materials (for example from reuse of materials and/or sourcing from local borrow pits). There are no areas identified for borrow pits. Presumably materials from local borrow pits will be needed and the worked areas will form significant landscape features in the area, both during construction and after restoration? Highways England should consider the merits of having borrow pits v importing materials and make public their approach on this matter. The creation of borrow pits is also an opportunity for important legacy works.

155. In addition to the need to reduce construction waste, consideration must also be given to the need to reduce the embodied carbon of materials in light of Government's announcement that the target in the Climate Change Act (2008) will be changed to reflect net zero carbon by 2050. We would welcome further detail of how the embodied carbon of materials will be reduced, noting that trials have been carried out on low energy road building materials, for example those carried out by the Carbon Trust and LaFarge Tarmac (https://www.carbontrust.com/news/2014/01/lafarge-tarmac-carbon-trust-launch-low-energy-road-building-materials/)

Construction traffic and traffic management

156. It is noted that during the A14 construction local villages have faced severe rat running impacts. We seek clarification from Highways England on how it will minimise rat running through villages during as well as after construction.

Impacts on local communities

157. Ensure communication focus is on communities which come into close proximity to the construction works. Timely offering, to eligible homes for noise insulation measures, house surveys and temporary rehousing.

158. Effective communication, to communities where removal of trees and/or shrubbery in close proximity to residential areas, is to be carried out.

159. Offer of communication to individuals whom do not have access to mainstream social media.

160. Community inclusion on additional projects to the scheme, for example, landscaping.

161. How will the risk of suicide throughout construction and operational phases will be managed?

162. How will the proposal's impact on the yet-to-be built Cambourne West application, which has a number of sports fields abutting the A428, be mitigated particularly with regard to the predicted increased traffic volume?

163. Need to expand upon the benefit of "Reconnect communities", something like: Reconnecting, and enhancing travel connections for local residents and communities, giving faster, easier travel connections.

164. Local communities have had so much road work over the last 5 years in the local area that efforts should be made to try and take the community along with the project. Mitigation could include continual interaction with communities, making them feel part of the process and constantly up to date. Community groups shaped around the development, to give them a combined voice.

165. Would there be any mitigations as far as facilities / public art, community group grants as a result of the works?

Public Health impacts

166. The Preliminary Environmental Information Report Volume 1: Report contains the main detail on the possible impacts on Population and Health. The methodology proposed is consistent with good practice and the topics to be assessed are welcomed, namely:

- Access to healthcare services and other social infrastructure.
- Access to open space and nature.
- Air quality, noise and neighbourhood amenity.
- Accessibility and active travel.
- Access to work and training.
- Social cohesion and neighbourhoods.
- Climate change.

167. The application would benefit from a full health impact assessment as requested at the EIA Scoping Stage which should have formed the basis of the "Population and Health" section of the PEIR.

168. The PEIR should have scoped into the assessment, the risk of suicide during both during the construction and operational phases, and Road Traffic Collisions both during the construction and operational phases.

169. Section 12.3.9 of the PEIR has failed to include the Cambridge University Hospital Foundation Trust (Addenbrooke's / CUH) in the list of community assets, whilst it may be within the direct vicinity of the A428 Addenbrooke's is a regional Trauma centre and therefore takes trauma patients from a wide catchment area including the rest of East Anglia, therefore disruption, albeit short term, during construction is likely to have an adverse effect on visitors to the hospital and emergency services.

170. As requested at the EIA scoping stage the applicant should have considered if the assessment of "impacts on any feeder PROWs between destinations, within 1km of the DCO site boundary" is appropriate considering that it is recommended to include walking and cycling as part of active travel to work and therefore distances travelled by NMU greater than 1km are not unusual, therefore consideration should be given to extend the boundary to 5km, or consideration given to identifying relevant employment and leisure destination within 5 km of the DCO boundary.

171. The human health section (12.3.28 – 12.3.29) has taken a narrow baseline on which to base any potential positive or adverse effects on health. The Cambridgeshire Transport and Health Joint Strategic Needs Assessment contains a wider group of domains which could have been used to provide a more detailed baseline of the health of the local population likely to be affected by the A428 upgrade.

Cultural Heritage Impacts

Archaeology

172. Highways England's non-technical summary of the Preliminary Environmental Information Report (PEIR) briefly indicates in Existing Conditions (baseline data) on page 9 that below ground and built aspects of the historic environment exist within historic landscapes. It also mentions, with some ambiguity, that archaeological excavations will occur in some locations "to identify the extent and survival of remains".

173. It is unclear if these excavations are to assist with the evaluation of the route or as part of a mitigation strategy as the language is vague. If the latter is intended, then the objectives of these excavations should acknowledge the need to conserve the significance of the archaeological resource in detailed investigation programme that will include significant large scale excavations, public engagement, research, analysis, publication and presentation in a variety of formats. The wording of this phrase, however, suggests an aim to evaluate the scheme rather than to describe the intention to provide a coherent, effective mitigation strategy that will enable the change to the historic environment to be suitably managed.

174. The scale of the impact on the extensive archaeological resource is not mentioned and this might provoke negative comments from the public at large, particularly from local people who may be knowledgeable about their local archaeology and history. While this construction impact can be appropriately mitigated, as recently evinced by the A14 archaeology programme, it would benefit the A428 team to acknowledge the scale of impact and considerable time that will be needed in advance of the construction programme to conduct the necessary excavations. Instead, "Other forms of mitigation are currently being considered…." that include landscape screening of the road to preserve the landscape settings of historic buildings without acknowledging that such mitigation will have an archaeological impact.

175. Overall, more emphasis has been given to indicating what could be done to protect the built heritage and historic landscape setting rather than to setting out the positive measures that can be designed to ensure that the extensive, non-designated archaeological settlement and funerary remains that will be negatively impacted by the scheme will be suitably preserved for posterity in a coherent, imaginative archaeological mitigation design and legacy programme.

176. The summary headlines given in the table on page 22 wholly ignores the impact in the scheme on the known extensive archaeological resource in the Construction column and it is too soon to properly predict what may follow from the evaluation and excavation to determine whether or not management of an archaeological resource might be required in the future. We object to the highlighted statement below.

177. The Cultural Heritage section (Chapter 6) of the PEIR outlines work done and currently being undertaken to acquire a baseline of known historic environment evidence, including archaeological and built environment assets mostly non-designated, historic landscapes and Conservation Areas, and some registered Parks and Gardens and Listed Buildings. Twelve scheduled monuments are also described.

178. A large part of the cultural heritage resource include non-designated remains and the severity of the construction impacts have been ranked according to the strictures of the Design Manual for Roads and Bridges. No mitigation design is yet available – it is too soon for this to be formulated.

179. Paragraph 6.4.27 describes operational effects on the recorded or unrecorded archaeological resource as not being envisaged. It is an unqualified statement that could have been improved by saying why this might be the case, for example:

- because large landscape scale excavations will be needed to mitigate construction impacts, or
- to refer to this aspect covered in 6.5.3, under Standard Mitigation Measures.

180. Currently lacking is a high level commitment to a public engagement strategy for archaeology during the course of construction and what plans might be in formulation to display the archaeological evidence and curate a publically accessible archaeological archive.

181. County Council officers have been working in partnership with colleagues from Central Bedfordshire and Bedford Borough Council Historic Environment Teams and constructively with AECOM and Highways England to consider how best to design and conduct an archaeological mitigation strategy for this scheme that provides value for money, is fit for purpose and in innovative and engaging for local residents who will be affected during the development of the scheme.

182. This work is ongoing but is not well reflected by the PEIR.

Listed building and monuments

183. The following heritage assets are likely to be affected by the proposed route (this is not a comprehensive list):

1) Dovecote at Pastures Farm. (LEN: 1163004) and Moated Site (LEN:1019177)
West of the proposed Caxton Gibbett new roundabout layout – As the route of the proposed new carriageway and associated slip roads would be located to the south of the existing A428, it would pass in closer proximity to the Grade II listed Dovecote at Pastures Farm (LEN: 1163004). The site is also a scheduled moated site (LEN:1019177). The proposed road layout is likely to impact upon the wider historic and countryside setting of these heritage assets.

2) Mile Post south of Pembroke Farm and west of Caxton Gibbet Inn (LEN:1162760)
May be impacted by the 'Proposed A428' changes.

3) Mile Post (LEN: 1331394)
Eltisley Junction and new roundabout and road layout – The proposal would see the loss of the existing road which approaches the triangular grassed area forming the junction between the A428 and main approach to Eltisley village. The new roundabout to the north of this may impact upon the setting of the Grade II listed Mile Post, and impact its relevance as it is proposed to remove a section of the existing A428 and re-route the carriageway.

4) Eltisley Conservation Area
At present, the A428 running north of the Eltisley Conservation Area is a single carriageway bordered on each side by open countryside, which informs the setting of the heritage assets. This setting and wider context is likely to be impacted by the replacement of the existing carriageway and introduction of the new dual carriageway and two roundabouts, may impact upon a primary approach to the Conservation Area. However, the location of the proposed dual carriageway further north than the existing A428 may relieve traffic pressures on Eltisley village.

5) Croxton Park (LEN: 1000491), Croxton deserted Medieval village and C16th/ C17th garden remains
The boundary of the Park, which is Grade II* listed, and medieval village runs along the A428 to the south and therefore, there is likely to be an impact to their wider setting and significance. The full extent of the park should also be investigated as this may have extended further north, and may have the potential to be impacted by the proposed scheme. On the contrary, the diversion of traffic from the existing route,

further north and away from the designated park boundary may relieve traffic pressures and result in neutral or positive impact.

6) Croxton Conservation Area

The A428 currently passes in close proximity to the norther extent of the Conservation Area. Proposals suggest that route will be unaffected, but there may be a reduction in traffic volume arising from the new dual carriageway proposed further north, which may benefit the Conservation Area and the setting of listed buildings in the Conservation Area, particularly The Downs, High Street (LEN:1127171).

Overall, the impact of the proposals is considered to be neutral. Whilst the proposals would result in notable public benefits, it would be necessary for a detailed Heritage Impact Assessment to be compiled to allow Officers to assess the impact against all relevant heritage assets. The proposals would need to satisfy Policy NH/14 of the 'South Cambridgeshire Local Plan' (2018) and Chapter 16 of the 'National Planning Policy Framework' (2019) which relates to the conserving and enhancing of the historic environment.

Mitigation and Legacy

184. South Cambridgeshire's experience of the A14 Development Consent Order and construction has been that it has generated a significant number of complaints from residents impacted by the construction. The Authorities expect Highways England to learn lessons from this scheme and provide clarity upfront through the DCO process as to how issues are going to be addressed. In addition, there will be a need for timely and effective communication and engagement with local communities, including with individuals who do not have access to mainstream social media. Clarification will also be sought on potential Legacy opportunities for local communities, similar to those provided by the A14 improvement scheme.

Ongoing work with Highways England through the scheme development and delivery programme

185. The district authorities' experience of the A14 Development Consent Order and construction has been that their input to the process has taken very substantial officer time over a period of years. This has led to Highways England funding a post within the South Cambridgeshire District Council late in the process to support this work. It can be expected that the A428 Development Consent Order and construction process will also give rise to the need for significant Council officer input. Based upon the above, to ensure that the Authorities can contribute effectively to the A428 project, South Cambridgeshire District Council officers will seek to engage with Highways England in the near future to discuss a Planning Performance Agreement, including financial contributions to enable the Council to resource this process. This should help to ensure a better working relationship with Highways England.