

2 Location and context

2.1 Introduction

2.1.1 This chapter provides a broad description of the main environmental features of the route and areas surrounding the scheme alignment. This chapter also provides a description of the land likely to be directly or indirectly affected by the scheme proposals and all associated elements, including temporary construction features, as set out in *Chapter 3*. Reference should be made to *Figures 1.1 and 2.1 to 2.4*, as well as the environmental topic chapters (*Chapters 8 to 18*) for further details about the environment.

2.2 The A14 trunk road

The existing route

2.2.1 The A14 trunk road provides an east-west route which links the Midlands with East Anglia. It begins at Catthorpe near Rugby, where it connects with the M1 and M6 motorways, and it continues east for approximately 209km to the port town of Felixstowe. It forms one of the United Kingdom's strategic routes and is part of the Trans-European Network.

2.2.2 The current alignment of the A14 trunk road has resulted from the construction and amalgamation of a series of bypasses between the M1 and Ipswich. The existing A14 Huntingdon bypass was constructed in the early 1970s and the Cambridge Northern Bypass was built just a few years later.

2.2.3 The A14 between Cambridge and Huntingdon serves an additional purpose, connecting the A1(M) motorway to the North of England, with the M11 motorway to London and the South East.

2.2.4 The A14 also serves as the main commuting route for local traffic between Huntingdon, Cambridge and other smaller communities in the local area.

Need for the scheme

2.2.5 The existing A14 trunk road between Huntingdon and Cambridge is well known for congestion, delays and incidents. Built more than three decades ago, the predominantly two-lane dual carriageway is unable to cope with the daily volume of traffic that now uses it, and is in need of improvement.

2.2.6 Around 85,000 vehicles use this stretch of the A14 every day. This is significantly beyond the level of traffic that was expected when the road was built. In addition, around a quarter of this traffic comprises heavy goods vehicles - above the national average (of 10 per cent) for a road of this type.

2.2.7 The importance of the A14 trunk road as a link between Britain and continental Europe is set to grow as the east coast Haven ports at Ipswich, Harwich and Felixstowe expand, bringing further growth to the region.

2.2.8 The Cambridge sub-region is one of the fastest growing areas of the United Kingdom in terms of population and economy. Between now and 2031, its

population is expected to grow by 23 per cent, driving a 22 per cent increase in jobs. However, congestion is regularly cited by business as a constraint on growth. The *Cambridgeshire Local Transport Plan 2011-2031* (Cambridgeshire County Council, June 2014) notes that delivery of the joint development strategy for Cambridgeshire is threatened by congestion on the A14. Major developments, such as the new 10,000 home village at Northstowe, the Alconbury Enterprise Zone, and expansion on the northern and eastern fringes of Cambridge would be facilitated by an improved A14. A planning application for Northstowe Phase 2 has recently been submitted to South Cambridgeshire District Council by the Homes and Communities Agency (HCA). However, further expansion of the Northstowe development beyond Phase 1 is dependent on improvement of the highway network, including the A14.

2.2.9 DCO submission document number 7.1, *Case for the scheme*, provides more information on the economic case and policy context for the scheme.

The A14 Cambridge to Huntingdon improvement scheme

2.2.10 In response to the recognised current problem, the Highways Agency proposes to improve the A14 trunk road corridor between Huntingdon and Cambridge, covering a total distance of approximately 34km (*Figure 1.1*). The A14 Cambridge to Huntingdon improvement scheme (the scheme) is described in detail in *Chapter 3*.

2.2.11 The key objectives of the scheme are to:

- combat congestion: making the route between Huntingdon and Cambridge more reliable and providing capacity for future traffic growth;
- unlock growth: enabling major residential and commercial developments to proceed, leading to increased economic growth, regionally and nationally;
- connect people: by placing the right traffic on the right roads and freeing up local capacity for all types of road user, including pedestrians, cyclists and equestrians;
- improve safety: designing the proposed scheme to modern highway standards, introducing better lane control, and providing adequate capacity for predicted traffic levels; and
- create a positive legacy: recognising the wider benefits of the road improvement scheme for local communities and businesses.

2.2.12 The A14 Cambridge to Huntingdon improvement scheme meets the threshold of being a “nationally significant infrastructure project” (NSIP) and, as a result, the powers to construct and operate the road will be gained through the *Planning Act 2008* rather than the *Highways Act 1980*. A Development Consent Order (DCO) application and supporting documents have been prepared following consultation with the community and stakeholders during 2014 and have been submitted to the Secretary of State through the Planning Inspectorate (as responsible agency) for

consideration. For more information regarding the DCO process, refer to *Chapter 1*.

2.3 General description of the area

Topography and hydrology

- 2.3.1 The topography of the area has resulted from rivers and other watercourses flowing generally northwards into the edge of the Fens, creating shallow valleys through low hills to the south and west of Cambridge and around Huntingdon. These low hills rise to around 60 to 80m Above Ordnance Datum (AOD), with the area around Hardwick to the west of Cambridge rising to over 100m AOD. In contrast, the Fenland landscape to the north-east of the A14 extends over large areas at only 2 to 5m AOD, with the Fenland villages located on local rises, or 'eyes' of 10 to 20m AOD.
- 2.3.2 The river Great Ouse flows northwards between Buckden and the Offords, then eastwards around Huntingdon before heading north-east past St Ives. The wide and flat floodplain of the river and its main tributaries, including Ellington and Alconbury brooks flowing from the west and West Brook/Hall Green Brook flowing from the south, lies at about 10m AOD. The floodplain has been extensively quarried for aggregates.

Settlement and land use

- 2.3.3 Land use within the area is dominated by large scale arable agriculture, characterised by open fields and sparse hedgerows. Within this are major communication corridors, including the A1, the existing A14 and the East Coast mainline railway east of the Great Ouse valley.
- 2.3.4 The largest settlements are Huntingdon to the west and Cambridge to the east. Brampton and Hinchingsbrooke are to the south-west of Huntingdon and Godmanchester and St Ives are to the south-east and east. Cambridge northern fringe is made up of housing, light industry and substantial offices and research establishments. Between Huntingdon and Cambridge are The Hemingfords, Swavesey, Fenstanton, Fen Drayton, Longstanton and Oakington, all to the north of the A14, with The Offords, Hilton, Conington, Boxworth, Lolworth, Bar Hill and Dry Drayton all to the south of the A14.
- 2.3.5 The area contains a number of recreational sites such as Hinchingsbrooke Country Park, a county wildlife site and gravel pits at Buckden, and angling lakes at Fenstanton.

Landscape pattern, landcover and vegetation

- 2.3.6 To the west of Cambridge, the landscape south of the existing A14 is predominantly undulating and north of the A14 predominantly flat. Both offer expansive views of large scale intensive arable farmland, divided by sparse trimmed hedgerows, open ditches or streamside vegetation. The scattered woods form important visual and wildlife features. 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.

2.4 Overview of local economy

- 2.4.1 The Greater Cambridge area is one of the fastest growing areas of the UK. This reflects a local economy which contains a range of businesses which are relatively highly focused on technology based activities and with a high value output. There is significant potential for continued expansion, with consequent benefits to the East of England and the UK as a whole.
- 2.4.2 Due to housing growth in the area between Huntingdon, Cambridge and St Ives (approximately 2.5km north of the A14 between Huntingdon and Cambridge), the area functions increasingly like a conurbation. For many people living and working around Cambridge, the A14 is the main route across the Greater Cambridge area, given the lack of suitable alternative roads.
- 2.4.3 Between now and 2031, the population and economy of the area are expected to grow significantly. However, congestion is regularly cited by business as a constraint on growth. The *Cambridgeshire Local Transport Plan 2011-2031* (Cambridgeshire County Council, June 2014), which is currently the subject of public consultation, notes that delivery of the joint development strategy for Cambridgeshire is threatened by congestion on the A14.
- 2.4.4 A number of development plans have been developed to guide future population and economic growth anticipated in the Greater Cambridge area. These development plans identify proposed major allocated sites along the A14 and A1 corridors, mainly to alleviate a housing shortage in the area and to plan for expansion of businesses. *Chapter 18* provides more information on the development plans for the Greater Cambridge area. DCO submission document number 7.1, *Case for the Scheme*, provides more information on the economic case and policy context for the scheme.

2.5 Existing A1/A14 corridor

Alconbury to A1 Brampton interchange

- 2.5.1 The route corridor of the A1 between Brampton interchange and Alconbury, outside of the highway boundary, is mainly arable farmland. The main developed area between Alconbury and Brampton Hut interchange is the Huntingdon Life Sciences research centre, west of the A1, which is located approximately 800m south of Alconbury and accessed via Woolley Road which has a junction with the A1.
- 2.5.2 Brampton Meadow Site of Special Scientific Interest (SSSI) is located immediately to the north-west of Brampton Hut interchange (*Figure 2.3*) on the opposite side of the current A14 to the Brampton Hut service area.
- 2.5.3 The Brampton Hut service area (NGR: TL 192718) is located off the south-west exit of the Brampton Hut A1/A14 interchange. The service area has a fuel filling station, motel (which has planning consent for a further 21 bedrooms), fast-food restaurant with 'drive-thru' and a lorry park. In addition, part of the site footprint also includes an outline and reserved matters planning consent for an additional four food outlets, including two with drive-through capability.

- 2.5.4 Continuing south from the Brampton Hut service area, the land surrounding the A1 returns to mainly arable farmland. However, there is an area of ancient woodland located approximately 1km west of the A1 and approximately 1km south-west of the service area. Brampton Wood is the second largest area of woodland in Cambridgeshire and is designated as a SSSI. The wood offers recreational and landscape interest as well as valuable wildlife habitat (*Figures 2.2 and 2.3*).
- 2.5.5 To the east of the A1 is the village of Brampton. The westernmost residential areas of Brampton are within 200m of the existing A1 highway boundary, with views west across open farmland to the road and traffic using it.
- 2.5.6 Most of the land either side of the A1 between Brampton Hut and A1 Brampton interchanges (a distance of nearly 3km) is arable farmland, although there are some fishing lakes on the eastern side of the A1 (NGR: TL 198701), close to Brampton Road which crosses the A1 via a bridge (*Figure 2.1*). The village of Buckden lies approximately 1km south-south-west of Brampton interchange.

Existing A14 Corridor - Ellington to Huntingdon

- 2.5.7 The land use surrounding the A14 from Ellington to Brampton Hut interchange is predominantly arable (*Figure 2.1*). However, there are some flooded former gravel pits abutting the northern highway boundary (NGR: TL 176720) and a farm and depot with an access off the westbound A14 (NGR: TL 183717).
- 2.5.8 Huntingdon racecourse is located approximately 800m to the east of Brampton Hut interchange, just north of the A14, whilst Hinchingsbrooke Country Park is located on the southern side of the A14 between the settlements of Brampton (which abuts the southern highway boundary of the A14) and Huntingdon. Part of the racecourse is designated as a SSSI (*Figure 2.3*).
- 2.5.9 The market town of Huntingdon is the second largest settlement within the area. The existing A14 currently separates the southern parts of Huntingdon from the remainder of the town. The East Coast mainline railway also passes through Huntingdon, from north to south, and the A14 currently crosses the railway via the Huntingdon road viaduct, which is considered to be a visually obtrusive structure within the town. There are several historic buildings and heritage assets within Huntingdon, including conservation areas and the site of the former Huntingdon Castle, which is a scheduled monument (*Figure 2.2*). There are a number of trees and groups of trees protected by tree preservation orders. The town suffers from periods of poor air quality, linked to transport, which has led to the designation of an air quality management area (AQMA) within the town. Mill Common lies immediately north of the A14 in the centre of Huntingdon, and includes civil war earthworks which are a scheduled monument.

Existing A14 - Huntingdon to Girton

- 2.5.10 The eastern edge of Huntingdon is bounded by the river Great Ouse (*Figure 2.3*). This navigable river is locally designated as a county wildlife site for its nature conservation interests, but it is also a popular recreational

asset. Close to the Great Ouse viaduct, which takes the A14 over the river, there is a confluence between the Great Ouse and another watercourse, the Alconbury Brook. Portholme, which is statutorily designated at national and European level for nature conservation interest, is an area of meadowland located south of the A14 close to the confluence between Alconbury Brook and the river Great Ouse (*Figure 2.3*). A long distance route, the Ouse Valley Way (*Figure 2.1*), follows the river corridor under the A14 and northwards through an area of grazing land to the east of Huntingdon.

- 2.5.11 The town of Godmanchester is located immediately east of the Great Ouse valley, on the south side of the existing A14. From Godmanchester, the land use surrounding the A14 becomes predominantly arable again as far as Girton, although the settlements of Fenstanton and Bar Hill abut the road corridor to the north and south respectively.
- 2.5.12 A number of settlements are situated close to the A14 to the north-east, including Hemingford Abbots, Hemingford Grey and Fen Drayton, all within 1-2km of the existing trunk road.
- 2.5.13 Although dominated by arable farmland, there are pockets of other land use within the surrounding area of the existing A14 such as farmsteads, small industrial estates, hamlets, former gravel pits, a water treatment plant, the Cambridge Crematorium and a golf course.
- 2.5.14 The villages of Boxworth, Lolworth and Dry Drayton all lie between 0.5 to 1.5km south-west of the A14. North-east of this section lie the villages of Swavesey, Longstanton and Oakington.
- 2.5.15 The village of Madingley is situated approximately 1.5km south-west of Girton interchange, on the A428 which joins the M11 and A14 at the interchange.

Existing A14 - Cambridge Northern Bypass

- 2.5.16 From Girton interchange the A14 becomes what is known as the Cambridge Northern Bypass, which takes the trunk road around the northern perimeter of the city.
- 2.5.17 The village of Girton, located east of Girton interchange, is the home of Cambridge's Girton College. Much of the land surrounding the A14 in this area is therefore part of the college estate.
- 2.5.18 Between the village of Girton and Histon interchange, the land use is again predominantly agricultural (arable), although large areas are zoned for development in the relevant local development plans. From Histon onwards, the northern extents of the city of Cambridge abut the A14 corridor. The new mixed use development of Orchard Park (formally Arbury Park and Arbury Camp) is located alongside the south-east edge of Histon interchange. There are pedestrian/cycle crossing points that have recently been improved across the A14 at this junction to cater for local journeys between the settlement of Histon, to the north of the junction, and the new areas of development at Orchard Park.
- 2.5.19 There is a hotel (Holiday Inn) located off the north-east of Histon interchange, which overlooks Impington Lake, a popular angling location.

The route of the Cambridgeshire guided bus passes to the eastern side of Impington Lake in a south-east to north-west direction, crossing under the A14.

- 2.5.20 The area of Kings Hedges lies on the southern side of the Cambridge Northern Bypass between Orchard Park and Milton junction, whilst to the north the land remains as arable farmland and is designated green belt.
- 2.5.21 Cambridge Science Park is located immediately south-west of Milton junction. The science park was established by Trinity College in 1970, and is recognised as a centre for innovation and high-tech industry. Over 100 companies are located within the science park.
- 2.5.22 Milton junction is located at the eastern end of the scheme alignment.

2.6 Location of proposed Huntingdon Southern Bypass

- 2.6.1 The Huntingdon southern bypass element of the scheme leaves the current Brampton interchange in a south-easterly direction, skirting around the southern edge of Buckden landfill west of the river Great Ouse.
- 2.6.2 The proposed route then crosses the Great Ouse valley. Here, in addition to the river itself, there is a network of ponds as well as Buckden Marina. The lower quality of agricultural land in this area has spared the valley from the intensive agricultural activity of surrounding areas, meaning there is a greater variety of habitat present. This area contains flood plain and areas of flood risk associated with the river (*Figure 2.3*).
- 2.6.3 The proposed route then crosses the East Coast mainline railway and the B1043. The B1043 connects the village of Offord Cluny, 500m south of the scheme route, to Godmanchester (*Figure 2.1*).
- 2.6.4 From here the route crosses more agricultural land as far as the A1198, Ermine Street. The Wood Green Animal Shelter is located close to the scheme location (NGR: TL 262682) and has direct access from the A1198. This is an animal rescue shelter which is also open for visitors.
- 2.6.5 A stables and riding centre is located opposite the Wood Green Animal Shelter, also accessed off the A1198.
- 2.6.6 From the A1198 Ermine Street to the point where the route meets the existing A14 alignment, the alignment passes through more arable farmland. The villages of Hilton and Conington are approximately 1km to the south of the scheme alignment. The scheme crosses the West Brook and its associated flood plain between the two villages.
- 2.6.7 The Huntingdon Southern Bypass alignment then rejoins the existing A14 corridor between Fenstanton and Cambridge Services.

2.7 Environmental constraints

- 2.7.1 The main environmental constraints in the scheme area are shown on *Figures 2.1 to 2.4*. Key constraints relevant to the scheme are:
- a number of communities and businesses of varying size;
 - a comprehensive network of public rights of way;

- a number of air quality management areas, primarily associated with the A14 and other major highways in the area;
- noise important areas (IAs) at a number of locations along the existing A14 and other major roads;
- Portholme Special Area of Conservation and a number SSSIs;
- conservation areas in Huntingdon and Godmanchester;
- registered parks and gardens;
- a number of country parks and county wildlife sites, mostly to the west and south of Huntingdon;
- green belt north and west of Cambridge;
- a number of individual trees and tree groups covered by tree preservation orders at various locations within the vicinity of the scheme;
- the river Great Ouse and other associated watercourses, both natural and man-made, some of which are main rivers and water framework directive watercourses;
- significant areas of floodplain associated with the watercourses;
- historic and active landfills, and other areas of potentially contaminated ground; and
- groundwater source protection zones.

2.7.2 The potential impacts of the scheme on the various environmental resources and receptors in the wider area are considered in more detail in *Chapters 8 to 18*.

2.8 Bibliography

Cambridgeshire County Council (June 2014). Cambridgeshire Local Transport Plan 2011 – 2031.

Highways Act 1980.

Planning Act 2008.