SUNNICA ENERGY FARM

Preliminary Environmental Information Report

Chapter 15: Human Health and Wellbeing Impact Assessment

Sunnica Ltd

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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 in relation to human health and wellbeing as well as presenting the impacts. It also identifies and proposes measures to address the 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 15: Air Quality*** of this PEI Report.

15.2 Legislation and Planning Policy

Legislation

Health and Social Care Act (2012)

15.2.1 The Health and Social Care Act 2012 (Ref 15-7) outlines the Secretary of State's duty to promote and improve the NHS, in pursuit of a number of key aims, which include:

- An improvement in the quality of services;
- A reduction in health inequalities;
- The promotion of autonomy for GPs and health centres; and
- Improvements to the treatments and services offered to patients.

15.2.2 The Act addresses the regulation of the NHS at a national and local level, and also introduced changes such as the abolition of NHS Trusts, support for the production of Joint Strategic Needs Assessments (JSNA), and establishment of Health and Wellbeing boards at a local authority level. These boards have been established for the purpose of advancing the health and wellbeing of people within each local authority area and will aim to *"encourage persons who arrange for the provision of any health or social care services in that area to work in an integrated manner".*

National Planning Policy

15.2.3 As outlined in Section 1.3 of ***Chapter 1: Introduction***, the EIA for the Scheme must have regard to the relevant policies of the NPPF and relevant NPSs.. Key aspects of the NPPF and relevant NPSs, which have been considered during the development of this chapter, are outlined below.

- NPS EN-1 (Ref 15-1) with specific reference to section 4.13 which acknowledges access to energy is clearly beneficial to society as a whole, the production, distribution, and use of energy may have negative impacts on some people's health. The policy requires the decision maker to consider potential effects of development proposals on human health, stating "*where the proposed project has an effect on*

human beings, the ES should assess these effects for each element of the project, identifying any adverse health impacts, and identifying measures to avoid, reduce or compensate for these impacts as appropriate." Negative effects could include direct impacts on health including increased traffic, air or water pollution, dust, odour, hazardous waste and substance, noise, exposure to radiation, and increases in pests; and the indirect health impacts of access to key public services, transport or the use of open space for recreation and physical activity.

- NPPF (Ref 15-2) with specific reference to section 8 promoting healthy and safe communities which sets out the need for planning policies to promote healthy, inclusive and safe places. This includes provision of social, recreational and cultural facilities which the community needs. The NPPF recognises the importance of high-quality open spaces and opportunities for sport for the health and wellbeing of communities, and it calls for planning policies to be based on robust assessments of such provision. Furthermore, the NPPF states that planning policies should protect and enhance public rights of way and access, including provision of better facilities for users. Section 9 also expects planning policies to provide for walking and cycling facilities and encourage sustainable transport solutions.

Other National policy and guidance

NHS Long Term Plan (2019)

15.2.4 The NHS Long Term Plan (Ref 15-4) sets out a ten-year programme of phased improvements to the NHS. The plan outlines how the NHS will attempt to reduce health inequalities through wider preventative action in deprived areas and improved integrated community-based care systems. This includes funding support to programmes which help to reduce smoking, obesity and air pollution in vulnerable communities. There will also be an increased focus on digital GP consultations to provide more options and better support for patients.

15.2.5 Increases in NHS funding and the establishment of a new NHS Assembly are planned to help achieve better care quality and outcomes as well as helping to reduce workforce pressures. There will be a focus on population health which involves a new system hierarchy involving primary care networks, local authorities and larger integrated care systems. The NHS Long Term Plan stresses the importance of the NHS and the built environment sector continuing to work together to improve health and wellbeing.

Spatial Planning for Health: An evidence resource for planning and designing healthier places (2017)

15.2.6 In 2017, Public Health England published 'Spatial Planning for Health: An evidence resource for designing healthier places'. The review provided public health planners and local communities with evidence informed principles for designing healthy places.

15.2.7 The review addresses the relationship which exists between public health and the built environment. It identifies five aspects of the built and natural environment which can be influenced by local planning policy:

- neighbourhood design
- housing

- healthier food
- natural and sustainable environment
- transport

15.2.8 For each aspect identified above, the review provides the evidence base underpinning why they are important determinants of public health. It also sets out principles which public health professionals and planners should follow to ensure healthier places.

15.2.9 The two aspects deemed most relevant to the Scheme are 'neighbourhood design' and 'natural and sustainable environment'. For 'neighbourhood design', the review states that 'Neighbourhoods are places where people live, work, and play and have a sense of belonging. The design of a neighbourhood can contribute to the health and well-being of the people living there. Several aspects of neighbourhood design (walkability and mixed land use) can also maximise opportunities for social engagement and active travel. Neighbourhood design can impact on our day-to-day decisions and therefore have a significant role in shaping our health behaviours.' (see page 11).

15.2.10 For the 'natural and sustainable environment', the review states *"there is a very significant and strong body of evidence linking contact and exposure to the natural environment with improved health and wellbeing. For the purpose of this review, the natural and sustainable environment is comprised of neighbourhood ecosystems and the resulting co-benefits between the environment and health. Protecting the natural environment is essential to sustaining human civilization."*

15.2.11 In 2020, Public Health England published the 'Public Health England Strategy 2020 to 2025 strategy' (Ref 15-6) which states their objectives over the next five years. The document also states the importance of planning in healthy communities, and references the Spatial Planning and Health document described above in providing an evidence base for this.

Planning Practice Guidance

15.2.12 Accompanying the NPPF, the National Planning Practice Guidance (PPG) (Ref 15-3) provides guidance on planning and provides a web-based resource in support of the NPPF. The PPG offers guidance on health and wellbeing in planning and planning obligations, and covers:

- The role of health and wellbeing in planning; and
- The links between health and wellbeing and planning.

15.2.13 The PPG suggests that local authority planners should consult with the Director of Public Health on mitigation measures for any planning applications that are likely to have an impact on the health and wellbeing of the local population or particular groups. A health impact assessment is a useful tool to use when assessing expected significant impacts.

15.2.14 The guidance states that*: "plan-making authorities may work with public health leads and health organisations to understand and take account of the health status and needs of the local population, including the quality, quantity of and accessibility to healthcare and the effect any planned growth may have on this. Authorities should also assess quality, quantity of and*

accessibility to green infrastructure, sports, recreation and places of worship including expected future changes, and any information about relevant barriers to improving health and well-being" (See 'Plan-Making' Guidance, Paragraph 46).

Local Planning Policy

15.2.15 Relevant local planning policy includes:

- The East Cambridgeshire Local Plan adopted in April 2015 (Ref 15-9) with specific reference to **Policy COM 3:** Retaining community facilities. This states that any proposal which would lead to the loss of commercial community facilities will only be permitted if the current use of the facility is not financially viable; **Policy COM 5:** Strategic green infrastructure. This states that loss or harm to existing strategic green infrastructure will not be permitted, unless the need for and benefits of the development demonstrably and substantially outweigh any adverse impacts on green infrastructure. **Policy COM 7:** Transport impact. This states that development should reduce the need to travel and give priority for walking and cycling with local communities. **Policy ENV 9: Pollution.** This states that all development proposal should minimise and reduce emissions and other forms of pollution, including light and noise pollution, and ensure no deterioration in air and water quality.
- The Forest Heath and St Edmundsbury District Joint Development Management Policies Document published in 2015 (Ref 15-13) with specific reference to **Policy DM14:** Protecting and enhancing natural resources, minimising pollution and safeguarding from hazards states that all new development should minimise all emission and other forms of pollution (including light and noise pollution) and ensure no deterioration to either air or water quality; **Policy DM41:** Community Facilities and Services states that provision and enhancement of community facilities and services will be permitted where they contribute to the quality of community life and the maintenance of sustainable communities; and **Policy DM44:** Rights of Way states that '*development which would adversely affect the character of or result in the loss of existing or proposed rights of way, will not be permitted unless alternative provision or diversions can be arranged'.*

Other relevant local policy

Cambridgeshire Health & Wellbeing Strategy (2012-2017)

15.2.16 The role of the Cambridgeshire Health and Wellbeing Board includes the promotion of integrated health and care services, identifying local health needs and priorities, and the development of a Health and Wellbeing Strategy (Ref 15-11).

15.2.17 The Health and Wellbeing Board have identified six key health priorities which reflect local issues and are all contributors to health inequality within the County. These key priorities have been selected as they either affect a considerable proportion of the county's population or they affect a vulnerable group:

- *"Ensure a positive start to life for children, young people and their families;*
- *Support older people to be independent, safe and well;*
- *Encourage healthy lifestyles and behaviours in all actions and activities while respecting people's personal choices;*

- *Create a safe environment and help to build strong communities, wellbeing and mental health;*
- *Create a sustainable environment in which communities can flourish; and*
- *Work together effectively"*

Joint Health and Wellbeing Strategy West Suffolk 2019-2022

15.2.18 The role of the Suffolk Health and Wellbeing Board includes the promotion of integrated health and care services, identifying local health needs and priorities, and the development of a Health and Wellbeing Strategy (Ref 15-14). The vision of the Suffolk Health and Wellbeing Board is that *"people in Suffolk live healthier, happier lives. We also want to narrow the differences in healthy life expectancy between those living in our most deprived communities and those who are more affluent through greater improvements in most disadvantaged communities."*

15.2.19 The Health and Wellbeing Board have identified four key health priorities which reflect key local issues and are key contributors to health inequality within the County. These key priorities have been selected as their either affect a significant proportion of the county's residents or a vulnerable group of people, as follows:

- *"Every Child in Suffolk to have the Best Start in Life;*
- *People of working age are supported to optimise their health and wellbeing;*
- *Older people have good quality of life; and*
- *People in Suffolk have the opportunity to improve their mental health and wellbeing"*

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 The assessment has been based on information about the Scheme available at the time this chapter of the PEI Report was produced and will be updated for the ES as part of the DCO Application. This will include additional information related to the modelling of air emissions from road traffic.

15.3.3 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 statistics from the census. Four years have passed since the latest revisions to the 2011/12 census were published (in 2016).

15.4 Assessment Methodology

Introduction

15.4.1 There is no consolidated methodology or practice for the assessment of effects on human health. The impacts of the Scheme on human health are

assessed qualitatively using professional judgement, best practice and draw upon other assessments within the PEI Report and therefore, the assessment does not follow the methodology outlined in ***Chapter 5: EIA Methodology***. The methodology for the assessment is outline below.

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

- Access to healthcare services and other social infrastructure;
- Air quality, noise and neighbourhood amenity;
- Accessibility and active travel;
- Access to work and training; and
- 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 15: Air Quality***).

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 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).

15.4.5 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. This approach ensures that the likely 'worst-case' is assessed, which may result in the overestimation of predicted health effects.

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

[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.

Study Area

15.4.6 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 National Grid Substation Extension). See ***Chapter 3: Scheme Description*** for further information.

15.4.7 The 'study area' comprises all human health receptors in surrounding areas which may have potential to be impacted by the Scheme. 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

15.4.8 The following assessment seeks to establish the potential social, economic and land use effects of the Scheme and assesses these against the current baseline conditions at the DCO Site and in the surrounding area.

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

- ONS Census 2011 (Ref 15-16);
- Mid-Year Population Estimates (Ref 15-17);
- Annual Population Survey (Ref 15-18);
- Indices of Multiple Deprivation (Ref 15-19);
- Public Health England; Health Profiles (Ref 15-20);
- Practice List Size and GP count (Ref 15-21); and
- Business Register and Employment Survey (Ref 15-22).

15.5 Stakeholder Engagement

15.5.1 The Scoping Report outlined the assessment methodology, relevant legislation and policy, defined study areas and identified baseline conditions pertaining to the scope of the human health impact assessment.

15.5.2 Following receipt of the Scoping Opinion, issues relevant to the human health assessment were raised during statutory consultation. These main matters are presented in Table 15-2.

Table 15-2: Main matters raised during consultation

Consultee	*Main matter raised*	*How has the concern been addressed*	*Location of response in chapter*
Public Health England	Guidance used in the methodology and justification for methodology.	Section 15.4: Assessment Methodology describes the methodology used to conduct the assessment based on best practice guidance.	Section 15.2.19
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 PEI Report.
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.	Section 16.8

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 on the DCO Site 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***.

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 section 15.6.27 to 15.6.20.

The Local Area

15.6.4 ***Chapter 12: Socioeconomics and Land Use*** 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.

DCO Site

15.6.5 The Sunnica East Sites A and B consists 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 the Sunnica West Site A by the A11 to the west and Chippenham Road to the east.

15.6.7 The Sunnica West Site B is located approximately 1.2km north west of Sunnica West Site A, separated by agricultural fields and Chippenham Road. The Sunnica West Site B is in proximity to the industrial and commercial estates on Newmarket Road and Fordham Road. Sunnica West Site B consist 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 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 The 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 National Grid Substation Extension option is currently on an agricultural field, located to the east of the existing substation and is in proximity to 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 the Sunnica East Site A are a small group of properties located 500m to the north in Isleham, 580m in relation to Freckenham and 1km away from Sunnica East Site B. 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. Located 400m away from Sunnica West Site B there are a small group of properties within Snailwell.

15.6.12 The closest residential properties to the Burwell National Grid Substation (located to the east of the existing substation) are 200m to the east in the village of Burwell.

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 DCO Site.

15.6.14 There are two churches (The Ark Church Isleham and Isleham Church of England) located within approximately 600m 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). There is also a church (All Saints Church) located approximately 500m away.

15.6.16 The closest community resource to Sunnica West Site A (and the closest resource to the entire scheme) is an outdoor activity park (WildTracks Outdoor Activity Park). As well as farm shop & café (La Hogue Farm) located 120m from the site. There is also a karting centre (Red Lodge Karting) located approximately 700m away.

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.

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 site.

Healthcare Facilities

15.6.19 The Scheme falls within both the NHS Cambridgeshire and Peterborough CCG (Clinical Commissioning Group) and the NHS West Suffolk CCG. Together, these CCGs serve 129 member GP practices, 636.full-time equivalents (FTE) GPs and 1,167,800 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 GPs located within 3km of the Scheme: Hopkinson DR GP (1.8km from DCO Site), The Whitehouse Surgery (2km from DCO site), the Market Cross Surgery (2km from DCO Site), Orchard House Surgery (2.5km from DCO Site) and DR NS Arthur Oakfield Surgery (2.8km from DCO Site). 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 Proposed Scheme.

NMU Facilities

15.6.21 Figure 13-1 in ***Chapter 13: Transport and Access*** 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 A (W-257/002/0, W-257/002/X, and W-257/007/0) located within the boundary of the 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 the Sunnica East Site B. 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 the Site there is Snailwell 5 bridleway (PRoW 204/5) which runs along the south-west boundary of the Site. As well as 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 35/17) 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 HUDU guidance.

15.6.28 The Scheme is located within three wards (Manor, Fordham & Isleham and Burwell) and two counties (East Cambridgeshire and West Suffolk). For the purposes of the baseline assessment of population characteristics, these three wards are identified as being the ‘Study Area’.

15.6.29 These wards, for the purposes of the Baseline, are identified as being the ‘study area’. 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

15.6.30 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, 8,760 people live in the study area.

15.6.31 The proportion of older people aged 65 years and over in the study area (21%) is higher than in East Cambridgeshire (20%), West Suffolk (18.1%), East of England (19.6%) and England and Wales (18.3%). The share of people of working age (defined by the ONS as people aged between 16 and 64) in the study area is approximately 62%. This is slightly higher than East Cambridgeshire (60%) but broadly the same as West Suffolk (61%), East of England (61%) and England and Wales as a whole (62.5%).

15.6.32 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 is Mixed/Multiple ethnicity (1.4% of the population) and Black/African/Caribbean/Black British (0.9% of the population) residents.

Qualifications and Economic Activity

15.6.33 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.

15.6.34 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

15.6.35 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.

15.6.36 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

15.6.37 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 have 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%)

15.6.38 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 15-3 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 represent the study area.

Table 15-3: 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 (%)	66.2	69.9	67	68	66.9	67.2
Mortality rate from all cardiovascular diseases (per 100,000 population under 75)	62.9	61.9	60.2	57.8	63.4	78.2
Mortality rate from cancer (per 100,000 population under 75)	108.6	119	121.3	117	126	144.4
Obese adults (%)	62.2	70.2	66.3	62.1	63.3	62.3
Proportion of	15	16.7	17	14.4	18	19.1

[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'.

Indicator	*East Cambridge-shire*	*West Suffolk*	*Suffolk*	*Cambridge-shire*	*East of England*	*England*
Obese children (year 6)						
Killed and seriously injured (KSI) rate on England's roads	67.1	38.7	39.2	57.5	46.7	42.6

Source: Public Health England (2019); Health indicators

15.6.39 The data shows that East Cambridgeshire and West Suffolk both have a similar proportion of physically active (66.2% and 69.9% respectively) than Cambridgeshire (68%), Suffolk (67%) and East of England (66.9%). 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 (108.6) and Cambridgeshire (117) than in West Suffolk (119), Suffolk (121.3) and the East of England (126).

Future Baseline

15.6.40 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 should be 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 need for additional mitigation and/or enhancement measures depends on the effects arising as part of the assessment. The health assessment is presented in Tables 15-4 to 15-8. Where there are assessed to be negative health impacts in the assessment, mitigation measures which should be implemented to avoid or minimise the human health impact are identified.

15.8 Assessment of Likely Impacts and Effects

15.8.1 Tables 15-4 to 15-8 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 table the term ‘n/a’ indicates that an assessment of the health criteria was not applicable to a particular phase.

Table 15-4: 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 Recommended*
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. 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 sites. However, 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 Construction Traffic Management Plan (CTMP) will ensure 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). There are expected to be a maximum of only 10 construction HGVs per hour (20 movements) across the Scheme. 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 five full time staff expected on the DCO Site 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 Decommissioning Environmental Management Plan will be prepared prior to the decommissioning phase as outlined in ***Chapter 3: Scheme Description***. 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 sites. 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 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 partly due to measures set out in the CTMP 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). There are expected to be a maximum of only 10 construction HGVs per hour (20 movements) across the Scheme). Therefore, the potential health impact on access to social infrastructure during the construction period is assessed to be neutral. **During operation**	0 during construction 0 during operation 0 during decommissioning	**During construction** None required **During operation** None required **During decommissioning** None required

Assessment Criteria	*Relevant to the proposed development?*	*Details and Evidence*	*Potential Health Impact*	*Further Action or Mitigation Recommended*
		During the operational phase, there are expected to be five full time staff expected on DCO Site 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 Decommissioning Environmental Management Plan will be prepared prior to the decommissioning phase as outlined in ***Chapter 3: Scheme Description***. The potential health effect on access to social infrastructure during the decommissioning period is assessed to be neutral.		

Table 15-5: 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** A preliminary assessment of the risk of dust and particulate matter impacts during the construction stage is provided in the Air Quality chapter of this PEI Report. 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 DCO Site. 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***. The assessment states that there will be negligible 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 Construction Environmental Management Plan (CEMP) to ensure that there are no significant noise effects during the construction phase. Overall, therefore, the above assessments conclude that if 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. **During operation** Not applicable as assessment criteria refers to construction impacts. **During decommissioning** A Decommissioning Environmental Management Plan will be prepared prior to the decommissioning phase as outlined in ***Chapter 3: Scheme Description***. Initial assessments of the impact of decommissioning of the Scheme on air quality and noise is provided in the ***Chapter 15: Air Quality*** and ***Chapter 11: Noise and Vibration***, 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 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** Ensure measures in the CEMP which reduce noise and air quality impacts are implemented accordingly. **During operation** n/a **During decommissioning** Ensure measures in the Decommissioning Environmental Management Plan which reduce noise and air quality impacts are implemented accordingly.
Does the proposal minimise air pollution caused by traffic and energy facilities?	Yes	**During construction** A preliminary assessment of the risk of dust and particulate matter impacts during the construction stage is provided in the Air Quality section of this chapter. The assessment states that Heavy Duty Vehicle (HDV) 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 site boundary. 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. An assessment of road traffic emissions will be provided for the ES and is not currently available for this PEI Report. **During operation**	0 during construction 0 during operation 0 during decommissioning	**During construction** Ensure measures in the CEMP which reduce air quality impacts are implemented accordingly. **During operation** n/a **During decommissioning** Ensure measures in the Decommissioning Environmental Management Plan which reduce air quality impacts are implemented accordingly.

Assessment Criteria	*Relevant to the proposed development?*	*Details and Evidence*	*Potential Health Impact*	*Further Action or Mitigation Recommended*
		An operational assessment of air quality has been scoped out of the EIA (see ***PEI Report Volume 2: Appendix 1A***) due to the volume of predicted traffic during the operational phase. The solar farm and battery storage systems are not expected to produce emissions. The potential health impact is therefore assessed to be neutral. **During decommissioning** A Decommissioning Environmental Management Plan will be prepared prior to the decommissioning phase as outlined in ***Chapter 3: Scheme Description***. An initial assessment of the impact of decommissioning of the Scheme on air quality is provided in ***Chapter 15: Air Quality***. 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***. The assessment states that the presence of construction traffic will lead to a minor adverse noise impact on residents of properties on Weirs Grove and Hythe Lane in Burwell, Cambridgeshire. The number of properties is not known at this stage but will be identified in the ES. There are not likely to be any other impacts on residential properties or community resources caused by construction traffic. 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 to be negative although this will only be temporary. **During operation** An assessment of the impact of operation of the Scheme on noise levels is provided in ***Chapter 11: Noise and Vibration***. The assessment states that noise from operation of the Burwell Substation Expansion during the night is predicted to exceed the background levels for residents of properties on Weirs Grove and Hythe Lane in Burwell, Cambridgeshire. The Scheme does include embedded mitigation which ensures that the change in noise level only results in a minor adverse effect. Due to the impact not being significant, there are no further mitigation measures which have been proposed. 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 is assessed to be negative. **During decommissioning** A Decommissioning Environmental Management Plan will be prepared prior to the decommissioning phase as outlined in ***Chapter 3: Scheme Description***. An initial assessment of the impact of decommissioning of the Scheme on noise and vibration is provided in in ***Chapter 11: Noise and Vibration***. The assessment concludes that the impact of decommissioning of the Scheme is likely to be similar to the construction period.	- during construction - during operation 0 during decommissioning	**During construction** Ensure measures in the CEMP which reduce noise impacts are implemented accordingly. **During operation** None required. **During decommissioning** Ensure measures in the Decommissioning Environmental Management Plan which reduce noise impacts are implemented accordingly.

Table 15-6: 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, W-257/002/X and W-257/002/0 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 West Site A will also result in the temporary severance of PRoW 204/5 between Snailwell and the Newmarket Bypass strategic road. The route is part of a network of PRoWs travelling between Snailwell and Newmarket and is likely to be used primarily by residents of Snailwell attempting to access Newmarket. Although there would be an added presence of traffic, users would be able to use an alternative route to travel between Newmarket and Snailwell via Newmarket Road, which would add no additional journey length to users. However, the existing route offers some 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 result in the temporary closure of the permissive bridleway 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. 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 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, 35/7 and 35/17. The Connection route will disrupt small sections of each footpath, and 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 will	- 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 Decommissioning Environmental Management Plan 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

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.

New permissive routes[3] will also be provided in both the Sunnica East Site A and B and Sunnica West Site A 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 on 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 a new permissive route to the north-east of Sunnica East Site B which will provide a circular route travelling through agricultural fields which will offer amenity value for local residents. In Sunnica West Site A, there will be a new permissive route which connects with the existing PRoW 204/5. It will provide a safe route for use by local residents in the area.

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 Decommissioning Environmental Management Plan will be prepared prior to the decommissioning phase as outlined in ***Chapter 3: Scheme Description***. 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. 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 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 15-7: 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 1,120[4] total net jobs per annum. Of these, a considerable proportion of these jobs (870[5] jobs per annum) are expected to be taken up the local workforce (residents located within the Cambridge Travel to Work Area). The potential health impact during construction is therefore assessed to be positive. **During operation** During operation, the Scheme will require only five 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 Decommissioning Environmental Management Plan will be prepared prior to the decommissioning phase as outlined in ***Chapter 3: Scheme Description***. Decommissioning of the Scheme is expected to support a similar number of jobs as the construction period. Therefore, decommissioning is expected to generate in the order of 1,000 jobs per annum and he 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** During the construction period, the scheme will support, on average, 1,120[6] total net jobs per annum. Of these, a considerable proportion of these jobs (870[7] jobs per annum) are expected to be taken up the local workforce (residents located within the Cambridge Travel To Work Area). Therefore, the potential health impact during construction is assessed to be positive. **During operation** During operation, the Scheme will require only five 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 Decommissioning Environmental Management Plan will be prepared prior to the decommissioning phase as outlined in ***Chapter 3: Scheme Description***. Decommissioning of the Scheme is expected to support a similar number of jobs as the construction period 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 0 during operation + during decommissioning	**During construction** Recommended that Meet the Buyer events are held to provide local services with an opportunity to log their interest in supporting the scheme and outline their service and skillsets. This will be considered further at ES and post consent stage. **During operation** n/a **During decommissioning** Recommended that Meet the Buyer events are held to provide local services with an opportunity to log their interest in supporting the scheme and outline their service and skillsets. This will be considered further at ES and post consent stage.

[4] This figure has been rounded and therefore may be different to what is presented in ***Chapter 12: Socioeconomics and Land-Use***.
[5] Rounded, as per footnote 3.
[6] Rounded, as per footnote 3.
[7] Rounded, as per footnote 3.

Table 15-8: 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. **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. In Sunnica West Site A, there will be a new permissive route which connects with the existing PRoW 204/5. 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 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.	- 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 Decommissioning Environmental Management Plan which reduce impacts on walkers, including appropriate signage and minimising the duration of closure, are implemented accordingly.

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:

- **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.
- **Air Quality, Noise and Neighbourhood Amenity –** these 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 HDV 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.
- **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.
- **Access to Work and Training –** during the construction and decommissioning phases the Scheme will require over 1,000 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 five jobs will be required onsite per annum.
- **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 Mitigation and Enhancement Measures

15.9.1 Where relevant, additional mitigation and enhancement measures have been proposed in the 'Further Action or Mitigation Recommended' column in the Table 15-4 to 15-8 above. The EIA is an iterative process, and should

further mitigation be identified after statutory consultation prior to the DCO application then the Scheme design will be amended to capture these and they will be included in the ES.

15.10 Cumulative Effects

15.10.1 This section assesses the potential effects of the DCO Site 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***.

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 DCO Site 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*** 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 three proposed developments within 500m of the DCO site at Burwell sub-station, 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. Due to their scale none of these developments are anticipated to result in any adverse significant effects on noise-sensitive

receptors. Therefore, at this stage, the potential health effect as a result of this cumulative noise effect is during the construction and the operation phases is not expected to be any greater than when considering these developments in isolation.

15.11 References

Ref 15-1 Department of Energy and Climate Change, (2011); Overarching National Policy Statement for Energy (EN-1). London: The Stationery Office.

Ref 15-2 Ministry of Housing, Communities and Local Government (MCHLG), (2019); National Planning Policy Framework (NPPF). MCHLG. Available online at: www.gov.uk/government/publications/national-planning-policy-framework--2

Ref 15-3 Department of Communities and Local Government (DCLG), (2019); Draft Planning Practice Guidance

Ref 15-4 NHS, (2019); NHS Long Term Plan

Ref 15-5 Public Health England, (2017); Spatial Planning for Health: An evidence resource for designing healthier places

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