

# Yorkshire GREEN Project

Environmental Impact Assessment

Preliminary Environmental Information Report  
Volume 2 Chapter 15: Health and Wellbeing

October 2021

nationalgrid

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Figure 15.1 Health and wellbeing Study Area  
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# 15. Health and Wellbeing

# 15. Health and Wellbeing

## 15.1 Introduction

15.1.1 This chapter presents the preliminary assessment of the likely effects of the Project with respect to health and wellbeing; defined by the World Health Organisation (WHO) as “*Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity*”<sup>1</sup>. Likely effects include access to healthcare facilities, access to open space and neighbourhood amenity. The preliminary assessment is based on information obtained to date. It should be read in conjunction with the Project description provided in **Chapter 3: Description of the Project** and with respect to relevant parts of the following chapters:

- **Chapter 6: Landscape and Visual Amenity;**
- **Chapter 12: Traffic and Transport;**
- **Chapter 13: Air Quality;**
- **Chapter 14: Noise and Vibration;** and
- **Chapter 16: Socio-economics.**

15.1.2 This chapter describes:

- the legislation, policy and technical guidance that has informed the assessment (**Section 15.2**);
- consultation and engagement that has been undertaken and how comments from consultees relating to health and wellbeing have been addressed (**Section 15.3**);
- the methods used for baseline data gathering (**Section 15.4**);
- overall baseline (**Section 15.5**);
- embedded measures relevant to health and wellbeing (**Section 15.6**);
- the scope of the assessment for health and wellbeing (**Section 15.7**);
- the methods used for the assessment (**Section 15.8**);
- the preliminary assessment of health and wellbeing effects (**Section 15.9**);
- preliminary assessment of cumulative (inter-project) effects (**Section 15.10**);
- a summary of the preliminary significance conclusions (**Section 15.11**);
- additional measures proposed (**Section 15.12**);
- health and wellbeing residual effects assessment (**Section 15.13**); and
- an outline of further work to be undertaken for the Environmental Statement (ES) (**Section 15.14**).

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<sup>1</sup> World Health Organisation (2021); Constitution of the World Health Organisation. [online] Available at: <https://www.who.int/about/governance/constitution> [Accessed 06 September 2021].

## Project overview

15.1.3 In summary, Yorkshire GREEN comprises the following new infrastructure within the draft Order Limits:

- Shipton North and South 400kV cable sealing end compounds (CSECs);
- The YN 400kV overhead line (north of proposed Overton Substation);
- Overton 400/275kV Substation;
- Two new sections of 275kV overhead line south of Overton Substation: the XC 275kV overhead line to the west and the SP 275kV overhead line to the east;
- Tadcaster Tee West and East 275kV CSECs; and
- Monk Fryston 400kV Substation (adjacent to the existing substation).

15.1.4 Works to existing infrastructure within the draft Order Limits would comprise:

- Replacement of one pylon on the 2TW/YR 400kV overhead line;
- Works to the existing XC/XCP Monk Fryston to Poppleton overhead line comprising a mixture of decommissioning, replacement and realignment east of Moor Monkton and reconductoring works south of Moor Monkton. This overhead line would be reconfigured at its southern end to connect into the new substation at Monk Fryston;
- Replacement of one pylon on the Tadcaster Tee to Knaresborough (XD/PHG) 275kV overhead line route;
- Reconfiguration and removal of a short span of the Monk Fryston to Eggborough 400kV 4YS overhead line to connect this overhead line into the new substation at Monk Fryston; and
- Minor works at Osbaldwick Substation comprising the installation of a new circuit breaker and isolator along with associated cabling, removal and replacement of one gantry and works to one existing pylon. All works would be within existing operational land.

15.1.5 Please refer to **Chapter 3: Description of the Development** and **Figures 1.1** and **1.2** for an overview of the different components of the Project.

## Limitations and assumptions

15.1.6 The information provided in this Preliminary Environmental Information Report (PEIR) is preliminary, the final assessment of likely significant effects will be reported in the ES. The PEIR has been produced to fulfil National Grid Electricity Transmission Plc's (National Grid) consultation duties and enable consultees to develop an informed view of the likely significant effects of the Project, and comment on this during statutory consultation, before the design of the Project is finalised and taken forward to submission of the application for development consent.

15.1.7 The health and wellbeing assessment has been limited at this PEIR stage by the maturity of assessment work undertaken in the other chapters identified above. In particular, **Chapter 14: Noise and Vibration** currently assesses construction traffic noise and not construction activity noise, while **Chapter 16: Socio-economics** has not undertaken an assessment of likely construction or operational spend, or potential employee numbers needed for the construction phase at this stage.

- 15.1.8 The Project has been based on the principle that measures have been ‘embedded’ into the Project design to remove potential significant effects (**Section 4.6**). This approach is informed by the iterative design process. Additionally, the Project would ensure that standard good practice construction measures are adopted, through the implementation of an Outline Construction Environmental Management Plan (CEMP). The preliminary appraisal of potential effects therefore assumes that both design mitigation and good practice measures are in place.
- 15.1.9 The assessment of the health and wellbeing effects has been carried out against a benchmark of current population, health and socio-economic baseline conditions prevailing around the Project, as far as is possible within the limitations of such datasets.
- 15.1.10 Baseline data is subject to a time lag between collection and publication. As with any dataset, these conditions may be subject to change over time which may influence the findings of the assessment. This is particularly significant in the current climate, where the impacts of COVID-19 have not filtered through public data sources yet.
- 15.1.11 Given the lack of clear industry recognised methodology in the assessment of health effects in EIA, particularly in respect of significance, the assessment presented in this chapter is qualitative and is based on the framework provided by the HUDU/NHS Planning for Health Rapid HIA Toolkit <sup>73</sup>.

## 15.2 Relevant legislation, planning policy and technical guidance

- 15.2.1 This section identifies the legislation, planning policy and technical guidance that has informed the assessment of effects with respect to health and wellbeing. Further information on policies relevant to the Project is provided in **Chapter 5: Legislation and Policy Overview**.

### Legislation

- 15.2.2 There is no applicable legislation specific to the assessment of health and wellbeing.

### Planning policy

- 15.2.3 A summary of the relevant national and local planning policy is given in **Table 15-1**.

**Table 15-1 – Planning policy relevant to the health and wellbeing assessment**

Policy	Policy Context
<b>National planning policy</b>	
Overarching National Policy Statement for Energy (EN-1) <sup>2</sup>	Paragraphs 4.13.2 to 4.13.5 and Section 5.10: Land Use Sets out requirements for the assessment of health and wellbeing effects of energy projects that fall within the scope of the National Policy Statement.

<sup>2</sup> Department of Energy and Climate Change (DECC), (2011). National Policy Statement for Energy (EN-1). [online] Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/47854/1938-overarching-nps-for-energy-en1.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/47854/1938-overarching-nps-for-energy-en1.pdf) [Accessed 06 September 2021].

Policy	Policy Context
National Policy Statement for Electricity Networks Infrastructure (EN-5) <sup>3</sup>	<p>Section 2.10: Electric and Magnetic Fields (EMFs)</p> <p>Sets out additional technology-specific considerations for electricity networks beyond those described in NPS EN-1.</p> <p>It identifies that EMFs can have both direct and indirect effects on human health.</p>
National Planning Policy Framework (NPPF) <sup>4</sup>	<p>The NPPF sets out various policies with respect to the health objectives of the planning system.</p> <p>Chapter 8 states planning should aim to support healthy and safe communities as part of creating sustainable development.</p> <p>The key theme relating to health and its wider determinants emphasises the importance of encouraging “<i>strong, vibrant and healthy communities</i>” by creating a good quality-built environment with accessible local services that reflect community needs and support wellbeing.</p>
<b>Local planning policy</b>	
Harrogate District Local Plan, 2014-2035 <sup>5</sup>	<p>Policy HP3: Local Distinctiveness</p> <p>Development should incorporate high quality building, urban and landscape design that protects, enhances or reinforces features that contribute to local distinctiveness.</p> <p>Policy HP4: Protecting Amenity</p> <p>Development should be designed to ensure that they will not result in significant adverse impacts on the amenity of occupiers and neighbours.</p> <p>Policy HP5: Public Rights of Way</p> <p>Ensures the protection of public rights of way so that the routes and their existing recreational and amenity value are not undermined by new development.</p> <p>Policy HP6: Protection of Existing Sport, Open Space and Recreation Facilities</p> <p>Ensures the protection of existing outdoor public and private sport, open space and recreational facilities.</p> <p>Policy HP8: Protection and Enhancement of Community Facilities</p> <p>Ensures the protection of land or premises currently or last in community use (including community/village halls, schools, colleges, nurseries, places of worship, health</p>

<sup>3</sup> DECC, (2011). Electricity Networks Infrastructure (EN-5). [online] Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/47858/1942-national-policy-statement-electricity-networks.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/47858/1942-national-policy-statement-electricity-networks.pdf) [Accessed 06 September 2021].

<sup>4</sup> Ministry of Housing, Communities and Local Government (MHCLG), (2021). National Planning Policy Framework. [online] Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1004408/NPPF\\_JULY\\_2021.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1004408/NPPF_JULY_2021.pdf) [Accessed 02 August 2021].

<sup>5</sup> Harrogate District Council, (2020). Harrogate Local Plan. [online] Available at: <https://www.harrogate.gov.uk/planning-policy-guidance/harrogate-district-local-plan-2014-2035> [Accessed 06 September 2021].



Policy	Policy Context
Hambleton Local Development Framework: Core Strategy Development Plan Document, 2007 <sup>6</sup>	<p>services, care homes, libraries, public houses, and village shops or post offices that cater for day-to-day needs in rural communities).</p> <p>Policy NE4: Landscape Character Proposals that will protect, enhance or restore the landscape character of Harrogate district for its own intrinsic beauty and for its benefit to the economic, environmental and social well-being of the district will be supported.</p> <p>Policy NE5: Green and Blue Infrastructure Ensures the protection and enhancement of the social, environmental and economic benefits of existing green infrastructure features and/or seeks the incorporation of new green infrastructure features within their design.</p> <p>Policy CP1: Sustainable development Seeks to ensure that development is sustainable and that it does not harm the area’s natural and man-made features. It seeks to maximise the conservation of land, energy and resources and minimise adverse impacts upon the economy, society and the environment.</p> <p>Policy CP3: Community assets Support will be given to proposals and activities that protect, retain or enhance existing community assets, or lead to the provision of additional assets that improve community well-being.</p> <p>Policy CP16: Protecting and enhancing natural and man-made assets Development or other initiatives will be supported where they preserve and enhance the District’s natural and manmade assets, where appropriate defined in the Development Policies Development Plan Document and identified on the Proposals Map. Particular support will be given to initiatives to improve the natural environment where it is poor and lacking in diversity.</p> <p>Policy CP19: Recreational facilities and amenity open space Support will be given to proposals and activities that protect, retain or enhance existing recreational and amenity assets, lead to the provision of additional assets, or improve access to facilities, particularly by non-car modes of transport. This will include support for greater access to and enjoyment of the countryside.</p> <p>Policy CP20: Design and the reduction of crime Design of all developments must take account of the need to reduce the opportunities for crime and the fear of</p>

<sup>6</sup> Hambleton District Council, (2007). Hambleton Local Development Framework: Core Strategy Development Plan Document 2007 (DPD). [online] Available at: <https://www.hambleton.gov.uk/planning-policy/adopted-local-development-framework/2> [Accessed 06 September 2021].

Policy	Policy Context
Hambleton Development Policies Development Plan Document, 2008 <sup>7</sup>	<p>crime, disorder and anti-social behaviour, and promote safe living environments.</p> <p>Policy DP1: Protecting amenity All development proposals must adequately protect amenity, particularly with regard to privacy, security, noise and disturbance, pollution (including light pollution), odours and daylight.</p> <p>Policy DP5: Community facilities Support will be given to the provision and enhancement of community facilities, and to their retention, where these constitute important contributions to the quality of local community life and the maintenance of sustainable communities.</p> <p>Policy DP30: Protecting the character and appearance of the countryside Throughout the District, the design and location of new development should take account of landscape character and its surroundings, and not have a detrimental effect on the immediate environment and on any important long-distance views.</p> <p>Policy DP34: Sustainable energy Development proposals should minimise energy demand, improve energy efficiency and promote energy generated from renewable resources, as part of an integrated strategy.</p> <p>Policy DP37: Open space, sport and recreation Development which will result in the loss of public or private land with recreational value will not be permitted, unless it can be shown having regard to the local standards, that the site is no longer needed, or is unlikely to be required in the future, or an alternative facility of equivalent value is to be provided.</p>
Hambleton Allocations Development Plan Document, 2010 <sup>8</sup>	<p>The Hambleton Allocations Development Plan Document concerns the site-specific allocations that form one of the “Development Plan Documents” (DPDs).</p> <p>The document includes the core strategy context and development commitments, including strategic infrastructure, in each of the district sub-areas, including the Easingwold Sub Area where the Project is located.</p>
Hambleton Local Plan - Publication Draft, 2019 <sup>9</sup>	<p>The Hambleton draft Local Plan sets out a strategy for development and addresses the need for new homes</p>

<sup>7</sup> Hambleton District Council, (2008). Hambleton Development Policies DPD. [online] Available at: <https://www.hambleton.gov.uk/planning-policy/adopted-local-development-framework/3> [Accessed 06 September2021].

<sup>8</sup> Hambleton District Council, (2010). Hambleton Allocations DPD. [online] Available at: <https://www.hambleton.gov.uk/planning-policy/adopted-local-development-framework/4> [Accessed 06 September2021].

<sup>9</sup> Hambleton District Council, (2019). Hambleton draft Local Plan (July 2019). [online] Available at: <https://www.hambleton.gov.uk/downloads/file/1087/lp01-hambleton-local-plan-publication-draft-july-2019> [Accessed 06 September2021].

Policy	Policy Context
Leeds City Council Saved Unitary Development Plan Review, 2006 <sup>10</sup>	<p>and jobs alongside the need for associated infrastructure, such as shops, community facilities, transport, open space, sport and recreation, health and education.</p> <p>Policy N43: Informal outdoor recreation Supports proposals for informal outdoor recreation and sports facilities provision in the countryside.</p> <p>Policy LT6b: Waterways and public rights of way Seeks where appropriate to secure footpath access and public rights of way, having regard to public safety and nature conservation interests.</p>
Leeds Core Strategy, 2019 <sup>11</sup>	<p>Policy P9: Community facilities and other services States the importance of access to local community facilities and services, such as education, training, places of worship, health, sport and recreation and community centres, to be important to the health and wellbeing of a neighbourhood. These should be accessible by foot, cycling, or by public transport in the interests of sustainability and health and wellbeing.</p> <p>Policy G1: Enhancing and extending green infrastructure Green Infrastructure/corridor function of the land should be retained and improved. Opportunities should be taken to protect and enhance the Public Rights of Way (PRoW) network through avoiding unnecessary diversions and by adding new links.</p>
Saved Policies of the York Local Plan, 2005 <sup>12</sup>	<p>Policy GP7: Open Space Development on open space will only be permitted where: a) there will be no detrimental effect on local amenity or nature conservation; and b) compensatory provision of an equivalent size and standard is provided by the applicant in the immediate vicinity of the site proposed for development.</p> <p>Policy T2a: Existing Pedestrian/Cycle Networks States that development proposals should enhance existing pedestrian and cycle networks or other rights of way.</p>
City of York draft Local Plan – Publication Draft, 2018 <sup>13</sup>	<p>Policy DP2: Sustainable Development Sustainable Development can be defined as <i>'meeting the needs of the present without compromising the ability of</i></p>

<sup>10</sup> Leeds City Council, (2006). Unitary Development Plan Review 2006. [online] Available at:

[https://www.leeds.gov.uk/docs/FPI\\_UDP\\_001%20Volumen%201%20Written%20Statement.pdf](https://www.leeds.gov.uk/docs/FPI_UDP_001%20Volumen%201%20Written%20Statement.pdf) [Accessed 06 September 2021].

<sup>11</sup> Leeds City Council, (2019). Core Strategy (as amended by the Core Strategy Selective Review 2019). [online] Available at:

<https://www.leeds.gov.uk/Local%20Plans/Adopted%20Core%20Strategy/Consolidated%20Core%20Strategy%20with%20CSSR%20Policies%20Sept%202019.pdf> [Accessed 06 September 2021].

<sup>12</sup> York City Council, (2005). York Local Plan (saved policies). [online] Available at: <https://www.york.gov.uk/downloads/file/2808/the-local-plan-2005-main-document> [Accessed 06 September 2021].

<sup>13</sup> York City Council, (2018). York draft Local Plan. Publication draft (February 2018). [online] Available at:

<https://www.york.gov.uk/downloads/file/1314/cd001-city-of-york-local-plan-publication-draft-regulation-19-consultation-february-2018-> [Accessed 06 September 2021].

Policy	Policy Context
Upper Poppleton and Nether Poppleton Neighbourhood Plan, 2016-2036 <sup>14</sup>	<p><i>future generations to meet their own needs</i>'. As indicated in the NPPF<sup>4</sup>, the purpose of the planning system is to contribute to the achievement of sustainable development.</p> <p>Development should meet a series of sustainable development principles which include 'creating a prosperous city for all' which includes supporting strategic employment locations and protecting and enhancing the visitor economy.</p> <p>Policy DP3: Sustainable Communities</p> <p>Development should contribute towards sustainable communities by following principles such as respecting the historic character and appearance of the green spaces landscapes.</p> <p>Policy HW1: Protecting Existing Facilities</p> <p>The Council will work with local communities and voluntary sector organisations to help preserve and re-use existing community assets.</p> <p>Section 6: Health and Wellbeing</p> <p>With regards to health and wellbeing, the draft Local Plan sets out the Council's ambition to help create happy, healthy and resilient communities and for all residents to have the best possible physical and mental health throughout the course of their lives.</p>
Selby District Local Plan, 2005 <sup>15</sup>	<p>Policy PNP 2: Green Infrastructure</p> <p>Supports development that safeguard and enhance the green infrastructure within and surrounding Upper Poppleton and Nether Poppleton.</p> <p>Policy PNP 5: Cycle and Pedestrian Access</p> <p>Improved and extended cycle and pedestrian access to and from the village in relation to Manor Academy, local villages and the city will be supported.</p> <p>Policy Planning Strategy 2.1: Promotion of Sustainable Development</p> <p>To ensure an adequate supply of suitable land for employment, housing and other purposes whilst safeguarding environmental and natural resources from inappropriate development. To facilitate economic recovery and diversification in a way which enhances environmental quality.</p>

<sup>14</sup> Nether with Upper Poppleton Neighbourhood Plan Committee, (2016). Upper Poppleton and Nether Poppleton Neighbourhood Plan 2016-2036. [online] Available at: <https://www.york.gov.uk/downloads/file/2830/upper-and-nether-poppleton-neighbourhood-plan-adopted-version-october-2017-> [Accessed 06 September 2021].

<sup>15</sup> Selby District Council, (2005). Selby District Local Plan (saved policies). [online] Available at: <https://www.selby.gov.uk/selby-district-local-plan-sdlp-2005> [Accessed 06 September 2021].

Policy	Policy Context
Selby District Core Strategy Local Plan, 2013 <sup>16</sup>	<p data-bbox="635 230 1342 297">Policy SP1: Presumption in Favour of Sustainable Development</p> <p data-bbox="635 315 1455 600">When considering development proposals, the Council will take a positive approach that reflects the presumption in favour of sustainable development contained in the NPPF. It will always work proactively with applicants jointly to find solutions which mean that proposals can be approved wherever possible, and to secure development that improves the economic, social and environmental conditions in the area.</p> <p data-bbox="635 618 1422 685">Policy SP12: Access to Services, Community Facilities, and Infrastructure</p> <p data-bbox="635 703 1417 909">In all circumstances opportunities to protect, enhance and better join up existing Green Infrastructure, as well as creating new Green Infrastructure will be strongly encouraged, in addition to the incorporation of other measures to mitigate or minimise the consequences of development.</p> <p data-bbox="635 927 1455 1108">Policy SP18: Protecting and Enhancing the Environment Development proposals are encouraged to contribute to the District's Green Infrastructure, consequently providing accessible opportunities to improve the health and wellbeing of the community.</p>
Selby Draft Local Plan - Preferred options, 2021 <sup>17</sup>	<p data-bbox="635 1140 1342 1207">Policy SP1: Presumption in Favour of Sustainable Development</p> <p data-bbox="635 1225 1455 1507">When considering development proposals, the Council will take a positive approach that reflects the presumption in favour of sustainable development contained in the NPPF<sup>4</sup>. It will always work proactively with applicants jointly to find solutions which mean that proposals can be approved wherever possible, and to secure development that improves the economic, social and environmental conditions in the area.</p>
North Yorkshire Joint Health and Well-Being Strategy, 2015-2020 <sup>18</sup>	<p data-bbox="635 1538 1455 1720">The Joint Health and Well-Being Strategy is a shared agreement between organisations that are represented on the Health and Well-Being Board. These include local authorities, Clinical Commissioning Groups and National Health Service (NHS) England.</p> <p data-bbox="635 1738 1437 1796">It is based on five key themes: Connected Communities; Start Well; Live Well; Age Well; and Dying Well.</p>

<sup>16</sup> Selby District Council, (2013). Selby District Core Strategy Local Plan. [online] Available at: [https://www.selby.gov.uk/sites/default/files/Documents/CS\\_Adoption\\_Ver\\_OCT\\_2013\\_REDUCED.pdf](https://www.selby.gov.uk/sites/default/files/Documents/CS_Adoption_Ver_OCT_2013_REDUCED.pdf) [Accessed 06 September 2021].

<sup>17</sup> Selby District Council, (2021). Selby Draft Local Plan - Preferred options January 2021. [online] Available at: [https://www.selby.gov.uk/sites/default/files/Local\\_Plan\\_PREFERRED\\_Options\\_29-01-2021\\_%28Web%20Version%29.pdf](https://www.selby.gov.uk/sites/default/files/Local_Plan_PREFERRED_Options_29-01-2021_%28Web%20Version%29.pdf) [Accessed 06 September 2021].

<sup>18</sup> North Yorkshire Health and Wellbeing Board, (2015). North Yorkshire Joint Health and Well-Being Strategy 2015-2020. [online] Available at: <https://www.nypartnerships.org.uk/sites/default/files/Partnership%20files/Health%20and%20wellbeing/jhwbs.pdf> [Accessed 06 September 2021].

Policy	Policy Context
	The overall outcome of the Strategy is for North Yorkshire to be a place where communities flourish, people shape services and have control of their lives.
North Yorkshire Joint Strategic Needs Assessment, 2019 <sup>19</sup>	The core aim of North Yorkshire's Joint Strategic Needs Assessment (JSNA) is to improve the public's health and reduce inequalities across the whole County. The JSNA provides topic based interactive documents as well as an annual update of core data and summary reports for each local authority and clinical commissioning groups (CCGs). The latest reports were produced in October 2019.
Leeds Joint Health and Wellbeing Strategy, 2016-2021 <sup>20</sup>	The Leeds Joint Health and Wellbeing Strategy sets out a vision for Leeds to be a healthy and caring City for all ages. Key outcomes of this approach are for people who are the poorest, to have improved health the fastest, with an overarching desire to reduce the differences in life expectancy between communities.
York's Joint Health and Wellbeing Strategy, 2017-2022 <sup>21</sup>	The York Joint Health and Wellbeing Strategy is based on four key themes: Mental Health and Wellbeing; Starting and Growing Well; Living and Working Well; and Ageing Well. In order to deliver this Strategy, the Health and Wellbeing Board will need to transform the way in which they work - with individuals, with communities, and within the Board.

## Technical guidance

15.2.4 A summary of the technical guidance for health and wellbeing is given in **Table 15-2**.

**Table 15-2 – Technical guidance relevant to the health and wellbeing assessment**

Technical Guidance Document	Context
Ministry for Housing, Communities and Local Government (2019) Planning Practice Guidance (PPG) <sup>22</sup>	The PPG provides a web-based resource in support of the NPPF <sup>4</sup> and the section on Healthy and Safe Communities offers guidance on health and wellbeing in planning and planning obligations. It covers both: <ul style="list-style-type: none"> <li>• The role of health and wellbeing in planning; and</li> </ul>

<sup>19</sup> North Yorkshire Health and Wellbeing Board. North Yorkshire Joint Strategic Needs Assessment. [online] Available at: <https://www.nypartnerships.org.uk/jsna> [Accessed 02 August 2021].

<sup>20</sup> Leeds Health and Wellbeing Board, (2016). Leeds Joint Health and Wellbeing Strategy 2016-2021. [online] Available at: <https://71633548c5390f9d8a76-11ea5efadf29c8f7bdcc6a216b02560a.ssl.cf3.rackcdn.com/content/uploads/2016/07/Health-and-Wellbeing-2016-2021.pdf> [Accessed 06 September 2021].

<sup>21</sup> York Health and Wellbeing Board, (2017). York's Joint Health and Wellbeing Strategy 2017-2022. [online] Available at: <https://www.york.gov.uk/downloads/file/1103/joint-health-and-wellbeing-strategy-2017-to-2022> [Accessed 06 September 2021].

<sup>22</sup> MHCLG, (2019). Planning Practice Guidance. [online] Available at: <https://www.gov.uk/government/collections/planning-practice-guidance> [Accessed 06 September 2021].

- The links between health and wellbeing and planning. 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 a significant 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 effects.

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Public Health England (2019) The Public Health England Strategy, 2020 to 2025<sup>23</sup>

The strategy sets out how Public Health England will work to improve public health and reduce health inequalities.

The key objectives for the period to 2025 include improved governance and embedding universal approaches on all programmes across Public Health England to support decision making.

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Institute of Health Equality (2010) Fair Society, Healthy Lives: The Marmot Review. Strategic review of health inequalities in England post-2010<sup>24</sup>

This Review provides guidance on decision-making to reduce health inequality in the context of health inequality in England.

The report argues that serious avoidable health inequalities exist across England and shows these inequalities to be determined by a wide range of socio-economic factors. Health is linked to both individuals and communities.

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Institute of Health Equality (2020) Health inequality in England: The Marmot Review 10 years on. (2020)<sup>25</sup>

The Marmot Review 10 Years On report published in February 2020, strengthens the argument provided in the Marmot Review, showing that health inequalities in England are increasing. Social and ethnic inequalities in health should be addressed to ensure better health outcomes for all. The report makes the case for a multi-disciplinary approach to achieve a reduction in health inequalities, which integrates health policies with housing, economic development and transport policies.

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Institute of Health Equality (2020) Build Back Fairer: The COVID-19 Marmot Review<sup>26</sup>

An update to the Marmot Review 10 Years On report, Build Back Fairer: The COVID-19 Marmot Review, was published in December 2020 to investigate how the pandemic has affected health inequalities in England.

The COVID-19 pandemic has exposed and amplified the inequalities highlighted in the Marmot Review 10 Years On report. The report points out that the economic harm

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<sup>23</sup> Public Health England, (2019). PHE Strategy 2020 to 2025. [online] Available at: <https://www.gov.uk/government/publications/phe-strategy-2020-to-2025> [Accessed 06 September 2021].

<sup>24</sup> Institute of Health Equity, (2010). Fair Society, Healthy Lives, The Marmot Review. [online] Available at: <http://www.instituteofhealththequity.org/resources-reports/fair-society-healthy-lives-the-marmot-review> [Accessed 06 September 2021].

<sup>25</sup> Institute of Health Equity, (2020). Health Equity in England: The Marmot Review 10 Years on. [online] Available at: <http://www.instituteofhealththequity.org/resources-reports/marmot-review-10-years-on> [Accessed 06 September 2021].

<sup>26</sup> Institute of Health Equity, (2020). Build Back Fairer: The COVID-19 Marmot Review. The Pandemic, Socioeconomic and Health Inequalities in England. [online] Available at: <http://www.instituteofhealththequity.org/about-our-work/latest-updates-from-the-institute/build-back-fairer> [Accessed 06 September 2021].

Technical Guidance Document	Context
Institute for Environmental Management and Assessment's (IEMA's) (2017) Health in Environmental Impact Assessment: A Primer for a Proportionate Approach <sup>27</sup>	caused by measures to control the virus also risks causing further damage to health and widening of health inequalities.
Wales Health Impact Assessment Support Unit (2017) Wales Health Impact Assessment Support Unit <sup>28</sup>	This guidance proposes ways in which health and wellbeing can be assessed as part of an EIA.
Highways England (2019) Design Manual for Roads and Bridges (DMRB) <sup>29</sup>	<p>Whilst the Project is located within England, the Wales Health Impact Assessment Support Unit (WHIASU) does provide a good array of guidance and resources on how health and well-being of a population may be affected by an action, such as a development proposal. Consideration has been given to the Health and Well-being checklist to help with the identification of which health determinants are relevant.</p> <p>Document LA112 – Population and Human Health sets out requirements for assessing and reporting the environmental effects on population and health from construction, operation and maintenance of highways projects.</p> <p>It provides a methodological framework for the assessment of human health effects in respect of linear infrastructure projects that goes beyond other guidance in detail. It has therefore been used to inform the proposed health and wellbeing assessment.</p>

## 15.3 Consultation and engagement

### Overview

15.3.1 The assessment has been informed by consultation responses and ongoing stakeholder engagement. An overview of the approach to consultation is provided in **Section 4.4 of Chapter 4: Approach to Preparing the PEIR**.

### Scoping Opinion

15.3.2 A Scoping Opinion was adopted by the Secretary of State for Business, Energy and Industrial Strategy (BEIS), administered by the Planning Inspectorate, on 28 April 2021. A summary of the relevant responses received in the Scoping Opinion in relation to

<sup>27</sup> Cave, B. Fothergill, J., Pyper, R., Gibson, G. and Saunders, P., (2017). Health in Environmental Impact Assessment: A Primer for a Proportionate Approach. Ben Cave Associates Ltd, IEMA and the Faculty of Public Health. [online] Available at: <https://www.iema.net> [Accessed 06 September 2021].

<sup>28</sup> Wales Health Impact Assessment Support Unit, (2012); Health Impact Assessment A Practise Guide. [online] Available at: <https://phwwhocc.co.uk/whiasu/> [Accessed 10 August 2021].

<sup>29</sup> Highways England, (2019). Design Manual for Roads and Bridges. [online] Available at: <https://www.standardsforhighways.co.uk/dmrb> [Accessed 06 September 2021].



Health and Wellbeing and confirmation of how these have been addressed within the assessment to date is presented in **Table 15.3**.

15.3.3 The information provided in the PEIR is preliminary and not all of the Scoping Opinion comments have been addressed at this stage. However, all comments will be addressed within the ES.

**Table 15-3 – Summary of EIA Scoping Opinion responses for health and wellbeing**

<b>Consultee</b>	<b>Consideration</b>	<b>How addressed in this PEIR</b>
Planning Inspectorate	The ES should ensure that significant effects on health receptors associated with changes in water quality or flood risk are assessed. However, the ES should avoid duplication of assessment and, where relevant, the Health and Wellbeing aspect chapter should cross refer to information contained in other ES aspect chapters e.g. Hydrology.	Comment noted and considered throughout this chapter.
Planning Inspectorate	The ES should ensure that significant effects on health receptors associated with changes to residual soil contamination and accumulation of ground gas are assessed. However, the ES should avoid duplication of assessment, and, where relevant, the Health and Wellbeing aspect chapter should cross refer to information contained in other aspect chapters e.g. Geology and Hydrogeology.	Comment noted and considered throughout this chapter.
Planning Inspectorate	On the basis that the Proposed Development will comply, as a minimum, with relevant EMF guidelines in all of its operations and will include a separate document with comprehensive information as described in section 17.4 of the Scoping Report to demonstrate that the Proposed Development will not give rise to likely significant effects in respect of EMF, the Inspectorate agrees that this matter can be scoped out of the ES.	Comment noted. Information on why EMF effects have been scoped out of the assessment is included in <b>Chapter 4: Approach to Preparing the PEIR</b> , specifically <b>Section 4.11</b> with this being considered where relevant in this chapter.
Planning Inspectorate	The ES should include reference to the North Yorkshire JSNA, which provides district profiles and Clinical Commissioning Group (CCG) profiles.	Comment noted. The chapter includes reference to the JSNA <sup>18</sup> .
Planning Inspectorate	...the ES should include a description of the baseline conditions for mental health or otherwise explain the basis on which this matter will be assessed.	Comment noted. The chapter includes a description of the baseline conditions for mental health in <b>Section 15.5</b> .
Planning Inspectorate	The ES should clearly explain the approach to identification of receptors and their geographical extent, including for the different aspects that	Comment noted. This is clarified in this chapter in <b>Section 15.4</b> .

Consultee	Consideration	How addressed in this PEIR
	could affect health and wellbeing, as well as how vulnerable groups have been identified and any variation in the approach to assessment for those groups.	
Planning Inspectorate	It is therefore proposed that the Health and Wellbeing chapter of the ES will describe the outcomes using the criteria set out in the Healthy Urban Development Unit (HUDU), which include "Positive", "Neutral", "Negative" and "Uncertain." The ES should make clear when applying the criteria whether the effect is deemed to be significant in terms of the EIA Regulations and whether mitigation is required.	Comment noted. To be addressed in the ES.
Planning Inspectorate	The ES should clarify whether the same assessment methodology will be used to assess effects on mental health and wellbeing and vulnerable groups or set out the assessment methodology where this differs.	Comment noted. This has been clarified in this chapter in <b>Section 15.4</b> .
Hambleton District Council	Health Impacts. Matters pertaining to health perceptions appear to have been overlooked. There remains public concern about high voltage overhead cables owing to perceptions of the health impact. Whether or not Electro-magnetic (EM) radiation has a health impact, there is clearly potential for a mental health impact resulting from a fear of impact.	Comment noted. EMF effects have been scoped out of the ES as discussed in <b>Chapter 4: Approach to Preparing the PEIR</b> . However, health perception is covered under amenity impacts in this chapter.
North Yorkshire County Council	<b>Section 15</b> related to Health and Wellbeing. We would recommend the inclusion of the North Yorkshire JSNA in table 15.1 as this provides both district profiles and CCG profiles <a href="https://www.nypartnerships.org.uk/jsna">https://www.nypartnerships.org.uk/jsna</a> . The rest of it seems very thorough and relates to relevant strategies etc. We also like the proposed assessment and consultation approach outlined.	Comment noted. This chapter includes reference to the North Yorkshire JSNA <sup>19</sup> in <b>Section 15.2</b> .
Public Health England	We understand that the promoter will wish to avoid unnecessary duplication and that many issues including air quality, emissions to water, waste, contaminated land etc. will be covered elsewhere in the Environmental Statement (ES). We believe the summation of relevant issues into a specific section of the report provides a focus which ensures that public health is given adequate consideration. The section should summarise key information, risk assessments, proposed mitigation measures, conclusions and residual impacts, relating to human health. Compliance with the requirements of National	Comment noted. These are included in this chapter. No further action required.

Consultee	Consideration	How addressed in this PEIR
	Policy Statements and relevant guidance and standards should also be highlighted.	
Public Health England	In terms of the level of detail to be included in an ES, we recognise that the differing nature of projects is such that their impacts will vary. The attached appendix summarises our requirements and recommendations regarding the content of and methodology used in preparing the ES. Please note that where impacts relating to health and/or further assessments are scoped out, promoters should fully explain and justify this within the submitted documentation.	Comment noted. The suggested methodology has been reviewed and incorporated into the methodology in this chapter, where appropriate.
Public Health England	We note that the applicant is planning on considering possible health impacts of Electric and Magnetic Fields (EMF) in their assessment.	EMF effects have been scoped out of the ES with information to explain why included in <b>Chapter 4: Approach to Preparing the PEIR</b> , specifically <b>Section 4.11</b> of this report. Considerations of health perceptions are included in the assessment of amenity effects in <b>Section 15.9</b> .
Public Health England	We request that the ES clarifies this and if necessary, the proposer should confirm either that the proposed development does not impact any receptors from potential sources of EMF; or ensure that an adequate assessment of the possible impacts is undertaken and included in the ES.	As above. No further action required.
Public Health England	This section of our scoping response identifies the wider determinants of health and wellbeing we expect the ES to address, to demonstrate whether they are likely to give rise to significant effects. We have focused our approach on scoping determinants of health and wellbeing under four themes, which have been derived from an analysis of the wider determinants of health mentioned in the National Policy Statements. The four themes are: Access, Traffic and Transport, Socioeconomic, Land Use.	Comment noted and considered throughout this chapter.
Public Health England	The scoping report references the broad definition of health proposed by the World Health Organisation (WHO) and includes reference to any mental health and wellbeing.	Comment noted. This chapter includes a description of the baseline conditions for mental health (see <b>Section 15.5</b> ).

Consultee	Consideration	How addressed in this PEIR
Public Health England	We welcome the inclusion of mental wellbeing, being fundamental to achieving a healthy, resilient and thriving population. It underpins healthy lifestyles, physical health, educational attainment, employment and productivity, relationships, community safety and cohesion and quality of life. The baseline health and inequalities data (Table 15.4) does not, however, contain data regarding local mental health and wellbeing.	Comment noted. The mental health baseline is included in this chapter. The method for assessing mental health and wellbeing has been clarified in <b>Section 15.4</b> .
Public Health England	An approach to the identification of vulnerable populations was provided as part of the health baseline data. The impacts on health and wellbeing and health inequalities of the scheme may have particular effect on vulnerable or disadvantaged populations, including those that fall within the list of protected characteristics.	As above. No further action required.
Public Health England	The ES should continue the initial identification of baseline data encompassing deprivation, demographics and other socio-economic factors. The environmental statement should identify, as far as possible, the presence and effects on vulnerable populations. The Wales HIA Support Unit provides guidance of the potential populations to be regarded as vulnerable.	As above. The Wales HIA Support Unit guidance was reviewed and relevant guidance is included in this chapter.
Skelton Parish Council	Very little is mentioned with respect to the impact on the health and wellbeing of people from the effects of Electro Magnetic [sic] Fields (EMF) and the potential long-term health effects. There is a wealth of information pertaining to this in respect to the siting of overhead High Voltage Power Lines (OHHVPL). In general, the locating of these lines less than 400m distance from villages and residents leads to health and welfare impacts on people. Moreover, the greater the voltage and amps conducted, the greater the field being generated	EMF effects have been scoped out of the ES as discussed in <b>Chapter 4: Approach to Preparing the PEIR</b> , specifically <b>Section 4.11</b> of this report. Considerations of health perceptions are included in the assessment of amenity effects in <b>Section 15.9</b> . A separate technical note on EMF will be provided in support of the

Consultee	Consideration	How addressed in this PEIR
	and consequently the impact on people and wildlife increases.	Development Consent Order application.
Skelton Parish Council	As current understanding in respect to substation notes finds that a minimum safety distance of 1/4 mile (1,320 feet) might be considered prudent. For individuals with EMF hypersensitivity or other serious health issues a much greater safety distance is needed. The Council could find no mention of Health and welfare as a primary consideration in the Environmental Impact Assessment Scoping Report and only a scant mention of (EMF) being expressed in one section listed below. Given that this should be a primary concern for any project at the inception phase, then we would have expected a greater emphasis being placed on the safety to people.	As above. No further action required.

## Technical engagement

- 15.3.4 No technical engagement has been required in regard to health and wellbeing to date.
- 15.3.5 During the preparation of the ES, stakeholder engagement will be carried out as needed to supplement desk-based analysis, and to capture any local data or local knowledge that might not be accessible in the public domain. With respect to the health and wellbeing assessment specifically, the approach will inform the baseline context, managing sensitivities and relevant design and mitigation measures.
- 15.3.6 Key stakeholders that will be engaged will include: health officials from relevant local authorities and Public Health England.

## 15.4 Data gathering methodology

### Study Area

- 15.4.1 This section presents the Study Area for health and wellbeing based on current Project information. The Study Area and assessment year for the determinants of health has matched those of the individual environmental aspects (for example air quality, noise and transport) set out within the relevant chapters. They may also be different for the construction and operational phases, and across the main components of the Project.
- 15.4.2 At present, a wide definition of the spatial area for consideration for the health assessment applies which includes the draft Order Limits (see **Figure 1.2**). It also includes the surrounding areas based on administrative boundaries to align with how the Government publishes official data and with the boundaries of health service planning areas, which are typically at borough-level (see **Figure 15.1**). Study Areas defined by other topics for each environmental aspect of relevance to health and wellbeing are also relevant in the assessment where effects are identified that inform the health and wellbeing assessment (for example air quality, noise and transport) and are as set out in the relevant chapters of this PEIR.

15.4.3 The immediate Zone of Influence (Zoi) of the Project is identified as the wards which fall within the draft Order Limits. The wider Zoi is identified as being the districts through which the Project passes. These are identified in the following section.

#### *Health and wellbeing profile baseline Study Area*

- 15.4.4 The Study Area for the health and wellbeing profile baseline is influenced by the availability of relevant publicly available data which is collected at different scales of administrative geography.
- 15.4.5 The baseline Study Areas includes national (England and Wales), regional (Yorkshire and Humber), County (North Yorkshire County Council), and district level (Harrogate Borough Council (Harrogate), Hambleton District Council (Hambleton), Leeds City Council (Leeds), York City Council (York), and Selby District Council (Selby)). In addition, the health and wellbeing baseline includes, where data is available and relevant, profile information from the local wards closest to the Project.
- 15.4.6 Dependent on the human health indicator being analysed, ward level data has been sourced for either 2011 Census or 2018 electoral wards. Whilst the geographic extents of the 2011 Census and 2018 electoral wards differ, both types of wards provide an indication of local health in proximity to the Project and are therefore considered suitable for assessing the existing baseline conditions for health and wellbeing.
- 15.4.7 The 2011 Census wards which fall within the draft Order Limits of the Project include:
- Harrogate Borough Council: Ribston; Marston Moor; and Ouseburn.
  - Hambleton District Council: Shipton; Easingwold; and Huby and Sutton.
  - Leeds City Council: Wetherby.
  - York City Council: Rural West York; Haxby and Wigginton; Osbaldwick; and Skelton, Rawcliffe and Clifton Without.
  - Selby District Council: Tadcaster East; Tadcaster West; Appleton Roebuck; Sherburn in Elmet; Saxton and Ulleskelf; Fairburn with Brotherton; and Monk Fryston and South Milford.
- 15.4.8 The 2018 electoral wards which fall within the draft Order Limits of the Project include:
- Harrogate Borough Council: Marston Moor; and Ouseburn.
  - Hambleton District Council: Easingwold; and Huby.
  - Leeds City Council: Wetherby.
  - York City Council: Rural West York; Haxby and Wigginton; Osbaldwick and Derwent; and Hull Road.
  - Selby District Council: Tadcaster; Appleton Roebuck and Church Fenton; Sherburn in Elmet; South Milford; Byram and Brotherton; and Monk Fryston.

#### *Health and wellbeing assessment Study Area*

15.4.9 The Study Areas for aspects of relevance to the health and wellbeing assessment are influenced by the geographic extent of the relevant technical topics. For example, potential effects on health and wellbeing related to noise are likely to be experienced close to the source, whereas health and wellbeing effects related to socio-economic factors such as employment opportunities would be expected to be experienced over a

larger area. The impact of the Project on existing health services is assessed in line with the scale at which services are planned. The assessment refers to the spatial areas identified by the relevant technical topic assessments. These are set out in this PEIR and will be finalised in the ES.

## Desk study

15.4.10 A summary of the organisations that have supplied data, together with the nature of that data is outlined in **Table 15.4**.

**Table 15-4 – Data sources used to inform the health and wellbeing assessment**

Organisation	Data Source	Data Provided
Office for National Statistics (ONS)	Mid-year sub-national population estimate data (2019-based) (2020) <sup>30</sup>	Information on population estimates and growth projections in the Study Area.
	Population Estimates (2019-based) (2020) <sup>31</sup>	Data on the ethnic profile of the population in the Study Area.
	2011 Census Data <sup>32</sup>	Data on the health profile of the population in the Study Area.
	Life Expectancy at birth data (2020) <sup>33</sup>	Data on economic activity and qualification attainments.
	Annual Population Survey (2020) <sup>34</sup>	Data on out-of-work benefit claimant counts.
	Claimant Count (2021) <sup>35</sup>	
NHS Choices	NHS Choices website <sup>36</sup>	Health services and patient list size data.
Sports England	Active Lives Survey <sup>37</sup>	Data on the engagement in, and attitudes to, sport and physical activity.
Public Health England	Health Profiles (2019) <sup>38</sup>	Health outcomes of the population in the Study Area.
	Mental Health and Wellbeing JSNA (2018) <sup>39</sup>	Mental health outcomes of the population in the Study Area.

<sup>30</sup> ONS, (2020). Mid-Year Population Estimates 2019.

<sup>31</sup> ONS, (2020). Population estimates - local authority based by five-year age band.

<sup>32</sup> ONS, (2012). Census 2011.

<sup>33</sup> ONS, (2020). Life Expectancy at Birth and at Age 65 by Local Areas in England and Wales (2017 to 2019), ONS.

<sup>34</sup> ONS, (2020). Annual Population Survey.

<sup>35</sup> ONS, (2021). Claimant Count.

<sup>36</sup> NHS Choices website. [online]: <http://www.nhschoices.gov.uk> [Accessed July 2021].

<sup>37</sup> Active Lives, Sports England website. [online]: <https://activelives.sportengland.org/> [Accessed July 2021].

<sup>38</sup> PHE, (2019). Health Profiles (2019).

<sup>39</sup> PHE, (2018). Mental Health and Wellbeing JSNA.

Organisation	Data Source	Data Provided
		Deaths by cause, disease prevalence data.
Ministry of Housing, Communities and Local Government	Index of Multiple Deprivation (2019) <sup>40</sup>	Data on relative deprivation of the population in the Study Area.
North Yorkshire Health and Wellbeing Board	North Yorkshire Joint Strategic Needs Assessment (2015) <sup>41</sup>	North Yorkshire health profile and priorities, including Hambleton, Harrogate and Selby Districts.
Leeds Health and Wellbeing Board	Leeds Joint Strategic Needs Assessment (2018) <sup>42</sup>	Leeds health profile and health priorities.
York Health and Wellbeing Board	York Joint Strategic Needs Assessment (2017) <sup>43</sup>	York health profile and health priorities.

## Survey work

15.4.11 No survey work has been completed for the purposes of the assessment.

## 15.5 Overall baseline

### Current baseline

15.5.1 This section sets out a summary of the key relevant baseline data covering the Study Areas, which has been identified through a desktop study.

### Health and wellbeing profile – community health profile

#### *Population and Demographics*

15.5.2 The Project is located in the Yorkshire and Humber region, which has an estimated population of 5,502,967<sup>44</sup>. The Study Area and its immediate surroundings are predominantly farmland, with nearby villages including Tadcaster, Monk Fryston, South Milford, Nether Poppleton, Skelton, Shipton and Wigginton. In addition, the Project includes works in the east of the City of York, at Osbaldwick Substation.

15.5.3 In 2015, Harrogate was estimated to have a population of 157,016, with its population declining year on year since 2011<sup>45</sup>. However, as of 2016, this population decline has

<sup>40</sup> MHCLG, (2019). English Indices of Deprivation 2019.

<sup>41</sup> North Yorkshire Health and Wellbeing Board, (2015). North Yorkshire Joint Health and Well-Being Strategy 2015-2020.

<sup>42</sup> Leeds Health and Wellbeing Board, (2018). Leeds Joint Strategic Needs Assessment 2018-2023.

<sup>43</sup> York Health and Wellbeing Board, (2017). York's Joint Health and Wellbeing Strategy 2017-2022.

<sup>44</sup> ONS, (2020). Mid-Year Population Estimates 2019. [online] Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/populationestimatesforukenglandandwalesscotlandandnorthernireland> [Accessed 10 February 2021].

<sup>45</sup> DATA North Yorkshire. District Population. Available at: <https://www.datanorthyorkshire.org/JSNA/articles/population-in-north-yorkshire/district-population/> [Accessed 15 July 2021]



reversed, with it being estimated that Harrogate had a population of 159,800 in 2016<sup>46</sup> and 160,800 in 2019<sup>47</sup>. The percentage of Harrogate's population aged between 16-64 (58.8%) is lower but not too dissimilar from the Yorkshire and Humber region (62.1%) and England and Wales (63.4%).

- 15.5.4 Hambleton sits within North Yorkshire County Council. Hambleton was estimated to have a population of 90,700<sup>48</sup> in 2017 which rose to 91,600 in 2019<sup>49</sup>. In 2019, 57.5% (52,700) of Hambleton's population was aged between 16-64, which is lower than both Yorkshire and Humber (62.1%) and England and Wales (63.4%).
- 15.5.5 The 2011 census identified that the population of Leeds was 751,500 and has risen since then with the population in 2019 estimated to be 793,100. The percentage of Leeds's population aged between 16-64 is 65.1%, which is higher than both Yorkshire and Humber (62.1%) and England and Wales (63.4%).
- 15.5.6 York sits within North Yorkshire County Council. The 2011 Census indicated that York had a population of 198,051 people and this was estimated to rise to 208,367 people in 2016<sup>50</sup>. York's population has continued to grow with the population estimated to be 210,600 in 2019, of which 66.0% is aged between 16-64 years old.
- 15.5.7 Selby sits within North Yorkshire County Council. In 2013, it was estimated that the total population of Selby was 82,200<sup>51</sup>. It was estimated that the population would rise to 86,667 in 2016, with population growth centred mainly around the key market towns of Selby, Tadcaster and Sherburn-in-Elmet<sup>52</sup>. However, by 2019, Selby's population had increased to 90,600<sup>53</sup>. Approximately 61.1% of the population is aged between 16-64 years old, which is lower than both Yorkshire and Humber (62.1%) and England and Wales (63.4%).

## *Ethnicity*

- 15.5.8 Data from the 2011 Census, which is the most recent data source available, shows the population proportion by ethnicity for each local authority and selected wards within the human health baseline Study Area and wider area comparators. This data is presented in **Table 15.5** and **Table 156**.

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<sup>46</sup> DATA North Yorkshire. District population estimates by 5-year age band. Available at: <https://hub.datanorthyorkshire.org/dataset/population-estimates/resource/46d7d92b-cd5f-49be-af9d-443134eef104> [Accessed 15 July 2021]

<sup>47</sup> NOMIS. Local Market Profile – Harrogate. Available at: <https://www.nomisweb.co.uk/reports/lmp/la/1946157115/report.aspx> [Accessed 15 July 2021]

<sup>48</sup> Hambleton Local Plan Publication Draft 2019. Available at: <https://www.hambleton.gov.uk/homepage/4/evidence-base> [Accessed 15 July 2021]

<sup>49</sup> NOMIS. Local Authority Profile – Hambleton. Available at: <https://www.nomisweb.co.uk/reports/lmp/la/1946157114/report.aspx?town=Hambleton#tabrespop> [Accessed 15 July 2021]

<sup>50</sup> City of York Local Plan Publication Draft 2018. Available at: <https://www.york.gov.uk/downloads/download/420/local-plan-submission-documents-1> [Accessed 15 July 2021]

<sup>51</sup> Selby District Core Strategy and Local Plan 2013. Available at: <https://www.selby.gov.uk/selby-district-core-strategy-local-plan> [Accessed 15 July 2021]

<sup>52</sup> Selby District Authority Monitoring Report 2017-2018. Available at: <https://www.selby.gov.uk/authority-monitoring-report-and-infrastructure-funding-statement> [Accessed 15 July 2021]

<sup>53</sup> NOMIS. Local Market Profile – Selby. Available at: <https://www.nomisweb.co.uk/reports/lmp/la/1946157119/report.aspx> [Accessed 15 July 2021]

**Table 15-5 – Ethnicity by local authority and wider comparators**

	<b>Harrogate District Council</b>	<b>Hambleton District Council</b>	<b>Leeds City Council</b>	<b>York City Council</b>	<b>Selby District Council</b>	<b>North Yorkshire and Humber</b>	<b>England and Wales</b>
White	96.3%	98.3%	85.1%	94.3%	98.4%	88.8%	86.0%
Mixed/ Multiple Ethnic Group	1.1%	0.7%	2.6%	1.2%	0.8%	1.6%	2.2%
Asian/ Asian British	1.5%	0.7%	7.8%	3.4%	0.6%	7.3%	7.5%
Black/ African/ Caribbean/ Black British	0.7%	0.2%	3.4%	0.6%	0.3%	1.5%	3.3%
Other	0.3%	0.1%	1.1%	0.5%	0.0%	0.8%	1.0%

**Table 15-6 – Ethnicity by ward**

<b>Borough</b>	<b>Ward</b>	<b>White</b>	<b>Mixed/ Multiple Ethnic Group</b>	<b>Asian/ Asian British</b>	<b>Black/ African/ Caribbean/ Black British</b>	<b>Other</b>
Harrogate	Ribston	98.3%	0.6%	0.7%	0.2%	0.2%
	Ouseburn	92.7%	0.9%	5.6%	0.4%	0.5%
	Marston Moor	98.8%	0.7%	0.2%	0.2%	0.1%
Hambleton	Shipton	98.7%	0.3%	0.5%	0.4%	0.1%
	Easingwold	98.9%	0.5%	0.5%	0.0%	0.1%
	Huby and Sutton	98.7%	0.6%	0.6%	0.1%	0.1%
Leeds	Wetherby	97.3%	1.0%	1.2%	0.3%	0.2%
York	Rural West York	97.6%	0.9%	1.0%	0.4%	0.1%
	Haxby and Wigginton	98.2%	0.6%	0.9%	0.2%	0.1%
	Osbalwick	95.2%	1.0%	2.7%	0.2%	0.9%

Borough	Ward	White	Mixed/ Multiple Ethnic Group	Asian/ Asian British	Black/ African/ Caribbean/ Black British	Other
	Skelton, Rawcliffe and Clifton Without	95.9%	1.1%	2.4%	0.4%	0.3%
Selby	Tadcaster East	97.6%	0.9%	0.7%	0.8%	0.0%
	Tadcaster West	98.4%	0.4%	0.4%	0.8%	0.0%
	Appleton Roebuck	97.4%	0.9%	1.0%	0.8%	0.0%
	Sherburn in Elmet	98.5%	0.7%	0.5%	0.2%	0.0%
	Saxton and Ulleskelf	98.8%	0.5%	0.6%	0.0%	0.1%
	Fairburn with Brotherton	98.6%	0.6%	0.3%	0.5%	0.0%
	Monk Fryston and South Milford	97.8%	0.5%	0.6%	0.9%	0.2%

15.5.9 The population within the human health baseline Study Area is shown to be mostly White, with the Asian/Asian British population being the second largest ethnic group by population proportion. Selby, Hambleton, Harrogate and York are less ethnically diverse than England and Wales, while Leeds is more diverse. All wards within the Study Area are less ethnically diverse than England and Wales.

### *Childhood Obesity*

15.5.10 Data from Public Health England for the year 2019/20 shows that the prevalence of obesity in children (aged 10-11 years) is better in Harrogate (17.2%) and Hambleton (17.6%), and slightly better in Selby (20.7%) and Leeds (20.8%) compared to North Yorkshire and Humber (21.9%) and the national average (21.0%). However, York (22.1%) has worse prevalence compared to the national (England) average (21.0%).

15.5.11 The prevalence of childhood obesity in the 2018 electoral wards within the Study Area aligns with the data at the local authority level and hence is below the national average. These are shown in **Table 15.11**.

### *Long-term illness or disability*

15.5.12 Data from the 2011 Census, which is the most recent data source available, shows that the four local authorities within the human health baseline Study Area had significantly lower proportions of residents whose daily activities were limited by a long-term health

problem or disability compared to wider geographic comparators. The proportion of the population whose daily activities were limited by a long-term illness or disability in Selby (7.2%), Hambleton (7.1%), Harrogate (6.6%), Leeds (7.9%), and York (6.6%) was lower than the proportion across England and Wales (8.5%).

15.5.13 Out of all 2011 Census wards within the Study Area, Easingwold (Selby) had the highest proportion of residents whose daily activities were limited by a long-term health problem or disability (8.5%) which is the same as the England and Wales average (8.5%).

### *Self-assessment of health*

15.5.14 Data from the 2011 Census, which is the most recent data source available, shows that lower proportions of the populations within Selby, Hambleton, Harrogate, Leeds, and York reported their health as being 'bad' or 'very bad' when compared to wider areas and England and Wales. Data from the 2011 Census also shows that a higher proportion of people within the human health baseline Study Area believed they were in 'good' or 'very good' health compared to the national comparator; Selby (82.7%), Hambleton (83.1%), Harrogate (84.4%), Leeds (81.9%), and York (83.9%) compared to 81.2% across England and Wales.

15.5.15 Out of all 2011 Census wards within the Study Area, Fairburn with Brotherton (Selby) had the highest proportion of residents that believed they were living in 'bad' or 'very bad' health (7.0%), which was higher than the average for England and Wales (5.6%).

### *Life expectancy*

15.5.16 Based on the ONS Mid-Year Population Estimates data<sup>54</sup>, male life expectancy in the health and wellbeing baseline Study Area is 80.5 years in Selby, 81.8 years in Hambleton, 81.1 years in Harrogate, 78.2 years in Leeds, and 80.2 years in York. This is higher in all areas compared to the average for England and Wales of 79.8 years.

15.5.17 Female life expectancy in the Study Area is 83.5 years in Selby, 84.8 years in Hambleton, 85.2 years in Harrogate, 82.1 years in Leeds, and 83.7 years in York. This is higher in all areas, except Leeds, compared to the average for England and Wales of 83.4 years.

### *Economic Activity*

15.5.18 Data from the Annual Population Survey<sup>55</sup> and ONS Out-of-Work Benefits Claimant Count<sup>56</sup> has been collated to provide an analysis of economic activity in the Study Area.

15.5.19 In Harrogate, 81.7% of the working age population is economically active, which is above the national (England) average of 79.5% and the Yorkshire and Humber regional average economic activity of 78.1%<sup>57</sup>. As of July 2021, approximately 2.9% of its working age population are in receipt of out of work benefits, which is considerably lower than both the Yorkshire and Humber region (5.9%) and England (5.8%).

15.5.20 Hambleton has a highly economically active population, with 81.5% of people of working age being classified as economically active in 2020, in comparison to the Yorkshire and

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<sup>54</sup> ONS, (2020). Mid-Year Population Estimates 2019.

<sup>55</sup> ONS, (2020). Annual Population Survey.

<sup>56</sup> ONS, (2021). Claimant Count.

<sup>57</sup> Nomis, (2021). Labour Market Profile, Harrogate.

<https://www.nomisweb.co.uk/reports/lmp/la/1946157115/report.aspx?c1=2013265923&c2=2092957699>

Humber region (78.1%) and England (79.5%) during 2019<sup>58</sup>. In July 2021 the number of claimants of out of work benefits within Hambleton (2.5%) was considerably lower than that recorded for the Yorkshire and Humber region (5.9%) and England (5.8%).

15.5.21 Approximately 84.1% of Leeds working age population are economically active, which is higher than the Yorkshire and Humber region (78.1%) and England (79.5%)<sup>59</sup>.

However, Leeds recorded a slightly higher level of out of work benefit usage (6.1%) compared to the regional (5.9%) and England average (5.8%).

15.5.22 In York, 79.7% of the population is economically active and there is a low claimant rate of out of work benefits at 2.7%<sup>60</sup>. Similarly, in Selby, 79.1% of the population is economically active and there is a lower uptake of out of work benefits at 3.1%<sup>61</sup>.

### Qualifications

15.5.23 Data from the Annual Population Survey<sup>62</sup> has been collated to provide an analysis of qualifications attainment across the Study Area between January 2020 and December 2020 as shown in **Table 15.7**.

15.5.24 This shows that within the Study Area levels of qualifications attainment are above regional and national averages at all levels i.e. National Vocational Qualification (NVQ)1 and above, and higher. This is with the exception of Selby, where levels of qualifications attainment are below both regional and national averages at all levels. In addition, it is noted that the proportion of Harrogate's population that has a NVQ4 and above qualification is higher than the regional average but lower than the average for England.

**Table 15-7 – Qualifications profile of the population**

Qualification Level	Harrogate District Council	Hambleton District Council	Leeds City Council	York City Council	Selby District Council	North Yorks. and Humber	England
NVQ4 and above	39.9%	42.9%	46.9%	46.4%	30.4%	37.3%	42.8%
NVQ3 and above	63.4%	63.7%	66.4%	67.1%	49.9%	57.7%	61.3%
NVQ2 and above	81.5%	84.4%	80.0%	83.6%	68.7%	75.9%	78.2%
NVQ1 and above	92.9%	92.0%	90.4%	90.9%	83.8%	86.9%	88.2%
Other qualifications	*	*	5.3%	3.7%	8.7%	6.2%	5.7%
No qualifications	*	*	4.3%	5.3%	*	7.0%	6.2%

\* Sample size too small for reliable estimate.

<sup>58</sup> Nomis, (2021). Labour Market Profile, Hambleton. <https://www.nomisweb.co.uk/reports/lmp/la/1946157114/report.aspx#tabwab>

<sup>59</sup> Nomis, (2021). Labour Market Profile, Leeds. <https://www.nomisweb.co.uk/reports/lmp/la/1946157127/report.aspx#tabwab>

<sup>60</sup> Nomis, (2021). Labour Market Profile, York. <https://www.nomisweb.co.uk/reports/lmp/la/1946157112/report.aspx#tabwab>

<sup>61</sup> Nomis, (2021). Labour Market Profile, Selby. <https://www.nomisweb.co.uk/reports/lmp/la/1946157119/report.aspx#tabwab>

<sup>62</sup> ONS, (2020). Annual Population Survey.

## Deprivation

- 15.5.25 The Government's Index of Multiple Deprivation (2019)<sup>63</sup> measures deprivation in England across seven different domains which combine to create an overall index.
- 15.5.26 According to the English Indices of Deprivation, in 2019 Harrogate was ranked 278<sup>th</sup> out of 317 local authorities in England (where 1 is the most deprived). Only 2% of the Lower Layer Super Output Areas (LSOAs) in the district are in the 30% most deprived, which is lower than the proportion for the Yorkshire and Humber region (40.0%). With respect to the health and disability deprivation, 3% of LSOAs in the district are in the 30% most deprived, which is lower than the proportion for the Yorkshire and Humber region (44.0%).
- 15.5.27 Hambleton was ranked 255<sup>th</sup> out of 317 local authorities in 2019. Only 3.8% of the LSOAs in the district are in the 30% most deprived, which is lower than the regional average (40.0%). For deprivation measured by health and disability, 1.9% of LSOAs in the district are in the 30% most deprived, notably lower than the regional average.
- 15.5.28 Leeds was ranked 92<sup>nd</sup> out of 317 local authorities in 2019. 42.3% of the LSOAs in the district are in the 30% most deprived, which is higher than the proportion for the Yorkshire and Humber region (40.0%). With respect to health and disability deprivation, 45.6% of LSOAs in the district are in the 30% most deprived, which is higher than the regional average.
- 15.5.29 York was ranked 275<sup>th</sup> out of 317 local authorities in 2019. 16% of the LSOAs in the district are in the 30% most deprived, which is lower than the proportion for the Yorkshire and Humber region (40.0%). Regarding health and disability deprivation, 5.8% of LSOAs in the district are in the 30% most deprived, which is again lower than the regional average.
- 15.5.30 Selby was ranked the 252<sup>nd</sup> most deprived local authority in England. Only 2% of the LSOAs in the district are in the top 30% most deprived in England, which is lower than the proportion for the Yorkshire and Humber region (19.3%). With respect to health and disability deprivation, 6.0% of LSOAs in the district are in the 30% most deprived, which is lower than the proportion for the Yorkshire and Humber region (44.0%).
- 15.5.31 **Table 15.8** shows that areas within the Study Area perform considerably better than the regional average on deprivation as well as the health deprivation and disability deprivation domain. Leeds however is performing slightly worse than the regional average on all indicators considered.

**Table 15-8 – English Index of Deprivation**

	<b>Harrogate District Council</b>	<b>Hambleton District Council</b>	<b>Leeds City Council</b>	<b>York City Council</b>	<b>Selby District Council</b>	<b>North Yorks. and Humber</b>
Rank (of 317, where 1 is most deprived)	278 <sup>th</sup>	255 <sup>th</sup>	92 <sup>nd</sup>	275 <sup>th</sup>	252 <sup>nd</sup>	-
LSOAs within the	2.0%	3.8%	42.3%	16.0%	2.0%	40.0%

<sup>63</sup> DCLG, (2019). English Indices of Deprivation 2019. [online] Available at: <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2019> [Accessed 10 February 2021].

	Harrogate District Council	Hambleton District Council	Leeds City Council	York City Council	Selby District Council	North Yorks. and Humber
30% most deprived						
Health Deprivation and Disability Domain - LSOAs within the 30% most deprived	2.0%	1.9%	45.6%	5.8%	6.0%	44.0%

### *Mental health*

15.5.32 Mental health and well-being profiles produced by Public Health England provide a summary of the mental health of people within local authority areas and a comparison of local mental health with average values for all areas of England<sup>64</sup>. Mental health profiles for 2018/19 have been obtained from the NHS North Yorkshire Clinical Commissioning Group (CCG) JSNA Report and are provided in **Table 15.9**.

15.5.33 The proportion of the population aged 16 and over with mental health disorders in local authorities within the Study Area is below the average for England (16.9%) with the exception of Leeds (18.2%). This is similar for the population aged 65 and over; all local authorities within the Study Area do better than the national average (10.2%) with the exception of Leeds (10.8%).

15.5.34 The rate of Employment and Support Allowance (ESA) claimants for mental and behavioural disorders reflect this trend as well as the level of deprivation identified within the Study Area. All local authorities within the Study Area do significantly better than the national average (27.3 per 1,000), with the exception of Leeds (33.4 per 1,000). The best performing authority within the Study Area is Hambleton with a rate of 13.2 per 1,000.

### *Health and Wellbeing*

15.5.35 **Table 15.9** provides a profile of health and wellbeing in the area surrounding the Project, focusing on key indicators identified by Public Health England<sup>65</sup> and supplemented by ONS data<sup>66,67,68</sup> at local authority level including a comparison of these to regional and England and Wales averages.

<sup>64</sup> PHE, (2018). Mental Health and Wellbeing JSNA.

<sup>65</sup> PHE, (2019). Health Profiles (2019). [online] Available at: <https://fingertips.phe.org.uk/profile/health-profiles> [Accessed 29 July 2021].

<sup>66</sup> ONS, (2020). Mid-Year Population Estimates 2019. [online] Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/populationestimatesforukenglandandwalescotlandandnorthernireland> [Accessed 29 July 2021].

<sup>67</sup> ONS, (2012). Census 2011. [online] Available at: <https://www.ons.gov.uk/census/2011census> [Accessed 29 July 2021].

<sup>68</sup> ONS, (2020). Annual Population Survey. Available at: [https://www.nomisweb.co.uk/home/release\\_group.asp?q=16](https://www.nomisweb.co.uk/home/release_group.asp?q=16) [Accessed 29 July 2021].

**Table 15-9 – Health and wellbeing profile**

<b>Indicator</b>	<b>Harrogate District Council</b>	<b>Hambleton District Council</b>	<b>Leeds City Council</b>	<b>York City Council</b>	<b>Selby District Council</b>	<b>North Yorkshire County</b>	<b>North Yorkshire and Humber</b>	<b>England and Wales</b>
Working age population (16-64) (2019/20)	58.8%	57.5%	65.1%	66.0%	61.1%	58.59%	62.1%	63.4%
Economically active population (2019/20)	81.7%	81.5%	84.1%	79.7%	79.1%	78.1%	78.1%	79.5%
Long-term illness or disability (2011)	6.6%	7.1%	7.9%	6.6%	7.2%	7.6%	9.1%	8.5%
Population in bad and very bad health (2011)	3.8%	4.3%	5.4%	4.1%	4.6%	4.6%	6.0%	5.6%
Obese adults (aged 18+) (2018/19)	56.9%	62.2%	62.0%	56.9%	72.8%	62.9%	62.3%	63.3%
Obese children (Year 6) (2019/20)	17.2%	17.6%	20.8%	22.1%	20.7%	18.5%	21.9%	21.0%
Physically active adults (2018/19)	72.9%	71.1%	69.7%	75.2%	72.8%	70.7%	66.2%	67.2%
Hospital admissions for alcohol related conditions (2018/19)*	691	612	649	713	629	679	729	664
Life expectancy at birth for males (2017/19) (years)	81.1	81.8	78.2	80.2	80.5	80.6	78.8	79.8
Life expectancy at birth for females	85.2	84.8	82.1	83.7	83.5	84.4	82.5	83.4



<b>Indicator</b>	<b>Harrogate District Council</b>	<b>Hambleton District Council</b>	<b>Leeds City Council</b>	<b>York City Council</b>	<b>Selby District Council</b>	<b>North Yorkshire County</b>	<b>North Yorkshire and Humber</b>	<b>England and Wales</b>
(2017/19) (years)								
Under 75 mortality rate from cardiovascular diseases (2017/19)*	53.1	53.0	82.3	65.9	58.6	59.0	80.2	70.4
Under 75 mortality rate from cancer (2017/19)*	115.9	111.1	146.5	132.2	117.9	117.0	137.5	129.2
Population aged 16 and over estimated to have any common mental health disorder (%)	13.0%	13.0%	18.2%	14.8%	14.2%	14.1%	17.6%	16.9%
Population aged 65 and over estimated to have any common mental health disorder (%)	8.5%	8.5%	10.8%	8.8%	8.9%	9.2%	10.7%	10.2%
ESA Claimants with mental and behavioural disorders: rate per 1,000 working age population	17.1	13.2	33.4	17.6	17.1	18.9	31.4	27.3

\* Directly standardised rate - per 100,000

**Table 15-1 – 2011 Census wards community health profile statistics**

<b>Borough</b>	<b>Ward</b>	<b>Proportion of population limited by a long-term health problem or disability (2011)</b>	<b>General self-health classification - bad or very bad (2011)</b>	<b>General self-health classification - good or very good (2011)</b>
Harrogate	Ribston	7.5%	4.3%	83.4%
	Marston Moor	3.9%	2.4%	87.1%
	Ouseburn	5.1%	2.4%	88.2%
Hambleton	Shipton	5.8%	2.5%	88.8%
	Easingwold	9.1%	5.5%	80.7%
	Huby and Sutton	5.2%	3.6%	85.6%
Leeds	Wetherby	6.8%	4.3%	83.0%
York	Rural West York	5.5%	3.0%	86.4%
	Haxby and Wigginton	7.2%	4.0%	82.3%
	Osbalwick	6.4%	4.0%	83.0%
	Skelton, Rawcliffe and Clifton Without	5.6%	3.4%	85.5%
Selby	Tadcaster East	6.4%	4.3%	83.1%
	Tadcaster West	8.1%	4.4%	80.6%
	Appleton Roebuck	4.6%	2.6%	87.8%
	Sherburn in Elmet	7.3%	4.8%	82.3%
	Saxton and Ulleskelf	4.5%	2.5%	87.6%
	Fairburn with Brotherton	10.2%	7.0%	78.0%
	Monk Fryston and South Milford	4.0%	2.5%	87.7%

**Table 15-2 – 2018 Electoral wards community health profile statistics**

Borough	Ward	Population (2019)	Population aged under 16 (2019)	Population aged over 65 (2019)	Prevalence of childhood obesity (age 10-11 years) (2019/20)
Harrogate	Marston Moor	3,746	17.1%	27.1%	16.4%
	Ouseburn	5,567	20.7%	19.7%	15.5%
Hambleton	Easingwold	10,402	17.6%	23.4%	11.9%
	Huby	3,610	16.9%	27.7%	13.8%
Leeds	Wetherby	20,339	16.3%	28.3%	11.8%
York	Rural West York	7,905	18.6%	25.9%	14.9%
	Haxby and Wigginton	11,843	15.7%	32.1%	12.6%
	Osballdwick and Derwent	8,335	16.9%	26.3%	15.3%
	Hull Road	15,166	9.8%	8.5%	24.2%
Selby	Tadcaster	7,559	17.2%	25.3%	14.8%
	Appleton, Roebuck and Church Fenton	6,228	20.9%	21.3%	12.1%
	Sherburn in Elmet	7,854	18.6%	20.8%	17.0%
	South Milford	2,846	20.2%	18.6%	17.0%
	Byram and Brotherton	3,012	16.2%	23.9%	12.8%
	Monk Fryston	3,048	18.1%	20.1%	14.2%

### Health and Wellbeing – determinants of health

15.5.36 Further determinants of health are outlined below including access to recreational facilities, air quality, noise sensitivity, landscape amenity and road safety information.

### Access to open space and physical activity

15.5.37 There are several publicly accessible open spaces within the Study Area. These open spaces are identified in **Table 15.12**, along with each space's respective typology, nearest element of the Project<sup>69</sup> (see **Chapter 3: Description of the Project**), on-site facilities and existing access points.

**Table 15-3 – Open space and physical activity**

Name	Type	Element of the Project	On-site facilities	Access
John Jeffery Playing Field	Playing field	NorthWest of York	Children's play facilities including slide and swings and green gym equipment	Mill Lane, Wigginton
Moorlands Woodland Nature Reserve	Nature reserve	North West of York	Large nature reserve	Moor Lane, Skelton
Overton Wood	Woodland	North-west of York	Large woodland, including walk paths	Overton Grange
Redhouse Wood	Woodland	North-west of York	Large woodland, including walk paths	Hall Lane, Moor Monkton
Dog Kennels Wood	Woodland	Tadcaster	Woodland	Tadcaster
Smaws Wood	Woodland	Tadcaster	Woodland	Tadcaster
Bullen Wood	Woodland	Tadcaster	Woodland	Saxton, Tadcaster
Castle Hill Wood	Woodland	Tadcaster	Woodland	Saxton, Tadcaster
Huddleston Old Wood	Woodland	Monk Fryston	Woodland	Newthorpe, Sherburn in Elmet
YWT Sherburn Willows Nature Reserve	Nature reserve	Monk Fryston	Large nature reserve	Sherburn in Elmet

<sup>69</sup> The new infrastructure forming part of the Project falls within three areas: North West of York, Tadcaster and Monk Fryston. Further information is provided in **Section 3.2** with a full description of the Project provided in **Section 3.4**. Works are also proposed to existing infrastructure including the existing substation at Osbaldwick and the existing XC/XCP overhead line running between Monk Fryston and Poppleton.

Name	Type	Element of the Project	On-site facilities	Access
River Ouse	Waterway	Selby, York	Recreational boating, angling	Various

15.5.38 In addition to the publicly accessible open spaces identified in **Table 15.12**, the Study Area is serviced by a comprehensive network of PRow as well as several National Cycle Routes (NCR).

15.5.39 NCR 65 runs from the seaside town of Hornsea to Middlesbrough via Hull, Selby, York and Easingwold. NCR 66 connects Greater Manchester to Yorkshire, via Bradford, Leeds, York, Beverley, and Kingston upon Hull.

15.5.40 NCR 665 currently runs from the north-west to Newton Kyme, and then starts again to the north-west of Tadcaster. Work is ongoing to join these two sections up, which will create a link across the Project near Tadcaster.

15.5.41 The spatial distribution of publicly accessible open spaces and NCRs within the Study Area is shown on **Figure 15.2**.

15.5.42 Based on data collected by the Active Lives Survey<sup>70</sup>, the proportion of the population within the Study Area who reported to cycle for travel and walk for leisure within the last year (November 2019/20) is available in **Table 15.-13**.

15.5.43 The data shows a high propensity of residents in the local area to walk for leisure and use local PRow. With the exception of Leeds, residents within the Study Area stated to walk for leisure is a considerably higher proportion than the average in England. On the other hand, residents of the Study Area cycle less than the average in England, with the exception of York where the proportion of residents who stated to cycle in the past year is more than double (27.6%) the national average (12.6%).

**Table 15-4 – Participation in the last year - yes or no: Participated in the last year by activity**

	Cycling for travel	Walking for leisure
Harrogate	10.0%	86.1%
Hambleton	10.5%	83.4%
Leeds	9.8%	78.8%
York	27.6%	84.8%
Selby	9.4%	83.3%
North Yorkshire County	8.6%	85.9%
Yorkshire and Humber Region	9.5%	79.0%

<sup>70</sup> Active Lives, Sports England website. [online]: <https://activelives.sportengland.org/> [Accessed July 2021].

	Cycling for travel	Walking for leisure
England	12.6%	79.7%

### *Access to healthcare facilities and other social infrastructure*

15.5.44 Within the Study Area, 32 facilities have been identified as healthcare facilities and social infrastructure. The assets comprise of six education facilities (including a campus of York University), five health facilities, six religious facilities, five care homes and ten further community facilities.

15.5.45 Healthcare facilities and social infrastructure within the Study Area are identified in **Table 15.14**, along with their respective typology, location and existing access points.

**Table 15-5 – Healthcare facilities and other social infrastructure**

Name	Type	Element of the Project <sup>69</sup>	Access
Poppleton's Millennium Garden and Pond	Religious facility	North West of York	Church Lane, Poppleton
Roseville Care Homes – Limetree House	Care Home	North West of York	Main Street, Upper Poppleton
York Hospital	Hospital	North West of York	Clifton, York
St Giles, Skelton	Religious facility	North West of York	The Green, Skelton
Skelton Village Hall	Community facility	North West of York	Brecksfield, Skelton
Forest of Galtres Golf Club	Golf club	North West of York	Skelton Lane, Skelton
York Medical Group at Skelton	Surgery	North West of York	St Giles Road, Skelton
Wigginton Primary School	Primary school	North West of York	Westfield Lane, Wigginton
Skelton Primary School	Primary school	North West of York	Backsfield, Skelton
John Jeffery Community Pavilion and Playing Field	Community facility	North West of York	Mill Lane, Wigginton
Toulston Polo Club	Polo Club	Tadcaster	Toulston, Tadcaster
Tadcaster Grammar School	Grammar School	Tadcaster	Toulston, Tadcaster

<b>Name</b>	<b>Type</b>	<b>Element of the Project<sup>69</sup></b>	<b>Access</b>
Tadcaster Leisure Centre	Leisure Centre	Tadcaster	Station Road, Tadcaster
Tadcaster Community Swimming Pool	Leisure Centre	Tadcaster	Westgate, Tadcaster
Kelcbar Centre	Community facility	Tadcaster	Kelcbar Close, Tadcaster
Tadcaster Medical Centre	Surgery	Tadcaster	Crab Garth, Tadcaster
Blossom Home Care	Care Home	Tadcaster	Station Road, Tadcaster
Guardian Care and Support	Care Home	Tadcaster	Bridge Street, Tadcaster
Tadcaster Methodist Church	Religious facility	Tadcaster	High Street, Tadcaster
St Joseph's Catholic Church	Religious facility	Tadcaster	St Joseph's Street, Tadcaster
St Mary's Church, Tadcaster	Religious facility	Tadcaster	Kirkgate, Tadcaster
Grove House Community Centre	Community facility	Monk Fryston	South Milford
South Milford Surgery	Surgery	Monk Fryston	High Street, South Milford
Monk Fryston Surgery	Surgery	Monk Fryston	Main Street, Monk Fryston
Monk Fryston and Hillam Community Centre	Community facility	Monk Fryston	Old Vicarage Lane, Monk Fryston
Hanover Housing Association Ltd	Care Home	Monk Fryston	Chapel Street, Hillam
St Wilfrid's Church	Religious facility	Monk Fryston	Church Lane, Monk Fryston
Monk Fryston Church of England Primary School	Primary School	Monk Fryston	Chestnut Green, Monk Fryston
South Milford Primary School	Primary School	Monk Fryston	Sand Lane, South Milford

Name	Type	Element of the Project <sup>69</sup>	Access
York Sport Village	Fitness Centre	Osballdwick	Heslington, York
University of York, Campus East	University campus	Osballdwick	Heslington, York
Grimston Court Residential Care Home	Care Home	Osballdwick	Hull Road, Grimston

15.5.46 Schools and nurseries, as a minimum, are generally used five days per week (Monday-Friday) by local communities. A school year is 39 weeks in England; however, school facilities can serve several purposes outside of just child education, meaning that use can occur outside of usual periods.

15.5.47 The surgeries and medical centres identified within the Study Area are open from Monday to Friday and provide General Practitioner (GP) and health services to the local communities. York Hospital is a National Health Service teaching hospital managed by the York Teaching Hospital NHS Foundation Trust which includes an urgent care centre which is open every day.

15.5.48 The religious facilities within the Study Area are mostly open for Sunday services and some evening services during the week. Religious facilities however can serve as venues for other community functions.

15.5.49 There are no existing accessibility restrictions or severance issues for the existing community land and assets.

### *Air quality*

15.5.50 The main pollutant of concern in the human health Study Area is nitrogen dioxide (NO<sub>2</sub>), the primary source of which is road traffic emissions. All local authorities within the health and wellbeing Study Area, except Hambleton District Council, declared an Air Quality Management Area (AQMA) relating to NO<sub>2</sub>, which are needed where an air quality objective set by the government is exceeded and identified at a receptor point.

15.5.51 The Air Quality assessment presented in **Chapter 13: Air Quality** considers dust deposition and emissions of PM<sub>10</sub>. There are no monitoring locations of PM<sub>10</sub> within the Study Area. In the absence of monitoring locations, background concentrations for PM<sub>10</sub> have been sourced from Defra UK Air Information Resource (UK-air)<sup>71</sup> The estimated concentration range of PM<sub>10</sub> within the Study Area is 14.0-14.3 (µg m<sup>-3</sup>).

15.5.52 Further information can be found in **Chapter 13: Air Quality**.

### *Noise and vibration sensitivity*

15.5.53 Sensitivity to noise needs to be considered during both the construction and operational phases of the Project.

<sup>71</sup> Defra. Background mapping data for local authorities. 2021. (Online) Available at: <https://uk-air.defra.gov.uk/data/laqm-background-home>. (Accessed 11 February 2021).



- 15.5.54 Potentially sensitive noise receptors include residential properties across the Study Area, as well as businesses and community facilities. Due to the rural nature of the Study Area, the baseline ambient noise levels are generally of a low magnitude except where close to major roads.
- 15.5.55 The baseline ambient noise conditions in the North West of York Area are influenced by road traffic noise from the A19 and the A1237 and train movements on the East Coast Main Line (ECML) railway with contributions from traffic on local roads and trains on the York – Leeds railway line. Given the area’s predominantly agricultural land uses few other sources of ambient noise are likely to be present.
- 15.5.56 The baseline ambient noise conditions in the Tadcaster Area are influenced by a combination of road traffic noise sources including: the A59; the A1237; the A19 and rail noise from the ECML railway with contributions from the local road network. Road traffic noise from the A1(M) and M1 motorways is likely to be dominant. For the receptors further east, road traffic noise contributions from the A162 may dominate baseline ambient conditions.
- 15.5.57 The background baseline noise environment in the vicinity of the Monk Fryston Substation Area is likely to be influenced by the following noise sources:
- Road traffic noise from the A1(M), A63 and A162;
  - Noise related to mineral extraction activities from the quarry on Betteras Hill Road (including heavy vehicles on local roads); and
  - Operational noise from the existing Monk Fryston Substation.
- 15.5.58 In addition, the operational noise from existing overhead lines may also contribute to the baseline ambient noise conditions for receptors located in close proximity to them.
- 15.5.59 Further information on the noise baseline and preliminary assessment can be found in **Chapter 14: Noise and Vibration**.

### *Landscape amenity*

- 15.5.60 The landscape character of the North West of York area is dominated by medium to large scale arable fields on low lying land. Woodland is infrequent, being typically small-scale blocks at the corner of fields and, occasionally, as narrow belts along watercourses.
- 15.5.61 The area is crossed by several transport routes. The A19 passes through the centre of the proposed YN 400kV overhead line corridor and connects the settlements of Skelton to the south and Shipton by Beningbrough to the north. Running broadly parallel with and south of the A19 is the ECML railway, typically slightly elevated above the surrounding landscape. Overton Road, which accommodates National Cycle Network 65, and Stripe Lane both pass through the draft Order Limits south of the proposed Overton Substation, connecting scattered farmsteads and linking to the A19.
- 15.5.62 The landscape character of the Tadcaster area is dominated by gently undulating arable farmland.
- 15.5.63 The location of the proposed Monk Fryston Substation is approximately 1.5km to the west of Monk Fryston and Hillam and lies adjacent to the north and eastern boundary of the existing substation on agricultural land.
- 15.5.64 There are no national landscape designations in the Study Area. The closest national designation is the Howardian Hills Area of Outstanding Natural Beauty (AONB), located

over 10km to the north of the Project at the closest point. In addition to the separation distance, there are existing overhead lines on steel lattice pylons, between the Project and the edge of the AONB near Easingwold.

15.5.65 Further information on the Landscape and Visual baseline and preliminary assessment can be found in **Chapter 6: Landscape and Visual Amenity**.

### Future baseline

15.5.66 The socio-economic and health profile in the Study Area can be expected to change during the construction of the Project. The population of Yorkshire and the Humber region is expected to grow by 3.6% to mid-2028<sup>72</sup>. At district level, in the same timeframe, the population is expected to grow by approximately 9.4% in Selby, 3.2% in Leeds, 1.9% in York, 1.5% in Hambleton, and 0.5% in Harrogate.

15.5.67 The expected population growth will increase demand for social infrastructure and potentially recreational routes in the Study Area. However, it is expected that planning policy will continue to ensure that there is sufficient investment in the necessary services and infrastructure to accommodate this population increase. Therefore, it is not expected that there will be any perceptible changes to the health and wellbeing of local communities and the Project should be assessed against current baseline conditions and policies.

15.5.68 It is noted, however, that these forecasts might be subject to change due to the impacts on demographic growth and behavioural shift resulting from the COVID-19 pandemic. At the time of writing, these impacts are still unknown and therefore cannot be quantified.

## 15.6 Embedded measures

15.6.1 A range of environmental measures have been embedded into the Project as outlined in **Chapter 3: Description of the Project**. **Table 15.15** outlines how these embedded measures will influence the health and wellbeing assessment.

**Table 15-6 – Summary of the embedded environmental measures**

Receptor	Potential changes and effects	Embedded measures	Compliance mechanism
<b>Construction</b>			
Health of local residents, business owners and employees, workers in the local economy and visitors	All potential impacts arising from the Project as listed here.	Develop and implement a stakeholder communications plan that includes community engagement before work commences on-site.	Outline CEMP secured via DCO requirement.

<sup>72</sup> ONS, (2020). Subnational population projections for England: 2018-based. [online] Available at: <https://www.ons.gov.uk/releases/subnationalpopulationprojectionsforengland2018based> [Accessed 06 September 2021].

<b>Receptor</b>	<b>Potential changes and effects</b>	<b>Embedded measures</b>	<b>Compliance mechanism</b>
Health of local residents, business owners and employees, workers in the local economy and visitors	Increased dust emissions, potential adverse effects from construction noise, visual impacts and likely adverse effects on the health of local receptors	Outline Construction Environmental Management Plan (CEMP) will implement standard construction management measures.	Outline CEMP secured via DCO requirement.
Health of users of local PRoWs	Potential impacts on the health of users of existing PRoW	Signage and/or temporary public PRoW /PRoW/footpath diversions will be provided during construction.	Public Rights of Way Management Plan (PRoWMP) secured by DCO requirement.
Health of users of local and strategic roads and associated receptors	Increased traffic in settlements and villages resulting in potential impacts on the health of users	The proposed heavy goods vehicle (HGV) routing to individual accesses during the construction period will be developed to avoid major settlements such as Sherburn in Elmet, South Milford, Micklefield, Saxton, Bramham, Clifford, Boston Spa, Tadcaster Centre, Healaugh, Tockwith, Long Marston, Rufforth, Askham, Angram, Nether Poppleton, Central York and Haxby. This measure will limit the impacts of the Project in key local villages and settlements.	Proposed routing in agreed Outline Construction Traffic Management Plan (CTMP) secured by DCO requirement.
Health of users of local PRoWs	Delays to users of local PRoW resulting in potential health impacts	PRoWsthat cross the various overhead line routes will be managed or diverted over the shortest distance possible with potential to provide adjacent crossings.	PRoWMP secured by DCO requirement.
Health of users of local network	Access to the local highways network resulting in potential health impacts	Construction accesses will be provided with visibility splays designed to DMRB design standards as agreed with the relevant highways authorities. This will provide for safe accesses where construction vehicles can access the highways network in a safe way which should reduce the risk of accidents related to the Project.	Outline CTMP secured by DCO requirement and Works plans.

Receptor	Potential changes and effects	Embedded measures	Compliance mechanism
Health of users of local Roads	Access to the local highways network resulting in potential health impacts	Permanent accesses required for the Project will be designed to DMRB design standards. This measure will allow for a safe and formal access to be provided to the highways network to permanent infrastructure.	Outline CTMP secured by DCO requirement and Works plans.
<b>Operation</b>			
Health of local residents, business owners and employees, workers in the local economy and visitors	Potential adverse effects from the operation of the Project	Locating the proposed substations, associated infrastructure, CSECs and new and realigned sections of overhead line away from sensitive receptors where possible, to minimise the potential adverse effects on health and wellbeing.	Works plans.

15.6.2 Health and wellbeing will be taken into consideration as part of the continuing iterative design process and development of the Project to ensure potential beneficial effects are enhanced and any potential significant adverse effects on health and wellbeing are mitigated.

15.6.3 The need for additional mitigation and/or enhancement measures depends on the effects arising as part of the assessment. Where there are assessed to be adverse health and wellbeing impacts, mitigation measures which should be implemented to avoid or minimise the human health impact are identified.

## 15.7 Scope of the assessment

### The Project

15.7.1 All aspects of the Project are included in the scope of the health and wellbeing chapter.

### Spatial scope

15.7.2 The spatial scope of the assessment of health and wellbeing covers the area of the Project contained within the draft Order Limits, together with the Zols that have formed the basis of the Study Area described in **Section 15.4**.

### Temporal scope

15.7.3 With the exception of the assessment of impacts on access to work and the impacts on local health services and other social infrastructure, the temporal scope of the assessment of health and wellbeing is consistent with the period over which the Project would be carried out (details provided in **Chapter 3: Description of the Project**) and therefore covers the construction and operational phases as detailed below.

- 15.7.4 The assessment of the impacts on access to work and the impacts on local health services and other social infrastructure will only cover the construction phase of the project, which extends over a 4-year period from 2024 to 2028, with some elements of the Project being operational from 2027.
- 15.7.5 The Project is expected to have a life span of more than 80 years. If decommissioning is required at this point in time, then activities and effects associated with the decommissioning phase are expected to be of a similar level to those during the construction phase works, albeit with a lesser duration of two years, and with the removal of visible infrastructure, effects would reduce over the course of that period. Therefore, the likely significance of effects relating to the construction phase assessment would be applicable to the decommissioning phase and decommissioning effects are not discussed further in this chapter.

### Potential receptors

- 15.7.6 The health and wellbeing receptors that have been identified as being potentially subject to effects are summarised in **Table 15.16**.

**Table 15-7 – Health and wellbeing receptors subject to potential effects**

Receptor	Reason for consideration
Local residents, business owners and employees, workers in the local economy, visitors using the local transport network, and the capacity of local health services.	Potential health effects associated with socio-economic effects.
Local residents, workers and visitors, and the capacity of local health services.	Potential health effects associated with socio-economic, transport, noise and vibration, landscape and visual, air quality, and recreation effects associated with the construction of the Project.
Local residents, workers and visitors, and the capacity of local health services.	Potential health effects associated with socio-economic, transport, noise and vibration, landscape and visual, air quality and recreation effects associated with the operation of the Project.

### Health Determinants

- 15.7.7 This chapter considers how the Project could impact on health outcomes and promote healthy lifestyles in order to reduce health inequalities in the Study Area. The scope of the preliminary assessment has been established by identifying the likely health determinants and possible pathways between a health influence and a receptor (an affected individual or community).
- 15.7.8 There is no definitive guidance on how to assess human health within EIA. Best practice principles are provided in NHS England’s/HUDU’s Rapid Health Impact Assessment

(HIA) Toolkit (Fourth Edition) 2019<sup>73</sup> and forms the basis for the approach to assessing impacts on health and wellbeing.

15.7.9 This qualitative assessment of human health effects considers the following health and well-being determinants<sup>74</sup> of relevance:

- Access to healthcare services and other social infrastructure;
- Access to open space and nature;
- Air quality, noise and neighbourhood amenity;
- Accessibility and active travel;
- Crime reduction and community safety;
- Access to work and training; and
- Social cohesion and neighbourhoods.

15.7.10 These health determinants are considered when assessing the likely impacts of the Project.

### Likely significant effects

15.7.11 The effects on health and wellbeing receptors which have the potential to be significant and have been taken forward for detailed assessment are summarised in **Table 15.17**.

**Table 15-8 – Health and wellbeing receptors scoped in for further assessment**

Receptor	Health determinant	Likely effects
Construction workforce.	Access to work and training.	Increased employment and training opportunities.
Local residents living in accommodation or accessing existing health services.	Access to healthcare services and other social infrastructure.	Increase in population including demographic change, potential increase in demand for accommodation and community services including health services.
Local residents and, workers and visitors in communities close to the construction sites and exposed to amenity effects (e.g. noise, construction traffic, air quality and visual intrusion).	Air quality, noise and neighbourhood amenity. Social cohesion and neighbourhoods. Crime reduction and community safety.	Potential amenity effects (e.g. noise, construction traffic, air quality and visual intrusion) which could impact on the mental and physical health of people living or working in local communities as well as visitors, including impacts on community cohesion due to severance and/or impacts to the local communities' quality of life.

<sup>73</sup> HUDU, (2019). Planning for Health Rapid HIA Tool, Fourth Edition. [online] Available at: <https://www.healthyurbandevelopment.nhs.uk/wp-content/uploads/2019/10/HUDU-Rapid-HIA-Tool-October-2019.pdf> [Accessed 12 February 2021].

<sup>74</sup> A comprehensive set of human health and well-being determinants is listed in the HUDU Rapid HIA Tool Fourth Edition 2019 which is generally considered as a best practice tool to use when undertaking health and well-being impact assessments.

Receptor	Health determinant	Likely effects
Users of affected recreational routes and amenity areas including open spaces and nature, public rights of way, local community services and social infrastructure.	Access to open space and nature. Air quality, noise and neighbourhood amenity. Accessibility and active travel.	Potential severance impacts (temporary diversion or closures) on walkers, cyclists and horse-riders in accessing recreational routes and amenity areas including open spaces and nature, public rights of way, local community services and social infrastructure.
Local residents, workers from communities close to the Project as well as visitors exposed to permanent amenity effects (e.g. visual, noise or maintenance traffic during operation).	Access to open space and nature. Air quality, noise and neighbourhood amenity. Accessibility and active travel. Social cohesion and neighbourhoods. Crime reduction and community safety.	Potential amenity effects (e.g. visual, noise or maintenance traffic during operation) which could impact on the mental and physical health of people living or working in local communities, including impacts on community cohesion due to severance and/or impacts to the local communities' quality of life.

15.7.12 As explained above, due to the broad nature of the determinants of health, the comprehensive assessment of the health effects of the Project presented in this chapter considers the environmental effects identified by other environmental aspects that could impact health and wellbeing.

15.7.13 The receptors/effects detailed in **Table 15.18** were scoped out from being subject to further assessment because the potential effects were not considered likely to be significant.

**Table 15-98 – Summary of effects scoped out of the health and wellbeing assessment**

Receptors/potential effects	Justification
Health and wellbeing effects relating to the water environment	These are covered within <b>Chapter 9: Hydrology</b> which considers the potential impacts on water resources supporting human health and economic activity that may arise from the construction and operation of the Project. No additional assessment of effects on health and wellbeing will be required and health effects associated with hydrology are scoped out of the health and wellbeing chapter.
Health and wellbeing effects relating to geology, hydrogeology and soil	These are covered within <b>Chapter 10: Geology and Hydrogeology</b> , which considers the potential impacts on groundwater, land contamination and ground instability receptors

Receptors/potential effects	Justification
	(e.g. human health, buildings) that may arise from the construction and operation of the Project. No additional assessment of effects on health and wellbeing has been carried out and health effects associated with geology, hydrogeology and soil are scoped out of the health and wellbeing chapter.

## 15.8 Assessment methodology

- 15.8.1 The generic project-wide approach to the assessment methodology is set out in **Chapter 4: Approach to Preparing the PEIR**, and specifically in **Sections 4.7 to 4.10**. However, whilst this has informed the approach that has been used in this health and wellbeing assessment, it is necessary to set out how this methodology has been applied, and adapted as appropriate, to address the specific needs of this health and wellbeing assessment.
- 15.8.2 There is no recognised or consolidated methodology or practice for the assessment of effects on health and wellbeing. Best practice principles are provided in NHS England’s HUDU’s HIA Toolkit 2019<sup>73</sup> 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 Wellbeing checklist of the WHIASU<sup>28</sup> ) to help with the identification of which health determinants are relevant.
- 15.8.3 Whilst not providing definitive guidance, the IEMA’s Health in Environmental Impact Assessment: A Primer for a Proportionate Approach<sup>27</sup> discusses ways in which human health can be assessed as part of an EIA. In addition, Highways England’s Document LA112 – Population and Human Health<sup>29</sup> sets out requirements for assessing and reporting the environmental effects on population and health which are applicable to infrastructure and provides guidance which is relevant to the Project.
- 15.8.4 As such, the impacts of the Project on health and wellbeing have been assessed qualitatively using professional judgement and best practice in line with this guidance.

### Assessing the outcomes for public health and wellbeing

- 15.8.5 As noted in **Section 15.1**, the WHO defines health as “*a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity*”<sup>75</sup>. Consequently, public health encompasses general well-being, not just the absence of illness. Some effects are direct and obvious, others are indirect and some may be synergistic, with different types of impact acting in combination.
- 15.8.6 The assessment has considered the following determinants when assessing the impacts of the Project on health and wellbeing:
- **Social and economic factors** – such as poverty, economic activity and unemployment and deprivation levels which influence and strongly determine health status;

<sup>75</sup> World Health Organisation, (2006); Constitution of the World Health Organisation.



- **Environmental factors** – such as air quality and the quality of the built environment which influence health and provide opportunities for health improvements;
- **Lifestyle factors** – such as physical activity levels, smoking, diet, alcohol consumption and sexual behaviour which can significantly influence health outcomes; and
- **Accessibility to services and infrastructure** – such as access to health services, education, social services, transport services and leisure facilities which influence the health of a population.

15.8.7 Health and wellbeing perceptions and impacts to the mental health of local residents which may result from changes to neighbourhood amenity have been taken into account throughout the assessment.

15.8.8 A qualitative assessment of landtake and changes to accessibility has been carried out. This considers disruption to the ability of users to undertake recreational activities within areas of open space due to construction activities. This includes an assessment of the availability of alternative open spaces, the remaining amount of space which will be available for users to undertake recreational activities and the potential for amenity effects on users of open spaces or recreational facilities.

15.8.9 The health and wellbeing assessment is a qualitative rather than quantitative assessment due to the diverse nature of health determinants and health outcomes which are assessed. Although this chapter describes the likely qualitative health impacts, 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 such none is proposed here. Instead, the potential health effects during construction and operation are described using the criteria provided in the HUDU Toolkit, which are outlined in **Table 15.19**.

**Table 15-19 - Health and wellbeing impact categories**

<b>Impact Category</b>	<b>Impact Symbol</b>	<b>Description</b>
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.

### **Mitigation and residual effects**

15.8.10 The health and wellbeing assessment reports on the likely effects of the Project taking into account the implementation of mitigation measures.

15.8.11 This chapter sets out a high-level summary of proposed measures (see **Section 15.6**), which will evolve through the refinement of the design of the Project.

15.8.12 Reflecting the multi-disciplinary nature of health and wellbeing impacts, the Project will take a health-conscious approach considering health and wellbeing issues and opportunities when planning the design and implementation of the Project.

15.8.13 In recognition of the dynamic nature of the health and wellbeing profile baseline, and the potential for change given the long-term nature of the Project, a flexible and adaptive approach to mitigation has been developed to respond to potential effects on health receptors that arise due to this dynamism and inherent uncertainty.

## 15.9 Preliminary assessment of health and wellbeing effects

15.9.1 The predicted construction and operational effects of the Project on the health and wellbeing receptors identified in this assessment are considered in further detail in the sections below including explanation of any receptors scoped out from further assessment.

15.9.2 Effects on the amenity of local residents and the local community due to visual impacts (**Chapter 6: Landscape and Visual Amenity**), traffic (**Chapter 12: Traffic and Transport**), air quality (**Chapter 13: Air Quality**), noise and vibration (**Chapter 14: Noise and Vibration**), and socio-economic impacts (**Chapter 16: Socio-economics**) are not included in this chapter as they are assessed in those chapters respectively with relevant findings cross referenced in this assessment.

### Construction

#### *Access to work and training*

15.9.3 It is recognised that the installation of specialist plant and equipment may not directly benefit the local economy as the majority of the employment will not be local. Some aspects of construction can be undertaken by local contractors such as earthworks, landscaping and cable trenching. The workforce for these latter elements is likely to be local to the Yorkshire and Humber Region. Therefore, local construction employment represents a positive temporary economic effect during construction of the Project, potentially resulting in new construction employment likely to benefit the local economy. Such employment gains should result in beneficial health outcomes such as improved mental and physical health and provide opportunities for social contact. An estimate of construction workers required during construction of the Project has not been undertaken at this stage and will be assessed and presented in the ES as part of the assessment of socio-economic effects.

15.9.4 There is also the potential for a temporary beneficial impact during construction on the local economy as expenditure within local businesses is likely to increase during construction of the Project, this will also be assessed and presented in the ES as part of the assessment of socio-economic effects.

15.9.5 As no preliminary assessment of construction workers required during the construction phase has been undertaken on which to base a conclusion, overall, the effect of the Project on access to work and training as a determinant of health and wellbeing during construction is assessed to be **uncertain**.

#### *Access to healthcare services and other social infrastructure*

15.9.6 An estimate of construction workers required during construction of the Project has not been undertaken at this stage as explained in **Chapter 16: Socio-economics**. It will be assessed and presented as part of the ES. The increase in population during construction may result in a potential increase in demand for accommodation and community services including health services. Given the number of construction

workers required during the construction phase of the Project has not been determined at this stage, the impact of population change on healthcare services and other social infrastructure as a determinant of health and wellbeing has not been assessed in this chapter and will be assessed in the ES. The impact of the Project on access to healthcare services and other social infrastructure as a determinant of health and wellbeing is therefore assessed as **uncertain** at this stage.

#### *Changes in severance and accessibility to healthcare services and other social infrastructure*

- 15.9.7 During construction, there is the potential for journey times and access to be temporarily affected by an increase in the number of HGVs or employee vehicles on the road and temporary traffic management at certain locations. These have the potential to lead to temporary delays and temporarily reduce or potentially sever access to local health services and other social infrastructure.
- 15.9.8 Wetherby Road (A659) provides links from Tadcaster north-west towards Boston Spa. Construction of the Project would cause an increase of HGVs such that it would cause some moderate severance associated with delays experienced to journeys along this route. There are several social infrastructure and community facilities in Tadcaster, including primary and secondary schools, leisure centres and a GP surgery which are likely to be used primarily by residents in Tadcaster. Taking an alternative route along Toulson Lane would increase journey times by approximately 5 minutes.
- 15.9.9 The presence of this additional traffic is not likely to affect local residents' ability to access these facilities. 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. There are expected to be a maximum of additional two construction HGVs per hour (four movements) using the A659. Therefore, the potential health and wellbeing impact on access to healthcare services and social infrastructure during the construction period is assessed overall to be **neutral**.

#### *Accessibility and active travel*

- 15.9.10 Maintaining a safe and secure environment during construction is important to ensure the wellbeing of inhabitants and local residents. Being able to enjoy where a person lives is important to facilitate social interaction and cohesion, without feeling threatened by traffic or insecure environment.
- 15.9.11 The Project seeks to mitigate construction traffic and manage construction traffic flows through best practice to help reduce and minimise road injuries. Details of the construction access strategy are available in the Preliminary CTMP (see **Appendix 12A**).
- 15.9.12 During construction of the Project, there is the potential for temporary closures or diversions of active travel routes such as PRoWs and cycle routes.
- 15.9.13 There are 28 active travel routes located within the draft Order Limits. Of these, the Preliminary PRoW Management Plan (see **Appendix 12B**) identifies that construction activities associated with the Project may temporarily affect 14 footpaths, 13 bridleways and one footpath/restricted byway, with temporary diversions provided.
- 15.9.14 No permanent impacts on active travel routes are anticipated at this stage. The list of potential impacts will be updated and refined as the final design of the Project progresses to ES stage.

15.9.15 Mitigation measures, such as temporary diversions to access routes would minimise disruption and therefore the effect of the Project on accessibility and active travel as a determinant of health and wellbeing during construction is assessed to be **neutral**.

#### *Access to open space*

15.9.16 During construction, the Project is likely to require temporary land take and changes to the access of recreational and open space areas located within the Study Area.

15.9.17 The areas of recreational open space that are likely to be impacted by the construction of the Project are listed below. The list will be updated and refined as the final design of the Project progresses to ES stage.

15.9.18 The River Ouse falls within the draft Order Limits. Decommissioning and realignment of the 275kV XCP overhead line which crosses the river would require temporary scaffolding in two locations close to the river south of Overton Wood. Any disruption to users is expected to last a short amount of time and be limited to temporary river management during the erection and removal of scaffolding. Therefore, the works would not require any closures of the river, and the management of the river is not considered to affect the ability of users to enjoy it. More details are provided in the Outline CTMP (see **Appendix 12A**).

15.9.19 Dog Kennels Wood falls within the draft Order Limits. This is a small area of open woodland which includes recreational walking paths used by the community living in surrounding villages. Approximately 0.028ha (4%) of the wood falls within the working area required to allow works on Pylon XC474. The temporarily affected area of woodland is located at the edge of Dog Kennels Wood and the Project working areas would not impact use of the remaining 0.67ha. In addition, access to and use of Smaws Wood, a larger wood located 140m north-west of the draft Order Limits, would remain unaffected throughout construction.

15.9.20 The south-east corner of Huddleston Old Wood falls within the draft Order Limits. It comprises a large open woodland including recreational walking paths used by the community living in surrounding villages. Approximately 0.21ha (less than 0.1%) of the 55ha wood falls within the draft Order Limits where temporary scaffolding would need to be installed whilst reconductoring works to the existing Poppleton to Monk Fryston XC 275kV overhead line are undertaken where it crosses an existing railway line. Temporary loss of access to this area of woodland within the draft Order Limits is not considered to affect the ability of users to enjoy the wood and its recreational paths based on the limited area required for the works which would be restored to use.

15.9.21 Through minimisation of temporary landtake from these open spaces, access to open and natural space during the Project construction would be maintained and so the effect on health and wellbeing is assessed to be **neutral**.

#### *Air quality, noise and neighbourhood amenity*

15.9.22 During construction of the Project, there is the potential for a change in amenity value due to the increase in construction traffic on nearby roads and noise, dust and vibration resulting from the construction of the Project which may have an impact on health and wellbeing. As such, there is the potential for users of recreational and open areas to experience impacts associated with a loss of amenity. Similarly, users of PRow and active travel routes are likely to experience impacts associated with a loss of amenity.

- 15.9.23 A preliminary assessment of the potential dust and particulate matter impacts during the construction stage is provided in the **Chapter 13: Air Quality**. The assessment concludes that during construction, demolition of pylons, earthworks, trackout and Project construction activities would result in dust emitted in an area up to 350m away from the draft Order Limits which includes some residential properties and a number of active travel routes, including PRowS. 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.
- 15.9.24 At this stage there is insufficient data to conduct the preliminary assessment of construction activity noise as stated in **Chapter 14: Noise and Vibration**. The preliminary assessment has identified the effects of construction road traffic in the Study Area, which concluded that the temporary effects are not significant. This means that the health and wellbeing of receptors within the Study Area are not likely to be impacted by construction traffic noise during construction of the Project.
- 15.9.25 Residents, workers and visitors in communities close to the construction sites as well as visitors within the Study Area would experience changes to the views, landscape and neighbourhood amenity as a result of the construction of the Project. These temporary changes may have an impact on the mental health and wellbeing of the population. The preliminary assessment within **Chapter 6: Landscape and Visual Amenity** identified potential significant adverse effects on the following receptors:
- residents of Wood House Farm (Moor Monkton);
  - residents of Red Brick House Farm;
  - users of the National Cycle Network Route 65 on Overton Road (between the edge of Overton and the route southwest of Shipton);
  - users of PRowS east of Shipton-by-Beningbrough, in the localised part of the PRow network north of Hall Moor Farm cottages, extending west to the PRow directly north of the sewage works;
  - users of the River Ouse corridor including people in canoes/boats and users of the PRow each side of the river, south of Overton Wood;
  - people travelling in vehicles along the A19, between New Farm and close to the junction with Overton Road;
  - people travelling in vehicles along Overton Road;
  - people in vehicles travelling along the A659;
  - residents of Pollums House Farm; and
  - people travelling in vehicles at the northern end of Rawfield Lane, between the existing Monk Fryston Substation and the junction with the A63.
- 15.9.26 Potential effects on air quality, noise and neighbourhood amenity would be managed through the use of best practicable means included in the Outline CEMP and the use of temporary noise barriers where appropriate or hedgerows and trees to protect views. Effects would be temporary; air quality emissions pose a low risk to human health, health and wellbeing is not likely to be impacted by construction noise although a number of receptors would experience adverse effects relating to landscape amenity. However, as no preliminary assessment of noise and vibration effects during the operation phase has been undertaken on which to base a conclusion overall the effect

of the Project on air quality, noise and neighbourhood amenity as a determinant of health and wellbeing during construction is assessed to be **uncertain**.

## Operation

### *Air quality, noise and neighbourhood amenity*

- 15.9.27 An operational assessment of air quality has been scoped out of the EIA due to the minimal volume of predicted traffic during the operational phase. In addition, the substations are not expected to produce emissions as stated in **Chapter 13: Air Quality**.
- 15.9.28 As stated in **Chapter 14: Noise and Vibration**, the preliminary noise and vibration assessment of the Project during the operation phase could not be carried out at this stage. This will be included as part of the ES.
- 15.9.29 Residents, workers and visitors in communities close to the Project as well as visitors within the Study Area would experience permanent changes to the views, landscape and neighbourhood amenity as a result of the operation of the Project. These changes may have an impact on the mental health and wellbeing of the population. The preliminary assessment within **Chapter 6: Landscape and Visual Amenity** identified potential significant adverse effects on the following receptors during Year 1 of operation:
- residents of Overton Grange and Nos. 1 and 2 Glenroyd Cottages;
  - residents of dwellings at New Farm on the A19 (Overton);
  - workers and visitors at Woodstock Lodge wedding venue;
  - users of the National Cycle Network Route 65 on Overton Road (between the edge of Overton and the route southwest of Shipton);
  - users of PRoWs east of Shipton-by-Beningbrough, in the localised part of the PRoW network north of Hall Moor Farm cottages, extending west to the PRoW directly north of the sewage works;
  - people travelling in vehicles along the A19, between New Farm and close to the junction with Overton Road;
  - people travelling in vehicles along Overton Road;
  - users of the PRoW west of Newlands Farm;
  - residents of Pollums House Farm;
  - people travelling in vehicles along the A63 near the junction with Rawfield Lane; and
  - people travelling in vehicles at the northern end of Rawfield Lane.
- 15.9.30 Of the landscape amenity effects identified, the following are assessed to remain significant during Year 15 of operation of the Project:
- residents of Overton Grange and Nos. 1 and 2 Glenroyd Cottages; and
  - residents of dwellings at New Farm on the A19 (Overton).
- 15.9.31 Potential effects on neighbourhood amenity would be managed through design measures, where required, including landscape planting, landscape earthbunds and if

required, noise management measures to mitigate adverse effects on residents, workers and visitors in communities close to the Project as well as residents, workers and visitors within the Study Area and users of active travel routes. However, as no preliminary assessment of noise and vibration effects during the operation phase has been undertaken on which to base a conclusion overall the effect of the Project on air quality, noise and neighbourhood amenity as a determinant of health and wellbeing during operation is assessed to be **uncertain**.

## 15.10 Preliminary assessment of cumulative (inter-project) effects

15.10.1 In accordance with Planning Inspectorate Advice Note 17<sup>76</sup> a long list of ‘other development’, including allocations, has been reviewed and screened to establish those other developments which could result in significant effects in cumulation with the Project. The process followed is described in **Section 4.9** and a long list of developments considered is provided in **Appendix 4C** of the PEIR. **Table 4.5** lists all the short listed developments identified to date, which will be kept under review as the Project progresses. A detailed assessment of the likely significant cumulative effects will be provided in the ES. At this stage of the Project the other developments which have the potential for significant effects in cumulation with the Project in relation to Health and Wellbeing comprise the following:

- proposed agricultural development, Shipton (20/01004/FUL);
- extension to Jackdaw Quarry (NY/2021/0098/A27, North Yorkshire County Council);
- various applications at Newthorpe Quarry (NY/2017/0268/ENV, North Yorkshire County Council);
- quarry extraction and restoration proposals, Stutton (NY/2018/0009/FUL, North Yorkshire County Council);
- limestone extraction and restoration proposals, Lumby (scoping opinion request reference - NY/2020/0204/SCO, North Yorkshire County Council);
- proposed motorway services on the A1(M), Lumby (2019/0547/EIA, Selby District Council);
- proposed gas peaking plant and battery storage projects south of Monk Fryston Substation (2021/0633/FULM, 2021/0789/FULM, 2020/0594/FULM, Selby District Council);
- battery storage project adjacent to Osbaldwick Substation (19/01840/FULM, City of York Council); and
- commercial/industrial development, Osbaldwick (21/00092/FULM, City of York Council).

## 15.11 Preliminary significance conclusions

15.11.1 A summary of the results of the preliminary health and wellbeing assessment is provided in **Table 15-21**.

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<sup>76</sup> Planning Inspectorate (2019) Advice Note 17: Cumulative Effects Assessment Relevant to Nationally Significant Infrastructure Projects [online]. Available at: <https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/advice-note-17/> (Accessed 13 October 2021).

**Table 15-10 – Preliminary summary of effects assessment**

Receptor and summary of predicted effects	Outcomes	Summary rationale
<b>Construction</b>		
Access to Work and Training	Uncertain	During the construction phase, the Project would create new jobs in the local area. Some of these are likely to be taken up by the local workforce. However, as no assessment of construction employment generation has been undertaken, the impact of the Project on access to work and training as a determinant of health and wellbeing is therefore assessed as <b>uncertain</b> at this stage.
Access to Healthcare Services and other Social Infrastructure	Uncertain	Given the number of construction workers required during the construction phase of the Project has not been determined at this stage, the impact of population change on healthcare services and other social infrastructure as a determinant of health and wellbeing has not been assessed in this PEIR and will be assessed as part of the ES.  The impact of the Project on access to healthcare services and other social infrastructure as a determinant of health and wellbeing is therefore assessed as <b>uncertain</b> at this stage.
Changes in Severance and Accessibility to Healthcare Services and other Social Infrastructure	Neutral	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 phase. This is because the additional construction traffic would not result in the transport network becoming over capacity. The effect on health and wellbeing is therefore assessed to be <b>neutral</b> .
Accessibility and Active Travel	Neutral	During the construction phase, the Project would result in temporary impacts on a number of active travel routes in the Study Area. One PRow would be temporarily diverted. Through mitigation measures and minimisation of temporary land take from these PRows, access to active travel routes during the Project construction would be maintained and so the effect on



Receptor and summary of predicted effects	Outcomes	Summary rationale
Access to Open Space and Recreational Facilities	Neutral	<p>health and wellbeing is assessed to be <b>neutral</b> .</p> <p>During construction, the Project would require temporary land take and changes to the access of a number of recreational and open space areas located within the Study Area. Through mitigation measures and minimisation of temporary land take from these open spaces, access to open and natural space during the Project construction would be maintained and so the effect on health and wellbeing is assessed to be <b>neutral</b>.</p>
Air Quality, Noise and Neighbourhood Amenity	Uncertain	<p>During construction, there is the potential for a change in amenity value due to the increase in construction traffic on nearby roads and noise, dust, vibration and so on resulting from the construction of the Project which may have an impact on health and wellbeing. As no preliminary assessment of noise impacts during the operation phase has been undertaken on which to base a conclusion overall the effect of the Project on air quality, noise and neighbourhood amenity as a determinant of health and wellbeing during construction is assessed to be <b>uncertain</b>.</p>
<b>Operation</b>		
Air Quality, Noise and Neighbourhood Amenity	Uncertain	<p>During operation, there is the potential for a change in amenity value due to the operational noise and vibration, changes to views and neighbourhood amenity resulting from the operation of the Project which may have an impact on health and wellbeing. As no preliminary assessment of noise effects during the operation phase has been undertaken on which to base a conclusion overall, the effect of the Project on air quality, noise and neighbourhood amenity as a determinant of health and wellbeing during construction is assessed to be <b>uncertain</b>.</p>

## 15.12 Additional measures

15.12.1 The assessment set out above has concluded that it will not be necessary to implement additional measures in addition to those embedded measures outlined in respect of severance and access to services, accessibility and active travel, and access to open space and nature as assessed in **Section 15.6**. Other assessment outcomes are uncertain and it is possible that additional measures may need to be identified at ES stage when information is available to definitively assess these outcomes. The EIA is an iterative process and should further mitigation be identified after statutory consultation prior to submission of the DCO application then the Project design will be amended and this will be reported in the ES.

## 15.13 Further work to be undertaken

15.13.1 The information provided in this PEIR is preliminary, the final assessment of likely significant effects will be reported in the ES. This section describes the further work to be undertaken to support the health and wellbeing assessment presented in the ES.

### Baseline

15.13.2 It is possible that updated versions of some of the datasets used in the PEIR will be published. These will be reviewed to identify whether they provide a reliable update to the datasets used in each case, and actioned with an update where confirmed.

### Assessment

15.13.3 Consultation on the assessment presented in this PEIR chapter will be reviewed and there may be discussion as to issues related to the methodology of the assessment which could lead to an amended assessment reported in the ES .

15.13.4 The assessment will be updated at ES stage cross-referencing the findings from the relevant chapters on visual impacts (**Chapter 6: Landscape and Visual Amenity**), traffic (**Chapter 12: Traffic and Transport**), air quality (**Chapter 13: Air Quality**), noise and vibration (**Chapter 14: Noise and Vibration**), and socio-economic impacts (**Chapter 16: Socio-economics**).

### Environmental measures

15.13.1 To date, no additional measures have been identified related to health and wellbeing. If, following stakeholder consultation feedback, further design refinement and further assessment, it is identified that additional measures are required, these will be detailed as part of the ES.

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