SUNNICA ENERGY FARM

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Environmental Statement

6.1 Chapter 15: Human Health

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Sunnica Energy Farm

Environmental Statement
Chapter 15: Human Health

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15.1 Introduction

15.1.1 This chapter defines the study area, the methodology used for developing the impact assessment, and provides a description of the baseline environment and impacts in relation to human health and wellbeing. Where relevant it also identifies and proposes mitigation measures to address potential impacts of the Scheme on human health and wellbeing during construction, operation and decommissioning.

15.1.2 This chapter presents a summary of the information on health and wellbeing provided in **Chapter 13: Transport and Access, Chapter 11: Noise and Vibration** and **Chapter 14: Air Quality** of this Environmental Statement **[EN010106/APP/6.1]**.

15.1.3 Abbreviations and capitalised terms are defined in the Glossary, **Chapter 0** of the Environmental Statement **[EN010106/APP/6.1]**.

15.2 Legislation and Planning Policy

15.2.1 **Appendix 15A** of this Environmental Statement **[EN010106/APP/6.2]** identifies the legislation, policy, and guidance of relevance to the assessment of significant human health effects of the Scheme.

15.3 Assessment Assumptions and Limitations

15.3.1 This human health impact assessment is based on professional judgement and considers both the adverse and the beneficial impacts that the Scheme will have on the surrounding receptors. It provides an indication of human health and well-being effects on people and the local community.

15.3.2 Community resources (as set out in Section 15.6) are mentioned expressly in the environmental baseline only where they contribute to the local context or where they may be affected by the Scheme. Information in the baseline related to demographics and the health profile of the population in the study area uses the most up to date available sources in each context. In respect of ethnicity data only, the 2011 Census provides the most recent source.

15.3.3 In the absence of a detailed construction programme at this stage, all temporary effects during construction and decommissioning are assessed as occurring simultaneously and for the entire 24-month programme of each phase. Whilst a phased construction may be possible, the approach taken to assuming a 24 month programme ensures that the likely ‘worst-case’ is assessed, which may result in the overestimation of predicted health effects. Should the construction phase be extended or delivered in phases the predicted effects would be the same or less than those outlined in this chapter.

15.3.4 Decommissioning will occur after 40 years of operation and for the purposes of this assessment is treated as being in 2065, based on a 40 year design life commencing from 2025. However, certain elements of the Scheme may be decommissioned prior to the end of the 40 year period. Should parts of

the Scheme be decommissioned in advance of the main decommissioning phase the predicted effects would be the same or less than those outlined in this chapter; the assessment of a 24 month decommissioning period therefore represents a worst case and any extension or phased construction would be the same or lesser in terms of the effects.

15.4 Assessment Methodology

Introduction

15.4.1 There is no consolidated methodology or practice for the assessment of effects on human health. Best practice principles are provided in NHS England's Healthy Urban Development Unit's Rapid Health Impact Assessment (HIA) Toolkit 2019 and forms the basis of the approach adopted to assess impacts on health and wellbeing in this chapter. In addition, consideration has been given to the Health and Well-being checklist of the Wales Health Impact Assessment Support Unit (WHIASU) (2017) to help with the identification of which health determinants are relevant. Based on this, the impacts of the Scheme on human health are assessed qualitatively using professional judgement, best practice and draw upon other assessments within the ES and therefore, the assessment does not follow the methodology outlined in **Chapter 5: EIA Methodology** of this Environmental Statement **[EN010106/APP/6.1]**. The methodology for the assessment is further outlined below.

15.4.2 This qualitative assessment of human health effects considers the following health and well-being determinants[1] of relevance:

a. Access to healthcare services and other social infrastructure;
b. Air quality, noise and neighbourhood amenity;
c. Accessibility and active travel;
d. Access to work and training; and
e. Social cohesion and neighbourhoods.

15.4.3 The assessment has considered the potential consequences for health and wellbeing from the construction, operation, and decommissioning phases of the Scheme and draws upon the information and conclusions reported within the traffic and transport assessment (**Chapter 13: Transport and Access),** the noise and vibration assessment (**Chapter 11: Noise and Vibration**), and the air quality assessments *(***Chapter 14: Air Quality***)* of this Environmental Statement **[EN010106/APP/6.1]**.

15.4.4 Due to the diverse nature of health determinants and outcomes which are assessed, the assessment of human health effects describes the likely qualitative health outcomes and it is not possible to quantify the severity or extent of the effects. The methodology set out in the HUDU Toolkit does not include a temporal scale of considerations of the effects. It does not provide a methodology for assessing the significance of outcomes or effects and as

[1] A comprehensive set of human health and well-being determinants is listed in the London Healthy Urban Development Unit (HUDU) Rapid Health Impact Assessment Tool Fourth Edition 2019 (Ref 15-15) which is generally considered as a best practice tool to use when undertaking health and well-being impact assessments.

such none is proposed here. The potential health effects during construction, operation, and decommissioning are described using the criteria as outlined in **Table 15-1**. Where an impact is identified, actions have been proposed to mitigate any negative impact on health, or to realise opportunities to create health benefits. It should be noted that in many cases, mitigation is embedded within the Scheme and the implementation of this is an underlying assumption of the assessment (see Section 15.7).

Table 15-1: Human health impact categories

Impact Category	Impact Symbol	Description
Positive	+	A beneficial impact is identified
Neutral	0	No discernible health impact is identified
Negative	-	An adverse impact is identified
Uncertain	?	Where uncertainty exists as to the overall impact

Study Area

15.4.5 The Scheme comprises four Sites (Sunnica East Site A, Sunnica East Site B, Sunnica West Site A and Sunnica West Site B), two cable route corridors (Grid Connection Route A and Grid Connection Route B), and one national grid substation (Burwell Substation Extension). A full description is provided in **Chapter 3: Scheme Description** of this Environmental Statement **[EN010106/APP/6.1]** for further information. There are two Options for Burwell Substation Extension, with Option 1 being the worst case scenario based on the closer proximity of the option to sensitive receptors.

15.4.6 The study area comprises all human health receptors in surrounding areas which may have potential to be impacted by the Scheme. The maximum extent is driven by the study area presented in **Chapter 10: Landscape and Visual Amenity**, within 2km of the Order limits. It should be noted, however, that it is not always possible to determine the catchment area for community facilities. Residents of an area may utilise facilities located within different districts, counties or regions without regard for statutory boundaries.

Sources of Information

15.4.7 The following assessment seeks to establish the potential human health effects and assesses these against the current baseline conditions at the Order limits and in the surrounding area.

15.4.8 Baseline data illustrating the existing conditions surrounding the Order limits has been collected through a desk-based research exercise using publicly available sources, documents and web-based applications. These sources include:

a. ONS Census 2011 (Ref 15-16);

b. Mid-Year Population Estimates (Ref 15-17);

c. Annual Population Survey (Ref 15-18);
d. Indices of Multiple Deprivation (Ref 15-19);
e. Public Health England; Health Profiles (Ref 15-20);
f. Practice List Size and GP count (Ref 15-21); and
g. Business Register and Employment Survey (Ref 15-22).

15.5 Stakeholder Engagement

15.5.1 The Scoping Report proposed that an appropriate sign-posting of health effects would be provided within the ES. Following receipt of the Scoping Opinion, it was decided a specific chapter on Human Health would be provided in the ES. **Table 15-2** outlines the main matters raised within the Scoping Opinion and how these have been addressed through the ES.

15.5.2 Consultation undertaken to date in relation to health and well-being is outlined in the **Consultation Report [EN010106/APP/5.1]. Table 15-3** outlines the main matters raised during Statutory Consultation and how these have been addressed through the ES.

Table 15-2: Main matters raised within the Scoping Opinion

Consultee	Main matter raised	How has the concern been addressed	Location of response in chapter
Public Health England (PHE)	Guidance used in the methodology and justification for methodology. PHE recommended that consideration be given to best practice guidance such as the Government's Good Practice Guide for EIA.	Section 15.4: Assessment Methodology describes the methodology used to conduct the assessment based on best practice guidance. The methodology has had regard to the Government's Good Practice Guide for EIA where relevant.	Section 15.4
Public Health England	Methodology to use best practice guidance and assessment to consider the operation, construction and decommissioning phase.	Section 15.4: Assessment Methodology describes the methodology used to conduct the assessment based on best practice guidance, including of construction, operation and decommissioning effects.	Section 15.4
East Cambridgeshire District Council	Include the 'Human Health' as a separate chapter	This chapter presents the Human Health assessment.	This chapter of the ES.

Consultee	Main matter raised	How has the concern been addressed	Location of response in chapter
NHS West Suffolk Clinical Commissioning Group	Possible impacts on healthcare services.	The impact on primary healthcare facilities is considered in **Table 15-4** of this chapter, and Section 15.8	Section 15.8
The Planning Inspectorate	Scoping out Electromagnetic Fields (EMF), based upon DECC guidance	The Inspectorate agreed that EMF could be scoped out of the ES.	N/A

Table 15-3: Main matters raised during consultation

Consultee	Main matter raised	How has the concern been addressed	Location of response in chapter
Landowners	Concern that people will be exploited through the supply chain for the Scheme components e.g. mining of minerals	The procurement of materials for the construction of the Scheme will be subject to all relevant UK laws, including all in relation to exploitation of workforces in the supply chain.	N/A
S42	Impact of the loss of views should be considered.	This is considered in the cumulative impact section, where any significant impacts from loss of views in the Landscape and Visual chapter are considered.	Section 15.8 – Assessment of Likely Impacts and Effects
S42	Impact of HGV movements should be considered.	This is considered in the Human Health assessment, where any significant impacts from the Transport chapter are taken into account.	Section 15.8 – Assessment of Likely Impacts and Effects
S47	Impact on Air Quality should be considered	This is considered in the Human Health assessment, where any significant impacts from the Air Quality chapter are taken into account.	Section 15.8 – Assessment of Likely Impacts and Effects

15.6 Baseline Conditions

Introduction

15.6.1 In order to assess the potential effects of the Scheme, the environmental conditions, resources, and receptors that currently exist within the Order limits and in the surrounding area have been identified. These are known as baseline conditions.

15.6.2 This section is split into two parts. It first presents a description of the local area, including local residential properties, community resources, and relevant commercial premises. The analysis is in Sections 15.6.4 to 15.6.26 and draws upon the baseline analysis provided in **Chapter 12: Socioeconomics and Land Use** of this Environmental Statement **[EN010106/APP/6.1]**.

15.6.3 It then presents a human health profile of the local population, using data from Public Health England and other relevant sources. This is provided in Sections 15.6.27 to15.6.38.

The Local Area

15.6.4 **Chapter 12: Socioeconomics and Land Use** of this Environmental Statement **[EN010106/APP/6.1]** provides a review of the local area as part of its baseline analysis. This section summarises receptors identified as part of that review which are relevant to the health assessment, including residential properties, community facilities, and non-motorised user (NMU) facilities.

Order limits

15.6.5 Sunnica East Sites A and B consist of agricultural land containing some ecological features, farm access tracks, footpaths and abutted by local transport roads. Worlington Quarry is located adjacent to the south-eastern area of the Sunnica East Site B accessed from Elms Road. The quarry is planned to cease operation in 2025, at which point it will be restored to agricultural land together with some habitat creation.

15.6.6 The Sunnica West Site A also consists of agricultural fields bounded by trees, managed hedgerows, footpaths and farm access tracks. A Grade II Listed Building (Waterhall Farmhouse) is located on the southern side of the A11, separated from Sunnica West Site A by the A11 to the west and Chippenham Road to the east.

15.6.7 Sunnica West Site B is located approximately 1.2km north west of Sunnica West Site A, separated by agricultural fields and Chippenham Road. Sunnica West Site B is in proximity to the industrial and commercial estates on Newmarket Road and Fordham Road. It consists of agricultural fields bound by trees and managed hedgerows.

15.6.8 Grid Connection Route A heading south from the Sunnica East Site A crosses agricultural land and the B1102 immediately north of Sunnica East Site B. The cable route then passes through Sunnica East Site B before

running south, crossing the River Kennett and Havacre Meadows and Deal Nook County Wildlife Site (CWS). The cable route corridor then crosses the Chippenham footpath 49/7. The cable route corridor then passes approximately 20m west of the Chippenham Gravel Pit CWS and crosses the B1085 before joining the Sunnica West Site A.

15.6.9 Grid Connection Route B connects Sunnica West Site A with Sunnica West Site B, and Sunnica West Site B with the Burwell National Grid Substation. It crosses agricultural fields and roads including the B1102 and A142. It also crosses several watercourses including the Burwell Lode, New River and the River Snail.

15.6.10 The primary Burwell Substation Extension option (Option 1) is currently on an agricultural field, located to the east of the existing substation and is in proximity to the village of Burwell. Option 2 of the Extension is located to the north of the existing substation, further from the village of Burwell.

Residential Properties

15.6.11 The study area is mostly rural and sparsely populated. Properties relevant to this assessment are either single properties or in small groups. The closest residential properties to Sunnica East Site A are a small group of properties located 500m to the north in Isleham, 580m in relation to Freckenham. The closest properties to the Sunnica East Site B are a small group located immediately north of the site in Worlington. There is one property on Dane Hill Road located approximately 100m away from the Sunnica West Site A, as well as some residential properties within the La Hogue Farm shop 120m from Sunnica West Site A.

15.6.12 The closest residential properties to Burwell Substation Option 1 (located to the east of the existing substation) are 200m to the east in the village of Burwell. The closest residential properties to Burwell Substation Option 2 (located to the north of the existing substation) are also in the village of Burwell, located 350m to the east.

Community Resources

15.6.13 There is a selection of community facilities and recreational facilities located within 2km of the Scheme. The text below sets out these and their distances from the Order limits.

15.6.14 There are two churches (The Ark Church Isleham and Isleham Church of England) located approximately 600m north west of Sunnica East Site A. There is also a community centre (The Beeches Isleham Community Centre) which is located approximately 800m away.

15.6.15 The closest community resource to Sunnica East Site B is a golf club (Royal Worlington and Newmarket Golf Club), 0.3km north of the site. There is also a church (All Saints Church) located approximately 500m to the North, in Worlington.

15.6.16 The closest community resource to Sunnica West Site A is a farm shop & café (La Hogue Farm) located adjacent to the site. Also nearby is an

outdoor activity park (WildTracks Outdoor Activity Park), located 100m to the north, and a karting centre (Red Lodge Karting) located approximately 700m to the north.

15.6.17 Community resources close to Sunnica West Site B include a public house located 500m away (The George and Dragon) and a church (St. Peter's Church) located 700m away, both in Snailwell.

15.6.18 There are two primary schools in Isleham, two primary schools in Red Lodge, and two primary schools and a secondary school in Mildenhall. These are all located within 2km of the order limits.

Healthcare Facilities

15.6.19 The Scheme falls within both the NHS Cambridgeshire and Peterborough Clinical Commissioning Group (CCG) and the NHS West Suffolk CCG. Together, these CCGs comprise 164 member General Practitioner (GP) practices, 997 GPs and serve 1,266,200 patients (Ref 15-21).

15.6.20 The Reynard Surgery in Red Lodge is located 0.5km south of the Scheme. There are a further 5 GP surgeries located within 3km of the Scheme: Hopkinson DR GP (1.8km from the Order limits), The Whitehouse Surgery (2km from the Order limits), the Market Cross Surgery (2km from the Order limits), Orchard House Surgery (2.5km from the Order limits) and DR NS Arthur Oakfield Surgery (2.8km from the Order limits). The Mildenhall Health Centre, a medical clinic in Mildenhall, associated with the Market Cross Surgery nearby, is located approximately 3km from the Scheme. The nearest hospital is the Newmarket Community Hospital, located approximately 3.5km away from the Scheme.

Non-motorised user (NMU) Facilities

15.6.21 **Figure 13-1** in **Chapter 13: Transport and Access** of this Environmental Statement **[EN010106/APP/6.3]** presents the location of NMU facilities located near to the Scheme. The below sets out NMU facilities which are relevant to the health assessment.

15.6.22 The Scheme will be located on agricultural land where there are several public rights of way (PRoWs) on or abutting the Scheme. There are three PRoWs (W-257/002/0, W-257/002/X, and W-257/007/0) located within the boundary of Sunnica East Site A. These PRoWs run between Mortimer Lane in the south to Beck Road in the north.

15.6.23 There is one PRoW located adjacent to the boundary of Sunnica East Site B. The PRoW (W-257/003/0) runs along the south-western boundary from Turnpike Road at Red Lodge in the south-east to Badlingham Manor in the north-west. In addition, an unclassified road (U6006), which is a publicly accessible route, including for equestrians, extends northwards from Elms Road to Worlington.

15.6.24 There are no PRoWs situated within the boundary of the Sunnica West Site A or B itself. Adjacent to one of the Sites there is Snailwell 5 bridleway (PRoW 204/5) which runs adjacent to the south-west boundary of Sunnica

West Site A. There is also Snailwell 1 footpath (PRoW 204/1) which crosses the land to the north-west of the Sunnica West Site A boundary.

15.6.25 There is one footpath 49/7 that intersects Grid Connection Route A, located to the south of the Sunnica East Site B, accessed by users making local journeys between Chippenham and Red Lodge.

15.6.26 There are six PRoWs that intersect with Grid Connection Route B. PRoW 204/1 connects Snailwell with Chippenham Park. Heading west from Sunnica West Site B, footpath 92/19 runs from through agricultural fields between Fordham and Snailwell. Then footpath 35/10 and 35/11 which runs between Wicken and Burwell passing through several agricultural fields. There are also two PRoWs (35/7 and 35/6) running between Burwell and Reach, again through agricultural land.

Health Profile

15.6.27 This section provides a human health profile of the study area, focusing on key determinants of health relevant to the assessment criteria provided within the Healthy Urban Development Unit (HUDU) / NHS England guidance (Ref 15-5).

15.6.28 The Scheme is located within three wards (Manor, Fordham & Isleham and Burwell) and two counties (East Cambridgeshire and West Suffolk). This section presents the data for the three wards and compares them with the counties they are part of (East Cambridgeshire and West Suffolk), the region (East of England) and England as a whole (or England and Wales, where appropriate). Where data is not available at a ward level, it is indicated in the text which areas represent the study area.

Population and Demographics

15.6.29 According to the Office for National Statistics Mid-Year Population Estimates (Ref 15-17), there are approximately 179,000 people living in West Suffolk and 89,800 people living in East Cambridgeshire. Of these, 15,280 people live in the three wards.

15.6.30 The proportion of older people aged 65 years and over in the study area (21.8%) is higher than in East Cambridgeshire (19.9%), West Suffolk (21.2%), East of England (19.9%), and England and Wales (18.5%). The share of people of working age (defined by the ONS as people aged between 16 and 64) in the study area is approximately 59%. This is broadly the same as East Cambridgeshire (60%),West Suffolk (59.9%), East of England (60.7%) and England and Wales as a whole (62.3%).

15.6.31 Approximately 96.6% of residents in the study area identify ethnically as white (Ref 15-16). This is broadly the same proportion of people identified ethnically as white as East Cambridgeshire (96.2%) but is higher than in West Suffolk (91.9%) and significantly higher than in England and Wales (86%). The next largest ethnic groups in the study area are Mixed/Multiple ethnicity (1.4% of the population) and Black/African/Caribbean/Black British (0.9% of the population) residents.

Qualifications and Economic Activity

15.6.32 Approximately 30% of residents in the study area hold a degree-level qualification (Level 4+). This is lower than in East Cambridgeshire (45.7%), the East of England (36.8%) and England and Wales (40%), but higher than in West Suffolk (26.7%) (Ref 15-16). Only 20% of residents in the study area do not have any qualifications. This is a higher proportion than in East Cambridgeshire (where 5.1% of residents have no qualifications), West Suffolk (5.5%) but a lower proportion than in England and Wales where 23% of residents have no qualifications.

15.6.33 The study area has relatively lower levels of economic activity, with 75% of the working age population economically active compared to 86.7% in East Cambridgeshire, 83.9% in West Suffolk, 80.6% in the East of England and 79% in England and Wales as a whole (Ref 15-17). Approximately 3% of the working age population in the study area are unemployed which is higher than the proportion in East Cambridgeshire (2.4%) and West Suffolk (2.6%) but lower than in East of England (3.2%) and England and Wales (3.9%).

Deprivation

15.6.34 Based on the 2019 Indices of Multiple Deprivation (IMD) (Ref 15-19), since this data is only outputted at a district level and therefore East Cambridgeshire and West Suffolk represent the study area. East Cambridgeshire is less deprived than West Suffolk. The district is the 272nd most deprived out of 326 in England and the 38th most deprived out of 47 in the East of England, compared to West Suffolk which is the 176th most deprived in England and the 20th most deprived in the East of England. No lower super output areas (LSOAs[2]) in East Cambridgeshire or West Suffolk are ranked in the top 10% most deprived parts of the country.

15.6.35 Analysis of claimant counts shows that welfare claimants constitute only 3.3% of working age residents in East Cambridgeshire and 4.2% in West Suffolk. This is considerably lower than the 6.3% across England and Wales (Ref 15-23).

Health and Wellbeing

15.6.36 Based on the 2011 Census data (Ref 15-16), 3.5% of the population in the study area reported bad or very bad health. This is lower than in East Cambridgeshire (4%), West Suffolk (3.7%), the East of England (4.7%) and England and Wales (5.6%). Similarly, the proportion of the population in the study area which identified themselves as having a long-term health problem or disability which limited their day-to-day activities was also lower (6%) than in East Cambridgeshire (6.5%), West Suffolk (7.9%), the East of England (7.4%) and England and Wales (8.5%)

[2] Lower Layer Super Output Areas are a geographic hierarchy designed to improve the reporting of small area statistics in England and Wales. Lower Layer Super Output Areas are built from groups of contiguous Output Areas and have been automatically generated to be as consistent in population size as possible, and typically contain from four to six 'Output Areas'.

15.6.37 Indicators deemed relevant to likely human health impacts of the Scheme have been identified from Public Health England data (Ref 15-20). They are shown in **Table 15-4** with some of these statistics summarised in the below text. This data is only outputted at a district level and therefore East Cambridgeshire and West Suffolk are used for the Human Health profile.

Table 15-4: Human Health profile of local authorities, county and England

Indicator	East Cambridge-shire	West Suffolk	Suffolk	Cambridge-shire	East of England	England
Percentage of physically active adults (%)	67.3	69.1	69.5	71.5	67.3	66.4
Mortality rate from all cardiovascular diseases (per 100,000 population under 75)	61.3	60.1	60.3	57.6	62.9	70.5
Mortality rate from cancer (per 100,000 population under 75)	111.5	110.7	117.9	114.1	122.6	129.2
Obese adults (%)	58.8	57.8	62.7	60.2	62.3	62.8
Proportion of Obese children (year 6) (%)	13.8	19.2	18.7	15.0	19.1	21.0
Killed and seriously injured (KSI) rate on England's roads (per 100,000 population)	67.1	38.7	39.2	57.5	46.7	42.6

Source: Public Health England (2020); Health indicators

15.6.38 The data shows that East Cambridgeshire and West Suffolk both have a similar proportion of physically active (67.3% and 69.1% respectively) to Cambridgeshire (71.5%), Suffolk (69.5%) and East of England (67.3%). East Cambridgeshire has a significantly higher rate of all road collisions resulting in killed and seriously injured casualties (67.1%) than West Suffolk (38.7%), Suffolk (39.2%), Cambridgeshire (57.5%), East of England (46.7%) and England (42.6%). The mortality rate from cancer per 100,000 people

under the age of 75 is lower in East Cambridgeshire (111.5) and West Suffolk (110.7), than Cambridgeshire (114.1), Suffolk (117.9) and the East of England (112.6).

Future Baseline

15.6.39 The future baseline is anticipated to be the same as the existing baseline for human health impacts. Community facilities may open and close; however, the exact details of this cannot be known in advance. Therefore, it is not expected that there will be any perceptible changes to the local human health baseline assessment and the Scheme has therefore been assessed against current baseline conditions.

15.7 Embedded Design Mitigation

15.7.1 Primary mitigation measures are embedded within the Scheme, as set out in the respective chapters, to reduce other operational effects (such as noise, air quality and landscape) which in turn will mitigate the effects on the local community and existing facilities from a human health perspective.

15.7.2 The health assessment is presented in **Table 15-5** to **Table 15-9**. Where there are assessed to be negative health impacts in the assessment, the implementation of mitigation measures has been considered in order to seek to avoid or minimise the human health impact are identified.

15.8 Assessment of Likely Impacts and Effects

15.8.1 **Table 15-5** to **Table 15-9** below set out the potential health and wellbeing impacts associated with the Scheme during construction, once the Scheme is complete and operational, and during decommissioning. The potential health impact is described in accordance with the methodology set out in Section 15.4.

15.8.2 In the below tables the term ‘n/a’ indicates that an assessment of the health criteria was not applicable to a particular phase.

Table 15-5: Access to Healthcare Services and Other Social Infrastructure

Assessment Criteria	Relevant to the proposed development?	Details and Evidence	Potential Health Impact	Further Action or Mitigation
Does the proposal assess the impact on healthcare services?	Yes	**During construction** As identified in the baseline, there are 6 GPs located within 3km of the Scheme (in Red Lodge, Newmarket, Burwell and Soham). The nearest hospital is in Newmarket to the south of the Scheme. The construction workers required to build the Scheme will not place additional demand or pressure for services on these as these services can only be accessed by residents living within the catchment area of the practices. If any of the workers reside locally, they will be registered at a practice currently and will not therefore place additional demand for services on these GPs. However, residents of single properties and properties in the village surrounding the Scheme attempting to access these healthcare facilities are likely to use the same strategic roads (including the A411, A11, A1034, A142 and the B1102) as construction traffic associated with the Scheme and workers attempting to access the Order limits. The presence of this additional traffic is not likely to affect local residents' ability to access healthcare facilities. The existing road network is expected to remain within capacity at all times during the construction period and there is not expected to be any considerable changes in journey time for existing users of any of the strategic roads in the study area. This is in part due to measures in the Framework Construction Traffic Management Plan (CTMP) **[EN010106/APP/6.2]** for construction staff to arrive on site between 06:00 and 07:00 (prior to the AM peak hour) and depart between 19:00 and 20:00 (after the PM peak hour). There are expected to be 90 HGV movements per day (158 at peak) for Sunnica East and West sites, an average of 14 movements per day (62 at peak) for the three substations and Burwell Substation extension, and an average of 22 movement per day (90 at peak) for the cable route construction, equating to negligible driver delays as identified in the traffic and transport assessment (**Chapter 13: Transport and Access)**. The implementation of the CTMP is secured by a Requirement in Schedule 2 of the DCO. Therefore, the potential health impact on access to healthcare services during the construction period is assessed to be neutral. **During operation** During the operational phase, there are expected to be up to 17 full time staff expected on the Order limits per day. The Scheme will therefore generate very low levels of traffic and it will not impact local residents' ability to access healthcare facilities. The potential health impact on access to healthcare services during operation is therefore assessed to be neutral. **During decommissioning** Traffic flow cannot be accurately forecasted for over 40 years into the future, however the Scheme's impact on local residents' ability to access healthcare facilities in the decommissioning phase is expected to be the same as during construction, based on the expected similar number of trips and duration of these phases. A Framework Decommissioning Environmental Management Plan (DEMP) has been prepared and provided in **Appendix 16E** of this Environmental Statement **[EN010106/APP/6.2]** which provides the outline mitigation measures to be adhered to during decommissioning. This will be updated and finalised prior to the decommissioning phase, and its implementation is secured by a Requirement in Schedule 2 of the DCO. The potential health effect on access to healthcare facilities during the decommissioning period is assessed to be neutral.	0 during construction 0 during operation 0 during decommissioning	**During construction** None required **During operation** None required **During decommissioning** None required.
Does the proposal assess the capacity, location and accessibility of other social infrastructure, e.g. schools, social care and community facilities?	Yes	**During construction** There are two primary schools in Isleham, two primary schools in Red Lodge and two primary schools and a secondary school in Mildenhall. Local residents are likely to travel to Mildenhall and Isleham for basic services and Newmarket to the west which has a wider range of services including a shopping centre. Residents of villages and single residential properties surrounding the Scheme are likely to use the same strategic roads (including the A411, A11, A1034, A142 and the B1102) as construction traffic associated with the Scheme and workers attempting to access the site. However, the presence of this additional traffic is not likely to affect local residents' ability to access this social infrastructure. The existing road network is expected to remain within operating capacity at all times during the construction period and there are not expected to be any considerable changes in journey time for existing users of any of the strategic roads in the study area. This is partly due to measures set out in the Framework CTMP **[EN010106/APP/6.2]** ensuring that construction staff will arrive on site between 06:00 and 07:00 (prior to the AM peak hour) and depart between 19:00 and 20:00 (after the PM peak hour). The implementation of the CTMP is secured by a Requirement in Schedule 2 of the DCO. There are expected to be an average of 90 HGV movements per day (158 at peak) for Sunnica East and West sites, an average of 14 movements per day (62 at peak) for the three substations and Burwell Substation extension, and an average of 22 movement per day (90 at peak) for the cable route construction. Any road closures that are required will be for a maximum of 7 days, and not at the same time as other closures. Therefore, the potential health impact on access to social infrastructure during the construction period is assessed to be neutral.	0 during construction 0 during operation 0 during decommissioning	**During construction** None required **During operation** None required **During decommissioning** Non required

Assessment Criteria	Relevant to the proposed development?	Details and Evidence	Potential Health Impact	Further Action or Mitigation
		During operation During the operational phase, there are expected to be up to 17 full time staff expected on the Order limits per day. The Scheme will therefore generate very low levels of traffic and it will not impact local residents' ability to access social infrastructure. The potential health impact on access to healthcare services during operation is therefore assessed to be neutral. **During decommissioning** Traffic flow cannot be accurately forecasted for over 40 years into the future, however the Scheme's impact on local residents' ability to access social infrastructure in the decommissioning phase is expected to be the same as during construction, based on the expected similar number of trips and duration of these phases. A Framework DEMP (DEMP) has been prepared and provided in **Appendix 16E** of this Environmental Statement **[EN010106/APP/6.2]** which provides the outline mitigation measures to be adhered to during decommissioning. This will be updated and finalised prior to the decommissioning phase, and its implementation is secured by a Requirement in Schedule 2 of the DCO. The potential health effect on access to social infrastructure during the decommissioning period is assessed to be neutral.		

Table 15-6: Air Quality, Noise and Neighbourhood Amenity

Assessment Criteria	Relevant to the proposed development?	Details and Evidence	Potential Health Impact	Further Action or Mitigation Recommended
Does the proposal minimise construction impacts such as dust, noise, vibration and odours?	Yes	**During construction** An assessment of the risk of dust and particulate matter impacts during the construction stage is provided in the **Chapter 14: Air Quality** of this Environmental Statement **[EN010106/APP/6.1]**. The assessment concludes that during construction, earthworks and Scheme construction activities will all result in dust emitted in an area up to 350m away from the Order limits (although at negligible levels beyond 50m). This area includes residential properties within Burwell, Snailwell, Isleham and Worlington and a number of NMU facilities including PRoWs and bridleways. However, due to low background particulate matter concentrations in the area, the impact of these dust emissions is assessed to have a low risk to human health. An assessment of the impact of construction of the Scheme on noise and vibration is provided in **Chapter 11: Noise and Vibration** of this Environmental Statement **[EN010106/APP/6.1]**. The assessment states that there will be negligible to minor adverse impacts on surrounding receptors arising from the construction of the Scheme. It states that due to the variation in works locations across the duration of the construction programme, it is considered that any periods of regular high construction noise levels experienced at a receptor would not exceed one month. The chapter proposes measures to control noise during the construction phase, including the development of a construction noise monitoring scheme. These mitigation measures will be implemented through the Framework Construction Environmental Management Plan (CEMP) **Appendix 16C** of this Environmental Statement **[EN010106/APP/6.2]** which will result in no significant noise effects during the construction phase. The implementation of the CEMP is secured by a Requirement in Schedule 2 of the DCO. Overall, therefore, the above assessments conclude that when measures to control dust and noise which are set out are followed, there is likely to be minimal impacts on surrounding receptors and the potential health impact is assessed to be neutral. No discernible health impact is identified. **During operation** Not applicable as assessment criteria refers to construction impacts. **During decommissioning** A Framework DEMP has been prepared and provided in **Appendix 16E** of this Environmental Statement **[EN010106/APP/6.2]** which provides the outline mitigation measures to be adhered to during decommissioning. This will be updated and finalised prior to the decommissioning phase, and its implementation is secured by a Requirement in Schedule 2 of the DCO. Initial assessments of the impact of decommissioning of the Scheme on air quality and noise is provided in **Chapter 14: Air Quality** and **Chapter 11: Noise and Vibration** of this Environmental Statement **[EN010106/APP/6.1]**, respectively. The assessments conclude that the impact of decommissioning of the Scheme is likely to be similar to the construction period. Therefore, the Scheme will result in dust emissions which are assessed to have a low risk to human health. It will have negligible to minor adverse noise and vibration impacts on surrounding residential properties if mitigation measures are followed. Overall, therefore, there is likely to be no discernible health impacts on surrounding receptors as per the construction phase and the potential health impact is assessed to be neutral.	0 during construction n/a during operation 0 during decommissioning	**During construction** Non required **During operation** n/a **During decommissioning** None required
Does the proposal minimise air pollution caused by traffic and energy facilities?	Yes	**During construction** An assessment of the risk of dust and particulate matter impacts, and road traffic emissions, during the construction stage is provided in **Chapter 14: Air Quality** of this Environmental Statement **[EN010106/APP/6.1]**. The assessment states that Heavy Goods Vehicle (HGV) movements (which are estimated to exceed 50 vehicles per day) are likely to lead to an increase in dust emitted in an area up to 350m away from the Order limits. This area includes residential properties within Burwell, Snailwell, Isleham and Worlington and a number of NMU facilities including PRoWs and bridleways. However, due to low background particulate matter concentrations in the area, the impact of these dust emissions is assessed to have a low risk to human health. Therefore, if measures to control dust which are set out in the chapter are followed, there is likely to be a minimal impact on surrounding receptors and the potential health impact is assessed to be neutral.	0 during construction 0 during operation 0 during decommissioning	**During construction** None required **During operation** n/a **During decommissioning** None required

Assessment Criteria	Relevant to the proposed development?	Details and Evidence	Potential Health Impact	Further Action or Mitigation Recommended
		During operation An operational assessment of air quality was scoped out of the EIA (see **Appendix 1A** of this Environmental Statement **[EN010106/APP/6.2]**) due to the volume of predicted traffic during the operational phase. The solar farm and battery storage systems are not expected to produce emissions (and there would be few operational vehicle trips or much emissions associated with maintenance). The potential health impact is therefore assessed to be neutral. **During decommissioning** A Framework DEMP has been prepared and provided in **Appendix 16E** of this Environmental Statement **[EN010106/APP/6.2]** which provides the outline mitigation measures to be adhered to during decommissioning. This will be updated and finalised prior to the decommissioning phase, and its implementation is secured by a Requirement in Schedule 2 of the DCO. An initial assessment of the impact of decommissioning of the Scheme on air quality is provided in **Chapter 14: Air Quality** of this Environmental Statement **[EN010106/APP/6.1]**. The assessment concludes that the impact of decommissioning is likely to be similar to the impact during the construction period.		
Does the proposal minimise noise pollution caused by traffic and commercial uses?	Yes	**During construction** An assessment of the impact of traffic on noise levels during the construction period is provided in **Chapter 11: Noise and Vibration** of this Environmental Statement **[EN010106/APP/6.1]**. The assessment states that the presence of construction traffic will lead to a minor adverse (not significant) noise impact on residents of properties on Weirs Grove and Hythe Lane in Burwell, Cambridgeshire. The Applicant is proposing a package of measures to mitigate construction phase noise and vibration impacts which can be found in the Framework CEMP which is Appendix 16C of this Environmental Statement **[EN010106/APP/6.2]**. Noise and vibration mitigation are set out in Table 3-6 of Appendix 16C which includes measures such as: ensuring that, where reasonably practicable, noise and vibration is controlled at source (e.g. the selection of inherently quiet plant and low vibration equipment); review of the construction programme and methodology to consider quieter methods; consideration of the location of equipment on-site and control of working hours. The minor adverse noise impacts on residents of properties in Burwell means that the potential impact during construction on the Burwell residents' health is assessed as neutral due to them being temporary and non-significant. **During operation** An assessment of the impact of operation of the Scheme on noise levels is provided in **Chapter 11: Noise and Vibration** of this Environmental Statement **[EN010106/APP/6.1]**. The assessment states that noise from operation of the Burwell Substation Extension during the night is predicted to exceed the background levels for residents of properties on Weirs Grove and Hythe Lane in Burwell, Cambridgeshire. However the absolute levels of operational noise at these receptors are assessed as limited to a minor adverse effect which is not significant. Operational noise levels at all other receptors range from a negligible to minor adverse effect which is not significant. At the time of writing the ES no specific noise mitigation measures have been included for operational plant, other than the design parameters.. As the detailed design is progressed, any tonal/impulsive/intermittent acoustic features will be carefully considered and specific noise control/mitigation measures (e.g. procuring equipment with lower (than modelled) sound power levels, silencers and/or acoustic barriers on equipment, and dynamic vibration absorbers and acoustic active cancelling for power transformers as necessary) incorporated. The adverse impacts on residents of properties are expected to occur over the entire operational phase (40 years) prior to the Scheme being decommissioned. The potential health impact during the operational phase on the Burwell residents' health is assessed to be **negative** due to the long-term nature of the impact. This is based on the Noise and Vibration chapter's worst case scenario (Option 1), but similar impacts would be expected for Option 2 too. **During decommissioning**	0 during construction - during operation 0 during decommissioning	**During construction** No additional mitigation is deemed necessary, beyond the embedded measures in the CEMP. **During operation** No further noise mitigation have been proposed in the operational phase. **During decommissioning** None required

Assessment Criteria	Relevant to the proposed development?	Details and Evidence	Potential Health Impact	Further Action or Mitigation Recommended
		A Framework DEMP has been prepared and provided in **Appendix 16E** of this Environmental Statement **[EN010106/APP/6.2]** which provides the outline mitigation measures to be adhered to during decommissioning. This will be updated and finalised prior to the decommissioning phase, and its implementation is secured by a Requirement in Schedule 2 of the DCO. An initial assessment of the impact of decommissioning of the Scheme on noise and vibration is provided in **Chapter 11: Noise and Vibration** of this Environmental Statement **[EN010106/APP/6.1]**. The assessment concludes that the impact of decommissioning of the Scheme is likely to be similar to the construction period.		

Table 15-7: Accessibility and Active Travel

Assessment Criteria	Relevant to the proposed development?	Details and Evidence	Potential Health Impact	Further Action or Mitigation Recommended
Does the proposal prioritise and encourage walking (such as through shared spaces)?	Yes	**During construction** Construction of Sunnica East Site A will result in temporary disruption to users of bridleways W-257/007/0 and W-257/002/X due to these conjoining routes being temporarily severed preventing access. The route is used by local residents of both Freckenham and Isleham whom enjoy the amenity value created by the surrounding agricultural fields. There are also likely to be some residents of Freckenham who use the route to travel to the community resources in Isleham, though due to the length of the route between the two villages (3.4km) the number of residents is likely to be minimal. Users of the PRoW will be temporarily diverted to Beck Road which will result in the distance between the two villages being increased by 1km to 4.4km. Beck Road, though still travelling through agricultural fields and offering amenity value, also has the added presence of vehicle traffic. This and the increased distance to travel therefore has potential to discourage NMUs between the two villages. Construction of Sunnica East Site B will result in the temporary closure of the unadopted bridleway (U6006) which cuts diagonally from Worlington to Elms Road. This route is used frequently by horse riders in the local area travelling towards the villages of Worlington and Freckenham. This route also offers amenity value by the presence of surrounding agricultural fields and the temporary closure of this route may therefore discourage NMUs in the study area during the construction phase. Construction of Sunnica East Site B will also result in temporary disruption of footpath W-257/003/0 between Freckenham and Red Lodge, where it passes through the cable route. The route travels between residential properties on Badlingham Road and Red Lodge. It is also used by other local residents whom may enjoy the amenity value of the PRoW created by the surrounding agricultural fields. Users of the PRoW will be diverted via Elms Road which will increase the distance between residential properties on Badlingham Road and Red Lodge by 1.2km. This will make it much more difficult to walk between the two destinations and the added journey length may potentially discourage existing NMUs on this diverted route. Construction of the Grid Connection Route A will intersect a small section of PRoW 49/7 which travels between Chippenham and Red Lodge. The PRoW will be required to be diverted to Dane Hill Road which is open to traffic and will increase the distance between Chippenham and Red Lodge for walkers by 300m. It is not expected that this increase in journey length will discourage users from travelling between Chippenham and Red Lodge. However, the current route offers amenity value by the presence of surrounding agricultural fields and the diversion may therefore discourage users from walking on the diverted route. Construction of the Grid Connection Route B will intersect footpaths 204/1, 92/19, 35/10, 35/11, 35/6 and 35/7. Connection Route will disrupt small sections of footpath 204/1 with the other PRoWs remaining open. Users will be able to use the existing road network which will result in only minimal increases in journey length along the PRoWs. It is not expected that this increase in journey length will discourage users from travelling along these routes. However, the current routes offer amenity value by the presence of surrounding agricultural fields and the diversions to the local road network may therefore discourage users from walking on the diverted routes. Overall, there are a number of temporary impacts on NMU facilities used by walkers in the study area. There will be diversions in place for all impacted NMU facilities; however, many of these diversions will result in NMUs interacting with the road network and the accumulation of all impacts on NMUs in the study area. All closures of PRoWs will be avoided as far as possible including along the cable route. If closure of routes is required then as a worst-case scenario it is assumed the PRoW are closed for up to three weeks. This will result in a potential health impact during construction which is assessed to be negative. **During operation** During the operational phase, all routes that were closed during the construction phase will be reopened. Some routes previously surrounded by agricultural fields will now border the Scheme. This could lead to impacts on the amenity value of these resources to their users, however, the impact is not considered to be enough to lead to a reduction in the number of users along the routes.	- during construction + during operation - during decommissioning	**During construction** Ensure measures in the CEMP which reduce impacts on walkers, including appropriate signage and minimising the duration of closure, are implemented accordingly. **During operation** None required **During decommissioning** Ensure measures in the Framework DEMP which reduce impacts on walkers, including appropriate signage and minimising the duration of closure, are implemented accordingly.

Assessment Criteria	Relevant to the proposed development?	Details and Evidence	Potential Health Impact	Further Action or Mitigation Recommended
		New permissive routes[3] will also be provided in both the Sunnica East Site A and B to provide a safe route for the use of local residents in the area. To the north-west of the Sunnica East Site A there will be a new permissive route adjacent to Beck Road. This route will result in some reduction to local journey lengths and will provide a safe route for the use of local residents in the area. There will also be three new permissive routes on Sunnica East Site B which will provide a circular route travelling through agricultural fields which will offer amenity value for local residents. The provision of these new routes could encourage active travel within the local population increasing participation in physical activity. The re-opening of the facilities impacted in the construction phase, as well as the addition of new NMU facilities which will offer amenity value and likely some shorter journey times for local residents, is likely to encourage NMUs in the study area and therefore the potential health impact during the operational phase is assessed to be positive. **During decommissioning** During the decommissioning phase, the Scheme would be dismantled and the infrastructure will be removed. A Framework DEMP has been prepared and provided in **Appendix 16E** of this Environmental Statement **[EN010106/APP/6.2]** which provides the outline mitigation measures to be adhered to during decommissioning. This will be updated and finalised prior to the decommissioning phase, and its implementation is secured by a Requirement in Schedule 2 of the DCO. It is expected that the same NMU facilities which were impacted in the construction period will be impacted again in the decommissioning period. The same diversions will be put in place to mitigate these impacts. Also the permissive paths created during the operation phase may be removed during the decommissioning phase There is therefore the same potential that NMUs in the study area will be discouraged from walking and the potential health impact during the decommissioning phase as is assessed for the construction phase which is assessed to be negative.		

[3] A permissive route is not a public right of way. It is a path clearly signed as a permissive path that a landowner allows the public to use. This may be for walkers, riders, cyclists, or any combination. However, there is no statutory right of access.

Table 15-8: Access to Work and Training

Assessment Criteria	Relevant to the proposed development?	Details and Evidence	Potential Health Impact	Further Action or Mitigation Recommended
Does the proposal provide access to local employment and training opportunities, including temporary construction and permanent end-use jobs?	Yes	**During construction** During the construction period, the Scheme will support, on average, approximately 1,685[4] total net jobs per annum. A considerable proportion of these jobs (1,483[5] jobs per annum) are expected to benefit the local workforce (residents located within a 45 minute travel time to the site). The potential health impact during construction is therefore assessed to be positive. **During operation** During operation, the Scheme will require up to 17 permanent staff members onsite. There will also be some additional part-time workers required to perform maintenance and engineering works. However, the impact of the Scheme on jobs in the operational phase is expected to be limited and the potential health impact is assessed to be neutral. **During decommissioning** A Framework DEMP will be prepared prior to the decommissioning phase as outlined in **Chapter 3: Scheme Description** of this Environmental Statement **[EN010106/APP/6.1]**. Decommissioning of the Scheme is expected generate in the order of 242 total net jobs per annum and the potential health impact during decommissioning is assessed to be positive.	+ during construction 0 during operation + during decommissioning	**During construction** None required **During operation** None required **During decommissioning** None required
Does the proposal include opportunities for work for local people via local procurement arrangements?	Yes	**During construction** A Skills, Supply Chain and Employment Plan for the construction of the Scheme will be implemented which will include provision of opportunities for work for local people. This is secured by a Requirement in Schedule 2 of the DCO. Therefore, the potential health impact during construction is assessed to be positive. **During operation** At least 17 permanent jobs will be generated and it is possible that these could provide employment for local people. Specific local procurement arrangements will be included in the Skills, Supply Chain and Employment Plan. The potential health impact is assessed to be positive. **During decommissioning** A Framework DEMP has been prepared and provided in **Appendix 16E** of this Environmental Statement **[EN010106/APP/6.2]** which provides the outline mitigation measures to be adhered to during decommissioning. This will be updated and finalised prior to the decommissioning phase, and its implementation is secured by a Requirement in Schedule 2 of the DCO. Decommissioning of the Scheme is expected generate in the order of 242 total net jobs per annum and a similar proportion of these jobs are likely to be taken up by the local workforce. The potential health impact during decommissioning is therefore assessed to be positive.	+ during construction + during operation + during decommissioning	**During construction** Meet the Buyer events will be held to provide local services with an opportunity to log their interest in supporting the scheme and outline their service and skillsets. The Skills, Supply Chain and Employment Plan will be implemented to maximise use of the local labour force. **During operation** The Skills, Supply Chain and Employment Plan will be implemented to maximise use of the local labour force. **During decommissioning** None required

[4] This figure has been rounded and therefore may be different to what is presented in **Chapter 12: Socioeconomics and Land Use** of this Environmental Statement **[EN010106/APP/6.1]**.
[5] Rounded, as per footnote 3.

Table 15-9: Social Cohesion and Lifetime Neighbourhoods

Assessment Criteria	Relevant to the proposed development?	Details and Evidence	Potential Health Impact	Further Action or Mitigation Recommended
Does the proposal connect with existing communities, i.e. layout and movement which avoids physical barriers and severance and land uses and spaces which encourage social interaction?	Yes	**During construction** Construction of the Scheme will result in temporary disruption for NMUs which use these facilities to travel between different communities within the study area. Construction of the Sunnica East Site A will result in temporary disruption to users of bridleways W-257/007/0, W-257/002/X and W-257/002/0 due to these conjoining routes being temporarily severed preventing access. This route is likely to be used by residents of the small village Freckenham who use the route to travel to community resources in Isleham. The PRoW will be diverted to Beck Road which will result in the distance between the two villages being increased by 1km to 4.4km. This is likely to discourage users from travelling between the two settlements for the duration of the temporary closures. Construction of Sunnica East Site B will result in temporary disruption of the footpath W-257/003/0 between Freckenham and Red Lodge. The route is likely to be used by residential properties on Badlingham Road to access community resources in Red Lodge. Users of the PRoW will be diverted via Elms Road which will increase the distance between residential properties on Badlingham Road and Red Lodge by 1.2km. This may potentially discourage users from travelling between the two settlements. There are other impacts on NMU facilities in the study area. However, none of these impacts are likely to lead to disruption which may considerably discourage movement between communities and therefore have not been included in this assessment. Overall, disruption to NMU facilities is likely to lead to some severance between communities within the study area as NMUs are required to travel further to move between these communities. Due to the nature of the Scheme it does not include spaces which encourage social interaction. The Scheme is assessed to have a negative health impact on social cohesion and lifetime neighbourhoods in the construction period. The existence of alternative routes will however continue to allow movement between communities and disruption will be limited to periods of closure. **During operation** During the operational phase, all routes that were closed during the construction phase will be reopened. New permissive routes will also be provided in both the Sunnica East Sites and Sunnica West Sites to provide a safe route for the use of local residents in the area. To the north-west of Sunnica East Site A there will be a new permissive route on Beck Road, as well as three new permissive routes off unadopted bridleway U6006 within Sunnica East Site B. These routes will improve connectivity between the villages of Worlingham, Isleham and Snailwell. They will provide a safe route for NMUs to use to travel between the sites without the presence of road traffic. Therefore, the Scheme is assessed to have a positive health impact on social cohesion and lifetime neighbourhoods in the operational phase. **During decommissioning**	- during construction + during operation - during decommissioning	**During construction** No additional mitigation required beyond the measures in the CEMP. **During operation** None required **During decommissioning** No additional mitigation required beyond the measures in the Framework DEMP.

Assessment Criteria	Relevant to the proposed development?	Details and Evidence	Potential Health Impact	Further Action or Mitigation Recommended
		During the decommissioning phase, the Scheme would be dismantled and the infrastructure will be removed. It is expected that the same NMU facilities which were impacted in the construction period will be impacted again in the decommissioning period. The same diversions will be put in place to mitigate the impacts on these NMUs. There is therefore the same potential that NMUs may be discouraged to travel between communities in the study area due to longer journey times. The potential health impact on social cohesion and lifetime neighbourhoods during the decommissioning phase is therefore assessed to be negative. A Framework DEMP has been prepared and provided in **Appendix 16E** of this Environmental Statement **[EN010106/APP/6.2]** which provides the outline mitigation measures to be adhered to during decommissioning. The permissive paths created during the operation phase may be removed during the decommissioning phase. The DEMP will be updated and finalised prior to the decommissioning phase, and its implementation is secured by a Requirement in Schedule 2 of the DCO.		

Summary of likely impacts and effects

15.8.3 This assessment has followed the 'HUDU Rapid Health Impact Assessment Matrix' and has assessed the principal health benefits and disbenefits to residents of the local community, including:

a. **Access to Healthcare Services and other Social Infrastructure –** there is not likely to be any severance between local residents and the healthcare facilities and other social infrastructure which they use during the construction, operation, or decommissioning phase. This is because neither the additional construction/decommissioning traffic or the traffic generated during the operational phase result in the transport network becoming over capacity. Any road closures required will not prevent access and no severance is expected.

b. **Air Quality, Noise and Neighbourhood Amenity –** there are assessed to be negative impacts on the amenity of some residents on Wells Grove and Hythe Lane in Burwell, Cambridgeshire during both the construction/decommissioning, and the operational phases. During the construction and decommissioning phase, this is due to noise impacts arising from the presence of HGV movements. During the operational phase, this is due to noise impacts arising from operation of the Burwell Substation Extension. There are expected to be no other negative health impacts on residents of properties or users of community resources in the study area.

c. **Accessibility and Active Travel –** during the construction and decommissioning phases, the Scheme will result in temporary impacts on a number of NMU facilities in the study area. The Scheme will provide diversions for each of these routes; however, these diversions will result in additional journey times for many NMUs and will not replicate the amenity value experienced in existing routes. It is likely therefore that these impacts may discourage walkers from using NMU facilities during the construction and decommissioning phases. During the operational phase, the Scheme will provide additional NMU facilities which will improve safety and reduce journey times for some NMUs. The Scheme is therefore expected to lead to a positive health impact during the operational phase. The decommissioning phase would be expected to have a similar impact on NMU facilities in the study area, with temporary closures of PRoWs, as well as potentially removing the permissive paths following the operation phase. The Scheme is therefore expected to lead to a negative, but temporary health impact during the decommissioning phase.

d. **Access to Work and Training –** during the construction phase the Scheme will support 1,685 total net jobs per annum, and the decommissioning phase also supporting over 242 total net jobs per annum. The majority of these are likely to be taken up by the local workforce. During these periods the Scheme is therefore expected to lead to a positive health impact on access to work and training. During the operational period, the scheme is assessed to have minimal impact on access to work as only 17 jobs will be required onsite per annum.

e. **Social Cohesion and Lifetime Neighbourhoods –** during the construction and decommissioning phases the Scheme will result in temporary impacts on a number of NMU facilities. Some of these impacts may reduce travel between communities in the study area due to an increase in journey times for walkers. The impact on social cohesion during these phases is therefore assessed to be negative. During the operation phase, the Scheme will provide additional NMU facilities which will reduce journey times for some NMUs travelling between communities and therefore the potential health impact is assessed to be positive.

15.9 Additional Monitoring, Mitigation and Enhancement Measures

15.9.1 No additional mitigation was deemed necessary, above the embedded mitigation.

15.10 Cumulative Effects

15.10.1 This section assesses the potential effects of the Scheme in combination with the potential effects of other development schemes (referred to as 'cumulative schemes') within the surrounding area, as listed within **Chapter 5: EIA Methodology** of this Environmental Statement **[EN010106/APP/6.1]**.

15.10.2 The assessment of 'Access to Healthcare Services and other Social Infrastructure' is inherently cumulative as the traffic data which the assessment is based on includes the change in traffic generated by other committed developments.

15.10.3 The assessment of potential effects on 'Accessibility and Active Travel' considers both physical changes to NMU infrastructure in the vicinity of the Order limits as well as changes to the environment that NMUs are exposed to. Cumulative effects on NMUs are difficult to quantify as from a physical infrastructure perspective, changes to NMU provision as a result of developing new housing in the vicinity of the Scheme is not known at this stage. From an NMU environment perspective, changes in traffic flows have already been assessed as part of **Chapter 13: Transport and Access** of this Environmental Statement **[EN010106/APP/6.1]** and in the assessment presented within this chapter and are therefore inherent as part of the assessment presented in this chapter. It is therefore concluded that the potential cumulative effects on NMUs will be the same as is the case for the Scheme when assessed in isolation.

15.10.4 For 'Access to Work and Training', the construction phases of the Scheme and the other committed developments would both be expected to generate employment. In the absence of commercially sensitive information relating to the construction costs of each of the cumulative schemes, it is not possible to make a quantitative assessment of the employment likely to be generated from the construction stage of the other development schemes. It is expected that there would be a cumulative beneficial effect on construction related employment within the local area.

15.10.5 Similarly, once the committed developments are built there will be new commercial, retail and leisure space created that will provide further opportunities for residents to access work and training in the local area. The new employment space would provide job opportunities for existing and new residents to the area, resulting in a cumulative beneficial effect for the local community.

15.10.6 For 'Air Quality, Noise and Neighbourhood Amenity', there are no anticipated cumulative effects on air quality, however there are some cumulative noise effects during the construction and operation phases of the Scheme. There are proposed developments within 500m of the Order limits at Burwell Substation Extension; therefore it is considered that any overlap of construction phases between the Scheme and these other nearby development schemes has the potential to contribute to in-combination cumulative effects. The noise assessment indicates that were the planned developments to be constructed at the same time, then cumulative effects from construction noise affecting the nearest receptors at Burwell may be up to moderate adverse (significant), but temporary with no permanent effect. It is considered unlikely that the programmes for construction of all four developments will overlap together, however to minimise the potential for cumulative effects the Scheme will have a designated environmental manager during construction who will liaise with these other developments to identify measures that can be undertaken to minimise disruptions and noise effects.

15.10.7 Therefore the potential health effect as a result of this cumulative noise effect is during the construction and the operation phases could be greater than when considering these developments in isolation.

15.11 References

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