



Gravity

Smart Campus

Gravity LDO Environmental Statement

**Volume 1 – Chapter 8:
Health, Wellbeing and Social Impacts**

8 Health, Wellbeing and Social Impacts

8.1 Introduction

- 8.1.1 This chapter presents the findings of an assessment of the likely significant effects on health, wellbeing and social impacts associated with the Proposed Development.
- 8.1.2 The chapter describes the methods used in the assessment, the relevant baseline characteristics and the likely significant effects on relevant receptor groups during operation and demolition/ construction of the Proposed Development. It also considers the mitigation measures embedded in the Proposed Development and those that are additionally required to prevent, reduce, or offset adverse effects and reduce health inequalities.
- 8.1.3 This assessment considers the wider determinants of human health, including social determinants – drawing on the findings of other relevant chapters of this ES, including; Chapter 7 Economics, Chapter 9 Transport and Access, Chapter 10 Noise and Vibration, Chapter 11 Air Quality, Chapter 12 Biodiversity, Chapter 13 Water Environment, Chapter 14 Landscape and Visual, and Chapter 15 Climate Change, and other relevant planning documents such as the Flood Risk Assessment, and Consultation Report. A technical note assessing the impacts on community infrastructure is provided in **Appendix 8.3**, which has been considered within this chapter where relevant.
- 8.1.4 This Chapter has been prepared by Stantec. In accordance with Regulation 18(5) of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017, as amended, a statement outlining the relevant expertise and qualifications of competent experts appointed to prepare this ES is provided in **Appendix 1.6**.
- 8.1.5 The appendices associated with this Chapter are:
- Appendix 8.1 Figures
 - Figure 1 – Ward boundaries surrounding the Site
 - Figure 2 – Lower Super Output Areas surrounding the Site
 - Figure 3 – Indices of Multiple Deprivation 2011
 - Figure 4 – % Jobseekers Allowance / Universal Credit Claimants 2011
 - Figure 5 – % of 0-17 year olds 2011
 - Figure 6 – % 18-64 year olds 2011
 - Figure 7 – % 65+ year olds 2011
 - Appendix 8.2 Community Infrastructure Note

8.2 Policy, Legislation, Guidance and Standards

National Legislation

- 8.2.1 The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended). Part 4 of Schedule 4 states that “A *description of the factors specified in regulation 4(2) likely to be significantly affected by the development: population, human health...*” should be included within the environmental statement.

National Policy

National Planning Policy Framework

- 8.2.2 The revised National Planning Policy Framework (NPPF) (2021) acknowledges that the purpose of the planning system is to contribute to the achievement of sustainable development which includes the importance of considering health impacts during the planning process. and covers many issues that are directly related to the determinants of health.
- 8.2.3 The NPPF identifies the three overarching objectives which must be met in order for the development to be truly *sustainable* development. These are economic, social and environmental objectives. Of particular relevance to health is the 'social objective. Paragraph 8 of the NPPF states that the planning system should support *“strong, vibrant and healthy communities...by fostering well-designed, beautiful and safe places, with accessible services and open spaces that reflect current and future needs and support communities’ health, social and cultural well-being.”*
- 8.2.4 The NPPF also acknowledges that planning policies and decisions should aim to achieve healthy, inclusive and safe places which:
- “a) promote social interaction, including opportunities for meetings between people who might not otherwise come into contact with each other – for example through mixed-use developments, strong neighbourhood centres, street layouts that allow for easy pedestrian and cycle connections within and between neighbourhoods, and active street frontages;*
- b) are safe and accessible, so that crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion – for example through the use of clear and legible pedestrian routes, and high quality public space, which encourage the active and continual use of public areas; and*
- c) enable and support healthy lifestyles, especially where this would address identified local health and well-being needs – for example through the provision of safe and accessible green infrastructure, sports facilities, local shops, access to healthier food, allotments and layouts that encourage walking and cycling.”* (Paragraph 92)
- 8.2.5 The NPPF is considered within the Environmental Statement as follows:
- **Section 8.5** of this chapter outlines the existing health profile within the study area, which has been used to identify local health and wellbeing needs. An assessment of potential health effects, as a result of the Proposed Development, is included in **Tables 8.4-8.11**, which includes the impact of the opportunities for economic improvement and social interaction.
 - The community and human health benefits associated with encouraging development that provides opportunities for sustainable transport and pedestrian and cycle movements are outlined in **Table 8.5 and 8.9**. This includes potential health effects.

Planning Practice Guidance (Various)

- 8.2.6 The PPG¹ identifies how positive planning can contribute to healthier communities, it notes that:
- “The design and use of the built and natural environments, including green infrastructure are major determinants of health and wellbeing. Planning and health need to be considered together in two ways: in terms of creating environments that support and encourage healthy lifestyles, and in terms of identifying and securing the facilities needed for primary, secondary*

¹ <https://www.gov.uk/guidance/health-and-wellbeing>

and tertiary care, and the wider health and care system (taking into account the changing needs of the population).” (Paragraph 1)

8.2.7 The PPG also defines a healthy place as:

“A healthy place is one which supports and promotes healthy behaviours and environments and a reduction in health inequalities for people of all ages. It will provide the community with opportunities to improve their physical and mental health, and support community engagement and wellbeing.

It is a place which is inclusive and promotes social interaction. The National Design Guide sets out further detail on promoting social interaction through inclusive design including guidance on tenure neutral design and spaces that can be shared by all residents.

It meets the needs of children and young people to grow and develop, as well as being adaptable to the needs of an increasingly elderly population and those with dementia and other sensory or mobility impairments.” (Paragraph 3)

8.2.8 The PPG is considered within the Environmental Statement as follows:

- Several of the determinants of health identified above have been considered within the assessment in **Tables 8.4-8.10**, including provision of green infrastructure, providing opportunities to improve physical and mental health, and promoting social interaction.
- Consideration has been given to vulnerable receptors, such as children, the elderly and those with pre-existing health conditions, as set out in **Section 8.4.10**.

National Guidance

8.2.9 There is a plethora of national and international level literature regarding the process of Health Impact Assessment (e.g. from the WHIASU) and the links between determinants of health and spatial planning and the built environment. More recently, guidance on health in EIA has been published which has been taken into account in this assessment, including the following:

- Health in Environmental Impact Assessment – A Primer for a Proportionate Approach (Institute of Environmental Management and Assessment, 2017)
- Addressing Human Health in Environmental Impact Assessment – Consultation Draft (International Association for Impact Assessment, 2019)
- Health Impact Assessment in Spatial Planning (Public Health England, 2020)²

8.2.10 Below, two key documents are considered in more detail: The Marmot Review was a study into health inequalities in England, which provides important context; and HUDU guidance which has been used to provide a structure for the consideration of determinants.

The Marmot Review (2010)

8.2.11 Fair Society, Healthy Lives: A Strategic Review of Health Inequalities in England Post-2010 (The Marmot Review)³ was published on 11 February 2010 (Institute of Health and Equity, 2010). This was the culmination of a yearlong independent review into health inequalities in England. Six policy objectives were developed:

² <https://www.gov.uk/government/publications/health-impact-assessment-in-spatial-planning>

³ <https://www.instituteofhealthequity.org/resources-reports/fair-society-healthy-lives-the-marmot-review/fair-society-healthy-lives-full-report-pdf.pdf>

- Give every child the best start in life (the highest priority recommendation);
- Enable all children, young people and adults to maximise their capabilities and have control over their lives;
- Create fair employment and good work for all;
- Ensure healthy standard of living for all;
- Create and develop healthy and sustainable places and communities; and
- Strengthen the role and impact of ill health prevention.

8.2.12 The Marmot Review reported on a substantial body of evidence on the influence the built environment has on the determinants of health. According to the Commission on the Social Determinants of Health, *“Where people live affects their health and chances of leading flourishing lives. Communities and neighbourhoods that ensure access to basic goods, that are socially cohesive, that are designed to promote good physical and psychological wellbeing and that are protective of the natural environment are essential”*.

8.2.13 In turn, the manner in which settlements are planned and designed contributes significantly to the health of the people who live in them. Bad planning and design results in poor health outcomes; conversely, good planning and design can be positively health-enhancing.

Health Equity in England: The Marmot Review 10 Years On (2020)

8.2.14 Health Equity in England: The Marmot Review 10 Years On was produced by the Institute of Health Equity and commissioned by the Health Foundation to mark 10 years on from the landmark study The Marmot Review. The report identified that since 2010:

- people can expect to spend more of their lives in poor health;
- improvements to life expectancy have stalled, and declined for the poorest 10% of women;
- the health gap has grown between wealthy and deprived areas; and
- place matters – living in a deprived area of the North East is worse for your health than living in a similarly deprived area in London, to the extent that life expectancy is nearly five years less.

8.2.15 The report identifies that actions are needed in all six domains set out in The Marmot Review to improve the lives people are able to lead and hence achieve a greater degree of health equity and better health and wellbeing for all. The report also sets out new recommendations in five of these areas, to account for profound changes in health and the social determinants since 2010.

Healthy Urban Planning Checklist (3rd Edition) (2017)

8.2.16 The checklist (London Healthy Urban Development Unit, 2017) (**HUDU Checklist**) aims to promote healthy urban planning by ensuring that the health and wellbeing implications of local plans and major planning applications are consistently taken into account. Although created for London it has many principles that are applicable to any development, particularly where it is residential led.

8.2.17 The checklist is divided into four themes (see **Table 8.1**). Each theme contains a number of questions focussed on a planning issue. Under each theme are related health and wellbeing issues, many of which are identified in local joint strategic needs assessments and health and wellbeing strategies.

Local Policy

Sedgemoor Local Plan 2011-2032

8.2.18 The Local Plan deals with key issues of local importance and gives direction to deliver a high quality of life in a sustainable way. It sets out Sedgemoor District Council's (SDC's) vision, aims and strategy for the borough up to 2032. Planning applications are determined against the policies and proposals of the Local Plan.

8.2.19 The Local Plan acknowledges that while Sedgemoor is not an especially deprived district overall, there are pockets of deprivation. It identifies that a key priority for promoting healthier lifestyle habits among adults, is addressing obesity as a result of low physical activity levels.

8.2.20 The Local Plan includes the following Spatial Vision 'Being Healthy':

"By 2032 the health of the people will have improved as a result of good access to a range of high quality health care facilities. More people will enjoy healthier lifestyles through sport, recreation and exercise, maximising the benefits of living within or close to a rural environment. Walking or cycling will be the first choice for local trips, encouraged by attractive, safe and convenient district wide green network links. New country parks at South Bridgwater and the Meads and the continued enhancement of Apex Park in Burnham-on-Sea and Highbridge will ensure those living in the towns will have local access to important green spaces."

8.2.21 A number of policies identified in the Local Plan relate to health, wellbeing and social infrastructure for new development, including:

- Policy S2: Spatial Strategy for Sedgemoor
- Policy T2b: Tier 2 Settlements
- Policy CO1: Countryside
- Policy D1: Flood Risk and Surface Water Management
- Policy D2: Promoting High Quality and Inclusive Design
- Policy D3: Sustainability and Energy in Development
- Policy D5: Housing Mix
- Policy D6: Affordable Housing
- Policy D7: Care Homes and Specialist Accommodation
- Policy D13: Sustainable Transport and Movement
- Policy D15: Economic Prosperity
- Policy D24: Pollution Impacts of Development
- Policy D27: Education Provision
- Policy D28: Health and Social Care
- Policy D29: Protection and Enhancement of Existing Green Infrastructure Resources
- Policy D30: Green Infrastructure Requirements in New Developments

- Policy D32: Outdoor Public Recreational Space and New Residential Areas
- Policy D35: Local Services

Puriton Energy Park Supplementary Planning Document (SPD)

- 8.2.22 This SPD, adopted in March 2012, sets out key requirements for the assessment and delivery of the Huntspill (formerly Puriton) Energy Park. As noted in Section 1.3, part of the Site, known as Huntspill Energy Park, received hybrid planning permission in November 2017 (the '2017 Planning Consent'). Regarding health, wellbeing and social infrastructure, it states that *"By being recognised as a regionally significant location for inward investment, the Council is providing local community leadership to meet high level objectives to strengthen the local economy and re-structure employment, skills and the health and well-being of local people."*
- 8.2.23 It also sets out a series of design principles for the Energy Park. Design Principle 4: Sustainability, states that it should create a *"healthy and attractive working environment"* and *"Choose materials to create healthy, comfortable buildings"*.

Bridgwater Vision 2015

- 8.2.24 The Bridgwater Vision, adopted in December 2015, sets out the vision and spatial objectives for Bridgwater. The Vision identified the Gravity Site as a transformational opportunity and acknowledges that *"the development of a high quality public realm not only improves the aesthetic of the town, but can promote more healthy lifestyles."* It highlights the link between moving people sustainably and better health and wellbeing through active lifestyles, as well as the importance of a local identity, access to decent homes, education and employment, provision of functional green and open space, and need for local services such as health centres and community facilities.

Local Guidance and Strategies

Somerset Joint Strategic Needs Assessment

- 8.2.25 The Joint Strategic Needs Assessment (JSNA) is an assessment of the current and future health and social care needs of the local community. The JSNA informs the Joint Health and Wellbeing Strategy (JHWS) which is a strategy for meeting the needs identified in the JSNA. Local authorities and clinical commissioning groups (CCGs) have equal and joint duties to prepare JSNAs and JHWSs, through the health and wellbeing board established by the local authority.
- 8.2.26 The JSNA (2020) provides baseline data within Somerset for the following topics:
- Behaviour and Lifestyle
 - Conditions and Disease
 - People and Groups
 - Wider Determinants of Health
 - Health and Care Services

Improving Lives Strategy 2019-2028

- 8.2.27 The Improving Lives Strategy 2019-2028 is prepared by the Somerset Health and Wellbeing Board and outlines four strategic priorities for improving health and wellbeing over the ten-year period. These priorities are:

- A county infrastructure that drives productivity, supports economic prosperity and sustainable public services;
- Safe, vibrant and well-balanced communities able to enjoy and benefit from the natural environment;
- Fairer life chances and opportunity for all; and
- Improved health and wellbeing and more people living healthy and independent lives for longer.

8.2.28 Over the ten-year period of the strategy the expected outcomes for health and wellbeing are to increase healthy life expectancy and reduced inequality in life expectancy and healthy life expectancy between communities.

Sedgemoor Health and Wellbeing Strategy

8.2.29 SDC also have a local health and wellbeing strategy which is underpinned by six themes:

- Planning for Sustainable Communities;
- Healthy Housing;
- Economic Independence;
- Healthy Body and Mind;
- Safer Communities; and
- Safer Individuals.

Sedgemoor Infrastructure Delivery Strategy (2017)

8.2.30 The Sedgemoor Infrastructure Delivery Strategy (IDS) provides an assessment of the education, green infrastructure, outdoor sport and recreation and wider infrastructure needs (including healthcare, community and cultural) that has been identified by SDC to support planning development and growth in the Local Plan.

8.2.31 The IDS identifies future demand and delivery for education provision:

- Further investment in education will be required to meet demand associated with growth in Sedgemoor. The residual requirement (2015 – 2032) indicates that development could generate demand across all levels of education provision – up to 978 Early Years Places, 1370 primary school places and 1130 secondary school places.
- In terms of delivery, four school projects have been consented and have funding for delivery: Northgate (primary), Salmon Parade former hospital site (early years), the expansion of Hamp Junior School and Phase 2 of Willowdown Primary School.
- The Submission Version of the Local Plan allocates various areas of land for education and the expansion of existing schools. New primary schools have been allocated at the West Bridgwater and East Bridgwater strategic sites, to be funded by the developers. At West Bridgwater, the potential for a replacement secondary school is cited.

8.2.32 The IDS identifies future demand / delivery of parks, open spaces, sports, and recreation facilities:

- Calculations for demand and costs of sport and recreation facilities directly related to the residual requirement of development (2015 – 2032) indicates demand for a new swimming pool, sports hall, playing pitches, outdoor sports, play space as well as informal and formal open space.
- On-site green infrastructure will continue to be provided by developers in accordance with Policies D32 (Protection and Enhancement of Existing Green Infrastructure Resources) and D33 (Green Infrastructure Requirement in New Development) of the Local Plan.
- Section 106 (s.106) Agreements will continue to be used as the mechanism to deliver on-site provision of outdoor playing space and on-site outdoor sport and recreation facilities. Where provision cannot be provided on-site, off-site green infrastructure will be delivered through CIL in accordance with the Accessible Natural Greenspace Standard (ANGSt) and the Fields in Trust 'Six Acre Standard'.

8.2.33 The IDS identifies improvements and capacity issues relating to healthcare facilities:

- There is demand for improvements to and increased capacity of healthcare provision across Sedgemoor.
- For the strategic allocations in the Local Plan, the Health Impact Assessment would allow the views of the local Clinical Commissioning Group and NHS England to be sought regarding the impact of new development on health infrastructure and/or the demand for healthcare services.
- Where a Proposed Development has a particular impact on the provision of healthcare, s.106 Agreements will continue to be the appropriate mechanism to fill any identified healthcare need or funding gap. In this case, the opportunity to retain and reuse business rates is an alternative mechanism through the locality investment plan.

8.2.34 The IDS identifies improvements and capacity issues relating to community facilities:

- There is also demand for improvements to and increased capacity of community centres and libraries across Sedgemoor.

Planning Guidance on Space for Sport and Play (2007)

8.2.35 This document sets out the minimum requirements for the provision of public open space and facilities for sport and recreation. It acknowledges that “*such provision as important to individual health and well-being, and to the promotion of sustainable communities*”.

8.3 Consultation

8.3.1 A section was included within the EIA Scoping Report (**Appendix A.X**) submitted to SDC in 29 July 2021 which identified that health and social impacts would be scoped into the EIA and provided a general overview of baseline characteristics, health priorities and proposed methodology. SDC agreed that appropriate human health receptors were identified within the scope of this chapter. SDC's Scoping Opinion was received on 23rd August 2021, and stated the following regarding Health, Wellbeing and Social Impacts:

“The Council is satisfied that appropriate Human Health receptors (nearby residents, construction workers and future residents) and effects have been identified within the scope of Chapter 8 Health, Social and Wellbeing as well as the transport, noise, air quality and water ES topics.

Omissions are noted from the policy table in paragraph 2.8.1:

Health, Social, Wellbeing and Inclusion:

- *Policy S2 Spatial Strategy for Sedgemoor*
- *Policy T2b Tier 2 Settlements – unmet local housing need*
- *Policy CO1 Countryside*

8.3.2 In response to the above, the listed policies have been included in **Section 8.2** above.

8.3.3 Public consultation has been carried out for the Proposed Development which has included the setting up of a project website, community webinars, circulation of e-newsletters to stakeholders and social media (see Consultation Report for further information). Key comments and issues raised by stakeholders have been considered as part of this assessment and referred to in the relevant sections of the assessment.

8.4 Methodology

Study Area

8.4.1 The geographical scope of this assessment includes receptor groups which are likely to be significantly affected by the Proposed Development. The scope of this Chapter is in part dependent upon the study areas identified within other ES Chapters (such as air quality, noise, transport and economics) and the sensitive receptor groups which have been identified within those assessments. Some considerations are relatively localised, such as noise, whereas others, such as economic effects, may affect communities further away from the Site.

8.4.2 Broadly, the study area includes the below geographical areas where appropriate to the health, wellbeing and social impacts being considered. The Site is located predominantly within the ward of Puriton and Woolavington, however the boundary of the Site also extends beyond this ward to the north into the neighbouring ward of Knoll, therefore both wards are within the study area (shown in **Appendix 8.1 – Figure 1**):

- M5 Corridor Function Economic Market Area (FEMA), comprised of Sedgemoor District Council and Taunton Deane District Council;
- Sedgemoor district;
- Ward of Puriton and Woolavington;
- Ward of Knoll; and
- The Lower Super Output Areas (LSOAs) in which the Site is located (Sedgemoor 006B, 006C and 006D).

Baseline Data Collection

Health and Wellbeing

8.4.3 The baseline section of the assessment provides an overview of health and wellbeing characteristics in the study area populations and aims to provide an indication of the distribution of vulnerable groups.

8.4.4 Different sources of information present data at the relevant different geographical scales (as outlined in the 'Study Area' section above). Mapped data relating to vulnerable groups is provided in **Appendix 8.1**.

8.4.5 The following sources of information have been used to develop the baseline characteristics:

- Active Lives Somerset (Sport England, 2020);

- Annual Population Survey (ONS, 2020);
- Annual Survey of Hours and Earnings (ONS, 2020)
- Business Register and Employment Survey (ONS, 2019)
- Somerset Joint Strategic Needs Assessment (Somerset Health and Wellbeing Board, undated):
 - Behaviour and Lifestyle
 - Conditions & Disease
 - People & Groups
 - Wider Determinants of Health
- Improving Lives Strategy 2019-2028 (Somerset Health and Wellbeing Board, undated)
- Sedgemoor District Council Health and Wellbeing Strategy for Sedgemoor 2016-2020 (SDC, undated);
- Consumer Data Research Group maps (Consumer Data Research Group, 2019);
- Office for National Statistics, NOMIS Census Data (NOMIS, 2011);
- Office for National Statistics (2019 and 2020)
- Local Authority Health Profiles (ONS, 2020);
- Local Health Profiles (Public Health England, 2020);
- Population Estimates (ONS, 2019)
- Population Projections (ONS, 2020)
- Relevant baseline from environmental assessments; and
- Outputs of public and stakeholder consultation.

Social Infrastructure

8.4.6 The following sources of information have been used to develop the baseline characteristics:

- Strategic Housing Market Assessment (SDC, 2016) – housing mix and affordable housing;
- Planning Guidance on Space for Sport and Play (SDC, 2007);
- Draft Playing Pitch Strategy (PMP, 2005).
- Sedgemoor Infrastructure Delivery Strategy (IDS) (SDC, 2017)

Future Baseline

8.4.7 In accordance with the methodology set out in the Scoping Report (**Appendix X**), a future baseline has been presented in **Section 8.5** to enable to effects of the LDO against a 'do nothing' scenario which takes into consideration the 2017 Planning Consent (excluding

safeguarded energy land uses), the Gravity Link Road and the Village Enhancement Scheme, approved/allocated developments in the vicinity and likely changes to the natural environment between now and 2032. 2032 has been identified as it is the end of the current Local Plan period and a date by which it is reasonable to assume that the development approved by the LDO will have been delivered.

Sensitive Receptors

- 8.4.8 Receptor groups considered within the assessment are part dependent upon those identified within the contributory assessments (such as air quality, noise, transport and economics) who may be adversely affected or benefitted by the Proposed Development in terms of health and social infrastructure.
- 8.4.9 A review of baseline conditions has identified the following groups as sensitive receptors in relation to health, wellbeing and social impacts:
- Existing residents surrounding the Site, primarily within the wards of Puriton and Woolavington and Knoll (**Appendix 8.1 Figure 1**);
 - Existing residents in the wider area of Sedgemoor District Council (and Taunton Deane when considering economic impacts), where identified as applicable in other ES Chapters (e.g. economics and transport);
 - New residents of the Proposed Development;
 - New community service users (including users of social infrastructure) likely to use facilities in the Proposed Development;
 - New employees working at the Proposed Development; and
 - Construction workers during the demolition and/ construction of the Proposed Development.
- 8.4.10 The sensitive receptors identified above will cut across communities within sub groups with protected characteristics including age, disability, marriage and civil partnership, race, religion or belief, sex, and sexual orientation.
- 8.4.11 Vulnerable groups within the above receptor group were identified using the WHIASU 'Health Impact Assessment Practical Guide' (2012) Vulnerable/Disadvantaged Groups Checklist and reviewing the JSNA data and baseline data. The following vulnerable groups were identified:
- Older people (65 and over);
 - Children (0-17);
 - Those with a high level of deprivation, low income or unemployment;
 - Those with pre-existing health conditions, such as obesity or mental health issues;
 - New parents or pregnant women; and
 - Vulnerable road users, including pedestrians and cyclists.

Assessment Methodology

- 8.4.12 The approach to this assessment involves a desk-top investigation of health, wellbeing and social impacts. It draws upon other assessments undertaken within the ES, and the approaches used therein. The assessment identifies likely significant effects on relevant

receptors in relation to each health determinant. The Impact Interaction ES Chapter (**Chapter 17**) identifies where potential interactions between effects may occur on the same receptor (e.g. receptors impacted by several health determinants).

- 8.4.13 The established definition of health from the World Health Organisation (WHO) is that “*health is a state of complete physical, social and mental wellbeing and not simply the absence of disease or infirmity*”. This assessment uses the WHO definition of health, recognising that although illness and disease (mortality and morbidity) are useful ways of understanding and measuring health, they need to be taken in the context of a broader understanding of health and wellbeing to be properly useful.
- 8.4.14 The definition of health reflects the understanding that an individual’s inherited traits interact with lifestyle, community, environmental, social and economic factors as well as a much wider range of issues to determine their health outcomes, as shown in **Figure 8.1**.

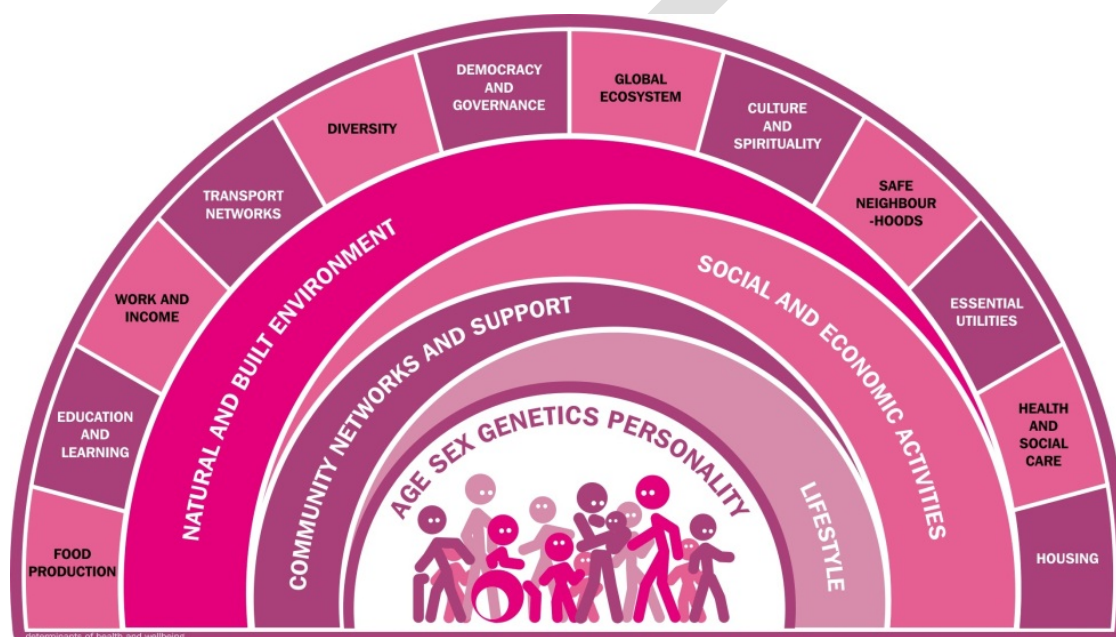


Figure 8.1 The Determinants of Health and Wellbeing (Stantec, adopted from Dahlgren and Whitehead, 1991⁴)

- 8.4.15 Many of these ‘determinants’ can be influenced by the quality of people’s living and working environments. Therefore, in planning for the Proposed Development it is understood that health is not only concerned with avoiding environmental impacts but also contributing to the factors that improve wellbeing. Planning will include measures to enhance social cohesion, access to jobs, access to affordable housing, access to green infrastructure and access to social infrastructure.
- 8.4.16 The assessment has been undertaken against determinants of health and their relationship to planning issues. The determinants considered are presented within the structure from the NHS HUDU checklist (see **Table 8.1**) and are based on national and local policy and guidance strategies.
- 8.4.17 **Table 8.1** indicates the determinants of health that have been considered in this assessment and the associated pathways to specific health, wellbeing and social outcomes based upon themes in the HUDU planning checklist. By assessing the Proposed Development against these themes, it is possible to identify the beneficial or adverse effect of the Proposed Development on the health and wellbeing of the sensitive receptors and provide a basis for

⁴ Dahlgren G & Whitehead M (1991) Policies and strategies to promote social equity in health. Institute for Future Studies, Stockholm

setting actions for further mitigation and enhancement. Certain issues have been scoped out of the demolition/construction phase assessment (e.g. housing standards) where not considered applicable. Other scoping issues are noted in **Table 8.1**.

8.4.18 The findings of this chapter have drawn on various technical assessments included within the ES of relevance to health, well-being and social factors, including; air quality, noise, ground conditions, water environment, transport and economics.

8.4.19 The assessment undertaken is largely qualitative, except where data is readily available to enable quantification or where quantification of health, wellbeing and social impacts is undertaken in other assessments (e.g. other technical studies in this ES).

Theme	Planning Issue	Health and Wellbeing Issue	Scoping Considerations
Healthy Housing	<ul style="list-style-type: none"> Housing design Accessible housing Healthy living Housing mix and affordability 	<ul style="list-style-type: none"> Lack of living space - overcrowding Unhealthy living environment – daylight, ventilation, noise Excess deaths due to cold / overheating Injuries in the home Mental illness from social isolation and fear of crime 	<ul style="list-style-type: none"> Housing mix and affordability has been scoped out of the demolition/construction assessment when considering the temporary workforce accommodation for up to 200 workers.
Active Travel	<ul style="list-style-type: none"> Promote walking and cycling Safety Connectivity Minimising car use 	<ul style="list-style-type: none"> Physical inactivity, cardiovascular disease and obesity Road and traffic injuries Mental illness from social isolation Noise and air pollution from traffic 	<ul style="list-style-type: none"> Promotion of walking and cycling and minimising car use planning issues have been scoped out of the demolition/construction assessment.
Healthy Environment	<ul style="list-style-type: none"> Construction Air quality Noise Contaminated land Open space Play space Biodiversity Local food growing Flood risk Overheating 	<ul style="list-style-type: none"> Disturbance and stress caused by construction activity Poor air quality - lung and heart disease Disturbance from noisy activities and uses Health risks from toxicity of contaminated land Physical inactivity, cardiovascular disease and obesity Mental health benefits from access to nature and green space and water Opportunities for food growing – active lifestyles, healthy diet and tackling food poverty Excess summer deaths due to overheating 	<ul style="list-style-type: none"> Local food growing has been scoped out of the demolition/ construction assessment. Biodiversity has been considered more broadly as 'access to nature'. Play space and open space are considered together along with physical recreation. It is considered that assessment against these issues, more accurately reflects potential health issues. Overheating has not been explicitly considered as this is a detailed design issue. However, orientation and landscaping should consider this issue as the design progresses.

Theme	Planning Issue	Health and Wellbeing Issue	Scoping Considerations
Vibrant Neighbourhoods	<ul style="list-style-type: none"> Healthcare services Education Access to social infrastructure Local employment and healthy workplaces Access to local food shops Public buildings and spaces 	<ul style="list-style-type: none"> Access to services and health inequalities Mental illness and poor self-esteem associated with unemployment and poverty Limited access to healthy food linked to obesity and related diseases Poor environment leading to physical inactivity Ill health exacerbated through isolation, lack of social contact and fear of crime 	<ul style="list-style-type: none"> Healthy workspaces have not been considered given there is limited information available regarding what the workspaces will be. However, workspace standards should be considered as the design progresses. Access to local food shops is considered together within 'access to social infrastructure'. Public buildings and spaces that are considered within 'access to social infrastructure'.

Table 8.1 HUDU Checklist – Assessment Framework

8.4.20 For ease of reference, the above 'planning issues' are considered to be synonymous with 'health determinants' within this Chapter. The likely significant effects within each health determinant, taking embedded mitigation into account, are considered for both demolition/ construction and operational phases, where appropriate, and presented within the impact **Tables 8.4 – 8.10**.

8.4.21 Given the approach as set out above, approved developments (or those considered likely to have been approved and implemented by 2032) are factored into the 2032 baseline, and therefore the assessment of likely significant cumulative effects with these developments is inherent to the assessment and is not reported separately.

Assessment of Significance

Characterisation of Impact

8.4.22 An effect is deemed to be possible where there is a relevant source (aspect of the Proposed Development), pathway (route by which the source affects the receptor - causation) and receptor (recipient that can be affected by the source).

8.4.23 Qualitative judgement is needed where these factors are in place, to establish whether a significant effect is likely. This is related to the strength of the evidence base regarding causation, the magnitude of impact and the sensitivity of the receptors.

8.4.24 Whilst very localised issues may arise and warrant consideration, the key consideration with regard to significance is whether it is likely receptors will experience a change in health, wellbeing and social outcomes and whether this is likely to affect 'population health', as population based conclusions are the appropriate level at which to consider effects for the purposes of EIA on human health (International Association for Impact Assessment (IAIA), 2019).

8.4.25 The following questions are relevant as noted below:

- Strength of Evidence

- What is the strength of evidence base linking the aspect of the Proposed Development to health, wellbeing and social outcomes? (e.g. through use of Healthy people healthy places evidence tool (Bird *et al.*, 2018));
- Have significant effects been identified in other assessments in the ES which are linked to human health (i.e. are environmental standards threatened) and social impacts?;
- Magnitude of Impact
 - Is the effect at an individual or population level?;
 - Is the impact linked to local public health priority objectives? (as identified through review of baseline sources);
 - Is the impact reversible or irreversible?;
 - Does the impact occur over the short (less than one year), medium (one to five years) or long (over five years) term?;
 - Is the impact permanent or temporary?;
 - Does the impact increase or decrease with time?;
- Sensitivity of Receptors
 - Are vulnerable groups (as identified for this assessment) likely to be affected?

Significance Criteria

- 8.4.26 The IEMA 'Health in Environmental Impact Assessment – A Primer for a Proportionate Approach' (IEMA, 2017) notes the complexities involved in defining significance for population and human health. There is an absence of significance criteria or a defined threshold for determining significance for population and health in UK EIA practice.
- 8.4.27 In addition to this, the IAIA 'Addressing Human Health in Environmental Impact Assessment – Consultation Draft' notes that whilst sensitivity and magnitude are part of determining health significance "...they tend not to capture other information, on importance, desirability and acceptability, that is relevant to presenting a robust 'reasoned conclusion'. For this reason, a simple sensitivity v. magnitude matrix approach is not recommended."
- 8.4.28 This guidance instead states that determination of significance should draw from a wider range of relevant information to support professional judgment including:
- scientific literature;
 - baseline conditions for the population;
 - consultation for the project;
 - health priorities in the jurisdiction;
 - regulatory standards in the jurisdiction; and
 - policy context in the jurisdiction.
- 8.4.29 As such, the typical matrix of determining impact significance in EIAs has therefore not been applied in this health impact assessment. However, the generic significance criteria (noted in

Chapter 5 of the ES) have been considered, taking into account the questions as noted under 'Characterisation of Impact' and drawing on the wider range of relevant information noted above.

- 8.4.30 In accordance with the generic significance criteria, effects that are described as 'minor' or 'negligible' are determined to be 'Not Significant' and effects that are described as 'moderate', or 'major' are determined to be 'Significant'.

Limitations

- 8.4.31 As illustrated in **Figure 8.1**, there are many determinants that can have an impact on an individual's health. It is possible for the Proposed Development to create conditions that could lead to enhanced health outcomes, but there are other factors determining health that cannot be managed by the Proposed Development (e.g. performance of the wider economy and genetic factors).
- 8.4.32 Census and other baseline health data characterises the study area at a single temporal point. Available census data is from 2011, which is likely to have evolved in the last 10 years, more so given the effects of Covid-19. Data is often aggregated at different scales in different sources. For example, census data is aggregated at the lower super output area level but regional and local authority level trends are presented within the JSNA. Therefore, comparisons can be limited.
- 8.4.33 There is a significant amount of literature regarding the evidence base for pathways between aspects of development and health outcomes. In order to provide a proportional assessment, a full literature review is not provided and the aspects considered in the HUDU Checklist provide the starting point for scoping of relevant determinants of health to be considered. However, a summary of pathways is provided in **Table 8.1**.
- 8.4.34 It should be noted that the focus of this assessment is public or population level health and individual occupational health and safety issues are not within the remit of this assessment.
- 8.4.35 As noted, this assessment draws upon other assessments undertaken within the ES, and the approaches used therein, and is therefore subject to the limitations of those contributory assessments. Conclusions have been drawn directly from contributory assessments where, for example, quantitative assessment has been undertaken, including noise and air quality.
- 8.4.36 Ambient air quality in the UK is assessed against National Air Quality Strategy Objectives (NAQOs), in which the concentrations against which compliance is assessed are health based, but not completely so. NAQOs also take into account the technical and economic feasibility of achieving them. In contrast, World Health Organisation (WHO) Guideline Values are wholly health based (to protect the most vulnerable individuals in society such as the young and old), and are lower for some pollutants than the NAQOs. The pollutants of particular concern for human health are Particulate Matter (PM)₁₀ and PM_{2.5}, in which the WHO Guideline Values are more stringent than the NAQOs. The air quality assessment in **Chapter 11** has assessed against the relevant NAQOs and been incorporated into the assessment in **Tables 8.4-8.10**. The National Air Quality Assessment uses NAQOs because these are a legal requirement. The Objectives (NAQOs) are set out in the Air Quality Standards Regulations 2010 (and subsequent amendments) which transposes the EU Directive (2008/50/EC) on ambient air quality and cleaner air for Europe and consolidates the Air Quality Regulations 2010 and subsequent amendments. Conversely, the WHO Guideline Values have not been transposed into UK or EU legislation therefore compliance with them is not a legal requirement. Furthermore, best practice prepared by the Institute of Air Quality Management (**IAQM**) and Environmental Protection UK states that when arriving at a planning decision, local authorities should pay particular attention to compliance with the NAQOs when considering air quality.
- 8.4.37 Where relevant, limitation regarding the COVID-19 pandemic on the assessments undertaken for transport, air quality and noise has been set out in their respective chapters.

8.5 Baseline Conditions

- 8.5.1 This section describes the baseline conditions of the study area, which is defined by the area in which the identified sensitive receptors are located. A description of the general characteristics of the local population along with relevant information is present under each of the HUDU Checklist themes (i.e. Healthy Housing, Active Travel, Healthy Environment, Vibration Neighbourhoods).

Current State of the Environment

- 8.5.2 The Site is located within the county of Somerset, within the local authority area of Sedgemoor District Council and within the ward of Puriton and Woolavington and ward of Knoll (see **Appendix 8.1 Figure 1**) The Site is located within the LSOAs of Sedgemoor 006B, 006C and 006D (see **Appendix 8.1 Figure 2**).
- 8.5.3 The Site is currently comprised of 261.54 hectares of land, of which approximately 250 hectares was part of the former Royal Ordnance Factory (ROF) which closed in 2008. The majority of the Site, associated with the ROF, is brownfield, previously developed land which has been incrementally developed over the past 70 years. Land on the edges of the Site, in particular to the south and east, is currently greenfield agricultural land.
- 8.5.4 The area of the Site relating to the former ROF has been remediated in accordance with Condition 10 of the remediation planning permission (ref. 42/11/00017), Remediation verification reports have been prepared by BAE Systems in March 2019, October 2019 and August 2020. It is therefore considered that the Site has been assessed, remediated and verified in accordance with the planning permission and industry best practice (BAE systems, CDM Health and Safety File – Remediation works, November 2020).
- 8.5.5 The Site is surrounded by largely agricultural land to the north, east and west. The village of Puriton lies immediately to the south west of the Site and the village of Woolavington lies immediately to the south east. Beyond Puriton, approximately 2km west of the Site, lies junction 23 of the M5 motorway. The motorway runs in north-south orientation.

Health and Wellbeing

General Health Characteristics and Distribution of Vulnerable Groups

- 8.5.6 Sedgemoor has a greater proportion of people aged 50-90+ than the England and South West region average, particularly within the 50-59 and 70-74 age brackets. Aligned with this, Sedgemoor has a much smaller proportion of people aged between 20 and 44, particularly within the 20-24 age bracket, as shown on **Figure 8.2** below.

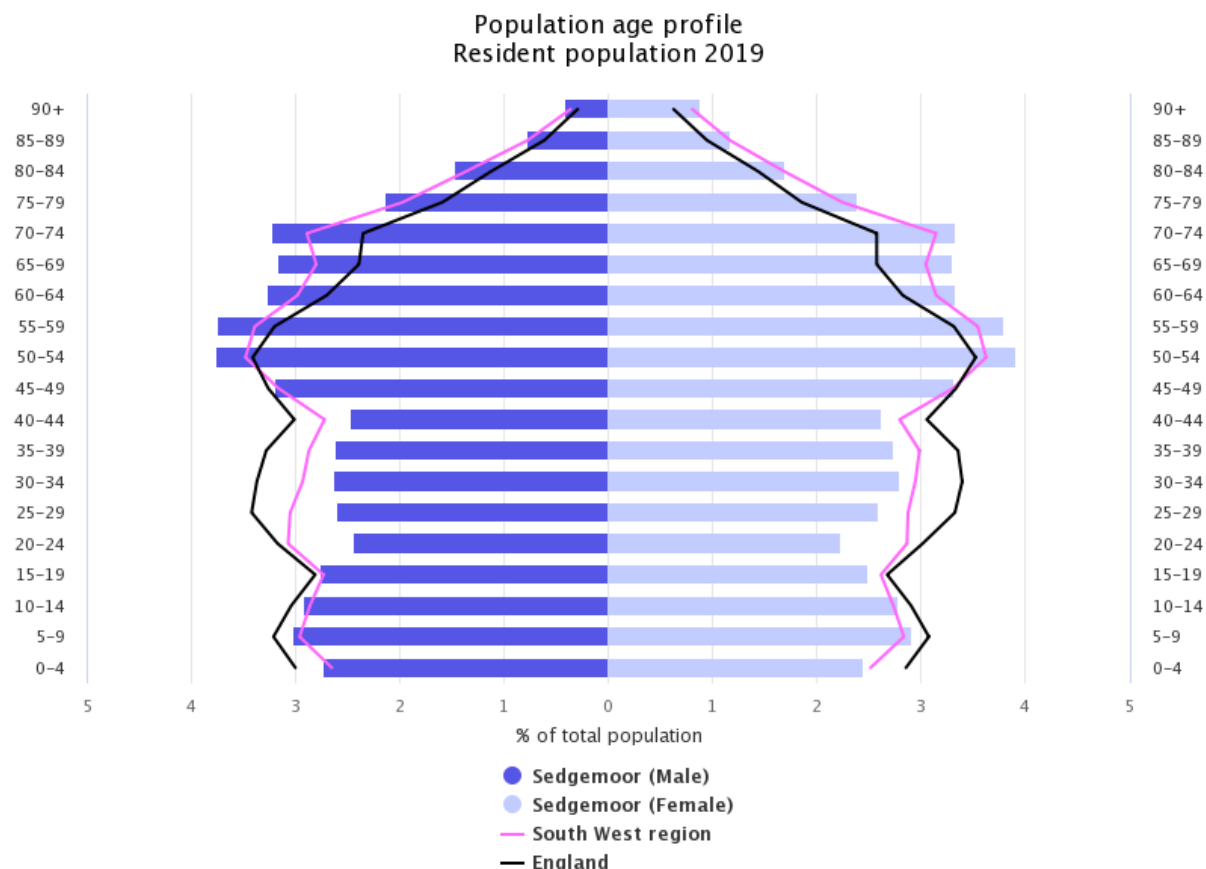


Figure 8.2: Age Profile of Sedgemoor (PHE, 2019)

- 8.5.7 The JSNA (Somerset Health and Wellbeing Board, N.Da) states that over one in four (almost 60,000) households in Somerset contain only residents aged 65 or older in 2014. Almost 4% of those aged 65 or older live in a communal establishment (mainly care homes), but amongst the population aged 85+ the proportion is 16%. It notes that social isolation and loneliness are key factors contributing to health and wellbeing of older people in particular, and that age friendly infrastructure is key to helping older people get out and about and stay connected, which is problematic in rural areas.
- 8.5.8 The age profile for the ward of Puriton and Woolavington shows that there is a slightly lower proportion of people under 16 and of working age than compared to Somerset and England (particularly in the 25-64 age bracket), and higher proportions of older aged people.
- 8.5.9 The age profile for the ward of Knoll shows an age profile more similar to the England average. The % of 16-25 year olds is higher than that of Puriton and Woolavington, with a slightly higher % of 25-64 year olds, and lower % of 65+ year olds.
- 8.5.10 A comparison of the age profiles of the ward of Puriton and Woolavington and ward of Knoll with that of Somerset and England is shown on **Figure 8.3** below.

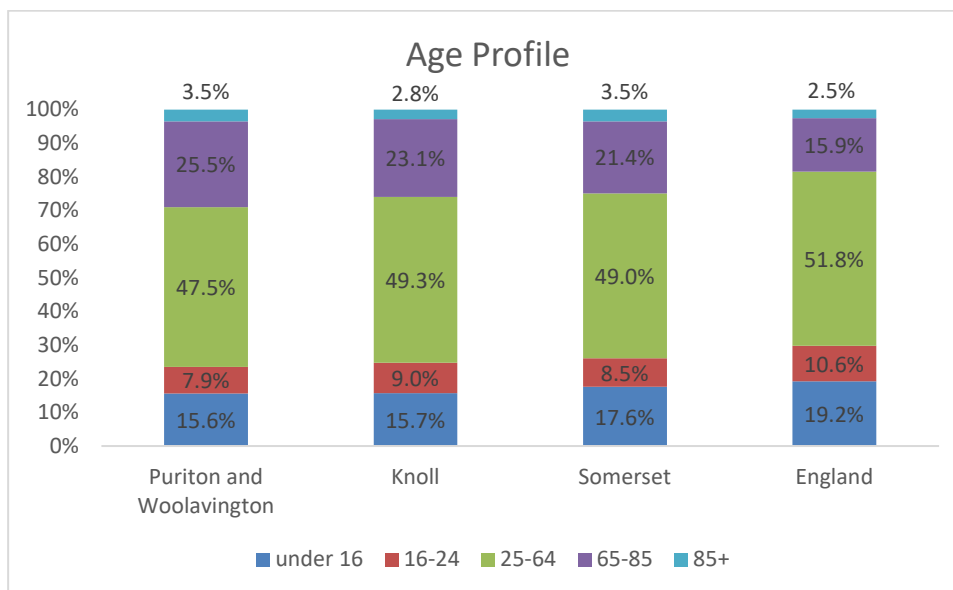


Figure 8.3 Age Profile Comparison

- 8.5.11 The JSNA (Somerset Health and Wellbeing Board, N.Db) summarises the headlines from the 2011 Census with regards to diversity in Somerset, including ethnicity, religion and sexual orientation.
- 8.5.12 94.6% of Somerset's population are 'White British'. This proportion is typical of that seen in Somerset's neighbouring local authorities but much higher than the England and Wales average (80.5%). The Black and Ethnic Minority population of Somerset was estimated at 10,717 in 2011, comprising 2% of Somerset's overall population, which is well below the national average of 14.0%.
- 8.5.13 At the time of the 2011 Census, 346,597 Somerset residents identified themselves as being affiliated to a religion, equating to 65% of the county's population. The main religious groups include: Christian (339,211 residents), Buddhist (1,612 residents), Muslim (1,470 residents), Pagan (1,147 residents), and Hindu (506 residents). A total of 141,071 residents (27%) reported having no religion.
- 8.5.14 The JSNA summarises the findings of several ONS population surveys estimating sexual identity at a local authority level. The estimates suggest that 95.2% of Somerset's adult (aged 16 or over) population identify themselves as heterosexual or straight; 0.9% (4,000 residents) identify as gay or lesbian; 1.1% (5,000 residents) identify as bisexual; and 0.4% (2,000 residents) as 'Other' ('other' indicates that respondents did not consider themselves to fit into the heterosexual or straight, bisexual, gay or lesbian categories). 2.4% of respondents didn't know or refused to answer.

Deprivation, Income and Employment

- 8.5.15 The Indices of Multiple Deprivation (IMD) is a measure of deprivation experienced by people living in an area and is calculated for every LSOA. In relation to deprivation, Somerset has been identified as generally performing better than the national average in terms of overall levels of deprivation. However, since 2015 the number of 'highly deprived' neighbourhoods in Somerset (categorised as being within the 20% most deprived in England) has increased to 29, up from 25 neighbourhoods in 2015 (Somerset Health and Wellbeing Board, N.Dc).
- 8.5.16 The majority of the Site is located within LSOA Sedgemoor 006C (see **Appendix 8 Figure 2**) which is identified as being within the 8th IMD decile (with 1 being the most deprived and 10 being the least deprived). Other parts of the Site are located within the LSOAs of Sedgemoor

006B and 006D which are identified as being with the 4th decile. The scores of each domain of deprivation used to calculate the IMD score for the LSOA are outlined in **Table 8.2** below.

LSOA	IMD Decile	Income Decile	Employment Decile	Education, Skills and Training Decile	Health, Deprivation and Disability Decile	Crime Decile	Barriers to Housing and Services Decile	Living Environment Deprivation
006C	8	8	7	7	6	8	6	5
006B	4	5	5	3	7	6	2	2
006D	4	4	3	3	5	3	9	4

Table 8.2 IMD Scores

- 8.5.17 LSOAs to the north, south and west of the Site similarly sit towards the middle decile and lower end of the rankings with areas of particularly high deprivation being located within urban areas such as Bridgwater and Highbridge.
- 8.5.18 The percentage of children living in low income families in Sedgemoor is better than the England average, and is decreasing (PHE, 2019). The JSNA (Somerset Health and Wellbeing Board, N.Dd) notes that, of the 110,000 children under the age of 18 living in Somerset, between 5,000 and 10,000 are in particular need, the majority living in the most deprived urban wards in 2016.
- 8.5.19 The health profile (2019) for the ward of Puriton and Woolavington identifies that it performs similar or better than the England average in relation to the percentages of people who experience income deprivation, child poverty and older people in deprivation. At a district level, Puriton and Woolavington perform better than Somerset in relation to child poverty and older people in deprivation.
- 8.5.20 However, compared to the ward of Puriton and Woolavington, the ward of Knoll has less income deprivation (2.3% lower), fewer children in poverty (7.1% lower) and fewer older people in deprivation (1.3% lower). The ward of Knoll is therefore lower than the Somerset and England averages for these indices.
- 8.5.21 A comparison of these indicators are presented in **Table 8.3** below.

Indicators	Puriton and Woolavington	Knoll	Somerset	England
Income Deprivation (%)	10.4	8.1	10.3	12.9
Child Poverty (%)	16.5	9.4	13.6	17.1
Older People in Deprivation (%)	9.2	7.9	10.4	14.2

Table 8.3 Indices of Deprivation Comparison

- 8.5.22 The Business Register and Employment Survey data (ONS, 2019) shows that there were an estimated 52,000 jobs in Sedgemoor in 2019. The sectors supporting the highest levels of employment are:

- Manufacturing (13.5%)
- Health (9.6%)

- Transport & Storage (9.6%)
- Retail (9.6%)
- Accommodation & Food Services (8.7%)

8.5.23 Within the FEMA there was an estimated 112,000 jobs as of 2019. There are clear similarities between the employment structures of the M5 FEMA and Sedgemoor. The sectors supporting the greatest levels of employment include:

- Health (17.0%)
- Retail (10.7%)
- Manufacturing (9.4%)
- Education (8.5%)
- Accommodation & Food Services (7.6%)

8.5.24 Data from the Annual Survey of Hours and Earnings (ASHE) indicates that the gross median weekly wage for people working in Sedgemoor was £483 in 2020. This represents a marginal increase over the previous year (£482.4). Within the FEMA, the gross median weekly wages have been slightly above what is observed within Sedgemoor alone. Data from ASHE shows that in 2020 the median weekly wage was £497, which is 2.9% above the wages in Sedgemoor.

8.5.25 As outlined in Chapter 7 Economics, the unemployment rate across the M5 Corridor FEMA was 4.0% in 2019, a slight increase over the 2.5% reported in 2018. This rate is above that which was observed in the South West (3.1%) region and also above the national average for the UK (3.9%).

Existing Health Outcomes

8.5.26 The average life expectancy at birth for men and women in Sedgemoor is 80.3 years and 84.0 years respectively, which is similar to, and better than, the England average (79.8 and 83.4 years respectively). Life expectancy at birth for men and women within Puriton and Woolavington is 81.1 years (similar to the England average) and 86.9 years (significantly better than the England average) respectively.

8.5.27 In relation to adult health, Sedgemoor ranges in performance against the England average in relation to a range of indicators. Sedgemoor performs better than the England average with regards to the under 75 mortality rate from all causes, including cardiovascular disease and cancer, killed and seriously injured casualties on England's roads, new STI diagnoses and tuberculosis incidents. It performs similar to the England average with regards to estimated diabetes diagnosis rates, dementia diagnosis rates, admission episodes for alcohol-related conditions and excess winter deaths. However, it performs significantly worse than the England average in relation to suicide rate, emergency hospital admissions for intentional self-harm, hip fractures in people over 65, and smoking prevalence in adults.

8.5.28 The self-reported general health of Sedgemoor, according to the 2011 census, is divided into five categories: very good, good, fair, bad, and very bad as shown in **Figure 8.4**. Sedgemoor has a lower percentage of people describing their health as 'very good' compared to national and south west averages and has a similar percentage of people describing their health as 'bad' or 'very bad'.

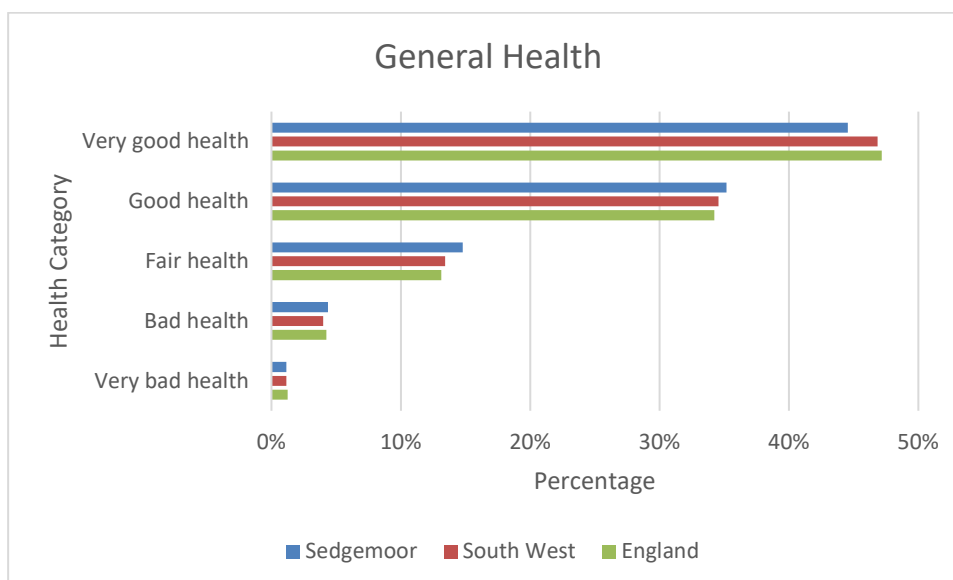


Figure 8.4 General Health (ONS, 2011)

- 8.5.29 In the ward of Puriton and Woolavington, the number of people living with a long-term illness or disability is higher than the England average. Puriton and Woolavington has a lower number of deaths from all causes (all ages and for under 75). The ward has similar numbers to the England average deaths from cancer (all ages and under 75), circulatory disease (all ages), coronary disease, stroke and respiratory diseases, as well as incidences of all cancers, breast cancer, colorectal cancer, lung cancer, prostate cancer, and deaths from causes considered preventable.
- 8.5.30 Comparatively, in the ward of Knoll, the number of people living with a long term illness or disability is similar to the England average. Knoll has a lower number of deaths from all causes (all ages and under 75), all cancers, respiratory disease and deaths from causes considered preventable, as well as lower incidences of colorectal cancer and lung cancer. It has similar number of deaths from circulatory disease, coronary disease and stroke, as well as similar rates of all cancers, breast cancer, prostate cancer and hospital stays for self-harm.
- 8.5.31 In relation to child health and development, Sedgemoor is better or similar to the England average on all indicators. The under 18 conception rate is 8.6%, significantly better than the England average of 16.7%. In Sedgemoor, 19.0% of Year 6 (10-11 year olds) are considered obese or severely obese, which is similar to the England average of 21.0%.
- 8.5.32 The JSNA (Somerset Health and Wellbeing Board, N.De) notes that, according to the Measuring National Well-being programme published by the ONS, Somerset has seen a general improving trend in levels of wellbeing since 2011/12. Around 4 in 10 adults in Somerset rate their 'happiness' very highly (a score of 9 to 10) while around 1 in 13 adults (7%) rate their happiness very low (a score of 0 to 4), with Somerset consistently reporting higher than the national averages for well-being, which may be partially due to the trend that rural areas tend to have higher levels of subjective wellbeing than urban areas.

Healthy Housing

- 8.5.33 As identified in Chapter 7 Economics, the Strategic Housing Market Assessment for Sedgemoor identifies a need for 644 dwellings per annum for the period up to 2032, or a total of 13,530 homes during the period from 2011 up to 2032.
- 8.5.34 Sedgemoor has below average house prices, making it more affordable than other districts within Somerset. However, low average wages mean that home ownership remains challenging despite a lower average house price. The Local Plan notes that a considerable

number of affordable homes have been built since 2006, but the need remains high. There is a particular need identified for starter homes for young people.

- 8.5.35 Fuel poverty is related to low income, high fuel costs and poorly insulated housing. It is linked with excess winter deaths and cold related illness admissions, for example respiratory illnesses (NHS HUDU, 2017).
- 8.5.36 The JSNA (Somerset Health and Wellbeing Board (N.Df) notes that fuel poverty is also particularly prevalent in West Somerset, where an estimated 24,391 households in Somerset are in fuel poverty according to latest figures (for 2016), representing 10.2% of all households. Within Puriton and Woolavington, rates of fuel poverty are similar (10.0%) to the England average (10.3%) However, excess winter deaths in Sedgemoor are worse (23.4%) than the England average (15.1%).
- 8.5.37 The JSNA (Somerset Health and Wellbeing Board (N.Dg) states that the ratio of house price to earnings is greater than the national average in all the Somerset housing authorities, and in West Somerset, house prices at market entry levels are ten times the average earnings figure, making it especially difficult for young people to afford their own homes. It also notes that housing supply remains an issue, especially for one-bedroom properties.

Active Travel

- 8.5.38 As noted in **Chapter 9 Transport and Access**, the footway provision surrounding the Site sometimes lacks consistency with narrow or no footway in places, with one formal crossing point in each village of Puriton and Woolavington. There are no formal cycle paths in the immediate vicinity of Puriton and Woolavington, however National Cycle Network Route (NCNR) 3 runs under the A39 Bath Road adjacent to Woolavington Hill and later connects to NCNR 33, which runs to the east of Woolavington and up into Highbridge. There is currently an absence of formal footways or cycleways adjacent to Woolavington Road.
- 8.5.39 Bus stops through the centre of Puriton and Woolavington are serviced by the 75 bus service from Wells to Bridgwater 7 times a day from 07:45 to 18:27. The 66 and X75 buses operate a singular daily service in each direction. Outside of the immediate vicinity of the Site, additional bus services are accessible from the A38 bus stops at Downend Road and Admirals Table, located approximately 2.5km and 2.8km respectively from the Site. A wider range of bus services are available from Bridgwater Bus Station, which is accessed off Watsons Lane in central Bridgwater. Private school buses operate in the morning and afternoon peaks, servicing secondary schools outside of both Puriton and Woolavington.
- 8.5.40 The closest railway station to the Site is Bridgwater Station, located on the Taunton to Bristol mainline. The station itself is located in Bridgwater town centre on Wellington Road, approximately 7km from the Site.
- 8.5.41 The majority of residents that live in the settlements around the Site, including Puriton and Woolavington travel to work by car or van (CDRC, 2019).
- 8.5.42 In relation to levels of activity, 65% of adults in Somerset identified as being 'Active' - undertaking at least 150 minutes a week, 11% identified as being 'fairly active' – undertaking 30-149 minutes per week and 24% identified as being 'inactive' – less than 30 minutes a week (Sport England, 2021).
- 8.5.43 As noted within Chapter 9, a single PRoW (BW28/2) crosses the Site to the south where the Gravity Link Road which has been implemented as part of the 2017 Planning Consent. The Gravity Link Road crosses the alignment of the public footpath and this has been considered and appropriately incorporated into the Gravity Link Road designs with provision of a new green bridge to retain existing connection.

- 8.5.44 There are several PRow which are in close proximity to the Site, including public footpaths BW 37/2 in Woolavington, BW 28/4 in Puriton, public bridleway BW 28/1 south of the Link Road and restricted byway BW 28/1/1 north of Puriton.

Healthy Environment

- 8.5.45 The majority of the Site (approximately 250 ha) was part of the former ROF and would be classified as brownfield land. The ROF land has been subject to extensive land contamination assessment and remediation as part of the remediation planning consent to reduce the risk of adverse impacts to human health. The Phase 1 Land Condition Report (Ashfield Solutions Group, 2021) assesses the greenfield agricultural land outside of the ROF land. A plan showing the extent of the ROF land is presented within the Phase 1 Land Condition Report (Ashfield Solutions Group, 2021) submitted with this application. This report determined that the overall land contamination risk estimation for this land is Low.
- 8.5.46 The Environment Agency (EA) '*Flood Map for Planning*' shows the majority of the Site lies within Flood Zone 3, with higher elevations towards the south being within Flood Zone 1. There is an intermediary zone between the two shown as Flood Zone 2. The '*Flood Map for Planning*' also indicates that all areas of Flood Zone 3 benefit from flood defences along the Parrett Estuary.
- 8.5.47 The majority of the Site is former ROF land and therefore fenced with no public access. The remainder of the Site (approximately 11 ha) is agricultural, open land. There are ten non-statutory designated sites within or adjacent to the Site, all of which are designated as Local Wildlife Sites, and described in full within Chapter 12 Biodiversity. The nearest statutory designated site is the Huntspill River NNR, which is located immediately to the north of the Site, with a small section (c.0.7ha of a total 148.98ha) within the Site boundary itself. To the south is comprised of open green space and the 37 Club, a local community facility used by residents in Puriton, Woolavington and within the wider area of Somerset as a social and function venue. The 37 Club contains a bar, serves food and offers catering for events. There is a range of sports facilities including skittle alleys, snooker and pool tables, darts, a football pitch and private fishing pond. The nearest children's playground is located in Woolavington adjacent to the Site boundary.
- 8.5.48 As noted in Chapter 11 Air Quality, SDC has not declared any Air Quality Management Areas (AQMAs). There have been no measured exceedances of the annual mean NO₂ concentrations in close proximity to the Site. The nearest monitoring stations to the Site for PM₁₀ or PM_{2.5} emissions are 4 km from the Proposed Development and are therefore not considered representative. However, the estimated background concentrations for the Site provided by Defra suggest that the annual mean background concentrations of NO₂, PM₁₀ or PM_{2.5} are well below the relevant NAQOs.
- 8.5.49 As stated in Chapter 10 Noise and Vibration, the current dominant noise sources are vehicular movements on the surrounding road network, which includes the M5, and vehicular noise from train movements on the Bristol to Exeter railway line to the west of the Site.

Vibrant Neighbourhoods

- 8.5.50 Chapter 9 Transport and Access outlines existing local facilities in the area. Within the vicinity of the villages of Puriton and Woolavington, there is Court Farm Butchers in Puriton, also providing grocery needs and located on Riverton Road, and Co-op Food on Woolavington Hill, with shops providing day to day convenience goods for local residents. The nearest supermarkets to the villages are in Bridgwater, with Budgens situated adjacent to Bristol Road or Sainsburys accessed from The Clink. A post office is also located on Middle Street within the centre of Puriton.
- 8.5.51 There are two GP surgeries within 4 km of the Site. Woolavington Surgery and Edington Surgery form part of the Polden Medical Practice. Bridgwater Community Hospital is located approximately 6km from the Site and offers urgent care and outpatient care. In addition,

Burnham On Sea War Memorial Hospital is located approximately 15km from the Site. The nearest dental facility is 'myDentist' located on Symons Way, Bridgwater, approximately 8 km from the Site.

- 8.5.52 There are two Nurseries School located within 2km of the Site, Hunny Bears Day Nursery and Sunshine Pre-School, both based in Puriton. There are primary schools located in both Puriton and Woolavington. Puriton Primary School is accessed via Rowlands Rise, which contains wide footways on both sides of the carriageway. Woolavington Village Primary School is located on the southern side of Higher Road, has limited car parking facilities and is only served by footways to the east. The closest secondary schools are Chilton Trinity and Bridgwater College Academy, both of which are located within Bridgwater.
- 8.5.1 The National Cycle Network Route extends to the east of Woolavington and north of the Site to Highbridge and is accessible via Cossington Lane. Furthermore, Puriton Sports Centre and the 37 Sports and Social Club can be accessed via Batch Road and Woolavington Road respectively.

Summary

- 8.5.2 Overall, Sedgemoor generally performs better than the national average in terms of overall levels of deprivation. However, there is inequality within this, with the ward of Puriton and Woolavington generally performing worse than the ward of Knoll and Sedgemoor. Key health and wellbeing issues identified for the area include:
- Sedgemoor has an aging population with a greater proportion of people over the working age.
 - There are higher levels of income deprivation, child poverty and older people in deprivation within the ward of Puriton and Woolavington than the ward of Knoll.
 - There are prevalent issues with suicide rates, incidents of self-harm, smoking, alcoholism.
 - Low average wages mean that home ownership remains challenging despite a lower average house price in Somerset. There is a particular need identified for starter homes for young people.
 - Fuel poverty is also prevalent in West Somerset, where an estimated 24,391 households in Somerset are in fuel poverty, representing 10.2% of all households. Within Puriton and Woolavington, rates of fuel poverty are similar (10.0%) to the England average (10.3%) However, excess winter deaths in Sedgemoor are worse (23.4%) than the England average (15.1%).
 - the unemployment rate within the M5 Corridor was 4.0% in 2019, a slight increase over the 2.5% reported in 2018. This rate is above that which was observed in the South West (3.1%) region and also above the national average for the UK (3.9%).

2032 Baseline

- 8.5.1 In 2032, it is assumed that:
- The extant 2017 Planning Consent for Huntspill Energy Park (see [Section 1.3](#) for further details) would have been constructed (excluding land safeguarded for energy uses);
 - The approved Village Enhancement Scheme (see [Section 3.2](#) for further details) would be completed, which includes the provision of a shared footway/cycleway between the villages of Puriton and Woolavington for walkers and cyclists, a mix of traffic calming features and enhanced crossing points between the two villages. This will include two new

permissive paths (which differ from a Public Right of Way (PRoW) as there is no statutory right of access, but the landowner allows the public to use); and

8.5.2 Committed development would have been constructed as per the proposed planning application (**Appendix 1.3**), including the contribution to housing delivery. Whilst it is not possible to accurately characterise the health of the receptor groups at a defined point in time in the future, the following considerations are relevant when assessing the evolution of the baseline:

- Projected trends in health outcomes;
- Success of the strategic programmes for health improvement; and
- Projected changes in demographics including new communities being built.

8.5.3 ONS projections indicate that over the next decade (2020-2030) the population of Sedgemoor will increase by 5.7% to a total of 132,731. This growth will be driven primarily to increases of people who are of pensionable age (+23.4%) with modest estimates for growth of the working age growth (+1%). The population of children is anticipated to decline (-3%) over the same period.

8.5.4 The 2019 Public Health Profile for Sedgemoor identifies that there is a significant increase in emergency hospital admissions for intentional self-harm and admission episodes for alcohol-related conditions, however decreasing rates of under 18s conception and decreasing number of children in low income families.

Health and Climate Change

8.5.5 In October 2020, the Somerset JSNA published a Climate Change and Health note (Somerset Health and Wellbeing Board, 2020) looking at the potential future health impacts of the climate emergency. The key findings were:

- Extreme conditions – heat, cold, floods and droughts – have the greatest adverse impacts on health.
- The risks associated with heatwaves are likely to increase considerably by the second half of the 21st century.
- The risks associated with cold snaps (and impact on ‘winter pressures’) are likely to be lowered by the effects of global warming.
- The most vulnerable in heatwaves are people with circulatory and respiratory conditions; this group may, though, benefit from reduction in winter cold.
- People in poor housing will continue to have poor health outcomes associated with heat and cold.
- The risks associated with flooding will rise. This will be particularly in the ‘usual’ flood zones (such as the lowland moors and low-lying coastal areas) and the ‘rapid rise catchments’ vulnerable to flash flooding, but no areas are exempt. The biggest health impact is mental.
- Flooding will affect provision of services, notably home-based social care.
- The risk of Lyme disease is likely to rise, as may West Nile virus.

- Longer term effects, within Somerset but probably to a greater extent in the poorer and environmentally marginal parts of the world, may have economic and social consequences with highly unpredictable and almost certainly harmful results.

8.6 Embedded Mitigation

Demolition/ Construction

- 8.6.1 A Framework Demolition/Construction and Environmental Management Plan (FDCEMP) has been submitted as part of this LDO (**Appendix 4.1**). The assessment identifies, within **Tables 8.4-8.10**, where specific measures within the FDCEMP are relevant to mitigate for potential health effects e.g. in relation to dust and noise. The FDCEMP is secured within the Compliance Form.

Operation

- 8.6.2 A Clean and Inclusive Growth Strategy (2020) has been prepared which sets out an ambitious vision for Gravity to deliver a socially inclusive development that considers health and wellbeing at its heart. An Environmental and Social Governance (ESG) policy has also been developed to ensure reporting requirements are threaded through the LDO processes, and to ensure that a standard is set for occupiers to have ESG. A Design Guide has also been prepared which sets out the design and placemaking principles.
- 8.6.3 Mitigation, which has been embedded into the development parameters and relied upon as part of this assessment, includes:
- Provision of up to 750 residential units;
 - A proportion of homes to be wheelchair accessible or adaptable in accordance with local policy;
 - Creation of a smart campus, which will provide up to 1,000,00 sqm of industrial, commercial and employment floorspace;
 - Provision of leisure and support facilities, including up to 100,000 sqm of sport and leisure facilities, restaurants, cafes, shops, and a hotel;
 - Provision of educational facilities, including a nursery and potentially training facilities aligned to business needs and to comply with the spirit of the employment and skills plans; and
 - As demonstrated on the Landscape Parameter Plan, there will be provision of public open space and natural green space, including the Gravity Park, within the Wellbeing and Arrival Zone, and other formal and informal spaces. Play space will be provided, and all homes will be within a 5 minute walk of a play area.
 - Transport proposals set out in the Transport Movement Strategic Masterplan which includes provision of dedicated footway and safe pedestrian routes, high quality cycling provision, provision of off-site cycle route improvements and improved connections to local bus routes.

8.7 Assessment of Likely Effects

- 8.7.1 This section sets out the predicted impacts and subsequent likely significant effects arising from the demolition/construction and occupation of the Proposed Development on human health as described in this chapter. The assessment considers the embedded mitigation, as described above.

Demolition/ Construction Effects

- 8.7.2 **Table 8.4 – 8.6** summarise the assessment of significant effects to human health, wellbeing and social impacts from the demolition/ construction phase of the Proposed Development. Some of the health determinants categories are only applicable to the operation of the Proposed Development (e.g. Housing Design) and therefore have not been considered within the construction assessment.

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Health Determinant	Potential Impacts and embedded mitigation	Receptor Group and Vulnerable Group	Likely Significant Effects	Additional Mitigation
Housing design, accessible housing, healthy living.	Up to 200 workers will require temporary workforce accommodation during the demolition/construction phase. Although there is currently no available information regarding the specific details of the temporary accommodation, it will be provided in accordance with the prevailing legal requirements for healthy and safe accommodation.	<u>Receptor Groups:</u> <ul style="list-style-type: none"> Construction workforce <u>Vulnerable Groups:</u> <ul style="list-style-type: none"> None identified 	Negligible	Implementation of best practice standards for temporary worker accommodation.

Table 8.4 The assessment of the effects on the Healthy Housing health determinant from the demolition/construction of the Proposed Development

Health Determinant	Potential Impacts and embedded mitigation	Receptor Group and Vulnerable Group	Likely Significant Effects	Additional Mitigation
Safety	<p>Chapter 9 Transport identifies that HGV movements will be limited to the Gravity Link Road, the A39 Puriton Hill, M5 junction 23 and mainline. The chapter notes that these links do not have sensitive receptors present. It also identifies that the Gravity Link Road will be operational prior to development, and therefore construction traffic will not be routed through Puriton or other links with adjacent sensitive receptors, mitigating any potential for effects to arise in relation to fear and intimidation.</p> <p>Additionally, the Village Enhancement Scheme will deliver improvements for pedestrians and cycle movements across the local network, as well as traffic calming measures. This will encourage pedestrians and cyclists to utilise the safe and sustainable connections between the villages of Puriton and Woolavington.</p> <p>A Framework Construction Traffic Management Plan (CTMP) is included in the FDCEMP, which will manage impacts from construction traffic, including safety.</p>	<p><u>Receptor Groups:</u></p> <ul style="list-style-type: none"> Existing residents adjacent to the Site boundaries and those within the area immediately surrounding the Site Existing community service users – PRoW New residents of the Proposed Development <p><u>Vulnerable Groups:</u></p> <ul style="list-style-type: none"> Vulnerable road users, including pedestrians and cyclists Older people (65 and over) Children (0-17) 	Negligible	No additional mitigation identified.
Connectivity	<p>One ProW currently crosses at the south of the Site where the Gravity Link Road has been constructed, however the Link Road has now been implemented and a new green bridge provided to retain the existing connection. As noted in Chapter 14, there are two existing tracks within the Site area (one leading to Crockers Hill in Woolavington and a second leading from Rookery Close in Puriton), which are not designated.</p> <p>It is anticipated that there would be no disruption to access to ProW to facilitate the construction works, however, there may be some temporary disruption to two permissive paths linking to Puriton and Woolavington during the construction</p>	<p><u>Receptor Groups:</u></p> <ul style="list-style-type: none"> Existing residents in the wider area of Sedgemoor Existing community service users – ProW/ cycleways New residents of the Proposed Development 	Negligible	No additional mitigation identified.

	<p>stage, and the permissive pathways associated with the approved Village Enhancement Scheme.</p> <p>Effects may arise in relation to severance as a result of these construction traffic impacts, however these will be mitigated by the delivery of the Gravity Link Road being operational prior to development, and therefore construction traffic will not be routed through Puriton or other links with adjacent sensitive receptors. The Framework CTMP included in the FDCEMP will also consider any potential severance concerns.</p>	<p><u>Vulnerable Groups:</u></p> <ul style="list-style-type: none">■ All vulnerable groups identified		
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Table 8.5 The assessment of the effects on the Active Travel health determinant from the demolition/construction of the Proposed Development

Health Determinant	Potential Impacts and embedded mitigation	Receptor Group and Vulnerable Group	Likely Significant Effects	Additional Mitigation
Air Quality	<p>Chapter 11 Air Quality identifies that there is potential for dust emissions during the demolition/construction phase. It identifies that the risk of construction dust impacts on human health are 'medium' for all activities including demolition, earthworks, construction and trackout. Dust mitigation measures have been included in the FDCEMP and will be implemented during the demolition and construction phase to see that effects are not significant.</p> <p>The chapter identifies that, during the construction period, the increase in heavy duty vehicles (HDVs) movements on the road network will be below the threshold of 100 movements per day outside an Air Quality Management Area (AQMA). The maximum increase in HDV movements is 54 per day, the construction traffic impacts on human health receptors in the area are likely to be insignificant.</p>	<p><u>Receptor Groups:</u></p> <ul style="list-style-type: none"> Existing residents located adjacent to the Site boundaries and those within the area immediately surrounding the Site New residents of the Proposed Development Site construction employees New users of the Proposed Development (prior to completion of construction) <p><u>Vulnerable Groups:</u></p> <ul style="list-style-type: none"> All vulnerable groups identified 	Negligible (as per terminology used in Air Quality ES Chapter)	No further mitigation identified.
Noise	<p>Chapter 10 Noise and Vibration identifies that demolition and construction noise could potentially increase the ambient noise levels at existing and proposed noise sensitive receptors.</p> <p>Noise sensitive receptors have been positioned in the south of the Proposed Development in the vicinity of existing noise sensitive receptors, to reduce impacts on existing environmental noise sources (specifically the railway and M5). Additionally, the reinstated railway line and extension is positioned to the north west of the Site away from proposed and existing noise sensitive receptors to allow the proposed commercial and industrial structures to provide acoustic screening.</p> <p>It is anticipated that noise impacts will range from negligible to minor for existing and proposed noise sensitive receptors as a result of construction activity. Noise and vibration</p>	<p><u>Receptor Groups:</u></p> <ul style="list-style-type: none"> Existing residents located adjacent to the Site boundaries and those within the area immediately surrounding the Site New residents of the Proposed Development (prior to completion of construction) <p><u>Vulnerable Groups:</u></p> <ul style="list-style-type: none"> All vulnerable groups identified 	<p>Impacts from construction activity – minor adverse</p> <p>Impacts from construction traffic – negligible</p> <p>Impacts from construction vibration – minor adverse</p>	No further mitigation identified.

Health Determinant	Potential Impacts and embedded mitigation	Receptor Group and Vulnerable Group	Likely Significant Effects	Additional Mitigation
	<p>mitigation measures have been set out in the chapter and included in the FDCEMP, and therefore effects are anticipated to be not significant.</p> <p>Noise generated from construction traffic is anticipated to be negligible and therefore not significant.</p> <p>The closest existing vibration sensitive receptors are likely to be approximately 30 m away from the closest demolition and construction works occurring on Site. It is anticipated that vibration levels as a result of auger piling are therefore likely to have a negligible impact.</p>			
Contaminated Land	<p>As stated in Section 2.3, the area of the Site relating to the former ROF has been remediated in accordance with Condition 10 of the remediation planning permission. The Phase 1 Land Conditions Report (Ashfield Solutions Group, 2021) identified the potential for land contamination hazards uses within the greenfield portion of the Site (see Phase 1 Land Condition Report for Plan showing extent of greenfield area) to be very low.</p> <p>The Phase 1 Land Condition Report assessed ground conditions with awareness that land uses for this area are likely to comprise a mix of residential, leisure, sport and community uses. With regards to human health it noted low potential for ingestion, inhalation and/or dermal contact from contaminated soil and dust, low potential for adverse human health impacts via ingestion of vegetables and soils attached to home grown produce in future residential areas across majority of site, with low to moderate potential on land immediately adjacent of the ROF approach roads where made ground is present. However, the Land Condition Report did not has not highlighted any specific land contamination sources requiring further investigation, and recommends that a “watching brief” should be implemented during future earthworks, particularly during the clearance of</p>	<p><u>Receptor Groups:</u></p> <ul style="list-style-type: none"> Existing residents surrounding the Site Construction workers during the construction of the Proposed Development <p><u>Vulnerable Groups:</u></p> <ul style="list-style-type: none"> No specific groups identified 	<p>Negligible in former ROF land</p> <p>Minor Adverse – Negligible in greenfield site</p>	<p>Measures set out in the Phase 1 Land Conditions Report (e.g. implementation of a watching brief during earthworks) to be implemented</p>

Health Determinant	Potential Impacts and embedded mitigation	Receptor Group and Vulnerable Group	Likely Significant Effects	Additional Mitigation
	<p>the former ROF buildings and associated foundations in the vicinity of the ROF approach roads.</p> <p>There is low potential for permeation of potable water supplies by hazardous substances, and negligible potential for inhalation of vapours from contaminated soils or groundwater based upon absence of historical sources of volatile contamination.</p> <p>However, there is moderate potential for migration of gases (radon & natural ground gas) from natural strata via unsaturated zone and services. The Phase 1 report recommends that all properties will be required to incorporate radon protection measures.</p> <p>To mitigate the potential adverse effects to human health during construction, the FDCEMP sets out incident control procedures which the Principal Contractor should follow, which will help to reduce the risk of adverse impacts to human health.</p>			
<p>Playspace, open space and physical recreation</p>	<p>There are no existing play spaces located on Site and limited publicly accessible open space, due to the majority of the Site being part of the former ROF and fenced off from the public. The remainder of the Site (approximately 11 ha) is agricultural land which is open, accessible land. As noted above, access to ProW is anticipated to be maintained throughout the construction period.</p> <p>Access to the 37 Club and its environs will be disrupted during demolition/ construction as the building is demolished and a replacement facility provided. A new facility will be provided prior to the demolition of the existing facility. There will be ongoing communications with the 37 Club to identify suitable mitigation measures until a new facility is provided, as outlined in the FDCEMP.</p>	<p><u>Receptor Groups:</u></p> <ul style="list-style-type: none"> Existing residents surrounding the Site Existing users of the Site – the 2 undesignated tracks and permissive pathways provided as part of the Village Enhancement Scheme Existing community service users – 37 club New residents of the Proposed Development 	<p>Minor adverse</p>	<p>None identified.</p>

Health Determinant	Potential Impacts and embedded mitigation	Receptor Group and Vulnerable Group	Likely Significant Effects	Additional Mitigation
		<u>Vulnerable Groups:</u> <ul style="list-style-type: none"> No specific groups identified 		
Access to Nature	<p>The majority of the Site is currently not accessible to the public as it is former ROF land and therefore fenced off. In addition, the Local Wildlife Sites (LWS) on or adjacent to the Gravity Site are not currently accessible to the public as they are on former ROF land or on private property. The remainder of the Site is agricultural land with open access. This includes the 37 Club and its environs along the southern boundary of the Site, and the ProW which runs adjacent to the Gravity Link Road.</p> <p>As noted above, access to the 37 Club and its environs will be disrupted during demolition and construction of a new facility. Access to the ProW to the south of the Site will not be impacted during construction.</p> <p>During the demolition and construction phase, there may be adverse effects to species and habitats including through direct loss of habitat and disturbance to wildlife.</p> <p>The FDCEMP aims to avoid adverse effects on retained features, such as through pollution prevention, prevention of encroachment of construction works onto retained habitat of value (including designated sites) and the control of noise and light disturbance on retained features such as badger setts or bat roosts.</p> <p>The strategic landscape parameters plan shows the green space, landscape corridors that include lines of trees and rhynes, the indicative extents of structural and woodland planting and amenity spaces to be provided as part of the</p>	<u>Receptor Groups:</u> <ul style="list-style-type: none"> Existing residents in the wider area of Sedgemoor Existing users of the Site – 37 Club New residents of the Proposed Development (prior to completion of construction) <u>Vulnerable Groups:</u> <ul style="list-style-type: none"> Groups with pre-existing health conditions (e.g. mobility impairment) New parents 	Minor Adverse	Further mitigation to be implemented as outlined in Chapter 12 Biodiversity (e.g. An Ecological Mitigation and Enhancement Strategy (EMES) will be prepared for the Site and secured through the Mitigation Checklist in the Design Guide).

Health Determinant	Potential Impacts and embedded mitigation	Receptor Group and Vulnerable Group	Likely Significant Effects	Additional Mitigation
	<p>Proposed Development. This can be utilised to deliver a diverse and interconnected matrix of habitat types of ecological value.</p> <p>Whilst some localised effects on specific ecological features are anticipated, the key point of relevance to human health is whether access to nature is affected. As there is currently limited access to the nature on Site, including the LWSs, it is therefore not anticipated to be any change to access during construction.</p>			
Flood Risk	<p>There is the potential for temporary minor adverse impacts as a result of increased surface water run off rates. However, the FDCEMP sets out the embedded mitigation measures to help see that effects will be negligible.</p>	<p><u>Receptor Groups:</u></p> <ul style="list-style-type: none"> Existing residential and commercial development located adjacent to the Site boundaries and those within the area immediately surrounding the Site (located upstream and downstream); Construction workers during the construction of the Proposed Development <p><u>Vulnerable Groups:</u></p> <ul style="list-style-type: none"> No specific groups identified 	Negligible	<p>During construction, the use of best practice construction techniques (such as CIRIA publication C753 the SuDS Manual) and the implementation of the FDCEMP will be adopted to manage the construction process, minimise the risk of a pollution incident, silt-laden runoff, or blockage of channels during the construction works.</p> <p>The FDCEMP will include a Flood Evacuation Plan and a suitable drainage scheme to control surface water runoff during the Proposed Development construction phase, including provision for the installation of drainage and attenuation outfalls before construction of buildings and site infrastructure.</p>

Table 8.6 The assessment of the effects on the Healthy Environment health determinant from the demolition/construction of the Proposed Development

Health Determinant	Potential Impacts and embedded mitigation	Receptor Group and Vulnerable Group	Likely Significant Effects	Additional Mitigation
Healthcare Services	<p>There are currently no healthcare services on the Site which would be affected by demolition/ construction activities.</p> <p>There is potential for additional demand to be placed on existing healthcare services as a result of an increase in construction workers in the area. However, Chapter 7 Economics notes that the construction labour force currently engaged with the development of Hinkley Point C will be retained and redeployed to the Gravity site where possible. This will help to dilute any new impacts on existing services.</p>	<p><u>Receptor Group:</u></p> <ul style="list-style-type: none"> Existing residents in the wider area of Sedgemoor <p><u>Vulnerable Groups:</u></p> <ul style="list-style-type: none"> All vulnerable groups identified 	Minor Adverse	No further mitigation identified.
Education	<p>There is potential for skills accumulation and training during construction for surrounding residents of the Site and within the wider area of Somerset.</p> <p>A Skills Charter has been prepared which sets out high level principles and objectives for the Proposed Development. Parcel/occupier specific Employment and Skills Plans will be developed with the Principal Contractor, which will seek to optimise inclusion in skills enhancement and integration into the community, working with the local Bridgwater and Taunton College. Measures include a targeted recruitment and training campaign to guarantee job interviews for local unemployed residents who have undertaken specific pre-employment training related to the Proposed Development.</p>	<p><u>Receptor Group:</u></p> <ul style="list-style-type: none"> Existing residents in the wider area of Sedgemoor <p><u>Vulnerable Groups:</u></p> <ul style="list-style-type: none"> Children (0-17) Those with a high level of deprivation, low income or unemployment 	Moderate Beneficial	Implementation of Employment and Skills Plan by Principal Contractor.
Local Employment and Healthy Workplaces	Chapter 7 Economics identifies that the construction of the Proposed Development will support 10,800 gross person years equivalent (PYE) ⁵ . Due to the mobility of labour, competition from externally located construction firms and supply chains, it is estimated	<p><u>Receptor Group:</u></p> <ul style="list-style-type: none"> Existing residents in the wider area of Somerset 	Major Beneficial	Implementation of occupier specific Employment Skills Plans to help deliver economic benefits to

⁵ Person Year Equivalents (PYE), i.e. the number of full-time jobs which could be supported for a single year based on the capital expenditure

Health Determinant	Potential Impacts and embedded mitigation	Receptor Group and Vulnerable Group	Likely Significant Effects	Additional Mitigation
	<p>that 3,525 net construction jobs will be generated. This is anticipated to have a Major Beneficial effect on the M3 Corridor Functional Economic Market Area, which includes Sedgemoor.</p> <p>The Gravity Skills Charter (2021) sets out the high-level principles and objectives for future parcel / occupier specific Employment and Skills Plans, which will be developed to deliver benefits to the local community, Gravity and its occupiers. It will help shape the local labour force to meet industry and market requirements and help residents to understand the training opportunities available to them at Gravity.</p> <p>This will also result in the creation of higher value, sustained (permanent) job opportunities as a transition opportunity from the temporary roles at Hinkley Point C.</p>	<p><u>Vulnerable Groups:</u></p> <ul style="list-style-type: none"> Those with a high level of deprivation, low income or unemployment 		the local population during the demolition/ construction phase.
Access to Social Infrastructure	<p>The Consultation Report outlines the extensive engagement process that has been undertaken and details the feedback received. Concerns were raised with regards to accessing the 37 Club. There is potential for disruption to this service during demolition/construction of the current facility and the opening of a new facility, however a new facility will be provided prior to the demolition of the existing facility so access to this facility is anticipated to be limited.</p> <p>A FDCEMP has been prepared and submitted with the LDO which includes measures on communication with local residents, and this will communication with the 37 Club. Information will be provided to local residents and communities through relevant communication channels such as letter drops, notices on Site hoardings, website communications, electronic and</p>	<p><u>Receptor Group:</u></p> <ul style="list-style-type: none"> Existing community services users – 37 Club New community service users – 37 Club <p><u>Vulnerable Groups:</u></p> <ul style="list-style-type: none"> All vulnerable groups identified 	Minor Adverse	No additional mitigation identified.

Health Determinant	Potential Impacts and embedded mitigation	Receptor Group and Vulnerable Group	Likely Significant Effects	Additional Mitigation
	<p>community (hard copy) newsletters, adverts in the local press etc.</p> <p>During the preparation and implementation of the detailed CEMPs for each phase and the appointment of principle contractors, CEMPs will be updated to include how comments and complaints can be made and associated contact details.</p>			

Table 8.7 The assessment of the effects on the Vibrant Neighbourhoods health determinant from the demolition/construction of the Proposed Development

Operation Effects

8.7.3 **Tables 8.8-8.11** summarise the assessment of significant effects to human health from the completed development.

Health Determinant	Potential Impacts and embedded mitigation	Receptor Group and Vulnerable Group	Likely Significant Effects	Additional Mitigation
Housing Design / Accessible Housing / Healthy Living	<p>Given that the LDO is parameter based, detailed information on the design of residential units is not currently available, however a proportion of homes will be wheelchair accessible or adaptable in accordance with local policy.</p> <p>As identified in the Energy Strategy (Stantec, 2021), housing will incorporate a range of measures to be implemented to help increase energy efficiency, including:</p> <ul style="list-style-type: none"> ■ implementing a fabric first approach, using high insulation levels to reduce energy demand and reliance on mechanical solutions ■ provision of a comprehensive green infrastructure network to facilitate air movement and enhance natural ventilation ■ orient buildings where appropriate to take advantage of south facing aspects for winter passive solar gains <p>The inclusion of these measures will help reduce the amount of energy that residents use, helping reduce household expenditure on bills and fuel poverty.</p>	<p><u>Receptors Groups:</u></p> <ul style="list-style-type: none"> ■ New Residents <p><u>Vulnerable Groups:</u></p> <ul style="list-style-type: none"> ■ Older people (65 and over) ■ Children (0-17) ■ New parents or pregnant women ■ Groups with pre-existing health conditions 	Minor Beneficial	Housing standards to be considered throughout detailed design including Building Regulations (M4), wheelchair accessibility and energy efficiency standards.
Housing Mix and affordability	<p>The Proposed Development will provide up to 750 private housing. It is assumed the majority of residential dwellings will be occupied by employees of the Proposed Development. As these residential units will not be open market homes they will ensure the Site makes a meaningful contribution to supporting</p>	<p><u>Receptors Groups:</u></p> <ul style="list-style-type: none"> ■ New Residents 	Minor Beneficial	Consideration to be given to a balanced and appropriate mix of house types at future planning and design stages to see that this best meets

Health Determinant	Potential Impacts and embedded mitigation	Receptor Group and Vulnerable Group	Likely Significant Effects	Additional Mitigation
	employees living locally and reduce the pressure on the local housing demand generated by new employees working at the Site.	<u>Vulnerable Groups:</u> <ul style="list-style-type: none"> No specific groups identified. 		the needs of the future workforce and their families.

Table 8.8 The assessment of the effects on the Healthy Housing health determinant from the Proposed Development during operation

Health Determinant	Potential Impacts and embedded mitigation	Receptor Group and Vulnerable Group	Likely Significant Effects	Additional Mitigation
Walking and Cycling	<p>Chapter 9 Transport and Access sets out the extensive strategic transport proposals which incorporates measures to facilitate and promote walking and cycling, including:</p> <ul style="list-style-type: none"> improved access and choice for pedestrians, including streets to have a minimum of a dedicated footway and safe pedestrian routes throughout the Proposed Development; streets to incorporate high quality cycling provision (segregated where possible) to facilitate and encourage trips by bike; provision of accessible, safe, secure and sheltered cycle parking facilities at key destinations throughout the Site; provision of cycle equipment storage, maintenance, changing and shower areas across the Site in appropriate areas; and provision of off-site cycle route improvements as part of the Gravity Link Road and the VES. 	<p><u>Receptor Groups:</u></p> <ul style="list-style-type: none"> Existing residents adjacent to the Site boundaries and those within the area immediately surrounding the Site New community service users (footpaths and cycleways) New residents of the Proposed Development New users of the Proposed Development <p><u>Vulnerable Groups:</u></p> <ul style="list-style-type: none"> All vulnerable groups identified 	Major Beneficial	No further mitigation proposed.
Safety	<p>No material road safety issues were identified within the Transport Assessment, and it is therefore anticipated that effects will be not significant.</p> <p>Within the Proposed Development, streets will be designed to provide appropriate pedestrian and cycle routes to provide safe routes throughout the development.</p>	<p><u>Receptor Groups:</u></p> <ul style="list-style-type: none"> Existing residents adjacent to the Site boundaries and those within the area immediately surrounding the Site New community service users (footpaths and cycleways) New residents of the Proposed Development 	Negligible	The package of transport mitigation remains subject to further consultation with key stakeholders, who may include additional mitigation by way of appropriately scaled financial contributions toward delivery of off-site transport improvements highway safety improvements where necessary.

Health Determinant	Potential Impacts and embedded mitigation	Receptor Group and Vulnerable Group	Likely Significant Effects	Additional Mitigation
		<ul style="list-style-type: none"> New users of the Proposed Development <p><u>Vulnerable Groups:</u></p> <ul style="list-style-type: none"> Vulnerable road users, including pedestrians and cyclists Older people (65 and over) Children (0-17) 		
Connectivity	<p>As outlined in Chapter 9 Transport and Access, the Transport Movement Strategic and Transport Movement Micromobility Parameter Plans in Appendices 3.1b & c illustrate the principal proposals to be delivered to support access and movement into and around the Proposed Development within the Site. This includes potential secondary access locations, with up to four secondary access locations proposed from Woolavington Road to provide potential access to development plots incorporating new points of access to the south-west and south-east of the Site and re-use of the existing site Eastern and Western approach access junctions.</p> <p>External bus routes will be able to enter the Site via the new access road, and in the early phases, an electric / alternative fuel bus loop will distribute people around the Site in an expedient manner.</p>	<p><u>Receptor Groups:</u></p> <ul style="list-style-type: none"> New residents of the Proposed Development New users of the Proposed Development <p><u>Vulnerable Groups:</u></p> <ul style="list-style-type: none"> All vulnerable groups identified 	Major beneficial	No further mitigation proposed.
Minimising Car Use	As outlined in Chapter 9 Transport and Access, the Proposed Development has sought to reduce the need to travel. Flexible or remote working practices and technological solutions including video conferencing	<p><u>Receptor Groups:</u></p> <ul style="list-style-type: none"> New residents of the Proposed Development 	Major beneficial	No further mitigation proposed.

Health Determinant	Potential Impacts and embedded mitigation	Receptor Group and Vulnerable Group	Likely Significant Effects	Additional Mitigation
	<p>and online collaboration will be available to employees where possible.</p> <p>Additionally, up to 750 residential units are to be delivered that are intended to primarily serve as housing for employees at the Site.</p> <p>The campus will include work hubs which will help to further reduce the overall need to travel off the Site for some trip purposes.</p> <p>As set out above, an extensive footway and cycleway will be provided to help facilitate active travel.</p>	<ul style="list-style-type: none"> ■ New users of the Proposed Development ■ Vulnerable Groups: ■ Older people (65 and over) ■ Children (aged 0-17) ■ Those with a high level of deprivation, low income or unemployment ■ Groups with pre-existing health conditions 		

Table 8.9 The assessment of the effects on the Active Travel health determinant from the Proposed Development during operation.

Health Determinant	Potential Impacts and embedded mitigation	Receptor Group and Vulnerable Group	Likely Significant Effects	Additional Mitigation
Air Quality	<p>Chapter 11 Air Quality identifies that operational road traffic impacts on all human receptors will be negligible.</p> <p>It is anticipated that impacts as a result emissions from the energy plant and industrial plant will be not significant. The chapter notes that higher emission rates are likely to be acceptable but will need to be considered through the Design Guide.</p>	<p><u>Receptor Groups:</u></p> <ul style="list-style-type: none"> Existing residents within the area immediately surrounding the Site New residents of the Proposed Development New community service users <p><u>Vulnerable Groups:</u></p> <ul style="list-style-type: none"> All vulnerable groups identified 	Negligible for all potential impacts	No further mitigation required.
Noise	<p>Chapter 10 Noise and Vibration identifies that, in the absence of mitigation, external noise levels is anticipated to be moderate adverse effect to proposed receptors. A series of mitigation is proposed to shield external amenity areas from the noise sources.</p> <p>It is anticipated that, based on the road traffic noise assessment, the change in ambient levels for existing receptors will be minor to negligible.</p> <p>It is anticipated that noise from the proposed rail infrastructure is likely to have a low impact at all existing and proposed noise sensitive receptors during both the daytime and the night-time, and is therefore considered to have a negligible impact.</p> <p>There is potential for noise impacts on nearby noise receptors as a result of fixed plant and equipment noise. The assessment concluded that the impact is likely to be negligible.</p>	<p><u>Receptor Groups:</u></p> <ul style="list-style-type: none"> Existing residents within the area immediately surrounding the Site New residents of the Proposed Development New community service users <p><u>Vulnerable Groups:</u></p> <ul style="list-style-type: none"> All vulnerable groups identified 	<p>External noise levels (proposed receptors) – minor</p> <p>Change in ambient levels (existing receptors) – minor to negligible</p> <p>Noise from rail proposals – negligible</p> <p>Plant noise – negligible</p>	Mitigation set out in Chapter 10 to control noise impacts (e.g. implementing a noise strategy, use of acoustic double glazing at properties directly adjacent to roads etc.) to be implemented.

Health Determinant	Potential Impacts and embedded mitigation	Receptor Group and Vulnerable Group	Likely Significant Effects	Additional Mitigation
Contaminated Land	<p>It is anticipated that the mitigation measures for ground contamination will be implemented during construction to help reduce adverse effects on human receptors. These have been outlined in Table 8.6 above.</p> <p>The former ROF land has undergone extensive remediation as part of the remediation planning application. As the Proposed Development is market led, the future occupiers of the industrial and commercial land uses on site are not yet known.</p>	<p><u>Receptor Groups:</u></p> <ul style="list-style-type: none"> Existing residents surrounding the Site; New residents and users of the Site. <p><u>Vulnerable Groups:</u></p> <ul style="list-style-type: none"> All specific groups identified 	<p>Negligible effect on the former ROF land</p> <p>Minor adverse on the greenfield site.</p>	<p>Recommendations outlined in the Phase 1 Land Condition Report (e.g. further assessment, agreeing building radon protection with Building Control) to be implemented.</p>
Play space, open space and physical recreation	<p>As shown on the Strategic Landscape Parameter Plan, landscaping and open spaces will be provided across the Site including Gravity Park, the Wellbeing and Arrival Zone, an east-west landscape corridor, and structural tree and woodland planting.</p> <p>Local Equipped Area for Play (LEAP), Neighbourhood Equipped Area for Play (NEAP) and Local Area for Play (LAP) will be provided to provide play facilities for a range of ages, with details to be provided at detailed design, aligned to Gravity Park or the replacement of the 37 club. Play provision will be supplemented by opportunities for self-led wilderness play using informal and semi natural open spaces.</p> <p>Up to 100,000 sqm of local and community facilities will be provided, which will include sport and leisure facilities for the workforce.</p>	<p><u>Receptor Groups:</u></p> <ul style="list-style-type: none"> New residents of the Proposed Development New community service users – 37 Club <p><u>Vulnerable Groups:</u></p> <ul style="list-style-type: none"> No specific identified 	<p>Moderate beneficial</p>	<p>At the detailed design stage, consideration should be given to see that play spaces, allotments and picnic areas are incorporated into open spaces to encourage outdoor exercise and social interaction.</p> <p>Sports England's 10 principles of active design should also be considered during the detailed design of open space, play space and sports facilities (e.g. mix of sport/ play facilities provided, seating and secure cycle parking provided in public spaces).</p> <p>Management procedures for facilities (including pitches) should be put in place to see that facilities are maintained appropriately to help support physical activity. Measures</p>

Health Determinant	Potential Impacts and embedded mitigation	Receptor Group and Vulnerable Group	Likely Significant Effects	Additional Mitigation
				should be implemented to help promote uptake of physical activity (e.g. programme of events, use of social media and identification of local champions).
Access to Nature	<p>As outlined in Chapter 12 Biodiversity, there may be beneficial and neutral effects to habitats and species during the operational stage of the Proposed Development however, the key point of relevance to human health is whether there are impacts on natural areas that are accessible.</p> <p>The construction of the Proposed Development will result in the complete loss of two LWS, the Woolavington Road and Fields LWS and the Puriton Cowslip Field LWS, and the partial land take of several other LWSs as described in Chapter 12. However, the Proposed Development provides ecological benefits with the opportunity to link the retained features more robustly with other habitats of value onsite and offsite, thereby providing a larger, better connected networks of ecological assets within the Site and wider landscape. This can be achieved through the provision of linear habitat links between features of interest. These features, previously inaccessible, will be available for the Gravity workforce to enjoy.</p> <p>The Proposed Development will develop a previously secure brownfield land and provide new open space and habitat which will provide future users and future residents of the Site means to 'access nature'. Residents surrounding the Site will have access to open spaces on the periphery of the core site and within the proposed residential areas.</p>	<p><u>Receptor Groups:</u></p> <ul style="list-style-type: none"> Existing residents within the area immediately surrounding the Site New residents of the Proposed Development <p><u>Vulnerable Groups:</u></p> <ul style="list-style-type: none"> Groups with pre-existing health conditions (e.g. mobility impairment) New parents 	Moderate beneficial	No further mitigation required.

Health Determinant	Potential Impacts and embedded mitigation	Receptor Group and Vulnerable Group	Likely Significant Effects	Additional Mitigation
Local Food Growing	No specific measures are currently proposed to provide facilities for community food growing facilities, however many residential units will have access to gardens which can also be used to grow food. There are allotments/ community growing sites in Puriton and Woolavington, however the current demand and waiting list timing for these allotments is not currently known.	<u>Receptor Groups:</u> <ul style="list-style-type: none"> New residents of the Proposed Development <u>Vulnerable Groups:</u> <ul style="list-style-type: none"> Children (aged 0-17) 	Negligible	Consideration of potential opportunity for a clean growth use is verticulture as a potential opportunity.
Flood Risk	<p>Chapter 13 Water Environment identifies that all flood vulnerable development will be located outside of the modelled flood extents to provide effective inherent mitigation against tidal flooding.</p> <p>A Surface Water Strategy has been development for the Proposed Development. A free discharge from the Site into the Huntspill River will be maintained. On site, surface water runoff will be conveyed utilising a modified rhynes/ditch system. The rhynes/ditches and reed beds will be sufficient to treat surface water runoff prior to discharge from the Site, although it is recommended that this system is augmented with additional on-plot SuDS i.e. upstream of the rhynes.</p> <p>As such the Proposed Development will have a Negligible impact on surface water runoff from the Site, surface water flood risk and flows in adjacent watercourses.</p>	<u>Receptor Groups:</u> <ul style="list-style-type: none"> Existing Residents surrounding the Site; New residents and users of the Site (e.g. including community facility users and employees). <u>Vulnerable Groups:</u> <ul style="list-style-type: none"> No specific groups identified 	Negligible	Measures outlined in Chapter 13 (e.g. implementation of Surface Water Drainage Strategy) to be implemented.

Table 8.10 The assessment of the effects on the Healthy Environment health determinant from the Proposed Development during operation

Health Determinant	Potential Impacts and embedded mitigation	Receptor Group and Vulnerable Group	Likely Significant Effects	Additional Mitigation
Healthcare Services	<p>The Community Infrastructure Note (Appendix 8.2) identifies that there is some capacity at existing GP Surgeries within the Study Area, however there is an absence of adequate Dental Surgery capacity and there may be a need to address capacity of Dental Surgery.</p> <p>However, it should be noted that Chapter 7 Economics has assumed approximately 750 sqm for a health centre, which will help to reduce pressure on surrounding services by providing on site facilities for new residents/ users of the Proposed Development.</p>	<p><u>Receptor Groups:</u></p> <ul style="list-style-type: none"> New residents and users of the Proposed Development <p><u>Vulnerable Groups:</u></p> <ul style="list-style-type: none"> All vulnerable groups identified 	Minor Adverse	If any C class uses are being proposed, contributions to education and health may be required through CIL, to be reviewed and confirmed through the Compliance Form.
Education	<p>The Community Infrastructure Note (Appendix 8.2) identifies that the provision of a new Nursery facility can accommodate the expected demand generated by employees accommodated at the Site. However, there is limited Primary School capacity within Woolavington Village Primary School and Puriton Primary School, and therefore further mitigation will be required in the form of proportionate developer contributions to address the shortfall in Primary School places. There is deemed to be sufficient capacity at Bridgwater College Academy to meet the forecasted demand for secondary school places arising from the Proposed Development.</p> <p>A Skills Charter has been prepared which sets out high level principles and objectives for the Proposed Development. Parcel/occupier specific Employment and Skills Plans will be developed with the Principal Contractor(s)/ Occupier(s). Measures during the operation of the Proposed Development includes recruiting apprentices, provide work experience placements for those unemployed and work experienced placements for</p>	<p><u>Receptor Groups:</u></p> <ul style="list-style-type: none"> New residents and users of the Proposed Development <p><u>Vulnerable Groups:</u></p> <ul style="list-style-type: none"> Children (aged 0-17) 	<p>Minor Adverse on local education capacity.</p> <p>Moderate Beneficial for education opportunities.</p>	If any C class uses are being proposed, contributions to education and health may be required through CIL, to be reviewed and confirmed through the Compliance Form.

Health Determinant	Potential Impacts and embedded mitigation	Receptor Group and Vulnerable Group	Likely Significant Effects	Additional Mitigation
	those aged 14-18 years in education associated with the operation of the Proposed Development.			
Access to Social Infrastructure	<p>The Proposed Development will provide a range of campus facilities for its workforce, including sport and leisure facilities, restaurants, cafes, shops, and a hotel, which will be provided for new residents within the Proposed Development. The current demand and waiting list timing for these allotments is not currently known.</p> <p>The 37 Club will be replaced as part of the Proposed Development. It will be re-imagined through a feasibility study to ensure a replacement facility is viable. It will be accessible to new residents of the Proposed Development, and existing residents in the surrounding areas.</p>	<p><u>Receptor Groups:</u></p> <ul style="list-style-type: none"> Existing community service users New Community Service users <p><u>Vulnerable Groups:</u></p> <ul style="list-style-type: none"> All vulnerable groups identified 	Moderate beneficial	Consideration of infrastructure which fosters social connections throughout the detailed design process
Local Employment and healthy workplaces	<p>The Proposed Development will provide up to 1,000,000 sqm of industrial, commercial and employment floorspace, as well as up to 100,000 sqm of leisure and support facilities and educational facilities.</p> <p>Chapter 7 Economics identifies that the operation of the Proposed Development will support 7,505 gross jobs across the 1,100,000 sqm defined across varying employment uses. The operational employment of the Proposed Development in combination with the operational employment supported by the additional development in the 2032 Baseline equates to 16,155 gross jobs in the labour market.</p> <p>This will provide a stimulation of a new era of cleaner, greener jobs in Sedgemoor, aligned to the sectors of the future. In addition, this will help to</p>	<p><u>Receptor Groups:</u></p> <ul style="list-style-type: none"> Existing residents in the wider area of Somerset <p><u>Vulnerable Groups:</u></p> <ul style="list-style-type: none"> Those with a high level of deprivation, low income or unemployment 	Major Beneficial	Implementation of occupier specific Employment Skills Plans to help deliver economic benefits to the local population to maximise local employment and training.

Health Determinant	Potential Impacts and embedded mitigation	Receptor Group and Vulnerable Group	Likely Significant Effects	Additional Mitigation
	<p>provide replacement for the lost jobs when the ROF closed in 2008.</p> <p>The Gravity Skills Charter (2021) sets out the high-level principles and objectives for future parcel / occupier specific Employment and Skills Plans, which will be developed to deliver benefits to the local community, Gravity and its occupiers. It will help shape the local labour force to meet industry and market requirements and help residents to understand the training opportunities available to them at Gravity. This will include pathways to work from school and/or college to site.</p> <p>The Consultation Report outlines the extensive engagement process that has been undertaken and details the feedback received. Local residents were asked to provide their views on the replacement of lost jobs when the ROF closed. The responses received indicates extremely strong support for the proposals in the belief it will provide opportunities for local people and economy.</p>			

Table 8.11 The Assessment of the effects on the Vibrant Neighbourhoods health determinant from the Proposed Development during operation.

8.8 Further Mitigation

- 8.8.1 Further mitigation measures have been detailed in **Tables 8.4 - 8.10** against the relevant health issue.
- 8.8.2 The following are secured within the Compliance Form:
- Where community facilities are proposed, the management procedures for those facilities (including pitches) should be specified to ensure that facilities are maintained appropriately;
 - Any Compliance Application which includes Dwelling Houses must comply with Building Regulations (M4), wheelchair accessibility and energy efficiency standards; and
 - Any Compliance Application which includes Dwelling Houses must comply with Building Regulations (M4), wheelchair accessibility and energy efficiency standards.

8.9 Residual Effects

Demolition/ Construction

- 8.9.1 With implementation of proposed mitigation measures (both embedded and further), no significant adverse effects are anticipated to human health during the demolition and construction stage. Moderate (significant) beneficial effects are anticipated during this phase in relation to education, and major (significant) beneficial effects are anticipated in relation to local employment.

Operation

- 8.9.2 With the implementation of the proposed mitigation measures (both embedded and additional), no significant adverse effects are anticipated to human health during the operational stage for the majority of effects.
- 8.9.3 There will be significant beneficial residual effects associated with the Proposed Development including in relation to:
- Education (Moderate Beneficial for training opportunities);
 - Access to Social Infrastructure (Moderate Beneficial);
 - Local Employment (Major Beneficial);
 - Walking and Cycling (Major Beneficial);
 - Connectivity (Major Beneficial);
 - Minimising Car Use (Major Beneficial);
 - Playspace, open space and physical recreation (Moderate Beneficial);
 - Access to Nature (Moderate Beneficial).

8.10 Monitoring

- 8.10.1 No further monitoring measures are required in relation to human health. Monitoring requirements are outlined in the transport chapter to monitor and manage transport effects through implementation of a site wide Travel Plan and Monitor and Manage Plan.

8.11 Summary

- 8.11.1 An assessment has been undertaken with regard to the likely significant effects of the Proposed Development on the health and wellbeing and social impacts on residential communities and other health-sensitive groups (referred to as 'receptors'). The assessment considers national and local policy and is based on the Healthy Urban Development Unit (HUDU) planning checklist which sets out key themes, including; Housing, Transport, the Environment and Neighbourhood dynamics, which can have a positive or negative effect on the health and wellbeing of the population. These are referred to as the 'wider determinants of health'.
- 8.11.2 The assessment used a variety of sources to provide details of current health and wellbeing issues including local health profiles, Somerset Joint Strategic Needs Assessment and Somerset Improving Lives strategy. The review of data indicated that Sedgemoor generally performs better than the national average in terms of overall levels of deprivation, however there is inequality within this. Health indicators where Sedgemoor performed significantly worse than the England average include suicide rate, emergency hospital admissions for Intentional self-harm, hip fractures in people aged 65 and over, estimated dementia diagnosis, admission episodes for alcohol specific conditions, smoking, and percentage of adults classified as overweight or obese. The Site lies is located within the of Puriton and Woolavington, and ward of Knoll. There are higher levels of income deprivation, child poverty and older people in deprivation within the ward of Puriton and Woolavington than the ward of Knoll.

Demolition and Construction

- 8.11.3 Demolition and Construction related health risks relate to the potential for reduced environmental amenity; such as through noise disturbances, increased traffic delays and higher levels of dust and poor air quality. These local environmental issues have the potential to disrupt or impact health and wellbeing of the population, resulting in increased stress-related illnesses and cardiovascular diseases. However due to the temporary nature of construction activities, these changes to the local environment are not considered to be significant with regard to human health. A Framework Demolition and Construction Environmental Management Plan (FDCEMP), will set out measures to manage construction works, including measures to reduce transport related impacts. Furthermore, it is anticipated that there will be a moderate beneficial effect in relation to the creation of training and education opportunities during this phase, and a major beneficial effect in relation to new construction jobs. No residual significant adverse demolition and construction effects are anticipated.

Operation

- 8.11.4 Beneficial effects are anticipated as a result of the Proposed Development through promotion of active travel. The Proposed Development will provide a range of measures to facilitate and encourage walking and cycling, including new footway and cycleways throughout the Site, and enhanced connectivity to the surrounding area, resulting in major beneficial (significant) effects on walking and cycling, connectivity and minimising car use.
- 8.11.5 The Proposed Development may have an overall impact on several environmental aspects, however no significant residual adverse effects are anticipated including in relation to air quality, noise, contaminated land and flood risk. Relevant mitigation measures in relation to the above topics have been identified to see that potential adverse effects are reduced to an acceptable level. Moderate beneficial (significant) effects are anticipated in relation to access to nature and provision of play space, open space and physical recreation given the provision of large areas of informal and formal open space throughout the Proposed Development and play facilities for children.

- 8.11.6 A range of new social infrastructure will be provided for the future workforce of the Proposed Development to use, including leisure and sport facilities, restaurants, cafes and shops. The Proposed Development will provide moderate beneficial (significant) effects regarding provision of social infrastructure, as well as access to education and training opportunities. The Proposed Development will provide major beneficial (significant) effects with regards to the creation of new employment opportunities.

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