

A14
Cambridge to Huntingdon
improvement scheme
Development Consent Order Application

HE/A14/EX/57

TR010018

HE/A14/EX/57

Highways England's comments on the Joint Local Impact Report

July 2015

The Infrastructure Planning (Examination Procedure) Rules 2010



A14 Cambridge to Huntingdon improvement scheme

Development Consent Order Application
Highways England's comments on the Joint Local Impact Report

**HE/A14/EX/57
07 July 2015**

Contents

Contents	2
Tables	3
1 Introduction	6
1.1 Purpose of this report.....	6
1.2 Structure of this report	6
2 Landscape and Visual	8
2.1 Positive Impacts.....	8
2.2 Negative Impacts	11
2.3 Missed Opportunities	24
3 Cultural Heritage	26
3.1 Positive Impacts.....	26
3.2 Negative Impacts	27
3.3 Missed Opportunities	34
4 Ecology.....	39
4.1 Positive Impacts.....	39
4.2 Negative Impacts	40
4.3 Missed Opportunities	46
5 Noise and Vibration	47
5.1 Positive Impacts.....	47
5.2 Negative Impacts	52
5.3 Missed Opportunities	71
6 Air Quality	73
6.1 Positive Impacts.....	73
6.2 Negative Impacts	74
6.3 Missed Opportunities	76
7 Economy.....	77
7.1 Positive Impacts.....	77
7.2 Negative Impacts	80
7.3 Missed Opportunities	89
8 Pedestrians, Cyclists and Equestrian Travellers.....	91
8.1 Positive Impacts.....	91
8.2 Negative Impacts	94
8.3 Missed Opportunities	100
9 Flooding and Water	103

9.1	Positive Impacts.....	103
9.2	Negative Impacts.....	103
9.3	Missed Opportunities.....	104
10	Minerals and Waste.....	106
10.1	Positive Impacts.....	106
10.2	Negative Impacts.....	106
10.3	Missed Opportunities.....	109
11	Social and Community Matters.....	111
11.1	Positive Impacts.....	111
11.2	Negative Impacts.....	112
11.3	Missed Opportunities.....	117
12	Legacy.....	120
12.1	Positive Impacts.....	120
12.2	Negative Impacts.....	125
12.3	Missed Opportunities.....	128
13	Borrow Pits Restoration and Aftercare Update.....	135

Tables

Table 2-1: Extensive areas of mitigation planting and ecological planting during operation.....	8
Table 2-2: Removal of A14 Viaduct, Huntingdon during operation.....	8
Table 2-3: Reduction in views of highways infrastructure and traffic in some areas during operation.....	9
Table 2-4: Lighting design will minimise light pollution during operation.....	10
Table 2-5: Removal of trees and vegetation during construction.....	11
Table 2-6: Disruption to landform – creation of Local Access Road, bunds / excavation of borrow pits during construction.....	16
Table 2-7: Views of heavy construction plant and materials, major earth works and temporary traffic management, signage and lighting during construction.....	19
Table 2-8: Introduction of highways infrastructure and associated traffic impacts during operation.....	19
Table 2-9: Introduction of highways infrastructure and associated impacts of traffic during operation.....	20
Table 2-10: Negative visual effects during operation.....	21
Table 2-11: New areas of lighting during operation.....	22
Table 2-12: Assessment of impact of artificial lighting.....	24
Table 4-1: Mitigation and ecological planting during operation.....	39
Table 4-2: Habitat creation during operation.....	39
Table 4-3: Loss of habitat during construction.....	41
Table 4-4: Adverse impact on Buckden Gravel Pits County Wildlife Site during construction.....	42

Table 4-5: Insufficient assessment of impact on Fenstanton Lakes and County Wildlife Site during construction	44
Table 4-6: Ecological mitigation areas for breeding birds may not be appropriate during operation	44
Table 4-7: Disturbance of bat habitats adjacent to off-line section during operation	45
Table 4-8: Ecology missed opportunities	46
Table 5-1: Noise and vibration impacts during operation	47
Table 5-2: Noise and vibration impacts during construction.....	52
Table 5-3: Noise insulation / Code of Construction Practice to ensure that significant observed adverse effects inside dwellings avoided during construction.....	54
Table 5-4: Assessment of noise from borrow pits does not follow policy during construction.....	55
Table 5-5: Noise and vibration impacts during operation	58
Table 5-6: Non residential during operation	71
Table 5-7: Cooperation with developers	71
Table 6-1: Air quality positive impacts during operation	73
Table 6-2: Air quality negative impacts during construction	74
Table 6-3: Air quality negative impacts during operation	75
Table 7-1: Direct and indirect benefits to employment during construction....	77
Table 7-2: Benefits of reduced journey time, greater reliability and impacts on economic activity during operation.....	78
Table 7-3: Unlocking housing constraints during operation	79
Table 7-4: Wider economic growth during operation.....	79
Table 7-5: Disruption to existing travel patterns during construction.....	80
Table 7-6: Temporary loss of land during construction	82
Table 7-7: Permanent loss of land during operation	85
Table 7-8: Economy missed opportunities	89
Table 8-1: New NMU route during operation	91
Table 9-1: Impact on flood risk during construction.....	103
Table 10-1: Potential to reduce heavy vehicle traffic during construction	106
Table 11-1: Reducing severance and improved access between communities during operation	111
Table 12-1: Design elements creating positive legacy	120
Table 12-2: Quality of life	120
Table 12-3: Local economic growth	122
Table 12-4: Landscape legacy	123
Table 12-5: Landscape legacy	125
Table 12-6: Ecological legacy	125
Table 12-7: Pedestrians, cyclists and equestrian travellers	127
Table 12-8: Landscape legacy	128
Table 12-9: Cultural heritage legacy	128
Table 12-10: Ecological legacy	129
Table 12-11: Noise and vibration legacy.....	129
Table 12-12: Pedestrians, cyclists and equestrian travellers	130
Table 12-13: Economic legacy.....	132
Table 12-14: Minerals and waste including borrow pits	132
Table 12-15: Flooding and water	133

1 Introduction

1.1 Purpose of this report

- 1.1.1 Cambridgeshire County Council, Huntingdonshire District Council, South Cambridgeshire District Council and Cambridge City Council submitted a Joint Local Impact Report (LIR) in accordance with the requirements set out in the Planning Act 2008 (the 2008 Act) and the Advice Note One: Local Impact Reports (version 2, April 2012, The Planning Inspectorate).
- 1.1.2 The Advice Note states that the “*content of the LIR is a matter for the local authority concerned as long as it falls within the statutory definition*”. The LIR should consist of a statement of positive, neutral and negative local impacts.
- 1.1.3 The Advice Note states that when the Examining Authority decides to accept an application it will ask the relevant local authorities to prepare a LIR and the relevant local authorities should prioritise preparation of their LIR irrespective of whether the local authority considers the development would have a positive or negative impact on the area. The LIR may include any topics that it considers to be relevant to the impact of the development on its area and will serve as a means by which its existing body of knowledge and evidence on local issues can be fully and robustly reported to the Examining Authority.
- 1.1.4 This report sets out Highways England's response to the positive, negative and neutral local impacts identified in the Joint LIR , in order to ensure that local issues and impacts are identified, understood and carefully addressed and to aid the Examining Authority in its consideration of the proposal.
- 1.1.5 For information relating to the context of the scheme please refer to chapters 1 to 4 of the *Environmental Statement (document reference 6.1)*.

1.2 Structure of this report

- 1.2.1 This report responds to the positive, negative and neutral local impacts and (in the view of the local authorities) the missed opportunities identified for the local area during construction and operation which are set out in chapters 9 to 11 in the Joint LIR and includes the following key topics:
 - Chapter 2: Landscape and Visual;

- Chapter 3: Cultural Heritage;
- Chapter 4: Ecology;
- Chapter 5: Noise and Vibration;
- Chapter 6: Air Quality;
- Chapter 7: Economy;
- Chapter 8: Pedestrians, Cyclists and Equestrian Travellers;
- Chapter 9: Flooding and Water;
- Chapter 10: Minerals and Waste;
- Chapter 11: Social and Community Matters;
- Chapter 12: Legacy; and
- Chapter 13: Borrow Pits Restoration and Aftercare Update

2 Landscape and Visual

2.1 Positive Impacts

2.1.1 Tables 2.1 to 2.4 respond to the positive landscape and visual impacts, during operation, as set out in sections 9.1.1 to 9.1.11 of the Joint LIR.

Table 2-1: Extensive areas of mitigation planting and ecological planting during operation

Joint LIR Identified Positive Impacts	Highways England response
9.1.1. Extensive areas of mitigation planting and ecological planting would be established in certain areas and would enhance landscape character and provide landscape pattern and structure in the longer term. More details are included in Chapter 9.3 Ecology.	Noted and agreed

Table 2-2: Removal of A14 Viaduct, Huntingdon during operation

Joint LIR Identified Positive Impacts	Highways England response
[Huntingdonshire] 9.1.2. The removal of the A14 viaduct within Huntingdon would significantly enhance the quality of the local townscape.	Noted and agreed.
9.1.3. In the area of Huntingdon Rail Station there would be localised direct benefits from the removal of the existing A14 viaduct, embankment and sign gantries. There would be benefits particularly for the landform and scale of the landscape in and around the station and along Brampton Road and the nearby parts of the historic grazing land at Mill Common, Views Common.	Noted and agreed
9.1.4. The removal of prominent and uncharacteristic elements of the existing landscape would be a major beneficial impact on this area from the year of opening in 2020. This would allow some sense	Noted and agreed. Work will commence on the removal of the viaduct following the completion of the construction of the new and improved roads in 2020.

Joint LIR Identified Positive Impacts	Highways England response
of quality to be restored, which would fit well with the landform, scale and pattern of the landscape with large beneficial effects.	
9.1.5. In addition to the above effects the scheme is likely to lead to reductions in traffic level on the Huntingdon inner ring road, especially along Nursery Road, Riverside Road and Castle Moat Road, as well as along George Street and on both road bridges over the River Great Ouse, including the historic Town Bridge ⁸⁰ . There would be potentially positive effects in the older and narrower streets, such as George Street, or where open spaces meet the road, such as the Town Park on Nursery Road, Riverside park adjacent the River Great Ouse and the adjacent open space area by the Old Bridge Hotel and Huntingdon Castle.	Noted and agreed.
9.1.6. The removal of the existing A14 viaduct would remove a locally dominant structure in views across the commons and from the south-west, and would cause a number of positive visual effects. In particular, there would be localised visual effects of very large positive impact for users of footpath Huntingdon 10 where it currently passes beneath the viaduct and on views from Huntingdon Station.	Noted and agreed.

Table 2-3: Reduction in views of highways infrastructure and traffic in some areas during operation

Joint LIR Identified Positive Impacts	Highways England response
9.1.7. The extent of some existing views of highway infrastructure and traffic flow is likely to be reduced with environmental bunds, noise barriers and mitigation planting (once it is established). There would also be a reduction in views of traffic along sections of de-trunked A14 and other local roads.	Noted and agreed.
9.1.8. It is predicted that there would be a significant reduction in traffic flow along the de-trunked A14 and a substantial reduction in lorry traffic ⁸¹ , which would potentially cause beneficial effects on the	Noted and agreed.

Joint LIR Identified Positive Impacts	Highways England response
landscape character as well as on views from the East Flowing Ouse Valley Floodplain.	
9.1.9. It is predicted that there would be a significant reduction in traffic flow within Godmanchester, as well as along the existing A14 to the north and the A1198 to the east. The principal benefits would be along The Avenue, Post Street and Cambridge Street. Traffic currently has a strong influence on the perception and enjoyment of these urban spaces and the predicted reductions in traffic would potentially cause beneficial positive effects on the landscape character as well as on views from within the area.	Noted and agreed.

Table 2-4: Lighting design will minimise light pollution during operation

Joint LIR Identified Positive Impacts	Highways England response
9.1.10. Whilst the detailed lighting design is currently being developed and therefore the actual extent of new lighting is not yet confirmed, the ES states that lighting design will aim to minimise light pollution which can cause sky glow, glare and light trespass. It is understood that the mainline A14 will generally not be lit except, for safety and journey continuity reasons, at junctions and areas where there is likely to be a significant amount of traffic weaving due to concentration of heavy goods vehicles or a high proportion of NMUs.	<p>Noted. Details of the scheme lighting design are shown on the general arrangement drawings. Part 1 of Schedule 3 to the draft DCO indicates which sheet(s) of the general arrangement drawings show the lighting design for each part of the proposed scheme. The general arrangement drawings will be 'certified' by the Secretary of State for the purposes of the lighting design should the DCO be made. The certified version will be the 'final' general arrangement drawings and the lighting design would need to be in accordance with those drawings.</p> <p>The road lighting installed for the operating scheme would be to modern standards and performance, ensuring light is constrained to the areas requiring illumination and spill light is kept to a minimum (reference standards BS 5489-1, BS EN 13201, CIE 115). Details of the specific type and character of the lighting would be developed during detailed design should the development consent order be made, with further consultation with Cambridgeshire County Council, Huntingdonshire District Council and Natural England as appropriate.</p>

Joint LIR Identified Positive Impacts	Highways England response
	More detail is provided in relation to the strategy for lighting the proposed scheme in Highways England's response to written question 1.9.8 (Response to ExA's First Written Questions: Report 9 Landscape and Visual Effects (<i>document reference EX-36</i>)).
9.1.11. The impact of lighting on landscape (visual) and flora and fauna has been considered and mitigation and measures have been included to minimise the impacts of lighting on bats and other wildlife, including the use of directional lighting and reducing light levels.	Noted and agreed.

2.2 Negative Impacts

2.2.1 Tables 2.5 to 2.11 respond to the negative landscape and visual impacts, during construction and operation, as set out in sections 9.1.12 to 9.1.41 of the Joint LIR. All of the following comments need to be considered alongside the agreed and acknowledged positive impacts set out in the earlier section of this chapter.

Table 2-5: Removal of trees and vegetation during construction

Joint LIR Identified Negative Impacts	Highways England response
9.1.12. There will be vegetation removal including some trees with Tree Protection Order (TPO) status along sections of highway to be widened, within the soft estate along the offline section of the scheme, in the vicinity of borrow pits and within Huntingdon. Loss of vegetation would cause landscape effects during construction and would also be permanent, although proposed planting would help to restore the landscape fabric in the long term (from 15 years post planting - 2035). The following areas would be affected by a loss of trees:	<p>Comments regarding the loss of existing vegetation and TPO trees are noted. The bullet points listed under 9.1.12 accord with ES chapter 10 sections 10.5.2 and 10.5.3. (<i>document ref erence 6.1</i>).</p> <p>The Development Consent Order submission provides the best estimate of the loss of existing vegetation from the information available at the time, applying generic principles for space required for construction assuming a worst case scenario. Detailed design (if the application is granted) after the DCO is made may allow where practicable for more vegetation and trees that are in good condition and would continue to thrive post construction to be retained.</p>

Joint LIR Identified Negative Impacts	Highways England response
Huntingdonshire	
<ul style="list-style-type: none"> In Huntingdon a number of individual trees and groups of trees are protected by TPOs, and the full extent of the scheme proposals in the town also fall within the Huntingdon Conservation Area. Trees that would be removed by the scheme include: trees in the historic shelterbelt along the south-west side of Views Common which would be punctured by the proposed Views Common Link; trees along Hinchingsbrooke Park Road at the junction of this road and the proposed Views Common Link; trees at the junction of Hinchingsbrooke Park Road and Brampton Road; trees in the station car park and dense woodland vegetation on the existing A14 embankments. Some trees and part of the historic open space and grazing land at Mill Common would be lost at the proposed Pathfinder Link off the detrunked A14 west of the Old Bridge Hotel and Huntingdon Castle. 	<p>Please refer to paragraph 9.1.12 above for Highways England's response. A schedule of TPO trees that would be affected by the Scheme was submitted as part of the draft DCO. (<i>document reference 3.1 Draft Development Consent Order Schedule 9 Trees subject to tree preservation orders</i>). The schedule details the type and location of the trees and/or groups of trees subject to TPO and the proposed works.</p> <p>Lost and retained vegetation is shown on ES Figure 3.4 Retained and removed vegetation (<i>document reference 6.2</i>).</p> <p>Advanced nursery stock would be used for replacement avenues and parkland trees in sensitive locations such as Huntingdon Conservation Area and Views and Mill Commons to provide immediate impact.</p>
<ul style="list-style-type: none"> Brampton Road, Buckden: A middle-aged oak subject to TPO just off Brampton Road near to Buckden landfill site would be removed to construct the southern A14 embankment. 	<p>Please refer to paragraph 9.1.12 above for Highways England's response. A schedule of TPO trees that would be affected by the Scheme was submitted as part of the draft DCO. (<i>document reference 3.1 Draft Development Consent Order Schedule 9 Trees subject to tree preservation orders</i>). The schedule details the type and location of the trees and/or groups of trees subject to TPO and the proposed works.</p>
<ul style="list-style-type: none"> South of Wood Green Animal Shelter east of Ermine Street: the scheme would sever a belt of mostly oak trees that are subject to a group TPO. 	<p>Please refer to paragraph 9.1.12 above for Highways England's response. A schedule of TPO trees that would be affected by the Scheme was submitted as part of the draft DCO. (<i>document reference 3.1 Draft Development Consent Order Schedule 9 Trees subject to tree preservation orders</i>). The schedule details the type and location of the trees and/or groups of trees subject to TPO and the proposed works.</p>
South Cambridgeshire	
<ul style="list-style-type: none"> North-east of Lolworth and Grange Farm, South Cambridgeshire: Removal of the periphery of a substantial tree and shrub belt covered by a TPO. 	<p>Please refer to paragraph 9.1.12 above for Highways England's response. A schedule of TPO trees that would be affected by the Scheme was submitted as part of the draft DCO. (<i>document reference 3.1 Draft Development</i></p>

Joint LIR Identified Negative Impacts	Highways England response
	<p><i>Consent Schedule 9 Trees subject to tree preservation orders</i>). The schedule details the type and location of the trees and/or groups of trees subject to TPO and the proposed works.</p>
<ul style="list-style-type: none"> Northern periphery of Menzies Golf Club: A section of trees designated as TPO. 	<p>Please refer to paragraph 9.1.12 above for Highways England's response. A schedule of TPO trees that would be affected by the Scheme was submitted as part of the draft DCO. (<i>document reference 3.1 Draft Development Consent Order Schedule 9 Trees subject to tree preservation orders</i>). The schedule details the type and location of the trees and/or groups of trees subject to TPO and the proposed works.</p>
<ul style="list-style-type: none"> A mature oak south of the A14 and west of The Avenue, Madingley, would be removed at the foot of the proposed embankment. 	<p>Please refer to paragraph 9.1.12 above for Highways England's response. A schedule of TPO trees that would be affected by the Scheme was submitted as part of the draft DCO. (<i>document reference 3.1 Draft Development Consent Order Schedule 9 Trees subject to tree preservation orders</i>). The schedule details the type and location of the trees and/or groups of trees subject to TPO and the proposed works.</p>
<ul style="list-style-type: none"> Part of a group TPO on the edge of Girton College grounds along Huntingdon Road would be removed, along with one TPO tree west of Girton Road. 	<p>Please refer to paragraph 9.1.12 above for Highways England's response. A schedule of TPO trees that would be affected by the Scheme was submitted as part of the draft DCO. (<i>document reference 3.1 Draft Development Consent Order Schedule 9 Trees subject to tree preservation orders</i>). The schedule details the type and location of the trees and/or groups of trees subject to TPO and the proposed works.</p>
<p>There are also various other locations where there would be significant loss of existing vegetation, which would change the landscape pattern. The principal areas of vegetation loss would be:</p>	<p>Please refer to paragraph 9.1.12 above for Highways England's response. Lost and retained vegetation is shown on ES Figure 3.4 Retained and removed vegetation (<i>document reference 6.2</i>). Effects on landscape character including changes to landscape pattern are assessed in ES Chapter 10 sections 10.5.4 – 10.5.80 (<i>document reference. 6.1</i>).</p>

Joint LIR Identified Negative Impacts	Highways England response
Huntingdonshire	
<ul style="list-style-type: none"> Along the east side of the A1 near Brampton, the existing intermittent hedgerow would be removed over a distance of about 1.4km, in order to accommodate the proposed environmental bund. This includes scattered oak and ash trees and some lengths of more substantial hedgerow. 	<p>Please refer to paragraph 9.1.12 above for Highways England's response. Lost and retained vegetation is shown on ES Figure 3.4 Retained and removed vegetation (<i>document reference 6.2</i>). Landscape effects as the result of the environmental bunds east of the A1 at Brampton are described in ES Chapter 10 sections 10.5.13 – 10.5.16 (<i>document reference. 6.1</i>).</p>
<ul style="list-style-type: none"> The proposed viaduct and embankment across the River Great Ouse floodplain would remove areas of floodplain grassland, tree and shrub field boundaries, including some willows on the edges of the flooded gravel workings, and there would be some minor loss and disturbance to parts of the County Wildlife Site water meadows. 	<p>Please refer to paragraph 9.1.12 above for Highways England's response. Lost and retained vegetation is shown on ES Figure 3.4 Retained and removed vegetation (<i>document reference 6.2</i>). Landscape effects on River Great Ouse floodplain are described in ES Chapter 10 sections 10.5.18 – 10.5.21 (<i>document reference. 6.1</i>).</p>
<ul style="list-style-type: none"> Several lengths of native hedgerow field boundaries and parts of small copses would be removed to accommodate the scheme between Brampton interchange and Offord Road. 	<p>Please refer to paragraph 9.1.12 above for Highways England's response. Lost and retained vegetation is shown on ES Figure 3.4 Retained and removed vegetation (<i>document reference 6.2</i>). Landscape effects are described in ES Chapter 10 sections 10.5.18 – 10.5.21 (<i>document reference. 6.1</i>).</p>
<ul style="list-style-type: none"> The existing native hedgerows along B1040 Potton Road and Hilton Road would have lengths removed as the scheme passes through them. 	<p>Please refer to paragraph 9.1.12 above for Highways England's response. Lost and retained vegetation is shown on ES Figure 3.4 Retained and removed vegetation (<i>document reference 6.2</i>). Landscape effects in this area are described in ES Chapter 10 sections 10.5.49-10.5.51 (<i>document reference. 6.1</i>).</p>
South Cambridgeshire	
<ul style="list-style-type: none"> A significant amount of vegetation would be removed to accommodate the expanded Swavesey junction including a large proportion of 'Down Spinney'. 	<p>Please refer to paragraph 9.1.12 above for Highways England's response. Lost and retained vegetation is shown on ES Figure 3.4 Retained and removed vegetation (<i>Document reference 6.2</i>). Landscape effects in this area are described in ES Chapter 10 sections 10.5.54-10.5.56 (<i>document ref. 6.1</i>).</p>

Joint LIR Identified Negative Impacts	Highways England response
<ul style="list-style-type: none"> Existing highway and amenity planting would be removed to accommodate the proposed junction improvements at Bar Hill. 	<p>Please refer to paragraph 9.1.12 above for Highways England's response. Lost and retained vegetation is shown on ES Figure 3.4 Retained and removed vegetation (<i>document reference 6.2</i>). Landscape effects in this area are described in ES Chapter 10 sections 10.5.59-10.5.61 (<i>document reference. 6.1</i>).</p>
<ul style="list-style-type: none"> Vegetation would be removed along the northern periphery of Menzies Golf Club, which currently provides visual screening of the existing A14 and traffic flow from the golf course. 	<p>Please refer to paragraph 9.1.12 above for Highways England's response. Lost and retained vegetation is shown on ES Figure 3.4 Retained and removed vegetation (<i>document reference 6.2</i>). Landscape effects in this area are described in ES Chapter 10 sections 10.5.45-10.5.61 (<i>document reference. 6.1</i>).</p>
<ul style="list-style-type: none"> A large amount of vegetation would be removed to accommodate the expanded Girton interchange, including 'Bulls Close' woodland block. Almost all of the existing intermittent vegetation along the embankment slopes of the A14 Cambridge Northern Bypass would need to be removed to accommodate the widening. 	<p>Please refer to paragraph 9.1.12 above for Highways England's response. Lost and retained vegetation is shown on ES Figure 3.4 Retained and removed vegetation (<i>document reference 6.2</i>). Landscape effects of the Girton interchange are described in ES Chapter 10 sections 10.5.62-10.5.64 and on the Cambridge Northern Bypass in sections 10.5.71 -10.5.79 (<i>document ref. 6.1</i>).</p>
<ul style="list-style-type: none"> Some discontinuous hedgerows would be removed within the borrow pits, but significant hedgerow and copse features within the borrow pits would be retained. 	<p>Please refer to paragraph 9.1.12 above for Highways England's response. Lost and retained vegetation is shown on ES Figure 3.4 Retained and removed vegetation (<i>document reference 6.2</i>). Landscape effects in this area are described in ES Chapter 10 sections 10.5.4 – 10.5.80 (<i>document ref. 6.1</i>).</p>

Table 2-6: Disruption to landform – creation of Local Access Road, bunds / excavation of borrow pits during construction

Joint LIR Identified Negative Impacts	Highways England response
Huntingdonshire	
9.1.13. Much of the construction activity and excavation of drainage lagoons would be focussed along the existing A1 corridor. However construction of the local access road to Ellington junction, excavation of the borrow pit north of the existing A14, and the movement of heavy plant along the haul route (existing track) from Woolley Road to the borrow pit would cause noticeable damage to landscape character, mainly in the Ellington Brook Farmland Landscape Character Area (LCA).	Noted. This accords with paragraph 10.5.16 of chapter 10 of the Environmental Statement (<i>document reference 6.1</i>)
9.1.14. There would be significant disruption to the landscape during construction, with extensive excavation of borrow pits and construction of major new infrastructure at Ellington junction and Brampton interchange. Although haul routes would generally be in close proximity to the existing infrastructure and the new alignment, there would be numerous soil storage areas and compound sites within this landscape character area.	Noted. This accords with paragraph 10.5.10 of chapter 10 of the Environmental Statement (<i>document reference 6.1</i>).
9.1.15. West of Brampton, the scheme would substantially widen the footprint of the existing highway network, increasing its urbanising and enclosing influence on the landscape. The scheme would introduce new elevated sections of highway infrastructure to the landscape, including the new Ellington junction, the A1 Brampton interchange bridge west of Brampton and bridges at Brampton Hut interchange.	Noted. This accords with paragraph 10.5.11 of chapter 10 of the Environmental Statement (<i>document reference 6.1</i>).
9.1.16. Extensive borrow pits filled with water west of the A1 and between RAF Brampton and Brampton interchange would significantly change the character of the currently arable landscape.	Noted. This accords with paragraph 10.5.12 of chapter 10 of the Environmental Statement (<i>document reference 6.1</i>).
9.1.17. During construction there would be major disruption to a large part of the Brampton Farmland landscape character area, with major earthworks and construction, haul routes and the presence of heavy plant.	Noted. This accords with paragraph 10.5.14 of chapter 10 of the Environmental Statement (<i>document reference 6.1</i>).

Joint LIR Identified Negative Impacts	Highways England response
<p>9.1.18. The scheme would introduce a sequence of new embankments, the river Great Ouse viaduct and the East Coast mainline bridge along the line of the new A14 as it cuts across the North Flowing Ouse Valley Floodplain landscape character area. To the west of the river, the new earthworks would be close to the southern edge of the raised landform of Buckden landfill and would continue across an area previously excavated for gravel.</p>	<p>Noted. This accords with paragraph 10.5.19 of chapter 10 of the Environmental Statement (<i>document reference 6.1</i>).</p>
<p>9.1.19. To the east of the river, the scheme would cross the floodplain on a double viaduct, supported by an island embankment with raised drainage attenuation pond, before continuing to a further embankment and bridge over the East Coast mainline railway and its raised power supply. The impact on landscape character and visual amenity would be very large and adverse and would be exacerbated by the fact that the embankments and bridges are at right angles to the south / north alignment of the broad river valley, creating an unnatural pinch point.</p>	<p>Noted. This accords with paragraph 10.5.19 of chapter 10 of the Environmental Statement (<i>document reference 6.1</i>).</p>
<p>9.1.20. During works associated with the removal of Huntingdon Viaduct, there would be large scale damage to the existing character of Views Common during the construction of the Views Common roundabout and Link Road and the removal of a substantial section of the existing A14 embankment within the Common. The character of Mill Common would be similarly affected through the construction of the Pathfinder Link and works to the de-trunked section of the A14, although much of existing vegetation along the existing route will be retained. Construction activity around the Commons would also affect the setting of nearby listed buildings and the Huntingdon Conservation Area.</p>	<p>Noted. This accords with paragraph 10.5.24 of chapter 10 of the Environmental Statement (<i>document reference 6.1</i>).</p>
<p>9.1.21. Construction traffic would be restricted to existing highways and the scheme footprint. Soil storage areas would be situated at intervals along the scheme alignment, with particularly extensive areas and a site compound concentrated around Ermine Street junction. These features in addition to construction activity and major earthworks for the construction of over bridges and environmental bunds would cause large scale damage to the existing landscape</p>	<p>Noted. This accords with paragraph 10.5.35 of chapter 10 of the Environmental Statement (<i>document reference 6.1</i>).</p>

Joint LIR Identified Negative Impacts	Highways England response
character.	
9.1.22. Extensive excavation of the borrow pit north of the offline section between Potton Road and Fenstanton Road, along with several soil storage areas and major earthworks for the construction of over bridges would cause large scale damage to character in the Hilton Road Farmland LCA.	Noted. This accords with paragraph 10.5.49 of chapter 10 of the Environmental Statement (<i>document reference 6.1</i>).
South Cambridgeshire	
9.1.23. During construction there would be haul routes operating north and south of the existing A14 and parallel with a local road to Boxworth, along with large site compounds south of Swavesey junction and several soil storage areas at junctions. These features in addition to construction activity and major earthworks for the construction of major junctions at Swavesey and Bar Hill and Robins Lane Bridge would collectively cause large scale damage to the existing landscape character.	Noted. This accords with paragraph 10.5.54 of chapter 10 of the Environmental Statement (<i>document reference 6.1</i>).
9.1.24. A Soil storage area and site compound would be located either side of The Avenue, south of the local access road alignment, and haul routes would run both sides of the alignment of the new A14 westbound link. Major earthworks would be necessary to construct highway embankments, especially the new A14 westbound link, and several areas of excavation would be necessary to implement the drainage lagoons.	Noted. This accords with paragraph 10.5.62 of chapter 10 of the Environmental Statement (<i>document reference 6.1</i>).
9.1.25. East of Dry Drayton Road and towards Girton there would be extensive excavation of a borrow pit and drainage lagoons during construction, along with a soil storage area south-east of Dry Drayton Road.	Noted. This accords with paragraph 10.5.65 of chapter 10 of the Environmental Statement (<i>document reference 6.1</i>).
9.1.26. The extensive water filled cavity of the borrow pit would be at odds with the surrounding agricultural landscape, and additional gantries and lighting at Girton interchange would slightly intensify the prominence of highway infrastructure.	Noted. This accords with paragraph 10.5.66 of chapter 10 of the Environmental Statement (<i>document reference 6.1</i>).

Table 2-7: Views of heavy construction plant and materials, major earth works and temporary traffic management, signage and lighting during construction

Joint LIR Identified Negative Impacts	Highways England response
<p>9.1.27. There would be a negative impact during construction as a result of views of temporary traffic management, signage and lighting; large scale plant such as cranes etc. involved in the demolition of the A14 viaduct in Huntingdon and for the construction of major over-bridges and junctions.</p>	<p>Noted. This accords with table 10.10 and paragraph 10.5.26 of chapter 10 of the Environmental Statement (<i>document reference 6.1</i>).</p>

Table 2-8: Introduction of highways infrastructure and associated traffic impacts during operation

Joint LIR Identified Negative Impacts	Highways England response
<p>9.1.28. The most significant negative visual effects during construction would affect the following areas¹:</p> <p>Huntingdonshire]</p> <ul style="list-style-type: none"> • Some residential properties on the western periphery of Brampton • Footpath Brampton 15 • Realigned bridleway Brampton 19 • Brampton Lodge Farm, Brampton • Some residential properties on the southern edge of RAF Brampton • Footpath Brampton 3 	<p>Noted. This accords with paragraph 10.5.88 of chapter 10 of the Environmental Statement (<i>document reference 6.1</i>).</p>

¹ Chapter 10 Landscape, 6.1 Environmental Statement, A14 Cambridge to Huntingdon Improvement Scheme, DCO Submission, Highways Agency (2014)

Joint LIR Identified Negative Impacts	Highways England response
<ul style="list-style-type: none"> • Bridleway Hemingford Abbots 10 • Bridleway Hemingford Grey 13/bridleway Hemingford Abbots 9 (Mere Way) • Footpath Buckden 13, Ouse Valley Way • Bridleway Godmanchester 1, Pathfinder Way • Footpath Hemingford Grey 10 	

Table 2-9: Introduction of highways infrastructure and associated impacts of traffic during operation

Joint LIR Identified Negative Impacts	Highways England response
<p>[Huntingdonshire] 9.1.29. There would be negative impacts on Hinchingsbrooke and Central Part of Views Common from the addition of the Views Common roundabout, which would be elevated on embankment and include lighting in a previously unlit area, and the Views Common Link (which is unlit). The new roundabout and link road would be at odds with the scale, appearance and cultural aspects of the landscape and adversely affect historic landscape patterns.</p>	<p>Noted. This accords with paragraph 10.5.29 of chapter 10 of the Environmental Statement (<i>document reference 6.1</i>).</p>
<p>9.1.30. There would be negative impacts on Hinchingsbrooke and central part of Views Common resulting from the addition of the Views Common roundabout, which would be elevated on embankment and include lighting in a previously unlit area, and the Views Common Link (which is unlit). The new roundabout and link road would be at odds with the scale, appearance and cultural</p>	<p>Noted. This accords with paragraph 10.5.29 of chapter 10 of the Environmental Statement (<i>document reference 6.1</i>).²</p>

² The text in the Joint LIR paragraph 9.1.30 is a repeat of 9.1.29

Joint LIR Identified Negative Impacts	Highways England response
aspects of the landscape and adversely affect historic landscape patterns.	
9.1.31. During operation there will be negative impacts on landscape character and particularly on visual amenity at areas around Brampton Hut, west of Brampton, south west of Brampton, the Ouse Valley crossing, and effectively at all other off line sections of the new road as it traverses existing, mainly open, agricultural land. Impacts will also result from acoustic barriers and noise bunds. All these impacts will be reduced as mitigation planting matures, and begins to fulfil its screening and integrating roles.	Noted. This accords with table 10.11 of chapter 10 of the Environmental Statement (<i>document reference 6.1</i>).
South Cambridgeshire	
9.1.32. The Local Access Road to the south of Cambridge Crematorium would detract from the rural character and affect field boundary pattern, numerous drainage lagoons would form uncharacteristic elements within the landscape, and the new A14 westbound link would be raised on a wide embankment. Numerous bridges, additional lighting, signage and gantries would intensify the presence of highway infrastructure.	Noted. This accords with paragraph 10.5.63 of chapter 10 of the Environmental Statement (<i>document reference 6.1</i>).
9.1.33. Noise barriers will also have an adverse visual and landscape impact on the landscape. Significant stretches of the new road will be contained by noise barriers blocking views to the wider landscape and replacing areas of planting removed during road widening.	Noted. This accords with paragraphs 10.5.69, 10.5.72, 10.5.75, 10.5.91 and paragraph 10.5.100 of chapter 10 of the Environmental Statement (<i>document reference 6.1</i>).

Table 2-10: Negative visual effects during operation

Joint LIR Identified Negative Impacts	Highways England response
9.1.34. Following construction the most significant negative visual effects following construction would be on views from the following locations: [South Cambridgeshire] <ul style="list-style-type: none"> Noon Folly Farm from where there would be clear views of 	Noted. This accords with sections 10.4-10.6 of chapter 10 of the Environmental Statement (<i>document reference 6.1</i>). Paragraph 10.5.103 to 10.5.61 of Chapter 10 of the Environmental Statement (<i>document reference 6.1</i>) considers the impact of the scheme on the landscape around Bar Hill.

Joint LIR Identified Negative Impacts	Highways England response
<p>the local access road and expanded Bar Hill junction;</p> <ul style="list-style-type: none"> • Users of bridleway Longstanton 10 from where there would be foreground views of local access road, elevated NMU bridge and enlarged Bar Hill junction; • Users of bridleway Dry Drayton 12 and footpath Girton 8 from where there would be foreground views of traffic on the local access road. 	

Table 2-11: New areas of lighting during operation

Joint LIR Identified Negative Impacts	Highways England response
Huntingdonshire	
<p>9.1.35. New areas of highway lighting and a summary of visual impacts are as follows:</p>	<p>Please refer to paragraphs 9.1.42 – 9.1.44 below for Highways England's response.</p>
<p>9.1.36. The proposed lighting at A1198 Ermine Street junction would have a negative impact on Depden Farm and Beaconsfield Equine Centre and Wood Green Animal Shelter to the north of the scheme and Depden Lodge Farm to the south. Users of Bridleway Hemingford Abbots 10 to the south would also be affected.</p>	<p>This accords with ES Chapter 10 paragraph 10.5.112 bullet point 2 (document reference 6.1).</p>
<p>9.1.37. There would be extended areas of highway lighting which would have negative impacts in the following locations:</p> <ul style="list-style-type: none"> • New Ellington junction to Brampton Interchange and bridge over Buckden Road • Views Common roundabout • Pathfinder Link and Mill Common • Ermine Street junction 	<p>Please refer to paragraphs 9.1.42 – 9.1.44 below for Highways England's response.</p> <p>This accords with ES Chapter 10 paragraph 10.5.113 (document reference 6.1).</p>
<p>9.1.38. Brampton Hut junction and the adjacent roadside services are already lit, so the Ellington junction lighting and new lighting on the link to Brampton Hut junction would extend the lighting to the</p>	<p>Please refer to paragraphs 9.1.42 – 9.1.44 below for Highways England's response.</p>

Joint LIR Identified Negative Impacts	Highways England response
<p>west. This would increase the existing negative impact of lighting on nearby properties to the south of Ellington junction and, more distantly, to the north. Views Common, Pathfinder Link and Mill Common are all within historic open spaces but in an urban environment, which reduces the negative impact of the lighting when compared to the existing situation. Ermine Street junction is in a rural setting and lighting will have an urbanising effect and negative impact.</p>	<p>This accords with ES Chapter 10 paragraph 10.5.112 bullet point 3 and 10.5.113 bullet point 1 (document reference 6.1).</p>
<p>South Cambridgeshire</p>	
<p>9.1.39. Swavesey junction is already lit, but the scheme would increase the lit area on both sides of the A14, and there would also be lighting on Swavesey NMU bridge. There would be a negative visual impact on the nearby farms and businesses.</p>	<p>Please refer to paragraphs 9.1.42 – 9.1.44 below for Highways England's response. This accords with ES Chapter 10 paragraph 10.5.113 bullet point 2 (document reference 6.1).</p>
<p>9.1.40. Bar Hill junction is already lit, but the scheme would extend the lit area, and there would also be lighting on Bar Hill NMU bridge. This would have a negative visual impact on properties in Bar Hill and on the nearby farms and businesses to the north.</p>	<p>Please refer to paragraphs 9.1.42 – 9.1.44 below for Highways England's response. This accords with ES Chapter 10 paragraph 10.5.113 bullet point 3 (document reference 6.1).</p>
<p>9.1.41. The changes to and expansion of Girton interchange would require the existing lighting to be replaced and new lighting to be added to the additional links. This would significantly increase the extent and quantity of highway lighting and would have a negative impact on properties close to the interchange, particularly on properties on the edge of Girton, as well as on Public rights of ways to the north and south.</p>	<p>Please refer to paragraphs 9.1.42 – 9.1.44 below for Highways England's response. This accords with ES Chapter 10 paragraph 10.5.113 bullet point 4 (document reference 6.1).</p>

2.3 Missed Opportunities

2.3.1 Table 2.12 responds to the landscape and visual comments as set out in sections 9.1.42 to 9.1.44 of the Joint LIR.

Table 2-12: Assessment of impact of artificial lighting

Joint LIR Identified Missed Opportunities	Highways England response
<p>9.1.42. An assessment of the impact of artificial lighting on people and their living conditions, particularly in residential areas close to junctions would determine impacts on health and quality of life.</p>	<p>Whilst an analysis of the effect of road lighting on the landscape has been made, a specific assessment of the effect of lighting on humans and living conditions has not been carried out. It is considered more prudent to assess the specific impact of a system of road lighting on specific receptors at detailed design stage, when the location of lighting units will be determined. In this manner, changes can be made during the design process, where an issue is identified.</p> <p>Many of the new and upgraded sections of the scheme run through a relatively flat, uniform and intrinsically dark landscape. It is therefore important to limit the impact on sensitive receptors through careful design and appropriate mitigation of effects. This has been enabled as follows.</p> <p>New road lighting installed for the operating scheme would be to modern standards and performance, constraining light to the areas requiring illumination and keeping spill light to a minimum (reference standards BS 5489-1, BS EN 13201, CIE 115). The equipment and design methodology would take into account the sensitive nature of the area. Details of the specific type and character of the lighting would be developed during detailed design, after (if the application is granted) the development consent order is made, subject to further consultation with Cambridgeshire County Council, Huntingdonshire District Council and Natural England as appropriate.</p> <p>Light pollution would be minimised by using mounting heights which are appropriate to the road classification. Typically for the mainline lighting 10, 12 and 15m columns would be utilised. It is not considered necessary to utilise high mast lighting (typically columns of 18m or more).</p> <p>Good quality modern road lighting units are proposed for compliance with British and European standards relating to upward light pollution. Namely,</p>

Joint LIR Identified Missed Opportunities	Highways England response
	<p>compliance with glare ratings, such that wasted light emitted above 90° (the horizontal) is kept to a minimum, reducing skyglow. An LED light source would be specified where appropriate for the scheme, in line with the move towards reduced energy and maintenance costs. In addition, it is anticipated that road lighting on Highways England routes would be subject to a regime of dimming during low trafficked hours of the night, reducing the impact of the installation during operation.</p> <p>Road lighting is generally proposed in areas that contain an existing road lighting installation. The illuminated areas within the most rural section of the route (Huntingdon southern bypass) are limited; Ermine Street Junction being the only area of proposed road lighting associated with the Trunk Road provided between the Great Ouse crossing and Swavesey Junction. With the use of mitigation measures as described above, the impact of road lighting for operation would be minimised.</p>
<p>9.1.43. It is likely to be most relevant when there is a potential to have an adverse impact on a considerable number of sensitive receptors in close proximity to lighted sections / junctions of the A14 and in particular any existing and proposed residential properties e.g. at Orchard Park.</p>	<p>Please refer to paragraph 9.1.42 above for Highways England's response.</p>
<p>9.1.44. As minimum there should be a commitment to ensure that artificial lighting will be installed having due regard to national and industry best practice guidance and standards including the Institute of Lighting Professional (ILP) Guidance Notes for Reduction of Obtrusive Light GN01:2011.</p>	<p>As mentioned at paragraph 9.1.42 above, details of the specific type and character of the lighting would be developed during detailed design after (if the application is granted) the development consent order is made, with further consultation with Cambridgeshire County Council, Huntingdonshire District Council and Natural England as appropriate.</p>

3 Cultural Heritage

3.1 Positive Impacts

3.1.1 Table 3.1 responds to the positive cultural heritage impacts, during operation, as set out in sections 9.2.1 to 9.2.2 of the Joint LIR.

Table 3-1: Positive cultural heritage impacts during operation

Joint LIR Identified Positive Impacts	Highways England response										
9.2.1. Beneficial impacts would result from the reduction of traffic levels and noise intrusion from de-trunking of the existing A14 on three conservation areas (Godmanchester Post Street Conservation Area, Godmanchester Earning Street Conservation Area and Huntingdon Bridge).	Noted and agreed. This accords with the statement in 9.5.13 of chapter 9 of the Environmental Statement (<i>document reference 6.1</i>).										
9.2.2. The removal of the existing A14 viaduct would have beneficial effects on the character of Huntingdon Conservation Area and Huntingdon Rail Station.	Noted and agreed. The positive impact on Huntingdon Conservation Area is also reflected in 9.5.6 of chapter 9 of the Environmental Statement (<i>document reference 6.1</i>).										
<p>9.2.13. During operation of the scheme there will be positive benefits for historic buildings of high value, namely in Huntingdon Conservation Area, Godmanchester Post Street Conservation Area and Godmanchester Earning Street Conservation Area. Beneficial impacts would result from the reduction of traffic levels and noise intrusion from de-trunking of the existing A14 on three conservation areas and Huntingdon Bridge. The removal of the existing A14 viaduct would have beneficial effects on the character of Huntingdon Conservation Area and Huntingdon Train Station.</p> <p>Table 18: Residual impacts on historic buildings during operation</p> <table border="1" data-bbox="207 1170 968 1338"> <thead> <tr> <th>Historic buildings Asset residual</th> <th>Impact during operation</th> </tr> </thead> <tbody> <tr> <td>Huntingdon Conservation Area</td> <td>Large beneficial</td> </tr> <tr> <td>Godmanchester Post Street Conservation Area</td> <td>Moderate beneficial</td> </tr> <tr> <td>Huntingdon Bridge</td> <td>Large beneficial</td> </tr> <tr> <td>Huntingdon Station</td> <td>Very large beneficial</td> </tr> </tbody> </table>	Historic buildings Asset residual	Impact during operation	Huntingdon Conservation Area	Large beneficial	Godmanchester Post Street Conservation Area	Moderate beneficial	Huntingdon Bridge	Large beneficial	Huntingdon Station	Very large beneficial	Noted and agreed
Historic buildings Asset residual	Impact during operation										
Huntingdon Conservation Area	Large beneficial										
Godmanchester Post Street Conservation Area	Moderate beneficial										
Huntingdon Bridge	Large beneficial										
Huntingdon Station	Very large beneficial										

Joint LIR Identified Positive Impacts	Highways England response
Godmanchester Earning Street Conservation Area Moderate beneficial	

3.2 Negative Impacts

3.2.1 Table 3.2 to 3.5 responds to the negative heritage impacts, during operation, as set out in sections 9.2.3 to 9.2.12 of the Joint LIR. All of the following comments need to be considered alongside the agreed and acknowledged positive impacts set out in the earlier section of this chapter.

Table 3-2: Cultural heritage impacts during construction

Joint LIR Identified Negative Impacts	Highways England response
9.2.3. During construction, there will be residual impacts, following mitigation by the Applicant, on the earthwork on Mill Common, which is classed as a high value archaeological remain asset.	<p>This concurs with the assessment presented in 9.4.4 and Table 9.12 of the Environmental Statement (<i>document reference 6.1</i>).</p> <p>The impact is based on the extent of the scheduled area. There is currently no evidence that the extent shown on the schedule, extending underneath the A14 embankment, has survived following construction of the railway in the 19th century and the A14 embankment; the extent is shown on Figure 9.1 sheet 15 of the <i>ES (document reference 6.1)</i>. Should the asset not extend into this area then there will not be an impact.</p>
9.2.4. Negative impacts would result from the presence of new road infrastructure on Mill Common in the landscape, and visual and noise intrusion resulting from its operation on Huntingdon Conservation Area.	This assessment of impact concurs with the assessment presented in 9.5.5 to 9.5.7, and in Table 9.12 and Table 9.13 of the Environmental Statement (<i>document reference 6.1</i>). The mitigation measures proposed in these sections seek to reduce these impacts.

Joint LIR Identified Negative Impacts		Highways England response
Table 15: Residual negative impacts on archaeological remains during construction		<p>The impact on the earthwork on Mill Common is based on the extent of the scheduled area. There is currently no evidence that the extent shown currently extending underneath the A14 embankment has survived following construction of the railway and the A14 embankment. Should the asset not extend into this area then there will not be an impact.</p> <p>Section 9.4.4 of the ES (document reference 6.1) states:</p> <p><i>The extent of this asset has been identified from historic Ordnance Survey mapping and has previously been impacted by the construction of the existing A14 which is likely to have removed or truncated archaeological remains of the earthwork within this area. Construction of the scheme would be located principally within the existing road embankment; however there is some potential for physical impacts on any surviving archaeological remains of the monument which survive below the embankment. The magnitude of this impact has been assessed to be minor adverse and the significance of effect as slight adverse.</i></p> <p>As noted the assessment of 'slight adverse' is based on the impact of the theoretical extent of the monument which is present and the impact can be mitigated by preservation by record. A residual adverse impact would indicate that the resource has been clearly modified. As the area that would be impacted by the scheme lies underneath the existing A14 embankment clear modifications to the heritage asset are considered unlikely.</p> <p>This assessment of impact on undesignated assets at the east end of Mill Common concurs with the assessment presented in Table 9.12 of the Environmental Statement (<i>document reference 6.1</i>) (assets 442, and 344/416). The impact on undesignated remains at the east end of Mill Common is mitigated by the implementation of a programme of archaeological recording ('preservation by record'); the proposed mitigation is presented in Table 9.12 of the <i>ES (document reference 6.1)</i>.</p>
Archaeological Remains		
Asset	residual Impact during construction	
Earthwork (scheduled) on Mill Common	Moderate adverse	
Undesignated archaeological remains at east end of Mill Common	Slight adverse	

Joint LIR Identified Negative Impacts		Highways England response
Table 16: Residual negative impacts on historic buildings during construction		<p>The assessment of impact on Huntingdon Conservation Area concurs with the assessment presented in Table 9.13 of the Environmental Statement (<i>document reference 6.1</i>). The noise and visual impacts are discussed in detail in 9.4.14 and 9.4.15, and the unmitigated and mitigated impacts are identified in Table 9.12 and Table 9.13 of the <i>ES (document reference 6.1)</i>. As noted in 9.4.15 of the Environmental Statement (<i>document reference 6.1</i>) these are short-term temporary impacts. Mitigation is not possible in this area as the assets sit directly adjacent to the construction area; the construction area is the visual intrusion.</p> <p>The assessment of impact on The Walks also identifies slight beneficial impacts as a result of the detrunking of the existing A14 dual carriageway. The impacts are discussed in paragraph 9.4.16, and the unmitigated and mitigated impacts are identified in Table 9.12 and Table 9.13 of the <i>ES (document reference 6.1)</i>. As noted in 9.4.16 of the <i>ES (document reference 6.1)</i> these are short-term temporary impacts. Mitigation is not possible in this area as the assets sit directly adjacent to the construction area the construction area is the visual intrusion.</p> <p>The assessment of impact on Huntingdon Council Hospital and Huntingdon Station concurs with the assessment presented in Table 9.13 of the Environmental Statement (ES) (<i>document reference 6.1</i>). The impacts are discussed in detail in 9.4.17, and the unmitigated and mitigated impacts are identified in Table 9.13 of the ES. As noted in 9.4.17 of the ES these are short-term temporary impacts.</p> <p>Offord Cluny Conservation Area, Porch House and 208 High Street: The impacts identified in these locations concur with the assessment presented in Table 9.14 of the Environmental Statement (<i>document reference 6.1</i>). The impacts are discussed in detail in 9.4.28, and the unmitigated and mitigated impacts are identified in Table 9.12 and Table 9.13 of the <i>ES (document reference 6.1)</i>. As noted in 9.4.15 of the <i>ES (document reference 6.1)</i> these are short-term temporary impacts.</p>
Historic buildings		
Asset	residual impact during construction	
Huntingdon Conservation Area	Moderate adverse	
2 The Walks North, Huntingdon	Moderate adverse	
3 - 4 The Walks North, Huntingdon	Moderate adverse	
5 - 6 The Walks North, Huntingdon	Moderate adverse	
Huntingdon County Hospital (main building only listed)	Moderate adverse	
Huntingdon Station	Moderate adverse	
Offord Cluny Conservation Area	Moderate adverse	
Porch House, Offord Cluny	Moderate adverse	
208 High Street, Offord Cluny	Moderate adverse	

Table 3-3: Possible impact on archaeological resources from 'compaction' of soil during construction

Joint LIR Identified Negative Impacts	Highways England response
<p>9.2.5. In the DCO ES 6.1 Appendix 12.2 section 2.5 "Compaction" of the Soil management strategy, the mitigation measure is that stockpiled soil areas, haul road, and construction compounds will have their topsoil removed as a first step (2.5.6) and any subsoil layers will be protected with geotextile prior to the laying of stone surfacing (2.5.6 page 8).</p>	<p>Noted. This accords with Appendix 12.2 of the Environmental Statement (<i>document reference 6.3</i>).</p>
<p>9.2.6. Not mentioned is the impact that such procedures will have upon archaeological resources that may be present or as yet unknown in these areas that will be vulnerable to compaction, compression, geochemical and post N storage/use machining operations. These areas need to be highlighted in the Code of Construction Practice and included in the Cultural Heritage mitigation strategy and Written Schemes of Investigation, or the resulting anticipated impact will be that the unrecorded archaeological resource is not protected and preserved in line with the objectives shown in the DCO ES 6.1 Appendix 20.1.</p>	<p>The methodology identified in appendix 12.2 section 2.5 of the Environmental Statement (<i>document reference 6.1</i>) will be included in the Cultural Heritage mitigation strategy and written scheme of investigation. No soil storage areas have been identified in areas where there is the potential for alluvial or peat deposits that are vulnerable to compression. The areas for soil storage would be topsoil stripped and any archaeological remains present would be recorded prior to storage. As a result compaction, compression and potential geochemical contamination are unlikely to become issues.</p>

Table 3-4: No clear archaeological mitigation strategy for the new local access roads during construction

Joint LIR Identified Negative Impacts	Highways England response
<p>9.2.7. There is no archaeological mitigation strategy for the new local access roads to the north and south of the current A14 between Fen Drayton and the Girton Interchange.</p>	<p>Section 9.6.12 of the Environmental Statement (<i>document reference 6.1</i>) identifies mitigation for the area around Girton Interchange. The local access roads are also identified in the written scheme of investigation for archaeological mitigation (A14-JAC-ZZ-XX-RPV-00138, rev. P00.1) provided to CCC for comment on 20 April 2015; this is being revised following comment from CCC and will be reissued in July 2015.</p>

Table 3-5: Cultural heritage impacts during operation

Joint LIR Identified Negative Impacts	Highways England response
<p>9.2.8. During operation there will be residual impacts on the Huntingdon Conservation Area from the presence of new road infrastructure on Mill Common in the landscape, and visual and noise intrusion.</p>	<p>This assessment of impact concurs with the assessment presented in 9.5.5 to 9.5.7, and in Table 9.12 and Table 9.13 of the ES (document reference 6.1). The assessment identifies that there will be adverse and beneficial impacts on Huntingdon Conservation Area as a result of the scheme after the implementation of mitigation.</p>
<p>9.2.9. Three buildings in Huntingdon would experience adverse impacts as a result of the scheme through the loss of setting.</p>	<p>This assessment of impact concurs with the assessment presented in 9.5.5 to 9.5.7, and in Table 9.12 and Table 9.13 of the ES (document reference 6.1). The assessment identifies that there will be adverse and beneficial impacts on buildings within Huntingdon Conservation Area as a result of the scheme after the implementation of mitigation</p>
<p>9.2.10. The ES assesses impact on All Saints Church, Lolworth (Grade II*) as slight adverse during construction and as a residual impact during operation – but approaches and views to the Church will be significantly altered by the embankments, lighting, gantries and current proposed landscape treatments.</p>	<p>Paragraph 9.5.18 of the Environmental Statement (<i>document reference 6.1</i>) states:</p> <p><i>The presence of Robin's Lane Bridge c.0.5km to the north of the Church of All Saints in Lolworth (asset 96) would intrude on views towards the church tower from the north and the A14 corridor. This would detract from the landmark role of the church tower which contributes to the asset's value</i></p> <p>The impact was assessed as moderate because of potential significant modifications to the setting of the asset through the introduction of raised elements of infrastructure including a bridge and two gantries. After implementation of the mitigation landscaping there will be a residual effect on the church tower from the proposed scheme through the addition of elevated infrastructure in the skyline, detracting from the tower as a landmark feature; the tower will still remain visible in the skyline. The immediate setting of the main body of the church will not be materially changed by the scheme as it is screened and additional planting will enhance this. As a result the impact is assessed as minor due to a noticeable change in the setting of a listed building; residual significance of effect is assessed as slight adverse.</p>
<p>9.2.11. The approach to All Saints Church, Lolworth will be significantly changed. Approaches and views to the village from the northern local access road will be elevated via a new bridge over the</p>	<p>Paragraph 9.5.18 of the Environmental Statement (<i>document reference 6.1</i>) states:</p>

Joint LIR Identified Negative Impacts	Highways England response
<p>A14 and will be dominated by the new raised embankment, bridge and lighting, and a series of new signage gantries.</p>	<p><i>The presence of Robin's Lane Bridge c.0.5km to the north of the Church of All Saints in Lolworth (asset 96) would intrude on views towards the church tower from the north and the A14 corridor. This would detract from the landmark role of the church tower which contributes to the asset's value</i></p> <p>The impact was assessed as moderate because of potential significant modifications to the setting of the asset through the introduction of raised elements of infrastructure including a bridge and two gantries. After implementation of the mitigation landscaping there will be a residual effect on the church tower from the proposed scheme through the addition of elevated infrastructure in the skyline, detracting from the tower as a landmark feature; the tower will still remain visible in the skyline. The immediate setting of the main body of the church will not be materially changed by the scheme as it is screened and additional planting will enhance this. As a result the impact is assessed as minor due to a noticeable change in the setting of a listed building; residual significance of effect is assessed as slight adverse.</p>
<p>9.2.12. The Applicant proposes to provide landscape planting in this location to reduce the impact to slight adverse. South Cambridgeshire District Council have identified that, due the high value of this asset, the impact may be higher than slight adverse and therefore additional mitigation may be required. South Cambridgeshire District Council's written representations provide more detail on mitigation proposals at this location.</p>	<p>The assessment of the setting of All Saints Church, Lolworth followed the guidance provided by <i>The Setting of Heritage Assets</i> (English Heritage 2011), DMRB and an inspection of the asset to assess its setting; Annex 2 of NPPF states that the setting of the asset contributes to its significance (value). The process for valuing heritage assets is set out at paragraph 9.1.12. Paragraph 9.5.18 of the Environmental Statement (<i>document reference 6.1</i>) states:</p> <p><i>The presence of Robin's Lane Bridge c.0.5km to the north of the Church of All Saints in Lolworth (asset 96) would intrude on views towards the church tower from the north and the A14 corridor. This would detract from the landmark role of the church tower which contributes to the asset's value.</i></p> <p>The impact was assessed as moderate because of potential significant modifications to the setting of the asset through the introduction of raised elements of infrastructure including a bridge and two gantries. After implementation of the mitigation landscaping there will be a residual effect on the church tower from the proposed scheme through the addition of elevated</p>

Joint LIR Identified Negative Impacts		Highways England response
		infrastructure in the skyline, detracting from the tower as a landmark feature; the tower will still remain visible in the skyline. The immediate setting of the main body of the church will not be materially changed by the scheme as it is screened and additional planting will enhance this. As a result the impact is assessed as minor due to a noticeable change in the setting of a listed building; residual significance of effect is assessed as slight adverse.
Table 17: Residual impacts on historic buildings during operation		<p>Huntingdon Conservation Area: This assessment of the impact on Huntingdon Conservation Area concurs with the assessment presented in 9.5.5 to 9.5.7, and in Table 9.13 and Table 9.14 of the Environmental Statement (<i>document reference 6.1</i>). The assessment states that there will be adverse and beneficial impacts on Huntingdon Conservation Area and the listed buildings as a result of the scheme. The beneficial impact results from the removal of the A14 viaduct.</p> <p>The 2, 3-4 and 5-6 The Walks: The assessment of impact on The Walks concurs with the assessment presented in paragraph 9.5.8, and the unmitigated and mitigated impacts are identified in Table 9.14 of the ES (<i>document reference 6.1</i>). However, a beneficial impact is also predicted to result from detrunking of the A14. The impacts are discussed in paragraph 9.5.8, of the ES (<i>document reference 6.1</i>).</p> <p>Lolworth Church: SCDC's assessment of the impact on 'Lolworth Church' is noted. The assessment of impact on All Saints Church, Lolworth (asset 96) is presented in 9.5.18, of the Environmental Statement (<i>document reference 6.1</i>). In the Environmental Statement the impact was assessed as moderate because of potential significant modifications to the setting of the asset through the introduction of raised elements of infrastructure including a bridge and two gantries. After implementation of the mitigation landscaping there will be a residual effect on the church tower from the proposed scheme through the addition of elevated infrastructure in the skyline, detracting from the tower as a landmark feature; the tower will still remain visible in the skyline. The immediate setting of the main body of the church will not be materially changed by the scheme as it is screened and additional planting will enhance this. As a result the impact is assessed as minor due to a noticeable change</p>
Historic buildings		
Asset	residual Impact during operation	
Huntingdon Conservation Area	Moderate adverse	
2 The Walks North, Huntingdon	Moderate adverse	
3 - 4 The Walks North, Huntingdon	Moderate adverse	
5 - 6 The Walks North, Huntingdon	Moderate adverse	
Lolworth Church (Grade II*)	Slight / moderate adverse*	
* SCDC consider the impact to be higher than 'slight adverse' as stated in the ES due to the high value of asset and the significant changes to the landscape in the vicinity.		

Joint LIR Identified Negative Impacts	Highways England response
	in the setting of a listed building; residual significance of effect is assessed as slight adverse. Therefore SCDC's assessment does not concur with the assessment within the ES that identifies a slight adverse residual effect.

3.3 Missed Opportunities

3.3.1 Tables 3.6 to 3.8 responds to the cultural heritage comments set out in section 9.2.14 to 9.2.20 of the Joint LIR.

Table 3-6: Weakness in assessment methodology – assessment of individual assets can result in misrepresentation of significance

Joint LIR Identified Missed Opportunities	Highways England response
<p>9.2.14. The subjective attribution of 'value' to non-designated heritage assets in ES Chapter 9 'Cultural Heritage' and related appendices is considered too reductive, altering the significance of known, non-designated archaeological assets in certain locations. The 1447 monument records obtained from the County Council's Historic Environment Record were smoothed into a total of 317 during the desk-top assessment. The attribution of value of individual heritage assets in tables within Ch 9 follows DMRB methodology³ but, as subjective measurements, some ascribed a 'low value' are open to challenge, either due to errors in the reading of the Historic Environment Record dataset⁴, or to a difference of</p>	<p>Highways England disagrees.</p> <p>The original data request to the Cambridgeshire County Council Historic Environment Record covered a 4km wide area along the length of the scheme. This data request returned a total of 1447 monument records. Please note that this included both archaeological remains and historic buildings.</p> <p>Following the guidance provided by the Design Manual for Roads and Bridges (DMRB) a study area was defined as the footprint of the scheme and a 200m study area around it. The number of monuments from the Historic</p>

³ Design Manual for Roads and Bridges (DMRB), Volume 11, Section 3 Part 2 'Cultural Heritage' (HA 208/07). (Highways Agency et al., 2007).

⁴ One example of a factual error is heritage asset number 58 in Appendix 9.2 "Archaeology and the built heritage baseline list", which records "Undated features, A14 Cambridge to Huntingdon improvement scheme" as being of "low value". This was the attribution for undated remains found during geophysical survey conducted in 2008 in advance of evaluations undertaken for an older A14 improvement scheme, the results of which were reported in

Joint LIR Identified Missed Opportunities	Highways England response
<p>archaeological opinion. The impact of this weakness of the DMRB methodology results in a misinterpretation of the significance (cf NPPF chapter 12 Conserving and enhancing the historic environment, paragraph 126, DCLG 2012) of the wider archaeological resource in which the individually recorded assets may constitute a single artefact or an extensive archaeological site, and is further compounded by the assumption that there is a low potential for unknown archaeological remains to be present within the scheme footprint (ES Ch 9 9.2.24). The consequence of this understanding is that the archaeological significance of various areas will be misconstrued to main and sub-contractors and is likely to affect the scheme's resourcing.</p>	<p>Environment Record contained within this study area was 308. Please note that this included both archaeological remains and historic buildings. An additional 117 monuments were identified based on the results of the desk based survey, walkover survey, aerial photographic studies, geophysical survey and trial trenching. In addition a further 19 historic landscape types were also considered in the baseline.</p> <p>The LIR states:</p> <p>"The attribution of value of individual heritage assets in tables within chapter 9 follows DMRB methodology[1] but, as subjective measurements, some ascribed a 'low value' are open to challenge, either due to errors in the reading of the Historic Environment Record dataset[2], or to a difference of archaeological opinion."</p> <p>Since differences of the assessment of value can be subject to differences in professional opinion, the statement that the interpretation of value is 'a factual error' is erroneous. The HER notes a 'Middle Iron Age circular enclosure was recorded which cut through an earlier human burial', it goes on to note that 'to the southern end of Area K, a series of boundary ditches and artefact rich deposits representing the remnants of midden material, suggested Romano-British settlement and agricultural activity'. The assessment was made on the understanding that this was common type of archaeological feature in area, which had the potential to contribute to local research objectives. The interpretation of 'medium-high' would suggest that the asset has the potential to contribute to national research objectives. This is not explicit in the summary text held by the HER, nor is it clearly stated in the trial trenching report that notes 'Within this stretch of the Scheme the majority of sites were</p>

2010 and deposited in the HER in 2011. This record was subsequently updated as "Middle Iron Age ring ditch and Romano-British settlement activity, A14 Improvement Scheme", noting in the record that an Iron Age inhumation was present in the evaluation trenches. This record is indicated in the HER dataset sent to Jacobs on 03/12/13 following a search request on 26/11/13. HET's value attribution of this multi-period settlement with burials in the vicinity of a major Roman road and part of a network of other contemporary settlements, would be "medium-high".

Joint LIR Identified Missed Opportunities	Highways England response
	<p>Middle Iron Age in origin, Sites 17, 18 and 19 all appeared to represent Middle Iron Age settlement activity'.</p> <p>(Unpublished report: Patten, R., Slater, A., & Standing, R. 2010. Archaeological evaluation of the proposed A14 Ellington to Fen Ditton: 2009 (volumes I & II). Cambridge Archaeological Unit Report 946.)</p> <p>Section 7.5 of the Environmental Impact Assessment Scoping Report (Highways Agency 2014) which was issued to Cambridgeshire County Council for comment stated that DMRB would be used. In the <i>Scoping Opinion - proposed A14 Cambridge to Huntingdon Improvement Scheme</i> the responses received from CCC stated:</p> <p><i>The impact on cultural heritage should follow the principles set out in Chapter 7 of the Scoping Report</i> (Planning Inspectorate 2014)</p> <p>Significance and impact assessment as defined in NPPF is presented in paragraphs 9.1.12 to 9.1.19.</p> <p>The assessment found that there is a low potential for unknown archaeological remains to be present within the scheme footprint, as detailed at paragraph 9.2.24 of the Environmental Statement (<i>document reference 6.1</i>). This was based on an intensive survey programme including desk-based study as well as air photograph analysis, geophysical survey, trial trenching and Unmanned Aerial Vehicle survey.</p>

Table 3-7: Impact during construction - archaeological impacts associated with borrow pits – issues with the mitigation strategy

Joint LIR Identified Missed Opportunities	Highways England response
<p>9.2.15. The construction impacts of the six borrow pits will be major upon buried archaeological remains, requiring a robust approach to the archaeological investigation of these large landscape areas. However, we are not yet able to agree to the mitigation strategy as it does not include all borrow pit areas (borrow pit 5 is omitted from the WSI) nor how they would be specifically examined, or what the research objectives of examination would be. Consequently, the WSI is not in compliance with policy CS36.</p>	<p>It was not possible to gain access by agreement to undertake geophysical survey or trial trenching of Borrow Pit 5. An unmanned aerial vehicle survey was undertaken and based on the results the need for further evaluation, comprising geophysical survey and trial trenching is identified in 9.6.6 of Chapter 9 of the <i>Environmental Statement (document reference 6.1)</i>.</p> <p>As the need for mitigation has not been confirmed, borrow pit 5 was not included in the written scheme of investigation for archaeological mitigation (A14-JAC-ZZ-XX-RPV-00138, rev. P00.1). A separate written scheme of investigation for the evaluation of borrow pit 5 will be produced and discussed with CCC.</p>
<p>9.2.16. In order for the local authorities to be satisfied that the extensive archaeological excavations required at each of the borrow pits take place sufficiently ahead of the establishment of the borrow pits so that archaeological areas are not compromised by timetabling restrictions or lack of resources, we would require assurance from the scheme's promoter and their agents that excavations in the borrow pits, following a preliminary stage of evaluation, would occur prior to the commencement dates listed in Table 3.1 of ES Appendix 3.2.</p>	<p>Archaeological investigations as noted will be undertaken prior to construction. Details of the archaeological mitigation and programme will be identified in the Construction Environmental Management Plan (CEMP).</p>
<p>9.2.17. The scale and timing of the archaeological investigations required is not yet covered in the mitigation strategy in neither the ES nor the WSI, the impact of which might result in the reduced understanding of pre-construction timetabling needs by Main and Sub-contractors, the restriction of access to archaeological teams only in specific areas and the level of archaeological costs and resources by the promoter, Main and Sub-contractor.</p>	<p>Details of the archaeological mitigation and programme will be identified in the written scheme of investigation for archaeological mitigation (secured by paragraph 7 of Schedule 2 (Requirements) to the draft Development Consent Order) once a construction programme has been developed by the detailed design team.</p> <p>The written scheme of investigation for archaeological mitigation (A14-JAC-ZZ-XX-RPV-00138, rev. P00.1) was provided to Cambridgeshire County Council for comment on 20 April 2015. Following discussion with Cambridgeshire County Council on 01 May 2015, the WSI will include the</p>

Joint LIR Identified Missed Opportunities	Highways England response
	requested detail on the proposed archaeological investigations, which are linked into research objectives for the areas identified. The WSI is being revised and will be reissued in July 2015.
9.2.18. There is no vision statement regarding and outreach scheme and there is no satisfactory strategy for the display of the A14's archaeology.	Following discussion with Cambridgeshire County Council on 01 May 2015 it was agreed that a statement on outreach would be included in the written scheme of investigation. A detailed outreach strategy will be developed during detailed design.
9.2.19. Restoration and legacy works for archaeology have not yet been considered and, which could lead, unacceptably, to their wholesale omission from inclusion at this stage in the scheme.	The written scheme of investigation for archaeological mitigation (A14-JAC-ZZ-XX-RPV-00138, rev. P00.1) states the requirements for post-excavation reporting and publication, including deposition of the archive with the receiving museum. Discussion with the receiving museum and Cambridgeshire County Council regarding the publication will be undertaken at the outset of the programme of archaeological mitigation.
9.2.20. It is not unreasonable to state concern that the impact of construction upon archaeological remains will be considerable if the individual site mitigation schemes are not precisely scoped and if they lack the research objectives that will aid their design, implementation and, ultimately, resourcing . In view of the above, the strategy to deal with the archaeological of the borrow pits is not compliant with the relevant planning policy CS36 Archaeology & the Historic Environment and requires significant revision to enable its approval.	Section 9.6 presents mitigation measures for archaeological remains, built heritage and historic landscape. These are based on impacts identified in chapter 9 of the <i>Environmental Statement (document reference 6.1)</i> . Following discussion with Cambridgeshire County Council on 01 May 2015 it was agreed that more detail would be provided on research aims tied into the regional research framework to the written scheme of investigation for archaeological mitigation (A14-JAC-ZZ-XX-RPV-00138, rev. P00.1). This will be completed for resubmission to Cambridgeshire County Council in July 2015.

4 Ecology

4.1 Positive Impacts

4.1.1 Tables 4.1 to 4.2 respond to the positive ecology impacts, during operation, as set out in sections 9.3.1 to 9.3.6 of the Joint LIR.

Table 4-1: Mitigation and ecological planting during operation

Joint LIR Identified Positive Impacts	Highways England response
<p>9.3.1. As identified in Chapter 9.2 "Landscape" extensive areas of mitigation planting and ecological planting in certain areas along the route of the scheme are planned. As part of the mitigation of the scheme the Applicant proposes to deliver native tree and shrub planting on and adjacent to highway earthworks to create woodlands, copses and shelterbelts in order to break up the scale of the road, screen structures, traffic and lighting and to help integrate the scheme into the existing landscape pattern.</p>	<p>Noted and agreed.</p>
<p>9.3.2. The proposed belt of planting extending from Huntingdon Recycling to Brampton Hut junction would contribute positively to the landscape pattern and would help integrate the scheme into the existing landscape. In Huntingdon there would be more formal planting where avenue tree planting set in broad grassland verges, some lined with hedges would reflect the historic character of parts of the town.</p>	<p>Noted and agreed.</p>

Table 4-2: Habitat creation during operation

Joint LIR Identified Positive Impacts	Highways England response
<p>9.3.3. The ES states that maintaining landscape and habitat connectivity has been a core aim of the design mitigation. This is achieved largely via the use of appropriate habitat creation,</p>	<p>Noted and agreed.</p>

Joint LIR Identified Positive Impacts	Highways England response
landscaping, including tall screen planting, and the provision of suitably located and designed culverts.	
9.3.4. Positive effects are anticipated from habitat created for groups / species including aquatic and terrestrial invertebrates, fish, Great Crested Newt, breeding birds, bats and water vole.	Noted and agreed.
9.3.5. As a result of the design mitigation there will be a net permanent gain in semi-natural habitats, excluding the loss of arable habitat, of 271ha of which 24% would be woodland and 74% would be semi-improved grassland. This will be of greater biodiversity value than the arable land it replaces as it will provide a connective corridor within the farmland landscape, linking adjacent habitats and enhancing the ability for wildlife to move through the landscape.	Noted and agreed.
9.3.6. Habitat creation at Brampton Wood SSSI should have a slight positive effect on aquatic and terrestrial invertebrates, fish, Great Crested Newts, breeding birds and water voles, and moderate benefit for bats.	Noted and agreed.

4.2 Negative Impacts

4.2.1 Tables 4.3 to 4.7 respond to the negative ecology impacts, during construction and operation, as set out in sections 9.3.7 to 9.3.15 of the Joint LIR. All of the following comments need to be considered alongside the agreed and acknowledged positive impacts set out in the earlier section of this chapter.

Table 4-3: Loss of habitat during construction

Joint LIR Identified Negative Impacts	Highways England response
<p>9.3.7. There will be a total habitat loss of 1,030ha during construction of which 87% will be arable habitat. Arable land is considered to be of relatively low ecological value and is abundant widespread in the local area, thus the loss will not be considered significant. In addition there will be a loss of 20.1km of linear habitat including species poor hedges and wet and dry ditches.</p>	<p>Although there would be semi natural habitat losses of 133.9ha in the short term associated with site clearance and construction, there would be a net gain in the long term of 271ha of semi natural habitats created as a result of the scheme by the creation of 404.9ha of habitat. These would be better connected than the existing habitats for movement of wildlife through the landscape. Highways England agrees that this loss of arable land (which has no significant ecological value) is not significant.</p>
<p>9.3.8. The following habitat losses would occur during construction:</p> <ul style="list-style-type: none"> • broadleaved woodland semi-natural 5.3ha; • broadleaved woodland plantation 18ha; • trees <1ha; • hedge (intact including with trees) 7.8km; • running water <1ha; • standing water 3.9ha; • wet ditches 3.6km; and • swamp and marginal and inundation 0.3ha. 	<p>Following the completion of the proposal and the implementation of the scheme of restoration there would be a net loss of the following specific woodland habitats:</p> <ul style="list-style-type: none"> • broadleaved woodland semi-natural -4.1ha; • broadleaved woodland plantation -13.3ha; • trees - 0.1ha; <p>The total amount of net gain of mixed woodland would be 83.1ha – therefore there is an overall gain in all woodland types across the scheme following completion and restoration of 65.6ha. A further 7.4ha of broadleaf woodland plantation, 8.9ha of mixed woodland plantation and 11.3ha of wet woodland would be created in the borrow pit restoration, resulting in a total woodland gain of 110.7ha.</p> <ul style="list-style-type: none"> • species rich hedge 27.9km; <p>Following the completion of the proposal and the implementation of the scheme of restoration there would be a net loss of these specific habitats within the scheme (excluding the borrow pits) :</p> <ul style="list-style-type: none"> • running water - 0.2ha; • standing water - 1.5ha;

Joint LIR Identified Negative Impacts	Highways England response
	<p>The total amount of new open water habitat provided as compensation through the extensive creation of open water habitats in the borrow pits is as follows:</p> <ul style="list-style-type: none"> • standing water 51.7ha; • wet ditches 4.51km; and • swamp and marginal and inundation 0.11ha.

Table 4-4: Adverse impact on Buckden Gravel Pits County Wildlife Site during construction

Joint LIR Identified Negative Impacts	Highways England response
<p>[Huntingdonshire]</p> <p>9.3.9. The scheme would pass directly through and over the Buckden Gravel Pits County Wildlife Site (CWS). The River Great Ouse Viaduct would carry the new A14 dual carriageway over the CWS therefore limiting land-take. Potential impacts on the cited features at Buckden Gravel Pits County Wildlife Site (CWS) include:</p> <ul style="list-style-type: none"> • Habitat loss • Changes in environmental conditions (dust, water quality, shading) 	<p>Impacts on the Buckden Gravel Pit County Wildlife Site have been assessed as neutral even though there will be some land take during construction and some permanent land take where viaduct piers and access routes would be installed. The restoration of the construction site and enhancement of extant habitats in the remaining site would ensure there were no significant residual effects on this site. Commitments in the Code of Construction Practice to follow guidance and best practice construction methods would ensure that changes of environmental conditions would be minimised and no residual significant effects on the site are anticipated.</p>

Joint LIR Identified Negative Impacts	Highways England response
<p>9.3.10. The entire CWS was not included in the Phase 1 Habitat survey undertaken by the applicant. As a result there is the risk that adverse impacts have not been identified.</p>	<p>Highways England considers the evidence provided in chapter 11 Environmental Statement (<i>document reference 6.1</i>) is adequate to ensure there are no residual significant effects on the Buckden Gravel Pits County Wildlife Site.</p> <p>Highways England has considered likely significant effects and is committed to restoration of habitats within the scheme footprint.</p> <p>A Phase 1 survey was carried out covering the scheme footprint and an area up to 250m from the proposed scheme.</p> <p>Whilst it is the case that habitats will vary in quality within the County Wildlife Site, it is unlikely that the small percentage of the site to be directly affected through the scheme would contain all or most of any designated features and therefore the risk of significant effects is very low.</p> <p>The wetland habitats within the County Wildlife Site are early successional habitats that are ecologically ephemeral and the species that rely on them are subsequently generally capable of colonising new habitats rapidly.</p>
<p>9.3.11. In addition there has been no attempt to identify opportunities to provide mitigation / compensation, for example the creation of new, ecologically-rich waterbodies or remedial works to enhance the poorer quality habitats located within the County Wildlife Site. No consideration has been given to the impact of the road on the management of areas of grassland, particularly their ability to be appropriately grazed. In light of the above, the local authorities conclude there will be a potential adverse impact on Buckden Gravel Pits County Wildlife Site (CWS).</p>	<p>During detailed design following the making of the DCO, the habitats within the County Wildlife Site would be surveyed and the quality identified in more detail to inform plans for restoration of the area within the footprint of the scheme.</p> <p>If there are habitats of particular value within the footprint of the scheme, the restoration of the construction site would be targeted to create similar habitats. Colonisation of these early successional habitats would be expected to be rapid from nearby similar habitats. Enhancement of the CWS would include provision of infrastructure to facilitate management practices such as grazing.</p>

Table 4-5: Insufficient assessment of impact on Fenstanton Lakes and County Wildlife Site during construction

Joint LIR Identified Negative Impacts	Highways England response
<p>9.3.12. Insufficient evidence has been provided to demonstrate that there will be no adverse hydrological impact on Fenstanton Lakes County Wildlife Site (CWS) as a result of the proposed works associated with Borrow Pit 3. Therefore, we conclude that the scheme has the potential to result in an adverse impact on this County Wildlife Site.</p>	<p>Highways England considers the scheme has adequately assessed the likely significant effects of changes in hydrology on the CWS and therefore demonstrated there would be no likely significant effects (see chapter 11, para 11.5.8 of the Environmental Statement (<i>document reference 6.1</i>)). The assessment of likely significant effects on ecological features includes a screening of the likelihood of effects in light of generic mitigation detailed in chapter 11, section 11.4, which screened out likely significant effects on the CWS.</p> <p>Environmental Statement (<i>document reference 6.1</i>). Design mitigation includes the application of ecological mitigation principles and commitment to the Code of Construction Practice in compliance with published guidance and best practice construction methods. This includes prevention of adversely affecting hydrology. The methods described in guidance are uncontroversial in controlling potential environmental effects of changes in groundwater.</p> <p>As there is a commitment to construction and operation of the Borrow Pits using these well established and proven methods, there would be no significant effects on Fenstanton Lakes County Wildlife Site.</p>

Table 4-6: Ecological mitigation areas for breeding birds may not be appropriate during operation

Joint LIR Identified Negative Impacts	Highways England response
<p>[Huntingdonshire] 9.3.13. The detailed design of the ecology mitigation areas, balancing ponds and landscape planting would comprise habitats that are suitable for breeding birds. This would focus on county or district value species, particularly those that only breed at Buckden Gravel Pits (cuckoo, Cetti's Warbler and grasshopper warbler), i.e. wet woodland, scrub and reed bed. The Applicant states that the total area of the breeding habitats created would offset any reduction</p>	<p>The area of suitable habitats for breeding birds created would be in excess of those lost, but these may not be on the same site. However these species are mobile and can colonise new sites easily as they occur in early successional habitats that are ecologically ephemeral and the species that rely on them are subsequently generally capable of colonising new habitats rapidly.</p>

Joint LIR Identified Negative Impacts	Highways England response
in breeding habitat at Buckden Gravel Pits and other important areas.	
9.3.14. Due to the estimated high volumes of traffic using the scheme breeding birds would be affected by noise disturbance for up to 1km from the scheme. Uncertainty exists in the responses of birds to noise disturbance and as to whether birds, especially cuckoo, Cetti's warbler and grasshopper warbler would use the ecology mitigation areas to breed to the extent that they fully offset the effects of disturbance.	Chapter 11 of the Environmental Statement (<i>document reference 6.1</i>) concludes that there could be residual significant adverse effects on Cetti's and grasshopper warbler, dependent on how the birds react to the new conditions and noise effects. Highways England would offer the borrow pit sites back to the original owners of the land and legal covenants would apply to the sale of land by Highways England to ensure that the sites are maintained and managed in accordance with the agreed aftercare arrangements..

Table 4-7: Disturbance of bat habitats adjacent to off-line section during operation

Joint LIR Identified Negative Impacts	Highways England response
9.3.15. There is potential for bats to be impacted by increased disturbance from noise and vibration during operation of the road, particularly in habitats adjacent to the off-line section. This may affect roosting bats, but also has the potential to impact commuting and foraging bats (particularly species which depend on listening for their prey such as brown long-eared bats). In addition the local authorities have identified that the potential for negative impact on the bat populations in the hedgerow between Brampton Wood and the A1 has not been assessed in the Environmental Statement.	<p>Highways England has assessed the likely significant effects on bats. Chapter 11, paragraph 11.5.174 to 11.5.219 of the <i>Environmental Statement (document reference 6.1)</i> concludes that there could be a residual significant adverse effect on barbastelle bat, dependent on how they react to the new road and new safe crossing points. Highways England would offer the borrow pit sites back to the original owners of the land and legal covenants would apply to the sale of land by Highways England to ensure that the sites are maintained and managed in accordance with the agreed aftercare arrangements, thus ensuring that the bats could expand their population into, which would counteract any losses through mortality on the new road.</p> <p>Effects on bat roosts are subject to licencing from Natural England (NE). Draft mitigation licence applications are currently being considered by NE. No licence would be issued unless it was demonstrated there would be no adverse effect on the conservation status of bats.</p>

Joint LIR Identified Negative Impacts	Highways England response
	The register of environmental actions and commitments includes a commitment to enhance the corridor between Brampton Woods and the scheme to provide better habitat for a range of species including bats and dormice.

4.3 Missed Opportunities

4.3.1 Table 4.8 responds to the ecology comments set out in section 9.3.16 to 9.3.18 of the Joint LIR.

Table 4-8: Ecology missed opportunities

Joint LIR Identified Missed Opportunities	Highways England response
9.3.16. Whilst the restoration of borrow pits has the potential to provide positive benefits in terms of habitat creation, there is no commitment to their long-term management.	<p>Please refer to the statement at the end of this report in chapter 13 which confirms Highways England's revised proposals for a 10 year aftercare strategy for borrow pit sites. Highways England considers that the 15 years aftercare that is being requested by South Cambridgeshire District Council (referred to in Appendix C of the Joint Local Impact Report) is excessive and cannot be justified.</p> <p>Highways England would offer the borrow pit sites back to the original owners of the land and legal covenants would apply to the sale of land to ensure that the sites are maintained and managed in accordance with the agreed aftercare arrangements.</p>
9.3.17. The proposed five year management of the borrow pits is considered inadequate to achieve any long-term net gain in biodiversity. This is a wasted opportunity and significantly diminished the ability of the scheme to achieve any long-term biodiversity gain.	Please refer to the statement at the end of this report in chapter 13 which confirms Highways England's revised proposals for a 10 year aftercare strategy for borrow pit sites. We consider that the 15 years aftercare that is being requested by South Cambridgeshire District Council (referred to in Appendix C of the Joint Local Impact Report) is excessive and cannot be justified.

Joint LIR Identified Missed Opportunities	Highways England response
	Highways England would offer the borrow pit sites back to the original owners of the land and legal covenants would apply to the sale of land by Highways England to ensure that the sites are maintained and managed in accordance with the agreed aftercare arrangements, thus ensuring long term biodiversity gain in accordance with the terms of the restoration and aftercare proposals.
9.3.18. A long term water strategy is proposed but further assessment /mitigation is required to ensure that biodiversity sites, at Brampton Wood SSSI and Fenstanton County Wildlife Site are not adversely affected by dewatering.	Highways England is committed to complying with guidance and best practice in construction methods. Brampton Wood SSSI and Fenstanton County Wildlife Site would not be affected adversely as detailed design of dewatering measures following the making of the DCO would ensure this was not the case (see chapter 11, paragraph 11.5.8 of the Environmental Statement (<i>document reference 6.1</i>)).

5 Noise and Vibration

5.1 Positive Impacts

5.1.1 Table 5.1 responds to the positive noise and vibration impacts, during operation, as set out in sections 9.4.1 to 9.4.15 of the Joint LIR.

Table 5-1: Noise and vibration impacts during operation

Joint LIR Identified Positive Impacts	Highways England response
9.4.1. The Environmental Statement reports that there are approximately 21,720 residential dwellings within the defined study area (600 metres from the scheme). The dwellings are mainly located in villages and towns but there are other single or clusters of dwellings at more isolated locations along the A14.	Noted and agreed.

Joint LIR Identified Positive Impacts						Highways England response																																																																					
<p>9.4.2. The table below compares the long term effects of noise on dwellings with and without the scheme:</p> <p>Table 19: Long-term traffic noise effects on dwellings</p> <table border="1"> <thead> <tr> <th colspan="2" rowspan="2">Scenario/comparison</th> <th colspan="2">Do-Minimum 2020 v. Do-Minimum (No Scheme / Natural Growth)</th> <th colspan="2">Do-Minimum 2020 v. Do-Something 2035 (With Improvement scheme)</th> </tr> <tr> <th colspan="2">Number of dwellings</th> <th colspan="2">Number of dwellings</th> </tr> <tr> <th colspan="2">Change in noise level:</th> <th>Daytime</th> <th>Night-time</th> <th>Daytime</th> <th>Night-time</th> </tr> </thead> <tbody> <tr> <td rowspan="4">Increase in noise level, LpA10,18hr</td> <td>0.1 - 2.9</td> <td>20,210</td> <td>8,630</td> <td>10,640</td> <td>10,420</td> </tr> <tr> <td>3 - 4.9</td> <td>0</td> <td>120</td> <td>500</td> <td>260</td> </tr> <tr> <td>5 - 9.9</td> <td>0</td> <td>0</td> <td>70</td> <td>10</td> </tr> <tr> <td>10 +</td> <td>0</td> <td>0</td> <td>10</td> <td>0</td> </tr> <tr> <td>No change</td> <td>0</td> <td>1080</td> <td>12970</td> <td>440</td> <td>520</td> </tr> <tr> <td rowspan="4">Decrease in noise level, LpA10,18hr</td> <td>0.1 - 2.9</td> <td>430</td> <td>10</td> <td>7,030</td> <td>7,740</td> </tr> <tr> <td>3 - 4.9</td> <td>0</td> <td>0</td> <td>2,140</td> <td>2,020</td> </tr> <tr> <td>5 - 9.9</td> <td>0</td> <td>0</td> <td>870</td> <td>750</td> </tr> <tr> <td>10 +</td> <td>0</td> <td>0</td> <td>10</td> <td>10</td> </tr> </tbody> </table>						Scenario/comparison		Do-Minimum 2020 v. Do-Minimum (No Scheme / Natural Growth)		Do-Minimum 2020 v. Do-Something 2035 (With Improvement scheme)		Number of dwellings		Number of dwellings		Change in noise level:		Daytime	Night-time	Daytime	Night-time	Increase in noise level, LpA10,18hr	0.1 - 2.9	20,210	8,630	10,640	10,420	3 - 4.9	0	120	500	260	5 - 9.9	0	0	70	10	10 +	0	0	10	0	No change	0	1080	12970	440	520	Decrease in noise level, LpA10,18hr	0.1 - 2.9	430	10	7,030	7,740	3 - 4.9	0	0	2,140	2,020	5 - 9.9	0	0	870	750	10 +	0	0	10	10	<p>Noted and agreed.</p>					
Scenario/comparison		Do-Minimum 2020 v. Do-Minimum (No Scheme / Natural Growth)		Do-Minimum 2020 v. Do-Something 2035 (With Improvement scheme)																																																																							
		Number of dwellings		Number of dwellings																																																																							
Change in noise level:		Daytime	Night-time	Daytime	Night-time																																																																						
Increase in noise level, LpA10,18hr	0.1 - 2.9	20,210	8,630	10,640	10,420																																																																						
	3 - 4.9	0	120	500	260																																																																						
	5 - 9.9	0	0	70	10																																																																						
	10 +	0	0	10	0																																																																						
No change	0	1080	12970	440	520																																																																						
Decrease in noise level, LpA10,18hr	0.1 - 2.9	430	10	7,030	7,740																																																																						
	3 - 4.9	0	0	2,140	2,020																																																																						
	5 - 9.9	0	0	870	750																																																																						
	10 +	0	0	10	10																																																																						
<p>9.4.3. Without the scheme 20,210 dwellings will experience an increase in noise levels in the daytime as opposed to 11,220 dwellings with the scheme - 8,990 fewer properties experiencing an increase in noise with the scheme. While fewer experience no change, (1,080 without scheme v 440 with scheme), 9,620 more dwellings will experience noise reductions than without (10,050 with v 430 without).</p>						<p>Noted and agreed.</p>																																																																					
<p>9.4.4. Traffic assessments have shown that as a result of the removal of the viaduct in Huntingdon and the changes to the local road network, traffic flows on the key radial routes into Huntingdon will reduce as local traffic transfers onto the de-trunked A14 as a more appropriate means of access and so reduce noise in the following areas:</p>						<p>Noted and agreed. The overall noise benefit reported in chapter 14 of the Environmental Statement (<i>document reference 6.1</i>) results from the proposed scheme as a whole including: the Huntingdon Southern Bypass, the removal of the viaduct in Huntingdon and de-trunking of the existing A14, and the proposed mitigation measures.</p>																																																																					

Joint LIR Identified Positive Impacts	Highways England response
<p>[Alconbury] 9.4.5. The Applicant proposes to replace the existing noise fence barrier with a taller fence barrier, improving the noise environment at residential dwellings in the north of Alconbury which face onto the A1 (M). Between the A1 / A14 Brampton Hut and the East Coast mainline there are 2 dwellings at Woodhatch Farm and Little Meadows where the Applicant is proposing mitigation in the form of a 2 metre high absorptive barrier which would provide moderate beneficial noise level reductions.</p>	<p>Noted and agreed.</p>
<p>[Brampton] 9.4.6. There is an Important Area (IA 5151) to the north of Brampton where residential dwellings in the large development off Thrapston Road are close to a section of the existing A14 that would be de-trunked by the scheme and hence the existing road traffic noise levels reduced. A reduction in road traffic noise will be experienced in the vicinity of Huntingdon Road on the eastern edge of Brampton which will cause a minor positive effect on the acoustic character of the area.</p>	<p>Noted and agreed.</p>
<p>[Huntingdon] 9.4.7. In Huntingdon there is significant noise reduction in the following areas mainly as a result of the de-trunking of the A14 and the associated reductions the levels of traffic:</p> <ul style="list-style-type: none"> • Residential dwellings on the western periphery of Hinchingsbrooke • Residential dwellings to the east of Hinchingsbrooke Hospital • Residential dwellings at Stukeley Meadows • Residential dwellings in the centre of Huntingdon on Castle Hill, Prince's Street, Alder Drive and Sayer Street • Residential dwellings in Northern Godmanchester 	<p>Noted and agreed.</p>
<p>[Fenstanton] 9.4.8. There would be a significant benefit to residential dwellings south-west of Fenstanton and there are existing noise fence barriers at this location. The Applicant predicts improvements in terms of noise as a result of the de-trunking of the A14 along this section.</p>	<p>Noted and agreed.</p>

Joint LIR Identified Positive Impacts	Highways England response
<p>[Hilton, Over, Conington, Knapwell and Boxworth] 9.4.9. There are reductions in traffic forecast for Hilton, and the villages of Over, Conington, Knapwell and Boxworth. As a result there will be significant positive impacts in terms of noise and vibration for these areas.</p>	<p>Noted and agreed.</p>
<p>[Swavesey to Girton] 9.4.10. Significant reductions in road traffic noise are expected for dwellings in the vicinity of Huntingdon Road, Lolworth due to reductions in traffic. In addition reductions in noise are expected at Hill Farm Cottages alongside the A14 near Bar Hill where mitigation provides major beneficial noise reduction to dwellings, specifically: at Rhadegund Cottages (IA5140), at Hackers Fruit Farm, Crouch Field Villas, Westdene (IA5139), Catchall Farm (IA5138) and Grange Farm Cottages (IA6113). The mitigation proposed in the form of environmental noise barriers will provide moderate to substantial reductions in road traffic noise.</p>	<p>Noted and agreed.</p>
<p>9.4.11. At Cambridge City Crematorium the grounds will be screened from the A14 by a noise barrier and a minor beneficial impact has been identified based upon the change in the airborne noise level which is likely to result in a reduction in disruption to visitors.</p>	<p>Noted, This accords with Table 14.27 of chapter 14 of the Environmental Statement (<i>document reference 6.1</i>) although this Joint LIR paragraph seems slightly 'at odds' with the Cambridge City Council's Written Representation with regard to the crematorium. Highways England will continue to discuss these matters with Cambridge City Council and will advise the ExA on progress via updates to the SoCG.</p>
<p>[Cambridge Northern Bypass (Girton, Impington, Histon, Milton)] 9.4.12. As a result of route noise avoidance such as road alignment, landscaping and noise mitigation measures integrated into the base scheme this section would avoid or limit airborne noise adverse effects on the majority of receptors in the communities of Girton, Histon and Milton. No or negligible impacts are envisaged.</p>	<p>Noted and agreed.</p>
<p>9.4.13. Dwellings in Girton alongside the existing A14 are expected to experience a decrease in road traffic noise. 4 dwellings at Woodhouse Farm are expected to experience major beneficial impacts in terms of noise as a result. Noise barriers and low noise surfacing are part of the mitigation measures included in the Environmental Statement. West of Girton Road (Wellbrook) a 3m absorptive barrier for properties close to the A14 is being provided. East of Girton Road (Wellbrook) a 3m</p>	<p>Noted and agreed.</p>

Joint LIR Identified Positive Impacts	Highways England response
<p>absorptive barrier is being provided. East of Girton Road (Oakington) a 3m absorptive barrier is being provided, and West of Girton Road (Oakington) Highways England plan to replace existing 2m reflective barrier with 4m absorptive barrier.</p>	
<p>9.4.14. There is currently a noise barrier in place along the existing A14 on the Cambridge Northern Bypass at J32 Histon Interchange. As part of the scheme the noise barrier in this location is to be extended westwards which will have a significant positive impact on residential properties nearby, including Lone Tree Avenue, Impington. The existing 1.8 metre barrier will be replaced by a new 4 metre absorptive barrier and also extended to the west by 250 metres with a 3 metre absorptive barrier.</p>	<p>Noted and agreed. As set out in the Environmental Statement (<i>document reference 6.1</i>) the proposed scheme provides generally neutral and some positive noise impacts.</p>
<p>[Cambridge City] 9.4.15. Residential dwellings within the Cambridge City boundary are forecast to experience minor to negligible impacts resulting from the proposed A14 scheme. However, the specifics are not known. Further work is being undertaken on transport assessment to ascertain likely local impacts which will clarify if there are likely to be additional traffic, air and noise impacts and this will be provided as part of a later submission. data.</p>	<p>This is not correct. All impacts from operational noise within the Cambridge City boundary are negligible and the specifics of the assessment are known and reported in Chapter 14 of the ES. As set out in Highways England Traffic Modelling Update Report (<i>document reference HE-A14-EX-44</i>), the radial roads from the A14 Cambridge Northern Bypass to the City Centre are included in the traffic model and the noise model. The analysis reported in the Traffic Update report shows a change of less than 1 dB (i.e. an imperceptible change in noise) along the radial routes as a consequence of the proposed scheme. In accordance with DMRB HS213/11 and best practice the study area defined in the noise assessment has not therefore included the radial routes because no impact is forecast. Highways England continues to work with the local authorities to confirm that there are no local impacts arising from the proposed scheme and this will be reported to the ExA at Deadline 6 as defined by the Rule 8 letter.</p>

5.2 Negative Impacts

5.2.1 Tables 5.2 to 5.6 respond to the negative noise and vibration impacts, during construction and operation, as set out in sections 9.4.16 to 9.4.49 of the Joint LIR. All of the following comments need to be considered alongside the agreed and acknowledged positive impacts set out in the earlier section of this chapter.

Table 5-2: Noise and vibration impacts during construction

Joint LIR Identified Negative Impacts	Highways England response
9.4.16. In locations with lower existing noise levels, construction noise effects are likely to be caused by changes to noise levels outside dwellings. These may be considered by the local community as an effect on the acoustic character of the area and hence be perceived as a change in the quality of life.	Noted. This accords with section 14.4.7 of the Environmental Statement (<i>document reference 6.1</i>).
9.4.17. Likely construction noise effects are identified at the communities listed in the table below, due to the number of people exposed to construction noise adverse effects and their close proximity to one another. However, the level of noise would not cause significant adverse effects on health and quality of life i.e. the noise is intrusive but not disruptive as set out in the Government's Planning Policy Guidance on Noise ⁵ .	Noted. This accords with section 14.4.10 of the Environmental Statement (<i>document reference 6.1</i>).
9.4.18. Significant observed adverse effects during construction activities are in the main avoided by the combination of envisaged mitigation integrated into the scheme in accordance with industry best practice and guidance that has been maximised as far as is reasonable and sustainable and, where required, noise insulation.	Noted. As set out in section 14.2.33 of chapter 14 of the Environmental Statement (<i>document reference 6.1</i>), significant observed adverse effects are avoided by the combination of on-site mitigation and, where required, noise insulation.
9.4.19. The noise assessment states that taking account of the avoidance and mitigation measures integrated into the base scheme, the following dwellings are predicted to experience and therefore significant adverse impact is likely to arise.	Table 20 from the LIR reproduces information from Table 14.9 of chapter 14 of the Environmental Statement (<i>document reference 6.1</i>). The Environmental Statement table reports adverse effects that are

⁵ Noise Policy Statement for England, Department for Environment, Food and Rural Affairs (2010)

Joint LIR Identified Negative Impacts			Highways England response
			considered to be likely but temporary significant construction noise effects on a number of residential communities. As set out in chapter 14 of the Environmental Statement, these significant effect conclusions are on the combined basis of the adverse effects, the number of people exposed to the effects and their close proximity to one another.
Table 20: Direct adverse effects from construction noise on residential Communities			Noted, as set out in chapter 14 of the Environmental Statement (<i>document reference 6.1</i>). Highways England has identified an error in the Environmental Statement. The significant temporary construction noise effect at the dwellings on the south west corner of the RAF Brampton base should be for a duration of 4 to 6 months, rather than 42 months. The source of the adverse effects is site establishment only which is for a period of approximately 4-6 months.
Communities			
Location	Construction activities	Duration	
Approx. 10 dwellings at the south west corner of RAF Brampton base	Operation of borrow pits and soil storage compounds with monthly noise levels of approximately 67dB _{LpAeq,12hr}	42 months (day time)	
Six dwellings on the A14 between Bar Hill and Girton	Online pavement laying works on the existing A14 with monthly noise levels of approximately 70dB _{LpAeq,1hr}	1 month (night time)	
Approx. 25 dwellings on Girton Road and Wellbrook Court, Girton	Online pavement laying works on the existing A14 with monthly noise levels of up to 67dB _{LpAeq,1hr}	1 month (night time)	
Approx. 25 dwellings on Lone Tree Avenue and Cambridge Road, Impington	Online pavement laying works on the existing A14 with a monthly noise level of approximately 58dB _{LpAeq,1hr} 58dB during the night is a significant level when considering the noise climate will be changing from a steady traffic noise to construction work. However, mitigation	1 month (Night time)	

Joint LIR Identified Negative Impacts			Highways England response
	measures are proposed within the Code of Construction Practice.		
Approx. 250 dwellings on Chieftain way, Cambridge	Online pavement laying works on the existing A14 with a monthly night time noise level of approximately 64dBL _{pAeq,1hr}	1 month (Daytime, Night time and evening)	
Approx. 90 dwellings to the north east of Kings Hedges and open playground/park on Topper Street	Earthworks with monthly evening noise levels of up to 62dBL _{pAeq,4hr} . Online pavement laying works on the existing A14 with monthly noise levels of up to 64dBL _{pAeq,1hr}	1-2 months (Daytime, Night time and evening)	
Approx. 30 dwellings on St George Street Huntingdon	Viaduct demolition with a monthly noise level of up to 73dBL _{pAeq,12hr} and evening earthworks with noise levels up to 67dBL _{pAeq,4hr}	1 month (day time)	

Table 5-3: Noise insulation / Code of Construction Practice to ensure that significant observed adverse effects inside dwellings avoided during construction

Joint LIR Identified Negative Impacts	Highways England response
9.4.20. These dwellings are likely to qualify for noise insulation (which includes as necessary additional ventilation to enable windows to be kept closed) as set out in the Code of Construction Practice (CoCP). Where noise insulation packages are accepted by the owner / occupier, internal noise levels will be substantially reduced so they are not disruptive and the significant observed	Noted, however, the LIR does not identify the properties that are likely to qualify for noise insulation. These are set out in chapter 14 of the Environmental Statement (<i>document reference 6.1</i>) at section 14.4.3. "14.4.3 Taking account of the avoidance and mitigation measures integrated into the base scheme, the following dwellings are predicted to experience construction noise levels higher than the noise insulation trigger levels

Joint LIR Identified Negative Impacts	Highways England response
<p>adverse effects inside the dwellings will therefore be avoided. It is likely that any construction effects should be mitigated effectively by implementation of a robust code of construction practice and proposed Local Environmental Management Plans (LEMPs).</p>	<p><i>defined in the Code of Construction Practice (Appendix 20.2)10 :</i></p> <ul style="list-style-type: none"> • <i>two dwellings on Huntingdon Road to the south of Girton Interchange;</i> • <i>approximately 220 dwellings on Chieftain Way to the south of the Cambridge northern bypass;</i> • <i>approximately 25 dwellings on Neal Drive to the south of the Cambridge northern bypass;</i> • <i>approximately 30 dwellings on Engledow Drive to the south of the Cambridge northern bypass; and</i> • <i>approximately 45 dwellings on Flack End to the south of the Cambridge northern bypass.”</i>

Table 5-4: Assessment of noise from borrow pits does not follow policy during construction

Joint LIR Identified Negative Impacts	Highways England response
<p>9.4.21. There is concern that the Code of Construction Practice significance of impact noise and vibration noise levels has been used to assess the impact of, and the control noise impact from, the Borrow Pits. Whilst the extraction of material from borrow pits is indirectly related to construction of the scheme they are effectively a separate minerals and waste activity for which Planning Policy Guidance operational noise limits are lower than for traditional construction noise. As some of the Borrow Pits are large and close to rural villages where A14 traffic noise is less of an impact the construction impact approach taken in the Code of Construction Practice should not be applicable to such pits and greater control is required.</p>	<p>The borrow pits are directly related to the construction of the A14 and will only be used for that purpose. The borrow pits are not being operated as a standalone business to supply materials as would be the case for mineral extraction. The BPs are earth working activities akin to those along the main line of the proposed scheme to create cuttings and embankments for the road and mitigation earthworks.</p> <p>Treating the borrow pits as an integral part of the overall construction and minimising noise effects using the Code of Construction Practice has several benefits to the local authorities and the local community:</p> <ol style="list-style-type: none"> 1. The Code of Construction Practice commits the contractor to seek prior consent for its working method and best practicable means steps to minimise noise from the works from the local authority under s.61 of Control of Pollution Act 1974. These consents would secure mitigation (such as the increased boundary screening and control measures to minimise noise and vibration as far as it would be reasonably practicable to do so. This would be likely to control noise

Joint LIR Identified Negative Impacts	Highways England response
	<p>levels at properties so that they do not exceed the noise standards identified in the NPPG Technical Guidance (for mineral workings). In the majority of cases the control measures would ensure that the noise levels are within and lower than the standards identified for mineral workings. The controls under the Code of Construction Practice and Control of Pollution Act are as noted in paragraphs 4.48 to 4.50 of the NNNPS).</p> <p>2. Seeking to control noise from adjacent activities using two different regimes (i.e. NPPG Technical Guidance for the BPs and the Code of Construction Practice for the construction of the other adjacent works in the proposed scheme would inevitably lead to challenges and risks in assuring compliance.</p> <p>It is not accepted therefore that another control regime is justified. On the contrary, the control measures set out in the Code of Construction Practice will provide a higher level of protection than that which will normally be provided by the imposition of limits based upon the technical guidance (noise standards) for mineral working sites, due to the operation of s61 controls.</p> <p>Highways England will continue to discuss these matters with the local authorities.</p>

Joint LIR Identified Negative Impacts			Highways England response
Table 21: Direct adverse effects from construction noise on non-residential			<p>Noted, as set out in chapter 14 of the Environmental Statement (<i>document reference 6.1</i>):</p> <p><i>“14.4.22 The Highways Agency would continue to engage with the owners and operators of all the non-residential receptors to establish sensitivity of the receptors and develop additional mitigation where necessary and practicable as required by the Code of Construction Practice. Specific mitigation would be included, where needed, in the relevant final local environmental management plan (Code of Construction Practice (Appendix 20.2)).”</i></p>
Construction Practice.			
Approx. 250 dwellings on Chieftain way, Cambridge	Online pavement laying works on the existing A14 with a monthly night time noise level of approximately 64dBLpAeq,1hr.	1 month (Daytime, Night time and evening)	
Approx. 90 dwellings to the north east of Kings Hedges and open playground/park on Topper Street	Earthworks with monthly evening noise levels of up to 62dBLpAeq,4hr. Online pavement laying works on the existing A14 with monthly noise levels of up to 64dBLpAeq,1hr	1-2 months (Daytime, Night time and evening)	
Approx. 30 dwellings on St George Street Huntingdon	Viaduct demolition with a monthly noise level of up to 73dBLpAeq,12hr and evening earthworks with noise levels up to 67dBLpAeq,4hr	1 month (day time)	
Travel Lodge Hotel, Bar Hill	Pavement/surfacing activities. Significant noise effects have been identified with noise levels of 60dBLpAeq,1hr	1 month (night time)	
Travel Lodge Hotel, Impington	Pavement/surfacing activities/earthworks. Significant noise effects have been identified during the night time with noise levels of 66dBLpAeq,1hr	1 month (night time)	
Hinchingbrooke Hospital	Earthwork activities Significant daytime noise effects have been identified	5 months (day time)	

Joint LIR Identified Negative Impacts			Highways England response
	on a worst case basis with noise levels between 57–65dB _{LpAeq,12hr}		
Hinchingbrooke Hospital	Earthwork activities (commencing 2020). Significant evening noise effects have been identified with noise levels of 60dB _{LpAeq,4hr}	1 month (night time)	
Cambridge Constabulary HQ, Huntingdon	Earthwork activities. Significant noise effects have been identified during the daytime with levels of 70-76dB _{LpAeq,12hr}	3 months (day time)	
Hinchingbrooke School	Earthwork activities. Significant noise effects have been identified during the daytime with levels of 61–72 dB _{LpAeq,12hr}	5 months (day time)	

Table 5-5: Noise and vibration impacts during operation

Joint LIR Identified Negative Impacts		Highways England response
9.4.22. The ES states that above the night-time level of 55dB _{LpAeq,8hr} and daytime level of 63dB _{LpAeq,16hr} , significant adverse effects on health and quality of life are possible and hence noise insulation is offered to avoid these effects where sustainable mitigation in the scheme has been exhausted.		Noted, as set out in chapter 14 of the Environmental Statement (<i>document reference 6.1</i>). Noise insulation will be provided in accordance with the Scheme operational noise and vibration policy (Appendix 14.1 of the Environmental Statement (<i>document reference 6.3</i>)).

Joint LIR Identified Negative Impacts	Highways England response
<p>9.4.23. There will be minor or moderate noise impacts for 330 properties located along the new bypass section between Brampton Interchange and Fen Drayton. This will be a long term negative impact for these properties. There are also increases in traffic forecast for Willingham, and Dry Drayton. As a result there will be impacts in terms of noise and vibration for these areas. The mitigation proposed reduces the effect on the majority of these areas to below the level of where there would be a significantly observed adverse effect.</p>	<p>Noted, this summary in the LIR accords with the summary set out in the Executive Summary of chapter 14 of the Environmental Statement (<i>document reference 6.1</i>).</p>
<p>9.4.24. In the long term (2035), the majority of properties on the outlying areas of villages closest to the A14, typically within 600m of the A14, such as Fen Drayton, Conington, Swavesey, Lolworth and Bar Hill are likely to experience noise increases ranging from 0.3 to 3 dB. This is considered a negligible adverse effect. In the opening year of 2020 this is considered a negligible to minor adverse impact. The remainder of the area experiences no or negligible barely imperceptible increases.</p>	<p>Noted, as set out in chapter 14 of the Environmental Statement (<i>document reference 6.1</i>.)</p> <p>It is t presumed that the LIR text should read 'barely perceptible' (rather than barely imperceptible').</p>
<p>9.4.25. A review of the areas where there will be negligible to moderate increases in noise, split by community is included below:</p> <p>[Brampton]</p> <p>9.4.26. Taking account of the avoidance and mitigation measures integrated into the base scheme, Rectory Farm Great North Road, Brampton is predicted to experience noise levels higher than the noise insulation trigger levels as defined in Noise Insulation Regulations 1975 (as amended). The installation of noise insulation would avoid the significant observed adverse effect (refer to Table 14.1) that would otherwise occur inside these dwellings.</p>	<p>Noted, this accords with section 14.4.36, in chapter 14 of the Environmental Statement (<i>document reference 6.1</i>).</p> <p>[Brampton]</p> <p>Noted. This accords with 14.4.36 of Chapter 14 to the ES (<i>document reference 6.1</i>)</p>
<p>9.4.27. An increase in road traffic noise will be experienced at dwellings in the vicinity of Stewart Close on the south west edge of Brampton and dwellings on the west edge of RAF Brampton. A predicted increase in noise from road traffic is likely to cause a minor adverse effect on the acoustic character of the area around the</p>	<p>Noted, this accords with Table 14.12 of chapter 14 of the Environmental Statement (<i>document reference 6.1</i>).</p>

Joint LIR Identified Negative Impacts	Highways England response
<p>closest properties. No adverse effects on shared open spaces have been identified.</p>	
<p>[Buckden]</p> <p>9.4.28. The western side of Buckden is close to the A1 and hence existing noise levels are dominated by road traffic noise from the trunk road. Further east, the dwellings are increasingly remote from and screened from the A1. At the eastern edge of Buckden, there is currently open land, which would have a direct line of sight to the scheme. On Brampton Road in Buckden, an adverse impact has been identified in 2035 (a change of 11.4dB in Daytime and 9.5 dB in the night-time) for one Farm property close to scheme.</p>	<p>Noted, as set out in chapter 14 of the Environmental Statement (<i>document reference 6.1</i>).</p> <p>The noise effects are reduced however by the implementation of Low Noise Surfacing.</p>
<p>[Huntingdon]</p> <p>9.4.29. During Construction several non – residential buildings in Huntingdon will experience noise increases (See para. 9.4.43).</p>	<p>Noted, this accords with sections 14.4.19 to 14.4.21 of chapter 14 of the Environmental Statement (<i>document reference 6.1</i>). Chapter 14 of the ES then goes on to confirm:</p> <p><i>“14.4.22 The Highways Agency would continue to engage with the owners and operators of all the non-residential receptors to establish sensitivity of the receptors and develop additional mitigation where necessary and practicable as required by the Code of Construction Practice. Specific mitigation would be included, where needed, in the relevant final local environmental management plan (Code of Construction Practice (Appendix 20.2)).”</i></p>
<p>[Offords]</p> <p>9.4.30. The most northerly properties of Offord Cluny are within the southern boundary of the noise study area. The soundscape is characterised by local road traffic, trains and occasional aircraft. Daytime noise levels were approximately 58 dB LpAeq, 16hr, north of Offord Cluny.</p>	<p>Noted, this accords with section 14.3.23 chapter 14 of the Environmental Statement (<i>document reference 6.1</i>) and sheet 8 of Figure 14.01 (<i>document reference 6.2</i>).</p>
<p>9.4.31. On the High Street in Offord Cluny there is a maximum change of 1.1 dB LpAeq in the day and 1.6 dB LpAeq at night in 2035 which is considered an inaudible change.</p>	<p>Noted, this is in accordance with sheet 8 of Figure 14.07 of the Environmental Statement (<i>document reference 6.2</i>) and Table 3.8 of Appendix 14.6 (<i>document reference 6.3</i>) – with reference to Assessment Locations 537, 927, 928, and 15933. In line with the Design Manual for Roads and Bridges and best practice the Environmental Statement describes these long term noise</p>

Joint LIR Identified Negative Impacts	Highways England response
	changes as 'negligible' or 'imperceptible' rather than 'inaudible'.
<p>[Fenstanton] 9.4.32. There will be a moderate increase in noise for dwellings in the vicinity of Pear Tree Close, Fenstanton (See para. 9.4.43).</p>	Noted, this accords with Table 14.14 in chapter 14 of the Environmental Statement (<i>document reference 6.1</i>).
<p>[Hilton] 9.4.33. On the northern edge of Hilton, the soundscape is characterised by local road traffic and wildlife. Daytime noise levels are around 56dB_{LpAeq,16hr}, falling to around 52dB_{LpAeq,8hr} at night.</p>	Noted, this accords with section 14.3.25 in chapter 14 of the Environmental Statement (<i>document reference 6.1</i>).
<p>9.4.34. On the northern edge of the village, predicted noise increases with mitigation are 1.1 dB_{LpAeq} or less, but isolated properties between the village and the A14 will experience increases of 3 to 5.6 dB_{LpAeq}, the increase at the latter is a property that is very close to the new A14. The majority of the village is outside the 40 dB night time contour below which adverse effects are not expected.</p>	Noted, this accords with sheet 10 of Figure 14.07 (<i>document reference 6.2</i>), and Table 3.8 of Appendix 14.6 of the ES (<i>document reference 6.3</i>).
<p>[Conington] 9.4.35. The north west of the village experiences noise levels of approximately 45-50 dB_{LpAeq,8hr} and 52-57 dB_{LpAeq,16hr}. Noise level changes are predicted to be negligible. One property at Friesland Farm, Conington is predicted to experience noise levels higher than the level of significant observed effect. As a result the scheme identifies that this property is likely to qualify for noise insulation. The installation of noise insulation would avoid the significant observed effect that would otherwise occur inside this dwelling.</p>	Noted. This accords with section 14.4.60 of chapter 14 (<i>document reference 6.1</i>), sheets 10 and 11 of Figure 14.07 (<i>document reference 6.2</i>) and Tables 3.8 and 3.9 of Appendix 14.6 of the ES (<i>document reference 6.3</i>).
<p>[Lolworth] 9.4.36. The scheme includes a 3m absorptive barrier for properties at 1 -6 Catchall Farm, Crouchfield Villa and Westdene at Hackers Fruit Farm, Huntingdon Road, Lolworth. There will still be significant residual negative noise impacts at these locations. The residual noise levels would be a reduction on existing noise levels at this location close to the A14, however the noise levels would remain a significant observed adverse effect at these locations.</p>	Noted. To be specific and to clarify the LIR and sections 14.6.42 and 14.6.43 and Table 14.26 of Chapter 14 (<i>document reference 6.1</i>); sheets 13 and 14 of Figure 14.07 (<i>document reference 6.2</i>); and Table 3.12 and its following text of Appendix 14.6 of the ES (<i>document reference 6.3</i>): Bar Hill/Dry Drayton: Important Area 5139. The proposed 3m absorptive barrier (reference M22), would provide major (approx. -8 dB) beneficial noise reductions at Crouchfield Villa and Westdene at Hackers Fruit Farm. With reference to Assessment Location 757 the residual noise levels would still be

Joint LIR Identified Negative Impacts	Highways England response
	<p>a significant observed adverse effect.</p> <p>- Dry Drayton: Important Area 5138. The proposed 3m absorptive noise barrier (reference M23) would provide major (approx. -7dB) beneficial noise reductions at 1 to 6 Catchall Farm. With reference to Assessment Location 752 the residual noise levels would still be a significant observed adverse effect.</p> <p>The dwellings at Bar Hill and Dry Drayton with residual significant observed adverse effects (following major beneficial reductions in noise level) would not qualify for noise insulation under the Noise Insulation Regulations 1975 as the regulations on apply where there is a noise increase resulting from the scheme.</p>
<p>9.4.37. The scheme includes a 3m reflective barrier for Rhadegund Cottages, Huntingdon Road. There will still be significant residual negative noise impacts at this location. The residual noise levels would be a reduction on existing noise levels at this location close to the A14, however the noise levels would remain a significant observed adverse effect at these locations.</p>	<p>Noted, to be specific and to clarify the LIR and sections 14.6.45 of Chapter 14 (document reference 6.1); sheets 13 and 14 of Figure 14.07 (document reference 6.2); and Table 3.12 and its following text of Appendix 14.6 of the ES (document reference 6.3):</p> <p>- Bar Hill: Important Area 5140. The proposed 3m reflective barrier (reference M21) would provide major beneficial noise reductions at Rhadegund Cottages. With reference to Assessment Location 15936, the residual noise levels would still be a significant observed adverse effect. The dwellings at Bar Hill with residual significant observed adverse effects (following major beneficial reductions in noise level) would not qualify for noise insulation under the Noise Insulation Regulations 1975 as the regulations only apply where there is a noise increase resulting from the scheme.</p>
<p>[Bar Hill] 9.4.38. The scheme moves the carriageways of the A14 away from Hill Farm Cottages resulting in a reduction in noise levels at the property closest to the A14 (no. 1 Hill Farm Cottages). However, the neighbouring receptors at Hill Farm Cottages are subject to a significant observed adverse effect as a consequence of the</p>	<p>Noted, to be specific and to clarify the LIR and sections 14.6.40 and Table 14.26 of Chapter 14 (document reference 6.1); sheets 13 and 14 of Figure 14.07 (document reference 6.2); and Table 3.12 and its following text of Appendix 14.6 of the ES (document reference 6.3):</p> <p>- Lolworth: Important Area 6114. The proposed 4m reflective noise fence</p>

Joint LIR Identified Negative Impacts	Highways England response
<p>scheme. Given that Hill Farm Cottages collectively fall with Important Area IA6114, further mitigation is provided in the form of a 4m reflective noise barrier which results in significant beneficial impacts on the noise environment.</p>	<p>barrier (reference M20, would provide major beneficial noise reductions at 1 to 4 Hill Farm Cottages and also minor beneficial noise reductions at the remainder of Hill Farm Cottages. Collectively these have been identified as a significant beneficial community effect (reference CN-C16). With reference to Assessment locations 686 and 15935) there would be no residual significant observed adverse effect at any of these dwellings.</p>
<p>9.4.39. 7 properties at Foxhollow, Bar Hill, are expected to qualify for noise insulation. The installation of noise insulation would avoid the significant observed effect that would otherwise occur inside these dwellings.</p>	<p>Noted, this accords with sections 14.4.60 and 14.4.61 in chapter 14 of the Environmental Statement (<i>document reference 6.1</i>).</p>
<p>[Dry Drayton] 9.4.40. At Cambridge Crematorium the scheme introduces a 3m absorptive noise barrier which will provide a minor reduction in disturbance to visitors to the crematorium due to reduction in external road traffic noise.</p>	<p>Noted, this accords with Table 14.27 in chapter 14 of the Environmental Statement (<i>document reference 6.1</i>).</p>
<p>[Milton] 9.4.41. As a result of route noise avoidance such as road alignment, landscaping and noise mitigation measures the scheme would avoid or limit airborne noise adverse effects on Milton. No or negligible impacts are envisaged.</p>	<p>Noted, this accords with sheet 17 of Figure 14.7 (document reference 6.2) and section 3.6.3 and Table 3.17 of Appendix 14.6 of the Environmental Statement (<i>document reference 6.1</i>).</p>
<p>[Cambridge City] 9.4.42. Residential dwellings within the Cambridge City boundary are forecast to experience minor to negligible impacts resulting from the proposed A14 scheme.</p>	<p>Only negligible impacts are reported for dwellings within the Cambridge City boundary. Please also refer to our response to LIR paragraph 9.4.15.</p>
<p>9.4.43. There will be residual negative effect in the following areas: Table 22: Residential areas where a significant observed adverse effect from noise would be experienced:</p>	<p>This LIR table appears to have conflated several matters reported in the ES. For clarification: Alconbury: This accords with sections 14.6.19 to 14.6.21 of Chapter 14 to the ES (document reference 6.1) and both the LIR and ES conclude that no likely negative/adverse significant effects have been identified in Alconbury taking account of the mitigation identified in the ES. There is therefore no need to present these receptors in a table of negative impacts</p>

Joint LIR Identified Negative Impacts				Highways England response
				<p>South-western edges Brampton and Brampton Barracks and Perl Tree Close (Fenstanton): are reported in Tables 14.22 as significant adverse effects on the communities at these locations arising from noise increases that would have an adverse effect on the acoustics character of the areas. The residual noise levels are not at a level of significant observed adverse effect on health and quality of life with respect to 5.195 of the NNNPs,⁶ that requires the scheme to avoid significant adverse impacts on health and quality of life from noise as a result of the new development, in the context of government policy on sustainable development..</p> <p>The LIR table accords with the ES that the mitigation in the proposed scheme and noise insulation (under the Noise Insulation Regulations 1975) would avoid significant observed adverse effects at the following dwellings: Rectory Farm,; Brampton (section 14.4.36 of ES Chapter 14 – <i>document reference 6.3</i>); Freisland Farm, Connington; and Foxhollow, Bar Hill. There is therefore, no need to present these receptors in a table of negative impacts.</p> <p>The significant observed adverse effects that occur in the base scheme reported in the ES for Lone Tree Avenue (Impington) and which would trigger the provision of noise insulation (section 14.4.75 of chapter 14 of the ES) are avoided by noise barriers M30 and M33, taking the barriers into account the impacts are negligible (section 3.6.3 for Appendix 14.6 of the ES – <i>document reference 6.3</i>). There is therefore, no need to present these receptors in a table of negative impacts.</p> <p>The significant observed adverse effects that occur in the base scheme reported in the ES for Blackwell Caravan Pk and which would trigger the provision of noise insulation (section 14.4.77 of chapter 14 of the ES – <i>document reference 6.3</i>) are avoided by noise barrier M31, taking the barriers into account the impacts are negligible (14.7.15 of Chapter 14 of the ES – <i>document reference 6.3</i>). There is therefore, no need to present these</p>
Location	Effect with scheme	Mitigation	Residual effect	
Dwellings in the vicinity of Great North Road, Manor Lane, Hillfield, Ash End, Beech End, Maple End, Willow End, School Lane, Sharps Lane, Rusts Lane, High Street, Field Close and Frumetty Lane in Alconbury	Indirect effect as a result of airborne noise increase in road traffic noise.	The scheme would significantly enhance the existing noise mitigation measures in this location, replacing the current noise fence barrier with a new taller fence barrier.	No likely significant negative effects	
Stewart Close, western edge of Brampton (minor)	Predicted increase in noise from road traffic which is likely to cause a minor adverse effect	no specific mitigation proposed	Minor adverse effect on the acoustic character of the area around the closest properties.	
Western edge of	Predicted	no specific	Minor	

⁶ Refer to sections 14.2.24 to 14.2.37 for explanations and definitions

Joint LIR Identified Negative Impacts				Highways England response
RAF Brampton (minor)	increase in noise from road traffic which is likely to cause a minor adverse effect	mitigation proposed	adverse effect on the acoustic character of the area around the closest properties.	<p>receptors in a table of negative impacts.</p> <p>Little Meadow and Woodhatch Farm. As noted in the LIR the mitigation (barrier M17 in Table 14.21 of ES Chapter 14 – <i>document reference 6.3</i>) avoids a significant effect at these receptors. There is therefore, no need to present these receptors in a table of negative impacts'</p> <p>The impacts at: 1-6 Catchall Farm Cottages; Crouchfield Villa and Westdene at Hackers Fruit Farm; Rhadegund Cottages; Hill Farm Cottages and their mitigation are described in the responses to LIR paragraphs 9.4.36 to 38.</p>
Rectory Farm Great North Road, Brampton	predicted to experience noise levels higher than the noise insulation trigger levels	The installation of noise insulation would avoid the significant observed adverse effect that would otherwise occur inside these dwellings	Significant observed effect would be avoided	
Little Meadow and Woodhatch Farm, Thrapston Road, Ellington	Noise levels are currently above the threshold for a significant observed adverse effect.	3m absorptive barrier for Little Meadows and Woodhatch Farm.	current significant observed adverse effects would be avoided with the scheme in operation.	
Dwellings in the vicinity of Pear Tree Close, Fenstanton	Predicted increase in noise from road traffic which is	no specific mitigation proposed	noise levels would remain a significant observed adverse	

Joint LIR Identified Negative Impacts				Highways England response
	likely to cause a moderate adverse effect		effect	
Friesland Farm, Conington	significant observed adverse effects	The installation of noise insulation would avoid the significant observed adverse effect that would otherwise occur inside these dwellings	Significant observed effect would be avoided.	
Foxhollow, Bar Hill	significant observed adverse effects	The installation of noise insulation would avoid the significant observed adverse effect that would otherwise occur inside these dwellings	Significant observed effect would be avoided.	
1-6 Catchall Farm Cottages 13, Cambridge	significant observed adverse effect	3m absorptive barrier for Catchall Farm properties	There would be noise reductions at these locations, with the scheme, and	
Crouchfield Villa and Westdene at Hackers Fruit	significant observed adverse	3m absorptive barrier for Crouchfield		

Joint LIR Identified Negative Impacts				Highways England response
Farm, Huntingdon Road, Lolworth	effect	Villa and Westdene – Hackers Fruit Farm, Huntingdon Road	further mitigation will be introduced.	
Rhadegund Cottages, Huntingdon Road, Cambridge	significant observed adverse effect	3m reflective barrier for Rhadegund Cottages, Huntingdon Road		
Hill Farm Cottages	significant observed adverse effect	4m reflective barrier for Hill Farm Cottages.	Significant observed effect would be avoided.	
10 dwellings on Lone Tree Avenue	significant observed adverse effect	The installation of noise insulation would avoid the significant observed adverse effect that would otherwise occur inside these dwellings	Significant observed effect would be avoided.	
30 residential dwellings at Blackwell Caravan Park	significant observed adverse effect	The installation of noise insulation would avoid the significant observed	Significant observed effect would be avoided.	

Joint LIR Identified Negative Impacts			Highways England response
		adverse effect that would otherwise occur inside these dwellings	
<p>9.4.44. There will be residual negative noise impacts in the following residential locations:</p> <ul style="list-style-type: none"> • Stewart Close, western edge of Brampton • Western edge of RAF Brampton • Dwellings in the vicinity of Pear Tree Close, Fenstanton • 1-6 Catchall Farm Cottages, Cambridge • Crouchfield Villa and Westdene at Hackers Fruit Farm, Huntingdon Road, Lolworth • Rhadegund Cottages, Huntingdon Road, Cambridge 			<p>The residual adverse (negative) impacts at Stewart Close (Brampton), western edge of RAF Brampton and Pear Tree Close (Fenstanton) are reported in the ES as significant effects on those communities as reported in Tables 14.11 and 14.14 in Chapter 14 of the ES (document reference 6.1). However the following receptors:</p> <ul style="list-style-type: none"> • 1-6 Catchall Farm Cottages, Cambridge; • Crouchfield Villa and Westdene at Hackers Fruit Farm, Huntingdon Road, Lolworth; and • Rhadegund Cottages, Huntingdon Road, Cambridge, <p>are not reported as residual negative noise impacts in the ES. They fall within three Important Areas (under the 2014 Noise Action Plan for Roads). They are reported as experiencing impacts for the 'base scheme' considered in the noise assessment reported in the ES (Vol6.1, Chapter 14, section 14.4.62). The additional noise mitigation identified in ES (Vol6.1, Chapter 14, Table 14.21) includes noise barriers at these three locations and these barriers would provide material noise reductions compared to the base scheme and the current environment (as reported in ES Volume 6.1 Chapter 14). Please also refer to Highways England response to LIR paragraphs 9.4.36 and 9.4.37.</p>
<p>9.4.45. The impacts at Stewart Close on the western edge of Brampton and at the Western edge of RAF Brampton are identified as minor adverse. No specific mitigation has been proposed by the Applicant in these areas. The local authorities would expect the Applicant to monitor noise levels in these locations to ensure that should they become major adverse impacts the necessary mitigation is provided.</p>			<p>The applicants response to the ExA's Q1.10.8 (<i>Response to ExA's First Written Questions, Report 10: Noise and Vibration (document reference EX/37)</i>), confirms that Highways England will propose an additional requirement to the draft DCO to secure the permanent noise mitigation. The additional requirement is included in the revised draft of the DCO submitted to the ExA at deadline 4 (7 July 2015) as defined by the Rule 8 letter. The new requirement secures the details of the noise mitigation for the scheme, reflecting the measures set out in the Environmental Statement.</p>

Joint LIR Identified Negative Impacts	Highways England response
	<p>Highways England will continue to engage with the local authorities on this matter.</p> <p>The Scheme Operational Sound, Noise and Vibration Policy (volume 6.3, appendix 14.1 of the ES) sets out generally how the detailed design of noise mitigation will be developed following the making of the DCO and is intended to provide:</p> <ul style="list-style-type: none"> - certainty to the ExA in terms of minimising noise impact and meeting the three aims of paragraph 5.195 of the NPS for National Networks; and - flexibility to Highways England and its contractor(s) in terms of the means to deliver the required noise performance within the 'maximum extent' of the noise impact defined by the ES (in line with the Draft DCO and NPS NN 4.18, 4.19 and 4.20). <p>The policy also sets out the provisions for post-scheme noise monitoring. It specifically refers to the duty placed upon Highways England to assess noise levels following the opening of the scheme in accordance with the requirements of the Noise Insulation Regulations. Amongst other things, the Noise Insulation Regulations make provisions for noise monitoring to ensure that all qualifying properties are properly identified.</p> <p>Highways England will continue to engage with the local authorities on this matter.</p>
<p>9.4.46. There is a moderate adverse impact on Pear Tree Close, Fenstanton. The Applicant has not proposed any specific mitigation in this area. The local authorities would expect the Applicant to monitor noise levels in this location to ensure that should they major adverse impacts the necessary mitigation is provided.</p>	<p>Please refer to the response above to LIR paragraph 9.4.45.</p>

Joint LIR Identified Negative Impacts	Highways England response
<p>9.4.47. According to the ES⁷ the residual levels at Rhadegund Cottages (IA5140), the dwellings at Hackers Fruit Farm (IA5138), and Catchall Farm (IA5138) would be a major reduction on the existing levels. However the local authorities note that taking account of the mitigation included in the base scheme, the noise levels would remain a significant observed adverse effect at these locations.</p>	<p>Noted. This accords with section 14.6.45 of the Environmental Statement (<i>document reference 6.1</i>). These dwellings with residual significant observed adverse effects (following major beneficial reductions in noise level) would not qualify for noise insulation under the Noise Insulation Regulations 1975 as the regulations only apply where there is a noise increase resulting from the scheme.</p>
<p>9.4.48. South Cambridgeshire District Council have concerns regarding the noise impact at Orchard Park, near to the Histon Interchange. A negligible change in noise levels has been predicted at this location. Additional clarification is being sought from the Highways England on the technical noise predictions and impact assessments that have been undertaken. See South Cambridgeshire District Council's written representations for more detail.</p>	<p>Highways England's response to South Cambridgeshire District Council's written representation deal's with the concerns about noise impact.</p> <p>Highways England will continue to engage with South Cambridgeshire District Council on these matters. The Applicant's response to ExA Q1.10.4 (<i>Response to ExA's First Written Questions, Report 10: Noise and Vibration (document reference EX/37)</i>) is also relevant to the ongoing engagement as set out in the response to the question, Highways England is undertaking a detailed review of the implications of IAN 185/15 with regard to the noise assessment for the section of the Cambridge northern bypass where Orchard Park is situated.</p> <p>Highways England and the Council will advise the ExA on the outcomes of this review through a further iteration of the SoCG.</p> <p>Highways England will continue to engage with South Cambridgeshire District Council on these matters.</p>

⁷ Para. 14.6.45 CH 14 6.1 ES, A14 Cambridge to Huntingdon Improvement Scheme, DCO submission, Highways Agency (2014)

Table 5-6: Non residential during operation

Joint LIR Identified Negative Impacts	Highways England response
<p>9.4.49. In terms of non - residential receptors the assessment has identified a moderate adverse airborne noise impact at:</p> <ul style="list-style-type: none"> • Cambridgeshire Constabulary HQ, Huntingdon (moderate) • St Johns Innovation Centre and Science Park – (moderate) • New Close Business Park, (moderate) 	<p>Noted, as set out in chapter 14 of the Environmental Statement (<i>document reference 6.1</i>) except that;</p> <p>St Johns Innovation Centre and Science Park is not identified in in chapter 14 of the Environmental Statement (<i>document reference 6.1</i>) and it is not forecast to experience a moderate adverse airborne noise impact.</p>

5.3 Missed Opportunities

5.3.1 Table 5.7 responds to the noise and vibration comments set out in sections 9.4.50 to 9.4.52 of the Joint LIR.

Table 5-7: Cooperation with developers

Joint LIR Identified Missed Opportunities	Highways England response
<p>9.4.50. North West Cambridge is a development with planning permission for the construction of up to 3,000 dwellings and substantial commercial and research space. Based on the results of the noise assessment, the vast majority of this committed development's footprint would be subject to negligible noise impacts as a result of the scheme: however, the north-eastern part of the site (opposite Girton College) would be subject to minor adverse impacts.</p>	<p>Noted, as set out in chapter 14 of the Environmental Statement (<i>document reference 6.1</i>) and figures 14.1 and 18.1 (<i>document reference 6.2</i>).</p> <p>The latest plans provided on the local planning authority's website for the North West Cambridge development⁸ suggest that the north eastern part of the development will remain as the University of Cambridge's sub-department of animal behaviour. As set out in the Applicant's response to ExA Q1.10.11, (<i>Response to ExA's First Written Questions, Report 10: Noise and Vibration (document reference EX/37)</i>), Highways England will engage with the</p>

⁸ https://www.cambridge.gov.uk/sites/www.cambridge.gov.uk/files/documents/NWC%20Quad%20Composite%20Plan%20LowRes%2011.03.15_1.pdf

Joint LIR Identified Missed Opportunities	Highways England response
	University on the matter of noise from the proposed scheme and the sub-department's activities.
<p>9.4.51. Land between Huntingdon Road and Histon Road in South Cambridgeshire (referred to as Darwin Green) is allocated for housing led mixed use development in the adopted South Cambridgeshire Site Specific Policies Development Plan Document (Policy SP/1). The Submission Local Plan 2014 continues the allocation, with an enlarged northern boundary (Policy SS/2). Both policies require noise mitigation measures to be delivered as part of the development, and require attenuation in the form of landscaped bunds as opposed to noise attenuation fencing.</p>	<p>The committed development referred to as Darwin Green is shown on figure 18.1 of the Environmental Statement (<i>document reference 6.2</i>). However, it accepted that the foot print should also have included the Darwin Green 2 that we understand was allocated in 2010 for development by local planning authority policy SP/2 of the Site Specific Policies DPD. Based on the information available, Highways England does not consider that a noise barrier would be justified to protect Darwin Green 2 from the proposed A14 scheme. This is because of the distance between the two schemes. Darwin Green (first phase) is even further from the proposed A14 scheme. We understand that Darwin Green 3, that is closer to the proposed scheme, currently has no planning or development status.</p> <p>No planning application for the Darwin Green development has been submitted to date. When a planning application is submitted, the provision of noise mitigation would be a matter for the developer and the local planning authority in consultation with the local highway authority, taking into account what is proposed for the A14 scheme.</p>
<p>9.4.52. The Applicant should coordinate with the developers promoting sites alongside the A14, particularly along the Cambridge Northern Bypass, to ensure noise mitigation measures are appropriately designed.</p>	<p>Highways England continues to engage with the University of Cambridge including in its role as developer for the North West Cambridge scheme. Ongoing dialogue will focus on the potential noise effects of the proposed A14 improvement scheme on both the North West Cambridge Scheme and the sub-department of animal behaviour (as noted above and in response to ExA Q1.10.11).</p> <p>Highways England does not consider that the proposed scheme should have any significant road traffic noise effect on the committed development on the Darwin Green 1 or 2 sites. Nonetheless, for the avoidance of doubt and in response to the local authorities' request, Highways England will approach the developer (Barratt Homes) to discuss noise mitigation and will update the ExA as these discussions progress.</p>

6 Air Quality

6.1 Positive Impacts

6.1.1 Table 6.1 responds to the positive air quality impacts, during operation, as set out in sections 9.5.1 to 9.5.3 of the Joint LIR.

Table 6-1: Air quality positive impacts during operation

Joint LIR Identified Positive Impacts	Highways England response
9.5.1. A number of areas are predicted to experience a large improvement in air quality, most notably in Huntingdon and along the existing A14 between Swavesey and Huntingdon. This is a result of the majority of traffic being diverted away from these areas and on to the proposed new road.	Noted and agreed.
9.5.2. The Huntingdon, Brampton and Hemingford to Fenstanton AQMAs are all predicted to have improvements in air quality concentrations. The scheme is likely to lead to a revocation of the AQMAs at these locations. The A14 Corridor AQMA also is predicted to have no exceedances of the air quality objectives in the opening year.	Noted and agreed.
9.5.3. Along the A14 to the north of Cambridge, the predicted changes to annual mean NO2 and PM10 are mainly negligible. There are three receptors where small increases in annual mean NO2 are observed and two where small decreases are predicted. The predicted changes to other receptors towards Histon and Girton are all negligible for NO2 and PM10 in 2020. In 2035 in this area, results are similar, however, with the increased affected road network there are more receptors to the south of the A14.	Noted and agreed.

6.2 Negative Impacts

6.2.1 Table 6.2 and 6.3 respond to the negative air quality impacts, during construction and operation, as set out in sections 9.5.4 to 9.5.8 of the Joint LIR. All of the following comments need to be considered alongside the agreed and acknowledged positive impacts set out in the earlier section of this chapter.

Table 6-2: Air quality negative impacts during construction

Joint LIR Identified Negative Impacts	Highways England response
<p>9.5.4. The areas affected by dust during the construction phase are likely to be areas near to the borrow pits and soil storage areas. The residential areas of Brampton are in close proximity to borrow pit sites and further assessment of the dust impacts will be required to ensure that the mitigation proposed in the Applicant's Code of Construction Practice⁹ are appropriate in reducing the negative impact on this areas.</p>	<p>Impacts of construction work will be mitigated following the measures set out in the Code of Construction Practice (appendix 20.2 of the Environmental Statement, <i>document reference 6.3</i>). Highways England's <i>Response to ExA's Written Questions, Report 1: Air Quality and Carbon Emissions</i>, question 1.1.4 (<i>document reference EX-28</i>) sets out how the contractor employed to carry out work on the borrow pits would be required to follow measures set out in the Code of Construction Practice (appendix 20.2 of the Environmental Statement, <i>document reference 6.3</i>). Measures used to mitigate dust impacts will reduce effects to negligible levels.</p> <p>Further consideration of potential dust impacts would be undertaken at detailed design stage, after the development consent order (assuming the application is granted) is made. This would include the production of Construction Environmental Management Plans and Local Environmental Management Plans through consultation with the Local Authorities."</p>

⁹ Code of Construction Practice, Cambridge to Huntingdon Improvement Scheme, DCO Submission, Highways Agency (2014)

Joint LIR Identified Negative Impacts	Highways England response
<p>9.5.5. In terms of dust created by the construction of the new road, residential areas in north Cambridge and in Huntingdon town centre, close to the existing viaduct will be most affected by dust. The Applicant notes in the Environmental Statement that mitigation will be secured by way of requirements in the DCO and through contractual responsibilities placed by the Applicant on the design and build contractors. The Applicant also notes that with this mitigation in place the impacts of the scheme are not expected to be significant.</p>	<p>Noted, this accords with section 8 in Chapter 8 of the Environmental Statement (<i>document reference 6.1</i>).</p>
<p>9.5.6. Complaints about excessive dust deposition have to be investigated by the local authority and any complaint upheld for a statutory nuisance to occur. The local authorities expect to be fully consulted on the mitigation measures planned to reduce the impact of dust on communities.</p>	<p>The potential impacts of dust from construction activities are discussed in Chapter 8 section 8.5 of the Environmental Statement (<i>document reference 6.1</i>). Best practice mitigation measures have been included in the Code of Construction Practice (Code of Construction Practice) (appendix 20.2 of the Environmental Statement, <i>document reference 6.3</i>) to prevent dust and air pollution emissions. In particular, section 6.10 of the Code of Construction Practice requires that the contractors implement inspection and monitoring procedures to assess the effectiveness of measures to prevent dust and air pollutant emissions. This would include consultation with relevant local authorities regarding the monitoring and mitigation procedures to be implemented.</p> <p>Highways England's written question response 1.1.17 (<i>Response to ExA's Written Questions, Report 1: Air Quality and Carbon Emissions (document reference EX-28)</i>) details the powers local authorities have to deal with dust impacts.</p>

Table 6-3: Air quality negative impacts during operation

Joint LIR Identified Negative Impacts	Highways England response
<p>9.5.7. The predicted changes in concentration in Cambridge are mostly small increases in annual mean NO₂ and Particulate Matter PM₁₀ around</p>	<p>No significant effects with respect to air quality have been predicted within Chapter 8 of the Environmental Statement (<i>document reference</i></p>

Joint LIR Identified Negative Impacts	Highways England response
<p>Kings Hedges Road, Arbury Road, Milton Road, Histon Road and Huntingdon Road as well as some moderate increases on Madingley Road. The maximum increase on Madingley Road is 3.6$\mu\text{g}/\text{m}^3$ however the Applicant notes in the Environmental Statement that the total annual mean concentration is still well below the objective at 16$\mu\text{g}/\text{m}^3$.</p>	<p>6.1). Concentrations predicted in Cambridge are well below the air quality objective and EU limit values for annual mean nitrogen dioxide (NO₂) and particulate matter (PM₁₀). Details of the assessment of significance are provided within the Environmental Statement and within Highways England's written question response 1.1.10. (<i>Response to ExA's Written Questions, Report 1: Air Quality and Carbon Emissions (document reference EX-28)</i>)</p>
<p>9.5.8. Whilst pollution levels in Cambridge City centre remain below the Objectives, where modelled, the more central sections of the feeder roads and the Inner Ring Road (part of the Air Quality Management Area) have not been assessed. Measured levels of nitrogen dioxide nearer the city centre have been closer to, and above, the Objective levels in recent years, typically in the 35- 40$\mu\text{g}/\text{m}^3$ range. Increases in traffic on this road, as an example, could tip the balance to being above the Objective.</p>	<p>Traffic data has been screened to define the affected road network where significant change to air quality may occur. The scheme does not result in any significant changes to traffic in central sections of Cambridge or inner ring road. Therefore the scheme would neither improve nor have a significant adverse impact on the Cambridge City/Cambridge Air Quality Management Area (AQMA) or feeder roads into the centre of Cambridge. The proposed scheme is forecast to have negligible or no impact in the AQMA. Details of why the impact from the scheme in the centre of Cambridge is predicted to be negligible are provided within Highways England's written question response 1.1.16 (<i>Response to ExA's Written Questions, Report 1: Air Quality and Carbon Emissions (document reference EX-28)</i>)</p>
<p>Table 23: Summary of Air Quality Impacts on Specific Communities</p>	<p>Joint LIR table 23 provides a summary of the air quality impacts on specific communities during operation. The table is based on the chapter 8 section 8.5 of the Environmental Statement (<i>document reference 6.1</i>). The points in the table have been noted.</p>

6.3 Missed Opportunities

6.3.1 There are no comments identified for air quality in the Joint LIR.

7 Economy

7.1 Positive Impacts

7.1.1 Tables 7.1 to 7.4 respond to the positive economy impacts, during construction and operation, as set out in sections 9.6.1 to 9.6.10 of the Joint LIR.

Table 7-1: Direct and indirect benefits to employment during construction

Joint LIR Identified Positive Impacts	Highways England response
9.6.1. Employment in the local economy will be generated both directly from construction jobs, as well as indirectly from employment generated due to the increased spending from construction workers on such items as accommodation and food.	Noted and agreed.
9.6.2. The DCO submission indicates that the construction phase of the scheme would be expected to generate between 824 and 1567 individual jobs between 2016 and 2021 ¹⁰ (taking into account factors such as Cambridgeshire's existing economy and skills base).	Noted and agreed.
9.6.3. The submission also states that approximately a quarter of the labour required during construction is expected to be directly sourced from within Cambridgeshire, with a further third sourced from existing capacity which may be based within Cambridgeshire. Spend in addition to labour would include aggregate materials, which are largely expected to be sourced from within the area of the scheme itself, and equipment, which is expected to mostly be sourced from outwith Cambridgeshire.	Noted and agreed.

¹⁰ Chapter 16 Community and Private Assets, 6.1 Environmental Statement, A14 Cambridge to Huntingdon improvement scheme, Highways Agency (2014)

Table 7-2: Benefits of reduced journey time, greater reliability and impacts on economic activity during operation

Joint LIR Identified Positive Impacts	Highways England response
<p>9.6.4. The scheme will significantly increase the capacity of the road network between Cambridge and Huntingdon, and on the A1 between Brampton and Alconbury. This additional capacity would help to alleviate congestion and delays on this part of the road network, leading to a significant decrease in lost productive time and subsequent increase in business user and transport service provider benefits.</p>	<p>Noted and agreed.</p>
<p>9.6.5. The scheme is forecast to deliver significant economic benefits associated with reduced travel times together with greater journey time reliability and wider impacts associated with economic activity and business growth. The Economic Case presented in the DCO¹¹ indicates that the combined monetised value of these benefits is forecast to be £1.039 billion over a 60 year period from opening.</p>	<p>Noted. In the <i>Case for the Scheme (document reference 7.1)</i> the value of £1.039 billion over 60 years is just Business User Benefits, made up of travel time, vehicle operating costs, delays due to construction and delays due to maintenance. Including journey time reliability and wider impacts results in economic benefits of £1.551 billion. In the <i>Traffic Modelling Update Report (reference HE-A14-EX-44)</i> the Charm 3a economic business user benefits are £0.647 billion. The economic business user benefits and the journey time reliability and wider impacts the economic benefits are £1.305 billion.</p>
<p>9.6.6. Business users and transport service providers would significantly benefit from the scheme as reduced travel times improve access to suppliers or customers and reduce vehicle operating costs such as fuel, vehicle maintenance and mileage-related depreciation.</p>	<p>Noted and agreed.</p>
<p>9.6.7. The monetised value of greater journey time reliability for business users and transport service providers is forecast to be £435 million¹² over a 60-year appraisal period.</p>	<p>Noted. In the <i>Traffic Modelling Update Report (reference HE-A14-EX-44)</i> the Charm 3a monetised value of greater journey time reliability is reported as £480 million.</p>
<p>9.6.8. The scheme would help to unlock economic activity and contribute to wider benefits forecast to be £77 million over a 60-year appraisal period through greater productivity through the concentration of economic activity (agglomeration), tax revenues arising from an increase in employment and profits generated as a</p>	<p>Noted and agreed.</p>

¹¹ 7.1 Case for the Scheme, A14 Cambridge to Huntingdon improvement scheme, DCO submission Highways Agency (2014)

¹² National Infrastructure Plan 2013, HM Treasury (2013)

Joint LIR Identified Positive Impacts	Highways England response
result of reduced transport costs.	

Table 7-3: Unlocking housing constraints during operation

Joint LIR Identified Positive Impacts	Highways England response
9.6.9. The Scheme would make a significant contribution to the local economy by unlocking local housing constraints, notably in relation to enabling phase 2 of the proposed 10,000 home development at Northstowe ¹³ . The scheme would also contribute to improved connectivity between Cambridge and other economic centres which would contribute to economic benefits in terms of wider business and employment growth.	Noted and agreed.

Table 7-4: Wider economic growth during operation

Joint LIR Identified Positive Impacts	Highways England response
9.6.10. In terms of wider economic growth the scheme will provide improved connectivity between Cambridge and other areas such as Peterborough, Ipswich, Harwich and Felixstowe. This provides benefits in terms of wider business and employment growth.	Noted and agreed.

¹³ Northstowe Planning Documents, South Cambridgeshire District Council website accessed 20 April 2015 <https://www.scambs.gov.uk/content/northstowe-planning-documents-phase-two>

7.2 Negative Impacts

7.2.1 Tables 7.5 to 7.7 respond to the negative economy impacts, during construction and operation, as set out in sections 9.6.11 to 9.6.22 of the Joint LIR. All of the following comments need to be considered alongside the agreed and acknowledged positive impacts set out in the earlier section of this chapter.

Table 7-5: Disruption to existing travel patterns during construction

Joint LIR Identified Negative Impacts	Highways England response
<p>9.6.11. During construction, temporary traffic management would be required to undertake the works whilst minimising disruption to users of both the existing mainline and the local side road network.</p>	<p>Noted, see the Code of Construction Practice in Appendix 20.2 and chapter 7 of the Environmental Statement (<i>document reference 6.1</i>) in regard to Traffic and Transport. The Code of Construction Practice states that the main contractors will implement traffic management measures during the construction of the scheme on or adjacent to public roads, cycle tracks and other paths as necessary. Traffic management works will comply with the provisions of the Traffic Signs Manual: Chapter 8: Traffic Safety Measures and Signs for Road Works and Temporary Situations. Traffic signs will comply with the Traffic Signs Regulations and General Directions (Highways Agency, 2002). Paragraph 8 of Part 1 of Schedule 2 (Requirements) to the draft development consent order requires Highways England to produce the traffic management plan applicable to construction in consultation with the relevant local planning authority.</p>

Joint LIR Identified Negative Impacts	Highways England response
<p>9.6.12. In general, construction phasing and temporary traffic management proposals would be prepared on the basis of keeping the same number of lanes in use as existing during the peak periods of traffic flow. Lane closures would be employed during off-peak times for the facilitation of changes to traffic management, surfacing tie-ins and gantry or bridge construction.</p>	<p>Noted, see the Code of Construction Practice in Appendix 20.2 and chapter 7 of the Environmental Statement (<i>document reference 6.1</i>) in regard to Traffic and Transport. The design of traffic management schemes by main contractors would ensure the safe transition for road users from existing roads to the traffic managed sections of road. The design of temporary traffic management schemes will maintain an appropriate number of lanes on public roads in line with the general requirements of Section 15.1 of the Code of Construction Practice in Appendix 20.2 of the Environmental Statement (<i>document reference 6.1</i>). Lane closures will only be permitted with the approval of the employer's representative and the relevant roads authority (Highways England and Cambridgeshire County Council). Paragraph 8 of Part 1 of Schedule 2 (Requirements) to the draft Development Consent Order requires Highways England to produce the traffic management plan applicable to construction in consultation with the relevant local planning authority.</p>
<p>9.6.13. For the main routes, it is expected that traffic would be kept on the normal carriageways wherever possible, if necessary using narrow lanes and restricted temporary speed limits through the main works areas.</p>	<p>Noted, see the Code of Construction Practice in Appendix 20.2 and chapter 7 of the Environmental Statement (<i>document reference 6.1</i>) states that the main contractors would implement traffic management measures during the construction of the scheme on or adjacent to public roads, cycle tracks and other paths as necessary. Paragraph 8 of Part 1 of Schedule 2 (Requirements) to the draft Development Consent Order requires Highways England to produce the traffic management plan applicable to construction in consultation with the relevant local planning authority.</p>
<p>9.6.14. The proposed traffic management proposals during construction are as follows:</p> <ul style="list-style-type: none"> • Lane restrictions: some sections (mainly those sections which involve widening of existing roads) would see lane restrictions and/or closures (predominantly night closures) during construction. • Speed limits: temporary speed limits would be enforced through the use of speed cameras. • Road closures: road closures would take place during 	<p>Noted, see the Code of Construction Practice in Appendix 20.2 and chapter 7 of the Environmental Statement (<i>document reference 6.1</i>) in regard to Traffic and Transport. The main contractors will each prepare a traffic management plan which would describe the traffic management, safety and control measures proposed during construction of the scheme. Paragraph 8 of Part 1 of Schedule 2 (Requirements) to the draft Development consent Order requires Highways England to produce the traffic management plan applicable to construction in consultation with the relevant local planning authority.</p>

Joint LIR Identified Negative Impacts	Highways England response
<p>widening and upgrading works. However traffic management would be designed to allow other parts of the A14 (either new or existing) to be utilised, thereby maintaining the existing number of operational lanes.</p> <ul style="list-style-type: none"> • Diversion measures: temporary diversions would be provided for access whilst works on the existing carriageway are conducted. • Slip road closures: slip roads at certain online junctions (in particular those at Swavesey and Bar Hill) would need to be closed during construction. 	
<p>9.6.15. Likely effects on businesses would be mitigated by providing essential access for businesses and community facilities throughout the construction period or at least during the normal operating hours of the businesses and facilities. The use of appropriate construction phasing as well as providing adequate signage to direct traffic to businesses which stand to lose out from passing trade would also reduce negative impacts.</p>	<p>Noted, this mitigation is proposed in paragraph 16.5.8 of chapter 16 of the Environment Statement. Further, the Code of Construction Practice in Appendix 20.2 of the Environmental Statement (ES) (<i>document reference 6.1</i>) outlines traffic safety and control during construction including the phasing of construction to minimise the impact on businesses and community facilities. Chapter 7 of the E provides information in regard to traffic conditions and traffic flows. Paragraph 8 of Part 1 of Schedule 2 (Requirements) to the draft Development Consent Order requires Highways England to produce the traffic management plan applicable to construction in consultation with the relevant local planning authority.</p>

Table 7-6: Temporary loss of land during construction

Joint LIR Identified Negative Impacts	Highways England response
<p>9.6.16. During construction there could be temporary severance of access to areas of farmland, community facilities and private property as a result of construction haul routes or other construction related land uses. Although the severance would be temporary, there may be longer term effects if the viability of the assets becomes undermined through lack of use or access during the construction period.</p>	<p>Noted. This accords with paragraph 16.4.4 of chapter 16 of the Environmental Statement (<i>document reference 6.1</i>). For the purposes of representing a likely worst case scenario for the construction phase it is assumed that all scheme sections are under construction throughout the duration of the construction period for the whole scheme; any actual interruption of access would likely be much shorter in duration</p>

Joint LIR Identified Negative Impacts	Highways England response
<p>9.6.17. The use of borrow pits to supply material for the scheme, as well as construction compound sites and soil storage areas, would require land and movement of material from these sites to their points of use on the scheme.</p>	<p>Noted, land take effects are assessed in chapter 16 of the Environmental Statement while materials are assessed in chapter 13 of the Environmental Statement (<i>document reference 6.1</i>). Further information on the approach taken to the use of borrow pits in relation to the proposed scheme is provided in Highway England's response to the ExA's written question 1.14.4 (Response to ExA's First Written Questions, Report 14: Other Matters (<i>document reference EX-41</i>)). The borrow pits are deliberately located adjacent to the scheme route to maximise construction efficiencies. The proposed solution for sourcing the bulk of the primary construction materials from borrow pits is a based on a well-established approach on major infrastructure projects, where suitable minerals are available locally and where these cannot be obtained from cut operations along the route of the scheme. This also ensures that the scheme is as self-sufficient as is practicable with regard to bulk earthworks materials, minimising haulage distances, and reducing the amount of construction traffic using the existing A14 and local road network. Chapter 15 of the Code of Construction Practice (CoCP) (Appendix 20.2 of the Environmental Statement Appendices, <i>document reference 6.3</i>) in Section 15.7 details measures on access routes for construction traffic including:</p> <ul style="list-style-type: none"> • As far as reasonably practicable, access routes for construction traffic would be limited to the trunk road network and main roads on the local road network. • Access along other local roads would be restricted, however, it may be necessary to allow transport or delivery of locally sourced materials <p>Where possible, the main contractors will provide offline haul routes created within or/and parallel to the scheme to reduce the need to use public roads.. All proposed compounds and soil storage areas are located within close proximity of the scheme alignment, which would help to lower traffic to and from the site once the depot plant and personnel are installed within compounds.</p>
<p>9.6.18. The borrow pits would be located adjacent to the scheme with the exception of borrow pit 5 (BP5) which would be located just under 1km to the south of the scheme adjacent to Boxworth.</p>	<p>Noted, this accords with paragraph 16.4.6 of chapter 16 of the Environmental Statement (<i>document reference 6.1</i>).</p>

Joint LIR Identified Negative Impacts				Highways England response																								
Additionally, there are borrow pits proposed near Brampton (BP1, BP2 and BP7), Fenstanton (BP3) and Bar Hill (BP6).																												
<p>9.6.19. A number of accommodation works and mitigation measures have been identified relating to individual farm units to avoid or reduce effects. This would be implemented during the construction phase of the scheme on individual farm units as follows:</p> <ul style="list-style-type: none"> • returning land within temporary construction areas (e.g. haul road, construction compounds, etc.) back to farming in a similar condition as before; • maintaining access to fields during construction phase; • provision of access to severed land; • undertaking work in accordance with the Code of Construction Practice to avoid pollution of natural springs, ditches and brooks on the farm holding; and • implementing bio-security advice and actions 				Noted, this accords with paragraph 16.5.6 of chapter 16 of the Environmental Statement (<i>document reference 6.1</i>).																								
<p>9.6.20. The temporary loss of land would be the footprint of the soil storage and compound sites and borrow pit 5 at Boxworth. There would a significant temporary loss of land at the following farms:</p> <p>Table 24: significant temporary loss of land at the following farms</p> <table border="1"> <thead> <tr> <th>Farm name</th> <th>Original plot (Ha)</th> <th>Temporary land take(Ha</th> <th>% of plot temporary land take</th> </tr> </thead> <tbody> <tr> <td>Rectory Farm</td> <td>35.2</td> <td>8.3</td> <td>24%</td> </tr> <tr> <td>Park Farm</td> <td>178.6</td> <td>20.9</td> <td>12%</td> </tr> <tr> <td>Depden Farm</td> <td>58.4</td> <td>10.2</td> <td>17%</td> </tr> <tr> <td>Depden Farm</td> <td>62.0</td> <td>22.2</td> <td>36%</td> </tr> <tr> <td>Boxworth Farm</td> <td>63.2</td> <td>43.8</td> <td>69%</td> </tr> </tbody> </table>				Farm name	Original plot (Ha)	Temporary land take(Ha	% of plot temporary land take	Rectory Farm	35.2	8.3	24%	Park Farm	178.6	20.9	12%	Depden Farm	58.4	10.2	17%	Depden Farm	62.0	22.2	36%	Boxworth Farm	63.2	43.8	69%	<p>Noted, this accords with table 16.11 of the Environmental Statement (<i>document reference 6.1</i>).</p> <p>Note that an Erratum (Highways England (2015). A14 Cambridge to Huntingdon improvement scheme: TR010018 - HE/A14/EX/10 Development Consent Order Application Errata Report (May 2015)) to the Environmental Statement has updated the assumptions used in regard to temporarily used land negating the assumptions previously used and updating the assessment of the significance of effects; however, the overall assessment remains as Moderate Adverse.</p>
Farm name	Original plot (Ha)	Temporary land take(Ha	% of plot temporary land take																									
Rectory Farm	35.2	8.3	24%																									
Park Farm	178.6	20.9	12%																									
Depden Farm	58.4	10.2	17%																									
Depden Farm	62.0	22.2	36%																									
Boxworth Farm	63.2	43.8	69%																									

Joint LIR Identified Negative Impacts				Highways England response
Slate Hall Farm	29.5	6.2	21%	
Sunlight Services	6.6	1.1	17%	

Table 7-7: Permanent loss of land during operation

Joint LIR Identified Negative Impacts	Highways England response
<p>9.6.21. Permanent land take is required for the long-term operation of the proposed scheme including land required for environmental mitigation such as landscape planting. The majority of land take is agricultural land from farms; this would have implications for their viability where land take is a significant proportion of the farm, or if it would cause severance or changes in access which would alter the farming operation.</p>	<p>Noted, this accords with paragraph 16.4.9, chapter 16 of the Environmental Statement (<i>document reference 6.1</i>).</p> <p>Impacts on farms are assessed in Table 16.11 of the Environmental Statement (<i>document reference 6.1</i>). Overall, the effect on farms is assessed as Moderate Adverse. Whilst there is no mitigation for the loss of best and most versatile agricultural land, it is possible to mitigate the effects of the scheme on agriculturally valuable soil. Mitigation identified in this regard focuses primarily on avoidance and proper soil handling.</p> <p>It should be noted that, while not part of the assessment presented in the Environmental Statement (<i>document reference 6.1</i>), affected farms will be compensated for loss of land and severance of or changes to access as a result of the scheme, where appropriate. Compensation will be paid in accordance with the national compensation code.</p>

Joint LIR Identified Negative Impacts		Highways England response														
<p>9.6.22. The DCO submission has identified an adverse impact on several local farms which will be impacted by a loss of land, severance and access changes as a result of the scheme. Major adverse impacts are expected to occur on the following farms (Full details in Table 16.11 6.1 ES Chapter 16)¹⁴.</p>		<p>Noted, this accords with Table 16.11 of the Environmental Statement (<i>document reference 6.1</i>).</p>														
<p>Table 25: Major adverse impacts are expected to occur on the following farms</p> <table border="1"> <thead> <tr> <th>Name</th> <th>Description of impact</th> </tr> </thead> <tbody> <tr> <td>Plot adjacent to Rectory Farm, near Brampton Hut</td> <td>Permanent land take of 94%</td> </tr> <tr> <td>Park Farm, Brampton</td> <td>Significant reorganisation of farmstead would be necessary due to land take.</td> </tr> <tr> <td>Linton's Farm, near Hilton</td> <td>Farmstead severed, access would require major reorganisation of operations.</td> </tr> <tr> <td>Oxholme Farm, near Hilton</td> <td>Farm halved by the scheme. This is one of the few Owner/Farmer holdings on the route and therefore considered to be a greater sensitivity. The scheme would greatly reduce the viability of the farm as the holding would be divided diagonally in half, to the point it may no longer be viable.</td> </tr> <tr> <td>West End Farm, near Fenstanton</td> <td>Most of the land is already excavated for gravel and now managed privately for nature conservation. Loss from borrow pit would take the majority of the remaining arable land.</td> </tr> <tr> <td>Gables Farm, near</td> <td>Farm cut in half, access to severed portion requires rerouting of farming patterns.</td> </tr> </tbody> </table>			Name	Description of impact	Plot adjacent to Rectory Farm, near Brampton Hut	Permanent land take of 94%	Park Farm, Brampton	Significant reorganisation of farmstead would be necessary due to land take.	Linton's Farm, near Hilton	Farmstead severed, access would require major reorganisation of operations.	Oxholme Farm, near Hilton	Farm halved by the scheme. This is one of the few Owner/Farmer holdings on the route and therefore considered to be a greater sensitivity. The scheme would greatly reduce the viability of the farm as the holding would be divided diagonally in half, to the point it may no longer be viable.	West End Farm, near Fenstanton	Most of the land is already excavated for gravel and now managed privately for nature conservation. Loss from borrow pit would take the majority of the remaining arable land.	Gables Farm, near	Farm cut in half, access to severed portion requires rerouting of farming patterns.
Name	Description of impact															
Plot adjacent to Rectory Farm, near Brampton Hut	Permanent land take of 94%															
Park Farm, Brampton	Significant reorganisation of farmstead would be necessary due to land take.															
Linton's Farm, near Hilton	Farmstead severed, access would require major reorganisation of operations.															
Oxholme Farm, near Hilton	Farm halved by the scheme. This is one of the few Owner/Farmer holdings on the route and therefore considered to be a greater sensitivity. The scheme would greatly reduce the viability of the farm as the holding would be divided diagonally in half, to the point it may no longer be viable.															
West End Farm, near Fenstanton	Most of the land is already excavated for gravel and now managed privately for nature conservation. Loss from borrow pit would take the majority of the remaining arable land.															
Gables Farm, near	Farm cut in half, access to severed portion requires rerouting of farming patterns.															

¹⁴ Table 16.11 CH 16 Community and private assets, 6.1 Environmental Statement, A14 Cambridge to Huntingdon improvement scheme, DCO submission, Highways Agency (2014)

Joint LIR Identified Negative Impacts		Highways England response
Fenstanton		
Boxworth Farm, Boxworth	Large borrow pit likely to affect quality of farm and would lead to temporary loss of whole farm.	
Slate Hall Farm, near Oakington	Access off of access lane adjacent to A14. Site of borrow pit.	
Trinity College (Moors Barn Farm), near Madingley	Scheme severs the plot significantly changing layout and accessibility.	
Table 26: Impact on local businesses		<p>Noted, this accords with Table 16.12 of the Environmental Statement (<i>document reference 6.1</i>).</p> <p>It should be noted that, while not part of the assessment presented in the Environmental Statement (<i>document reference 6.1</i>), affected farms will be compensated for loss of land and severance of or changes to access as a result of the scheme, where appropriate. Compensation will be paid in accordance with the national compensation code.</p>
Business	Impact	
Landro	Impacts from de-trunking of the A14 where raised above property likely to be minimal, although some land take from the property to occur.	
Barker Storey Matthews	Loss of land, currently a car park but with development potential.	
Landmans Portaloo	Potentially would lose small area on edge of property.	
Goff Petroleum Site	To lose over 30% of property, this may be detrimental to plans for a fuel transfer depot.	
Little Chef KFC and Service Station at Fenstanton	Reduced business possible due to change in traffic patterns.	
Little Chef, Lolworth	Improvement to access but small loss of land on edge.	
Mason's Garage	Improvement in safety of access.	
Shell Station, Godmanchester	Reduced business possible due to change in traffic patterns.	
Travelodge,	Possible reduction in number of	

Joint LIR Identified Negative Impacts			Highways England response
Fenstanton		customers due to reduced traffic flow, though improvement in amenity due to diverted traffic may improve appeal to guests somewhat.	
Table 27: Impacts on development land			<p>Noted, this accords with Table 16.13 of the Environmental Statement (<i>document reference 6.1</i>).</p> <p>It should be noted that, while not part of the assessment presented in the Environmental Statement (<i>document reference 6.1</i>), affected farms will be compensated for loss of land and severance of or changes to access as a result of the scheme, where appropriate. Compensation will be paid in accordance with the national compensation code..</p>
Application reference	Location	Detail	
S/0141/11	Buckingway Business Park, Anderson Road, Swavesey, Cambridgeshire, CB24 4UQ	<i>Extension of time limit for implementation of planning consent S/0303/08 for the Erection of 15 Units (including 9 Terraced) with Ancillary Offices, Service Yards, Car Parking and Landscaping and the Erection of 4 Terraced Office</i> Loss of approximately 10% of plot to land take.	
S/0174/14/FL	Darwin Green One, Land between Huntingdon Road and Histon Road, Cambridge, Cambridgeshire, CB3 0LE	<i>Formation of a Landscaped Mound adjacent to and south of the A14 to be formed from excess spoil from the Darwin Green One development.</i> Loss of approximately 5% of plot to land take.	
S/2347/12/FL	Bard Pharmaceuticals Ltd, Cambridge Science Park, Milton Road, Cambridge,	<i>Extensions to existing building to provide additional floor space (including plant at ground and first floors); demolition</i>	

Joint LIR Identified Negative Impacts		Highways England response
	CB4 0GW <i>of existing outbuildings and erection of replacement outbuilding.</i> Loss of approximately 5% of plot to land take.	

7.3 Missed Opportunities

7.3.1 Table 7.8 responds to the economy comments set out in section 9.6.23 of the Joint LIR.

Table 7-8: Economy missed opportunities

Joint LIR Identified Missed Opportunities	Highways England response
<p>9.6.23. The DCO submission identifies positive economic benefits for local communities in terms of the long term employment opportunities created during the construction phase of the scheme. There is an opportunity to maximise the economic benefits further by setting out in a plan how the various elements of the scheme will result in a positive legacy particularly in terms of benefiting and supporting local economic growth. The ES identifies that a “Education, Employment and Skills Strategy” has been developed with emerging priorities focused on increasing apprenticeships in highways and engineering. The local authorities expect the Applicant to develop clear action plans linked to the legacy priorities and to commit to the delivery of these legacy ambitions. The local authorities would expect this plan to be developed in order to ensure the legacy opportunities presented by the scheme can be realised.</p>	<p>Highways England is committed to supporting the education, employment and skills agenda as part of the A14 project with the aim of maximising local opportunity and to address potential skills shortages in the roads infrastructure sector. Highways England will set up a National Skills Academy (NSA) for the project and is in the process of establishing Key Performance Indicators which meet NSA requirements, alongside additional project-specific targets to address specific local priorities. A Skills and Employment sub-group, reporting to the Strategic Stakeholder Board (SSB), will be set up to support delivery of the strategy. The key role of the Group will be to ensure that the local provision of skills is in place to support delivery of targets.</p> <p>All targets will be consulted upon with the Strategic Stakeholder Board as well as with the design consultants and contractors who will be the key delivery partners.</p> <p>The Case for the Scheme (document reference 7.1) sets out the approach of</p>

Joint LIR Identified Missed Opportunities	Highways England response
	Highway's England to deliver a legacy through to the end of the construction phase (section 7). The section sets a framework for delivering legacy, setting out the key priorities which were identified in partnership with stakeholders. Highways England is committed to working with the membership of the Strategic Stakeholder Board to establish joint delivery plans to maximise the legacy opportunities identified through the scheme.

8 Pedestrians, Cyclists and Equestrian Travellers

8.1 Positive Impacts

8.1.1 Tables 8.1 to 8.3 respond to the positive pedestrians, cyclists and equestrian travellers impacts, during operation, as set out in sections 6.1.1¹⁵ and 9.7.1 to 9.7.2 of the Joint LIR.

Table 8-1: New NMU route during operation

Joint LIR Identified Positive Impacts	Highways England response
<p>6.1.1 Approximately 10km of new NMU facility (comprising a route suitable for pedestrians, cyclists and equestrians) will be provided linking Fenstanton, Fen Drayton, Swavesey, Lolworth, Bar Hill, Dry Drayton, Girton and Cambridge. This proposed new NMU facility is intended to link a number of existing bridleways and footpaths, and provide link between Cambridge, and local villages to enable travel on foot, by bicycle or on horseback. It will also tie into proposals for an NMU route from the proposed Northstowe development.</p>	<p>Noted and agreed.</p>

Table 8-2: Re-connection of severed links during operation

Joint LIR Identified Positive Impacts	Highways England response
<p>9.7.1 Bridleways which were severed when the A1 was originally converted to dual carriageway would be re-linked using grade separated facilities near Brampton Hut junction. A new bridleway would also be provided to link Brampton via existing Public Footpath Brampton 15 with Brampton Wood and Brampton Hut services via the new intersection bridges.</p> <p><i>Table 28: Detailed look at positive enhancements to NMU routes</i></p>	<p>Noted and agreed.</p>

¹⁵ The paragraph number (6.1.1) in the Joint LIR is incorrect. The chapter should start with paragraph number 9.7.1.

Joint LIR Identified Positive Impacts			Highways England response
NMU	Construction / Operation	Impact	
Buckden Road B1514 (local road)	Operation	A new shared use path would be provided alongside the road to a point where it meets existing provision, improving convenience for non-motorised users.	
Bridleway 15	Operation	A new bridleway would also be provided to link Brampton via existing Public Footpath Brampton 15 with Brampton Wood and Brampton Hut services via the new intersection bridges.	
Bucking Way Road and minor road to Boxworth (High Street)	Operation	A new NMU bridge suitable for use by pedestrians and cyclists would provide a link between the Bucking Way Road, the proposed new local access road and Bucking Way Business Park north of the A14 to Conington Road and the Cambridge Services to the south. This would provide a new crossing for pedestrians and cyclists.	
B1050 (Hatton's Road) and Bar Hill junction	Operation	A new NMU bridge suitable for use by pedestrians, cyclists and equestrians would provide a link between Bar Hill and Hatton's Road.	

Joint LIR Identified Positive Impacts			Highways England response
Oakington Road and Dry Drayton Road (Pathfinder Long Distance walk)	Operation	Two new roundabouts are proposed on Dry Drayton Road/Oakington Road with a realignment of Oakington Road to the south of the A14. This would result in the shortening of the route by approximately 50m. In addition, the existing Dry Drayton junction bridge would be modified to accommodate a new footway/cycleway, which would be particularly beneficial to pedestrians including wheelchair users. The shared use path would tie into the proposed new shared use path alongside the local access road, increasing connectivity for NMU.	
Bridleway Dry Drayton 12	Operation	The new NMU provision on the local access road would improve access to the Cambridge Crematorium and surrounding area by non-motorised modes of transport.	
Footpaths Huntingdon 9, 10 and 11	Operation	A proposed new footway/cycleway would be provided along the eastern side of the new Views Common link road which would connect to footpath 11, providing a new connection to Hinchbrooke Park Road adjacent to the school.	

Table 8-3: Impacts on NMU routes during operation – bus travellers

Joint LIR Identified Positive Impacts	Highways England response
<p>9.7.2 Whilst access to bus stops has the potential to be impeded during the construction phase, this will be of little consequence as the stops are already inconvenient. The relocation of the bus stops onto the Local Access Road at Swavesey and Lolworth will improve their safety and accessibility, including for less mobile people and/or people with pushchairs.</p>	<p>Noted and agreed.</p>

8.2 Negative Impacts

8.2.1 Tables 8.4 to 8.5 respond to the negative pedestrians, cyclists and equestrian travellers impacts, during construction and operation, as set out in sections 9.7.3 to 9.7.4 of the Joint LIR. All of the following comments need to be considered alongside the agreed and acknowledged positive impacts set out in the earlier section of this chapter.

Table 8-4: Impacts on NMU routes (Table 29 of the Joint LIR) during construction and operation

Joint LIR Identified Negative Impacts	Highways England response
<p>9.7.3 Table 29 Bridleway at the Stukeleys 6 during operation.</p> <p>Bridleway 6 - The Stukeleys currently connects to a lay-by on the eastern side of the A1. It is proposed that the lay-by will be stopped-up and closed by the DCO, which will effectively sever this PROW from meeting another highway. At present this lay-by is used by local people who park there and walk their dogs along the bridleway. This will no longer be possible after the completion of the scheme and will result in a negative impact on locals and others who use the lay-by. It will also create a new issue severing a public highway and having an adverse impact on connectivity.</p>	<p>Highways England notes the concerns about the proposals affecting the lay-by and the indirect impact upon use of the bridleway Stukeley 6. This is considered to be an indirect impact since there would be no notable direct impact upon the bridleway from the proposed scheme. The Local Impact Report also makes a point that the proposed closure of the lay-by would affect the means by which some people access the bridleway. However, there are also other considerations which have been taken into account, based upon consultations with Cambridgeshire County Council and the Police, which have led to the proposed closure of the lay-by.</p> <ul style="list-style-type: none"> The lay-by strategy allows for no lay-bys other than emergency lay-bys within the scheme for safety reasons, focussing motorists on the two service areas on the route, Brampton Hut and Cambridge

Joint LIR Identified Negative Impacts	Highways England response
	<p>Services. Also, the provision of lay-bys is considered to lead to environmental problems caused by overnight lorry parking, and anti-social behaviour.</p> <ul style="list-style-type: none"> • This particular lay-by on the A1 was identified by the Police and Highways England as a location which caused particular problems in the context of anti-social behaviour. • The main carriageway of the highway would be fenced to discourage NMUs entering the main carriageway. <p>In accordance with the lay-by strategy, people would have the option of travelling to the Brampton Hut services to park and exercise their dogs from there in relative safety. There would be links to public rights of way from that location.</p> <p>Highways England does not agree the claim that the proposed scheme would introduce severance or have an adverse impact on connectivity that is noticeably different from the existing situation as NMU have not been observed to enter the A1 from the bridleway (as they are permitted to do), demonstrating that the bridleway already acts as a cul-de-sac. Links to Alconbury from the public rights of way network on the east side of the A1 are already made using the minor country lane, Low Road and byway 7/1, which links to High Street, Alconbury, where there is a bridge under the A1. NMUs can continue to use these routes, therefore there is no severance.</p>
<p>9.7.3 Table 29 Silver Street and Pathfinder Long Distance walk and Bridleway Godmanchester 1 during operation.</p> <p>A shared footway and cycleway (suitable for equestrians) would be provided on the new Silver Street bridge to reconnect the Pathfinder Long Distance walk north and south of the new A14 The need to</p>	<p>Noted. This accords with the assessment as presented in Table 15.7, page 15/47 of chapter 15 of the Environmental Statement (<i>document reference 6.1</i>).</p>

Joint LIR Identified Negative Impacts	Highways England response
<p>cross the new A14 via the bridge would cause inconvenience and the presence of the new road a loss of amenity in the previously rural route in the study area.</p>	
<p>9.7.3 Table 29 Bucking Way Road and minor road to Boxworth (High Street) during construction.</p> <p>Substantial construction activities associated with constructing the proposed new Swavesey junction would cause noise, disturbance and some disruption to people crossing between Bucking Way Business Park and Cambridge Services.</p>	<p>Noted. This accords with the assessment as presented in Table 15.7, page 15/52 of chapter 15 of the Environmental Statement (<i>document reference 6.1</i>).</p> <p>It should be noted that the negative impact would be temporary and that there would be a permanent positive impact through improved NMU connectivity as noted in the Local Impact Report above under “positive impacts”. This was also predicted in the Environmental Statement (<i>document reference 6.1</i>).</p> <p>Furthermore, section 15 of the Code of Construction Practice (Appendix 20.2 of the Environmental Statement, document ref. 6.3) places a requirement upon the contractor to liaise with the County Council and agree measures for the mitigation of construction related impacts upon pedestrians, cyclists and equestrians, in order to minimise disruption and manage diversions as safely and conveniently as possible. The measures are to be set out in the Traffic Management Plan required under the Code of Construction Practice. Compliance with the Code of Construction Practice is secured by paragraph 3 of Part 1 of Schedule 2 to the draft Development Consent Order, and compliance with the Traffic Management Plan is secured by paragraph 8 of Part 1 of that Schedule.</p>
<p>9.7.3 Table 29 B1050 (Hatton’s Road) and Bar Hill junction during construction.</p> <p>Substantial construction activities associated with constructing the proposed new Bar Hill junction would cause noise, disturbance and some disruption to people crossing between Bar Hill and Hatton’s Road.</p>	<p>Noted. This accords with the assessment as presented in Table 15.7, page 15/55 of chapter 15 of the Environmental Statement (<i>document reference 6.1</i>).</p> <p>It should be noted that the negative impact would be temporary and that there would be a permanent positive impact through improved NMU connectivity as noted in the Local Impact Report above under “positive impacts”. This was also predicted in the Environmental Statement (<i>document reference 6.1</i>).</p> <p>Furthermore, section 15 of the Code of Construction Practice (Appendix 20.2 of the Environmental Statement, document ref. 6.3) places a requirement</p>

Joint LIR Identified Negative Impacts	Highways England response
	<p>upon the contractor to liaise with the County Council and agree measures for the mitigation of construction related impacts upon pedestrians, cyclists and equestrians, in order to minimise disruption and manage diversions as safely and conveniently as possible. The measures are to be set out in the Traffic Management Plan required under the Code of Construction Practice. Compliance with the Code of Construction Practice is secured by paragraph 3 of Part 1 of Schedule 2 to the draft Development Consent Order, and compliance with the Traffic Management Plan is secured by paragraph 8 of Part 1 of that Schedule.</p>
<p>9.7.3 Table 29 Bridleway Dry Drayton 12 during construction.</p> <p>The route would be disrupted by construction of the proposed new local access road, which would affect 560m of the bridleway during construction.</p>	<p>Noted. This accords with the assessment as presented in Table 15.7, page 15/56 of chapter 15 of the Environmental Statement (<i>document reference 6.1</i>).</p> <p>It should be noted that the negative impact would be temporary and that there would be a permanent positive impact through improved NMU connectivity as noted in the Local Impact Report above under “positive impacts”. This was also predicted in the Environmental Statement (<i>document reference 6.1</i>).</p> <p>Furthermore, section 15 of the Code of Construction Practice (Appendix 20.2 of the Environmental Statement, document ref. 6.3) places a requirement upon the contractor to liaise with the County Council and agree measures for the mitigation of construction related impacts upon pedestrians, cyclists and equestrians, in order to minimise disruption and manage diversions as safely and conveniently as possible. The measures are to be set out in the Traffic Management Plan required under the Construction Code of Practice. Compliance with the Code of Construction Practice is secured by paragraph 3 of Part 1 of Schedule 2 to the draft Development Consent Order, and compliance with the Traffic Management Plan is secured by paragraph 8 of Part 1 of that Schedule.</p>
<p>9.7.3 Table 29 B1049 at Histon junction during construction.</p> <p>There would be disruption to the NMU routes across the junction during construction of the junction improvement. This would cause temporary inconvenience to high numbers of cyclists and moderate</p>	<p>Noted. This accords with the assessment as presented in Table 15.7, page 15/59 of chapter 15 of the Environmental Statement (<i>document reference 6.1</i>). It should be noted that the negative impact would be temporary and that there would be a permanent positive impact through improved NMU connectivity as noted in the Local Impact Report above under “positive</p>

Joint LIR Identified Negative Impacts	Highways England response
<p>numbers of pedestrians on this highly sensitive route in the vicinity of the junction although access would be maintained. This would be a key consideration as part of the consultation with the local highway authority, Cambridgeshire County Council, that the contractor would be required to undertake in line with the Code of Construction Practice.</p>	<p>impacts". This was also predicted in the Environmental Statement (<i>document reference 6.1</i>).</p>
<p>9.7.3 Table 29 Footpaths Huntingdon 9, 10 and 11 during construction.</p> <p>During construction there would be some loss of amenity to footpaths 10 and 11 due to the construction of the new Views Common link road. There would also be temporary disruption (such as diversions) to the footpaths due to construction of the proposed new roundabout at the northern end of the link road and during demolition of the viaduct when temporary closure of footpath 10 is anticipated.</p>	<p>Noted. This accords with the assessment as presented in Table 15.7, page 15/61 of chapter 15 of the Environmental Statement (<i>document reference 6.1</i>).</p> <p>It should be noted that the negative impact would be temporary and that there would be a permanent positive impact through improved NMU connectivity as noted in the Local Impact Report above under "positive impacts". This was also predicted in the Environmental Statement (<i>document reference 6.1</i>).</p> <p>Furthermore, section 15 of the Code of Construction Practice (Appendix 20.2 of the Environmental Statement, <i>document ref. 6.3</i>) places a requirement upon the contractor to liaise with the County Council and agree measures for the mitigation of construction related impacts upon pedestrians, cyclists and equestrians, in order to minimise disruption and manage diversions as safely and conveniently as possible. The measures are to be set out in the Traffic Management Plan required under the Code of Construction Practice. Compliance with the Code of Construction Practice is secured by paragraph 3 of Part 1 of Schedule 2 to the draft Development Consent Order, and compliance with the Traffic Management Plan is secured by paragraph 8 of Part 1 of that Schedule.</p>
<p>9.7.3 Table 29 B1514 Brampton Road, Hinchingsbrooke Park Road, Edison Bell Way and National Cycle Network route 12 and 51 during construction.</p> <p>During construction there would be some loss of amenity to Hinchingsbrooke Park Road due to the construction of the new Views Common link road. There would also be temporary disruption (such as diversions) to footways during demolition of the viaduct when</p>	<p>Noted. This accords with the assessment as presented in Table 15.7, page 15/62 of chapter 15 of the Environmental Statement (<i>document reference 6.1</i>).</p> <p>It should be noted that the negative impact would be temporary and that there would be a permanent positive impact through improved NMU connectivity as noted in the Local Impact Report above under "positive impacts". This was also predicted in the Environmental Statement (<i>document reference 6.1</i>).</p> <p>Furthermore, section 15 of the Code of Construction Practice (Appendix 20.2</p>

Joint LIR Identified Negative Impacts	Highways England response
<p>temporary closure of Brampton Road and the cycle route is anticipated.</p>	<p>of the Environmental Statement, document ref. 6.3) places a requirement upon the contractor to liaise with the County Council and agree measures for the mitigation of construction related impacts upon pedestrians, cyclists and equestrians, in order to minimise disruption and manage diversions as safely and conveniently as possible. The measures are to be set out in the Traffic Management Plan required under the Construction Code of Practice. Compliance with the Code of Construction Practice is secured by paragraph 3 of Part 1 of Schedule 2 to the draft Development Consent Order, and compliance with the Traffic Management Plan is secured by paragraph 8 of Part 1 of that Schedule.</p>
<p>9.7.3 Table 29 B1514 Brampton Road, Hinchingsbrooke Park Road, Edison Bell Way and National Cycle Network route 12 and 51 during operation.</p> <p>The proposed new Views Common link road would have a junction with Hinchingsbrooke Park Road close to Hinchingsbrooke School. This would introduce a new road to be crossed by NMU, which would be achieved with the provision of a new signalised crossing with toucan crossings for pedestrians. The crossings would introduce localised inconvenience in this highly sensitive area with high numbers of schoolchildren present. There would also be new signalised crossings on Brampton Road which would cause some slight additional disruption to NMU, including cyclists on NCN 12.</p>	<p>Noted. This accords with the assessment as presented in Table 15.7, page 15/62 of chapter 15 of the Environmental Statement (<i>document reference 6.1</i>).</p> <p>The level and design of provision for pedestrians at this junction continues to be discussed with Huntingdonshire District Council. For example, the toucan crossing facilities proposed at the new junctions in Huntingdon have been amended following these discussions. Where possible, they have been re-designed and would provide more direct, single stage crossings for non-motorised users with timings optimised, where possible, for their increased convenience and safety.</p>
<p>9.7.3 Table 29 Footpaths Huntingdon 6 and 4 and cycle route and permissive path from Mill Common/Castle Moat Road junction to Huntingdon railway station during construction.</p> <p>Construction of the new Mill Common link road would cause a loss of amenity to footpath 4 and 6 due to noise. However there would be a direct impact upon the cycle route which would coincide with the footprint of the proposed new link road. This would disrupt the route and cause inconvenience to NMU wishing to access the railway station along this route.</p>	<p>Noted. This accords with our assessment as presented in Table 15.7, page 15/63 of chapter 15 of the Environmental Statement (<i>document reference 6.1</i>).</p> <p>It should be noted that the negative impact would be temporary and that there would be a permanent positive impact through improved NMU connectivity as noted in the Local Impact Report above under "positive impacts". This was also predicted in the Environmental Statement (<i>document reference 6.1</i>).</p> <p>Furthermore, section 15 of the Code of Construction Practice (Appendix 20.2 of the Environmental Statement, document ref. 6.3) places a requirement</p>

Joint LIR Identified Negative Impacts	Highways England response
	<p>upon the contractor to liaise with the County Council and agree measures for the mitigation of construction related impacts upon pedestrians, cyclists and equestrians, in order to minimise disruption and manage diversions as safely and conveniently as possible. The measures are to be set out in the Traffic Management Plan required under the Construction Code of Practice. Compliance with the Code of Construction Practice is secured by paragraph 3 of Part 1 of Schedule 2 to the draft Development Consent Order, and compliance with the Traffic Management Plan is secured by paragraph 8 of Part 1 of that Schedule.</p>

Table 8-5: Impacts on views and amenity from public rights of way during operation

Joint LIR Identified Negative Impacts	Highways England response
<p>9.7.4. During operation the negative impacts are likely to involve permanent changes to amenity as a result of the presence of new highway infrastructure in areas which are currently rural or other open space and some instances where connectivity will be reduced and journeys inconvenienced by the introduction of crossings such as on Hinchbrooke Park Road.</p>	<p>Noted. This accords with the assessment presented in chapter 15 of the Environmental Statement (<i>document reference 6.1</i>). These impacts do, however, need to be considered alongside the significant positive effects for pedestrians, cyclists and equestrians produced by the scheme, noted at the beginning of this section 8.</p>

8.3 Missed Opportunities

8.3.1 Tables 8.6 and 8.7 respond to the pedestrian, cyclist and equestrian travellers comments set out in sections 9.7.5 and 9.7.7 of the Joint LIR.

Table 8-6: Public rights of way around the borrow pits

Joint LIR Identified Missed Opportunities	Highways England response

Joint LIR Identified Missed Opportunities	Highways England response
<p>9.7.5. There is the potential for a long term positive impact in terms of the legacy of the borrow pits sites. As a minimum additional Public Rights of Way around the sites to the west and south west of Brampton should be created.</p>	<p>Highways England is aware of the Councils preference to include additional public rights of way adjacent to borrow pits. This has been the subject of discussions between the Councils and Highways England during consultation. It has not been possible to include this proposal within the Development Consent Order submission, nor is it necessary as part of the scheme to mitigate its impact. However, if the Councils wanted to explore this further with Highways England during the detailed design stage after making of the DCO (if granted) then Highways England would welcome this further dialogue.</p>
<p>9.7.6. Cambridgeshire County Council requested a footpath link between Footpath 3 and Grafham Road running within the northern boundary of Borrow Pit 2. RAF Brampton base is being redeveloped as residential housing and this would provide an off-road link between the estate and the countryside served by Grafham Lane.</p>	<p>The requirement for the path is driven by the proposed RAF Brampton redevelopment rather than the proposed A14 improvement scheme. Therefore the path should be provided as part of the RAF Brampton proposals and planning requirements. Paragraph 4.7.5 of the RAF Brampton Urban Design Objectives and Guidance Document (Huntingdon District Council, December 2011) identifies the possibility of a Community Infrastructure Levy and section 106 agreements in contributing to a footpath and the wider public right of way network around the development. A mechanism for delivering this additional footpath is therefore already identified as part of the RAF Brampton design guidance and is outside of the commitments that can reasonably be expected of Highways England as part of the A14 scheme.</p>

Table 8-7: Solar studs

Joint LIR Identified Missed Opportunities	Highways England response
<p>9.7.7. The use of solar studs on NMU routes should be considered as a design feature which will improve the experience for NMU users and encourage use of the routes at all times of day, particularly for cyclists.</p>	<p>The potential use of solar studs has been discussed during highways England meetings with the local authorities and is under consideration by Highways England in locations where a full lighting scheme would be inappropriate.</p> <p>It should be noted that there are other factors to consider in some locations. For example, care will need to be taken to ensure any solar powered studs</p>

Joint LIR Identified Missed Opportunities	Highways England response
	<p>on non-motorised users (NMU) path on the route adjacent to the local access road would not introduce perception issues of the direction/location of the carriageway for motorists at night, resulting in safety problems. The studs may need to be uni-directional to avoid this. However, Highways England considers that these issues are a matter for the detailed design process after (if the application is granted) the making of the Development Consent Order and Highways England does not regard it as a missed opportunity at this stage.</p>

9 Flooding and Water

9.1 Positive Impacts

9.1.1 Table 9.1 responds to the positive flooding and water impacts, during construction, as set out in section 9.8.1 of the Joint LIR.

Table 9-1: Impact on flood risk during construction

Joint LIR Identified Positive Impacts	Highways England response
9.8.1. In the construction phase impacts would be fully mitigated by the provision of floodplain compensation and there would not be any likely significant residual effects.	Noted and agreed.

9.2 Negative Impacts

9.2.1 Table 9.2 responds to the negative flooding and water impacts, during operation, as set out in sections 9.8.3 to 9.8.5 of the Joint LIR. All of the following comments need to be considered alongside the agreed and acknowledged positive impacts set out in the earlier section of this chapter.

Table 9-2: Impact on flood risk during operation

Joint LIR Identified Negative Impacts	Highways England response
9.8.3 Ellington Brook - There are no properties within Flood Zone 3 in the vicinity of the scheme. The Environmental Statement indicates that modelling of the impact of the scheme including floodplain compensation has identified that the new local access road crosses the flood plain which would result in a localised peak rise of 1% Annual Exceedance Probability (AEP) water levels of 0.25m.	Agreed. The predicted change to peak water levels affects land as opposed to property. Liaison is ongoing between Highways England, the Environment Agency, other drainage authorities and the landowner to seek acceptance of the predicted change to flood risk on Ellington Brook.
9.8.4 Brampton Brook – Flood risk has been identified as very high downstream in the proximity of Brampton. The crossing of the floodplain by the new A14 results in a peak water level rise of 0.25	Agreed. The predicted change to peak water levels affects land upstream (west) of the scheme, as opposed to property. Liaison is ongoing between Highways England, the Environment Agency, other drainage authorities and

Joint LIR Identified Negative Impacts	Highways England response
metres for the 1% (1 in 100) Annual Exceedance Probability (AEP) event immediately upstream of the new road.	the landowner to seek acceptance of the predicted change of flood risk on Brampton Brook upstream of the scheme. There is no predicted change to flood risk downstream of the scheme in Brampton.
9.8.5 River Great Ouse - For the numbers of property within the floodplain upstream of the scheme crossing, the importance of flood risk on the River Great Ouse has been assessed as very high in the Flood Risk Assessment (FRA) carried out by the Applicant. The new crossing would result in a peak water level rise for the 1% (1 in 100) Annual Exceedance Probability (AEP) event of 0.02 metres within the floodplain.	The predicted increase in water levels affects land as opposed to property. Liaison is ongoing between Highways England, the Environment Agency, other drainage authorities and the landowner to seek acceptance of the predicted change to flood risk on the river Great Ouse.

9.3 Missed Opportunities

9.3.1 Table 9.3 and 9.4 respond to the flooding and water missed opportunities set out in sections 9.8.6 to 9.8.9 of the Joint LIR.

Table 9-3: Opportunities to alleviate local flooding issues

Joint LIR Identified Missed Opportunities	Highways England response
9.8.6. The proposals make provision for flood compensation from the road scheme, but fail to take the opportunity to provide further mitigation to alleviate local flooding issues, which could be provided at minimal additional cost, with significant benefit to local communities. A specific example of this kind of opportunity is present at Brampton. It is understood that the Applicant is undertaking a feasibility study on the impact of introducing a flow splitter in this location order to understand if it would be technically possible to divert flood water into the borrow pit storage area.	In accordance with the National Planning Policy Framework (NPPF) and the National Policy Statement of National Networks (NPS) these measures provide mitigation for the impact of the scheme and will ensure that it would not worsen or contribute to existing flooding issues. The NPPF and NPS do not require the scheme to mitigate pre-existing flooding issues. The proposed measures provide mitigation for the impact of the proposed scheme and will ensure that it would not worsen or contribute to existing flooding issues. However, they do not provide direct mitigation for the pre-existing flooding issues in Girton. It is not necessary to mitigate those separate issues in order to make the application acceptable in planning terms (please refer to section 5.103 of the NPS). Highways England are giving consideration to undertake a feasibility study to investigate the viability and impact of the use of the scheme Borrow Pits to provide a degree of mitigation to pre-existing fluvial flood risk across the

Joint LIR Identified Missed Opportunities	Highways England response
	scheme including at Brampton, Girton and Fenstanton.
9.8.7. Similarly there are opportunities to reduce flood risk in Fenstanton by providing flood storage area at the Galley Hill borrow pit.	Highways England is giving consideration to undertake a feasibility study to investigate the viability and impact of the use of the scheme Borrow Pits to provide a degree of mitigation to pre-existing fluvial flood risk across the scheme including at Brampton, Girton and Fenstanton.
9.8.8. Substantial existing local flooding issues also exist for the residents of Bar Hill and Girton and in these locations the Applicant could seek to utilise balancing ponds to reduce the risk of flooding for these communities.	The NPPF and NPS do not require the scheme to mitigate pre-existing flooding issues. Mitigation is included for the impact of the proposed scheme and will ensure that it would not worsen or contribute to existing flooding issues. However, they do not provide direct mitigation for the pre-existing flooding issues. It is not necessary to mitigate those separate issues in order to make the application acceptable in planning terms (please refer to section 5.103 of the NPS).

Table 9-4: Assurance that Maintenance Access will be Available

Joint LIR Identified Missed Opportunities	Highways England response
9.8.9. The detailed design must ensure that maintenance access will be available at all times (both during and following construction) so that annual works can be undertaken by the Council in order to fulfil its statutory duties. Under the terms of the Council's Land Drainage Byelaws, a 5-metre maintenance strip is required along the top of the banks of the award drains in order to allow for access. Additionally, at certain locations (as outlined on marked-up drawings shared with the HA) field access points will be required in order in order to access the awards.	Highways England will continue to liaise with all drainage authorities regarding the provision of access for maintenance activities during and after construction. This will be resolved through the detailed design process following the making of the DCO if granted and in accordance with the guidance and best practice contained in the Code of Construction Practice.

10 Minerals and Waste

10.1 Positive Impacts

10.1.1 Table 10.1 and 10.2 respond to the positive minerals and waste impacts, during construction and operation, as set out in section 9.9.2 to 9.9.3 of the Joint LIR.

Table 10-1: Potential to reduce heavy vehicle traffic during construction

Joint LIR Identified Positive Impacts	Highways England response
9.9.2. The inclusion of the borrow pits in the scheme has the potential to reduce heavy vehicle traffic on the local road network. This is likely to be a positive impact for all 6 of the borrow pits.	Noted and agreed.

Table 10-2: Positive strategy for sustainable use of surplus soil during operation

Joint LIR Identified Positive Impacts	Highways England response
9.9.3. There will be surplus soils arising from all the borrow pits, apart from at Borrow Pit 5 at Boxworth, as they are not being restored wholly / partially to an agricultural after use; but a positive strategy to ensure that these are used in a sustainable way is proposed by the applicant.	Noted and agreed.

10.2 Negative Impacts

10.2.1 Table 10.3 responds to the negative minerals and waste impacts, during construction, as set out in section 9.9.6 to 9.9.9 of the Joint LIR. All of the following comments need to be considered alongside the agreed and acknowledged positive impacts set out in the earlier section of this chapter.

Table 10-3: Lack of assessment: noise, biodiversity and hydrology during construction

Joint LIR Identified Negative Impacts	Highways England response
<p>9.9.6. The County Council is concerned that the noise impacts have been assessed using criteria appropriate for road construction and not those appropriate for mineral extraction. In particular, noise from screens, weighbridges, conveyors and the like is emitted from fixed locations within a geographically limited area, compared to construction on a linear site with the workface at varying distance. Further consideration is requested in relation to these operations to ensure that noise impacts will be appropriately mitigated in relation to the borrow pits.</p>	<p>Please refer to paragraph 9.4.21 in Table 5-4 in Chapter 5 of Highways England's response to this point.</p> <p>The borrow pits are directly related to the construction of the A14 improvement scheme and will only be used for that purpose. Treating the borrow pits as an integral part of the overall construction and minimising noise effects using the Code of Construction Practice has several benefits to the local authorities and the local community:</p> <ol style="list-style-type: none"> 1. The Code of Construction Practice commits the contractor to seek prior consent for its working method and to use best practicable means to minimise noise from the works from the local authority under s.61 of the Control of Pollution Act 1974. 2. Seeking to controlling noise from adjacent activities using two different regimes (i.e. NPPG Technical Guidance for the borrow pits and the Code of Construction Practice for the construction of the other adjacent works in the proposed scheme) will inevitably lead to challenges and risks in assuring compliance. <p>It is not accepted therefore that a greater level of control is justified. On the contrary, the control measures set out in the Code of Construction Practice will provide a higher level of protection than that which would normally be provided by the imposition of limits based upon the technical guidance (noise standards) for mineral working sites.</p>
<p>9.9.7. Potential effects on dewatering at Brampton Wood SSSI are covered at para. 17.4.45 of the ES, which states: 'It is envisaged that the sand and gravel deposits do not extend to the Brampton Wood SSSI, with glacial till being the only superficial deposits. The entire area is underlain by Oxford Clay and the woodland located on higher ground some 500m away from borrow pit 1. On that basis, there</p>	<p>Noted.</p>

Joint LIR Identified Negative Impacts	Highways England response
<p>would be no impact on the hydrogeological functioning of the Brampton Wood SSSI as a consequence of the scheme.'</p>	
<p>9.9.8. The County Council believes the distance to be closer to 425m. Para. 17.4.38 of the ES defines the Zone of dewatering influence as being up to 450m, which suggests that there may be the possibility of an effect upon the SSSI.</p>	<p>Highways England has checked the distances involved from the excavation area to the SSSI based on the up to date design and these are well in excess of the predicted dewatering zone. On this basis Highways England does not believe there will be any adverse effects due to dewatering of the SSSI. The water environment in the proximity of the borrow pit sites will be subject to routine monitoring.</p>
<p>9.9.9. There are also the potential effects of dewatering borrow pit 3 on the immediately adjacent Fenstanton Gravel Pits CWS. This is most certainly within the potential zone of influence defined in the ES and yet there appears to be no consideration of the potential effect on this important wildlife site.</p>	<p>The assessment of likely significant effects on ecological features includes a screening of the likelihood of effects in light of generic mitigation detailed in chapter 11, section 11.4 of the Environmental Statement (<i>document reference 6.1</i>). Design mitigation includes ecological mitigation principles and commitment to published guidance and best practice construction methods.</p> <p>The methods described in guidance are plainly established and uncontroversial in controlling potential environmental effects including changes in groundwater levels.</p> <p>As there is a commitment to construction using CEMP and Code of Construction Practice methods, there would be no significant effects on Brampton Wood SSSI and Fenstanton County Wildlife Site County Wildlife Site because the development of detailed design would necessarily ensure that none would occur.</p>

10.3 Missed Opportunities

10.3.1 Tables 10.4 to 10.6 respond to the minerals and waste comments set out in section 9.9.10 to 9.9.13 of the Joint LIR.

Table 10-4: Opportunities to address existing flooding issues

Joint LIR Identified Missed Opportunities	Highways England response
<p>9.9.10. There is an opportunity to mitigate climate change and enhance local flood management in respect of existing local flooding issues which has not been taken. This fails to meet the Highways England objective of a positive legacy for local communities. Specifically, measures related to flood alleviation <i>could be</i> introduced at the following borrow pits to address issues in the following locations: (<i>Borrow Pit followed by affected community</i>).</p> <ul style="list-style-type: none"> • Borrow pit No. 1 (West of Brampton) - Brampton • Borrow pit No. 2 (South West Brampton) - RAF Brampton • Borrow pit No. 3 (Galley Hill Fenstanton & Oxholme Farm) - Fenstanton • Borrow Pit 6 (North Dry Drayton Junction & North Junction 14, Grange Farm) - Dry Drayton • Borrow pit No. 7 (Weybridge Farm, Alconbury) - Brampton via Ellington Brook 	<p>In accordance with the National Planning Policy Framework (NPPF) and the National Policy Statement of National Networks (NPS) these measures provide mitigation for the impact of the scheme and will ensure that it would not worsen or contribute to existing flooding issues. The NPPF and NPS do not require the scheme to mitigate pre-existing flooding issues. The proposed measures provide mitigation for the impact of the proposed scheme and will ensure that it would not worsen or contribute to existing flooding issues. However they do not provide direct mitigation for the pre-existing flooding issues in Girton. It is not necessary to mitigate those separate issues in order to make the application acceptable in planning terms (please refer to section 5.103 of the NPS).</p>
<p>9.9.11. There is no certainty that a beneficial afteruse / aftercare scheme will be achieved and maintained or that the site will be worked and restored in phased manner. This means the substantial legacy that could be delivered to the local community and the environment e.g. through creation of priority habitat and / or public access and amenity will not be delivered.</p>	<p>Please refer to the statement at the end of this report in chapter 13 which confirms Highways England's revised proposals for a 10 year aftercare strategy for borrow pit sites. Highways England considers that the 15 years aftercare that is being requested by South Cambridgeshire District Council (referred to in Appendix C of the Joint Local Impact Report) is excessive and cannot be justified.</p> <p>Highways England would offer the borrow pit sites back to the original owners of the land and legal covenants would apply to the sale of land by Highways England to ensure that the sites are maintained and is managed in accordance with the agreed aftercare arrangements, thus ensuring long term community and environmental gain in accordance with the terms of the restoration and aftercare proposals.</p>

Table 10-5: Creation of priority habitats

Joint LIR Identified Missed Opportunities	Highways England response
<p>9.9.12. Borrow pit No. 1 (West of Brampton) and Borrow pit No. 2 (South West Brampton) could be restored to create Priority habitat and public access and amenity, while Borrow pit No. 3 (Galley Hill Fenstanton & Oxholme Farm) could be restored to deliver Priority habitat creation. See chapter 9.3 Ecology.</p>	<p>The restoration proposals for borrow pits 1, 2 and 3 as described in Appendix 3.3 of the Environmental Statement (<i>document reference 6.1</i>) assumes a significant amount of landscape planting and habitat creation. Habitat creation would include priority habitats broadleaved woodland, hedgerows and standing water.</p> <p>No additional formal public rights of way or public access are proposed. Further details on the restoration provisions for the borrow pits will be developed during the Examination of the DCO along with an aftercare strategy for all of the borrow pits. As stated in chapter 13 of this report Highways England has now made a commitment to 10 years aftercare of the borrow pit sites, plus imposition of covenants on any onward sale of the sites securing continued maintenance after disposal.</p>

Table 10-6: Transport of hard rock by sustainable means

Joint LIR Identified Missed Opportunities	Highways England response
<p>9.9.13. There is a need to ensure that environmental impacts of the importation of hard rock for the scheme (which cannot be supplied locally) are minimised. Securing the option of a direct access to the Chesterton Rail sidings on the same basis that borrow pits are being promoted would be beneficial.</p>	<p>Through dialogue and consultation with the local authorities, Highways England has acknowledged the concerns about minimising local impacts associated with importation of raw materials not sourced from the borrow pits. The option of utilising the Chesterton Rail sidings to minimise road haulage of such materials is being actively considered by Highways England. However, a strategy for sourcing and transportation of such materials cannot be finalised until after the making (if the application is granted) of the Development Consent Order. Any changes to the configuration of the Chesterton Rail sidings or other infrastructure to allow importation via this route which constitutes new development may be subject to obtaining of separate planning permissions, as this falls outside the scope of the DCO. Local amenity impacts would be assessed and reported to support any separate planning applications should these be required.</p>

11 Social and Community Matters

11.1 Positive Impacts

11.1.1 Table 11.1 to 11.3 respond to the positive social and community impacts, during operation, as set out in sections 10.1.2 to 10.1.5 of the Joint LIR.

Table 11-1: Reducing severance and improved access between communities during operation

Joint LIR Identified Positive Impacts	Highways England response
10.1.2. The scheme would deliver positive community impacts once constructed. For example, at the online section between Fen Drayton and Milton the scheme would provide improved access between existing community facilities along the A14 corridor and to Cambridge via the route improvements.	Noted and agreed
10.1.3. Also the traffic diverted onto the new offline section of the A14 would result in reductions in traffic levels on the existing local road network and the current A14 route. This would provide relief from existing severance issues between communities and community facilities by easing congestion and reducing hazards.	Noted and agreed.

Table 11-2: Improving access for non-motorised users across the A14 corridor during operation

Joint LIR Identified Positive Impacts	Highways England response
10.1.4. The improvements to Public Rights of Way (PROW) included in the scheme design will deliver significant positive impacts for non-motorised users (pedestrians, cyclists and equestrian travellers). There are significant health and quality of life benefits of improving non – motorised user facilities for communities.	Noted and agreed.

Table 11-3: Improvements to the noise and air quality improvement along de-trunked section during operation

Joint LIR Identified Positive Impacts	Highways England response
<p>10.1.5. The reduction in traffic on the de-trunked section of the new scheme will also offer positive benefits for communities in terms of noise and air quality. Specifically a positive impact in terms of noise reduction has been identified for Stukeley Meadows Primary School (Huntingdon) and Hemingford Nursery School. These improvements would result mainly from re-routeing traffic out of town and along the new bypass.</p>	<p>Noted and agreed.</p>

11.2 Negative Impacts

11.2.1 Table 11.4 to 11.7 respond to the negative social and community impacts, during construction and operation, as set out in sections 10.1.6 to 10.1.11 of the Joint LIR. All of the following comments need to be considered alongside the agreed and acknowledged positive impacts set out in the earlier section of this chapter.

Table 11-4: Environmental impacts on communities from operation of borrow pits during construction

Joint LIR Identified Negative Impacts	Highways England response
<p>10.1.6. HGV movements between borrow pits and the construction sites are likely to cause negative impacts on communities in terms of noise, air quality as well as increased congestion.</p>	<p>As noted within section 8.2.18 of the Environmental Statement (ES) (<i>document reference 6.1</i>) emissions from HGVs have been scoped out of the air quality assessment due to the temporary nature of the works and the minimal impact the additional vehicles would have on overall pollutant concentrations. The assessment of construction noise reported in the ES (<i>document reference 6.1</i>) takes account of the envisaged HGV movement between the borrow pits and the construction sites. The assessment reports any impacts and any likely significant direct effects arising from construction where the HGV movements are within the Red Line Boundary for the</p>

Joint LIR Identified Negative Impacts	Highways England response
	<p>proposed scheme. Such significant effects (e.g. at the SW corner of RAF Brampton Barracks¹⁶) are based on the total construction noise forecast to occur (i.e. from HGV movements and any other concurrent construction activities in the area such as excavating material from the borrow pits). Any change in noise along the existing highway network due to HGV traffic temporarily generated by the proposed scheme has been assessed as an indirect effect. No likely significant indirect effects due to noise from construction traffic are identified in the Environmental Statement (<i>document reference 6.1</i>).</p> <p>With regard to direct noise effects from borrow pit activities and associated HGV movements inside the red line boundary, no significant effects are reported in the ES except at approx.10 dwellings on the south west corner of RAF Brampton Base (<i>table 14.9 in chapter 14 of the ES - document reference 6.1</i>). With reference to the Highways England response to Table 20 in the LIR, Highways England has confirmed that the duration of this significant effect would be 4 to 6 months rather than the 42 months reported in Table 14.9 of the ES. With reference to the Highways England response to LIR para 9.4.21, the control processes in the CoCP and particularly the commitment to secure s.61 consents from the local authority before starting work on site, are likely to result generally in lower levels of noise than reported in the ES. This would be on the basis of greater boundary screening for example that would result in the temporary significant construction effect at Brampton RAF base being avoided.</p> <p>The Code of Construction Practice (Appendix 20.2 of the Environmental Statement Appendices, document reference 6.3) sets out a series of proposed measures and standards of work that will be applied by Highways England and its main contractors throughout the construction period. The main contractors would consult with local authorities regarding routes that</p>

¹⁶ Please note the error in the *Environmental Statement (document reference 6.1)* discussed in response to LIR paragraph 9.4.19 Table 20 that confirmed that the likely duration of this significant effect is 4 to 6 months – during site establishment – rather than the 42 months reported in the ES.

Joint LIR Identified Negative Impacts	Highways England response
	<p>they may use to access the construction sites.</p> <p>Chapter 15 of the Code of Construction Practice (CoCP) (Appendix 20.2 of the Environmental Statement Appendices, document reference 6.3) in Section 15.7 details measures on access routes for construction traffic including:</p> <ul style="list-style-type: none"> • As far as reasonably practicable, access routes for construction traffic would be limited to the trunk road network and main roads on the local road network. • Access along other local roads would be restricted; however, it may be necessary to allow transport or delivery of locally sourced materials. Where possible, the main contractors will provide offline haul routes created within or/and parallel to the scheme where possible to reduce the need to use public roads. All proposed compounds and soil storage areas are located within close proximity of the scheme alignment, which would help to lower traffic to and from the site once the depot plant and personnel are installed within compounds. Paragraph 8 of Part 1 of Schedule 2 (Requirements) to of the draft Development Consent Order requires Highways England to produce a traffic management plan applicable to construction in consultation with the relevant local planning authority.
<p>10.1.7. There would be a negative impact during construction on the community of Boxworth in terms of noise, air quality and congestion. This would be as a result of activity related to the borrow pits, specifically borrow pit 5 which is the largest and therefore is expected to generate more haulage traffic.</p>	<p>Noted, this effect on Boxworth is assessed in Table 16.14 of the ES as Moderate Adverse. "Due to its large size borrow pit 5 is a significant presence in close proximity to Boxworth, increased congestion during the construction phase may cause severance issues as regards access to the A14 from this location." Mitigation measures to manage dust, air pollution, odour and exhaust emissions during the construction phase in accordance with best practicable means are outlined in the Code of Construction Practice. This includes consideration of transportation of materials and haul routes.</p> <p>As noted within section 8.2.18 of the Environmental Statement (<i>document reference 6.1</i>) emissions from HGVs have been scoped out of the air quality assessment due to the temporary nature of the works and the minimal impact</p>

Joint LIR Identified Negative Impacts	Highways England response
	<p>the additional vehicles would have on overall pollutant concentrations.</p> <p>With regard to noise, please refer to Highways England's response to paragraph 10.1.6 of the LIR. No significant construction noise effects have been identified at Boxworth. Please refer to section 14.4 and Appendix 14.4 of the Environmental Statement (<i>document reference 6.1 and 6.3</i>)</p>

Table 11-5: Environmental impacts on community facilities during construction

Joint LIR Identified Negative Impacts	Highways England response
<p>10.1.8. During construction there would also be negative impacts on community facilities such as schools. Noise during construction has been identified as a significant negative impact at Hinchingsbrooke School (Huntingdon) during the daytime with levels of 61–72 dBLpAeq,12hr over a period of approximately 5 months commencing in 2020 during earthwork activities for surrounding new and altered roads.</p>	<p>Highways England agrees that there will be some negative impacts on community facilities, including Hinchingsbrooke School as set out in this paragraph. Highways England is developing, through an ongoing engagement process with the owners and operators of the facilities, measures to minimise and mitigate impacts. Please see chapter 14 section 14.4.22 of the Environmental Statement (<i>document reference 6.1</i>) “<i>The Highways Agency would continue to engage with the owners and operators of all the non-residential receptors to establish sensitivity of the receptors and develop additional mitigation where necessary and practicable as required by the Code of Construction Practice. Specific mitigation would be included, where needed, in the relevant final local environmental management plan (Code of Construction Practice (Appendix 20.2)).</i>”</p> <p>Further, the Code of Construction Practice (<i>document reference 6.3</i>) requires the main contractors to seek and obtain prior consents from the relevant local authority under section 61 of the Control of Pollution Act 1974 for the works. The site-specific controls must therefore be agreed with and consented by the relevant local authority before the works can start. To secure consent the contractor will have to provide evidence that through their proposed construction method and associated mitigation, best practicable means to minimise noise and vibration will be in place (for further information please refer to Highway England's response to ExA question 1.10.3 (Response to</p>

Joint LIR Identified Negative Impacts	Highways England response
	ExA's First Written Questions, Report 10: Noise and Vibration (document reference EX/37)).

Table 11-6: Land-take impacts on viability during operation

Joint LIR Identified Negative Impacts	Highways England response
<p>10.1.9. The scheme involves the compulsory purchase of land for the road and for environmental mitigation such as landscape planting. The majority of land take required is agricultural land. This would have implications for their viability where land take is a significant proportion of a farm, or if it would cause severance or changes in access which would alter the farming operation.</p>	<p>Noted, see Table 16.11 of the Environmental Statement (<i>document reference 6.1</i>) for the assessment of impacts of land take on farms. Assessments are made by farm unit and range from Minor Adverse to Major Adverse, and are based on land take and severance. If the DCO for the scheme is made by the Secretary of State, compensation and blight procedures will be those contained in the national compensation code. Principles such as disturbance, severance, injurious affection, home loss, basic loss, occupier's loss, blight and property devaluation will apply.</p>
<p>10.1.10. In addition to farms there are other businesses / organisations that will be affected by land take such as MAGPAS – the Eastern Air Ambulance Charity based in Huntingdon. The scheme design includes the removal of a private car park, which is within the ownership of part of MAGPAS office facilities. The charity run training courses and generate income indirectly from the car park by offering it as a facility as part of sub-letting the office space. Removal of the car park facility is likely to negatively affect the income of the charity although it is noted that since the end of March 2015, the use of the car park has ceased.</p>	<p>Noted. Impacts on farming businesses, private property and development land viability are covered within Tables 16.11, 16.12 and 16.13 in chapter 16 of the <i>Environmental Statement (document reference 6.1)</i>. . The scheme has been designed to reduce impacts on the car park as far as practicable. The Statement of Common Ground between Highways England and the landowner includes an alternative arrangement which reduces the impact on the car park to a loss of 4-5 spaces.</p>

Table 11-7: Land-take impacts on accessibility during operation

Joint LIR Identified Negative Impacts	Highways England response
<p>10.1.11. Community impacts include possible severance that could occur as a result of the footprint of the scheme dissecting farmsteads and access routes between communities, especially along the offline section. The scheme could act as a barrier to movement between communities through traffic impacts and as a physical barrier where none was present before. Additionally, where the scheme would dissect farmsteads, farming operations could need reorganisation, especially in regards to harvest patterns and the movement of farming equipment between severed fields.</p>	<p>Noted, severance impacts are assessed in Tables 16.11 and 16.14 in chapter 16 of the Environmental Statement (<i>document reference 6.1</i>). Whilst Highways England accepts there are some severance impacts caused as a result of the scheme, a lot of work has been done to minimise those effects, and in many areas the impacts are actually beneficial, as referred to in Table 7.1 to 7.3 of this document.. Extensive consultation with landholders was carried out. In addition, Statements of Common Ground (SoCG) with selected landholders were produced. This is an ongoing process.</p>

11.3 Missed Opportunities

11.3.1 Table 11.8 and 11.9 respond to the social and community matters comments set out in section 10.1.12 to 10.1.14 of the Joint LIR.

Table 11-8: Opportunities to alleviate local flooding issues

Joint LIR Identified Missed Opportunities	Highways England response
<p>10.1.12. Girton has been flooded on three occasions during the last 38 years, and this flooding stems from two streams (The Washpit and The Beck), which drain from the A14. Flood risk has been exacerbated by the developments of the A14 and M11 that have taken place over those 38 years. There are also local flooding issues at Brampton, Fenstanton and Bar Hill. The development of the scheme offers the opportunity to incorporate comprehensive drainage strategies and management of out-flowing water that will decrease, as opposed to increase or leave unchanged the flooding risk.</p>	<p>Noted. See chapter 17 of the Environmental Statement (<i>document reference 6.1</i>) in regard to drainage. The National Planning Policy Framework and National Policy Statement for National Networks do not require the scheme to mitigate pre-existing flooding issues. Measures are included to provide mitigation for the impact of the proposed scheme and will ensure that it would not worsen or contribute to existing flooding issues. However they do not provide direct mitigation for the pre-existing flooding issues. It is not necessary to mitigate those separate issues in order to make the application acceptable in planning terms (please refer to section 5.103 of the NPS).</p>

Table 11-9: Noise monitoring at community facilities where noise increases are currently below thresholds

Joint LIR Identified Missed Opportunities	Highways England response
<p>10.1.13. During operation there will be an impact on in terms of increased noise levels at Brampton Primary School – In 2035 with the scheme the predicted noise level at the school would be 48.2 dBLpAeq during the day. This represents an increase of 4.8BLpAeq during the day with the scheme in 2035. However the total scheme level is below Impact screening criterion (50dBLpAeq,T and a change >3dB) as set out in Government Noise Policy . This school will be impacted by additional traffic using the A14 Huntingdon Southern Bypass and the A1. The noise levels are close to the threshold level of 50dB and the change is greater than >3dB.</p>	<p>See chapter 14 of the Environmental Statement (<i>document reference 6.1</i>).in regard to noise and Appendices 14.3 and 14.6 (<i>document reference 6.3</i>).</p> <p>The assessment reported in the Environmental Statement, considers forecast noise levels with regard to the 2012 Education Funding Agency's Acoustics Performance Standards for schools. These performance standards have since been confirmed in the updated Building Bulletin 93. The 50 dB LpAeq,T criterion identified in Table 14.8 of the ES (<i>document reference 6.1</i>) applies to outdoor teaching spaces Further as noted in the <i>Environmental Statement (document reference 6.1)</i>, significant construction noise effects on non-residential receptors such as schools have been identified on a cautious, worst case basis, assuming that occupied rooms or otherwise sensitive facilities are located at the closest facades of the building to the scheme and that windows are open. Taking account of the (worst case) increase of 4.8 dB and, assuming the arrangement and design of the school means that internal teaching spaces are the most vulnerable they can be to changes in external noise levels, no impact or significant effect is likely on the primary school . This is because the 'end state' noise level (48.2 dB LpAeq,t) is lower than the relevant design guidance for new schools.</p>
<p>10.1.14. The impacts on residential properties at Stewart Close, near to the school are classified as being as minor adverse, due to noise level being above 50dB. As part of the scheme mitigation Highways England has included a noise barrier fence alongside the A1/A14 at Brampton. It will be important to review noise levels at this location in order to ensure that if noise levels increase beyond the threshold, mitigation is provided.</p>	<p>Noted. See chapter 14 of the Environmental Statement (<i>document reference 6.1</i>) in regard to Noise.</p> <p>As set out in Table 14.21 of the Environmental Statement (<i>document reference 6.1</i>) the envisaged 2m fence barrier is on top of a landscape earthwork (bund) that would rise 2m above carriageway level. In total this would provide a noise barrier rising 4m above carriageway level. Further information on the design of noise barriers with specific reference to their height is provided in Highways England's response to ExA question 1.10.12.</p> <p>As set out in Highway England's response to ExA Question 1.10,8, Highways England has committed to propose a further Requirement to the draft DCO that will secure the details of the noise mitigation. The new requirement has</p>

Joint LIR Identified Missed Opportunities	Highways England response
	<p>been included in the updated draft DCO submitted to the ExA on deadline 4 (7 July 2015) as defined by the Rule 8 letter.</p> <p>Appendix 14.1 of the Environmental Statement Appendices (document reference 6.3) sets out the scheme operational noise and vibration policy including the provisions for post-scheme noise monitoring. It specifically refers to the duty placed upon the Highways England to assess noise levels following the opening of the scheme in accordance with the requirements of the Noise Insulation Regulations 1975¹⁷. The Noise Insulation Regulations make provisions for noise monitoring to ensure that all qualifying properties are properly identified.</p>

¹⁷ Noise Insulation Regulations (as amended 1988), 1975

12 Legacy

12.1 Positive Impacts

12.1.1 Tables 12.1 to 12.4 respond to the positive legacy impacts, during construction and operation, as set out in section 11 of the Joint LIR.

Table 12-1: Design elements creating positive legacy

Joint LIR Identified Positive Impacts	Highways England response
<p>11.1.3. The following aspects, incorporated into the design have been identified as bringing direct benefits:</p> <ul style="list-style-type: none"> • Removal of the Huntingdon road viaduct over the East Coast Mainline; • 12 km of new NMU routes; • NMU bridges at Swavesey and Bar Hill • Public rights of Way (PRoW) across A1 providing an NMU link to Brampton Services and Brampton Wood. 	<p>Noted and agreed.</p>

Table 12-2: Quality of life

Joint LIR Identified Positive Impacts	Highways England response
<p>11.1.4. The removal of the road viaduct over the East Coast Mainline and the creation of link roads and new accesses for NMUs create several legacy benefits for Huntingdon town centre and the surrounding area. The removal of the viaduct creates the direct benefit of removing the visual, noise and other environmental impacts from the traffic that passes through the town using the existing A14.</p>	<p>Noted and agreed.</p>

Joint LIR Identified Positive Impacts	Highways England response
<p>11.1.5. The creation of the new facilities for NMUs improves access to Huntingdon town centre and reduces the impact of traffic on the historic town bridge between Huntingdon and Godmanchester. In addition the HA are planning to use heritage fencing to replace fencing at Mill Common and on the Views Common link to Hinchingsbrooke Park Road which reflects and strengthens the historic background within this location.</p>	<p>Noted and agreed.</p>
<p>11.1.6. Other legacy aspects have been included such as landscape treatment and the early delivery of improved noise barriers to the latest standards at designated Important Areas.</p>	<p>Noted and agreed.</p>
<p>6.4.40. The delivery of 'Green Infrastructure' is identified as part of the legacy delivery. A Net gain (c271HA) in more valuable semi-natural habitats is expected as well as improvements in habitat connectivity. The removal of the existing A14 and embankments across Views Common will lead to the return of the area to grassland / planting, the reduction of severance in the area and an enhanced sense of place.</p>	<p>Noted and agreed.</p>
<p>11.1.7. The 12KM NMU shared cycleway / footway from Fenstanton to Girton alongside the local access road offers legacy benefits for landscape treatments and habitat connectivity which will lead to benefits for wildlife in the area. The new NMU bridges at Swavesey and Bar Hill, enhanced PROWs and the de-trunking of the existing A14 between Brampton and Swavesey will lead to a number of direct legacy benefits including improved local connectivity between local communities and key employment sites.</p>	<p>Noted and agreed.</p>
<p>11.1.8. In terms of delivering legacy the DCO identifies that the Strategic Stakeholder Board (SSB) will provide strategic direction for the scheme and oversee sub-groups tasked with developing and delivering legacy themes.</p>	<p>Noted and agreed.</p>
<p>11.1.30. As part of removal of Huntingdon viaduct, Brampton Road will be returned to its previous form. Currently the pavement is wide enough for pedestrian and cyclists and is frequently used by commuters to the rail station and by children travelling to Hinchingsbrooke School and those employed within the</p>	<p>Noted and agreed</p>

Joint LIR Identified Positive Impacts	Highways England response
Hinchingsbrooke area as well as part of the Brampton to Huntingdon walking and cycling route.	

Table 12-3: Local economic growth

Joint LIR Identified Positive Impacts	Highways England response
11.1.9. Further legacy objectives are planned to be delivered at the construction phase. These include supporting young people and schools, supporting neighbourhoods, promoting health and well-being; and building capacity within the voluntary and community sector. Local economic growth will be delivered through two strands: education, employment and skills; and open procurement.	Noted and agreed.
11.1.10. The scale of the scheme at £1.5 billion and an estimated peak workforce of 1,800 people creates both a significant challenge, at a time of expansion in the construction sector, and an opportunity to develop a regional construction supply chain and workforce with the right capabilities, skills and knowledge.	Noted and agreed.
11.1.11. The scheme would provide the potential to create local and regional employment during the planning and construction phases and to provide local people with the chance to learn new skills, which would remain relevant in a growing regional and national construction sector. It would also provide the opportunity to raise the profile of the sector, encouraging new entrants and to develop a training infrastructure that is relevant to the workforce needs of the industry.	Noted and agreed.
11.1.12. The aim of the open procurement strand is to ensure that opportunities to access contracts are open to all potential contractors and, in particular, to SMEs and new entrants into the sector.	Noted and agreed.
11.1.35. The scheme provides economic benefits to the County through the reduction in congestion between Cambridge and	Noted and agreed

Joint LIR Identified Positive Impacts	Highways England response
<p>Huntingdon as well as on local routes around Huntingdon. There are also significant opportunities to deliver economic benefit to the area in the construction phase through local and regional employment and training. The DCO sets out the high level aspirations of supporting young people and schools, supporting neighbourhoods and building capacity within the voluntary and community sector.</p>	

Table 12-4: Landscape legacy

Joint LIR Identified Positive Impacts	Highways England response
<p>11.1.14. The removal of the Huntingdon Viaduct offers a number of environmental, economic and social benefits. We would wish to see the opportunity taken to maximise the legacy opportunities available.</p>	<p>Noted and agreed.</p>
<p>11.1.15. The removal of the existing road viaduct over the East Coast Mainline railway would: benefit the townscape of, and some views in Huntingdon, particularly the setting of the Huntingdon Conservation Area, improve views from public rights of way and accesses to Huntingdon railway station as well as improving the setting of the listed canopy of the railway station; and offer the opportunity for regeneration within Huntingdon town centre by removing the severance caused by the viaduct and by widening accessibility opportunities across the town and reducing journey times.</p>	<p>Noted and agreed.</p>
<p>11.1.16. The existing A14 viaduct and its associated traffic is a substantial landmark feature across Brampton Road and the East Coast mainline railway and detracts from the visual quality of these approaches to the town. As identified previously the removal of the viaduct will have significant benefits in terms of the landscape and visual amenity of the area.</p>	<p>Noted and agreed.</p>

Joint LIR Identified Positive Impacts	Highways England response
<p>11.1.17. The ES identifies that Huntingdon Rail Station will benefit from an improved setting for this listed building and its canopy. The removal of the viaduct offers the opportunity to benefit the setting of this listed building, the opportunities to do this need to be scoped out earlier on to ensure that improvements to the area can be undertaken during the construction phase or safeguarded for implementation in the future.</p>	<p>Noted. The improvement of the setting of the railway station is a matter for the landowner and other interested parties, If these parties wish to discuss these matters after the making of the DCO (assuming the application is granted) Highways England is willing to take part.</p>
<p>11.1.18. The removal of the viaduct and its embankments would help to mitigate the loss of open space and the privately owned green space at View Common, in accordance with Policy HW7 within the Huntingdon West Area Action Plan.</p>	<p>Noted and agreed.</p>
<p>11.1.41. A new public rights of way around the borrow pits would result in enhancements to landscape character, visual amenity, biodiversity and a new resource for passive recreation for local residents and visitors. This is especially relevant at Borrow Pits 1 and 2, west and south west of Brampton where construction and operation phases of the scheme will have large scale adverse impacts for many years until mitigation planting has matured and begins to fulfil its screening and integrating functions These Borrow Pits have the potential when together with Brampton Woods SSSI, Grafham Water SSSI, and the Ouse Valley meadows and gravel pits to form a substantial block of nature conservation and informal recreation sites, and contribute to the objectives of the Cambridgeshire Green Infrastructure Strategy.</p>	<p>Noted and agreed</p>

12.2 Negative Impacts

12.2.1 Tables 12.5 to 12.7 respond to the negative legacy impacts, during construction and operation, as set out in section 11 of the Joint LIR. All of the following comments need to be considered alongside the agreed and acknowledged positive impacts set out in the earlier section of this chapter.

Table 12-5: Landscape legacy

Joint LIR Identified Negative Impacts	Highways England response
<p>11.1.19. In terms of the landscape around the borrow pits used for the scheme the DCO contains a commitment for management for a period of 5 years. This is unacceptable to the local authorities and it is the County Council's position to seek a minimum of 10 years for aftercare management which has now been agreed by the Applicant, Highways England. This legacy element is detailed further in para. 6.1.</p>	<p>Please refer to the statement at the end of this report in chapter 13 which confirms Highways England's revised proposals for a 10 year aftercare strategy for borrow pit sites.</p> <p>Highways England would offer the borrow pit sites back to the original owners of the land and legal covenants would apply to the sale of land by Highways England to ensure that the sites are maintained in accordance with the agreed aftercare arrangements.</p>

Table 12-6: Ecological legacy

Joint LIR Identified Negative Impacts	Highways England response
<p>11.1.23. In terms of the legacy of the scheme on Cambridgeshire's ecology, the Applicant will need to undertake further assessments on a number of areas in order that the local authorities can be confident of the ecological impacts of the scheme. In particular there has been inadequate assessment of the impacts on Buckden Gravel Pits County Wildlife Site and Fenstanton County Wildlife Site. Further assessment of the impact on terrestrial invertebrates and on reptiles will also be necessary. Finally, a long term water strategy is</p>	<p>Highways England consider that the scheme is compliant with policy CS35 as the assessment within chapter 11 of the Environmental Statement (ES) (document reference 6.1) has adequately assessed the likely significant effects on designated sites.</p> <p>The assessment of likely significant effects on ecological features includes a screening of the likelihood of effects in light of generic mitigation detailed in chapter 11, section 11.4 of the Environmental Statement (<i>document ref 6.1</i>).</p>

Joint LIR Identified Negative Impacts	Highways England response
<p>proposed but further assessment /mitigation is required to ensure that biodiversity sites, at Brampton Wood SSSI and Fenstanton County Wildlife Site are not adversely affected by dewatering.</p>	<p>Further ecological assessment would be carried out during detailed design, including in relation to invertebrates and on reptiles. Design mitigation includes ecological mitigation principles and commitment to published guidance and best practice construction methods. The methods described in guidance are established and uncontroversial in controlling potential environmental effects such as pollution (including dust) and changes in groundwater.</p> <p>As there is a commitment to construction using these methods, there would be no significant effects on Brampton Wood SSSI and Fenstanton County Wildlife Site because the development of detailed design would necessarily ensure that none would occur.</p>
<p>11.1.24. The Applicant has only committed to 5 year management of the borrow pits resulting in the loss of long-term ecological compensation sites as well as the loss of a potential overall net gains in biodiversity value as part of the scheme. This does not accord with the Cambridgeshire and Peterborough Minerals and Waste Plan, which seeks to secure biodiversity gains. At the very least the local authorities expect 10 years management of minerals and waste sites that result in the loss of significant biodiversity value, as per the example of Whitemoor Marshalling Yard County Wildlife Site in Fenland.</p>	<p>Please refer to the statement at the end of this report in chapter 13 which confirms Highways England's revised proposals for a 10 year aftercare strategy for borrow pit sites.</p> <p>Highways England would offer the borrow pit sites back to the original owners of the land and legal covenants would apply to the sale of land by Highways England to ensure that the sites are maintained in accordance with the agreed aftercare arrangements.</p>

Table 12-7: Pedestrians, cyclists and equestrian travellers

Joint LIR Identified Negative Impacts	Highways England response
<p>11.1.34. Bridleway No. 6 "The Stukeleys" currently connects to a lay-by on the eastern side of the A1. It is proposed that the lay-by will be stopped-up and closed by the DCO, which will effectively sever this PROW from meeting another highway. At present this lay-by is used by local people who park there and walk their dogs along the bridleway. This will no longer be possible after the completion of the scheme and will result in the severing of a public highway with an adverse impact on connectivity.</p>	<p>Highways England notes the concerns about the proposals affecting the lay-by and the indirect impact upon use of the bridleway Stukeley 6. However there are also other considerations which Highways England has taken into account, based upon consultations with Cambridgeshire County Council, which have led to the proposed closure of the lay-by.</p> <ol style="list-style-type: none"> 1. The lay-by strategy allows for no lay-bys other than emergency lay-bys within the scheme for safety reasons, focussing motorists on the two service areas on the route, Brampton Hut and Cambridge Services. Also, the provision of lay-bys is considered to lead to environmental problems caused by overnight lorry parking, and anti-social behaviour. This approach was agreed by Cambridgeshire County Council. 2. This particular lay-by on the A1 was identified by the Police and Highways England as a location which caused particular problems in the context of anti-social behaviour. <p>The main carriageway of the highway would be fenced to discourage NMUs entering the main carriageway. In accordance with the lay-by strategy, people would have the option of travelling to the Brampton Hut services to park and exercise their dogs from there in relative safety. There would be links to public rights of way from that location.</p> <p>Highways England does not agree with the claim that the proposed scheme would introduce severance or have an adverse impact on connectivity that is noticeably different from the existing situation, as NMU have not been observed to enter the A1 from the bridleway (as they are permitted to do), demonstrating that the bridleway already acts as a cul-de-sac. Links to Alconbury from the public rights of way network on the east side of the A1 are already made using the minor country lane, Low Road and byway 7/1, which links to High Street, Alconbury, where there is a bridge under the A1. NMUs can continue to use these routes, therefore there is no severance.</p>

	<p>During detailed design, the designation of the proposed maintenance track on the east side of the A1 as a bridleway could be considered. However this would be subject to further considerations, such as determining safe use of the B1043 junction by NMUs. As part of our approach to legacy for the scheme, Highways England is committed to on-going engagement with stakeholders on a series of priorities as set out in section 7 of the Case for the Scheme (document reference 7.1).</p>
--	--

12.3 Missed Opportunities

12.3.1 Tables 12.8 to 12.5 respond to the legacy comments set out in section 11 of the Joint LIR.

Table 12-8: Landscape legacy

Joint LIR Identified Missed Opportunities	Highways England response
11.1.20. With regard to artificial lighting introduced by the scheme, an assessment of the impact of artificial lighting on people and their living conditions, particularly in residential areas close to junctions would determine impacts on health and quality of life.	Please refer to Highways England's response to the Joint LIR paragraph 9.1.42 in chapter 2 Table 2.12 of this document.
11.1.21. As minimum there should be a commitment to ensure that artificial lighting will be installed having due regard to national and industry best practice guidance and standards	Please refer to Highways England's response to the Joint LIR paragraph 9.1.43 in chapter 2 Table 2.12 of this document.

Table 12-9: Cultural heritage legacy

Joint LIR Identified Missed Opportunities	Highways England response
11.1.22. Archaeological projects run in Cambridgeshire build an element of community engagement in all major projects. We would like to see an integrated approach to this aspect in order that a positive legacy for cultural heritage is achieved. The creation of a public information centre for finds from the excavation works would	Highways England, through its work on legacy with local stakeholders, is keen to deliver a coordinated approach to community engagement. The archaeological works related to the scheme, provide an opportunity to support both the cultural heritage and education agenda within the local community. Highways England has established the Strategic Stakeholder

Joint LIR Identified Missed Opportunities	Highways England response
be of educational and cultural interest for the community and visitors.	Board with a membership comprising local authorities and the Local Enterprise Partnership as driving the agenda for community initiatives to be delivered through the lifetime of the scheme and is committed to working with stakeholders to establish the best solution to publicise and display archaeological finds.

Table 12-10: Ecological legacy

Joint LIR Identified Missed Opportunities	Highways England response
11.1.25. The opportunity to enhance the environment for species of County Importance, such as Cetti's Warbler could be taken through the development of priority habitats.	Priority and UK BAP habitats that would be created within the landscape and ecological mitigation and borrow pit restoration proposals are: standing open waters; hedgerows; lowland mixed deciduous woodland including some wet woodland; lowland meadows; and reedbeds. These would be maintained in the long term and would provide enhancements for a range of species of County importance, including Cetti's and grasshopper warblers and barbastelle bat.

Table 12-11: Noise and vibration legacy

Joint LIR Identified Missed Opportunities	Highways England response
11.1.27. The 'Important Areas' for noise as classified by Defra, have been identified in the ES and mitigation in these areas is included in the plans. Outside of the 'Important Areas' there are areas where the impact is classified as 'minor adverse' and it may be necessary in these areas to make alterations to the design of noise barriers in order to mitigate these residual impacts.	The NNNPS at 5.195 notes that the proposed scheme must <i>“meet, the following aims, within the context of Government policy on sustainable development:</i> <ul style="list-style-type: none"> • <i>avoid significant adverse impacts on health and quality of life from noise as a result of the new development;</i> • <i>mitigate and minimise other adverse impacts on health and quality of life from noise from the new development; and</i> • <i>contribute to improvements to health and quality of life through the</i>

Joint LIR Identified Missed Opportunities	Highways England response
	<p><i>effective management and control of noise, where possible.”</i></p> <p>The requirement is therefore to minimise adverse ‘as far as is sustainable’ not to mitigate (i.e. remove) them.</p> <p>Highways England has agreed with the local and county authorities to undertake further ‘sensitivity tests’ during the examination to evidence that mitigation in the scheme has been maximised and hence adverse effects minimise, as far as sustainable.</p> <p>As set out in the section 14.5.5 of ES (document reference 6.1) <i>“To ensure that additional mitigation is sustainable, the provision has been subject to the following tests:</i></p> <ul style="list-style-type: none"> • <i>Benefit (monetised benefit of noise reduction evaluated using WebTAG21) compared to cost of the mitigation;</i> • <i>Engineering practicability;</i> • <i>Other environmental effects potentially caused by the mitigation (for example landscape or visual effects); and</i> • <i>Stakeholder engagement and consultation responses.”</i>
<p>11.1.28. The Applicant should seek to cooperate with the promoters of new developments in order to ensure that a joined up approach is taken to ensuring a positive legacy in terms of the noise environment.</p>	<p>As set out in LIR paragraphs 9.4.50 and 9.4.51, this relates to the North West Cambridge and Darwin Green developments. In the response to LIR paragraph 9.4.52 Highways England has confirmed that it is already in dialogue with the University of Cambridge and will seek to engage with Barratt Homes and will advise the local/county authorities and ExA of the engagement outcomes via updated SoCG.</p>

Table 12-12: Pedestrians, cyclists and equestrian travellers

Joint LIR Identified Missed Opportunities	Highways England response
<p>11.1.29. The local authorities expect modern cycle and pedestrian routes that reflect the levels of use and the standards typically seen on the dedicated routes alongside the Cambridgeshire Guided</p>	<p>The Non-Motorised User proposals accord with the Department for Transport best practice guidelines and Highways England design standards.</p> <p>The potential use of solar studs has been discussed during our meetings with</p>

Joint LIR Identified Missed Opportunities	Highways England response
<p>Busway. The inclusion of solar studs in unlit areas is one specific design aspect which will ensure that NMU routes can be used as much as possible in both the day and the evening periods.</p>	<p>the local authorities and is under consideration by Highways England in locations where a full lighting scheme would be inappropriate. These issues will be considered at detailed design after making of the DCO (if granted), and so the opportunity remains.</p>
<p>11.1.31 As part of the scheme a number of previously severed public rights of way are being reconnected. The joint local authorities are supportive of the positive impact this will have for communities in terms of improving accessibility and opportunities for sustainable travel. There are several areas where opportunities to maximise the legacy benefits for public rights of way exist are not currently included as part of the scheme.</p>	<p>As part of its approach to legacy for the scheme, Highways England is committed to on-going engagement with stakeholders after the Development Consent Order is made (assuming it is granted) on a series of priorities as set out in section 7 of the Case for the Scheme (document reference 7.1). Encouraging non-motorised users is one strand of the Legacy Plan and Highways England will work with the membership of the Strategic Stakeholder Board to maximise the legacy opportunities identified through the scheme, including regarding public rights of way.</p>
<p>11.1.32. The Applicant has identified the Borrow Pit sites as being suitable for an informal recreational after use, but there is no mechanism to guarantee public access for this use. As a very minimum, it is considered that additional public rights of way should be created around the sites to the west and south west of Brampton. During the pre-submission stage Cambridgeshire County Council requested a footpath link between Footpath 3 and Grafham Road running within the northern boundary of Borrow Pit 2. RAF Brampton is being redeveloped as residential housing and this would provide an off-road link between the estate and the countryside served by Grafham Lane. This link is a missed opportunity to secure easy access to the countryside for residents of the development.</p>	<p>Highways England notes the Councils' desire to facilitate additional public access but it does not propose any additional public rights of way beyond those already included in the DCO proposals, as they would not be necessary for the delivery of the scheme or mitigation of its impacts. As part of its approach to legacy for the scheme, however, Highways England is committed to on-going engagement with stakeholders after the making of the Development Consent Order (assuming the application is successful) on a series of priorities as set out in section 7 of the Case for the Scheme (document reference 7.1). Encouraging non-motorised users is one strand of the Legacy Plan and Highways England will work with the membership of the Strategic Stakeholder Board to establish joint delivery plans to maximise legacy right of way opportunities.</p>
<p>11.1.33. Another important aspect that has been overlooked is the necessity for a mechanism to ensure that the plans for the connection of PROWs are clearly and correctly recorded so that Cambridgeshire County Council's Definitive Map can be updated with accurate information.</p>	<p>Highways England is aware of the Council's desire for the plans to clearly record connections of PROWs. Highways England confirms this as a matter for further liaison between Highways England and Cambridgeshire County Council following detailed design. The detailed design will provide the level of detail to form the basis for an agreement.</p>

Table 12-13: Economic legacy

Joint LIR Identified Missed Opportunities	Highways England response
<p>11.1.36. The local authorities are supportive of this aspiration and are members of the Strategic Stakeholder Partnership Board looking at legacy planning. The local authorities are supportive of the progress being made through the Board but would emphasise the importance of developing more detailed plans regarding the programmes for education, employment and skills which should set out how contractors will be required to deliver the programme in greater detail. Details including targets of the numbers benefiting from employment and training as a result of the scheme will provide greater substance to the picture of economic legacy to be delivered by the scheme.</p>	<p>Highways England is committed to supporting the education, employment and skills agenda as part of the A14 project. Highways England will set up a National Skills Academy (NSA) for the project and is in the process of establishing Key Performance Indicators which meet NSA requirements, alongside additional project-specific targets to address specific local priorities. A Skills and Employment sub-group, reporting to the Strategic Stakeholder Board (SSB), will be set up to support delivery of the strategy. The key role of the group will be to ensure that the local provision of skills is in place to support delivery of targets.</p> <p>All targets will be consulted upon with the Strategic Stakeholder Board as well as with the design consultants and contractors who will be the key delivery partners.</p> <p>The Case for the Scheme (document reference 7.1) sets out the approach of Highway's England to deliver a legacy through to the end of the construction phase (section 7). The section sets a framework for delivering legacy, setting out the key priorities which were identified in partnership with stakeholders. Highways England is committed to working with the membership of the Strategic Stakeholder Board to establish joint delivery plans to maximise the legacy opportunities identified through the scheme.</p>

Table 12-14: Minerals and waste including borrow pits

Joint LIR Identified Missed Opportunities	Highways England response
<p>11.1.42. The Applicant has the opportunity to alleviate long standing local flooding issues through balancing ponds and the use of flood storage areas at borrow pits. Further detail is included in 6.1.15.</p>	<p>As part of the commitment to support wider legacy objectives, Highways England has commissioned further technical assessment work to look into the possibility of including additional off-site flood attenuation using the borrow pit voids. The results of this work will not be available until the end of the Development Consent Order examination period. If any works were to be</p>

Joint LIR Identified Missed Opportunities	Highways England response
	taken further on this, they would be progressed independently of the current application. Those works are not necessary to address any impacts resulting from the current application.
<p>11.1.43. Finally, there is a need to ensure that environmental impacts of the importation of hard rock for the scheme (which cannot be supplied locally) are minimised. Securing the option of a direct access to the Chesterton Rail sidings on the same basis that borrow pits are being promoted would be beneficial.</p>	<p>Through dialogue and consultation with the local authorities, Highways England has acknowledged the concerns about minimising local impacts associated with importation of raw materials not sourced from the borrow pits. The option of utilising the Chesterton Rail sidings to minimise road haulage of such materials is still being actively considered by Highways England. However, a strategy for sourcing and transportation of such materials cannot be finalised until after the making (if the application is granted) of the Development Consent Order. Any changes to the configuration of the Chesterton Rail sidings or other infrastructure to allow importation via this route which constitutes new development may be subject to separate planning permissions, as this falls outside the scope of the DCO. Local amenity impacts would be assessed and reported on to support any separate planning applications should these be required.</p>

Table 12-15: Flooding and water

Joint LIR Identified Missed Opportunities	Highways England response
<p>11.1.43¹⁸ Opportunities exist as part of the scheme to alleviate flood risk in certain areas. The proposals make provision for flood compensation from the road scheme, but fail to take the opportunity to provide further mitigation to alleviate local flooding issues, which could be provided at minimal additional cost, with significant benefit to local communities.</p>	<p>Volume 7 of the Development Consent Order application contains the Case for the Scheme (document reference 7.1) which sets out the approach to legacy through to the end of the construction phase (section 7). Highways England is committed to working with the membership of the Strategic Stakeholder Board to prioritise and deliver legacy opportunities identified through the scheme. Flood attenuation sits under the 'Green Infrastructure' strand and Highways England, with stakeholders, will examine the possibility of including additional off-site flood attenuation and does not see it as a</p>

¹⁸ The paragraph number (11.1.43) in the Joint LIR is incorrect as it is a repeat of the previous paragraph number.

Joint LIR Identified Missed Opportunities	Highways England response
	missed opportunity. As part of its commitment, Highways England has commissioned further technical assessment work to look in to the possibility of including additional off-site flood attenuation using the borrow pit areas.
<p>11.1.44. Several areas along the route, e.g. at Brampton, Fenstanton, Bar Hill and Girton, already have significant flood risk issues and the Local Authorities and the Environment Agency have, throughout the pre-application consultation period, highlighted the potential for borrow pits to assist in alleviating local flooding issues. This approach is consistent with Policy 100 of the NPPF, which advises Local Authorities to consider, 'using opportunities offered by new development to reduce the causes and impacts of flooding.' Given the overall environmental impacts of the scheme on local communities, it is considered that the possibility of providing long term legacy benefits to those communities as part of the scheme is all the more important, and entirely consistent with the stated objectives of the Applicant to secure a positive legacy.</p>	<p>Volume 7 of the Development Consent Order application contains the Case for the Scheme (document reference 7.1) which sets out the approach to legacy through to the end of the construction phase (section 7). Highways England is committed to working with the membership of the Strategic Stakeholder Board to prioritise and deliver legacy opportunities identified through the scheme. Flood attenuation sits under the 'Green Infrastructure' strand and Highways England, with stakeholders, will examine the possibility of including additional off-site flood attenuation and does not see it as a missed opportunity. As part of its commitment, Highways England has commissioned further technical assessment work to look in to the possibility of including additional off-site flood attenuation using the borrow pit areas. Since any such works are not necessary to address any impacts resulting from the current application, they would be progressed independently of the current application.</p>

13 Borrow Pits Restoration and Aftercare Update

- 13.1.1 Since the formal submission of the Development Consent Order (DCO) application to the Planning Inspectorate in December 2014, and following ongoing engagement with a number of key stakeholders, Highways England has given further consideration to its position with respect to restoration and aftercare arrangements for the borrow pit sites.
- 13.1.2 The commitment in the DCO submission relating to borrow pits restoration and aftercare was that Highways England would maintain the landscape planting and ecological mitigation proposals for a period of five years after completion of the scheme construction. The proposed five year aftercare period has been applied successfully by Highways England on other major highways projects.
- 13.1.3 Representations made by the partner authorities and other interested parties during the consultation and dialogue on the proposed borrow pits argued that a commitment to five years was not sufficient. Cambridgeshire County Council has made representations during the consultation process that a longer period of aftercare was more common place on commercial mineral sites and that this approach would be more appropriate for the borrow pits.
- 13.1.4 Highways England considers that the importance of the borrow pit sites as long term landscape, nature conservation and flood alleviation assets is such that these areas warrant an exception to be made to the normal approach to landscape maintenance which would apply to the rest of the scheme. Highways England proposes to extend the aftercare arrangements for borrow pit sites from five to ten years. An aftercare management strategy for each borrow pit will be prepared during the examination period. The partner authorities will be consulted on the content of the aftercare strategies as they are developed. The restoration and aftercare of the borrow pits would be secured by a requirement already contained in Schedule 2 to the DCO but which will be modified by Highways England to refer to ten years rather than five years.