

APPENDIX D

A14 CAMBRIDGE TO HUNTINGDON IMPROVEMENT SCHEME

DEVELOPMENT CONSENT ORDER

JOINT LOCAL IMPACT REPORT PRODUCED BY

CAMBRIDGESHIRE COUNTY COUNCIL

HUNTINGDONSHIRE DISTRICT COUNCIL

SOUTH CAMBRIDGESHIRE DISTRICT COUNCIL

CAMBRIDGE CITY COUNCIL

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1. Introduction to the Report and Terms of Reference

- 1.1. This Local Impact Report (LIR) has been jointly prepared by four local authorities; Cambridgeshire County Council, Huntingdonshire District Council, South Cambridgeshire District Council and Cambridge City Council. This LIR forms part of the local authorities' responses to the Cambridge to Huntingdon Improvement Scheme.
- 1.2. The LIR is defined in section 60(3) of the Planning Act 2008 as 'a report in writing giving details of the likely impact of the proposed development on the authority's area (or any part of that area)'.
- 1.3. This LIR contains a section on the existing characteristics of the local area on which the scheme impacts. This identifies the local urban and landscape qualities, cultural heritage, ecology, minerals and waste sites, the environment for pedestrians, cyclists and equestrian travellers, watercourses and the air quality and noise environment. The report also provides an assessment and considers compliance of the scheme against the local plans and policies and details the history and development of the scheme.
- 1.4. Section 7 identifies the existing transport movements and routes in the area of the scheme. The 'Local Impacts' section contains an assessment of positive, negative impacts, during construction and operation of the scheme, as well as areas where there are missed opportunities for the Applicant to contribute to improving the local area through the scheme.
- 1.5. The following terms used throughout the document are explained here:
 - 'The local authorities' – Cambridgeshire County Council, Huntingdonshire District Council, South Cambridgeshire District Council, Cambridge City Council.
 - 'Applicant' –Highways England
 - 'Development Consent Order' – Legal order related to the A14 Cambridge to Huntingdon Improvement Scheme
 - 'Environmental Statement' – The Environmental Statement produced by Highways England and submitted to support the Development Consent Order application on 31 December 2014.
 - 'Construction' – Phase commencing in 2016 until 2020.
 - 'Operation' - Phase commencing after construction, post 2020.

2. Executive Summary

2.1. Description of the proposals

2.1.1. The scheme includes proposals that seek to meet the objectives set out in plan:

- A bypass to the south of Huntingdon and Godmanchester
- Carriageway widening on the existing A14 between Swavesey and Girton and improvements to the Cambridge Northern Bypass
- Junction improvements and the widening of the A1 trunk road between Brampton and Alconbury and new local access roads
- De-trunking of the existing A14 just west of Brampton Hut to and Swavesey
- Removal of the road viaduct over the East Coast mainline at Huntingdon
- Changes to the local road connections in Huntingdon town centre

2.2. The Existing Characteristics

2.2.1. The landscape in the scheme area is made up of agricultural farmland, natural features such as the river Great Ouse and Brampton Wood, the A1, A14 and East Coast Mainline, the market towns of Huntingdon and Godmanchester, surrounding villages and other residential areas and settlements, commercial business parks and recreational sites such as Hinchingsbrooke Country Park, Fenstanton Lakes, Buckden Gravel Pits County Wildlife Site and Milton Country Park.

2.2.2. The largest settlements are Huntingdon to the west and Cambridge to the east. Between these urban areas lie numerous settlements including, the Hemingfords, Swavesey, Fenstanton, Fen Drayton, Longstanton, Oakington, Girton, Histon and Impington and Milton, all north of the A14, with Hilton, Conington, Boxworth, Lolworth, Bar Hill, Dry Drayton, Madingley, Girton and Orchard Park all south of the existing A14. South of Huntingdon lie the settlements of the Offords, Buckden, Brampton and Godmanchester.

2.2.3. In terms of cultural heritage the Earthwork on Mill Common, Huntingdon and Huntingdon Castle are both known archaeological assets classified as Scheduled Monuments. There are several important historic buildings through the scheme area including Huntingdon Station, Huntingdon Bridge, All Saints Church, Lolworth as well as two conservation areas in Godmanchester¹.

2.2.4. The ecological assets of the area include Sites of Special Scientific Interest at Brampton (Brampton Meadow, Brampton Wood and Brampton Racecourse) Madingley Wood, Portholme, St Neots Common and Paxton Pits. The Ouse Washes is considered a wetlands site of international importance (RAMSAR). In addition to the statutory

¹ Cambridgeshire Historic Environment Record (CHER), Cambridgeshire County Council (2014)

designated sites there are County Wildlife Sites at Buckden Gravel Pits, Fenstanton Pit, along the River Great Ouse and at Fen Drayton Gravel Pits among others². In terms of species the White spotted pinion moth, the common toad and Cetti's warbler are section 41 listed species present in the local area³, while the cuckoo is also a species of County Value with habitat in the scheme area.

2.2.5. In terms of the existing noise environment there are approximately 23 areas along the A14 corridor which have been classified as 'Important Areas' by the Department for Environment, Farming and rural Affairs (Defra) on account of the existing noise environment⁴. These areas are at Alconbury, Brampton, Huntingdon, Godmanchester, Hemingford Abbot, Fenstanton, Swavesey, Dry Drayton, Girton, around the Cambridge Northern Bypass and in Impington. Traffic noise from the A14 is the main contributor to the local noise environment at these locations. There are a number of other settlements along the route which experience noise from local road traffic and the East Coast mainline, such as Buckden and the Offords, Brampton, Bar Hill and Orchard Park.

2.2.6. Air Quality management Areas (AQMA) exist in Huntingdon, Brampton, on the A14 near Fenstanton, and along the A14 between Bar Hill and Milton as well as in Cambridge City Centre⁵. These are areas where the levels of Nitrogen Dioxide (NO₂) and Particulate Matter (PM₁₀) are above the threshold levels set by the European Commission. The three AQMA in Huntingdonshire and the single AQMA in South Cambridgeshire are mainly caused by heavy traffic flow on the existing A14.

2.2.7. The existing A14 between Cambridge and Huntingdon is considered a 'congestion hotspot' by Highways England⁶. Local roads are impacted as a result of the A14 reaching capacity and travellers seeking other routes. Journey times are significantly unpredictable on a regular basis and combined with the growing population in the county and the economic growth of Cambridge and the Sub-Region and the wider area congestion is likely to increase.

2.2.8. There is very limited use of the A14 by pedestrians, cyclists and equestrian travellers. There are several locations where local roads, bridleways and footpaths join the A14, however these are not widely used by these modes. The A14 does have a range of crossing points at existing junctions and some public rights of way that pass over or under the route. The main cycle routes within the scheme area are National Cycle

² Designated Sites Search, Natural England website

<https://designatedsites.naturalengland.org.uk/SiteSearch.aspx> (2015)

³ Terrestrial Invertebrate Survey Report, Environmental Statement, A14 Cambridge to Huntingdon Improvement Scheme, DCO submission Highways Agency, (2013)

⁴ Noise Action Plan (Including Major Roads), Environmental Noise Regulations, Department for Environment, Food and Rural Affairs (DEFRA) (2014)

⁵ Air Quality Management Areas (AQMA), Department for Environment, Food and Rural Affairs (Defra) Air Quality website, <http://uk-air.defra.gov.uk/> (2015)

⁶ A14 Study, Department for Transport (DfT) (2012)

Network routes 11, 12 and 51. There are also long distance walks, notably, the Ouse Valley Way walk and the Pathfinder Long distance route.

2.2.9. There are several watercourses in the area of the scheme including Alconbury Brook, Ellington Brook, Brampton Brook, the River Great Ouse, West Brook, Oakington Brook, Cottenham Lode /Beck Brook and Washpit Brook. Recent instances of flooding have occurred in Alconbury, Brampton, Hilton and Oakington and Girton⁷.

2.2.10. The main borrow pits sites proposed are located within the scheme area are west of Brampton (BP1), South west of Brampton (BP2), Fenstanton (BP3), Boxworth (BP5), Dry Drayton (BP 6) and Alconbury (BP7). These borrow pits can supply sand, gravel and clay⁸.

2.3. Compliance with local plans and policies

2.3.1. There are several local development plans and policies that apply to development in the local area. These are listed and assessed for compliance in Chapter 4 and Appendix A.

2.4. Traffic and Transport patterns

2.4.1. The traffic and transport patterns across the local area are identified in chapter 8. In summary the existing A14 between Huntingdon and Cambridge is well known for congestion and delay and is used by a mixture of local traffic and strategic traffic, such as Heavy Goods Vehicles (HGVs). There are often long delays and if there is an accident the impacts on local roads is worsened by traffic using alternative routes. Other strategic roads in the vicinity of the A14 are the A1(M) and the A428. The A1 (M) runs between Alconbury and Buckden in the scheme area and the A428 runs between the A421 and A1 at St Neots and the M11 at Madingley.

2.4.2. Other important local roads include the A141 around the north of Huntingdon, the A1123 from Huntingdon to St Ives, the B1514 between Huntingdon and Brampton and Buckden, the A1198 at Ermine Street which provides a route from Godmanchester to the A428 and the B1044 connecting Huntingdon to St Neots via the A428 through Godmanchester and the Offords. Between Huntingdon and Cambridge the A1198 is a north-south connection between the A14 and A428, while the B1040 also runs north-south between the A14 and A428 via the village of Hilton. Strategic traffic is known to use a number of these routes to avoid congestion on the A14.

⁷ “What’s in your backyard” section of Environmental Agency website <http://apps.environment-agency.gov.uk/wiyby/37837.aspx> 2015

⁸ Cambridgeshire and Peterborough Minerals and Waste Site Specific Proposals Plan, Cambridgeshire County Council (2012)

2.5. Local Impacts

2.5.1. Summary table of Local Impacts: positive, negative and missed opportunities

Table 1: table of Local Impacts: positive, negative and missed opportunities

Landscape

Positive
<p><i>During operation</i> Extensive areas of mitigation and ecological planning, including adjacent to the highway to break up the scale of the road, screen traffic and lighting and integrate the scheme into the landscape.</p>
<p><i>During operation</i> Reduction in views of highways infrastructure and improvement in landform through removal of highways infrastructure and traffic (e.g. removal of Huntingdon viaduct).</p>
<p><i>During operation</i> Lighting design will minimise light pollution</p>
Negative
<p><i>During construction</i> Removal of trees and vegetation during construction.</p>
<p><i>During operation</i> There will be a period during operation where trees and vegetation will not have fully matured (2020-2035).</p>
<p><i>During construction</i> Views of heavy construction plant and materials, major earthworks and temporary traffic management.</p>
<p><i>During construction</i> Excavation of borrow pits, drainage lagoons, ecological ponds, SUDS features, and creation of environmental bunds, road embankments and cuttings during construction, all leading to disruption to landform.</p>
<p><i>During operation</i> Introduction of new highways infrastructure and associated traffic (sections of highway west and south west of Brampton, the Ouse Valley crossing, the Southern Bypass, roundabouts, bridges / crossings). Adverse effects on visual amenity and landscape character.</p>
Missed opportunity
<p>Additional off-site planting between A14 and the Local Access Road.</p>
<p>Creation of a positive recreation and ecological resource at the borrow pit areas.</p>
<p>Lack of 10 year aftercare programme and additional rights of way at Borrow Pits means that the potential for new and publicly accessible resources for nature conservation and passive recreation are being ignored – to the detriment of the local community.</p>
<p>Assessment of impact of artificial lighting.</p>

Cultural Heritage

Positive
<p><i>During operation</i> Positive benefits for 3 conservation areas (Godmanchester Post Street, Godmanchester Earning Street and Huntingdon Bridge) as a result of reduction in traffic levels and noise intrusion.</p>
<p><i>During operation</i> Removal of Huntingdon viaduct will have a positive impact on character of Huntingdon conservation area and Huntingdon Station.</p>

Negative*During construction*

Slight adverse visual and noise impact on Earthwork on Mill Common, which is classed as a high value archaeological remain asset.

During construction and operation

Moderate adverse impact on 2 The Walks North, 3-4 The Walks North, 5-6 The Walks North, Huntingdon through loss of setting.

During construction

Adverse impacts on Huntingdon County Hospital (main building only listed) through loss of setting.

During construction

Adverse impacts on Huntingdon Station through loss of setting.

During construction

Adverse impacts through loss of setting on Offord Cluny Conservation Area, Porch House, Offord Cluny, 208 High Street, Offord Cluny.

During operation

Noise impact on Huntingdon Conservation Area from the presence of new and changed road infrastructure on Mill Common.

During operation

Noise impact on Huntingdon Conservation Area from the presence of new road and changed infrastructure on Mill Common.

During operation

Adverse impact on setting of All Saints Church, Lolworth due to new raised embankment, bridge and lighting in the vicinity.

Missed opportunity

Provision for the long-term display of discoveries in suitable public places as this scheme will generate very large archaeological assemblages of public interest.

Ecology**Positive***During operation*

Mitigation and ecological planting along the route of the scheme would be a positive impact.

During operation

Construction of the scheme would result in a significant amount of new semi-natural habitat (271ha) which would be beneficial to bats.

Negative*During construction*

Insufficient assessment of impact on Fenstanton Lakes County Wildlife Site (CWS).

During construction

Loss/ disturbance of bat habitats adjacent to off-line section.

During construction

Potential unassessed impact on terrestrial invertebrates and reptiles.

During operation

Disturbance to breeding birds of county value associated with Buckden Gravel Pits.

During operation

Disturbance to roosting bats during operation.

During operation

Mortality to bats during operation.

Missed opportunity

Scheme does not achieve the ecological mitigation objectives as set out.
Inadequate assessment of impact on Fenstanton Gravel Pits County Wildlife Site (CWS).
Consideration of Bat Habitats between Brampton Wood and the A1.
Creation of priority habitats.
Development of Long term water strategy.
Insufficient evidence of assessment of impact on terrestrial invertebrates.
Insufficient evidence of assessment of impact on reptiles.

Noise and Vibration

Positive
<i>During operation</i> Positive impact on over 2900 dwellings along existing A14 corridor including at Hinchingsbrooke Hospital, Hinchingsbrooke Park, Stukeley Meadows, including Primary School and Hemingford Nursery School.
<i>During operation</i> Residential dwellings at Alconbury – currently experience noise from the A1(M) Applicant proposes to improve noise barrier.
<i>During operation</i> Improvements near Bar Hill and at other properties along existing A14 between Swavesey and Girton due to mitigation being introduced.
<i>During operation</i> Improvement to the noise environment as a result of reductions in traffic on the de-trunked A14 at the following locations: To the north of Brampton, off Thrapston Road and near Huntingdon Road on the eastern edge of the village Hinchingsbrooke, Stukeley Meadows, centre of Huntingdon and northern Godmanchester South west Fenstanton and Lolworth Hilton, Over, Conington, Knapwell and Boxworth Girton and the Blackwell Caravan Park
Negative
<i>During construction</i> Impact identified at 7 communities at RAF Brampton, 30 dwellings in Georges Street, Huntingdon, 6 dwellings between Bar Hill and Girton, 25 dwellings in Girton, 25 dwellings in Impington, 250 dwellings on Chieftan Way, Cambridge and 80 dwellings in Kings Hedges.
<i>During operation</i> Minor adverse effect from road traffic noise experienced at 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.
<i>During operation</i> Increase in road traffic noise experienced at dwellings in the vicinity of Stewart Close on the south west edge of Brampton.
<i>During operation</i> Increase in road traffic noise experienced at dwellings in the west edge of RAF Brampton.
<i>During operation</i> Increase in road traffic noise experienced at dwellings in the vicinity of Pear Tree Close, Fenstanton.
Missed opportunity
Ensure cooperation with developers of new development sites to ensure mitigation is appropriate.
Monitor noise levels at locations where a residual impact remains to ensure they do not exceed

threshold for qualification for noise insulation / further mitigation

Air Quality

Positive

During operation

Improvements to air quality both PM₁₀ and NO₂ in Huntingdon and along the de-trunked section of the A14 as a result of reductions in traffic.

Negative

During construction

Residential areas near Borrow Pits such as Brampton and Boxworth likely to experience impacts from dust.

During construction

Dust impacts in residential areas in the north of Cambridge and within Huntingdon town centre from the construction of the new road and the removal of the viaduct. With the mitigation identified in the COCP the impacts are not expected to be significant.

During operation

Small increases in annual mean NO₂ around Kings Hedges Road and some medium increases on Madingley Road.

Pedestrians, Cyclists and Equestrian travellers

Positive

During operation

10km of new NMU facility (comprising a route suitable for pedestrians, cyclists and equestrians) would be provided linking Fenstanton, Swavesey, Bar Hill, Dry Drayton and Girton.

During operation

Re-connection of previously severed links e.g. Bridleway 15 between A1 and Brampton Hut Services.

Negative

During construction

Disruption to PROWs due to temporary closure and negative impacts on noise, views and amenity – Substantial disruption to bridleways Madingley 2 and Girton 6).

During construction

Impacts on public rights of way in Huntingdon, Brampton, Godmanchester, Boxworth, Bar Hill, Dry Drayton and around the Histon interchange from noise, visual intrusion as well as physical disruption.

During construction and operation

Severance of public right of way at the Stukeleys as a result of stopping up of A1 southbound layby where users of this popular bridleway park their cars.

During operation

New roads to be crossed for NMU on Brampton Road (NCN 12 and 51) and Hinchingsbrooke Park Road.

Missed opportunity

There is the potential for a long term positive impact in terms of the legacy of the borrow pits sites - For example by providing a NMU link between RAF Brampton and the northern boundary of Borrow Pit 2.

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.

Economy

Positive
<p><i>During construction</i> Direct and indirect benefits from employment during construction (between 824 – 1567 new jobs)</p>
<p><i>During operation</i> Increased road capacity between Cambridge and Huntingdon and on A1 between Brampton and Alconbury will alleviate existing congestion, reducing rat-running, reducing travel time and leading to greater journey time reliability. Monetised value forecast to be over 1.039 billion over a 60 year period.</p>
<p><i>During operation</i> Unlock future business growth through greater productivity as a result of agglomeration effects, and reduced transport costs.</p>
<p><i>During operation</i> Unlock housing constraints – Allow Northstowe Phase 2 to be developed plus significant proposed allocations within the Draft Huntingdonshire Local Plan.</p>
<p><i>During operation</i> Wider economic growth – improve connectivity with Peterborough, Ipswich, Harwich and Felixstowe plus to the Midlands and North-West.</p>
Negative
<p><i>During construction</i> Disruption to existing travel patterns</p>
<p><i>During construction</i> Temporary loss of land - 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.</p>
<p><i>During operation</i> Permanent Loss of Land – Major impact on 9 farms – impact on access and from potential changes in traffic for 9 businesses along the existing A14, minor impact from land take on 3 existing planning applications</p>
Missed opportunity
<p>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.</p>

Flooding and water

Positive
<p><i>During construction</i> During construction works the planned mitigation will ensure no significant residual impacts post-scheme completion.</p>
Negative
<p><i>During operation</i> Water level rises at</p> <ul style="list-style-type: none"> •Ellington Brook; •Brampton Brook; and •River Great Ouse <p>No significant increase in flood risk to nearby properties</p>

Missed opportunity

Existing flood risk issues at Girton, Fenstanton, Bar Hill, and Brampton could be alleviated through balancing ponds associated with Borrow Pit works.

Assurance that maintenance access for annual works by local authorities will be available.

Minerals and Waste

Positive

During construction

Inclusion of borrow pits has the potential to reduce significant levels of heavy vehicle traffic on the local road network as the distance to transport materials between the scheme and the required area for construction is minimised.

During operation

Positive strategy for sustainable use of surplus soil.

Negative

During construction

There has been a lack of assessment for certain impacts that are likely to occur as a result of the operation of the borrow pits: Archaeology, noise, dust, biodiversity, hydrology.

Missed opportunity

Opportunities to alleviate local flooding issues.

Lack of an aftercare programme beyond 10-years for integrating the borrow pits into the local landscape

Transport of hard rock by sustainable means.

Social and Community matters

Positive

During operation

Reducing severance and improved access between communities.

During operation

Improving access for non-motorised users across the A14 corridor.

During operation

Improvements to the noise and air quality improvement along de-trunked section.

Negative

During construction

Environmental impacts (noise, air quality, HGVs) on communities, particularly Boxworth, from operation of borrow pits.

During construction

Environmental impacts on community facilities - significant negative impact at Hinchingbrooke School (Huntingdon) during the daytime – period of 5 months.

During operation

Land-take impacts on viability.

During operation

Land-take impacts on accessibility - 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.

During operation

Noise and air quality impacts on community facilities.

Missed opportunity

Noise monitoring at community facilities where noise increases are currently below thresholds.

3. Context

3.1. Role of the A14 in the Local Transport Network

- 3.1.1. The A14 provides an east-west route which links the Midlands with the East of England. It begins at Catthorpe near Rugby, where it connects with the M1 and M6 motorways, and continues east for approximately 209 km (130 miles) to the port of Felixstowe. There it serves one of the largest container ports in Europe, and the largest in the United Kingdom. The A14 forms one of the country's strategic routes and is part of the Trans-European Transport Network; a transport network identified by the European Union as key to the efficient operation of businesses across and within country borders⁹.
- 3.1.2. The section of the route between Huntingdon and Cambridge carries a high level of commuter as well as long-distance traffic and, in addition, provides a strategic link between the A1 and the M11 motorway. It carries around 85,000 vehicles per day¹⁰; it is frequently congested and traffic is often disrupted by breakdowns, accidents and road works.
- 3.1.3. The A14 Study¹¹ identified that there is severe congestion at several sections and junctions of the A14 under normal conditions (i.e. during the typical day-to-day traffic conditions). Analysis during the morning and evening peak times showed that there are several locations where the average traffic speed is below 20mph¹². Analysis undertaken by Highways England identified the A14 between Cambridge and Huntingdon as the fourth busiest hotspot¹² on the trunk road network in England in 2008.
- 3.1.4. The limited capacity of the route, together with the very high traffic demand, was identified as the main cause of this congestion. The A14 between Cambridge and Huntingdon is predominantly a two lane dual carriageway and is used by a high proportion of Heavy Goods Vehicles (HGVs), which are limited to 50mph on dual carriageways and typically make use of the near-side carriageway. HGVs comprise 26% of vehicles using the road in comparison with the national average of 10%¹¹. Higher levels of heavy goods vehicles on this two lane road combined with higher traffic flows contribute to driver stress resulting in the perception that the A14 is hazardous.

⁹ European Trans-T Network http://ec.europa.eu/transport/infrastructure/tentec/tentec-portal/site/index_en.htm

¹⁰ 7.1 Case for the Scheme, A14 Cambridge to Huntingdon Improvement Scheme, DCO submission, Highways Agency (2014)

¹¹ A14 Study, Department for Transport (DfT) (2011)

¹² A 'hotspot' is defined when a congestion alert is issued when the speeds break down to below 30mph and include both severe traffic congestion and incidents.

3.1.5. Conflicts between traffic leaving and traffic entering the carriageway also cause severe congestion at key junctions, as well as conflict between local and strategic traffic as a consequence of the presence of a large number of local access roads, including private and agriculture-related accesses.

3.1.6. The impact of congestion and delay on the local road network was also examined in the A14 Study. Based on traffic speed data, it was shown that local roads around Huntingdon, St. Ives, Godmanchester, Cambridge and other local areas were congested during peak times due to traffic 'spill-overs' from the A14 with drivers avoiding the route.

3.1.7. The use of the A14 by local traffic travelling short distances conflicts with strategic traffic using the route solely as a means to pass through the area. Vehicles joining and leaving the route via the many junctions and local accesses results in variable traffic speeds and contributes significantly to recorded congestion levels. Equally, the presence of such a congested route causes severance between communities to both side of the A14.

3.1.8. Congestion on the A14 results in unpredictable journey times for all users, particularly commuters and businesses, which creates a cost to the local, regional and national and international economies and constrains access to the regional labour pool.

3.2. National Growth

3.2.1. The A14 forms part of the Trans-European Transport Network; a strategic route designated by the EU linking the east coast with the Midlands and beyond to Glasgow. Along with the railway network, this road corridor also serves the important Haven Ports of Ipswich, Harwich and Felixstowe. As one of the principal road gateways to these ports, it is vital that the A14 has sufficient capacity to accommodate future demand. The scheme has the potential to make a major contribution to national economic growth by providing a, safer route for this commercial traffic and also a more stable level of journey time through the route.

3.3. Local and Regional Growth

3.3.1. Cambridgeshire is a growing county both in terms of population and employment. Cambridgeshire's employment is forecast to grow by 16% between 2012 and 2031¹³. Over the period 2011 to 2031 Cambridgeshire's population is set to increase by 24%¹⁴.

3.3.2. The local economy contains a range of technology based businesses with a high value output and there is significant potential for their continued expansion with consequent benefits to the East of England and the UK as a whole. In addition the Alconbury Weald

¹³ Cambridgeshire's Economic Assessment 2013, Cambridgeshire County Council (2013)

¹⁴ Transport Strategy for Cambridge and South Cambridgeshire, Cambridgeshire County Council (2014)

Enterprise Campus has the potential to create up to 8,000 jobs¹⁵. However, the expansion of these industries is constrained by severe traffic congestion and resulting poor journey time reliability on the A14 corridor between Cambridge and Huntingdon.

3.3.3. In addition to economic growth, large-scale housing developments are planned in the A14 and A1 corridors to alleviate acute housing shortages at local and regional levels. Of note, 10,000 houses are planned at Northstowe and 5,000 at Alconbury Weald. Planning approval has been granted for the first phase of housing development at Northstowe (1,500 houses) with an application submitted in August 2014¹⁶ for a further 3,500 houses. This second phase is dependent on improvement of highways in the area, including the A14.

3.4. Lack of resilience to incidents and accidents

3.4.1. The current A14 has evolved and been upgraded over a prolonged period of time and through its use as a route through Cambridgeshire as well as connecting roads designed to meet local access needs, not those of the wider region. As a consequence the standard of design varies enormously, with significant design shortcomings in respect of current good practice, as set out within the Design Manual for Roads and Bridges (DMRB)¹⁷.

3.4.2. The A14 Study considered both the rate at which accidents and incidents (including formally reported road traffic accidents, minor damage only accidents, clearance of debris, emergency roadwork and vehicle breakdowns) occur and their impact on traffic flows in the A14 corridor. It found that around 200 such incidents occurred within the study area in 2008¹⁸, which required the closure of one lane for an average of two hours. It reported that the accident rate on the A14 is not significantly different to other similar 'A' roads. However, the disruption caused to road users was more significant due to the volume of traffic and the low resilience of the network.

3.4.3. Although for the majority of the A14 the observed accident rate is within the national average for a road of this type, the sections between Brampton Hut and Spittals (J22-23) and around J24 have accident rates that are higher than the national average²⁰. This is considered to be due to the impact of vehicles changing lanes on a congested road that has design limitations and is in proximity to busy junctions.

3.4.4. The particular characteristic of the A14 which makes these incidents and accidents more problematic is the lack of resilience. The lack of resilience on the A14 is caused by the lack of additional or spare capacity in the width of the road and by the lack of viable alternative routes.

¹⁵ Huntingdonshire Economic Growth Plan 2013-2023, Huntingdonshire District Council (2013)

¹⁶ <https://www.scambs.gov.uk/content/northstowe-news>

¹⁷ Design Manual for Roads and Bridges (DMRB), Department for Transport (DfT)

<http://www.standardsforhighways.co.uk/dmrb/>

¹⁸ A14 Study, Department for Transport (DfT) (2011)

3.5. Air Quality, Noise, Public Rights of Way environment

- 3.5.1. Existing noise levels vary widely across the area of the existing A14 corridor. They are currently high close to the existing A14 and A1 and a number of locations adjacent to these roads have been identified as ‘Important Areas’ in action plans published under Government’s Noise Action Plan¹⁹.
- 3.5.2. Air quality varies across the area of the existing A14 corridor. Each local authority reviews air quality in their area and if any locations are identified where the national air quality objectives are not likely to be achieved, it must declare an Air Quality Management Area (AQMA). In the vicinity of the scheme AQMAs exist at Cambridge, Huntingdon, St Neots, Brampton, Hemingford/ Fenstanton and along the route of the A14 between Bar Hill and Milton.
- 3.5.3. There is a network of public rights of way throughout the existing A14 corridor. Works previously carried out on the A1 and A14 have affected some routes and some public rights of way terminate at the existing trunk road with no provision for walking, cycling or horse riding.
- 3.5.4. As a consequence of the congestion and poor resilience of the existing A14, local roads experience higher levels of traffic than would be expected as people seek to avoid the A14. This has a detrimental impact on the environment (noise, air quality, quality of life and severance) within those villages affected.

3.6. Historical Context

- 3.6.1. Improvement of the road now known as the A14 was first proposed in the Government’s 1989 “Roads for Prosperity”²⁰ White Paper where it was included as three contiguous schemes. However, It was not until 1998 that the Cambridge to Huntingdon Multi-Modal Study (CHUMMS) was commissioned by Government to investigate the combined problems of congestion, road safety and residential development pressure in the Cambridge and Huntingdon area²¹. The Cambridge to Huntingdon Multi-Modal Study (CHUMMS) Final Report was published in 2001. A route was then developed following the recommendations of the CHUMMS study, referred to as the CHUMMS strategy²².
- 3.6.2. In 2006, an unsuccessful legal challenge as to the process of selection of the alignment of the Huntingdon southern bypass was mounted by local opponents of the scheme.

¹⁹ Noise Action Plan (Including Major Roads), Environmental Noise Regulations, Department for Environment, Food and Rural Affairs (Defra) 2014

²⁰ “Roads for Prosperity White Paper, Department of Transport (DOT) (1989)

²¹ Cambridge to Huntingdon Multi Modal Study, Department for Environment, Transport and the Regions (DETR) (2001)

²² CHUMMS Strategy, Department for Transport (2003)

Highways England then consulted further on alignment proposals for the Huntingdon southern bypass section of the A14 between Ellington and Fen Ditton.

3.6.3. Later in 2006, the A14 Huntingdon Study was commissioned by Highways England in conjunction with the local authorities to assess the effectiveness of proposed A14 connections with the local network in the vicinity of Huntingdon. The study concluded that removing the viaduct, replacing it with an at-grade junction in Brampton Road, building the West of Town Centre Link and providing a new link at Mill Common to the existing A14 would be most beneficial to the town in economic terms.

3.6.4. Following consultation, a preferred route was announced in 2007 and the scheme was developed with an estimated cost of £1.1 billion and a start of construction date of early 2012. Plans were drawn up to commence a public inquiry in July 2010 but in government's 2010 Spending Review the A14 Ellington to Fen Ditton scheme was withdrawn from the roads programme as it was considered to be unaffordable in the financial climate current at that time.

3.6.5. In 2011, the A14 Study was commissioned by the Department for Transport²³, in conjunction with the county councils of Cambridgeshire, Suffolk and Northamptonshire, to look at multi-modal transport solutions to this problem. Six packages of highway measures were identified and appraised.

3.6.6. In July 2012 the Secretary of State for Transport, Justine Greening MP, announced that the A14 Cambridge to Huntingdon improvement scheme would be taken forward, with construction work hoped to commence in 2018. In June 2013 the Government announced it would provide £1bn to upgrade the A14, with a requirement that local authorities contributed £100m to the project. Local authorities and Local Enterprise Partnerships, led by Cambridgeshire County Council agreed to make a local contribution to the scheme. In Dec 2013, following the publication of the new National Infrastructure Plan the Government announced that construction on the scheme would begin before the end of 2016²⁴. Public consultation on the scheme followed in 2013 and 2014 before the Development Consent Order submission was made in December 2014.

3.6.7. A detailed history of the scheme development is included in Appendix B.

²³ A14 Study, Department for Transport (DfT) (2011)

²⁴ <https://www.gov.uk/government/news/new-infrastructure-plan-published-by-government>

4. Policy Context

4.1. Historic Policy Documents (superseded)

4.1.1. The need for the improvement scheme was included in various editions of Regional Planning Guidance: East Anglia to 2016 (2000) and the East of England Plan (2008). Regional Planning Guidance Note 6 (2000) included “Improvements to the A14”²⁵ as number 2 priority in terms of improvements required to the strategic road network. Regional Planning Guidance Note 6 (2000) identified that a multi-modal study between Cambridge and Huntingdon would consider solutions to congestion and safety problems in the corridor around the A14 which is subject to substantial development.

4.1.2. The East of England Plan (2008)²⁶ included the A14 Ellington to Fen Ditton Improvement as a scheme programmed for delivery, and funded by Central Government through Highways Agency National network. The first Local Authority policy document to include the A14 scheme was the Cambridgeshire and Peterborough Structure Plan 2003.

National Policy

The following national policy documents are relevant to the scheme:

Table 2: national policy documents relevant to the scheme

Plan / Policy	Relevance to scheme
National Policy Statement for National Networks (2015)	The NPS sets out general policies in accordance with which applications relating to national networks infrastructure are to be decided.
National Infrastructure Plan (2014);	The A14 is listed as one of the 40 priority investments and is deemed to be a priority because of its ‘significant strategic value’.
National Planning Policy Framework (2012)	The NPPF outlines Government’s core planning principles which seek to ensure that development plans and decisions taken on planning applications contribute to the delivery of sustainable development. The scheme supports the delivery of the NPPF’s as it would provide the necessary highway infrastructure to support the growth of

²⁵ Regional Planning Guidance Note 6: Regional Planning Guidance for East Anglia to 2016 (2000) p.47
http://webarchive.nationalarchives.gov.uk/20100528142817/http://gos.gov.uk/goee/docs/Planning/Regional_Planning/Regional_Spatial_Strategy/Regional_Planning_Guidance_1.pdf

²⁶ East of England Plan, Government Office East of England, (2008) p.115
http://webarchive.nationalarchives.gov.uk/20100528142817/http://gos.gov.uk/goee/docs/Planning/Regional_Planning/Regional_Spatial_Strategy/EE_Plan1.pdf

	Cambridgeshire's economy.
Investing in Britain's Future (June 2013);	Sets out Government's intention to build a strong UK economy by delivering infrastructure that competes with the best in the world. Refers to A14 scheme directly.
Action for Roads: A network for the 21st Century (July 2013)	Scheme is referred to as 'one of the most important links for freight to access European markets' (para.2.5)
Department for Transport Business Plan 2012 – 2015 (May 2012)	The scheme conforms and aligns with priority of investment in infrastructure to promote growth and reduce congestion.

Local Policy

Table 3: The following local plans / policy documents are relevant to the scheme:

Plan / Policy	Type
County	
The Cambridgeshire Local Transport Plan 2011 - 2031 (LTP3) including Cambridgeshire Long Term Transport Strategy (LTTS) Cambridgeshire County Council (2014)	County Transport Plan
Transport Strategy for Cambridge and South Cambridgeshire, Cambridgeshire County Council (2014)	Area Transport Plan
Huntingdon and Godmanchester Market Town Transport Strategy, Cambridgeshire County Council (2014)	Area Transport Plan
Cambridgeshire and Peterborough Minerals and Waste Core Strategy, Cambridgeshire County Council and Peterborough City Council (July 2011)	Minerals and Waste Plan
Cambridgeshire and Peterborough Minerals and Waste Site Specific Proposals Plan, Cambridgeshire County Council and Peterborough City Council (February 2012)	Minerals and Waste Plan
Rights of Way Improvement Plan - Rights of Way: the Way Ahead, Cambridgeshire County Council (2005)	Rights of Way Plan
Cambridgeshire Green Infrastructure Strategy, Cambridgeshire Horizons / Cambridgeshire County Council (2011)	Green Infrastructure Strategy
Cambridgeshire Highways Policies and Standards (2014)	Highways Policies
Cambridgeshire's Local Flood Risk Management Strategy (2013)	Flood Risk Management Strategy
Cambridgeshire Landscape Guidelines (1993)	Landscape policy
Cambridgeshire Advisory Freight Map (2012)	County wide Advisory Freight Map
District	
South Cambridgeshire Local Plan 2011-2031:	Local Plan (Submission Draft)

Submission, South Cambridgeshire District Council (Submitted to Secretary of State March 2015, currently undergoing Examination)	
South Cambridgeshire Local Development Framework Development Control Policies Development Plan Document, South Cambridgeshire District Council (Adopted July 2007)	Development Plan Document
South Cambridgeshire Local Development Framework Northstowe Area Action Plan (Adopted July 2007)	Area Action Plan
South Cambridgeshire Local Development Framework Cambridge East Area Action Plan (produced jointly with Cambridge City Council) (Adopted February 2008)	Area Action Plan
South Cambridgeshire Local Development Framework North West Cambridge Area Action Plan (produced jointly with Cambridge City Council) (Adopted October 2009)	Area Action Plan
Cambridge Local Plan 2014 proposed submission document (2014) (Submitted to Secretary of State March 2015, currently undergoing Examination)	Local Development Plan (Submission Draft)
Cambridge Local Plan, Cambridge City Council (2006)	Local Development Plan
Huntingdonshire Draft Local Plan to 2036, Huntingdonshire District Council (2013)	Local Development Plan
Huntingdonshire Core Strategy, Huntingdonshire District Council (2009)	Local Development Plan
Saved policies from the Huntingdonshire Local Plan 1995 and the Local Plan Alteration 2002, Huntingdonshire District Council (2002)	Local Development Plan
Huntingdon West Area Action Plan, Huntingdonshire District Council (February 2011)	Area Action Plan
Cambridgeshire Joint Air Quality Action Plan (2010)	Air Quality Plan

4.2. Assessment of scheme against policy and guidance

National Policy

4.2.1. The A14 Cambridge to Huntingdon Improvement scheme is in compliance with relevant national policies identified in Section 4.2. The documents reviewed in this section underline Government's commitment to investment in transport infrastructure and emphasise the role this investment has in stimulating economic growth as well as maintaining the operation of the UK economy. The scheme is seen as key to supporting planned major growth in businesses and housing in Cambridgeshire as well as accommodating both current and growing strategic freight traffic, including that between the Haven Ports and the Midlands.

4.2.2. The following section includes a detailed review of compliance with local planning documents. An appraisal of the scheme against specific local policies contained within the planning documents is included in Appendix A.

Local Policy (County –wide)

Cambridgeshire Local Transport Plan 3 (2014)

4.2.3. The Cambridgeshire Local Transport Plan 3 (LTP3) includes a section on the A14 corridor²⁷, refers to CHUMMS and the previous Ellington to Fen Ditton scheme, and includes the A14 Cambridge to Huntingdon scheme as a committed scheme to be delivered by 2020. The LTP3 notes that the improvement will provide relief to traffic problems in the wider Huntingdon area and have a positive impact on air quality particularly in Huntingdonshire. The LTP3 concludes that delivery of a development strategy for Cambridgeshire is hampered by current conditions on the A14. Without the scheme, the current severe congestion on the A14 would worsen and growth of the Eastern region would be restricted, with negative consequences for jobs, housing development and regional businesses.

4.2.4. The LTP3 identifies the negative impacts of the current A14 on the local transport network in Cambridgeshire. These include:

- The negative impact of congestion on the ability to deliver development at Northstowe, the Cambridge fringe sites and at Huntingdon
- Rat-running through villages along the route of the A14, leading to localised congestion in roads and settlements that are not designed for strategic traffic, and to negative social and environmental impacts
- The Air Quality impacts from traffic on the A14 which have led to the declaration of Air Quality Management Areas (AQMA) in the vicinity of Brampton, Hemingford, Fenstanton, Bar Hill, Girton, Histon and Impington

4.2.5. The Third Cambridgeshire LTP 2011-2031: Long Term Transport Strategy includes the “A14 Cambridge to Huntingdon Improvement” scheme made up of capacity enhancements including a Huntingdon Southern Bypass. The scheme is identified as a “critical intervention to support development at Alconbury Weald, Wyton Airfield, Northstowe and North West Cambridge”²⁸.

Transport Strategy for Cambridge and South Cambridgeshire (2014)

²⁷ The Third Cambridgeshire LTP 2011-2031: Policies and Strategy Refresh, Cambridgeshire County Council (2014)

²⁸ The Third Cambridgeshire LTP 2011-2031: Long Term Transport Strategy, Cambridgeshire County Council (2014)

4.2.6. The Transport Strategy for Cambridge and South Cambridgeshire (TSCSC) forms part of the Local Transport Plan (LTP3)²⁹. The TSCSC identifies key locations where there are existing congestion problems and major intervention is planned for. Page 4-31 of the TSCSC refers to the A14 Cambridge to Huntingdon improvement scheme and states that:

‘This scheme will provide additional capacity on the A14 including a Huntingdon Southern Bypass, widening between Fenstanton and Bar Hill, and parallel local roads between Fenstanton and Girton. It will address existing capacity problems on this nationally and internationally important route, as well as providing capacity that will allow new development at Alconbury, Godmanchester and Northstowe’

Huntingdon Market Town Transport Strategy (2014)

4.2.7. The objectives of the Market Town Transport Strategy³⁰ are to:

- Support strategic sustainable development in and around Huntingdon
- Keep Huntingdon moving
- Ensure that the transport network supports the economy and acts as a catalyst for sustainable growth.
- Ensure good transport links between new and existing communities, and the jobs and services people wish to access.
- Enhance the transport linkages within Huntingdon
- Make travel safer
- Protect the historic and natural environment.

4.2.8. The scheme supports these objectives, primarily as it re-routes strategic traffic away from Huntingdon town centre and Godmanchester and through changes to the local road network, including the removal of the Huntingdon viaduct, provides the opportunity to deliver significant public realm improvements in the future.

Cambridgeshire and Peterborough Minerals and Waste Core Strategy (CPMWCS) (July 2011)

4.2.9. The scheme is located over areas of gravel, sands and clay, it is therefore anticipated that the primary aggregate materials required for construction would be taken from within the scheme footprint.

4.2.10. Six borrow pits have been identified in the DCO to provide building materials for the A14 scheme and they are integral to the delivery of the scheme. The six borrow pits, located along the route would provide a large proportion of the construction materials required.

4.2.11. The adopted Cambridgeshire and Peterborough Minerals and Waste Core Strategy (2011)³¹ makes specific reference to future improvements to the A14 in its policy CS1.

²⁹ Transport Strategy for Cambridge and South Cambridgeshire (TSCSC), Cambridgeshire County Council, (2014)

³⁰ Huntingdon and Godmanchester Market Town Transport Strategy, Cambridgeshire County Council (2014)

The policy states that in the case of the future improvements to the A14 (Ellington to Fen Ditton), specific provision (for the supply of mineral) will be made through sand and gravel and clay borrow pits close to the scheme. Where essential minerals cannot be supplied from the Plan area e.g. granite, the use of sustainable transport of this material will be encouraged, including railheads. Sustainable transport facilities will be safeguarded through the designation of Transport Safeguarding Areas. Policies CS11 and CS12 of the Core Strategy make provision for borrow pits to provide material for the A14 improvements (sand and gravel / engineering clay respectively).

Cambridgeshire and Peterborough Minerals and Waste Site Specific Proposals Plan (February 2012)

4.2.12. The provision for borrow pits is taken forward through the adopted Cambridgeshire and Peterborough Site Specific Proposals Plan³² (2012) which allocates sites.

4.2.13. Of the 6 Borrow pits proposed to supply the scheme: 3 are consistent with site allocations in Minerals and Waste Plan, 2 partly within allocated sites and one is outside but adjacent.

4.2.14. Borrow pit two is located within allocated site South West Brampton, borrow pit three is located within allocated site Galley Hill Fenstanton (Southern Site) and allocation Oxholme Farm and borrow pit seven is located within allocated site. The allocated sites are all identified for areas of search allocations for sand and gravel borrow pits for any future improvements of the A14. Borrow pits two, three and seven are located within the allocated areas in the (CPMWSSP) and therefore reflect Core Strategy policy CS11 set out above.

4.2.15. Parts of borrow pits one and six and the whole of borrow pit five are located outside of the areas allocated for mineral extraction. Parts of borrow pit one are located within allocated site West of Brampton which is within an area of search allocations for sand and gravel borrow pits for any future improvements of the A14. However, a large section of borrow pit one is located outside of the allocated area.

4.2.16. Part of borrow pit six is located within allocated site North Dry Drayton Junction, Slate Hall Farm which is within an area of search allocations for engineering clay borrow pits for any future improvements of the A14. However, a large section of borrow pit six is located outside of the allocated area.

4.2.17. The whole of borrow pit five is located outside of an allocated area although it is situated adjacent to allocated site Brickyard Farm, Boxworth which is within an area of search allocations for engineering clay borrow pits for any future improvements of the A14.

³¹Cambridgeshire and Peterborough Minerals and Waste Core Strategy, Cambridgeshire County Council (2011)

³²Cambridgeshire and Peterborough Site Specific Proposals Plan, Cambridgeshire County Council (2012)

- 4.2.18. Core Strategy policy CS11 relevant to borrow pit one refers to sand and gravel borrow pits. Core Strategy policy CS12 refers to engineering clay and is therefore relevant to borrow pits five and six.
- 4.2.19. The policies and paragraphs identified above confirm that borrow pits located outside of the allocated areas will not be permitted unless it can be demonstrated that there are overriding benefits which justify an exception to the policy e.g. to provide substantial social and environmental benefits and to avoid sterilisation of reserves.
- 4.2.20. Construction materials would primarily be conveyed along haul routes within the footprint of the scheme. The proposed use of the borrow pits would significantly reduce the amount of material treated as waste materials exported from the scheme. The excavation of sands, gravels and clay materials from such pits is an established and ‘best practice’ approach to securing local mineral resources avoiding transport of materials from further afield.
- 4.2.21. For those reasons, the use and location of the borrow pits, both within and, in the case of borrow pit five, outwith, the allocated areas is justified on the basis of the overriding social and environmental benefits that use provides. To require supply of materials from other sources further from the scheme would not provide those benefits and would lead to increased mineral traffic on the public highway contrary to policy CS11.

Cambridgeshire Rights of Way Improvement Plan (ROWIP)(2005)

- 4.2.22. SOA1 – “Making the Countryside More Accessible” – The scheme delivers improvements to Public Rights of Way that were severed as part of previous road improvements at Bar Hill and Brampton and the provides a long distance NMU route from Swavesey Junction to Girton and to south of A14 from Dry Drayton Junction to Girton.
- 4.2.23. SOA2 – “A Safer Activity” – The provision of long distance NMU route from Swavesey Junction to Girton and to south of A14 from Dry Drayton Junction to Girton meets this objective. The scheme is fully compliant, as this will separate vulnerable users from A14 and other traffic enhancing safety of users.
- 4.2.24. SOA5 – “Filling in the Gaps” – The provision of new PROW/NMU links to join PROW that were severed by the previous A14 scheme including Lolworth FP5 to Bar Hill BR1 and Brampton BR19 to the highway network to the east of the A1(T). The scheme is fully compliant, providing new connections between communities that have been severed for many years by previous road improvements.
- 4.2.25. SOA7 – Develop Definitive Map and Other Records – The reconnection of PROW links that were severed by previous road improvements improves the legal record by resolving long standing anomalies. The scheme is compliant in terms of those routes

that are being reconnected but not compliant for two routes – notably - The Stukeleys Bridleway 6 and Brampton Footpath 3.

Cambridgeshire Highways Policies and Standards (2014)

4.1.1. This document sets out the policies that apply to the operation of the highway network in Cambridgeshire excluding the rights of way network, motorways and trunk roads.

Cambridgeshire Green Infrastructure Strategy (2011)

4.1.2. The Cambridgeshire Green Infrastructure Strategy is designed to assist in shaping and co-ordinating the delivery of Green Infrastructure in the county, to provide social, environmental and economic benefits now and in the future.

4.1.3. The Strategy demonstrates how Green Infrastructure can be used to help to achieve four objectives:

- To reverse the decline in biodiversity - The scheme provides new ecological mitigation planting.
- To mitigate and adapt to climate change – The scheme is compliant in this objective in that it provides 12km of new NMU routes which provide the opportunities for increased travel by sustainable modes.
- To promote sustainable growth and economic development- The NMU links provide connections between communities across the county and support the growth of communities such as Northstowe.
- To support healthy living and well-being - The scheme is compliant in this objective in that it provides 12km of new NMU routes which provide the opportunities for increased travel by sustainable modes.

Cambridgeshire's Local Flood Risk Management Strategy (2013)

4.1.4. The strategy sets out the roles and responsibilities of Flood Risk Management Partners within the County, highlighting the position of the County Council as the Lead Local Flood Authority under the Flood and Water Management Act 2010.

4.1.5. There are 5 key objectives within the strategy:

- Understanding flood risk in Cambridgeshire
- Managing the likelihood and impact of flooding
- Helping Cambridgeshire's citizens to understand and manage their own risk
- Ensuring appropriate development in Cambridgeshire
- Improving flood prediction, warning and post flood recovery.

4.1.6. A review of the scheme has not identified any areas where the scheme contradicts the strategy approach.

Cambridgeshire Landscape Guidelines (1993)

4.1.7. The Guidelines set out the following relevant objectives:

- Mobilise care and action amongst the main bodies who play the most active role in generating tomorrow's landscapes.
- Improve overall visual quality and strengthen the contrasts between landscapes in different parts of the County (emphasising a sense of place).
- Integrate wildlife conservation into landscape action at all scales from planning at a county level, through site planning, design and management, to the detailing of "hard" and "soft" features at the smallest scale.
- Protect and enhance historic features.
- Conserve existing features and create landmarks and 'personality' in the landscape.

4.1.8. On the whole the detailed landscape mitigation detailed in Ch. 10 – "Landscape" of the Environmental Statement reflects the principles set out in the Cambridgeshire Landscape Guidelines.

Cambridgeshire Joint Air Quality Action Plan (2010)

4.1.9. The Air Quality Action Plan (AQAP) was developed by Cambridge City Council, Huntingdonshire District Council and South Cambridgeshire District Council. It looked at how to improve air quality up to 2015 in order to meet national air quality objectives, setting priority actions for each district, and focuses on reducing PM₁₀ and NO₂ concentrations along the A14 and within each district.

4.1.10. The specific actions related to the A14 and improving air quality are:

- Widening of the A14 carriageway between Fen Drayton and Histon
- Re-alignment of the A14 and the construction of a local road between the M11 and Bar Hill junctions during the A14 Improvement Scheme

4.1.11. The scheme includes proposals that seek to meet the objectives set out in plan.

5. Local Growth and Development – development proposals not commenced or completed

5.1. Relevant Planned Developments

5.1.1. The population of Cambridgeshire and Peterborough is forecast to grow by another 23-24% over the next two decades to around a million people with demand for new homes and employment significantly increasing.

5.1.2. Current and emerging Local Plans include allocations for around 72,500 new houses to be delivered across Cambridgeshire to 2031³³. Investment in transport infrastructure is critically important to help sustain this growth and economic prosperity.

Cambridge East

5.1.3. In 2008 South Cambridgeshire District Council and the City Council adopted the Cambridge East Area Action Plan³⁴. This plan identifies the site for “a sustainable new urban quarter of approximately 10,000 to 12,000 dwellings”, the delivery of which is based on the relocation of Cambridge airport. Marshall has signalled its intention not to move the airport in the foreseeable future, and the Submission Local Plans of Cambridge and South Cambridgeshire propose to safeguard the main airport site for potential development post 2031.

5.1.4. Part of the site is capable of development whilst the airport remains in operation. This includes land North of Newmarket Road, being referred to as the ‘Wing development, anticipated to accommodate up to 1,300 new homes, a primary school, food store and all the associated infrastructure, services and facilities to serve the new community. A smaller development is anticipated north of Cherry Hinton.

Orchard Park (previously Arbury Park)

4.1.1. Orchard Park is a mixed use development located to the northern side of Cambridge alongside the A14. The site is largely built out. A further 140 dwellings have planning permission but have yet to be built, and a further 120 are planned in the South Cambridgeshire Submission Local Plan (carried forward from the adopted Site Specific Policies DPD). Access to the development from the A14 is via the Histon Interchange.

4.1.2. The site north of Newmarket Road (Wing) and Orchard Park, which is already largely built out, are not dependent upon the A14 improvements. However, improvement to the A14 along the Cambridge Northern Bypass may relocate trips using the Histon and Milton junctions.

North West Cambridge

4.1.3. There are three significant proposed developments in this quadrant of Cambridge:³⁵

4.1.4. The University Site between Madingley Road and Huntingdon Road includes proposals for 3,000 dwellings, 2,000 student bed spaces, hotel, indoor sports and outdoor area and commercial properties. The site straddles the City and South Cambridgeshire boundary. The site was planned through the North West Cambridge Area Action Plan,

³³ Cambridgeshire Local Transport Plan 3 : Cambridgeshire Long Term Transport Strategy, Cambridgeshire County Council (2014)

³⁴ Cambridge East Area Action Plan, Cambridge City Council, South Cambridgeshire District Council (2008)

³⁵ North West Cambridge Area Action Plan, South Cambridgeshire District Council, Cambridge City Council (2009)

produced jointly by Cambridge City Council and South Cambridgeshire District Council. The site has subsequently gained planning permission, and is under construction.

4.1.5. Both the Cambridge and South Cambridgeshire Local Plans identify development between Huntingdon Road and Histon Road.

4.1.6. Within Cambridge, development (being referred to as Darwin Green 1) consists of up to 1,593 dwellings of varying types and sizes, primary school, children's centre and up to 6 small retail units located on approximately 40 hectares of land was originally identified in the Cambridge Local Plan 20016. This development has planning permission.

4.1.7. In South Cambridgeshire, an adjoining site was allocated in the Site Specific policies DPD 2010 (being referred to as Darwin Green 2). The South Cambridgeshire Submission Local Plan proposes to slightly extend the northern boundary of the site (Darwin Green 3). In total Darwin Green 2 and 3 would deliver around 1000 homes, and a secondary school.

4.1.8. The Pinch point scheme being delivered ahead of the wider A14 improvement scheme will provide improved capacity as well as access improvements at the Girton and Histon interchanges, enabling development on the University Site and Darwin Green in the north west quadrant of Cambridge in advance of the main A14 scheme (along with a range of other measures in the Transport Assessments associated with the development schemes).

4.1.9. The development to the north-west of Cambridge would benefit from improved access at the Girton and Histon Interchanges as a result of the proposed scheme.

Cambridge Southern Fringe/Cambridge Biomedical Campus

4.1.1. There are a number of planned developments on the southern fringe of Cambridge.

4.1.2. Access to and from these developments will impact on A14 traffic and M11/A14 junctions. The developments include the new communities at Glebe Farm, Clay Farm and Trumpington Meadows as well as extensions to the Addenbrookes Hospital site known as CBC 2020 and CBC 2040.

Glebe Farm

4.1.3. Glebe Farm is allocated for housing development within the Cambridge Local Plan. This site is situated north of the section of the Addenbrooke's Road between Hauxton Road and Shelford Road. It is 8.89 hectares, and was previously in agricultural use. This full application is for 286 dwellings with associated landscaping, open spaces, vehicle access from Addenbrooke's access road and related infrastructure.

Clay Farm

4.1.4. The site is 113 hectares in size, currently in agricultural use. It is allocated for residential within the Cambridge Local Plan (2006). Outline was granted permission in August 2010 for up to 2,300 homes, 40% of which will be affordable.

Trumpington Meadows

4.1.5. The Trumpington Meadows site lies west of Trumpington Road, in the south east of the City. The development wraps around the Trumpington Park and Ride site. Planning permission has been granted for 1200 dwellings at this cross boundary site, and the development is under construction.

Northstowe

4.1.6. The new town of Northstowe was identified in the Cambridgeshire Structure Plan 2003, and an Area Action Plan was adopted by South Cambridgeshire District Council in 2007. Northstowe will include up to 10,000 new homes, accompanied by employment land, a new town centre and other facilities. It is located five miles northwest of Cambridge, between the villages of Oakington and Longstanton³⁶. The Busway and Park and Ride have already been constructed and are successfully carrying passengers. A new Busway loop will be provided through the town centre and access roads will link the town to the A14 trunk road. Phase 1 of the development, for the first 1,500 homes, has planning permission, and can proceed before the A14 scheme is completed. Highways England has indicated that development beyond this amount cannot proceed until the A14 Cambridge to Huntingdon Improvement scheme is completed.

Waterbeach New Town

4.1.7. The Submitted South Cambridgeshire Local Plan proposes a new town on the former Waterbeach Barracks and land to the east and north. Waterbeach lies to the north of Cambridge between the A10 and the Ely to Cambridge railway line. The A10 to the north of Cambridge, connecting to the A14 at Milton, is one of the more congested outer radial routes into the city.

4.1.8. Approximately 8,000 – 9,000 homes are planned. The Submitted Local Plan anticipates development towards the end of the plan period, with the majority of development taking place after 2031. New Town will deliver high quality public transport links to Cambridge, with provision of a new busway and a relocated railway station, closer to the New Town but still serving the existing village of Waterbeach. Additional capacity will be needed on the section of the A10 between Waterbeach Barracks and the A14 to cater for the traffic demand of the new town and also of development in Ely.

Cambourne West/ Bourn Airfield

³⁶ South Cambridgeshire District Council website (2015) <https://www.scambs.gov.uk/services/northstowe>

4.1.9. The Submitted South Cambridgeshire Local Plan proposes additional development on the A428 corridor to the west of Cambridge. The Cambourne West site, an extension to the Cambourne village, will host 1,200 homes. Bourn Airfield is identified for the development of a new village, and will include 3500 homes⁴⁵. Since the Local Plan was submitted, an outline planning application has been submitted on the Cambourne West site for a larger development comprising 2,350 houses. Whilst the developments are not directly dependent upon the A14 improvements, they will benefit indirectly as additional capacity on the A14 should draw traffic away from the A428 corridor, and in particular the Caxton Gibbet roundabout with the A1198.

Wintringham Park / Loves Farm St. Neots

4.1.10. 3,820 homes are planned to the eastern side of St. Neots split between Wintringham Park and Love's Farm.

4.1.11. It is anticipated that the A14 improvements will improve capacity and journey time reliability to draw back traffic which has diverted onto alternative routes, such as the A1198 and A428, to avoid the congestion. This will help to free up capacity along the A428 corridor for these developments, although traffic conditions on the A1303 around Madingley and the M11 junction regularly become very congested at peak periods. The A14 improvement scheme does not address the 'missing links' (between the A428 and the A14 and M11) at the Girton interchange, which will be considered as part of the A428 Route Based Strategy.

Alconbury Weald, Wyton Airfield

4.1.12. The Alconbury Weald (5000 homes) and Wyton Airfield (4500 homes) developments will drastically change the economic profile of the local area around Huntingdon and St Ives, acting as a major economic hub, and leading to new travel patterns and new pressures on the transport network. The A14 Cambridge to Huntingdon improvement Scheme will provide some relief to traffic problems in Huntingdon, Godmanchester, Brampton and St Ives, but new transport links will still be needed to cater for this level of new development.

4.1.13. Alconbury Weald and Wyton Airfield will together deliver over 9,500 new dwellings by 2036³⁷, with potential for more development within the area in the longer term. In addition, the Enterprise Zone at Alconbury Weald has 150 hectares of land for employment development and the creation of 8,000 jobs. Further development is also planned around Huntingdon, and to a lesser extent St Ives. Significant levels of investment in transport infrastructure and services are needed to provide capacity for this growth and these are covered within the Cambridgeshire Long Term Transport Strategy (LTTS).

³⁷ Draft Huntingdonshire Local Plan, Huntingdonshire District Council (2013)

Huntingdon, St Ives

- 4.1.14. Traffic conditions around Huntingdon and St Ives can be very congested at peak periods, particularly at times when the A14 is busy or when incidents occur. In this context, as with Northstowe, the A14 Cambridge to Huntingdon scheme is a critical intervention that will release transport capacity on the local road network around Huntingdon and provide capacity for the travel demand of various developments.
- 4.1.15. As a result of delivering a new A14, conditions on the A141 around Huntingdon will markedly improve, to the extent that traffic from Alconbury Weald and Wyton Airfield can largely be accommodated in the Huntingdon area with improvements to junctions on the existing route³⁸. However, it is also considered necessary at the local level to safeguard a possible new alignment for the A141 around the north of Huntingdon, should further capacity be needed in future.
- 4.1.16. The Cambridgeshire Long Term Transport Strategy³⁹ also identifies the need to develop two Sustainable Transport packages focussed on Huntingdon and St. Ives in order to consider a possible range of interventions that might be necessary to fully accommodate planned growth in the immediate area.

³⁸ Cambridgeshire Long Term Transport Strategy, Cambridgeshire County Council (2014)

6. Existing Local Area Characteristics

This section will set out the existing local characteristics of the area which the A14 Cambridge to Huntingdon Improvement Scheme will impact upon. It will identify the baseline conditions in the local area, in the current year (2015) for the following features:

- Landscape
- Cultural Heritage
- Air Quality
- Noise and Vibration
- Ecology
- The environment for Pedestrians, Cyclists and Equestrian travellers
- The Economy
- Minerals and Waste
- Flooding and Water

6.1. Landscape

The 'Route'

6.1.1. The existing A14 runs past Ellington to the A1 Brampton Hut junction and on to Hinchingsbrooke along the valley of Ellington Brook to meet the A14 spur at Spittals. The A14 spur runs gently down from the low hill at Alconbury past the Stukeleys to Spittals. The A14 then runs through Huntingdon on an embankment across Views Common, on a viaduct over the East Coast mainline and the station and on an embankment across Mill Common, and then continues past Huntingdon Castle on the north side of the floodplain meadows at Portholme, before crossing the River Great Ouse at Godmanchester. It runs across the floodplain of West Brook on its route eastwards towards Cambridge, where the A14 becomes the Cambridge Northern Bypass, cutting through Girton and continuing eastwards past Impington.

6.1.2. The existing A14 is a prominent feature of the landscape between Cambridge and Huntingdon. In Huntingdon the A14 divides runs along the edge of Mill Common and across Views Common, largely on raised embankments. The raised route of the existing A14 in Godmanchester and its heavy traffic flow has an adverse influence over the character of the northern edge of the town and over the Maltings area and the river. The route through South Cambridgeshire is largely flat, agricultural farmland, as a result the A14 is prominent in a setting with open views to either side.

6.1.3. Land use within the study area comprises:

- Agricultural farmland (predominantly large scale arable fields);
- Natural features (river Great Ouse, various other smaller watercourses, water meadows, gravel pits and Brampton Wood);
- Major highway infrastructure, including the A1, the existing A14 and Cambridge Northern Bypass;
- East Coast mainline railway line east of river Great Ouse;
- Residential;
- Commercial, including Brampton Hut Services, Cambridge Services, Buckingham Business Park south of Swavesey and Cambridge Science Park immediately south of the A14 Cambridge Northern Bypass; and
- Recreational sites such as Hinchingsbrooke Country Park, county wildlife site/gravel pits / marina at Buckden and angling lakes at Fenstanton.
- Historic green open spaces within an urban setting e.g. Views Common and Mill Common.

Settlements

6.1.4. The largest settlements near the scheme include Huntingdon to the west and Cambridge to the east. Brampton is to the south-west of Huntingdon and Godmanchester and St Ives are to the south-east and east. The existing A14 passes close to Brampton and Godmanchester and runs through the middle of Huntingdon. The A14 Cambridge Northern Bypass runs between the Cambridge northern fringe and the extended villages of Impington, Histon and Milton and runs through the southern part of Girton. The Cambridge northern fringe is made up of housing, light industry and substantial offices and research establishments, including Cambridge Science Park, the Innovation Centre, the Regional College and the mixed-use development at Orchard Park.

6.1.5. Between Huntingdon and Cambridge are The Stukeleys, The Hemingfords, Fenstanton, Fen Drayton, Swavesey, Longstanton and Oakington all to the north of the existing A14, with, Alconbury, Hilton, Conington, Boxworth, Lolworth, Bar Hill, Dry Drayton and Madingley all to the south of the existing A14. South of Huntingdon either side of the Great Ouse Valley are The Offords, Buckden, Brampton and Godmanchester. Along the Cambridge northern bypass lie Girton, Histon and Impington, Milton and Orchard Park.

Landscape pattern

6.1.6. To the west of Cambridge the landscape south of the existing A14 is predominantly undulating and north of the A14 predominantly flat. Both landscapes offer expansive views of large scale intensive arable farmland, divided by sparse trimmed hedgerows, open ditches or streamside vegetation. The scattered woods, some of which are designated as ancient, form important landscape and wildlife features⁴⁰.

6.1.7. The smaller villages and isolated farms scattered throughout the area surrounding the scheme are often in sheltered places with tree cover. Small grass paddocks typically occur on the edges of villages, sometimes as part of parkland. Church spires and towers, wind turbines and water towers often form distinctive local landmarks.

Table 4: Designations relevant to landscape and visual impact

Area / Location	Designation
Section of Mill Common, Huntingdon	Registered common land
Westside Common, Huntingdon	Registered common land
Childerley Park, Madingley Park and the American Military Cemetery, South Cambridgeshire	Recorded Heritage Assets - Register of Historic Parks and Gardens
Large part of Huntingdon Town Centre , parts of Alconbury, Brampton, Buckden, Fen Drayton, Fenstanton, Godmanchester, Hilton, Madingley, Offord Cluny	Conservation areas
Earthworks on Mill Common	Scheduled monument
Huntingdon Castle	Scheduled monument
Brampton Wood	Ancient woodland, site of special scientific interest (SSSI), Nature Reserve
Brampton Meadow	Site of special scientific interest (SSSI),
Portholme	Site of special scientific interest (SSSI), SAC
Brampton Racecourse	Site of special scientific interest (SSSI),
River Great Ouse and adjacent areas	County Wildlife Sites
Trees within Huntingdon Conservation Area.	Tree Protection Orders (TPOs)
Trees within Hinchingsbrooke Country Park, Huntingdon	Tree Protection Orders (TPOs)
East of Ermine Street, northeast of Lolworth, north-east of Bar Hill and west of Girton along 'The Avenue'	Tree Protection Orders (TPOs)

⁴⁰Cambridgeshire Green Infrastructure Strategy, Cambridgeshire Horizons (2011)

6.2. Cultural Heritage

6.2.1. This section examines the cultural heritage of the area affected by the scheme. It will provide a summary of the Archaeological remains and Historic buildings across the scheme area.

Archaeological assets

Table 5: The table below list Archaeological assets of high value⁴¹

Name	Location	Designation
Earthwork on Mill Common	Huntingdon	Scheduled monument
Huntingdon Castle (Castle Hills)	Huntingdon	Scheduled monument

6.2.2. The earliest known prehistoric activity in the scheme area dates to the Upper Palaeolithic (45,000-10,000 BP1), Mesolithic (10,000 BP – 4,000 BC) and Neolithic (4,000 - 2,200 BC) periods and comprises small quantities of worked flint tools⁴².

6.2.3. These are likely to date to the Bronze Age (2,500 - 700 BC) or Iron Age (800 BC – AD 43) periods. Enclosures are a common feature of the Iron Age and Roman period (AD 43 – 410) Cambridgeshire landscape; enclosures generally comprised a bank and ditch enclosing an area that contained roundhouses and pens for animals. The area is crossed by a number of Roman roads notably Ermine Street.

6.2.4. Medieval activity (AD 410 - 1540) is largely focussed on Huntingdon with an Anglo-Saxon (AD 410 - 1066) settlement being developed as a Danish burh, and after the Norman invasion construction of a motte and bailey castle in AD 1068. Some of the villages outside Huntingdon have their origins in the medieval period and two were deserted. Remains of fields dating to the medieval period have also been identified.

6.2.5. Later medieval (AD 1066 - 1540) and post-medieval (1540 - 1901) activity is largely represented by the urban development of Huntingdon, surrounding villages, along with the development of agricultural landscape through enclosure and later large-scale arable farming. Activity dating to the modern period (1901 to present) is represented by military sites including the former RAF Brampton and RAF Oakington / Oakington Barracks and other World War II civil defences.

⁴¹ As informed by criteria set out in by DMRB guidance HA 208/07 (Highways Agency et al., 2007): Scheduled monuments (including proposed sites), Undesignated assets of schedulable quality and importance, assets that can contribute significantly to acknowledged national research objectives.

⁴² Chapter 9 Cultural Heritage, 6.1 Environmental Statement, A14 Cambridge to Huntingdon Improvement Scheme, DCO Submission, Highways Agency (2014)

6.2.6. In Huntingdon there are 2 notable archaeological sites. These are at Huntingdon Castle and Mill Common. Huntingdon Castle was built in 1068 for William the Conqueror, and has been used for a variety of purposes, including use as a gaol during the 15th and 16th centuries. The castle is a scheduled monument. The earthwork on Mill Common is believed to be the remains of part of the English civil war defences of Huntingdon, but may have medieval origins. This asset is also a scheduled monument.

Historic buildings

Table 6: The table below lists local historic buildings and their designations⁴³:

Name	Location	Designation
Huntingdon Town Hall	Huntingdon	Grade II* listed building
Huntingdon Station	Huntingdon	Grade II listed building
Huntingdon Bridge	Huntingdon	Scheduled monument
Hinchingbrooke House	Huntingdon	Grade I listed building
Castle Hill House, Huntingdon	Huntingdon	Grade II* listed building
28 High Street, Huntingdon	Huntingdon	Grade II* listed building
Godmanchester Post Street Conservation Area	Godmanchester	Conservation area
Godmanchester Earning Street Conservation Area	Godmanchester	Conservation area
Conington Hall	Conington	Grade II* listed building
Manor House	Fenstanton	Grade II* listed building
All Saints' Church, Lolworth	Lolworth	Grade II* listed building
American Military Cemetery	Madingley	Grade I registered landscape
Girton College	Girton	Grade II* listed building

[Huntingdonshire]

6.2.7. The historic town of Huntingdon is designated as a conservation area. The medieval layout of the town remains legible with the gently undulating High Street, which follows the line of Ermine Street, which is a Roman road, lined by continuous rows of buildings set within long narrow plots laid out perpendicular to the street front. The legibility of the medieval layout has been reduced by modern redevelopment which is particularly apparent to the east of High Street, the built heritage of the conservation area is characterised by buildings of post-medieval date, comprising a mixture of vernacular cottages, townhouses, substantial gentry houses, coaching inns, and civic and public buildings.

6.2.8. Located to the south and west of the town are Mill Common and Views Common. Established in the medieval period, these areas remain an important feature within the conservation area, evidencing the history and development of the settlement, and continuing to shape the character of the town today.

⁴³Cambridgeshire Historic Environment Record (CHER), Cambridgeshire County Council (2015)

6.2.9. Huntingdon Conservation Area⁴⁴ is currently adversely affected by the presence of the A14 dual carriageway which runs across Views Common and Mill Common, resulting in noise intrusion from high vehicle numbers, and visual intrusion from the presence of the viaduct which carries the road A14 route across Brampton Road and the ECML. The viaduct also adversely affects the setting of surrounding historic buildings including Huntingdon County Hospital and Huntingdon railway station.

6.2.10. Hinchingbrooke House, a grade I listed building, is located to the west of Huntingdon and forms an integral part of the conservation area. Hinchingbrooke House survives today as a fine example of a high status post-medieval house.

6.2.11. The value of Huntingdon Conservation Area is enhanced by its setting close to Portholme and Westside Common, located to the south and east of the conservation area respectively, both of which are flanked by the river Great Ouse. Formed by wide open, flat areas of privately owned green space, they provide long views out from the conservation area, and maintain our understanding of the town's historic rural setting.

6.2.12. The village of Godmanchester is located to the south-east of Huntingdon and is designated as two separate conservation areas: Godmanchester Post Street conservation area and Godmanchester Earning Street conservation area. With its origins in the Roman period, the settlement rose to prominence in the post-medieval period and is today characterised by high status post-medieval merchants and yeoman farmers' houses. The conservation areas contain one grade I listed building and six grade II* listed buildings, whilst the historic buildings within the designated areas hold considerable group value as evidence of a post medieval domestic architecture.

6.2.13. The presence of Portholme to the northwest of the Post Street conservation area contributes to the value of the conservation area, providing an open green setting to the town, and long distance views to and from the conservation area. In consideration of their architectural and historic interest, these conservation areas have been assessed to be of high value.

[South Cambridgeshire]

6.2.14. The 14th century Church of All Saints in Lolworth is located on a hillside above the current A14 with the church tower forming a notable local landmark. It is designated as a grade II* listed building.

6.2.15. The American Military Cemetery was established during WWII and laid out in its current form in the mid-1950s to provide the final resting place for American servicemen and women who lost their lives during WWII.

⁴⁴ Huntingdon Conservation Area Character Assessment Huntingdonshire District Council (2007)

6.2.16. Conington Hall was built in the early 18th century and survives today as a charming example of a modest country house. Conington Hall is designated as a grade II* listed building.

6.2.17. Girton College Lodge is sited at entrance to Girton College and its extensive grounds from the A1307. The lodge is of group value with the historic college buildings and currently experiences noise and visual intrusion as a result of traffic levels on the adjacent road.

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6.3. Ecology

6.3.1. Within the Huntingdon – Cambridge corridor there are a number of valuable habitats present, specifically woodland, standing and running water, swamp and marginal vegetation and semi-improved grassland.

6.3.2. Ecological surveys⁴⁵ have shown that, in areas surrounding the existing A14 and in habitats within the Scheme, there are a number of legally protected species, including bats, dormouse, badger, breeding birds, wintering birds, water vole, otter, great crested newt, grass snake and common lizard.

6.3.3. There are localised areas of high ecological value which are designated as County Wildlife Sites. These include the River Great Ouse and its surrounding flood meadows, Buckden Gravel Pits and the River Cam. There are also other locally and nationally significant designated sites of nature conservation interest in the surrounding area. There are 26 County and City Wildlife Sites and two Protected Roadside Verges within 2km of the scheme.

Table 7: *Statutory designated sites of nature conservation with potential to be adversely affected by the scheme*⁴⁶

Key:

SSSI – Site of Special Scientific Interest
 SAC – Special Areas of Conservation
 SPA – Special Protection Area
 PRV - Protected Roadside Verges
 CWS- County Wildlife Sites
 RAMSAR - wetlands of international importance

Site name:	Designation:
Brampton Meadow	SSSI
Portholme	SSSI, SAC
Brampton Wood	SSSI
Brampton Racecourse	SSSI
Madingley Wood	SSSI
Little Paxton Pits	SSSI
St Neots Common	SSSI
Ouse Washes	SAC, SPA, Ramsar, SSSI
Eversden and Wimpole Woods	SAC, SSSI

⁴⁵ Phase 1 Habitat Surveys April 2013 (2013), Terrestrial Invertebrate Survey Report (2013-2014), aquatic invertebrate surveys (2013-2014) Freshwater fish surveys (2013-2014), Great Crested Newt Surveys (2014), Reptile surveys (2013-2014), Breeding and wintering bird study (2013-2014), Bat Study (2013-2014), Barn Own Studies (2013-2014), Badger Study, (2014), Otter and Water vole surveys (2013-2014) A14 Cambridge to Huntingdon Improvement Scheme, DCO submission, Highways Agency (2014)

⁴⁶ Designated sites system, Natural England (2015)

<https://designatedsites.naturalengland.org.uk/SiteSearch.aspx>

Table 8: *Non-statutory designated sites of nature conservation with potential to be adversely affected by the Scheme*⁴⁷

Site name:	Designation:
Buckden Gravel Pits	CWS
River Great Ouse	CWS
Fenstanton Pits (West End Pits)	CWS
Madingley Brick Pits	CWS
Brampton Road A1 Slip Road	CWS
Park Road Grasslands	CWS
Hinchingbrooke Gravel Pits	CWS
Brampton Flood Meadows	CWS
Settling Bed (East of Silver Street)	CWS
West Meadow	CWS
Lattenbury Hill Parkland	CWS
Mere Lane (East) RSV	CWS
Marsh Lane Gravel Pits	CWS
Fenstanton Meadow	CWS
Woolley Leys RSV	CWS
River Cam	CWS
Littlebury Farm Meadows	CWS
Fen Drayton Gravel Pits	CWS
Low Meadows (West)	CWS
Hermitage Wood	CWS
Ellington Pastures and Underlands	CWS
King's Hedges Hedgerow	CWS
Milton Road Hedgerows	CWS
Ascension Parish Burial ground	CWS
Bird Sanctuary, Conduit Head	CWS
Scrub East of M11 Verge	CWS
Alconbury	PRV
Brampton Road East	PRV

Table 9: Along the route and within the existing study area the following important populations of species exist:

Population	Designation	Habitat location
White-spotted pinion moth	Section 41 listed species	Elm trees south of Wood Green Animal Shelter
Common toad	Section 41 listed species	Chivers Lake, Histon
Cetti's warbler	Species of County Value	Buckden Gravel Pits CWS Fenstanton Gravel Pits CWS Fen Drayton Gravel Pits
Cuckoo	Species of County Value	Buckden Gravel Pits CWS Fenstanton Gravel Pits CWS Fen Drayton Gravel Pits
Grasshopper warbler	Species of District Value	Buckden Gravel Pits CWS
Linnet	Species of District Value	Buckden Gravel Pits CWS
Yellowhammer	Species of District Value	Buckden Gravel Pits CWS
Yellow wagtail	Species of District Value	Buckden Gravel Pits CWS

⁴⁷Cambridgeshire and Peterborough Environmental Records Centre (2015) also http://www.cambridgeshire.gov.uk/info/20012/arts_green_spaces_and_activities/88/nature_conservation_sites

6.4. Noise and vibration

- 6.4.1. Environmental noise mainly consists of noise from transport sources such as road, rail and aviation. Communities exposed to the highest levels of traffic noise are often found close to and along established heavily trafficked roads within cities, other developed areas and along major strategic road transport networks such as the A14.
- 6.4.2. The impact of road noise on nearby residents can vary depending on the nature of building's construction and location / orientation (including external amenity areas) and the separation distance from the source, traffic volume, speed and type, road gradient and surface finish, driving conditions, and physical barriers or topography between the source and receptor, and the sensitivity of residents.
- 6.4.3. Traffic noise is usually loudest closest to the road source, reducing with distance separation. Up to 600m is generally considered the distance that receptors are likely to be most sensitive to and directly affected by traffic noise. Beyond this noise levels tend to be less discernible or are masked by other noises. However, under certain metrological conditions distant diffuse traffic noise (often described as a distant rumble) can be audible at times at distances of 1 to 2 km from the carriageway
- 6.4.4. Existing traffic noise levels varies widely across the scheme area and is currently high at a number of residential noise sensitive premises close, and immediately adjacent, to the existing A14. At certain locations the levels are likely to give rise to significant adverse impacts on health and quality of life.
- 6.4.5. 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.
- 6.4.6. The Environmental Noise (England) Regulations 2006 (as amended) implement nationally the EU directive. In January 2014 the Department for Environment Food and Rural Affairs (DEFRA) published its *Noise Action Plan: Road (Including Major Roads)* in response to the Regulations, which defines Important Areas. Noise Action Plans and associated noise mapping are used to estimate the number of people exposed to various levels of environmental noise and the identification of long term strategies for managing environmental noise.
- 6.4.7. DEFRA noise mapping identified and designated areas of land as Important Areas (IAs) "noise hotspots" for the purpose of noise action planning and this includes noise sensitive residential receptor locations along and immediately adjacent to the exiting A14. The population at these locations is likely to be at the greatest risk of experiencing a significant adverse impact to health and quality of life as a result of their exposure to road traffic noise. Important Areas typically include 1% of the

population affected by the highest noise levels (typically 75 dB_{(A), LA10,18h} or higher and not less than 65 dB). This is effectively the worst case scenario.

6.4.8. Highways England (HE) and Cambridgeshire County Council (CCC) as relevant highway authorities responsible for transport are defined as “Noise Making Authorities” under noise action planning, They are expected to examine each ‘Important Area’ (IA) with regard to noise mitigation and form a view about what measures / actions, if any, may be taken in order to assist with the implementation of the Government’s policy on noise which aims to promote good health and quality of life (wellbeing) through effective management of noise. “Noise Receiving” authorities are those local authorities in which the IAs are located and for this scheme this is either Huntingdonshire District Council (HDC), South Cambridgeshire District Council (SCDC) or Cambridge City Council (CCityC).

6.4.9. According to Defra’s Noise Action Planning Support Tool the designated ‘Important Areas’ likely to be affected by the scheme are listed below (from west to east):

Table 10: Road Important Areas- Defra’s Noise Action Planning Support Tool the ‘Important Areas’

Road Important Areas- Defra’s Noise Action Planning Support Tool the ‘Important Areas’			
IA Number	Indicative Location	Noise Making Authority	Noise Receiving Authority
IA5153	A1 Alconbury		
IA5152	Little Meadow and Woodhatch Farm	HA	HDC
IA5151	A14 North of Brampton	HA	HDC
IA6116	Stukeley Meadows, Huntingdon	HA & CCC	HDC
IA5150	Bliss Close, Huntingdon	HA	HDC
IA6185	Mill Common, Huntingdon	HA	HDC
IA12131 (Replaced 5148)	Waters Meet, Huntingdon	HA	HDC
IA5149	Bridge Place, Huntingdon	HA	HDC
IA6115	Rectory Gardens / Cambridge Villas, Godmanchester	HA	HDC
IA5147	New Farm, Hemingford Abbot	HA	HDC
IA11743	Rectory Farm, Hemingford Abbot	HA	HDC
IA5146	Gore Tree Cottage, Hemingford Grey	HA	HDC
IA11744	The Cottages, Woolpack Farm, Hemingford Grey	HA	HDC
IA5144	Fenstanton	HA	HDC
IA 5143	Wayside, Swavesey NB - possibly dilapidated & derelict possibly uninhabitable	HA	SCDC
IA 5142	Fairlawn, Swavesey NB - possibly dilapidated & derelict possibly uninhabitable	HA	SCDC
IA 6114	Hill Farm Cottages, Swavesey	HA	SCDC
IA 5140	Rhadegund Farm Cottages x 3	HA	SCDC
IA 5139	Bungalow, Hackers Fruit Farm, Dry Drayton Crouchfield Villas x 3 properties, Dry Drayton	HA	SCDC

	Westdene, Dry Drayton		
IA 5138	Catch Hall Farm Cottages x 6 properties (1 to 6), Girton	HA	SCDC
IA 6113	Grange Farm Cottages x 2, Girton, Elm Grange, Girton	HA	SCDC
IA 5043	North of A14 - 121 Girton Road, Girton, Approximately 50 separate properties at Weavers Field, Girton Approximately 10 separate properties at St Vincents Close, Girton South of A14 - 97, 99, 100 and 102 Girton Road, Girton Girton Grange x 3 Grange Drive, Girton	HA	SCDC
IA 5044	South of A14 - Orchard Close, Impington, Woodhouse Farm x 3, Impington	HA	SCDC
IA 6109	North of A14 - 49 to 51 and 68 to 76, Impington Approximately 25 separate properties at Lone Tree Avenue, Impington	HA	SCDC
IA 5045	North of A14 - Blackwell Caravan Site, Milton (approximately 15 to 20 plots)	HA	SCDC
IA 5042	Grange Lodge Grange Drive, Girton	CCC	SCDC
IA 5040	Vicinity of 25 Brandon Road, Girton	CCC	SCDC
IA 5041	Vicinity of Howe House, Girton	CCC	SCDC
IA 5039	Vicinity of 183 to 216 Huntingdon Road, Cambridge	CCC	CCityC

The existing noise environment in settlements along the route

[Alconbury]

6.4.10. Close to the existing A14 and the A1 there are significant noise issues. Between the A1 at Alconbury and Brampton Hut road traffic noise is emitted from the A1 and the A14. The A1 (M) passes alongside properties on the east of Alconbury, but it is the properties to the North of Alconbury, currently classified as an 'Important Area' (IA 5153) under noise regulations, where there are homes closest to the A1 (M). To the south of Alconbury, Huntingdon Life Sciences are located off Woolley road and the buildings are 100m west of the A1.

[Brampton]

6.4.11. In Brampton the dwellings closest to the A1 (M) are 200m away and experience high levels of traffic noise. There is a large residential development off Thrapston Road which currently experiences traffic related noise due to its proximity to the existing A14. This is classified as Important Area IA5151.

6.4.12. Further south is RAF Brampton, which at closest is around 600m east of the A1(M) and has outline planning permission to be redeveloped for residential purposes. The noise climate is dominated by the A1(M) and traffic on the local roads, particularly Buckden Road.

[Buckden]

6.4.13. 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.

[The Offords]

6.4.14. Along the route of the proposed A14 Huntingdon Southern Bypass, Offord Cluny and Offord Darcy are settlements which experience noise from local road traffic and trains.

[Huntingdon]

6.4.15. In Huntingdon, road traffic noise from the A14 and A141 are the primary contributors to existing noise levels. Noise levels along the A14 are sufficient to give rise to Important Areas⁶ at Stukeley Meadows; to the south of Huntingdon, north of Godmanchester and at a number of individual properties or small settlements further east. There is also an 'Important Area', to the east of Huntingdon at Hinchbrook. All of these Important Areas would be bypassed, and existing road traffic noise levels reduced when the scheme is completed.

[Hilton]

6.4.16. In Hilton noise is experienced from local traffic movements on West Brook and Potton Road.

[Conington]

6.4.17. Prior to the Swavesey Services Friesland Farm is located approximately 200m to the south. New Barns Farm and the village of Conington lie approximately 500m and 1.4km respectively further south west from the existing A14. These locations currently experience relatively moderate levels of distance diffuse traffic noise.

[Fenstanton]

6.4.18. At Fenstanton there are approximately 80 properties close to the A14 which currently experience elevated noise levels. Fenstanton is within the Important Area⁴⁸ IA5144 as identified by DEFRA's Noise Action Planning work⁴⁹.

[Fen Drayton]

6.4.19. There are two properties at 1 and 3 Mill Road Fen Drayton, about 60m north of the A14, which experience moderate to high traffic noise in outside areas.

⁴⁸ Important Areas - The Environmental Noise Regulations action plans identify a series of Important Areas where 1% of the local population will be affected by noise levels from major roads

⁴⁹ DEFRA, Noise Action Plans, Important areas and First Priority Locations
<http://webarchive.nationalarchives.gov.uk/20130124025256/http://archive.defra.gov.uk/environment/quality/noise/environment/documents/actionplan/firstpriority/major-sources-tile-164.pdf>

[Swavesey]

- 6.4.20. To the north of the A14 prior to the Swavesey Services junction lies a property called Wayside, Swavesey, identified as IA5143. It is understood this property has historically been residential but is currently vacant and appears derelict and dilapidated.
- 6.4.21. Just off the Swavesey service junction is the Trinity Foot Public House which is known to have been residential manager's accommodation in the past and which is currently exposed to high levels of traffic noise. Just to the east is Buckingway Business Park with various industrial, trade or business uses.
- 6.4.22. Further along to the north of the A14 there are potential noise sensitive receptors at IA5142, a residential property at Fairlawn, and the adjacent Travelodge Hotel, Swavesey.

[Lolworth]

- 6.4.23. About 300m after Uttons Drove Sewage Works to the north of the A14 there are 10 residential premises forming part of IA6114 (1 to 10 Hill farm Cottages) the closest being approximately 22m from the edge of the existing A14. In this same location to the south of the A14 is a residential premise at Clare College Farm, Lolworth, which is approximately 220m from the A14. The village of Lolworth lies slightly further south and currently experiences moderate diffuse A14 traffic noise from time to time.

[Bar Hill]

- 6.4.24. Traffic related noise from the A14 is experienced at Bar Hill and other smaller settlements between Swavesey and Girton. The Important Areas are as follows: Hill Farm Cottages (IA6114), Rhadegund Cottages, Huntingdon Road, Cambridge (IA5140), 1-6 Catchall Farm Cottages, Cambridge (IA 5138), Crouchfield Villa and Westdene at Hackers Fruit Farm, Huntingdon Road, Lolworth (Important Area IA5139); Elm Grange/Grange Farm (IA6113).
- 6.4.25. As the A14 moves east past Fenstanton it enters South Cambridgeshire. There are two properties at 1 and 3 Mill Road Fen Drayton, about 60m north of the A14, which experience moderate to high traffic noise in outside areas.

[Girton]

- 6.4.26. The Southern edge of Girton is classified as an 'Important Area (IA5043), where the A14 is on an embankment where it passes through residential developments. There is also a section of raised link road at the Girton Interchange. This 'Important Area' includes dwellings in Girton adjacent to the existing A14. There is an existing noise fence to the north of the existing A14 at this location. Further east and to the south of the A14, in Engledow Drive there are acoustic barriers in place.

6.4.27. Between Westdene and Catch Hall Farm Cottages is located Cambridge City Crematorium, approximately 80m to 100m south of the A14. Although not a residential premise it is noise sensitive with a Chapel of Rest and outside Gardens of Remembrance, a place for personal reflection or similar.

6.4.28. As the A14 meets the M11 there are residential premises at Grange Farm Cottages and Elm Farm immediately adjacent to the A14 off slip to A14 eastbound, which due to their location are exposed to very high levels of traffic noise.

6.4.29. To the north of the A14 approximately 50 separate properties at Weavers Field, Girton and 10 separate properties at St Vincents Close, Girton are within the designated IAs exposed to high levels of traffic noise. The remainder of the village of Girton experiences moderate levels of traffic noise. This 'Important Area' includes dwellings in Girton adjacent to the existing A14. There is an existing noise fence barrier to the north of the existing A14 at this location. Further east and to the south of the A14, in Engledow Drive there are noise barriers in place.

[Histon and Impington]

6.4.30. Between Girton and Histon to the south of the A14 there are about 5 to 10 residential properties at Orchard Close, Woodhouse Farm x3 and Impington Farm, all Impington, which are located approximately 15 to 20m from the edge of the carriageway. All these properties are exposed to high levels of traffic noise and are classified as Important Area.

6.4.31. The area of land to the north of the Histon / Impington interchange is identified as an 'Important Area' by DEFRA in its Noise Action Plan. This includes approximately 25 to 30 separate properties on Cambridge Road and at Lone Tree Avenue, Impington. There appears to be a noise barrier along the Histon and Impington junction slip road (A14 eastbound) but it is considered that due to its limited length and height very little noise mitigation is actually provided.

6.4.32. The experience of adverse noise impact from the A14 on the relatively new residential areas of Orchard Park, including a primary school and external public recreational areas (to the south of the A14) is reflected in the fact that the grant of planning permission required the installation of the existing substantial physical noise barrier, (approximately 3m high and 1km in length) to provide protection against the adverse impacts of A14 traffic noise. It should be noted that even with this noise barrier, noise levels are moderate to high at the upper floor of residential properties where the noise barrier affords less protection.

6.4.33. The emerging South Cambridgeshire Local Plan identifies requirements for development on the Orchard Park site to provide adequate attenuation measures in relation to noise and emissions generated by traffic on the A14, including the adoption of an appropriate layout and disposition of uses as part of Policy SS/1. The area of

Lone Tree Avenue, Impington is classified as an 'Important Area' and noise barriers are in place at this location.

6.4.34. In this general area there are also three hotels close to the A14 including the Holiday Inn Bridge Road, Impington (150m north of the A14) and a Premier Inn and a Travelodge within Orchard Park immediately south of the A14 noise barrier.

6.4.35. Immediately north of the A14 is the Blackwell Caravan Site which is totally unprotected from A14 traffic noise. The entire site with 15 to 20 Traveller Plots comprising a combination of brick built buildings and mobile homes / caravans, has been designated an IA. The fact there are mobile homes and caravans on site is important as such structures have lower standards of noise insulation than traditional brick built structures. They cannot be insulated against noise to the same standard as brick built dwellings and limited ventilation options are available.

6.4.36. Slightly further to the east is Milton junction, the eastern edge of the A14 Improvement Scheme, where there will be junction improvements. The village of Milton lies approximately 350m to 400m to the north of the A14 in this location and residential premises are often subject to moderate to high levels of distance diffuse traffic noise.

6.4.37. The Southern edge of Girton is classified as an 'Important Area (IA5043)', where the A14 is in an embankment where it passes through residential developments. There is also a section of raised link road at the Girton Interchange. This 'Important Area' includes dwellings in Girton adjacent to the existing A14. There is an existing noise fence to the north of the existing A14 at this location. Further east and to the south of the A14, in Engledow Drive there are acoustic barriers in place.

6.4.38. The area of the Histon Interchange is identified as an 'Important Area' by Defra in its Noise Action Plan. The experience of noise from the A14 on the residential areas of Orchard Park is reflected in the specific reference to the need for noise attenuation in the emerging South Cambridgeshire Local Plan. The emerging Local Plan identifies requirements for development on the Orchard Park site to provide adequate attenuation measures in relation to noise and emissions generated by traffic on the A14, including the adoption of an appropriate layout and disposition of uses as part of Policy SS/1⁵⁰.

6.4.39. The area of Woodhouse Farm, Impington is classified as an important area (IA5044). The area of Lone Tree Avenue, Impington is classified as an 'Important Area' (IA6109) and acoustic barriers are in place at this location. Blackwell Caravan Park is also an important area (IA5045).

⁵⁰ South Cambridgeshire Local Plan 2013 Policy SS/1: Orchard Park
[https://www.scambs.gov.uk/sites/www.scambs.gov.uk/files/documents/Proposed%20Submission%20Local%20Plan%20\(for%20website\)_0.pdf](https://www.scambs.gov.uk/sites/www.scambs.gov.uk/files/documents/Proposed%20Submission%20Local%20Plan%20(for%20website)_0.pdf)

5.5. Air Quality

- 5.5.1. Air Quality Management Areas (AQMAs) have been declared by Huntingdonshire District Council, South Cambridgeshire District Council and Cambridge City Council.
- 5.5.2. In Cambridge the AQMA covers the inner ring road and the junctions with the main feeder roads into the city. It was declared due to exceedances of the annual mean NO₂ objective. In 2013 the annual mean objective for NO₂ was exceeded at five sites in Cambridge. Concentrations within the AQMA are decreasing, following peaks recorded in 2010.
- 5.5.3. In Huntingdon the area encompasses the southern part of the town centre. The area includes properties in the north, (south of the A141) to the east (north of the river) and to the south in Godmanchester.
- 5.5.4. In St Neots the area encompasses the junction of the High St with New St and South St. In 2013, none of the 2013 annual mean NO₂ concentrations exceeded the objective.
- 5.5.5. In Brampton, the AQMA area includes properties at Wood View, Nursery Cottages, Thrapston Road, Bliss Close, Flamsted Drive and Hinchbrooke. In addition the area includes residential properties to the north of Bobs Wood, east of the A14 and north of Wood View. None of the 2013 annual mean NO₂ concentrations for any of the Brampton diffusion or Hemingford and Fenstanton tubes exceeded the objectives⁶⁵.
- 5.5.6. In 2008, as a result of exceedances of the national objectives for annual mean nitrogen dioxide and daily mean PM₁₀, South Cambridgeshire District Council designated an area along either side of the A14 between Milton and Bar Hill as an AQMA. An area along the A14 between Bar Hill and Milton was declared as an AQMA. Unlike the other AQMAs in Cambridgeshire, this AQMA was created due to high concentrations of fine particles (PM₁₀) as well as concentrations of nitrogen dioxide (NO₂). Concentrations of NO₂ recorded since 2008 have fluctuated around the objective⁵¹.

6.6. The Economy

Congestion hotspot

- 6.6.1. The A14 Study⁵² identified that there is severe congestion at several sections and junctions of the A14 under normal conditions (i.e. during the typical day-to-day traffic conditions). Analysis during the morning and evening peak times showed that there are several locations where the average traffic speed is below 20mph. Analysis undertaken by Highways England identified the A14 between Cambridge and Huntingdon as the fourth busiest hotspot⁵³ on the trunk road network in England in

⁵¹ 2014 Air Quality Progress Report, South Cambridgeshire District Council (2014)

⁵² A14 Study, Department for Transport (2012)

⁵³ 'hotspot' is defined by Highways England as when a congestion alert is issued when the speeds break down to below 30mph and include both severe traffic congestion and incidents.

2008. The limited capacity of the route, together with the very high traffic demand, was identified by the A14 Study as the main cause of this congestion.

Impact on local roads

6.6.2. Based on traffic speed data from the A14 Study⁶⁷ and data collected from Satellite navigation devices in 2013⁵⁴, it was shown that local roads around Huntingdon, St. Ives, Godmanchester, Cambridge and other local areas were congested during peak times due to traffic 'spill-overs' from the A14.

Unpredictable journey times

6.6.3. Congestion on the A14 results in unpredictable journey times for all users, particularly commuters and businesses, which creates a cost to the local, regional and national economies and constrains access to the regional labour pool.

Population

6.6.4. Cambridgeshire is relatively affluent compared with other counties within the UK with a gross value added (GVA) per head of £22,716 in 2011 compared with £19,355 for the east of England and £20,873 for the whole of the United Kingdom⁵⁵. The county had a population of 632,100 in 2013. Currently the construction industry employs approximately 4% of workers in Cambridgeshire. This equates to approximately 10,500 people⁵⁶.

6.6.5. The region has proven resilient to the recession in terms of jobs, and is set to create many more in the future. Over the period 2011 to 2031 Cambridgeshire's Economic Assessment forecasts a population increase of 24% for the county of Cambridgeshire⁵⁷.

Development constraints

6.6.6. The local economy contains a range of technology based businesses with a high value output and there is significant potential for their continued expansion with consequent benefits to the East of England and the UK as a whole. In addition the Alconbury Weald Enterprise Campus has the potential to create up to 8,000 jobs⁵⁸. However, the expansion of these industries is constrained by severe traffic congestion and resulting poor journey time reliability on the A14 corridor between Cambridge and Huntingdon.

Economic activity of Cambridge and South Cambridgeshire

6.6.7. The Greater Cambridge area is one of the UK's and Europe's key assets, successfully competing on the international stage, with a strong presence of European and global

⁵⁴ Tom Tom journey time data from 5 routes in the scheme area (A1198, A141, A428, A1, A14) analysed by Highways England, see Chapter 7.2, Transport Assessment, A14 Cambridge to Huntingdon Improvement Scheme, DCO submission, Highways Agency (2014)

⁵⁵ 2011 Census, Office of National Statistics (2012)

⁵⁶ 2011 Census, Office of National Statistics (2012)

⁵⁷ Cambridgeshire's Economic Assessment 2014, Cambridgeshire County Council (2014)

⁵⁸ Draft Huntingdonshire Local Plan, Huntingdonshire District Council (2014)

business. Cambridge University drives a world leading research and development community, a source of growth industries now and in the future.

6.6.8. Greater Cambridge is already home to Europe's foremost biotechnology cluster and also companies that are leading the research in drug discovery, development and delivery, agricultural biotechnology and animal healthcare. Other key sectors include high-value manufacturing, low carbon environmental goods and services (LCEGS) and food industries.

6.6.9. In a recent 'Centre for Cities' report⁵⁹ Cambridge was highlighted as one of the most resilient economies in the UK. The hi-tech and biotechnology industries are central to the local economy. Cambridge technologies are leading the way in fields such as semiconductors, wireless technology, display technology, sensors, inkjet technology, mobile telecommunications and instrumentation.

6.6.10. The district of South Cambridgeshire has a relatively large, fast growing population with high levels of prosperity marked by high household income and GVA per capita. The district has a diverse and high value economy with national strengths in R&D, high value manufacturing and software consultancy with high forecast GVA and employment growth⁷².

6.6.11. In terms of weaknesses the rural areas of the district suffer from relatively low accessibility of jobs by public transport, cycling and walking. At present there are high levels of commuting out of and into the district which causes high levels of traffic congestion affecting business productivity and negative economic impacts⁷².

Economic activity of Huntingdonshire

6.6.12. Huntingdonshire has many niches in manufacturing markets; both high and low value and include the Alconbury Weald Enterprise Zone. The district has a large working age population who are well skilled with higher than average proportions qualified to NVQ levels 1, 2 and 3. The district has a diverse economy with significant hi-tech employment and industrial strengths in manufacturing, in particular⁷².

6.6.13. However, there is a significant amount of out commuting by higher skilled workers and outside of Huntingdon and St Ives there is relatively poor accessibility of jobs for residents in rural areas. The current infrastructure deficit is considered to be constraining the delivery of sustainable growth in the district⁶⁰.

6.7. Existing conditions for Pedestrians, Cyclists and Equestrian travellers

Conditions for Non-motorised users on the A1 and A14

⁵⁹ Cities Outlook 2015 – Centre for Cities (Jan 2015)

⁶⁰ Draft Huntingdonshire Local Plan, Huntingdonshire District Council (2014)

6.7.1. The current A14 within the scheme area is not suitable for journeys on foot, or by bicycle or horse due to the traffic speed, high traffic levels, high proportions of heavy goods vehicles (HGVs) and the frequency of slip road merge and diverge tapers.

6.7.2. Very few cycle journeys were recorded on the A14 during surveys in 2014⁶¹. Therefore, although there are several locations along the A14 where local roads, bridleways or footpaths join the A14, these connections are not widely used because of the inhospitable conditions on the A14 for modes other than motor vehicle.

6.7.3. With the exception of the Cambridgeshire Guided Busway north of Swavesey and Longstanton, there is currently limited provision for travel between settlements along the A14 corridor between Cambridge and Huntingdon by transport modes other than motor vehicle. Access to bus stops on the A14, between Swavesey and Girton, is difficult and hazardous.

6.7.4. As with the A14, the A1 within most of the scheme area is unsuitable for journeys on foot or by bicycle or horse. The exception is south Buckden junction where a cycleway is provided from the B1514 slip road alongside the southbound A1 into Buckden. There are some public rights of way which meet the A1 but from which journeys on foot or by bicycle are unlikely to be continued due to the inhospitable conditions of the dual carriageway trunk road.

6.7.5. The existing A14 within the scheme area has a range of crossing points, either as road bridges, most of which are part of the existing junctions, or as public rights of way that pass over or under the route. These all provide valuable points of access across the trunk road, which would otherwise present a barrier to pedestrian, cyclist and equestrian movement. However, many of the road bridges are too busy for many cyclists and horse riders to consider using and many do not have footways.

Main crossing points

6.7.6. The main crossing points on the A1 are:

- Grafham Road bridge (footway for pedestrians)
- Brampton Hut Interchange - The Brampton Hut interchange is light controlled. This allows some opportunity for pedestrians to cross but which is nevertheless inconvenient due to the number of slip roads to be crossed to get from one side of the A1 corridor to the other. There is no provision of footways.
- Buckden Road underpass - Although there is no footway provision along Buckden Road there is a footway through the underpass. Pedestrians have to walk on the road or the grassed verge. There is access to a Public Right of Way immediately to the west.

⁶¹ NMU surveys undertaken in May and June 2014, Highways Agency (2014)

6.7.7. The main crossing points on the existing A14 between Huntingdon and Cambridge are:

- Bridleway link from Little Stukeley to south of A14 spur.
- Cambridge Road (B1044) underpass north of Godmanchester - The Pathfinder Long Distance walk follows this route.
- Bucking Way Road Bridge - the bridge provides a link between the business park and Cambridge Services, and Bucking way Road links a number of villages and public rights of way north and south of the existing A14.
- The B1050 provides a link between Longstanton and the A14. With the A14 being accessed off Bar Hill junction. The current over bridge at Bar Hill junction does not offer a continuous route for NMU. Any cyclists, pedestrians or horse riders need to be on the road or walk along the soft verges if they want to cross between Bar Hill and the B1050 to Longstanton. Access across the A14 is poor at this location.
- Oakington Road and Dry Drayton Road - The Pathfinder long distance walk follows Oakington Road and Dry Drayton Road, crossing the A14 at Dry Drayton junction. As with Bar Hill junction, there is no special provision for NMU at the current Dry Drayton junction over bridge and so access is poor for NMU.
- Girton Road and Sustrans local route 24 - Girton Road links the southern and northern parts of Girton. These are separated by the A14 and linked via the Girton Road over-bridge. Girton Road Sustrans local cycle route (no. 24) runs from Huntingdon to join the cycle network in Cambridge. This is a regular route for cyclists and pedestrians travelling from Girton to Cambridge.
- B1049 at Histon junction - The B1049 links Impington and Histon with Cambridge. It crosses the A14 Cambridge Northern Bypass at Histon junction, which is a grade separated junction. Crossing points for pedestrians and cyclists have recently been provided across this junction where pelican crossing facilities are provided.
- Jane Coston Bridge – This is a cycle and footbridge over the A14 which links the village of Milton with the north of Cambridge. The bridge accommodates National Cycle Network Route 11 and also provides a link towards Milton Park.

Cycle routes

6.7.8. National Cycle Network routes 11, 12 and 51⁶² are within the area of the A14 Cambridge to Huntingdon Improvement Scheme and are described below. There are also local cycle routes within Huntingdon and Cambridge that coincide with the scheme area which are also included below.

- NCN 11 - This route runs through Cambridge and the west side of the river Cam. The route crosses under the existing A14 near to junction 34.

⁶² National Cycle Network Map available at <http://www.sustrans.org.uk/ncn/map/national-cycle-network/about-network>

- NCN 12 - follows this road across the A1, continuing up through Brampton and into Huntingdon and then northwards along Ermine Street towards St Neots and Peterborough.
- NCN 51 -The section of this route within the scheme area is the route from Huntingdon to Cambridge. The route passes through Huntingdon, Godmanchester, St Ives, Willingham, Cottenham, Histon and into the Kings Hedges area of Cambridge.

Distance walking trails

6.7.9. The Ouse Valley Way⁶³ is a long distance walking trail which follows the River Great Ouse from its source near Syresham in Northamptonshire to the tidal river at Kings Lynn, linking many towns and villages. The Ouse Valley Way crosses the existing A14 via an underpass near Godmanchester.

6.7.10. The Pathfinder Long Distance walk⁶⁴ is a long distance walk is a heritage trail in memory of the RAF Pathfinder Force and links up four airfields (Wyton, Graveley, Oakington and Warboys). In the vicinity of the proposed Huntingdon southern bypass the route comes off a public footpath, following Debden Top Farm access track before joining Silver Street into Godmanchester. It then crosses the A14 via the Cambridge Road (B1044) underpass north of Godmanchester before continuing northwards.

Table 11: Other Important Non-motorised user (NMU) routes in the area:

NMU route	Description / importance
Park Road (local road) and NCN Route 12 (combines route 51)	Park Road crosses the A1 using the existing Grafham Road Bridge and links Brampton to Grafham, approximately 3.5km to the west of the A1.
Buckden Road B1514 (local road)	Buckden Road (B1514) provides a link for traffic between Brampton and the A1. A cycleway is provided alongside the A1 south of Buckden junction and therefore this route provides a link between settlements such as Brampton and Buckden for cyclists, pedestrians and potentially, equestrians.
B1043 Offord Road (local road)	This road links villages such as Offord Cluny and Offord D'Arcy with Huntingdon.
A1198 Ermine Street	The A1198 has a junction with the existing A14 at Godmanchester. For any cyclists wanting to commute to and from Huntingdon and Papworth Everard and surrounding villages this would be the main route (approximately 9km) and any alternative routes would be substantially longer.
Bucking Way Road and minor road to Boxworth (High Street)	Cambridge Services is located at this junction on the west-bound side whilst there is a business park off the junction on the east-bound side. The junction bridge is likely to be used by workers in the Buckingham Business Park travelling to and from Cambridge Services, on the opposite side of the A14, for lunch. A new cycle route was provided from Swavesey over this bridge in spring

⁶³ Ouse Valley Way information, Huntingdonshire District Council website (2015) <http://www.huntingdonshire.gov.uk/Parks%20and%20Countryside/Pages/Ouse%20Valley%20Way.aspx>

⁶⁴ Cambridgeshire Rights of Way Improvement Plan, Cambridgeshire County Council (2005)

	2014 to improve access. On the basis that the bridge provides a link between the business park and Cambridge Services, and that Bucking Way Road links a number of villages and public rights of way north and south of the existing A14 this is a highly valued NMU route.
Bridleway Dry Drayton 12	Bridleway 12 follows a route northwards meeting the A14 between Hackers Fruit Farm and Cambridge Crematorium, which has a direct access onto the A14 but no crossing point of the A14. The bridleway provides a link to Madingley. This route provides the only access to the crematorium other than via the A14 itself.
Footpaths Madingley 3 and Girton 5 and 4	These footpaths combined provide one of the few routes across the Girton interchange area.
Bridleways Impington 6, Orchard Park 1 and Milton 6 and 7 – the Cambridgeshire Guided Busway	These bridleways follow the Cambridgeshire Guided Busway route which links Cambridge with Histon and Impington. It crosses the A14 via an under bridge and is well used by cyclists and pedestrians. It provides one of the few crossing points of the A14 Cambridge Northern Bypass.
Byways Milton 3 and Impington 3	This route is one of the few crossing points of the Cambridge Northern Bypass and provides a key link for NMU to the Cambridge Science Park, and other key employment areas around northern Cambridge.
Footpaths Huntingdon 10, 9 and 11	These footpaths provide a link between Huntingdon town centre, Views Commons, Hinchingsbrooke Country Park and recent development (business and residential) in Hinchingsbrooke near the Spittals interchange. These routes are all considered to be of very high sensitivity to disruption because of their importance as routes by school children, commuters and people moving around the Huntingdon community generally.
B1514 Brampton Road in Huntingdon, Hinchingsbrooke Park Road and Huntingdon West of town centre link road	This route links Brampton and the A14 with Huntingdon town centre. The presence of Hinchingsbrooke School 500m west of the A14 road viaduct means that high numbers of school children use this route. Other key facilities likely to generate journeys by NMU in the viaduct area are the Hinchingsbrooke Country Park (1km west of the viaduct), residential areas off Scholars Avenue (180m west) and Huntingdon rail station under the viaduct.
Huntingdon – footpaths Huntingdon 6 and 4 and cycle route and permissive path from Mill Common/Castle Moat Road junction to Huntingdon station.	This is a key NMU route to the railway station. Footpaths 6 and 4 are short routes along The Walks at Mill Common in Huntingdon. There is also a cycle route across Mill Common which provides a link between the Mill Common road (just off the Huntingdon ring road) and Huntingdon railway station.
Huntingdon (south of existing A14): footpaths Huntingdon 1,2, 35 and Brampton 12, 13 and 14	These footpaths offer key access to the countryside for residents in Huntingdon and a crossing point of the A14 (for which there is only one other practical alternative route across, near the railway station).
B1044 (The Avenue)	The B1044 (The Avenue) provides the main route suitable for NMU over the River Great Ouse in Huntingdon. This route provides the only direct route for NMU between Godmanchester and Huntingdon.
Rideaway and Moat's Way minor roads at Hemingford Abbots junction	Rideaway is a road that links Hemingford Abbots junction with Hemingford Abbots. Moat's Way, south of the A14 provides a route from Hemingford Abbots junction to some farms south of the A14. These routes provide the only route across the A14 for residents in farms south of the A14 wishing to access settlements to the north.
Bridleway Hemingford Grey 16 and Gore Tree Farm overbridge near Hemingford Grey	This route provides one of the few crossing points of the existing A14 suitable for NMU.
Hilton Road and underpass	Hilton Road links Hilton with Fenstanton. This route is one of the few dedicated NMU crossing points for the existing A14 within the study

	area, and it links two parts of a settlement otherwise severed by the A14.
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Bus travellers

6.7.11. The main local bus routes, other than those that use the Guided Busway, include nine services that follow the A14 between Huntingdon and Cambridge and/or connect villages along the A14 corridor. A number of other services operate within Huntingdon and between Huntingdon and other towns and villages.

6.7.12. There are currently bus stops on the A14 at Swavesey (by Buckingham Business Park), Robin's Lane, Lolworth and Cambridge Crematorium. Accessing these stops is difficult and hazardous as travellers using these stops are required to cross the A14. Whilst two of the stops can be accessed by over bridges, bus travellers have no choice but to cross the A14 carriageway to access the bus stops at Robin's Lane. There is no footway alongside the A14 requiring bus travellers to walk some distance (up to 1km) along grass verges, which is inconvenient and even impracticable for some people with push chairs or wheelchair users.

6.8.Floods and Water

6.8.1. Cambridgeshire spans two major river catchments which are, the River Great Ouse (including Key Tributaries such as the River Cam) and the River Welland. Rivers are categorised into main rivers and ordinary watercourses. Main rivers are usually large watercourses but also include smaller watercourses of strategic drainage importance.

6.8.2. There are a number of features related to flood risk, surface water and ground water within the local area along the existing A14 and the alignment of the new scheme. Flood risk has been identified at Brampton Brook (downstream of the A1) for the town of Brampton which is located downstream of the scheme. Properties at Offord Cluny and Godmanchester are currently at flood risk from the River Great Ouse. There is also risk from Oakington Brook. In 2012 the Washpit, a tributary of Beck Brook flooded dozens of houses at Girton⁶⁵.

Table 12: Watercourses in the scheme area

Watercourse	Designation	Description	Records of flooding
Alconbury Brook	Main River	A tributary of the Great Ouse. Extensive flood zone at this point with a number of lakes.	Flooded in March 1947, July 1968 and Easter 1998.
Cock Brook	IDB Drain	A tributary of the Alconbury Brook with a flood zone that	Flooded in July 1968 and Easter 1998.

⁶⁵ Flooding in Girton 2012 BBC news report July 2012, <http://www.bbc.co.uk/news/uk-18843479>

		crosses the A1.	
Ellington Brook	Main River	Main river upstream of the scheme. Flood zone is extensive and extends both sides of the A1.	Flooded in March 1947 and Easter 1998.
Brampton Brook	Main River	Tributaries lie to the west of the A1 and include Grafham Road Drain and IDB Drain No.1. The town of Brampton is located downstream of the scheme with a large number of properties within Flood Zone 3	Flooded in Easter 1998 to the east/downstream of the existing A1. Flooding also occurred east/downstream of the existing A1 to properties to the south of Centenary Way in Brampton in January 1998.
Grafham Road Drain	IDB Drain	Flows north-eastwards towards Brampton and joins the Brampton Brook to the east of Park Road in Brampton.	None on record
IDB Drain No.1	IDB Drain	Runs parallel to the west of the river Great Ouse toward Brampton. Flood levels are dominated by the Great Ouse.	None on record
Great Ouse	Main River	Major watercourse. There are properties upstream and downstream of the scheme within Flood Zone 3 at Offord Cluny and Godmanchester	River Great Ouse and its surrounding area have suffered flooding at numerous times including in 1947 and 1998.
West Brook (Hall Green Brook)	Main River	Majority of its tributaries are Award Drain. Properties located within flood zone upstream at Conington and downstream at Fenstanton	Significant flooding problems within the village of Hilton, notably the October 2001 event which caused inundation of some properties.
Oxholme Drain	Award Drain	Tributary of the River Great Ouse.	None on record
Covell's Drain	Award Drain	Rises as two branches. A tributary of the river Great Ouse. Flood zone merges with the flood zone for Oxholme Drain.	None on record
Swavesey Drain	IDB Drain	Tributary of the River Great Ouse.	None on record
Utton's Drove Drain	Award Drain	Tributary of the River Great Ouse.	None on record
Longstanton Brook	Award Drain	Tributary of the Swavesey Drain.	None on record
Oakington Brook	Award Drain	Upstream of the A14.	Flooding 1.8km north/downstream of the A14 in Oakington in May 1978 and Oct 2001
	Main River	Downstream of the A14 crossing.	None on record
Cottenham Lode/Beck Brook	Main River	Downstream of the A14. It is a tributary to the Oakington Brook	Flooding downstream of the A14 in Girton in May 1978 and October 2001.
	Award Drain	Upstream of the A14	None on record
Washpit Brook	Main River	Main River upstream of the A14. Downstream of the A14. Tributary of the Oakington Brook.	Flooding downstream of the A14 in Girton in May 1978 and October 2001 and June 2012.

Award Drains North of Cambridge	Award Drain	Award drains	None on record
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Table 13: Lakes and Ponds

Water feature	Use/Site protected under UK or EU legislation
Former Gravel Pits along the Ellington Brook and Alconbury Brook	Recreation and Fishing – including the lake within Hinchingsbrooke Country Park
Brampton Ponds	Ponds
Grafham Road Drain Ponds	Ponds
Royal Society for the Protection of Birds (RSPB) Lakes at Fen Drayton	Local Nature Reserve
Former Gravel Pits along the River Great Ouse	Country Wildlife Site
Cawcutts Reservoir, Impington	Abstraction reservoir for food production
National Institute of Agricultural Botany	Abstraction reservoir for agricultural research site
Milton Country Park Lakes	Former gravel pits used for recreational and fishing

6.9. Minerals and Waste

6.9.1. Borrow pits arise where major proposals come forward e.g. for road improvements (A428, A14, A1, A47) or a bypass or major infrastructure project, and there is a source of aggregate in the immediate area. Permission has sometimes been given for a 'borrow pit' to supply a single project and for a temporary period only.

6.9.2. Six borrow pits are proposed to supply the scheme: three are consistent with site allocations in Minerals and Waste Plan⁶⁶, two partly within allocated sites and one is outside but adjacent.

6.9.3. The adopted Minerals and Waste Site Specific Proposals Plan⁶⁷ includes site profiles for each allocated borrow pit. The following information is drawn from these site profiles in the Plan:

Table 14: Borrow Pit site profiles:

Borrow Pit	Characteristics
<p>West of Brampton (Borrow Pit 1)</p> <p>This site is classified as an area of search for Sand and Gravel and has an estimated reserve of 1 million tonnes. The Borrow Pit site covers an area of 82.04 ha and is located in the Parish of Brampton.</p>	<ul style="list-style-type: none"> • Within Flood Zone 3 • Multiple public rights of way cross the site • Site is close to the Brampton Wood Site of Special Scientific Interest (SSSI) • High grade agricultural land (Grade 2) • Archaeologically sensitive site
<p>South West Brampton (Borrow Pit 2)</p> <p>This site is classified as an area of search for Sand</p>	<ul style="list-style-type: none"> • RAF Brampton adjoins the northeast side of the site • Within Flood Zone 3

⁶⁶ Cambridgeshire and Peterborough Minerals and Waste Plan, Cambridgeshire County Council (2012)

⁶⁷ Cambridgeshire and Peterborough Minerals and Waste Site Specific Proposals, Cambridgeshire County Council (2012)

<p>and Gravel and has an estimated reserve of 2 million tonnes. The Borrow Pit site covers an area of 53.3 ha and is located in the Parish of Brampton.</p>	<ul style="list-style-type: none"> • Close proximity to Grade II listed buildings and archaeological remains • High grade agricultural land (Grade 2) • Brampton Wood Site of Special Scientific Interest (SSSI lies to the west of the site)
<p>Galley Hill, Fenstanton Southern Site (Borrow Pit 3) This site is classified as an area of search for Sand and Gravel and has an estimated reserve of 0.1 million tonnes. The Borrow Pit site covers an area of 25.8 ha and is located in the Parish of Fenstanton and Hemingford Grey.</p>	<ul style="list-style-type: none"> • Adjacent to a County Wildlife Site • Access constraints, particularly at the roundabout junction with the A14 / A1196 – capacity and safety, especially at peak times • Within Flood Risk Zone 3 • The site is located in a landscape of high archaeological potential • Potential for protected species on site (otters and water voles)
<p>Oxholme Farm (Borrow Pit 3) This site is classified as an area of search for Sand and Gravel and has an estimated reserve of 1.5 million tonnes. The Borrow Pit site covers an area of 61.3 ha and is located in the Parish of Fenstanton.</p>	<ul style="list-style-type: none"> • Located within 1km of Hemingford Grey Meadow Site of Special Scientific Interest (SSSI), adjacent to Fenstanton Pits (West End Pits) County Wildlife Site, within 1km of Marsh Lane Gravel Pits and within 2 km of Low Road Meadows(West) • Agricultural land is identified as mostly Grade 2 • Within airfield safeguarding zone for RAF Wyton • Archaeologically sensitive site
<p>Brickyard Farm, Boxworth (Borrow Pit 5) This site is classified as an area of search for Clay and General Fill and has an estimated reserve of 75,000 m³. The Borrow Pit site covers an area of 104.6.8 ha and is located in the Parish of Boxworth (Conington (S), Swavesey, Fen Drayton & Lolworth are adjacent parishes).</p>	<ul style="list-style-type: none"> • Located along the route of the A14, south west of junction 28. Fronts two roads, A14 & a minor road • Intensively farmed arable land • High grade agricultural land (Grade 3)
<p>North Dry Drayton Junction, Slate Hall Farm (Borrow Pit 6) This site is classified as an area of search for Clay and General Fit and has an estimated reserve of 245,000 m³. The Borrow Pit site covers an area of 27.9 ha and is located in the Parish of Oakington & Westwick, Girton (adjacent to parish Dry Drayton).</p>	<ul style="list-style-type: none"> • Located to the north of the existing A14 route • Within airfield safeguarding zone for Cambridge Airport • Within area of intensively farmed open arable land • High grade agricultural land (Grade 2) • Site is located adjacent to the line of the road linking the Roman towns of Cambridge and Godmanchester, there is high potential for prehistoric and Roman agriculture and settlement in the area
<p>North Junction 14, Grange Farm (Borrow Pit 6) This site is classified as an area of search for Clay and has an estimated reserve of 125,000 m³. The Borrow Pit site covers an area of 35.8 ha and is located in the Parish of Girton.</p>	<ul style="list-style-type: none"> • Located north of the existing A14 route • Within airfield safeguarding zone for Cambridge Airport • High grade agricultural Land (Grade 2) • Within 4 km of Madingley Wood Site of Special Scientific Interest (SSSI), 700 metres of Madingley Brick pits, County Wildlife Site
<p>Weybridge Farm, Alconbury (Borrow Pit 7)</p>	<ul style="list-style-type: none"> • Former borrow pit site for previous A14 / A1 improvement

<p>This site is classified as an area of search for sand and gravel and has an estimated reserve of 0.2 million tonnes. The Borrow Pit site covers an area of 16.3 ha and is located in the Parish of Alconbury within the District of Huntingdonshire.</p>	<ul style="list-style-type: none"> • Close to listed buildings • Within Flood Zones 2 and 3 • Situated above a minor aquifer • Archaeologically sensitive site • Brampton Wood Site of Special Scientific Interest (SSSI) lies to the south of the site
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Contaminated Land

6.9.4. Sites with potentially contaminative land use and potential to significantly affect the scheme or be impacted by the scheme include⁶⁸:

- Former Buckden fuel depot, which is located to the east of Brampton Road
- Buckden South landfill, which is a closed landfill site within 10m of the alignment between Brampton Road and the East Coast Main Line railway.
- Buckden North landfill
- Milton landfill, which comprises a permitted landfill (partially restored in the area of the scheme) to the north of the existing A14 at the far eastern end of the scheme.

Summary of existing and historic mineral extraction, workings and restoration

6.9.5. There are no significant geologically important sites within 500m of the scheme area. However there are existing contaminated sites within the area including Buckden Fuel depot, Buckden South landfill, Buckden North landfill and Milton landfill⁶⁹.

Buckden Fuel Depot

6.9.6. This is a former fuel depot located to the west of Buckden South landfill.

Buckden North landfill

6.9.7. Buckden North landfill is a permitted, operational landfill although some areas have been filled and restored. Cells 1 to 3 in the south-western-most portion of the landfill, which are close to the scheme, were filled using inert waste only to minimise risks to nearby residential homes. Cells 4 to 6, which are along the western boundary of the landfill, were also filled and restored although the waste deposited potentially included household, industrial, liquids, contaminated soils, construction waste and clinical waste.

⁶⁸ “What’s in your backyard” –Environment Agency website (2015) <http://maps.environment-agency.gov.uk/wiyby/wiybyController?x=357683&y=355134&scale=1&layerGroups=default&ep=map&textonly=off&lang=en&topic=waste>

⁶⁹ “What’s in your backyard” –Environment Agency website (2015) <http://maps.environment-agency.gov.uk/wiyby/wiybyController?x=357683&y=355134&scale=1&layerGroups=default&ep=map&textonly=off&lang=en&topic=waste>

Buckden South landfill

6.9.8. This is a historic landfill site. The last waste was accepted in 1994. Prior to being used for landfill the site was used for gravel extraction. The scheme does not extend within the landfill boundary and the site's containment infrastructure would not be impacted.

Milton landfill

6.9.9. Milton landfill is at the far eastern end of the scheme situated approximately 1km west of the village of Milton and 3km north of the centre of Cambridge. Developed within a number of disused clay pits excavated during the 1970's, the site has received waste since the 1980's. Both hazardous and non-hazardous waste was accepted at Milton up to 2004 and non-hazardous waste thereafter.

Conington landfill

6.9.10. Conington landfill site is a historic landfill which accepted inert, industrial, commercial, household and special waste, and liquid sludge. Available information indicates that concrete wastes and blue asbestos contaminated soil were also accepted. No active control measures are understood to be in place for leachate or landfill gas though passive gas venting continues at the site. The site is located 50 metres from the nearest works of the scheme.

7. Local Transport Patterns and Issues

7.1. This chapter describes the local transport patterns and issues on the local roads / routes in the vicinity of the existing A14 and on the A14 itself. It identifies the main routes used by car drivers, buses and freight carriers as well as non-motorised users in the local area. The chapter also identifies the existing issues on local routes for people travelling on these routes.

[The A14 between Cambridge and Huntingdon]

Capacity for motor vehicles including HGVs

7.1.1. The section of the A14 trunk road between Cambridge and Huntingdon is well known for congestion and delays. Improved to dual-carriageway standard more than three decades ago, the road was not designed to accommodate the daily volume of traffic that now uses it. Up to 85,000 vehicles currently use the road every day and a large number of heavy goods vehicles (HGVs) rely on this important strategic route⁷⁰. Road users regularly experience long delays and unpredictable journey times on this section of road and there are safety concerns due to the volume and density of traffic. The effective capacity of the existing A14 is limited by a number of factors, including:

- the high percentage of HGVs (up to 26% compared against a national average of 13%), which take up more road space than other vehicles;
- the number of roads with direct access to the A14, which results in conflicts as traffic enters and leaves the main carriageway; and
- major junctions along the route with significant volumes of joining and exiting traffic which result in weaving between lanes, reducing effective capacity and causing knock-on delays.

7.1.2. Congestion on the A14 trunk road has already become a constraint to housing and employment growth in the Cambridge and Huntingdon area. Local and regional businesses need access to a large and diverse labour market, requiring many people to commute into and out of the area each day. The quality of life for those who live in and between Cambridge and Huntingdon is diminished by congestion, primarily on the A14, which can cause driver stress and can contribute to other factors affecting wellbeing, safety and health. Without improvement, the situation is expected to get worse.

Other modes

7.1.3. There are several locations along the A14 where local roads, bridleways or footpaths join the A14, however these connections are not widely used other than by motor vehicles. With the exception of the Cambridgeshire Guided Busway north of Swavesey and Longstanton, there is currently limited public transport provision for travel

⁷⁰ Annual Traffic Monitoring Report 2013, Cambridgeshire County Council (2014)

between settlements along the A14 corridor between Cambridge and Huntingdon by transport modes other than motor vehicle. Access to bus stops on the A14, between Swavesey and Girton, is difficult and hazardous. There is a network of public rights of way throughout the area⁷¹ but historic works to the A1 and A14 have truncated some routes with many public rights of way now terminating at the existing trunk roads and with no means to extend walking, cycling or equestrian journeys.

Roads in the vicinity of the A14

7.1.4. This section reviews the existing conditions for all modes of transport on roads connecting to or impacted by the existing A14.

Other Strategic Roads

A1 (M)

7.1.5. The existing A1 (M) extends south as far as Alconbury and then becomes a dual two-lane carriageway all-purpose road down to Buckden with minor junctions at Woolley Road and Brampton Road and grade separated junctions at Alconbury (B1043), Brampton Hut (with the A14) and Brampton / Buckden (B1514).

7.1.6. According to the Transport Assessment submitted as part of the DCO⁷², traffic flows on the A1 (M) are around 31,900 vehicles per day to the north of Brampton Hut and 34,700 vehicles per day to the south.

A428

7.1.7. The A428 to the east of Caxton Gibbet carries around 33,300 vehicles per day⁸⁷. The stretch of the A428 Caxton Gibbet to St Neots' Black Cat roundabout, regularly experiences severe traffic delays and results in rat running through neighbouring towns and villages.

7.1.8. In December 2014, the Government announced that the A428 would become dual carriageway between the Caxton Gibbet roundabout and the A1⁷³ as part of the Road Investment Strategy programme within the next 5 years.

Local Roads around Huntingdon

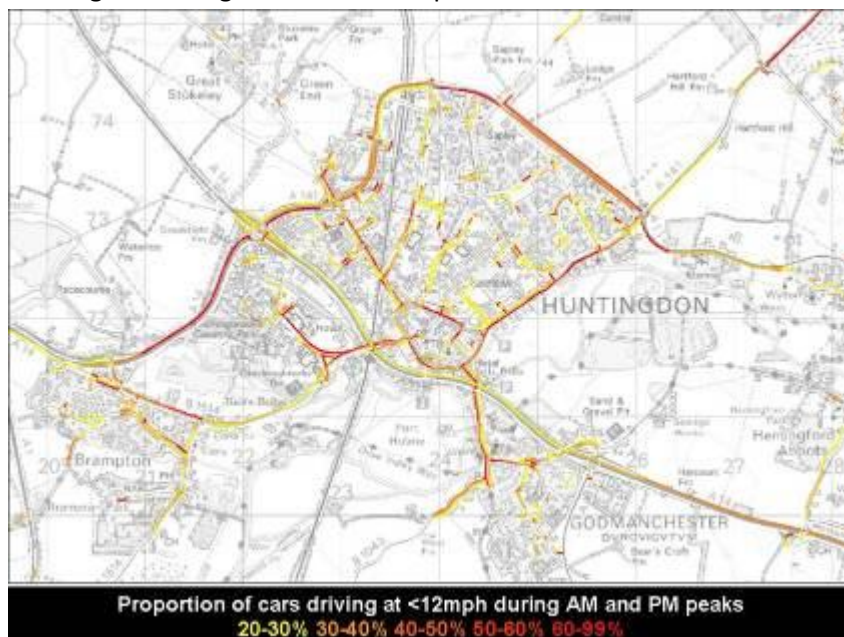
7.1.9. Huntingdon and the surrounding area suffers from heavy traffic flows, especially during peak hours, as shown in the figures below. While this is not uncommon for a busy market town it is considered that these are greatly affected by current A14 issues and traffic avoiding the route, especially Spittals Interchange, J23.

⁷¹ Rights of Way Improvement Plan, Cambridgeshire County Council (2005)

⁷² Chapter 7.2 Transport Assessment, A14 Cambridge to Huntingdon Improvement Scheme, DCO Submission, Highways Agency (2014)

⁷³ "Major roads investment in the east of England" (2014) <https://www.gov.uk/government/news/major-roads-investment-in-the-east-of-england>

7.1.10. The figure below illustrates the main areas which suffer from congestion in Huntingdon during the AM and PM peaks.



7.1.11. The data gathering survey undertaken to inform the Huntingdon and Godmanchester Market Town Transport Strategy (MTTS) reported that 72% of residents regularly experience ‘significant delay’ when driving around Huntingdon and Godmanchester⁷⁴. Access into Huntingdon from the A14 is either through Brampton village, accessed from Junction 22, the Northern Bypass, accessed via Spittals Interchange, or Godmanchester, accessed from Junction 24.

7.1.12. Respondents in the data gathering survey complained of Godmanchester being used as a shortcut for the A14 and residential routes used as rat runs. In 2012, an average of 2,000 more cars accessed and exited Huntingdon via Godmanchester than the number which used Spittals Interchange (for Ermine St) as an entrance/exit point.

7.1.13. To the north of Huntingdon, the A141 is a single two-lane road currently carrying around 28,300 vehicles per day. The road has seen a 15% increase in traffic flow over the past ten years⁷⁵. The A141 bypasses the centre of Huntingdon from where traffic can then carry on north-east on the A141 or to the A1123 through Houghton, Wyton and onwards to St Ives. Traffic bound for Cambridge can then re-join the A14 at junction 26 using the A1096. Traffic count data shows that around 14,237 vehicles use the A1096 per day⁸⁹.

7.1.14. The B1090 links from the A1 (M) north of Alconbury, meeting the A141 near Harford and joining with the A1123 at St Ives. It is possible that traffic uses this route from the

⁷⁴ Huntingdonshire and Godmanchester Market Town Transport Strategy (MTTS), Cambridgeshire County Council (2014)

⁷⁵ Annual Traffic Monitoring Report 2013, Cambridgeshire County Council (2014)

A1 (M) to bypass the A14 at Huntingdon and join the A14 again at junction 26 using the A1096.

7.1.15. The B1514 Thrapston Road / Huntingdon Road / Brampton Road provides a route for traffic into Huntingdon from Brampton, Buckden and the A14 via the Racecourse junction. Currently around 13,669 (2013) vehicles per day use the B1514.

7.1.16. The A1198 Ermine Street provides a north-south route from the grade separated junction with the A14 at Godmanchester, south of Papworth, linking the A428 at Caxton Gibbet and continuing south.

7.1.17. The B1044 /43 is a road connecting Huntingdon to St Neots and the A428. The B1043 runs through Godmanchester, the Offords and Great Paxton.

Local Roads between Huntingdon and Cambridge

7.1.18. As described, the A1123 links Huntingdon with Wyton and St Ives. The latest traffic count data indicates that 16,822 vehicles use the road per day (2013).

7.1.19. The A1198 is a north south connection between the A14 and A428. It connects with the A14 at junction 24 at Godmanchester and links with Graveley Way, near Hilton before running on a bypass around Papworth Everard and meeting the Caxton Gibbet Roundabout at the A428. Traffic flows on the A1198 to the west of Hilton are around 11,100 vehicles per day.

7.1.20. The B1040 connects the A428 to the A14 running through the village of Hilton. Strategic traffic uses the B1040 to reach the A428 and avoid congestion on the A14. However this road was not designed for strategic traffic and there is local pressure to introduce a 24 hour HGV weight limit on this road.

7.1.21. The villages of Over and Swavesey are connected to the A14 via the Bucking Way Road junction with A14. The B1050 connects Willingham, Longstanton and the Bar Hill Junction of the A14. Around 10,408 vehicles use this road per day (2010).

7.1.22. Cottenham and Dry Drayton to the north of the A14 use Dry Drayton Road to access the A14 and residents of Dry Drayton use Oakington Road, south of the A14 to access it. Traffic can carry on through Dry Drayton, along Scotland Road to access the A428.

Local Roads around Cambridge

7.1.23. Huntingdon Road meets the A14 between the Cambridge Crematorium and the Girton Interchange. Huntingdon Road leads into the City Centre.

Traffic from Madingley can currently access the A14 westbound from The Avenue (there is no east-bound access) which links southwards down to the A428.

7.1.24. The B1049 is the radial route from Histon and Impington into central Cambridge via the Histon Interchange of the A14. It is also used by traffic from the north avoiding Milton Road. Approximately 19649 vehicles use the B1049 per day (2011).

7.1.25. The A10 carries traffic from the north of Cambridge into the city centre via the A14 Milton roundabout. The A10 has experienced a 14% increase in traffic flow over the last 10 years⁷⁶.

Impact of strategic developments on existing traffic conditions

7.1.26. Major strategic developments are discussed in detail in Chapter 5.

8. With Scheme Traffic Conditions

Impact of the A14 Cambridge to Huntingdon Improvement scheme on traffic conditions⁷⁷

Table 1 – Traffic flow on the trunk road elements in **2035** are currently forecast to be:

Location	Without A14	With A14	Change
A1 Alconbury to Brampton Hut	52,100	81,500	+56%
A14 West of Brampton	-	49,000	
A1 West of Brampton	51,500	92,000	+84%
A14 North of Brampton	63,900	18,000	-72%
A14 Through Huntingdon	90,500	28,500	-69%
A14 Huntingdon Southern Bypass	-	95,500	
A14 Swavesey to Bar Hill	93,400	112,300	+20%
A14 Bar Hill to Girton	110,700	135,900	+23%
A14 Histon to Milton	86,600	104,900	+21%

⁷⁷ Chapter 7.2 Transport Assessment, A14 Cambridge to Huntingdon Improvement Scheme, DCO Submission, Highways Agency (2014)

Table 2 Traffic flow on local roads in 2035 currently forecast to be:

Location	Change
B1514 Thrapston Road	-60%
B1514 Buckden Road	-20%
A1123 Houghton Road, St Ives	-5%
A1123 Station Road, Earith	-5%
B1050 Station Road, Willingham	+15%
B1040 Potton Road (north of Hilton)	0%
Elsworth Road, Conington	-10%
High Street, Boxworth	-5%
Scotland Road, Dry Drayton	+35%**
A1303 Madingley Road, Cambridge	-10%
Cambridge Road, Girton	-15%
A1307 Huntingdon Road, Girton	+5%
B1049 Histon Road, Cambridge	+5%
Bridge Road, Histon	-5%
A1309 Milton Road, Cambridge	+5%

** Includes traffic routing from A428 to Northstowe

8.1.1. The improvement scheme is demonstrating more general positive benefits not only to strategic traffic but also to local traffic movement. This relates to the fact that with improved traffic capacity and resilience to incidents for the A14 itself, the tendency for traffic to avoid the A14 and rat run on unsuitable local roads will be substantially reduced. It is important to clarify that in table 1, the changes between the 'do nothing' and 'do something' include Northstowe only in the latter one. This is recognising that this key development could not be fully built out without the additional capacity on the A14, and as such planned growth in general could well be slower and more constrained.

8.1.2. Another impact is that the strategic traffic stays on the A14 for longer. This means that for some local routes there will be some local reassigning. For example the increase on Huntingdon Road in Cambridge is considered to be due to traffic staying on the A14 for

longer, and no longer routing through Madingley Road, Oakington, Girton, or Histon to avoid congestion on the A14. The increase is measured immediately south of the A14. Indeed analysis done to date is showing that the 24% headline increase is due to reassignment. However, south of Girton this is only a 5% increase.

8.1.3. Updates to the model are planned to take account of the latest 2015 forecasts, and also to reflect the results of the work being undertaken with local partners on modelling local impacts. However, sensitivity tests are showing limited impacts on forecasts. Therefore it is considered unlikely that the work underway will require changes in the final traffic forecasts, the environmental assessment, or scheme proposals. However work is underway and a detailed submission will be made to PINS once completed.

8.1.4. In addition, HE have agreed to post opening monitoring and the funding of minor works such as traffic calming should there be a significant increase in traffic above that predicted

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9. Local Impacts

This Section identifies the local impacts for the local area during construction and operation of the scheme. The impacts are categorised as occurring during construction or during operation of the scheme. The section draws upon the impacts already identified by the Applicant and highlights where impacts are of particular importance to the local authorities or where impacts have not been classified as significantly as the local authorities feel they should be. The impacts are assessed in terms of positive and negative for the local area and missed opportunities are identified where the Applicant could enhance the positive impacts or reduce the negative impacts of the scheme.

9.1. Landscape and Visual Impact

Positive impacts

During operation

Extensive areas of mitigation planting and ecological planting

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.

[Huntingdonshire]

Removal of A14 Viaduct, Huntingdon

9.1.2. The removal of the A14 viaduct within Huntingdon would significantly enhance the quality of the local townscape.

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 and Views Common.

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 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 Bridge⁷⁸. 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.

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.

Reduction in views of highways infrastructure and traffic in some areas

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.

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 traffic⁷⁹, which would potentially cause beneficial effects on the 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.

Lighting design will minimise light pollution

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.

⁷⁸ Chapter 7.2 Transport Assessment, A14 Cambridge to Huntingdon Improvement Scheme, Development Consent Order Submission (2014)

⁷⁹ Chapter 7.2 Transport Assessment, A14 Cambridge to Huntingdon Improvement Scheme, DCO submission, Highways Agency (2014)

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.

Negative impacts

During construction

Removal of trees and vegetation

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 Huntingdon⁸⁰. 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:

[Huntingdonshire]

- 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.
- 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.
- 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.

[South Cambridgeshire]

⁸⁰ Chapter 10 Landscape, 6.1 Environmental Statement, A14 Cambridge to Huntingdon Improvement Scheme, DCO submission, Highways Agency (2014)

- North-east of Lolworth and Grange Farm, South Cambridgeshire: Removal of the periphery of a substantial tree and shrub belt covered by a TPO.
- Northern periphery of Menzies Golf Club: A section of trees designated as TPO.
- A mature oak south of the A14 and west of The Avenue, Madingley, would be removed at the foot of the proposed embankment.
- 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.

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:

[Huntingdonshire]

- 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.
- 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.
- 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.
- The existing native hedgerows along B1040 Potton Road and Hilton Road would have lengths removed as the scheme passes through them.

[South Cambridgeshire]

- A significant amount of vegetation would be removed to accommodate the expanded Swavesey junction including a large proportion of 'Down Spinney'.
- Existing highway and amenity planting would be removed to accommodate the proposed junction improvements at Bar Hill.
- 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.
- 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.

Some discontinuous hedgerows would be removed within the borrow pits, but significant hedgerow and copse features within the borrow pits would be retained.

During construction

*Disruption to landform – creation of Local Access Road, bunds / excavation of borrow pits*⁸¹

[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).

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.

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.

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.

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.

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

⁸¹ Chapter 10 Landscape, A14 Cambridge to Huntingdon Improvement Scheme, 6.1 Environmental Statement, DCO submission, Highways Agency (2014)

9.1.19. for gravel. 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.

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.

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 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.

[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.

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.

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.

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.

Views of heavy construction plant and materials, major earthworks and temporary traffic management, signage and lighting

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.

9.1.28. The most significant negative visual effects during construction would affect the following areas⁸²:

[Huntingdonshire]

- 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
- 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

During operation

Introduction of highways infrastructure and associated impacts of traffic

[Huntingdonshire]

9.1.29. There would be negative impacts on Hinchbrooke 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.

⁸² Chapter 10 Landscape, 6.1 Environmental Statement, A14 Cambridge to Huntingdon Improvement Scheme, DCO Submission, Highways Agency (2014)

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 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.

[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.

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.

Negative visual effects during operation

9.1.34. Following construction the most significant negative visual effects following construction would be on views from the following locations:

[South Cambridgeshire]

- Noon Folly Farm from where there would be clear views of the local access road and expanded Bar Hill junction;
- 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.

New areas of Lighting

9.1.35. New areas of highway lighting and a summary of visual impacts are as follows:

[Huntingdonshire]

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

9.1.37. There would be extended areas of highway lighting which would have negative impacts in the following locations:

- New Ellington junction to Brampton Interchange and bridge over Buckden Road
- Views Common roundabout
- Pathfinder Link and Mill Common
- Ermine Street junction

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 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.

[South Cambridgeshire]

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.

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.

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.

Missed opportunities

Creation of a positive recreation and ecological resource at the borrow pit areas

9.1.42. The lack of 10 year aftercare management schemes for the several borrow pits associated with the project means that there is no guarantee that a beneficial after use

would be achieved. Landscape character and landscape amenity could be degraded as a result.

Assessment of impact of artificial lighting

- 9.1.43. 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.
- 9.1.44. 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.
- 9.1.45. 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.

Summary

- 9.1.46. In summary there are likely to be positive impacts post construction from extensive mitigation planting and ecological planting particularly in the areas from Brampton interchange to Buckden Road and in Huntingdon. The removal of the A14 viaduct over the East Coast mainline at Huntingdon will have a positive benefit on the landscape in and around Huntingdon rail station and along Brampton Road and the nearby parts of the open land of Mill Common and Views Common. It would also remove a locally dominant structure in views across the commons and from the south-west, and would cause a number of beneficial visual effects. The predicted reduction in traffic along the de-trunked A14 will result in positive benefits on views as well as on the landscape features in settlements such as Godmanchester.
- 9.1.47. The negative impacts on landscape character will be during construction and operation. During construction this includes the disruption to landform through the excavation of borrow pits and the creation of environmental bunds and soil storage areas. During construction negative impacts on the landscape and visual amenity will result from views of heavy construction plant and materials, major earthworks and temporary traffic management, signage and lighting. The scheme will also result in the removal of trees and vegetation at locations across Huntingdonshire and South Cambridgeshire.
- 9.1.48. During operation the landscape and views of the landscape will be impacted by the introduction of highways infrastructure and associated impacts of traffic particularly in Huntingdon, at the section west and south west of Brampton, at the Ouse Valley crossing, at Girton Interchange, and at the whole of the offline section through the

arable landscape south and south east of Godmanchester Hinchingsbrooke and Central Part of Views Common will be affected by the addition of the Views Common roundabout. At the Eastern Part of Mill Common there would be negative impacts on landscape and views from the addition of the Pathfinder Link and associated embankments, lighting and other highway infrastructure.

9.1.49. The Local access road to the south of Cambridge Crematorium would detract from the rural character and affect field boundary pattern. The introduction and extension of lighting will have a negative impact on the visual environment most significantly for local residents and businesses located near the A14 junctions.

DRAFT

9.2. Cultural Heritage

Positive

During operation

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)

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

Negative

During construction

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.

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.

Table 15: Residual negative impacts on archaeological remains during construction

Archaeological Remains	
Asset	residual Impact during construction
Earthwork on Mill Common	Slight adverse

Table 16: Residual negative impacts on historic buildings during construction

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

During operation

- 9.2.5. 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.
- 9.2.6. Three buildings in Huntingdon would experience adverse impacts as a result of the scheme through the loss of setting.
- 9.2.7. 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.
- 9.2.8. 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 A14 and will be dominated by the new raised embankment, bridge and lighting, and a series of new signage gantries.
- 9.2.9. 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 to 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.

Table 17: Residual impacts on historic buildings during operation

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.

Positive

[Huntingdonshire]

- 9.2.10. 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.

Table 18: Residual impacts on historic buildings during operation

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
Godmanchester Earning Street Conservation Area	Moderate beneficial

Missed opportunities

9.2.11. There is a missed legacy opportunity in terms of setting out how public participation in archaeology could be encouraged through different ways of displaying and interpreting archaeological evidence.

Summary

9.2.12. In summary, during construction 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. Residual negative impacts of moderate adverse impact would occur on 9 areas containing historic buildings.

9.2.13. During operation there will be positive impacts on cultural heritage as a result of the de-trunking of the existing A14, and the removal of the Huntingdon viaduct, on 3 conservation areas in Huntingdon and Godmanchester. Three buildings in Huntingdon would experience adverse impacts as a result of the scheme through the loss of setting. The Applicant has not set out in the DCO how archaeological finds could be displayed, for example in public places, for the benefit of engagement of local residents and visitors in cultural heritage and archaeological activity.

9.3. Ecology

Positive

During operation

Mitigation and ecological planting

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.

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.

Habitat creation

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, 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.

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.

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.

Negative

During construction

Loss of Habitat

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.

9.3.8. The following habitat losses would occur during construction:

- 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.

[Huntingdonshire]

Adverse impact on Buckden Gravel Pits County Wildlife Site

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:

- Habitat loss
- Changes in environmental conditions (dust, water quality, shading)

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.

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).

Insufficient assessment of impact on Fenstanton Lakes County Wildlife Site

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.

Impact on Species

[Huntingdonshire]

Ecological mitigation areas for breeding birds may not be appropriate

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 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.

Disturbance of bat habitats adjacent to off-line section

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.

Missed opportunities

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.

9.3.17. The proposed 5 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.

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.

Summary

9.3.19. There will be positive impacts on Ecology through the introduction of ecological planting along the route of the scheme as well as the net permanent gain of 271ha of new semi natural habitats. During construction there will be inevitable negative impacts including the loss of some habitat of low ecological value and possible disturbance for bat populations in habitats adjacent to the off line section. There may also be impacts of breeding birds of county value as a result of noise from traffic and the location of mitigation areas.

9.3.20. In the worst case scenario there is for a moderate adverse effect for breeding birds of county value and for bats due to the impact of traffic noise and lack of certainty over how these species would respond. Bats may also be impacted by vehicle collisions, as it is not known if the mitigation will be effective enough.

9.3.21. The local authorities are concerned about the lack of assessment work undertaken on the County Wildlife Sites, specifically Buckden Gravel Pits CWS and Fenstanton CWS. Further work will need to be undertaken prior to the construction phase. Equally 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.

9.4. Noise and vibration

Positive

During operation

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.

9.4.2. The table below compares the long term effects of noise on dwellings with and without the scheme:

Table 19: Long-term traffic noise effects on dwellings

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

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).

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:

[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.

[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.

[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:

- 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

[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.

[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.

[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.

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.

[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.

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 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.

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.

[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

Negative

During construction

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.

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 Noise⁸³.

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.

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: Direct adverse effects from construction noise on residential Communities

Direct adverse effects from construction noise on residential 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 measures are proposed within the Code of Construction Practice.	1 month (Night time)

⁸³ Noise Policy Statement for England, Department for Environment, Food and Rural Affairs (2010)

Approx. 250 dwellings on Chieftain way, Cambridge	Online pavement laying works on the existing A14 with a monthly night time noise level of approximately 64dB _{L_{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 62dB _{L_{pAeq,4hr}} . Online pavement laying works on the existing A14 with monthly noise levels of up to 64dB _{L_{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 73dB _{L_{pAeq,12hr}} and evening earthworks with noise levels up to 67dB _{L_{pAeq,4hr}}	1 month (day time)

Noise insulation / COCP to ensure that significant observed adverse effects inside dwellings avoided

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 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).

Assessment of noise from borrow pits does not follow policy

9.4.21. There is concern that the CoCP 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 CoCP should not be applicable to such pits and greater control is required.

Table 21: Direct adverse effects from construction noise on non- residential

Direct adverse effects from construction noise on non- residential		
Location	Construction activities	Duration
Huntingdon Research Centre	Significant adverse vibration effects have been identified at this receptor	1 month (day time)
Landsmans Ltd, Brampton Rd	Significant noise effects have been identified with noise levels of 65–70dB _{L_{pAeq,12hr}} Soil storage works and construction of Buckden Bridge.	13 months (day time)

Travel Lodge Hotel, Bar Hill	Pavement/surfacing activities. Significant noise effects have been identified with noise levels of 60dB _{L_{pAeq,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 66dB _{L_{pAeq,1hr}}	1 month (night time)
Hinchingbrooke Hospital	Earthwork activities. Significant daytime noise effects have been identified on a worst case basis with noise levels between 57– 65dB _{L_{pAeq,12hr}}	5 months (day time)
Hinchingbrooke Hospital	Earthwork activities (commencing 2020). Significant evening noise effects have been identified with noise levels of 60dB _{L_{pAeq,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 _{L_{pAeq,12hr}}	3 months (day time)
Hinchingbrooke School	Earthwork activities. Significant noise effects have been identified during the daytime with levels of 61–72 dB _{L_{pAeq,12hr}}	5 months (day time)

During operation

9.4.22. The ES states that above the night-time level of 55dB_{L_{pAeq,8hr}} and daytime level of 63dB_{L_{pAeq,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.

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.

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.

9.4.25. A review of the areas where there will be negligible to moderate increases noise, split by community is included below:

[Brampton]

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.

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 closest properties. No adverse effects on shared open spaces have been identified.

[Buckden]

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.

[Huntingdon]

9.4.29. During Construction several non – residential buildings in Huntingdon will experience noise increases. See para. 9.4.43.

[Offords]

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 $L_{pAeq, 16hr}$, north of Offord Cluny.

9.4.31. On the High Street in Offord Cluny there is a maximum change of 1.1 dB L_{pAeq} in the day and 1.6 dB L_{pAeq} at night in 2035 which is considered an inaudible change.

[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.

[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 $56\text{dB}_{\text{LpAeq},16\text{hr}}$, falling to around $52\text{dB}_{\text{LpAeq},8\text{hr}}$ at night.

9.4.34. On the northern edge of the village, predicted noise increases with mitigation are $1.1\text{ dB}_{\text{LpAeq}}$ or less, but isolated properties between the village and the A14 will experience increases of 3 to $5.6\text{ dB}_{\text{LpAeq}}$, 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.

[Conington]

9.4.35. The north west of the village experiences noise levels of approximately 45-50 $\text{dB}_{\text{LpAeq},8\text{hr}}$ and 52-57 $\text{dB}_{\text{LpAeq},16\text{hr}}$. 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.

[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.

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.

[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 scheme. Given that Hill Farm Cottages collectively fall within 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.

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.

[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.

[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.

[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.

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:

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 RAF	Predicted increase	no specific mitigation proposed	Minor

Brampton (minor)	in noise from road traffic which is likely to cause a minor adverse effect		adverse effect on the acoustic character of the area around the closest properties.
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 likely to cause a moderate adverse effect	no specific mitigation proposed	noise levels would remain a significant observed adverse 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 location, with the scheme, and further mitigation will be introduced.
Crouchfield Villa and Westdene at Hackers Fruit Farm, Huntingdon Road, Lolworth	significant observed adverse effect	3m absorptive barrier for Crouchfield Villa and Westdene – Hackers Fruit Farm, Huntingdon Road	
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	significant observed adverse	The installation of noise insulation would avoid the	Significant observed effect

Caravan Park	effect	significant observed adverse effect that would otherwise occur inside these dwellings	would be avoided.
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9.4.44. There will be residual negative noise impacts in the following residential locations:

- 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

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.

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.

9.4.47. According to the ES⁸⁴ 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.

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.

Non residential

9.4.49. In terms of non - residential receptors the assessment has identified a moderate adverse airborne noise impact at:

- Cambridgeshire Constabulary HQ, Huntingdon (moderate)
- St Johns Innovation Centre and Science Park – (moderate)
- New Close Business Park, (moderate)

Missed opportunities

⁸⁴Para. 14.6.45 CH 14 6.1 ES, A14 Cambridge to Huntingdon Improvement Scheme, DCO submission, Highways Agency (2014)

Cooperation with developers

- 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.
- 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.
- 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.

Summary

- 9.4.53. There are currently a number of 'Important Areas' (IA), where existing noise levels are significant. The scheme has positive impacts on a number of these areas as a result of reassigning traffic from the existing A14 to the new A14 Huntingdon Southern Bypass. In addition the scheme mitigation being introduced results in improvements in the noise environment for certain communities.
- 9.4.54. During construction there are direct negative noise impacts on residential communities and non-residential premises. The most significant impact during construction is on 10 dwellings at the south west corner of RAF Brampton base where the operation of borrow pits and soil storage compounds will be ongoing for 42 months during day time. There will also be significant impacts for Hinchingsbrooke Hospital and Hinchingsbrooke School during construction from earthworks.
- 9.4.55. During operation there will be negative noise impacts at Stewart Close, western edge of Brampton (minor), the Western edge of RAF Brampton (minor) and dwellings in the vicinity of Pear Tree Close, Fenstanton (moderate). There will also be residual noise impacts at Catchall Farm Cottages, Hackers Fruit Farm, Huntingdon Road, and Rhadegund Cottages, Huntingdon Road, Cambridge.
- 9.4.56. For non-residential properties significant observed effects remaining after mitigation will occur at Cambridgeshire Constabulary HQ, Huntingdon (moderate) New Close Business Park, (moderate) and St Johns Innovation Centre and Science Park – (moderate).

9.4.57. From DCO submissions, and in particular the ES, it appears that the noise and vibration impact assessment has in the main been undertaken in accordance with relevant national and industry best practice guidance and standards. The noise assessment undertaken for the borrow pits is a subject for concern in terms of compliance with local policy, more detail is provided in the Minerals and Waste section of this document.

9.4.58. With appropriate mitigation (with final technical details and specifications location, length, height etc. for both new and replacement noise barriers to be secured and approved through the requirements / conditions of the DCO and CEMP approval) construction work during the day would be satisfactorily controlled and short and long term scheme operational noise should not to give rise to long term unacceptable noise or vibration impacts on health and quality of life.

DRAFT

9.5. Air Quality

Positive

During Operation

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.

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.

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.

Negative

During Construction

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 Practice⁸⁵ are appropriate in reducing the negative impact on this areas.

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.

⁸⁵ Code of Construction Practice, Cambridge to Huntingdon Improvement Scheme, DCO Submission, Highways Agency (2014)

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.

During operation

9.5.7. The predicted changes in concentration in Cambridge are mostly small increases in annual mean NO₂ and Particulate Matter PM₁₀ around 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 3.6µg/m³ however the Applicant notes in the Environmental Statement that the total annual mean concentration is still well below the objective at 16µg/m³.

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 µg/m³ range. Increases in traffic on this road, as an example, could tip the balance to being above the Objective.

Table 23: Summary of air quality impacts on specific communities

<i>Area</i>	<i>Air Quality Impact (during operation)</i>		
	<i>Positive</i>	<i>Negative</i>	<i>Negligible /no impact</i>
Alconbury	-	Predicted to experience a small increase in NO ₂ concentrations (0.4 – 2µg/m ³) in 2020.	By 2035 the change in NO ₂ concentration is negligible (0 – 0.4µg/m ³).
Brampton	Improvements in NO ₂ and PM ₁₀ concentrations along the A14 and B1514 in 2020 and 2035. Concentrations in the Brampton AQMA are already below the air quality objectives. The modelled results indicate that the scheme would benefit air quality in this location with improvements between 3.6µg/m ³ and 1.7µg/m ³ being predicted in 2020, resulting in concentrations well below the objective.	Close to the A1 there is a small increase in NO ₂ concentrations in 2020.	Change in NO ₂ concentrations is reduced to a negligible level by 2035.
Buckden	Buckden experiences improvements in NO ₂ and PM ₁₀ concentrations at locations closest to the	Where the new road joins the A1 there are a few receptors that experience a worsening	-

Area	<i>Air Quality Impact (during operation)</i>		
	road (A1).	of pollution concentrations. The maximum change is 3.6µg/m ³ and 0.6µg/m ³ for NO ₂ and PM ₁₀ off Brampton Road.	
The Offords	-	-	At the Offords The impact for NO ₂ and PM ₁₀ is negligible in 2020 and 2035.
Huntingdon and Godmanchester	The largest improvements are along the existing A14 with the maximum improvement (6.3µg/m ³) in 2020 being on Castle Moat Road	Small increase in annual mean NO ₂ concentrations in 2020 at the junction of Edison Bell Way and Ermine Street.	By 2035 the change in annual mean NO ₂ concentrations is predicted to be negligible.
	Positive	Negative	Negligible /no impact
Hilton	-	-	In Hilton there is predicted to be negligible changes in NO ₂ during operation of the scheme.
Conington	-	-	In Conington there is predicted to be negligible changes in NO ₂ during operation of the scheme.
Lolworth	Along the existing A14 at Lolworth at the receptor at Hill Farm Cottages, there is expected to be an improvement of air quality in 2020 and 2035.	-	-
St Ives, Fenstanton and Swavesey	Fenstanton and along the A14 between Fenstanton and Godmanchester predicted to have an improvement in NO ₂ concentrations in 2020 and 2035.	-	-
Dry Drayton, Elsworth, Graveley, Cambourne	-	-	Villages of Dry Drayton, Elsworth and Graveley experience a negligible change in annual mean NO ₂ and PM ₁₀ concentrations.
Bar Hill	-	-	At Bar Hill small increases in NO ₂ in 2020 and 2035 are predicted. There will be a negligible change in PM ₁₀ concentrations in 2020 and 2035.
Girton	-	Small increase in NO ₂ in 2020 and 2035.	Negligible change in PM ₁₀ concentrations in 2020 and 2035.
Cambridge City	-	The predicted changes in	

Area	<i>Air Quality Impact (during operation)</i>	
		<p>concentration in Cambridge are mostly small increases in annual mean NO₂ and Particulate Matter PM₁₀ around 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_{µg/m³} however the Highways England note in the Environmental Statement that the total annual mean concentration is still well below the objective at 16_{µg/m³}.</p>

Summary

9.5.9. The impacts for air quality on the local areas from the scheme are mostly positive.

During construction there will be impacts from dust in the residential areas of Brampton, close to the borrow pits and residential areas close to the Cambridge Northern Bypass, from the changes to the Girton Interchange and in central Huntingdon, from the removal of the existing viaduct. The applicant has stated in the Environmental Statement that best practice approach will be followed and mitigation measures will prevent any significant adverse impacts from dust. The local authorities expect the applicant to consult in full over the mitigation measures to be provided in order to ensure they are appropriate.

9.5.10. In terms of air quality impacts from emissions of NO₂ and PM₁₀, there are a number of communities that will benefit from reductions in these emissions as a result of reductions in levels of traffic on the existing A14 as traffic re-assigns to the new scheme. In particular communities along the route between Swavesey and Huntingdon are expected to benefit. Huntingdon will also experience benefits associated with reduction in traffic. There is likely to be some negative impact on air quality on the routes into Cambridge, in particular Madingley Road. The local authorities will require the Applicant to conduct additional monitoring of the air quality in this area to ensure that the impact does not become significant.

9.6. Economy

Positive

During construction

Direct and indirect benefits to employment

- 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
- 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 2021⁸⁶ (taking into account factors such as Cambridgeshire's existing economy and skills base).
- 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.

During Operation

Benefits of reduced journey time, greater reliability and impacts on economic activity

- 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.
- 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 DCO⁸⁷ indicates that the combined monetised value of these benefits is forecast to be £1.039 billion over a 60 year period from opening.

⁸⁶ Chapter 16 Community and Private Assets, 6.1 Environmental Statement, A14 Cambridge to Huntingdon improvement scheme, Highways Agency (2014)

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

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.

9.6.7. The monetised value of greater journey time reliability for business users and transport service providers is forecast to be **£435 million**¹⁰⁶ over a 60-year appraisal period.

9.6.8. The scheme would help to unlock economic activity and contribute to wider benefits forecast to be **£77 million**¹⁰⁶ 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 result of reduced transport costs.

Unlocking housing constraints

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 Northstowe⁸⁸. 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.

Wider economic growth

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.

Negative

During Construction

Disruption to existing travel patterns

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.

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.

⁸⁸Northstowe Planning Documents, South Cambridgeshire District Council website accessed 20 April 2015
<https://www.scambs.gov.uk/content/northstowe-planning-documents-phase-two>

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.

9.6.14. The proposed traffic management proposals during construction are as follows:

- 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 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.
- 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.

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.

Temporary Loss of land

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.

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.

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. Additionally, there are borrow pits proposed near Brampton (BP1, BP2 and BP7), Fenstanton(BP3) and Bar Hill (BP6).

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:

- 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 CoCP to avoid pollution of natural springs, ditches and brooks on the farm holding; and
- implementing bio-security advice and actions

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:

Table 24: significant temporary loss of land at the following farms

	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%
Slate Hall Farm	29.5	6.2	21%
Sunlight Services	6.6	1.1	17%

During Operation

Permanent Loss of Land

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.

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)⁸⁹.

⁸⁹ Table 16.11 CH 16 Community and private assets, 6.1 Environmental Statement, A14 Cambridge to Huntingdon improvement scheme, DCO submission, Highways Agency (2014)

Table 25: Major adverse impacts are expected to occur on the following farms

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 Fenstanton	Farm cut in half, access to severed portion requires rerouting of farming patterns.
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

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.
LandmansPortaloos	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, Fenstanton	Possible reduction in number of 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

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	<i>Formation of a Landscaped Mound adjacent to and south of the A14 to be formed from excess spoil from the</i>

	and Histon Road, Cambridge, Cambridgeshire, CB3 0LE	<i>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, CB4 0GW	<i>Extensions to existing building to provide additional floor space (including plant at ground and first floors); demolition of existing outbuildings and erection of replacement outbuilding.</i> Loss of approximately 5% of plot to land take.

Missed opportunities

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.

Summary

9.6.24. The scheme will bring a number of positive economic benefits to Cambridgeshire as well as the wider region. Cambridgeshire already has a strong economy and the new scheme will support continued growth by reducing congestion on the key routes between Cambridge and Huntingdon. There will be benefits for local and national businesses using the route. Negative impacts will be felt by local farms, in particular where farms are severed and viability affected. Creating a positive legacy is quoted in the Development Consent Order application by the Applicant and the local authorities expect that a full programme is developed to ensure that the applicant delivers on this objective, particularly with regard to local construction jobs and training and skills development to create long term employment in the area.

9.7. Pedestrians, Cyclists and Equestrian travellers

Positive

During operation

New NMU Route

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 Cambridge⁹⁰. 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.

Re-connection of severed links

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.

Table 28: Detailed look at positive enhancements to NMU routes

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.
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

⁹⁰ Chapter 15 Effects on all travellers, 6.1 Environmental Statement, A14 Cambridge to Huntingdon Improvement Scheme, DCO submission, Highways Agency (2014)

		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 Hinchingsbrooke Park Road adjacent to the school.

Bus travellers

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.

Negative

9.7.3. The impacts on NMU routes are identified below where the impacts are considered to be of moderate or major significance:

Table 29: impacts on NMU routes are

Route	Construction / Operation	Impact
Bridleway at the Stukeleys 6	Operation	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.
Silver Street and Pathfinder Long Distance walk and Bridleway Godmanchester 1	Operation	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 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.
Bucking Way Road and minor road to Boxworth (High Street)	Construction	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.
B1050 (Hatton's Road) and Bar Hill junction	Construction	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.
Bridleway Dry Drayton 12	Construction	The route would be disrupted by construction of the proposed new local access road, which would affect 560m of the bridleway during construction.
B1049 at Histon junction	Construction	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 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.
Footpaths Huntingdon 9,10 and 11	Construction	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.
B1514 Brampton Road, Hinchingsbrooke Park Road, Edison Bell Way and National Cycle Network route 12 and 51	Construction	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 temporary closure of Brampton Road and the cycle route is anticipated.
	Operation	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.
Footpaths Huntingdon 6 and 4 and cycle route and permissive path from Mill Common/Castle Moat Road junction to Huntingdon railway station	Construction	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.

During operation

Impact on views and amenity from public rights of way

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 Hinchingsbrooke Park Road.

Missed opportunities

Public Rights of Way around the Borrow Pits

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.

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.

Solar studs

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.

Summary

9.7.8. The scheme provides a number of positive benefits to the local area for pedestrians, cyclists and equestrian travellers. The most prominent benefit is the creation of the 10km NMU route alongside the new local access road between Swavesey and Girton. The other main benefit from the scheme is the re-connection of Public Rights of Way that have been previously severed. The re-connection of Brampton Bridleway No. 15 around Brampton Hut and Brampton Hut services is an example of this. The scheme will also generate negative impacts for NMU users across the scheme area. These impacts will be mainly during the construction phase and involve temporary disruption and impacts upon amenity (noise, dust and visual impact) where construction activities would coincide with existing routes; and temporary diversions or hindrances to NMU journeys as a result of construction activities, including construction traffic haul routes, coinciding with existing routes. 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.

9.7.9. The local authorities have identified missed opportunities to deliver a positive legacy for NMUs at the borrow pits. As a minimum additional Public rights of way around the sites to the west and south west of Brampton should be created in order to enhance connectivity and create opportunities for leisure and exercise. Finally the local authorities believe that the use of solar studs on NMU routes would contribute to increased use of these routes, particularly at night or in winter. The local authorities would encourage this to be included at the detailed design stage.

9.8. Flooding and Water

Positive

During Construction

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.

Negative

During Operation

Impact on flood risk

9.8.2. For the operational phase, the likely significant effect of the scheme on flood risk would be neutral for 11 of the 14 watercourses assessed within the Flood Risk Assessment. A negative effect is identified for the following three watercourses:

- Ellington Brook;
- Brampton Brook; and
- River Great Ouse.

The impact is identified because of a rise in water levels in these locations.

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.

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 metres for the 1% (1 in 100) Annual Exceedance Probability (AEP) event immediately upstream of the new road..

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.

Missed opportunities

Opportunities to alleviate local flooding issues

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 in order to understand if it would be technically possible to divert flood water into the borrow pit storage area.

9.8.7. Similarly there are opportunities to reduce flood risk in Fenstanton by providing flood storage area at the Galley Hill borrow pit.

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.

Assurance that maintenance access will be available

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 to access the awards.

Summary

9.8.10. The Applicant has set out in the Environmental Statement how during the construction phase flood risk will be fully mitigated through flood compensation resulting in no residual negative impacts. During operation 3 watercourses have been identified as being affected by increases in water levels. However the increase in flood risk is not considered to be significant and the Applicant is in discussions with the Environment Agency to ensure that appropriate mitigation measures are included in the detailed design stage to mitigate risk. The local authorities are satisfied that the scheme will not have a major negative impact on the flooding and water environment. However the scheme also offers the opportunity to mitigate local flooding issues and the Applicant has the opportunity to provide a positive legacy by doing so.

9.9. Minerals and Waste

9.9.1. The use of 6 borrow pits, located across Cambridgeshire is a major element of the scheme and there are different local impacts arising from each borrow pit. The impacts for each borrow pit are summarised in tabular form in Appendix C. The following impacts have been identified for the borrow pits element of the scheme. These impacts are relevant depending on the individual borrow pit (see Appendix C) but apply generally across the subject area.

Positive

During construction

Potential to reduce heavy vehicle traffic

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.

During operation

Positive strategy for sustainable use of surplus soil

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.

Negative

During construction

9.9.4. There will be a generally significant short term impact from intensive extraction and backfilling operations on the local area. This negative impact will occur across all 6 borrow pits.

Lack of assessment: Archaeology, noise, dust, biodiversity, hydrology

9.9.5. A number of 'potential' negative impacts have been identified as a result of the lack of assessment undertaken in certain areas:

- There is a potential for an impact on archaeology at the borrow pit sites as this has not been properly assessed or mitigated by the Applicant. As result the archaeological heritage may be adversely affected. See chapter 9.2 Cultural Heritage.
- There is a potential for noise impacts on residential properties near to the borrow pits, and this has not been properly assessed. Lack of proper assessment and / or mitigation will adversely affect local residents and other occupied uses. Specifically borrow pit 1

(West of Brampton) will create noise impacts for Brampton Lodge and Rectory Farm, while borrow pit 2 (South West Brampton) will affect RAF Brampton. See chapter 9.4 Noise and Vibration.

- There is potential for dust impacts on residential development and this needs further assessment / mitigation to ensure that they are not adversely affected. The residential areas of Brampton are in close proximity to borrow pit sites and therefore mitigation measures as identified in the Applicant’s Code of Construction Practice⁹¹ are necessary to reduce the negative impact on residential area nearest the borrow pit. See chapter 9.5 Air Quality.
- There are potential adverse effects on biodiversity which have not been properly assessed and / or mitigated.
- 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. See chapter 9.3 Ecology.

Missed opportunities

Opportunities to address existing flooding issues

9.9.6. 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 *could* be introduced at the following borrow pits to address issues in the following locations:

Table 30: *Opportunities to address existing flooding issues*

Borrow pit	Community
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

9.9.7. 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

⁹¹ Code of Construction Practice, Cambridge to Huntingdon Improvement Scheme, DCO Submission, Highways Agency (2014)

environment e.g. through creation of priority habitat and / or public access and amenity will not be delivered.

Detailed long term management plan and 10 year aftercare programme

9.9.8. The delivery of a detailed long term management plan agreed by the local authorities and a 10 year aftercare programme should satisfactorily integrate the sites into the existing landscape, ensuring there is no adverse visual impact for local communities and others. See chapter 9.1 Landscape.

Creation of priority habitats

9.9.9. 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.

Transport of hard rock by sustainable means

9.9.10. 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.

Summary

9.9.11. The use of 6 borrow pits, located across Cambridgeshire is a major element of the scheme and there are different local impacts arising from each borrow pit. Appendix C lists the different impacts identified at each borrow pit. There are a number of positive and negative impacts that are relevant across the borrow pits in general. In terms of positive impacts the borrow pits will reduce the impact of traffic caused by heavy goods vehicles that might otherwise have to travel further to reach sand, gravel and other resources. It has not been possible to fully assess the negative impacts due to the lack of assessment by the Applicant in certain areas regarding archaeology, noise, dust, biodiversity and hydrology impacts at the borrow pits. There are a number of missed opportunities which the local authorities believe will create a positive legacy for the scheme, in particular the opportunity to alleviate local flooding issues, the delivery of a 10 year landscape management plan, the creation of priority habitats and the opportunity to transport materials by sustainable modes, namely rail.

10.Social and Community matters

10.1.1. This section identifies social and community impacts from the scheme during construction and operation. The impacts focus on specific local impacts which may have also be made as representations to the Planning Inspectorate by groups or individuals specifically affected. The purpose of this chapter is to specify the local social and community impacts and to highlight examples of how the local communities / businesses are affected.

Positive

During operation

Reducing severance and improved access between communities

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.

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.

Improving access for non-motorised users across the A14 corridor

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.

Improvements to the noise and air quality improvement along de-trunked section

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 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-routing traffic out of town and along the new bypass.

Negative

During construction

Environmental impacts on communities from operation of borrow pits

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.

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.

Environmental impacts on community facilities

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 Hinchingbrooke School (Huntingdon) during the daytime with levels of 61–72 $\text{dB}_{\text{LAeq},12\text{hr}}$ over a period of approximately 5 months commencing in 2020 during earthwork activities for surrounding new and altered roads.

During operation

Land-take impacts on viability

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.

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 Huntingdon⁹². 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.

⁹² Representation no.126 25 Feb 2015, Relevant Representations to Planning Inspectorate (2015)
<http://infrastructure.planningportal.gov.uk/projects/eastern/a14-cambridge-to-huntingdon-improvement-scheme/?ipcsection=relreps&relrep=126>

Land-take impacts on accessibility

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.

Environmental impacts on community facilities

10.1.12. During operation there will be an impact on in terms of increase noise levels at Brampton Primary School – In 2035 with the scheme the predicted noise level at the school would be 48.2 dB_{LpAeq} during the day. This represents an increase of 4.8 dB_{LpAeq} during the day with the scheme in 2035. However the total scheme level is below Impact screening criterion (50dB_{LpAeq,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.

10.1.13. 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 the 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.

Missed opportunities

Opportunities to alleviate local flooding issues

10.1.14. 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.

Summary

10.1.15. During construction there will be negative impacts on communities from the operation of the borrow pits, as a result of the excavation works as well as the

transport of materials from the borrow pits to the site. These impacts will mainly be for the community of Boxworth, closest to Borrow Pit 5.

- 10.1.16. Hinchingsbrooke School will experience an increase noise levels during the construction phase for a period of 5 months as a result of activities associated with the creation and alteration of roads.
- 10.1.17. Once the scheme is complete, it will improve accessibility between communities along the existing A14 corridor, as a result of the reductions in congestion predicted. The reduced traffic flow along the existing A14 will result associated noise and air quality improvements for communities along the route. The scheme will also deliver significant improvements to infrastructure for pedestrians, cyclists and equestrian travellers,
- 10.1.18. Delivering the scheme will require land take and as a result once the scheme is built certain land will be taken permanently. This will be largely agricultural land and may affect the viability of certain farms. There are also other businesses and a charity that will be affected by land take and changes to access as a result of the delivery of the scheme.
- 10.1.19. During operation, negative noise impacts have been identified for Brampton Primary School in the vicinity of the new Southern Bypass and the A1, both of which will experience increased levels of traffic. The noise levels at this location are close to the threshold for mitigation to be introduced. This will need to be monitored and appropriate mitigation provided if the threshold is breached. Equally there are air quality impacts for Cambridge, at the eastern end of the scheme. Monitoring of air quality in the locations identified will need to be followed by introduction of mitigation should levels increase beyond predicted levels and worsen the conditions within the Air Quality Management Area (AQMA) in Cambridge.
- 10.1.20. The Applicant has missed an opportunity to alleviate local flooding issues through the use of balancing ponds and works associated with the borrow pits. 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.

11. Legacy

11.1.1. As part of the Development Consent Order (DCO) Highways England set out a specific objective with regards to the legacy of the scheme.

“Creating a positive legacy that enhances the reputation of Cambridgeshire and which establishes a distinctive gateway to a region known for excellence in science and technology”⁹³

11.1.2. The DCO identifies that this is a step change for Highways England because it is broader than the traditional remit of operating and maintaining the trunk and motorway network. To deliver the objective the HA identify 1) ‘quality of life’ and 2) ‘local economic growth’ as specific themes to deliver the objective.

Design elements creating positive legacy

11.1.3. The following aspects, incorporated into the design have been identified as bringing direct benefits:

- 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.

Quality of life

In terms of quality of life the following legacy benefits have been identified by the Applicant:

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.

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 Hinchingbrooke Park Road which reflects and strengthens the historic background within this location.

⁹³ 7.2 Case for the Scheme, A14 Cambridge to Huntingdon Improvement Scheme, DCO Submission, Highways Agency (2014)

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.

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.

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.

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.

Local Economic Growth

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.

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.

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.

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.

What the local authorities want to see delivered

11.1.13. The A14 Cambridge to Huntingdon improvement scheme is one of the UK's largest road projects and represents a significant investment in the region by both central and local government. It is imperative that every opportunity is taken to ensure the scheme delivers a positive for residents and all communities across the scheme area and beyond. The section below identifies the key opportunities for creating a positive legacy that will need to be addressed to maximise the positive impacts brought about by the scheme.

Landscape legacy

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.

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.

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.

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.

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 Plan⁹⁴.

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

⁹⁴ Huntingdon West Area Action Plan, Huntingdonshire District Council (2011)

minimum of 10 years for aftercare management. This legacy element is detailed further in para. 6.1.1.

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.

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

Cultural heritage legacy

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 be of educational and cultural interest for the community and visitors.

Ecology

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 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.

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.

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.

Noise and Vibration

- 11.1.26. The noise impacts of the scheme, particularly in the operational phase, are a priority concern for residents, communities and businesses in the scheme area. Noise from road traffic can have health impacts and long term impacts on quality of life. Mitigation measures proposed by Highways England include noise barriers and insulation to complement the use of low-noise road surfacing.
- 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.
- 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.

Pedestrians, cyclists and equestrian travellers

- 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 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.
- 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 Hinchingsbrooke area as well as part of the Brampton to Huntingdon walking and cycling route.
- 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.
- 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.

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.

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.

Economic legacy

11.1.35. The scheme provides economic benefits to the County through the reduction in congestion between Cambridge and 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.

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.

Minerals and Waste incl. Borrow Pits

10.1.39. The local authorities have set out in the Local Impact Report the impacts that the pits have at the local level. It is an important part of mitigation of construction impacts that materials are locally sourced where possible, and the County Council fully supports this principle. However, the local authorities note the objectives of the Applicant to provide a long term positive legacy to local communities and businesses. Restoration of the borrow pits is considered by the local authorities to be an element of securing this legacy in respect of nature conservation, flooding and rights of way, plus enhancements to public amenity and informal leisure opportunities for the local community and others

11.1.40. A 10 year Aftercare management scheme is crucial, as well as the consideration of aftercare beyond a 10-year period. The Borrow pits restoration plan is inadequate and does not secure a minimum 10 year after-care period. Discussion on this matter is ongoing. A 10 year aftercare programme and 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.

11.1.41. 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.

11.1.42. 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.

Flooding and Water

11.1.43. 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.

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.

Appendices

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Appendix A: Policy Assessment Of The Scheme and Degree Of Compliance with Local Plans and Policies



Compliant with Policy



Currently considered contrary to Policy

	<u>Relevant policies</u>	<u>Comment</u>	<u>Compliance with Plan / Policy</u>
<p>The Cambridgeshire Local Transport Plan 2011 - 2031 (LTP3)</p> <p>Cambridgeshire County Council (2014) including Cambridgeshire Long Term Transport Strategy (LTTS)</p>	<p>Objectives:- Enabling people to thrive, achieve their potential and improve quality of life</p> <p>Supporting and protecting vulnerable people</p> <p>Managing and delivering the growth and development of sustainable communities</p> <p>Promoting improved skill levels and economic prosperity across the county, helping people into jobs and encouraging enterprise</p> <p>Meeting the challenges of climate change and enhancing the natural environment</p>	<p>Plan makes reference to the scheme – notes that scheme will provide some relief to traffic problems in Huntingdon, Godmanchester, Brampton and St Ives, but new transport links will still be needed to cater for new development.</p> <p>Plan recognises 3 of 4 AQMAs in Huntingdonshire and single AQMA in South Cambridgeshire that are caused by the heavy flow of traffic and regular congestion on the A14 between Cambridge and Huntingdon. The proposed scheme is expected to have a positive impact on air quality along the route, particularly in Huntingdon itself.</p> <p>LTTS notes that the A14 Cambridge to Huntingdon scheme is a critical intervention to support development.</p>	
	<p>Transport Strategy for Cambridge and South Cambridgeshire, Cambridgeshire County Council (2014)</p> <p>TSCSC 1 : The strategy approach</p> <p>TSCSC 4: National Networks: trunk roads, motorways and rail</p>	<p>Scheme contributes to aim of contributing to a transport network that supports economic growth, mitigates impacts the impact of the growth agenda.</p> <p>Environmental Statement demonstrates consideration on local impacts and opportunities, however more can be done on ensure legacy benefits are delivered.</p>	

	<u>Relevant policies</u>	<u>Comment</u>	<u>Compliance with Plan / Policy</u>
	TSCSC 9: Access to jobs and services	Scheme contributes to improving access by reducing congestion – new NMU routes also improve access to Cambridge from South Cambridgeshire.	
	TSCSC 12: Encouraging cycling and walking	Scheme includes creation of 12km of new NMU routes, including reinstatement of previously severed routes.	
	TSCSC 13: Provision of new highway capacity	TSCSC notes that scheme will address capacity problems as well as providing capacity that will allow new development at Alconbury, Godmanchester, Northstowe and on the edge of Cambridge.	
	TSCSC 17: Air quality	TSCSC notes scheme will reduce congestion on the A14 and through the Bar Hill to Milton AQMA, and in places reroute the corridor further away from residential areas in that AQMA.	
	TSCSC 18: Protecting the environment	Highways scheme will result in inevitable negative environmental impacts, Environmental Statement identifies mitigation to minimise impacts on the natural environment.	
Huntingdon and Godmanchester Market Town Transport Strategy, Cambridgeshire County Council (2014)	<p>Aims:</p> <ul style="list-style-type: none"> • Support strategic sustainable development in and around Huntingdon • Keep Huntingdon moving • Ensure good transport links between new and existing communities, and the jobs and services people wish to access • Enhance the transport linkages within Huntingdon • Make travel safer 	Strategy highlights the importance of the A14 and the growing dependency on the area for successful delivery of the scheme to relieve existing network pressure, and cater for forthcoming development.	

	<u>Relevant policies</u>	<u>Comment</u>	<u>Compliance with Plan / Policy</u>
	<ul style="list-style-type: none"> Protect the historic and natural environment 		
<p>Cambridgeshire and Peterborough Minerals and Waste Core Strategy, Cambridgeshire County Council and Peterborough City Council (July 2011)</p>	<p>CS11 Sand and Gravel Borrow pits</p> <p>CS12 Engineering Clay</p> <p>CS13 Additional Mineral Extraction</p> <p>CS22 Climate Change</p> <p>CS25 Restoration and Aftercare of Mineral and Waste Management Sites</p> <p>CS32 Traffic and Highways</p> <p>CS33 Protection of Landscape Character</p> <p>CS34 Protecting Surrounding Uses</p> <p>CS35 Biodiversity and Geodiversity</p> <p>CS36 Archaeology and Historic Environment</p> <p>CS37 Public Rights of Way</p> <p>CS38 Sustainable Use of Soils</p> <p>CS39 Water Resources and Water Pollution Prevention</p>	<p>See Written Representations document Appendix D for full assessment of scheme against policies.</p>	

	<u>Relevant policies</u>	<u>Comment</u>	<u>Compliance with Plan / Policy</u>
	CS40 Airport Safeguarding		
	CS41 Ancillary Development		
Cambridgeshire and Peterborough Minerals and Waste Site Specific Proposals Plan, Cambridgeshire County Council and Peterborough City Council (February 2012)	SSP M2 Area of Search Allocations for Sand and Gravel Borrow pits to serve future A14 improvements SSP M7 Area of Search Allocations for Engineering Clay Borrow pits to serve future A14 improvements:	See Written Representations document Appendix D for full assessment of scheme against policies.	
Rights of Way Improvement Plan - Rights of Way: the Way Ahead, Cambridgeshire County Council (2005)	SOA1 – Making the Countryside More Accessible	Improvements to PROW that were severed as part of previous road improvements at Bar Hill and Brampton. Provision of long distance NMU route from Swavesey Junction to Girton and to south of A14 from Dry Drayton Junction to Girton and into Cambridge.	
	SOA2 – A Safer Activity	Provision of long distance NMU route from Swavesey Junction to Girton and to south of A14 from Dry Drayton Junction to Girton and into Cambridge.	
	SOA5 – Filling in the Gaps	Provision of new PROW / NMU links to join PROW that were severed by the previous A14 scheme including Lolworth FP5 to Bar Hill BR1 and Brampton BR19 to the highway network to the east of the A1(T).	
	SOA7 – Develop Definitive Map and Other Records	Reconnection of PROW links that were severed by previous road improvements, improves the legal record by resolving long standing anomalies.	Compliant in terms of those routes being reconnected but not compliant for two routes – notably - The Stukeleys

	<u>Relevant policies</u>	<u>Comment</u>	<u>Compliance with Plan / Policy</u>
			Bridleway 6 and Brampton Footpath 3.
Cambridgeshire Green Infrastructure Strategy (2011)	<p>To reverse the decline in biodiversity</p> <p>To mitigate and adapt to climate change</p> <p>To promote sustainable growth and economic development</p> <p>To support healthy living and well-being</p>	<p>The Cambridgeshire Green Infrastructure Strategy is designed to assist in shaping and co-ordinating the delivery of Green Infrastructure in the county, to provide social, environmental and economic benefits now and in the future.</p> <p>The scheme provides new ecological mitigation planting.</p> <p>The scheme is compliant in this objective in that it provides 12km of new NMU routes which provide the opportunities for increased travel by sustainable modes.</p> <p>The NMU links provide connections between communities across the county and support the growth of communities such as Northstowe.</p> <p>The scheme is compliant in this objective in that it provides 12km of new NMU routes which provide the opportunities for increased travel by sustainable modes.</p>	
Cambridgeshire’s Local Flood Risk Management Strategy (2013)	<p>Understanding flood risk in Cambridgeshire</p> <ul style="list-style-type: none"> •Managing the likelihood and impact of flooding •Helping Cambridgeshire’s citizens to understand and manage their own risk •Ensuring appropriate development in Cambridgeshire •Improving flood prediction, warning and post flood recovery. 	<p>The strategy sets out the roles and responsibilities of Flood Risk Management Partners within the County, highlighting the position of the County Council as the Lead Local Flood Authority under the Flood and Water Management Act 2010.</p> <p>A review of the scheme has not identified any areas where the scheme contradicts the strategy approach.</p>	
Cambridgeshire Landscape Guidelines (1993)	<ul style="list-style-type: none"> •Mobilise care and action amongst the main bodies who play the most active role in generating tomorrow’s landscapes. •Improve overall visual quality and strengthen the contrasts between 	<p>In general the detailed landscape mitigation detailed in Ch. 10 – “Landscape” of the Environmental Statement reflects the principles set out in the Cambridgeshire Landscape Guidelines.</p>	

	<u>Relevant policies</u>	<u>Comment</u>	<u>Compliance with Plan / Policy</u>
	<p>landscapes in different parts of the County (emphasising a sense of place).</p> <ul style="list-style-type: none"> •Integrate wildlife conservation into landscape action at all scales from planning at a county level, through site planning, design and management, to the detailing of “hard” and “soft” features at the smallest scale. •Protect and enhance historic features. •Conserve existing features and create landmarks and ‘personality’ in the landscape. 		
<p>Cambridgeshire Joint Air Quality Action Plan (2010)</p>	<p>The Air Quality Action Plan (AQAP) was developed by Cambridge City Council, Huntingdonshire District Council and South Cambridgeshire District Council. It looked at how to improve air quality up to 2015 in order to meet national air quality objectives, setting priority actions for each district, and focuses on reducing PM10 and NO2 concentrations along the A14 and within each district.</p>	<p>The specific actions related to the A14 and improving air quality are:</p> <ul style="list-style-type: none"> •Widening of the A14 carriageway between Fen Drayton and Histon •Re-alignment of the A14 and the construction of a local road between the M11 and Bar Hill junctions during the A14 Improvement Scheme <p>The scheme includes proposals that seek to meet the objectives set out in plan.</p>	

Appendix B: Historical development of the scheme

“Roads for Prosperity” White Paper (1989)

1.1. Improvement of the road now known as the A14 was first proposed in the Government’s 1989 “Roads for Prosperity”⁹⁵ White Paper where it was included as three contiguous schemes:

- A604 Huntingdon to Cambridge (renumbered A14 in 1993)
- A rebuilt Girton Interchange (M11 Junction 14)
- A widened A45 (renumbered A14 in 1993) Cambridge Northern Bypass

Cambridge to Huntingdon Multi-Modal Study (CHUMMS) (2001)

1.2. The Cambridge to Huntingdon Multi-Modal Study (CHUMMS) was commissioned by Government in 1998 to investigate the combined problems of congestion, road safety and residential development pressure in the Cambridge and Huntingdon area⁹⁶. The Cambridge to Huntingdon Multi-Modal Study (CHUMMS) Final Report was published in August 2001. This identified the A14 improvement scheme as part of a range of multi-modal solutions to the transport problems of the corridor.

1.3. The CHUMMS recommendations included public transport improvements (the now completed Cambridgeshire Guided Busway), rail freight improvements between Felixstowe to Nuneaton, additional demand management measures in Cambridge and traffic calming measures in villages along the corridor. CHUMMS recognised that the A14 between Cambridge and Huntingdon was a growth corridor, and it identified, and included, significant development in the travel demand forecasts.

⁹⁵ “Roads for Prosperity White Paper, Department of Transport (DOT) (1989)

⁹⁶ Cambridge to Huntingdon Multi Modal Study, Department for Environment, Transport and the Regions (DETR) (2001)

Progress with CHUMMS recommendations

Works are on-going to increase the capacity of the rail route between Felixstowe and Nuneaton in both the size and number of freight trains that the route can accommodate.

The Cambridgeshire Guided Busway opened in 2011 and has become a highly successful public transport system, providing connections beyond the Busway to Huntingdon and Peterborough. Traffic calming measures within villages on the A14 corridor were implemented in 2003 and 2004 with the aim of reducing the use of rat-runs by vehicles avoiding congestion on the A14.

In Cambridge measures to manage demand in the city centre have been introduced, including further stages of the Core Traffic Scheme and extension of the Cambridge Park & Ride network. In addition, transport strategies for the market towns of Huntingdon, St Ives and St Neots have all had to deal with the local implications of the impact of the current congested A14, particularly during the numerous incidents that occur on an almost daily basis when local routes within these areas are the only viable alternatives.

Initial Appraisal of Route Options Report (2003) and development of the CHUMMS Strategy (2003-2005)

- 1.4. Following the CHUMMS recommendations a large number of routes were considered with 24 combinations of options being assessed within the Initial Appraisal of Route Options Report⁹⁷. Of these, 18 were rejected on safety, environmental or engineering grounds and the remaining options were developed further.
- 1.5. A route was developed following the recommendations of the CHUMMS study, referred to as the CHUMMS strategy⁹⁸. This detailed a route that comprised of:
 - a new dual carriageway to the south of Huntingdon between Ellington and Fen Drayton;
 - widening of the existing A14 to three lanes in each direction between Fen Drayton and Fen Ditton;
 - local access roads alongside the widened A14 to separate local and strategic traffic;
 - major interchanges with the A1 at Brampton, the existing A14 at Fen Drayton and the M11/A428 at Girton; and
 - the removal of the Huntingdon road viaduct over the East Coast Mainline railway, together with road improvements within the town.
- 1.6. An alternative proposal which retained the existing A14, providing a new two lane route in each direction between Ellington and Fen Drayton, and included the re-construction of the viaduct, was also considered. The CHUMMS Strategy was taken to a public consultation

⁹⁷ Initial Appraisal of Route Options Report, Department for Transport (2003)

⁹⁸ CHUMMS Strategy, Department for Transport (2003)

between March and June 2005, together with the alternative proposal. 4,182 completed questionnaires were received and of these 57% said they preferred the CHUMMS Strategy whilst 16% said they preferred the alternative proposal.

Legal Challenge and second public consultation (2006)

1.7. In 2006, an unsuccessful legal challenge as to the process of selection of the alignment of the Huntingdon southern bypass was mounted by local opponents of the scheme. The Highways Agency consulted further on alignment proposals for the Huntingdon southern bypass section of the A14 between Ellington and Fen Ditton. The consultation considered two options together with two variations previously considered within the Stage 2 Environmental Assessment and Scheme Assessment Reports, referenced against the route for this section of the road shown in the CHUMMS Strategy, presented at the consultation of 2005. The second public consultation ran between December 2006 and March 2007. 3,667 completed questionnaires were received and of these 62% said they preferred the route as presented within the CHUMMS Strategy.

A14 Huntingdon Study (2006)

1.8. The A14 Huntingdon Study⁹⁹ was commissioned by the Highways Agency in conjunction with the local authorities to assess the effectiveness of proposed A14 connections with the local network in the vicinity of Huntingdon. The study concluded that removing the viaduct, replacing it with an at-grade junction in Brampton Road, building the West of Town Centre Link and providing a new link at Mill Common to the existing A14 would be most beneficial to the town in economic terms.

A14 Ellington to Fen Ditton Scheme (2007-2010)

1.9. Following the consultation a preferred route was announced in 2007 and the scheme was developed with an estimated cost of £1.1 billion and a start of construction date of early 2012. Plans were drawn up to commence a public inquiry in July 2010 but in government's 2010 Spending Review the A14 Ellington to Fen Ditton scheme was withdrawn from the roads programme as it was considered to be unaffordable in the financial climate current at that time¹⁰⁰.

The A14 Study (2011-2012)

1.10. Whilst the estimated £1.1 billion A14 Ellington to Fen Ditton improvement scheme was considered unaffordable by Government in 2010 when it was withdrawn, it was recognised by the Secretary of State that a solution was still needed to the growing problem of traffic congestion in the trunk road corridor between Huntingdon and Cambridge. In 2011 a study was commissioned by the Department for Transport¹⁰¹, in conjunction with

⁹⁹ A14 Huntingdon Study, Highways Agency (2006)

¹⁰⁰ A14 Ellington to Fen Ditton Scheme, Highways Agency (2007)

<http://webarchive.nationalarchives.gov.uk/20090322020841/http://www.highways.gov.uk/roads/projects/421.1.aspx>

¹⁰¹ A14 Study, Department for Transport (DfT) (2011)

the county councils of Cambridgeshire, Suffolk and Northamptonshire, to look at multi-modal transport solutions to this problem.

- 1.11. The A14 study resulted in a public challenge exercise, aimed at encouraging the public and other stakeholders to participate in the debate, and the production by consultants of three study output reports. Study Output 3 comprised an appraisal of the shortlisted public transport, rail freight and highway packages identified in the previous stage of the study, including shortlisted six highway packages. Six packages of highway measures were identified and appraised.
- 1.12. At the time, Government's direction was for a scheme which could be partly self-funding through application of a tolling element. Each package was assessed using HM Treasury's five-case model (consisting of the strategic case, economic case, financial case, management case and commercial case).
- 1.13. Option 3 (which included a southern bypass to Huntingdon with a link to the A1, the downgrading of the existing A14 through the town and the online widening of the A14 between Huntingdon and Cambridge) and Option 5 (which was similar but retained the existing A14 through Huntingdon for east to north movements and introduced a local access road linking Huntingdon with Cambridge) proved to be the most effective solutions. The final section of the report considered the impact of tolling and identified a seventh highway package which combined elements of Options 3 and 5 to offer an effective tolled solution.
- 1.14. Through a cost benefit analysis carried out by the Highways Agency Option 5 was identified as the best performing option. This consisted of:
- Huntingdon southern bypass as a two-lane dual carriageway, with a tie in south east of Fenstanton;
 - local access roads between Swavesey and Girton plus full Girton enhancement;
 - enhancement of Cambridge Northern Bypass; and
 - Huntingdon Viaduct retained in its current arrangement for strategic traffic to/from the A1(M).
- 1.15. However, Option 5 would not perform well as a tolled scheme; with a toll in place, much of the strategic traffic would be expected to continue to use the existing A14 via Huntingdon. As a result, a new option was developed and named as Option 7, which combined the better performing operational features of Option 5, such as the local access road, together with Option 3. Option 7 was the same as Option 5, except for:
- Downgrading of the existing A14 alignment north of Swavesey with removal of the Huntingdon road viaduct over the East Coast Mainline railway; and a three lane Huntingdon southern bypass with additional junctions linking to the A1
- 1.16. Given that tolling was a requirement of the scheme at this time, Option 7 was identified as the best performing option because it combined:

- the positive characteristics of options that downgraded the existing A14 around Huntingdon, as incorporated in Option 3, with the expectation of attracting most if not all of the strategic traffic to the new bypass; and
- the local access road in Option 5 which, in conjunction with the downgraded section, would offer a free route attractive to local traffic but less so to strategic traffic due to its passage through urban areas
- the A1198 for local traffic.

A14 Cambridge to Huntingdon Scheme (2012-2013)

- 1.17. In July 2012 the Secretary of State for Transport, Justine Greening MP, announced that the A14 Cambridge to Huntingdon improvement scheme would be taken forward, with construction work hoped to commence in 2018. The same statement also confirmed that tolls would be introduced over part of the enhanced route.
- 1.18. In June 2013 the Government announced it would provide £1bn to upgrade the A14, with a requirement that local authorities contributed £100m to the project. Local authorities and Local Enterprise Partnerships, led by Cambridgeshire County Council, agreed to make a local contribution to the scheme.

Tolling (2012-2013)

- 1.19. The document, 'Investing in Britain's Future'¹⁰², published in June 2013, confirmed commitment to the upgrade of the A14 between Cambridge and Huntingdon, subject to value for money and deliverability. It confirmed that funding would be supported by contributions from local authorities and local enterprise partnerships plus tolling.

Public consultation on route options (Autumn 2013)

- 1.20. A non-statutory consultation was held over a five-week period in autumn 2013. This sought the views of the public and stakeholders on the proposed scheme and options previously considered under the A14 Study, as well as tolling arrangements.
- 1.21. The options consultation confirmed that tolling proposals generated significant antipathy. In connection with the Autumn Statement 2013 and within a speech given at the Institution of Civil Engineers on 4 December 2013 to launch the National Infrastructure Plan 2013¹⁰³, Danny Alexander MP, in his role as Chief Secretary to the Treasury, confirmed that the scheme would not be tolled. He stated that this decision would not delay the scheme and that the related costs would be covered by government.

Consultation on the proposed scheme (April – June 2014)

- 1.22. A statutory consultation was held between 7 April and 15 June 2014. This engagement sought the views of the public and stakeholders on the scheme. Over 1,150

¹⁰² "Investing in Britain's Future", HM Treasury (2013)

¹⁰³ National Infrastructure Plan 2013, HM Treasury (2013)

responses to the questionnaire published by the Highways Agency were received and more than 1,350 people responded on the scheme overall.

- 1.23. The Consultation Report¹⁰⁴ (November 2014) set out how the scheme has evolved in response to comments received through statutory consultation. Ongoing engagement with the Environment Agency on technical matters informed the development of the scheme in respect of flood compensation. As a consequence of this engagement, the crossing over the River Great Ouse was changed from a single multi-span viaduct with an embankment over the flood plain to two multi-span viaducts separated by a short embankment. Also, additional flood compensation areas were introduced and others modified. These changes were made to ensure that there would be no increased flood risk as a consequence of the scheme.

¹⁰⁴ 5.1 Consultation Report, A14 Cambridge to Huntingdon Improvement Scheme DCO submission, Highways Agency (2014)

Appendix C: Local Impacts at individual Borrow pits

*SCDC are seeking a minimum of 15 year aftercare management scheme for the borrow pits.

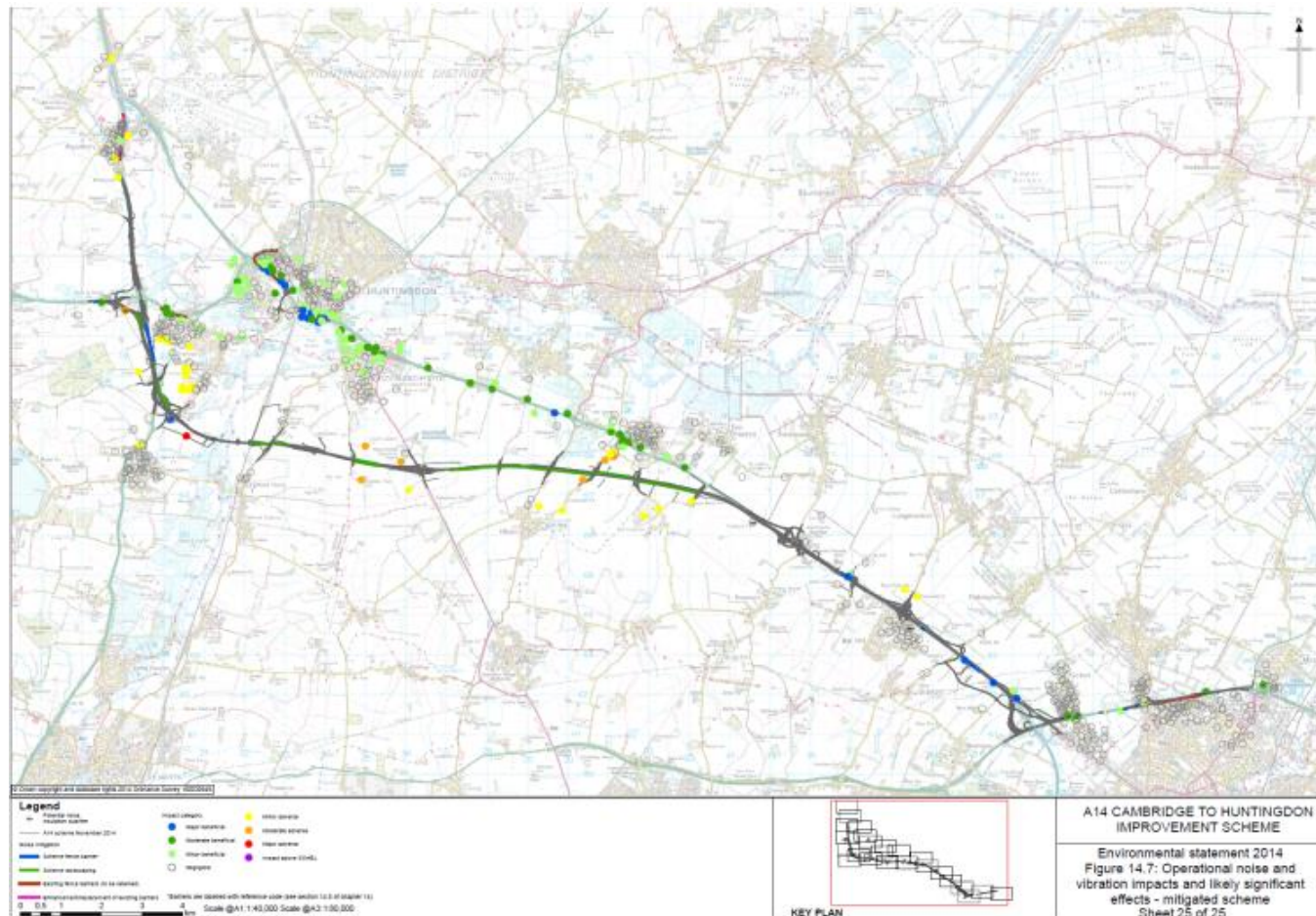
Impact	Highway Agency Borrowpit No. 1 (West of Brampton)	Highway Agency Borrowpit No. 2 (South West Brampton)	Highway Agency Borrowpit No. 3 (Galley Hill Fenstanton & Oxholme Farm)	Highway Agency Borrowpit No 5. (Boxworth)	Highway Agency Borrowpit No. 6 (Slate Hall Farm / Grange Farm)	Highway Agency Borrowpit No. 7 (Weybridge Farm, Alconbury)
Location of Sand and Gravel Borrow pits	Broadly aligns with Area of Search	Aligns with Area of Search	Aligns with Area of Search	Broadly aligns with Area of Search	Broadly aligns with Area of Search	Aligns with Area of Search
Additional Mineral Extraction	Extension area justified	n/a	n/a	Extension area justified	Extension area justified	n/a
Climate Change	Potential (not taken) to address local flooding issues in Brampton & to deliver new habitat (carbon sink)	Potential to address surface water attenuation for RAF Brampton needs investigation & delivery of new habitat (carbon sink)	Potential (not taken) to address local flooding issues in Fenstanton & to deliver new habitat (carbon sink)	Compliant with policy	Potential (not taken) to address local flooding issues in Bar Hill and Girton.	Potential (not taken) to address surface local flooding issues in Brampton via Ellington Brook
Sustainable Transport of Minerals and Waste	Traffic movements will be minimised	Traffic movements will be minimised	Traffic movements will be minimised	Traffic movements will be minimised	Traffic movements will be minimised	Traffic movements will be minimised
Restoration and Aftercare of Borrow pit	Requires phased restoration plan to deliver beneficial afteruse required, with 10 year aftercare scheme	Requires phased restoration plan to deliver beneficial afteruse required, with 10 year aftercare scheme	Requires phased restoration plan to deliver beneficial afteruse required, with 10 year aftercare scheme	Subject to phased restoration to agricultural afteruse is appropriate	Subject to phased restoration and a 10 year aftercare scheme* restoration is acceptable	Subject to phased restoration and a 10 year aftercare scheme* restoration is acceptable
Traffic and Highways	Traffic movements will be minimised	Traffic movements will be minimised	Traffic movements will be minimised	Traffic movements will be minimised	Traffic movements will be minimised	Traffic movements will be minimised
Protection of Landscape Character	Satisfactory subject to detailed landscaping scheme to be agreed, with 10 year aftercare programme	Satisfactory subject to detailed landscaping scheme to be agreed, with 10 year aftercare programme	Satisfactory subject to detailed landscaping scheme to be agreed, with 10 year aftercare programme	Satisfactory subject to detailed landscaping scheme to be agreed, with 10 year aftercare programme*	Satisfactory subject to detailed landscaping scheme to be agreed, with 10 year aftercare programme*	Satisfactory subject to detailed landscaping scheme to be agreed, with 10year aftercare programme*
Protecting Surrounding Uses	Inappropriate standard for noise	Inappropriate standard for noise	Inappropriate standard for noise	Satisfactory subject to the mitigation of	Inappropriate standard for noise	Inappropriate standard for noise

Impact	Highway Agency Borrowpit No. 1 (West of Brampton)	Highway Agency Borrowpit No. 2 (South West Brampton)	Highway Agency Borrowpit No. 3 (Galley Hill Fenstanton & Oxholme Farm)	Highway Agency Borrowpit No 5. (Boxworth)	Highway Agency Borrowpit No. 6 (Slate Hall Farm / Grange Farm)	Highway Agency Borrowpit No. 7 (Weybridge Farm, Alconbury)
	applied. Detailed noise assessment / mitigation required for Rectory Farm and Brampton Lodge. Soil storage area should be set back further from Rectory Farm. Long term landscape scheme addressing visual impact should also be provided for both properties.	applied, and there needs to be an assessment for dust. There may be a greater number of properties adversely affected which need appropriate mitigation	applied, there may be a greater number of properties adversely affected which need appropriate mitigation	noise and dust through the implementation of the Code of Construction Practice	applied, there are some properties nearby but ambient noise likely to be high, further assessment required	applied, there are some properties nearby but ambient noise likely to be high, further assessment required
Biodiversity and Geodiversity	Potential impact of dust on Brampton Wood requires clarification. Proper consideration required of the impact and need for mitigation in respect to bat populations in the hedgerow between the Wood and the A1.	Compliant with policy	Potential impact of dust on the Fenstanton County Wildlife site needs assessment together with mitigation, and more detailed proposals for restoration management of the borrowpit site	Compliant with policy	Compliant with policy	Compliant with policy
Archaeology and the Historic Environment	No satisfactory archaeological mitigation measures for the Borrow Pits	No satisfactory archaeological mitigation measures for the Borrow Pits	No satisfactory archaeological mitigation measures for the Borrow Pits	No satisfactory archaeological mitigation measures for the Borrow Pits	No satisfactory archaeological mitigation measures for the Borrow Pits	No satisfactory archaeological mitigation measures for the Borrow Pits
Public Rights of Way	Opportunity to	Opportunity to	Compliant with	Compliant with	Compliant with	Compliant with

Impact	Highway Agency Borrowpit No. 1 (West of Brampton)	Highway Agency Borrowpit No. 2 (South West Brampton)	Highway Agency Borrowpit No. 3 (Galley Hill Fenstanton & Oxholme Farm)	Highway Agency Borrowpit No 5. (Boxworth)	Highway Agency Borrowpit No. 6 (Slate Hall Farm / Grange Farm)	Highway Agency Borrowpit No. 7 (Weybridge Farm, Alconbury)
	enhance Rights of Way Network should be taken	enhance Rights of Way Network should be taken	policy	policy	policy	policy
Sustainable Use of Soils	Compliant on the assumption the Soil Management Strategy will be implemented	Compliant on the assumption the Soil Management Strategy will be implemented	Compliant on the assumption the Soil Management Strategy will be implemented	Compliant on the assumption the Soil Management Strategy will be implemented	Compliant on the assumption the Soil Management Strategy will be implemented	Compliant on the assumption the Soil Management Strategy will be implemented
Water Resources and Water Pollution Prevention	Further assessment re dewatering on Brampton wood required to determine mitigation measures.	Subject to further assessment / mitigation regarding dewatering (as suggested) this should be compliant with policy	Combined hydrological / ecologically assessment required to address potential adverse effects on Fenstanton County Wildlife Site	Compliant with policy	Compliant with policy	Compliant with policy

*SCDC are seeking a minimum of 15 year aftercare management scheme for the borrow pits.

Appendix D: Location of Noise mitigation measures (Landscaping, Barriers, Fences) –



This plan is available in higher resolution on the Planning Inspectorate website at: <http://infrastructure.planningportal.gov.uk/wp-content/uploads/projects/TR010018/2.%20PostSubmission/Application%20Documents/Environmental%20Statement/A14%206.2%20ES%20Figure%2014.07.pdf>

Location of noise barriers as identified in the Environmental Statement for the Scheme

Mitigation Identification	Location	Barrier length (m)	Total barrier height (m)	Description
M14	Alconbury – west of A1(M)	1120	2 to 4	Replace existing 2m reflective barrier with 4m absorptive and additional 2m absorptive barrier along existing 2m earth bund.
M16	Alconbury – east of A1(M)	200	2	Absorptive barrier alongside B1043 (A1 Southbound off slip)
M17	Brampton Hut – west of A14 / A1 Interchange	285	3	Absorptive barrier for little Meadows and Woodhatch Farm
M18	Brampton	1000	2	2m absorptive barrier on top of 2m false cutting along scheme alignment
M20	Swavesey	320	4	4m reflective barrier for Hill Farm Cottages
M21	Bar Hill south of J29 (A14)	120	3	3m reflective barrier for Rhadegund Cottages
M22	Dry Drayton	260	3	3m absorptive barrier for Crouchfield Villa and Westdene

				Huntingdon Road
M22	Dry Drayton	290	3	3m absorptive barrier for Cambridge Crematorium
M23	Dry Drayton	200	3	3m absorptive barrier for Catchall Farm properties
M24	Girton	100	3	3m absorptive barrier for Grange Farm properties
M25	Girton (Wellbrook)	110	3	West of Girton Road- 3m absorptive barrier for properties close to A14
M26	Girton (Wellbrook)	40	3	East of Girton Road -3m absorptive barrier for 4 properties
M27	Girton (Oakington)	100	3	East of Girton Road – 3m absorptive barrier along top of existing cutting.
M28 / 34	Girton (Oakington)	390	4	West of Girton Road – replace existing 2m reflective barrier with 4m absorptive along top of existing cutting

M29	Impington	250	2	2m absorptive barrier for properties in Orchard Close and Woodhouse farm just west of J32
M30 / M33	Impington	320 250	4 3	Replace existing 2m barrier with new 4m absorptive and also extend to west by 250m with 3m absorptive barrier
M31	Blackwell Caravan Site	250	3	3m Absorptive barrier

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Appendix E: 'Important Areas' as identified by DEFRA Noise Action Plans

