



## **Graven Hill, D1 Site, Bicester**

### **Rapid Health Impact Assessment**

On behalf of **Graven Hill Purchaser Ltd**

Project Ref: 332511090 | FINAL | Date: June 2022

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Registered Office: Buckingham Court Kingsmead Business Park, London Road, High Wycombe, Buckinghamshire, HP11 1JU  
Office Address: Caversham Bridge House, Waterman Place, Reading, Berkshire RG1 8DN  
T: +44 (0)118 950 0761 E: PBA.Reading@stantec.com

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	Name	Position	Signature	Date
<b>Prepared by:</b>	Roxy Cottey	Environmental Consultant	RC	07/06/22
<b>Reviewed by:</b>	Juliet Clark	Senior Associate	JC	07/06/22
<b>Approved by:</b>	Stefan Boss	Director	SB	13/06/22
<b>For and on behalf of Stantec UK Limited</b>				

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# 1 Introduction

## 1.1 Background

1.1.1 Stantec has been appointed by Graven Hill Purchaser Ltd ('the Applicant') to prepare a rapid Health Impact Assessment (HIA) to support the Outline Planning Application for the proposed redevelopment of Graven Hill (Sites D1 and EL1), Bicester, OX26 6HF (hereafter referred to as 'the Site').

1.1.2 The development description is as follows:

*Outline (fixing 'Access' only) – redevelopment of Graven Hill D1 Site, including demolition of existing buildings, development of B8 'Storage or Distribution' use comprising up to 104,008 sq. m (GIA), creation of open space and associated highway works, ground works, sustainable drainage systems, services infrastructure and associated works*

1.1.3 The Site forms part of the Graven Hill development site and is allocated to deliver mixed-use development comprising 1,900 homes; retail and community facilities, and employment floorspace comprising up to 2,160 sq. m of B1(a) use, 2,400 sq. m of B1(c) use, 20,520 sq. m of B2 use and up to 66,960 sq. m of B8 use (a total of approx. 92,040 sq. m of employment floorspace). The majority of this employment floorspace is provided at Sites D1 and EL1.

## 1.2 Purpose of this Report

1.2.1 There is an increasing awareness of the links between how places are planned and delivered and the health of the communities who live and work in them. This rapid HIA seeks to identify the potential beneficial and adverse impacts of the Proposed Development on the wider determinants of human health and demonstrate how the Proposed Development will enhance beneficial impacts through its design and delivery.

1.2.2 The Oxfordshire Health Impact Assessment Toolkit (WSP, 2021) (the 'Toolkit') sets out a proposed methodology for undertaking a rapid HIA for major developments in Oxfordshire. The methodology consists of five stages:

- 1) Description of the proposed development;*
- 2) Identification of population groups affected by the development;*
- 3) Identification of geographical area and associated health needs and priorities;*
- 4) Assessment of health and recommendations; and*
- 5) Monitoring.*

1.2.3 This rapid HIA has been structured to respond to the Toolkit.

## 1.3 Other Documents

1.3.1 Various other reports and statements have been prepared as part of the information for the planning application. Several of these have elements that relate to impacts on the wider determinants of health, including technical assessments such as those on air, noise, contamination and transport. Where necessary, this report cross references those documents as they provide greater detail on the assessment of impacts, clarification on the Proposed Development and proposed mitigation.

1.3.2 Relevant documents include:

- **Design and Access Statement:** provides an explanation of how a Proposed Development design responds to the site and setting, and demonstrate that it can be adequately accessed by prospective users;
  - **Statement of Community Involvement:** sets out the consultation that has been undertaken, and how the project has responded to the points raised; and
  - **Energy and Sustainability Statement:** details the Proposed Development's approach to energy efficiency and sustainable development.
- 1.3.3 The conclusions of several Environmental Statement (ES) chapters have been reviewed and incorporated into the assessment where relevant. This includes:
- Chapter 10 Landscape and Visual Effects
  - Chapter 13: Traffic and Transport
  - Chapter 14: Noise and Vibration
  - Chapter 16: Air Quality
  - Chapter 17: Socio-economics

## 2 The Site Context and Development Proposals

### 2.1 The Site and Surrounding Context

- 2.1.1 The Site is located to the southeast of Graven Hill, Bicester and totals approximately 76 acres. A Site Location Plan is provided in **Appendix A**. There are existing vacant warehouses at the site, comprising B8 'Storage or Distribution' use.
- 2.1.2 The Site was previously used as part of the Logistics, Commodities and Services (LCS), formerly known as Defence Storage or Distribution Agency logistics hub. The LCS operation has been rationalised and moved to 'C' Site at Upper Arncliffe, meaning that 'D' Site is surplus to requirements. As the Site was formerly used by the Ministry of Defence, it is currently secure with no access to the general public.
- 2.1.3 There are areas of green space within the Site, including vegetation along the boundary and areas of grass. There are no Public Rights of Way (PROW) within the Site.
- 2.1.4 Immediately north of the Site lies St David's Barracks, which is operational. Beyond this lies Graven Hill, which includes new residential areas and patches of woodland.
- 2.1.5 To the east lies agricultural land and the village of Ambrosden. Symmetry Park, a newly constructed logistics park, is located to the east of the site off the A41.
- 2.1.6 To the south and west lies a freight railway line, beyond which lies a large solar farm and open agricultural land.

### 2.2 The Development Proposals

- 2.2.1 The Proposed Development involves the demolition of all existing warehouses currently on the Site. A total of approx. 104,008 sqm Gross Internal Area (GIA) of logistics-led floorspace will be constructed. The indicative Masterplan demonstrates how this floorspace could be provided across 9 separate units (Units 1-9) (**Appendix A**).
- 2.2.2 Approximately 902 parking spaces would be provided, including Heavy Goods Vehicles (HGV) parking yards associated with the Logistics Units as well as disabled parking. These could be arranged in a variety of layouts to best respond to market demand as well as site constraints.
- 2.2.3 There will be areas of open space and tree planting, including green corridors and break-out amenity spaces. Existing woodland and trees will be retained where possible to create amenity spaces, as well as complement biodiversity and sustainable drainage.

### 2.3 Planning History

- 2.3.1 The Site is allocated under Cherwell Local Plan 2011-2031 Strategic Development Policy Bicester 2 - Graven Hill.
- 2.3.2 The Site forms part of the wider Graven Hill development site, of which development was granted permission in August 2014 (ref: 11/01494/OUT). The wider site was granted permission for the provision of 1,900 homes; retail and community facilities, and employment floorspace comprising up to 2,160 sq. m of B1(a) use, 2,400 sq. m of B1(c) use, 20,520 sq. m of B2 use and up to 66,960 sq. m of B8 use (a total of approx. 92,040 sq. m of employment floorspace). The majority of this employment floorspace is provided at D1 Site.
- 2.3.3 The residential element is located to the north of Graven Hill and the employment uses are located to the south of Graven Hill (D1 Site). Outline and reserved matters applications for the residential areas have been made.

- 2.3.4 Planning Permission (ref: 20/02415/F) to provide a new dedicated Employment Access Road (EAR) adjacent the northern boundary of the Site was permitted in April 2021 with expected completion in October 2022. The EAR will run along the northern perimeter of the Site, connecting north of the A41 with a new roundabout. It will include a 2m footway and 3m cycleway on one side, and pedestrian crossings. In the long term, there is the potential to extend this road westwards and connect to the A41 to the west of the Site.

## Policy Context

### 2.4 Introduction

- 2.4.1 This section sets out the approach of this HIA, including consideration of Policy Context, how health is defined for the purposes of the HIA and the methodology selected to be proportionate to the type and scale of the Proposed Development.

### 2.5 National Planning Policy

- 2.5.1 The National Planning Policy Framework (NPPF) (published March 2012, revised July 2021) acknowledges the importance of considering health impacts during the planning process. It covers many issues that are directly related to the determinants of health (see **Section 3.4** of this report).
- 2.5.2 The NPPF identifies the three overarching essential objectives (economic, social and environmental) for delivering sustainable development, which gives rise to the need for the planning system to perform a number of roles. All three objectives are pertinent to health and wellbeing as is reflected in the wide range of determinants of health assessed within this report. These objectives state a role of the planning system to:
- a) an economic objective – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure;*
- b) to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and 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*
- c) an environmental objective – to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy. (Paragraph 8).*
- 2.5.3 Chapter 8 of the NPPF 'Promoting healthy and safe communities' sets out specific measures that should be a consideration of planning decisions that relates directly to health and wellbeing. This includes promoting social interaction, enabling and supporting healthy lifestyles, as well as ensuring development that is safe and accessible. This should be based on an understanding on what the needs are for local communities that should be addressed by planning policies and development proposals.

### 2.6 Cherwell Planning Policy

- 2.6.1 There are no specific policies within the Cherwell District Council Local Plan 2011-2031 which set out the need for a HIA.
- 2.6.2 **Policy Bicester 2: Graven Hill** sets out the requirements for the development of Graven Hill. The policy acknowledges the need for design and place shaping principles which influence



determinants of health, including the need to maximise the potential for walkable neighbourhoods, integrating new and existing communities, managing open space for health benefits and managing pollution such as noise.

## 2.7 Guidance

- 2.7.1 The Oxfordshire Health Impact Assessment Toolkit (January 2021) is a material consideration for the determination of development proposals. This rapid HIA has been structured to respond to the Toolkit, which is set out in **Section 4.3** below.

## 2.8 Local Health Priorities

- 2.8.1 The Site lies within the local authority area of Cherwell District Council (CDC) and within the jurisdiction of Oxfordshire Clinical Commissioning Group (CCG).
- 2.8.2 The Oxfordshire Joint Health and Wellbeing Strategy (JHWS) (2018-2023)<sup>1</sup> identifies four priorities for the region:
- **A good start in life** – ensuring children have access to high quality education, employment and training, are educated on staying healthy, are protected and supported;
  - **Living well** – reducing the risk of contracting illnesses (such as heart disease, cancer and diabetes) through healthy lifestyles;
  - **Aging well** – the number of old people is projected to grow, with many living longer and spending more years at the end of life in poor health; and
  - **Tackling wider issues that determine health** – finding ways to shape new communities so they promote health and wellbeing.
- 2.8.3 Across these four priorities, the JHWS adopts a 'Prevent, Reduce, Delay' i.e. preventing illness through keeping people healthy, reducing the need for treatment and delaying the need for care. The JHWS acknowledges that tackling inequalities is essential, as some people do not have the same access to opportunities/ outcomes and services.
- 2.8.4 The Oxfordshire Health and Wellbeing Board (HWB), responsible for ensuring the actions set out in the Oxfordshire JHWS, have also approved a Prevention Framework<sup>2</sup> which will help to deliver a range of initiatives to deliver the prevent, reduce and delay approach. Part of the HWB is the Health Improvement Board, which has a series of priorities for Oxfordshire which sit alongside the JHWS.

<sup>1</sup> <https://www.oxfordshire.gov.uk/sites/default/files/file/constitution/oxfordshirejointhwbstrategy.pdf>

<sup>2</sup> [https://www.oxfordshire.gov.uk/sites/default/files/file/plans-performance-policy/OxfordshirePreventionFramework\\_.pdf](https://www.oxfordshire.gov.uk/sites/default/files/file/plans-performance-policy/OxfordshirePreventionFramework_.pdf)

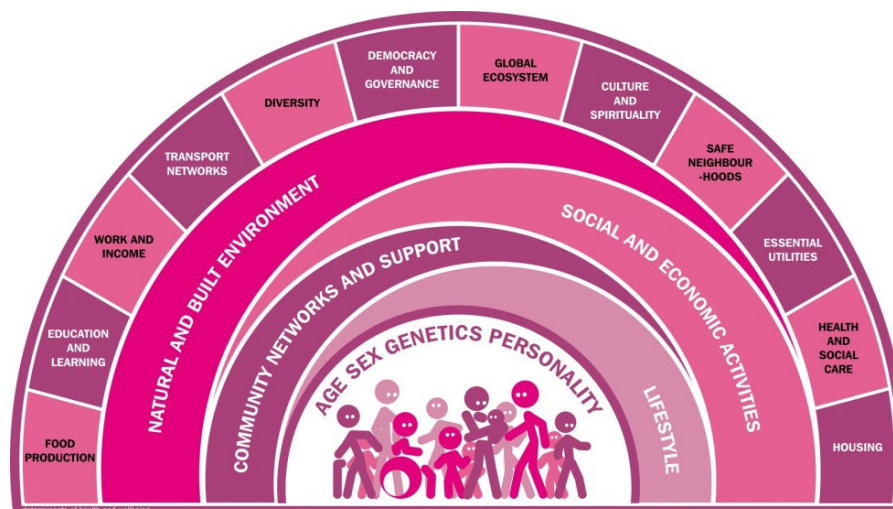
## 3 Approach to HIA

### 3.1 Introduction

- 3.1.1 This section sets out the approach of this rapid HIA, including consideration of Policy Context, how health is defined for the purposes of the HIA, and the methodology selected to be proportionate to the type and scale of the Proposed Development.

### 3.2 Defining Health and Health Determinants

- 3.2.1 The established definition of health from the World Health Organization (WHO) is that “*Health is a state of complete physical, social and mental wellbeing and not simply the absence of disease or infirmity.*”<sup>3</sup> 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 fitted within a broader understanding of health and wellbeing to be properly useful.
- 3.2.2 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 **Inset Figure 4.1**. Some impacts may be direct, obvious or intentional and others indirect, difficult to identify and unintentional. HIA tries to anticipate and mitigate for these effects.



Inset Figure 4.1: The Determinants of Health and Wellbeing (Stantec, adopted from Dahlgren and Whitehead, 1991)

<sup>3</sup> World Health Organization; Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 19-22 June 1946, and entered into force on 7 April 1948

### 3.3 Methodology – Oxfordshire Health Impact Assessment Toolkit

- 3.3.1 The methodology used in this rapid HIA has been selected to be proportionate to the scale and nature of Proposed Development. The Toolkit uses a five step process, which is set out in **Table 3.1** below.

Table 3.1: the Toolkit and rapid HIA response

Toolkit HIA Stage	Rapid HIA Response
1. description of proposed development	provided in <b>Section 2</b> .
2. identification of population groups affected by the proposed development	This has been informed by the Vulnerable Groups listed within the Toolkit, which is provided in <b>Section 4.4</b> below. Using this list, the most relevant vulnerable groups that have been identified for Proposed Development is set out in <b>Section 5</b> .
3. identification of geographical area and associated health needs and priorities	Provided in <b>Section 5</b> , a health baseline has been prepared which reviewed the Oxfordshire Health and Wellbeing Strategy, Joint and Strategic Needs Assessment, Public Health England datasets, Census data and other sources.
4. assessment of health and recommendations	Provided in <b>Section 6</b> , the assessment covers the following priorities: physical activity, air quality, noise, traffic and transport, economy and employment, crime and antisocial behaviour, and access to green spaces.
5. monitoring	setting recommendations which will be discussed with the client and design team. This is recorded in <b>Section 6</b> .

### 3.4 Consultation

- 3.4.1 The Toolkit notes that the scope of the assessment, and extent of stakeholder engagement, should be discussed and agreed with the relevant Planning Officer to ensure a proportionate and focussed approach to the HIA is taken.
- 3.4.2 Consultation was undertaken with the CDC Cast Officer<sup>4</sup> to agree scope. A copy of this correspondence is provided in **Appendix B**.

### 3.5 Vulnerable Groups

- 3.5.1 The Toolkit identifies groups that could potentially be most vulnerable to impacts resulting from a development, as shown on **Inset Figure 4.2**. This list has been reviewed to identify vulnerable groups to the Proposed Development, with consideration to the development proposals and the existing health baseline set out in **Section 5** below.

<sup>4</sup> Email correspondence between Environmental Consultant (Stantec) and Principal Planning Officer, Major Development (CDC) on 27 April and 12 May 2022.

Sex/Gender related groups	Age related groups	Groups at higher risk of discrimination, or other social disadvantage	Income related groups	Geographical groups and/or settings
<ul style="list-style-type: none"> <li>Female</li> <li>Male</li> <li>Transgender</li> <li>Other</li> </ul>	<ul style="list-style-type: none"> <li>Children and young people</li> <li>Early years (including pregnancy and first year of life)</li> <li>General adult population</li> <li>Older people</li> </ul>	<ul style="list-style-type: none"> <li>Black and minority ethnic groups</li> <li>Carers</li> <li>Ex-offenders</li> <li>Gypsies and Travellers</li> <li>Homeless</li> <li>Language/culture</li> <li>Lesbian, gay and bisexual people</li> <li>Looked after children</li> <li>People seeking asylum</li> <li>People with long term health conditions</li> <li>People with mental health conditions</li> <li>People with physical, sensory or learning disabilities/difficulties</li> <li>Refugee groups</li> <li>Religious groups</li> <li>Lone parent families</li> <li>Veterans</li> </ul>	<ul style="list-style-type: none"> <li>Economically inactive</li> <li>People on low income</li> <li>People who are unable to work due to ill health</li> <li>Unemployed/workless</li> </ul>	<ul style="list-style-type: none"> <li>People in key settings: workplaces/schools/ hospitals/care homes/ prisons</li> <li>People living in areas which exhibit poor economic and/or health indicators</li> <li>People living in rural, isolated or over-populated areas</li> <li>People unable to access services and facilities</li> <li>Students</li> </ul>

Inset Figure 4.2: List of potential vulnerable groups to development (source: Oxfordshire HIA Toolkit)

## 3.6 Study Area

3.6.1 Table 3.2 below sets out the study area for each health priority.

Health Priority	Study Area
Traffic and transport	Walking catchment (800m or a 10 minute walk, as set out in Transport Assessment) to focus on sustainable/ active travel options that are within walking and/ or cycling distance.
Physical activity	Local area – ward of Bicester South and Ambrosden, as shown in <b>Appendix C</b> . This is to capture local opportunities for physical activity and will include active travel opportunities (as above).
Air quality	As per Air Quality Assessment – sensitive receptors likely to experience impacts will be captured by this assessment.
Noise	As per Noise Assessment – sensitive receptors likely to experience impacts will be captured by this assessment.
Economy and employment	As per Socio-Economic Assessment – assesses impacts at a local and regional scale.
Crime and antisocial behaviour	Local area – ward of Bicester South and Ambrosden,
Natural environment	Local area – ward of Bicester South and Ambrosden,

## 3.7 Assessment of Impacts

3.7.1 The Toolkit provides a template for the assessment tables to be included in the HIA. An assessment table has been prepared for each health priority identified as relevant to the Proposed Development.

## 4 Population Profile

- 4.1.1 This section provides a high level overview of the population profile of the Study Area. Specific baseline information related to the health priorities are set out in Section 5 below.

### 4.2 Population Profile – Oxfordshire

- 4.2.1 The Oxfordshire Health and Wellbeing Joint Strategic Needs Assessment (JSNA) 2021 provides a summary of the population profile. Where relevant, the latest ONS data has been updated:
- **Population:** The ONS mid-year population estimates for 2020<sup>5</sup> dataset identifies that there are 696,880 people in Oxfordshire.
  - **Sex:** ONS estimates 347,569 are male (49.88%), and 349,311 are female (50.12%).
  - **Age:** ONS estimates that, in 2020, children aged 0-19 accounted for 23.7% of the population, similar to the national average of 23.6%. People aged 65 – 84 accounted for 16.1% of the population, compared to 16% of the national average, and those aged 85 and over accounted for 2.7% of the population, slightly higher than the national average of 2.5%.
  - **Gender:** the JSNA acknowledges there is limited information on gender identity. There is currently no accurate picture of how many trans people there are in the UK or locally. The best estimate at the moment is that around one per cent of the UK population might identify as trans, including people who identify as non-binary. That would mean about 6,968 trans and non-binary people living in Oxfordshire.
  - **Sexual Orientation:** Similarly, there is limited information on sexual orientation. ONS 2021 sexual orientation<sup>6</sup> estimates suggest that 1.6% of people in the UK identify as gay or lesbian, 1.1% identify as bisexual, 0.7 identify as other and 3% identify as don't know/refuse. It is therefore estimated (applying these rates) that 18,815 people in Oxfordshire identify as lesbian, gay or bisexual (LGB).
  - **Ethnicity:** in 2011, 16% of the total residential population of Oxfordshire was from an ethnic minority background, slightly lower than the national average of 20%.

### 4.3 Health Profile – Oxfordshire

- 4.3.1 The JSNA (2021) also provides a summary of health conditions, behavioural determinants and wider determinants of health. Of note:
- **Most Common Conditions:** the most common health conditions in Oxfordshire were high blood pressure (97,600 GP registered patients), depression (73,600 patients), asthma (48,100 patients) and diabetes (32,000 patients).
  - **Disability:** in 2018/19, around 19% of people in the South East region have a disability, equating to an estimated 131,400 people in Oxfordshire. As of 1 April 2020, 1,672 adults in Oxfordshire received long term social care for learning disabilities from Oxfordshire County Council Adult Social Care services. In 2019-20 there were a total of 3,025 people with learning disabilities (all ages) registered with GP practices in Oxfordshire CCG.

<sup>5</sup> <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates>

<sup>6</sup> <https://www.ons.gov.uk/peoplepopulationandcommunity/culturalidentity/sexuality/datasets/sexualidentityuk>

- **Musculoskeletal:** around 15% of the population suffer with a musculoskeletal condition. Depression and anxiety are more common in people with persistent pain.
- **Mental Health:** prevalence of depression is increasing in Oxfordshire. the Mental Wellbeing Needs Assessment (2021)<sup>7</sup> notes that, in 2019-2020, there were 73,648 patients (aged 18 or over) with a diagnosis of depression registered by Oxfordshire's GP practices – equivalent to around 12% of registered patients.
- **COVID-19:** the number of people claiming unemployment-related benefits has significantly increased, an increase in the rate of young people Not in Education, Employment and Training, and a decrease in the number of Apprenticeships advertised in Oxfordshire in 2020.

#### 4.4 Health Profile for the Site

4.4.1 The Bicester settlement profile of Health and Wellbeing Evidence<sup>8</sup> (December 2020) identifies that Bicester is relatively less deprived than other parts of Oxfordshire, although there are pockets of deprivation.

4.4.2 The health profile for Bicester South and Ambrosden (**Appendix C**) identifies that this ward performs significantly better than the national average with regards to:

- Unemployment and long term unemployment
- Limiting long-term illness or disability
- Emergency hospital admissions for all causes and for Chronic Obstructive Pulmonary Disease (COPD)
- Hospital stays for self-harm
- Incidence of lung cancer
- Deaths from all causes (<75 years and all ages) and deaths from causes considered preventable (<75 years)

4.4.3 However, it performs significantly worse with regards to:

- A&E attendances in under 5 years old
- General fertility rate

4.4.4 The ward performs similar to the national average in all other indicators.

#### 4.5 Vulnerable Groups

4.5.1 In summary, based on the health profile of the region and local area, it is considered that there are vulnerable groups in the area which may be impacted by the Proposed Development. These groups may live and work in the surrounding area and be vulnerable during the construction phase, or will be occupiers/ employees during the operational phase:

- Children and young people

<sup>7</sup> [https://insight.oxfordshire.gov.uk/cms/system/files/documents/MWBNA\\_Oxon\\_Dec21\\_forweb.pdf](https://insight.oxfordshire.gov.uk/cms/system/files/documents/MWBNA_Oxon_Dec21_forweb.pdf)

<sup>8</sup> [https://insight.oxfordshire.gov.uk/cms/system/files/documents/Bicester\\_profile\\_Dec20.pdf](https://insight.oxfordshire.gov.uk/cms/system/files/documents/Bicester_profile_Dec20.pdf)

- Older people
- Those with a mental health condition e.g. depression
- Those with a pre-existing health condition e.g. asthma
- Those with musculoskeletal condition
- Unemployed or economically inactive

## 5 Assessment of Impacts

### 5.1 Introduction

5.1.1 This section presents the assessment of impacts, using the assessment tables set out in the Toolkit. An additional 'theme' has been included to allow for clear recommendations to be identified. The following health 'priorities' have been assessed:

- Traffic and transport;
- Physical activity;
- Air quality;
- Noise;
- Economy and employment;
- Crime and antisocial behaviour; and
- Natural environment.



## 5.2 Traffic and Transport

### Health Baseline of the Population

- 5.2.1 **Travel to work:** Census data (2011) for Cherwell shows that approximately 45.8% of people travel to work by car or van, higher than the national average of 37%. Only 8.7% in Cherwell walk although this is higher than the national average of 7%. 3.6% travelling by bus, lower than the national average of 5%, and 2.5% by bicycle similar to the national average.
- 5.2.2 **Road safety:** the Cherwell health profile identifies that, in 2016-2018 Cherwell performs similar to the national average in terms of killed and seriously injured casualties on England's Roads.

### Current Provision on the Site

- 5.2.3 **Active travel provision:** the Site lies within secure ex-MOD land and is relatively isolated. The current local transport provision reflects this. Pedestrian and cyclist provision to the Site largely consists of footways adjacent to vehicular carriageways along private roads. There are no Public Rights of Way (PRoW) or National Cycle Route connecting to or crossing the Site. However, there is a network of footpaths surrounding the Site, which link into the surrounding area<sup>9</sup>.
- 5.2.4 **Other sustainable transport provision:** There are two rail stations within Bicester, with connections to London, Birmingham and Oxford. Bicester Village is located approximately 2km north of the site (10 minute cycle) and Bicester North is located approximately 3.5km north of the site (20-minute cycle).
- 5.2.5 There are hourly bus services running from the centre of Bicester close to the Site. The nearest bus stop is at Symmetry Park, approximately 800m (10 minute walk).
- 5.2.6 **Quality of provision:** currently, those wishing to walk or cycle from the station or bus stop would have to use the A41. There is no cycle lane, and the footpath is not set back from the road. There is good crossing provision across the A41-A4421 roundabout.

### Evidence

- 5.2.7 The Department for Transport's Transport, health and wellbeing<sup>10</sup> research identifies the following:
- Public transport interventions can positively impact **mental health** in two ways: alleviating traffic and reducing commuting times. Interventions to improve physical health may also be beneficial for mental health, e.g. reducing road noise can improve sleeplessness and lower blood pressure, and can also have an effect on stress and mental wellbeing.
  - Transport availability, particularly public transport, affects wellbeing because it facilitates **social connectedness**. A lack of access to transport or a withdrawal of public transport services has been found to reduce social networks and social relationships, as can transport infrastructure if it leads to individuals being disconnected from the community, essential amenities and workplaces. By contrast, effective transport provision, such as reliable bus links, can help facilitate social interactions and promote social inclusion.

<sup>9</sup> <https://publicrightsofway.oxfordshire.gov.uk/standardmap.aspx>

<sup>10</sup>

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/847884/Transport\\_health\\_and\\_wellbeing.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/847884/Transport_health_and_wellbeing.pdf)

- Older people, younger people, economically disadvantaged people, and people with disabilities are particularly vulnerable to the negative health impacts of transport such as noise or pollution.

## Stakeholder Engagement

- 5.2.8 Active travel is a key theme that arose from stakeholder engagement. As noted in the Statement of Community Involvement (SCI), consultation as undertaken with local groups including Bicester Bike Users Group and Graven Hill Residents Association. These groups raised questions relating to the provision of cycle access and cycle parking spaces. The project team response was to highlight that the masterplan is indicative, and there is potential to decouple pedestrian and cycle access from the road, and provision of the 350 proposed cycle spaces could be increased at the Reserved Matters stage.

## Health Effects

### Construction

- 5.2.9 **Vulnerable groups:** construction workers
- 5.2.10 Chapter 13 Traffic and Transport of the Environmental Statement (ES) identifies that there is the potential for fear and intimidation, and an increase in accidents and safety during the construction phase, often associated with the number of construction vehicles on roads.
- 5.2.11 The construction of the EAR (ref: 20/02415/F) is anticipated to alleviate many construction traffic impacts, as it will provide the highway capacity required to service the Site. Chapter 13 notes that new highways in the area have been designed to facilitate a longer term southern relief road, linking the A41 as a bypass at the south of Bicester, of which the EAR forms a part.
- 5.2.12 The chapter identifies that there is anticipated to be neutral effects on fear and intimidation and accidents and safety, when compared to the consented development. A Construction Traffic Management Plan and Construction Logistics Plan should be conditioned to the application to help identify whether any further mitigation measures would be necessary. These plans should include consideration of supporting active travel of construction workers e.g. providing secure cycle parking.
- 5.2.13 **Effects:** neutral.

### Operation

- 5.2.14 **Vulnerable groups:** those with pre-existing conditions e.g. asthma.
- 5.2.15 Provision will be made for internal pedestrian and cycle routes, which will be designed in accordance with the Department for Transport Cycle Infrastructure Design guidance LTN 1-20. This will connect with the pedestrian and cycleway that is proposed as part of the EAR, secured through the extant planning permission. New cycle crossings will be provided at each new vehicular access.
- 5.2.16 A total of 345 cycle parking spaces is proposed, which will be provided in secure, covered cycle stores in locations that are convenient, well overlooked, and have easy access to units and cycle routes. Ancillary changing and showering facilities would be provided within individual units. A total of 678 car parking spaces is proposed on site. There are no specific standards for large vehicle parking, and a total of 224 bays is currently proposed.
- 5.2.17 New bus stops will be provided along the EAR, and existing bus routes are proposed to be extended within the Graven Hill masterplan area. The exact service and frequency is currently unknown.

- 5.2.18 There is potential for the Proposed Development to accommodate an amenity hub on Site, including pop up kiosks/ food trucks/ cafés, subject to demand. This would be in walkable distance and help discourage offsite travel by car.
- 5.2.19 Chapter 13 Traffic and Transport notes that, compared to the consented development, there is anticipated to be a reduction in volumes of traffic as a result of removing the B1 office uses. This would result in neutral to minor beneficial impacts with regards to pedestrian amenity, fear and intimidation and accidents and safety, compared to the consented development.
- 5.2.20 **Effects:** beneficial.

### Recommendations

- **Condition:** the Construction Traffic Management Plan to include measures to promote car share, use of public transport, walking and cycling among the construction force, such as through a Travel Plan.
- **Condition:** an operational Travel Plan should be prepared to encourage uptake of walking and cycling for future employees at the Site.
- **Recommendation:** the potential for a segregated walking and cycle route should be explored at detailed design stage.

## 5.3 Physical Activity

### Health Baseline of the Population

- 5.3.1 **Active lives:** Sports England Active Lives data<sup>11</sup> suggests that, in Cherwell, 67.2% of adults are 'active' (150+ minutes a week), higher than the national average of 61.7%. 13.4% are 'fairly active' (30-149 mins a week) compared to the national average of 11.5% and 24.4% are 'inactive' (<30 mins a week) lower than the national average of 27.2%.
- 5.3.2 **Diet and weight:** Over half of Oxfordshire adults are classified as overweight or obese. Prevalence is higher in males, older people, some ethnic groups and more deprived areas. 1 in 4 adults do not meet the guidelines for recommended physical activity. Dietary risk factors accounted for over 11,500 lost years of healthy life (DALYs) in 2019. Excess weight in children has remained high. One in five children in Reception, and one in three children in Year 6 was overweight or obese (Oxfordshire Insight, 2021).
- 5.3.3 **Causes of death:** In 2017-19, cancer was the leading cause of death in Oxfordshire, followed by heart disease and stroke for males and Dementia for females.

### Current Provision on Site

- 5.3.4 **Access to open space:** the wooded hilltop of Graven Hill is used for recreational purposes, and the Site is surrounded by open space and woodland within the wider Graven Hill development. This is largely comprised of natural scrub land and open grass areas. The Site is currently not accessible to the public.
- 5.3.5 **Footpaths, cycle paths and bridleways:** as noted above, there are no routes crossing the Site, however there is a wider network of footpaths, cycle paths and bridleways surrounding the Site. There are footpaths connecting to the wider countryside, as well as footpaths leading to Bicester. National Cycle Network Route 51 lies approximately 1.4 km to the west, and runs

<sup>11</sup> <https://www.sportengland.org/know-your-audience/data/active-lives/active-lives-data-tables>

from Oxford to Felixstowe. There closest bridleway lies approximately 400 m to the west across the railway line.

## Evidence

- 5.3.6 With regards to active travel and physical health, there is a wealth of high quality evidence to show that investing in infrastructure to support walking can increase physical activity levels and improve mobility among children, adults and older adults. There is moderate to high quality evidence that indicates that prioritising active travel, through investment in cycling infrastructure, can lead to numerous health gains such as improved cardiovascular outcomes and improved weight status<sup>12</sup>.

## Stakeholder Engagement

- 5.3.7 Physical activity in general has not been identified in the SCI, however comments have been made with regards to pedestrian and cycle routes, as per **Section 5.2** above.

## Health Effects

### Construction

- 5.3.8 **Vulnerable groups:** construction workers.
- 5.3.9 The measures outlined in **Section 5.2** above will help to promote active travel among the construction workforce, and therefore have an impact on physical exercise. Construction workers will be able to access the wooded areas immediately adjacent to the Site for recreation during breaks.
- 5.3.10 **Effects:** beneficial.

### Operation

- 5.3.11 **Vulnerable groups:** Those with a pre-existing health condition e.g. obesity
- 5.3.12 The measures outlined in **Section 5.2** above will help to promote active travel among the operational workforce, and therefore have an impact on physical exercise.
- 5.3.13 With regards to a healthy environment, the Proposed Development will include outside breakout areas and internal walking routes, giving an opportunity for employees on Site to take breaks and move around outside. This will include areas of existing woodland, tree planting and grassland.
- 5.3.14 **Effects:** beneficial.

## Recommendations

- 5.3.15 None proposed.

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<sup>12</sup> <https://www.gov.uk/government/publications/spatial-planning-for-health-evidence-review>

## 5.4 Air Quality

### Health Baseline of the Population

- 5.4.1 **Sensitive Receptors:** there existing sensitive receptors surrounding the Site, including those working immediately north of the Site in St David's Barracks approximately 40m to the north, and residential receptors at Ambrosden Farm approximately 470 m to the east.
- 5.4.2 **Respiratory conditions:** the closest GP practice to the Site (Alchester Medical Group) GP profile indicates that overall, the area has similar instances of COPD and Asthma compared to the national average<sup>13</sup>.

### Site Conditions

- 5.4.3 **AQMA:** the Site is not located within an Air Quality Management Area (AQMA), however there are four within CDC boundary, all for exceedances in nitrogen dioxide (NO<sub>2</sub>) objectives. The nearest is AQMA No. 4, located approximately 3.1km north-west of the Site.
- 5.4.4 **Monitored emissions:** CDC air quality monitoring in 2019 (most appropriate year as COVID-19 pandemic may not be representative of conditions) indicates that NO<sub>2</sub> concentrations have reduced at monitored locations since 2016.

### Evidence

- 5.4.5 The PHE Review of interventions to improve outdoor air quality and public health<sup>14</sup> identifies clear evidence that air pollution is the largest environmental risk to public health in the UK:
- estimates of between 28,000 and 36,000 deaths each year attributed to human-made air pollution
  - a close association with cardiovascular and respiratory disease including lung cancer
  - emerging evidence that other organs may also be affected, with possible effects on dementia, low birth weight and diabetes
  - emerging evidence that children in their early years are especially at risk, including asthma and poorer lung development

### Stakeholder Engagement

- 5.4.6 As noted in the SCI, air quality was raised during the consultation, particularly with regards to the school at Graven Hill. Chapter 16 of the Environmental Statement sets out the air quality assessment and measures taken to reduce emissions.

### Health Effects

#### Construction

- 5.4.7 **Vulnerable groups:** construction workers.
- 5.4.8 There are residential receptors during demolition and construction. Chapter 16 Air Quality identifies that there is a medium to low risk to human health from demolition, earthworks, construction and trackout dust emissions. However, with the inclusion of primary mitigation as set out in the CEMP, it is anticipated that the impact would be negligible. Chapter 16 identifies

<sup>13</sup> <https://fingertips.phe.org.uk/profile/general-practice/data#page/12/ati/7/are/K84613>

<sup>14</sup> <https://www.gov.uk/government/publications/improving-outdoor-air-quality-and-health-review-of-interventions>

that construction traffic emissions would likely be relatively small compared to existing road traffic emissions, and therefore would result in a negligible impact.

5.4.9 **Effects:** neutral.

#### Operation

5.4.10 **Vulnerable groups:** those with a pre-existing health condition e.g. asthma.

5.4.11 During the operational phase, the main source of emissions is likely to be associated with transport. Chapter 16 identifies that, while there will be emissions associated with the Proposed Development, it is not anticipated that these will result in an exceedance of air quality objectives, and is therefore negligible.

5.4.12 The Proposed Development will provide areas of open space, and green wildlife corridors are proposed which will help to protect employees on site.

5.4.13 Measures to reduce reliance on car use and promote active/ sustainable modes of travel (described in Tables 6.1 and 6.2) will help to reduce emissions associated with operational transport.

5.4.14 **Effects:** neutral.

#### Recommendations

- **Recommendation:** construction to promote recycling wherever possible to reduce vehicle trips
- **Recommendation:** Electric Vehicle charging infrastructure to be provided in accordance with Oxfordshire electric Vehicle Infrastructure Strategy, which requires 25% of all car parking spaces for new commercial development
- **Condition:** internal air quality should be considered at the detailed design stage.

### 5.5 Noise

#### Health Baseline of the Population

5.5.1 **Sensitive Receptors:** as described in Section 5.4, there are sensitive receptors in close proximity to the Site. Chapter 14 Noise and Vibration ES chapter did not identify any schools or health facilities as sensitive receptors.

5.5.2 **Cardiovascular disease:** there were 17,940 people (all ages) registered with Coronary Heart Disease (CHD) among Oxfordshire GP practices in 2019-20 (2.32% of all patients, compared to 3.09% nationally). 13,417 patients at Oxfordshire GP practices in 2019-20 had recorded stroke or transient ischaemic attack (TIA). This is 1.73% of all Oxfordshire patients, just below the national average (1.8%). (Oxfordshire Insight, 2021)

#### Site Conditions

5.5.3 **Dominant noise sources:** there is currently construction works in connection with the Graven Hill development and EAR. Outside of construction operational hours, the dominant noise is road traffic noise from the A41.

## Evidence

- 5.5.4 The Institute of Acoustics Planning & Noise guidance<sup>15</sup> identifies that noise pollution can have a detrimental impact on health. Noise exposure can lead to a range of adverse effects including sleep disturbance and annoyance. There is an association between long term exposure to environmental noise and chronic health effects. For example, associations have been found between long term exposure to transport noise, particularly from aircraft and road traffic, and an increase in the risk of cardiovascular effects (heart disease and hypertension). Good design and the separation of land uses can lessen noise impacts<sup>16</sup>.

## Stakeholder Engagement

- 5.5.5 As noted in the SCI, concerns were raised with regards to noise, particularly from traffic. Chapter 14 of the Environmental Statement sets out the noise and vibration assessment and measures taken to reduce impacts.

## Health Effects

### Construction

- 5.5.6 **Vulnerable groups:** construction workers.
- 5.5.7 Noise sources associated with the construction phase include demolition, earthworks, concreting and pavement.
- 5.5.8 The CEMP will help to manage and reduce construction noise and vibration. This includes erecting hoarding where appropriate, using quiet, well-maintained machinery and avoiding unnecessary noise (such as idling engines between operations). The CTMP, which will be secured by a condition, will help to manage construction traffic noise. The Outline CEMP states that reasonable steps will be taken to engage with residents prior and during construction to inform them of location of planned works, duration and complaints procedure.
- 5.5.9 Chapter 14 Noise and Vibration identified that most receptors will experience negligible effects during construction, except St David's Barracks which will experience moderate adverse impacts from demolition due to the close proximity of the building to the Site (40 m). This would be a short term and local adverse impact. The demolition works will not exceed the construction threshold limit, and therefore no additional mitigation is proposed. No significant adverse impacts are anticipated with regards to vibration.
- 5.5.10 **Effects:** neutral

### Operation

- 5.5.11 **Vulnerable groups:** the elderly, young children
- 5.5.12 There is potential for significant adverse effects at St David's Barracks as a result of the fixed plant and building services noise, however the specific type of plant is not yet known. There may also be significant adverse effects with regards to break-out noise from the B8 units, and other site operational noise from the service yard, reverse alarms and unloading docks.
- 5.5.13 There are a series of mitigation measures that can help to address the above. Chapter 14 sets out noise limits for controlling external plant and building services noise, and recommendations to reduce noise from the service yard such as layout and fencing.

<sup>15</sup> <https://www.ioa.org.uk/sites/default/files/14720%20ProPG%20Main%20Document.pdf>

<sup>16</sup> NHS London HUDU (2019) Rapid Health Impact Assessment Tool



5.5.14 With regards to operational traffic, there is anticipated to be negligible effects on nearby sensitive receptors, with the exception of the new EAR, which is subject to a separate assessment.

5.5.15 **Effects:** neutral.

## Recommendations

**5.5.16** As per Chapter 14, recommendations have been set for noise limits on site, as well as other mitigation measures such as strategic layout of units, sensitive choice of reserve alarms, use of electric plant for external loading/unloading operations and use of fencing where relevant, to be secured by planning condition. This could include a mechanism for local people to raise noise concerns.

## 5.6 Economy and Employment

### Health Baseline of the Population

5.6.1 **Economic activity:** Chapter 17 Socioeconomics identifies that, at the time of the 2011 Census, levels of economic activity in the Local Area were higher than at other spatial scales, with 83% of economically active residents in employment, compared to 76% in Cherwell and 72-73% in Oxfordshire and the South-East.

5.6.2 **Unemployment rate:** the unemployment rate in the Local Area was comparatively low, at 2.7% at the time of the 2011 Census, which was almost half the rate of unemployment in the South-East, and lower than the rate in Cherwell and Oxfordshire at 3.7-3.8%. As of February 2022, there were 165 residents claiming unemployment related benefits in the Local Area.

5.6.3 **Disability:** 1 in 5 of the working age population are classed as disabled. In 2021, the disability employment rate was 52.7% in Q2 2021, compared to 81.0% for non-disabled people<sup>17</sup>.

### Site Conditions

5.6.4 The Site currently comprises vacant warehousing units and brownfield land.

### Evidence

5.6.5 Employment and income are a key determinant of health and wellbeing. Unemployment generally leads to poverty, illness and a reduction in personal and social esteem. Work aids recovery from physical and mental illnesses. National data show that premature mortality is closely associated with deprivation.

5.6.6 The susceptibility of a population accessing these health benefits relates directly to their suitability for the job. This is influenced by an array of factors, but includes knowledge of opportunity, adequate skills for the job, ease of travel as well as personal attributes.

### Stakeholder Engagement

5.6.7 The SCI does not identify any specific comments with regards to economy and employment.

### Health Effects

### Construction

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<sup>17</sup> [The employment of disabled people 2021 - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/statistics/the-employment-of-disabled-people-2021)



5.6.8 **Vulnerable groups:** construction workers.

5.6.9 The Proposed Development is anticipated to generate approximately 570 Full Time Equivalents (FTE) jobs over the 21 month demolition and construction period. Chapter 17 Socioeconomics notes that, in a regional context, the scale of this beneficial effect is likely to be negligible.

5.6.10 CDC require an Employment, Skills and Training Plan (ESTP), to be secured by a Section 106 Agreement.

5.6.11 **Effects:** beneficial.

#### Operation

5.6.12 **Vulnerable groups:** unemployed or economically inactive, disabled.

5.6.13 The Proposed Development is anticipated to accommodate between 1,150 and 2,430 FTE jobs. Chapter 17 Socioeconomics concludes that this will result in moderate beneficial effects at the local and district level.

5.6.14 In terms of accessibility and inclusive design, the Proposed Development allows for a minimum 6% disabled parking bays with safe paths to office entrances. There is also a provision for disabled shower and WC, lifts to ease the access. As the application is in outline, the final provision will be subject to the occupiers.

5.6.15 **Effects:** beneficial.

#### Recommendations

- **Condition:** Design of reserved matters applications to deliver inclusive work environments that encourage disabled and other protected characteristics in the Equalities Act 2012 to be able to work in the proposed development.

## 5.7 Crime and Antisocial Behaviour

### Health Baseline of the Population

5.7.1 The Bicester South and Ambrosden ward (**Appendix C**) has an overall Indices of Multiple Deprivation (IMD) 2019 score of 6.2, lower than the Oxfordshire (11.7) and England (21.7) scores. A lower score indicates there is less deprivation.

5.7.2 The Site lies within Lower Super Output Area (LSOA) Cherwell 011A. This LSOA is ranked 10<sup>th</sup> for the crime decile (where 10 is the least deprived 10% of LSOAs).

### Site Conditions

5.7.3 The Safer Oxfordshire Partnership Strategic Intelligence Assessment 2021<sup>18</sup> identifies that Cherwell experienced a 2% decrease in crime between 2019 and 2020, although the district had above average rates for several types of crime (including drugs, shoplifting, and theft from the person, as well as 'other' crime/theft).

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<sup>18</sup> [SIA June 2021 \(oxfordshire.gov.uk\)](https://www.oxfordshire.gov.uk/sia-june-2021)

5.7.4 The Site falls within Thames Valley Police jurisdiction, within the Bicester Rural boundary. Between January and April 2022<sup>19</sup>, no specific crimes have been recorded on the Site, however crimes reported within the wider Graven Hill area include:

- Violence and sexual offences (9)
- Theft from a person (2)
- Other theft (2)
- Robbery (1)
- Burglary (1)
- Criminal damage and arson (1)
- Public order (1)
- Vehicle crime (1)
- Other crime (1)

5.7.5 In addition, one Stop and Search was conducted in the north of Graven Hill in April 2022, which found offensive weapons.

### Evidence

5.7.6 Thoughtful planning and urban design that promotes natural surveillance and social interaction can help to reduce crime and the 'fear of crime', both of which impact on mental wellbeing. As well as the immediate physical and psychological impact of being a victim of crime, people can also suffer indirect long-term health consequences including disability, victimisation and isolation because of fear.

### Stakeholder Engagement

5.7.7 The SCI does not identify any specific comments with regards to crime and ASB.

5.7.8 No specific engagement has been undertaken with the local authority or police force regarding Secured by Design as the application is in outline.

### Health Effects

#### Construction

5.7.9 **Vulnerable groups:** construction workers.

5.7.10 It is anticipated that, during construction, the Site will be secured to protect the public and deter unauthorised access. The Health and Safety Executive<sup>20</sup> identifies that all construction sites are required to adopt measures to:

- Manage access across defined boundaries; and

<sup>19</sup> <https://www.police.uk/pu/your-area/thames-valley-police/bicester-rural/?tab=CrimeMap>

<sup>20</sup>

<https://www.hse.gov.uk/construction/safetytopics/publicprotection.htm#:~:text=Secure%20sites%20adequately%20when%20finishing,cannot%20topple%20or%20roll%20over.>

- Exclude unauthorised persons.

5.7.11 This should include adopting and maintain suitable fencing to define boundaries.

5.7.12 **Effects:** neutral

### Operation

5.7.13 **Vulnerable groups:** those with a perception/ fear of crime

5.7.14 At this outline stage, detail on design elements to design out crime are not available. However, the parameter plans (**Appendix C**) show the proposal includes transport corridors throughout the Site which will help to increase “eyes on the street”.

5.7.15 A Lighting Impact Assessment (BWB, 2022) has been prepared which includes a lighting strategy. This will help to reduce perceptions/ fear of crime.

5.7.16 **Effects:** neutral

### Recommendations

- **Condition:** Design in Reserved Matters Applications should reflect best practice in designing out crime and engage with crime prevention stakeholders.

## 5.8 Natural Environment

### Site Conditions

5.8.1 The Site comprised buildings and hardstanding, with habitat on site including occasionally managed grassland, scattered broadleaved trees, woodland and ditches. The Site supports a range of species including reptiles, bats, breeding birds and badgers.

5.8.2 See **Section 5.3** for footpaths and cycleway provision.

### Evidence

5.8.3 Benefits have been broadly categorised by the three pathways by which they are gained:

- Induced feelings of relaxation and reduced stress
- Facilitation of social interaction and social capital
- Stimulation of physical activity

5.8.4 Benefits accrue to individuals using the space, but there is also evidence that greener and more natural environments are beneficial to the human health of a wider population, as open space offer a ‘therapeutic landscape’. Interaction and visual connection with nature has been proven to benefit people by:

- Lowering blood pressure and heart rate reducing the hormones linked to stress
- Positively impacting perceptual and physiological sense of wellbeing and tranquillity, enabling positive thinking.
- Impacting the Circadian system, the clock in the body, that enables good sleep, digestion and healthy hormone production

## Stakeholder Engagement

- 5.8.5 The SCI notes that comments were raised with regards to ecology. Green buffers were also raised as a way to separate the Proposed Development from residential areas. The design team confirmed that the proposals do not encroach on residential areas, and green corridors will be provided throughout the Site.

## Health Effects

### Construction

- 5.8.6 **Vulnerable groups:** construction workers.
- 5.8.7 A series of mitigation measures will be put in place during the construction period to mitigate impacts on ecology. This includes through the CEMP, CTMP and use of an Ecological Clerk of Works to help reduce impacts. These are set out in the Chapter 8 Ecology and Nature Conservation of the ES.
- 5.8.8 Chapter 8 Ecology and Nature Conservation of the ES identifies some adverse impacts on certain species on and around the Site. However, the key point of relevance to human health is whether there are impacts on natural areas that are accessible.
- 5.8.9 There will be a loss of habitat on site, including grassland, trees, scrub, woodland and small waterbodies. However, as the Site is vacant and currently not accessible to the public, this is unlikely to impact any users.
- 5.8.10 As noted above, there are areas within and around the Site which can be used by construction workers for recreation.
- 5.8.11 **Effects:** neutral.

### Operation

- 5.8.12 **Vulnerable groups:** all identified
- 5.8.13 The Proposed Development will retain some existing landscape features, and create landscaped areas throughout the Site for green corridors and breakout amenity spaces, and shown in the Design and Access Statement (Atelier Gooch, 2022). These areas will also function as part of the sustainable drainage where possible.
- 5.8.14 During the operational phase, new and retained habitat will be managed, potentially through a Habitat Mitigation and Management Plan.
- 5.8.15 **Effects:** beneficial

## Recommendations

- 5.8.16 None proposed.

## 6 Conclusions

### 6.1 Summary

- 6.1.1 This rapid HIA has been undertaken for the proposed redevelopment at Graven Hill, which will comprise demolition of existing vacant warehouses and erection of up to 104,008 sqm of B8 Storage or Distribution, car parking and landscaping.
- 6.1.2 The HIA has followed the Oxfordshire HIA Toolkit (2021) to identify potential impacts on health priorities, demonstrate how health considerations have been incorporated into the proposals, and to identify opportunities for securing measures that could bring health and wellbeing enhancements in the future delivery of development.
- 6.1.3 A review of the baseline health of the population identified the following sensitive receptors:
- Children and young people
  - Older people
  - Those with a mental health condition e.g. depression
  - Those with a pre-existing health condition e.g. asthma
  - Unemployed or economically inactive
  - Construction workers
- 6.1.4 During the construction phase, the HIA identified beneficial effects with regards to physical activity, economy and employment. Neutral effects were identified with regards to traffic and transport, air quality and crime and antisocial behaviour. One adverse effect was identified with regards to natural environment.
- 6.1.5 During the operational phase, the HIA identified beneficial impacts with regards to traffic and transport, physical activity, economy and employment and natural environment. Neutral effects were identified with regards to air quality, noise, and crime and antisocial behaviour.

### 6.2 Recommendations and Monitoring

- 6.2.1 Recommendations for each health priority have been set out in **Section 5** above and summarised in Table 6.1 below.

Traffic and Transport
<p><b>Condition:</b> the Construction Traffic Management Plan to include measures to promote walking and cycling among the construction force, such as through a Travel Plan.</p> <p><b>Condition:</b> an operational Travel Plan should be prepared to encourage uptake of walking and cycling for future employees at the Site.</p> <p><b>Reserved matters:</b> the potential for a segregated walking and cycle route should be explored.</p>
Physical Activity
None proposed.

Air Quality
<p><b>Recommendation:</b> construction to promote recycling wherever possible to reduce vehicle trips</p> <p><b>Recommendation:</b> Electric Vehicle charging infrastructure to be provided in accordance with Oxfordshire electric Vehicle Infrastructure Strategy, which requires 25% of all car parking spaces for new commercial development</p> <p><b>Reserved Matters:</b> internal air quality should be considered at the detailed design stage.</p>
Noise
Chapter 14 Noise and Vibration of the ES sets out proposed mitigation to manage operational noise.
Economy and Unemployment
<b>Reserved matters:</b> consideration of inclusive design to be finalised at detailed design.
Crime and Antisocial Behaviour
<b>Reserved Matters:</b> consideration should be given to the detailed planting strategy to avoid creating dark places where people can lurk.
Natural Environment
None proposed.

## **Appendix A     Parameter Plans**





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Key Plan

KEY

- Site Boundary
- Site by others
- Existing Buildings
- Existing Water tanks/ Reservoirs
- Existing Concrete hardstanding
- Existing Services  
(Substation, Generators, Thames water pump)

GENERAL NOTE

Site Area : 311,088m<sup>2</sup> (76.87 Acres / 31.11 Hactare)

- P7 28/04/2022 DRAFT FOR PLANNING (OUTLINE)
- P6 10/03/2022 FOR PLANNING (DEMO)
- DRAFT 09/03/2022 DRAFT FOR COMMENTS
- P5 17/09/2021 DRAFT FOR PRE-APP
- P4 26/02/2021 PRE-APP ELL SITE ADDED
- P3 04/11/2020 SITE BOUNDARY FINALISED
- P2 20/05/2020 SITE BOUNDARY UPDATED
- P1 15/05/2020 FOR INFORMATION

Revisions

ateliergooch

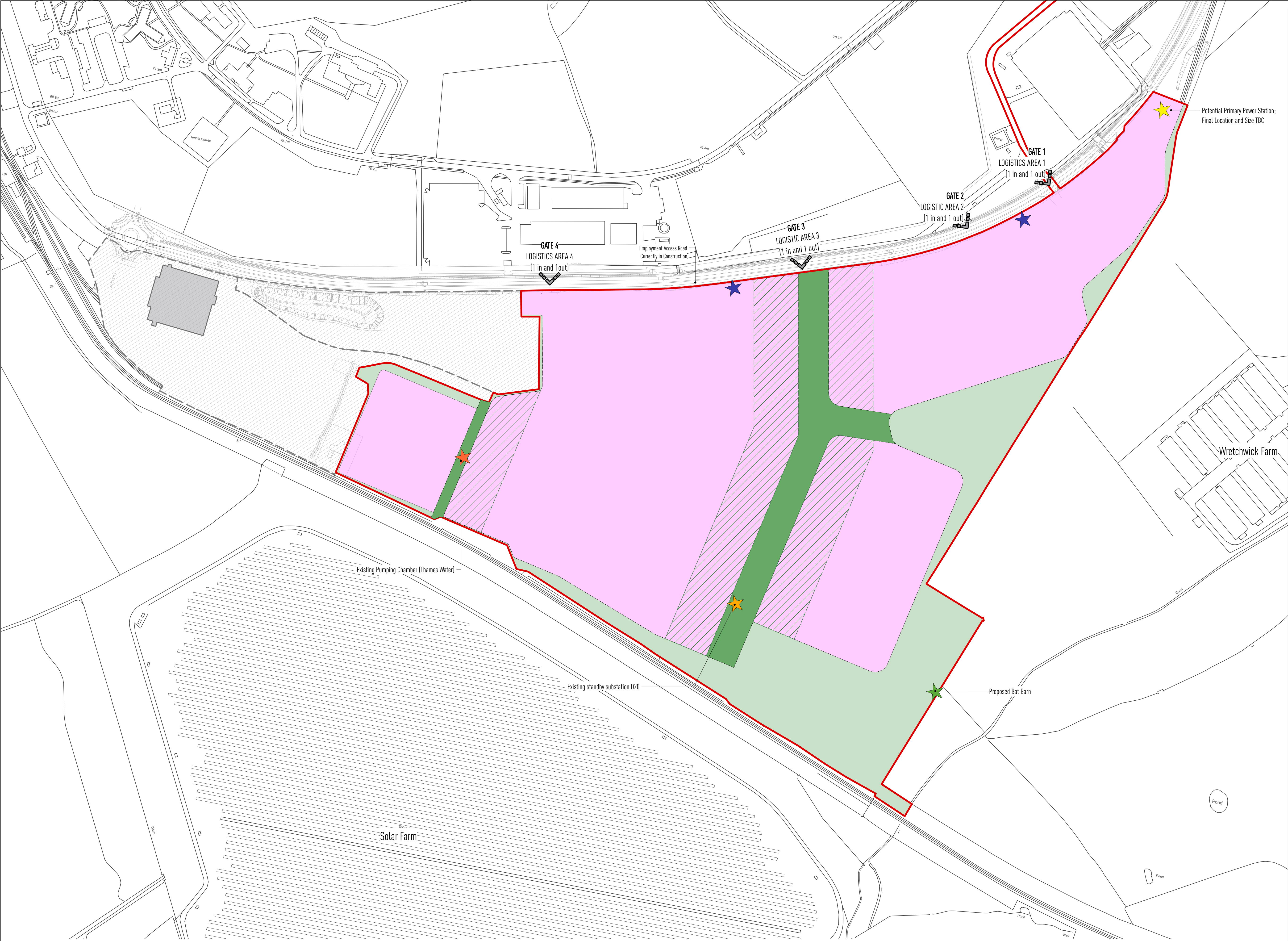
Rivington House · 82 Great Eastern Street · London · EC2A 3JF  
+44 (0) 7985 524 080  
studio@ateliergooch.com  
ateliergooch.com

Client  
Graven Hill Purchaser Ltd  
Project  
Graven Hill D1 Site, Bicester  
Project No.  
410

Drawing Title  
Site Location Plan

Status	Drawn	Checked
PLANNING	JH	GO
Scale	Date	
1:2500 @A1	May 2020	
Drawing Number	Revision	
410_S-00	P7	





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KEY

- Site Boundary
- Extent of Employment Allocated Land
- Structural Landscape planting including Existing woodlands, Proposed Amenity and Sustainable Drainage System (SuDS)
- Indicative route of Green fingers/ wildlife corridors; Final location /extent to be determined at Reserved Matters Stage
- Parameter of Green fingers/ wildlife corridors; Final location /extent to be determined at Reserved Matters Stage
- Development Area; including roads, parking and service yards; Max. 20m Ridge Height Details at Reserved Matters Stage 227,511m<sup>2</sup> (2,448,908 ft<sup>2</sup>)
- Existing D20 Substation
- Existing Thames Water Pumping Station
- New Sub-stations (as part of EAR Dev.)
- New Bat Barn
- Indicative location for Potential Primary Power Station

Refer to 410\_S-50 Indicative Proposed Plan and ABA's Transport Report for detailed Gate/ Entrance Layout

P2 10/05/2022 FOR COMMENTS  
P1 09/05/2022 FOR DISCUSSION

Revisions

ateliergooch  
Rivington House · 82 Great Eastern Street · London · EC2A 3JF  
+44 (0) 7985 524 080  
studio@ateliergooch.com  
ateliergooch.com

Client  
Graven Hill Purchaser Ltd  
Project  
Graven Hill D1 Site, Bicester  
Project No.  
410

Drawing Title  
PROPOSED LAYOUT PARAMETER PLAN

Status	Drawn	Checked
PRELIMINARY	JH	GO
Scale	Date	
1:2000 @A1	MAY 2022	
Drawing Number	Revision	
410_S-51	P2	



**GRAVEN HILL D1 SITE - RESTRICTIONS REMAINING (S-51 Rev P1)**

ateliergooch

AREA 1			AREA 2			AREA 3		
GIA			GIA			GIA		
sq.m	sq.ft		sq.m	sq.ft		sq.m	sq.ft	
UNIT 1	4,493	48,357						
UNIT 2			7,220	77,718				
UNIT 3			17,715	190,685				
UNIT 4						8,346	89,835	
UNIT 5						9,853	106,054	
UNIT 6						15,527	167,133	
UNIT 7						8,863	95,402	
UNIT 8						7,031	75,676	
UNIT 9						23,255	250,315	
CENTRAL HUB						477	5,137	
NLA TOTAL PER AREA	4,493	48,357	24,936	268,403	73,352	789,552		
SUB-STATION	854	9,193						
PLANT/ BINS 1						171	1,843	
PLANT/ BINS 2						171	1,843	
BAT BARN						32	339	
TOTAL PER AREA	5,347	57,550	24,936	268,403	73,726	793,570		

	sq.m	acres	sq.m	acres	sq.m	acres
<b>SITE AREA</b>	16,310	4	64,664	16	224,179	55

Warehousing Area		Ancillary Office Area	
GIA		GIA	
sq.m	sq.ft	sq.m	sq.ft
4,050	43,594	443	4,763
6,690	72,005	531	5,713
15,087	162,390	909	9,782
7,737	83,281	609	6,554
9,244	99,500	609	6,554
14,717	158,411	810	8,723
8,276	89,082	587	6,320
6,552	70,525	479	5,151
22,118	238,074	1,137	12,242
94,470	1,016,862	6,113	65,799

PARKING		
LARGE	STANDARD	DISABLED
18.5' X 3.5m	2.4 X 4.8m	3.6 X 6m
13	33	
9	48	
32	100	
21	55	
23	63	
25	95	
19	57	
26	47	
56	139	

	<b>TOTAL</b>	
	<b>GIA</b>	
	sq.m	sq.ft
<b>TOTAL DEVELOPMENT</b>	<b>104,008</b>	<b>1,119,529</b>
TOTAL NLA	102,780	1,106,312
TOTAL NLA WAREHOUSE	102,303	1,101,175

	sq.m	acres
<b>TOTAL SITE AREA</b>	305,153	75.4

## **Appendix B     HIA Consultation**

## Cottey, Roxy

---

**From:** Robin Forrester <Robin.Forrester@cherwell-dc.gov.uk>  
**Sent:** 12 May 2022 13:27  
**To:** Cottey, Roxy; David Lowin  
**Cc:** Young, Neil; Clark, Juliet; Matt Humphreys; Mark Goulding  
**Subject:** RE: Graven Hill, D1 Site, Bicester - rapid Health Impact Assessment scope

Dear Roxy,

Many thanks for the document – your approach seems fine, and should not raise any issues if the ‘toolkit’ has been followed.

I understand that this is a County Council initiative and is not adopted District Council policy at present.

Kindest regards,

Rob

**Rob Forrester, BSc Town and Regional Planning**  
**Principal Planning Officer, Major Development**

Development Management Division  
Place & Growth Directorate  
Cherwell District Council  
Bodicote House  
Bodicote  
Banbury  
OX15 4AA

Tel: 01295 753738  
Email: [robin.forrester@cherwell-dc.gov.uk](mailto:robin.forrester@cherwell-dc.gov.uk)  
Web: [www.cherwell.gov.uk](http://www.cherwell.gov.uk)

*Please note I normally work Mon – Wed and Thursday am only, and so may not be able to answer your email immediately.*

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**From:** Cottey, Roxy <roxy.cottey@stantec.com>  
**Sent:** 27 April 2022 10:49  
**To:** Robin Forrester <Robin.Forrester@cherwell-dc.gov.uk>

Cc: Young, Neil <neil.young@stantec.com>; Clark, Juliet <Juliet.Clark@stantec.com>; Matt Humphreys <matt@hplanning.london>; Mark Goulding <Mark@resoluteproperty.co.uk>

**Subject:** Graven Hill, D1 Site, Bicester - rapid Health Impact Assessment scope

**CAUTION:** This email originated from outside of the Council. Do not click links or open attachments unless you recognise the sender and know the content is safe.

Hi Robin,

I am preparing a rapid Health Impact Assessment (HIA) to support the planning application for Graven Hill, D1 Site in Bicester. I understand the key planning officer for this application, David Lowin, is currently on leave, and I have therefore been passed your contact details in his absence.

It is intended that the application will be in outline with some matters reserved, for approximately 117,000 sqm (GIA) of logistics-led floorspace.

The rapid HIA will follow the Oxfordshire Health Impact Assessment Toolkit (January 2021) methodology. The Toolkit states that the scope of the assessment should be discussed and agreed with the relevant Planning Officer to ensure a proportionate approach to the HIA is taken. I have therefore set out below how our rapid HIA will respond to the Toolkit, and would appreciate if you could confirm this is acceptable. Please do let me know if you have any suggestions, or require further information.

The rapid HIA will set out:

1. description of proposed development – a description of the proposals, existing site conditions and surrounding context will be provided.
2. identification of population groups affected by the proposed development – this will be guided by the list of vulnerable groups set out in the Toolkit.
3. identification of geographical area and associated health needs and priorities – a health baseline will be prepared, which will review of the Oxfordshire Health and Wellbeing Strategy, Joint and Strategic Needs Assessment, Public Health England datasets, Census data and other sources.
4. assessment of health and recommendations – based on the development proposals, we will include assessment on the following priorities: physical activity, air quality, noise, traffic and transport, economy and employment, crime and antisocial behaviour, and access to green spaces. Recommendations and how these will be secured, will be set out in the conclusions.
5. monitoring – setting recommendations which will be discussed with the client and design team.

For clarity, our proposed study area for each of the identified priorities are as follows:

Health Priority	Study Area
Physical activity	Local area - MSOA
Air quality	As per Air Quality Assessment
Noise	As per Noise Assessment
Traffic and transport	Walking catchment as set out in Transport Assessment
Economy and employment	As per Socio-Economic Assessment
Crime and antisocial behaviour	Local area - MSOA
Access to green space	Local area - MSOA

Kind regards,

**Roxy Cotley**

Environmental Consultant  
Reading, UK

Direct: 01189 520244  
[roxy.cotley@stantec.com](mailto:roxy.cotley@stantec.com)



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## **Appendix C     Study Area Health Profiles**



Public Health  
England



## Oxfordshire

Published on 03/03/2020

Area type: County  
Region: South East

# Local Authority Health Profile 2019

This profile gives a picture of people's health in Oxfordshire. It is designed to act as a 'conversation starter', to help local government and health services understand their community's needs, so that they can work together to improve people's health and reduce health inequalities.

Visit <https://fingertips.phe.org.uk/profile/health-profiles> for more area profiles, more information and interactive maps and tools.

## Health in summary

The health of people in Oxfordshire is generally better than the England average. Oxfordshire is one of the 20% least deprived counties/unitary authorities in England, however about 10.3% (12,120) children live in low income families. Life expectancy for both men and women is higher than the England average.

## Health inequalities

Life expectancy is 6.2 years lower for men and 4.0 years lower for women in the most deprived areas of Oxfordshire than in the least deprived areas.

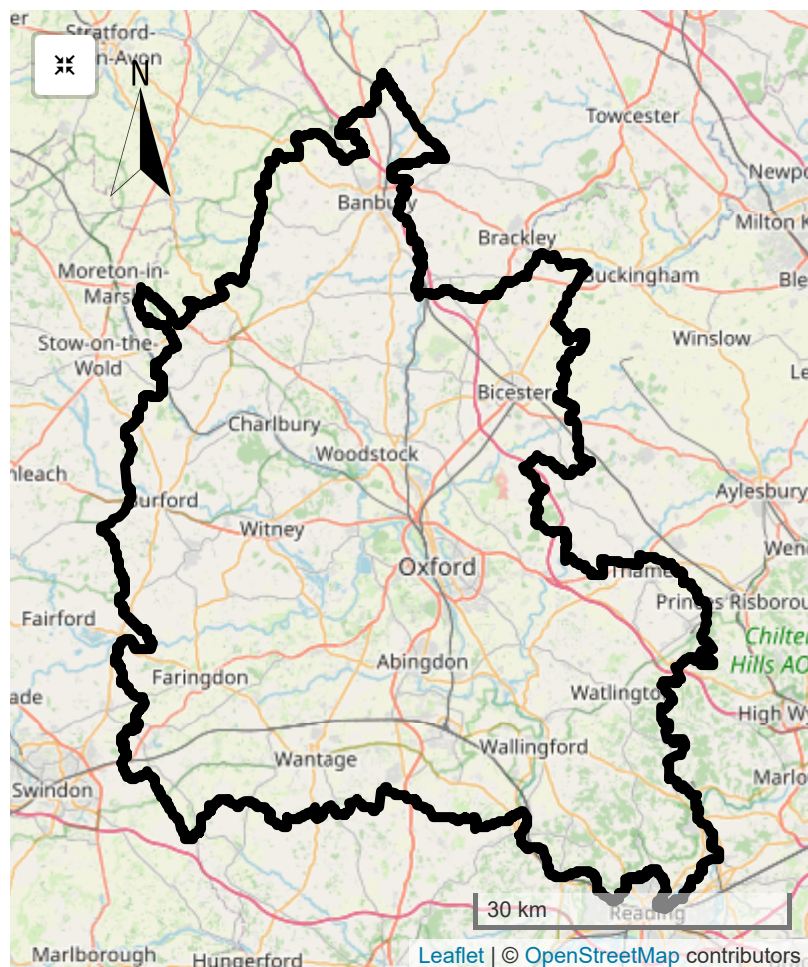
## Child health

In Year 6, 15.7% (1,084) of children are classified as obese, better than the average for England. The rate for alcohol-specific hospital admissions among those under 18 is 38\*, worse than the average for England. This represents 55 admissions per year. Levels of teenage pregnancy, GCSE attainment (average attainment 8 score) and smoking in pregnancy are better than the England average.

## Adult health

The rate for alcohol-related harm hospital admissions is 497\*, better than the average for England. This represents 3,316 admissions per year. The rate for self-harm hospital admissions is 183\*. This represents 1,295 admissions per year. Estimated levels of excess weight in adults (aged 18+), smoking prevalence in adults (aged 18+), smoking prevalence (in routine and manual occupations) and physically active adults (aged 19+) are better than the England average. The rates of new sexually transmitted infections and new cases of tuberculosis are better than the England average. The rates of statutory homelessness, violent crime (hospital admissions for violence), under 75 mortality rate from cardiovascular diseases, under 75 mortality rate from cancer and employment (aged 16-64) are better than the England average.

\* rate per 100,000 population



Contains National Statistics data © Crown copyright and database right 2019  
Contains OS data © Crown copyright and database right 2019  
Local authority displayed with full resolution clipped boundary

Leaflet | © OpenStreetMap contributors



# Health summary for Oxfordshire

## Key

Significance compared to goal / England average:

Significantly worse

Significantly lower

↑ Increasing / Getting worse

↑ Increasing / Getting better

Not significantly different

Significantly higher

↓ Decreasing / Getting worse

↓ Decreasing / Getting better

Significantly better

Significance not tested

↑ Increasing

↓ Decreasing

↑ Increasing (not significant)

↓ Decreasing (not significant)

— Could not be calculated

→ No significant change

## Life expectancy and causes of death

Indicator	Age	Period	Count	Value (Local)	Value (Region)	Value (England)	Change from previous
1 Life expectancy at birth (male)	All ages	2016 - 18	n/a	81.6	80.7	79.6	↑
2 Life expectancy at birth (female)	All ages	2016 - 18	n/a	84.7	84.1	83.2	↑
3 Under 75 mortality rate from all causes	<75 yrs	2016 - 18	4566	262.2	292.3	330.5	↓
4 Mortality rate from all cardiovascular diseases	<75 yrs	2016 - 18	889	51.4	59.0	71.7	↑
5 Mortality rate from cancer	<75 yrs	2016 - 18	1961	113.4	123.6	132.3	↓
6 Suicide rate	10+ yrs	2016 - 18	155	8.60	9.21	9.64	↓

## Injuries and ill health

Indicator	Age	Period	Count	Value (Local)	Value (Region)	Value (England)	Change from previous
7 Killed and seriously injured (KSI) rate on England's roads	All ages	2016 - 18	910	44.4	49.6	42.6 ^	—
8 Emergency hospital admission rate for intentional self-harm	All ages	2018/19	1295	183.2	199.7 \$	193.4	↑
9 Emergency hospital admission rate for hip fractures	65+ yrs	2018/19	715	545.1	516.6 \$	558.4	↓
10 Percentage of cancer diagnosed at early stage	All ages	2017	1492	56.3	52.7	52.2	↑
11 Estimated diabetes diagnosis rate	17+ yrs	2018	n/a	67.2	75.2	78.0	↓
12 Estimated dementia diagnosis rate	65+ yrs	2019	5749	68.4 *	65.6 *	68.7 *	↑

## Behavioural risk factors

Indicator	Age	Period	Count	Value (Local)	Value (Region)	Value (England)	Change from previous
13 Hospital admission rate for alcohol-specific conditions	<18 yrs	2016/17 - 18/19	165	38.3	31.7 \$	31.6	↓
14 Hospital admission rate for alcohol-related conditions	All ages	2018/19	3316	497.5	526.3 \$	663.7	↑
15 Smoking prevalence in adults	18+ yrs	2018	54804	10.1	12.9	14.4	↓
16 Percentage of physically active adults	19+ yrs	2017/18	n/a	72.5	69.8	66.3	↑
17 Percentage of adults classified as overweight or obese	18+ yrs	2017/18	n/a	58.9	60.3	62.0	↑

## Child health

Indicator	Age	Period	Count	Value (Local)	Value (Region)	Value (England)	Change from previous
18 Teenage conception rate	<18 yrs	2017	121	11.1	13.9	17.8	↓
19 Percentage of smoking during pregnancy	All ages	2018/19	484	7.53	9.70 ^	10.6	↓
20 Percentage of breastfeeding initiation	All ages	2016/17	6253	- ~	79.1	74.5	—
21 Infant mortality rate	<1 yr	2016 - 18	57	2.54	3.65	3.93	↓
22 Year 6: Prevalence of obesity (including severe obesity)	10-11 yrs	2018/19	1084	15.7	16.8	20.2	↓

## Inequalities

Indicator	Age	Period	Count	Value (Local)	Value (Region)	Value (England)	Change from previous
23 Deprivation score (IMD 2015)	All ages	2015	n/a	11.5	-	21.8	—
24 Smoking prevalence in adults in routine and manual occupations	18-64 yrs	2018	n/a	17.0	25.0	25.4	↓

## Wider determinants of health

Indicator	Age	Period	Count	Value (Local)	Value (Region)	Value (England)	Change from previous
25 Percentage of children in low income families	<16 yrs	2016	12120	10.3	12.9	17.0	↑
26 Average GCSE attainment (average attainment 8 score)	15-16 yrs	2018/19	290239	47.7	47.9	46.9	↑
27 Percentage of people in employment	16-64 yrs	2018/19	348800	82.5	78.4	75.6	↑
28 Statutory homelessness rate - eligible homeless people not in priority need	Not applicable	2017/18	140	0.51	0.66	0.79	↑
29 Violent crime - hospital admission rate for violence (including sexual violence)	All ages	2016/17 - 18/19	255	12.1	31.2 \$	44.9	↑

## Health protection

Indicator	Age	Period	Count	Value (Local)	Value (Region)	Value (England)	Change from previous
30 Excess winter deaths index	All ages	Aug 2017 - Jul 2018	528	30.4	30.2	30.1	↑
31 New STI diagnoses rate (exc chlamydia aged <25)	15-64 yrs	2018	3001	685.0	708.1	850.6	↑
32 TB incidence rate	All ages	2016 - 18	120	5.86	6.19	9.19	↓

For full details on each indicator, see the [definitions tab of the Local Authority Health Profiles online tool](#).

For a full list of profiles produced by Public Health England, see the fingertips website: <https://fingertips.phe.org.uk/>

## Indicator value types

1,2 Life expectancy - years 3,4,5 Directly age-standardised rate per 100,000 population aged under 75 6 Directly age-standardised rate per 100,000 population aged 10 and over 7 Crude rate per 100,000 population 8 Directly age-standardised rate per 100,000 population 9 Directly age-standardised rate per 100,000 population aged 65 and over 10 Proportion - % of cancers diagnosed at stage 1 or 2 11 Proportion - % recorded diagnosis of diabetes as a proportion of the estimated number with diabetes 12 Proportion - % recorded diagnosis of dementia as a proportion of the estimated number with dementia 13 Crude rate per 100,000 population aged under 18 14 Directly age-standardised rate per 100,000 population 15,16,17 Proportion 18 Crude rate per 1,000 females aged 15 to 17 19,20 Proportion 21 Crude rate per 1,000 live births 22 Proportion 23 Index of Multiple Deprivation (IMD) 2015 score 24 Proportion 25,26 Slope index of inequality 27 Proportion 28 Mean average across 8 qualifications 29 Proportion 30 Crude rate per 1,000 households 31 Directly age-standardised rate per 100,000 population 32 Ratio of excess winter deaths to average of non-winter deaths 33 Crude rate per 100,000 population aged 15 to 64 (excluding Chlamydia) 34 Crude rate per 100,000 population

*	Value compared to a goal (see below)
~	Value not published for data quality reasons
\$	Due to an issue with HES coding in East Sussex Healthcare NHS Trust in 2018/19, for which approximately 85,000 records erroneously had all diagnosis codes removed, this value should be treated with caution. In 2018/19, between 1 to 10% of patients that attended hospital from this area had records that were missing diagnosis codes
^	Aggregated from all known lower geography values

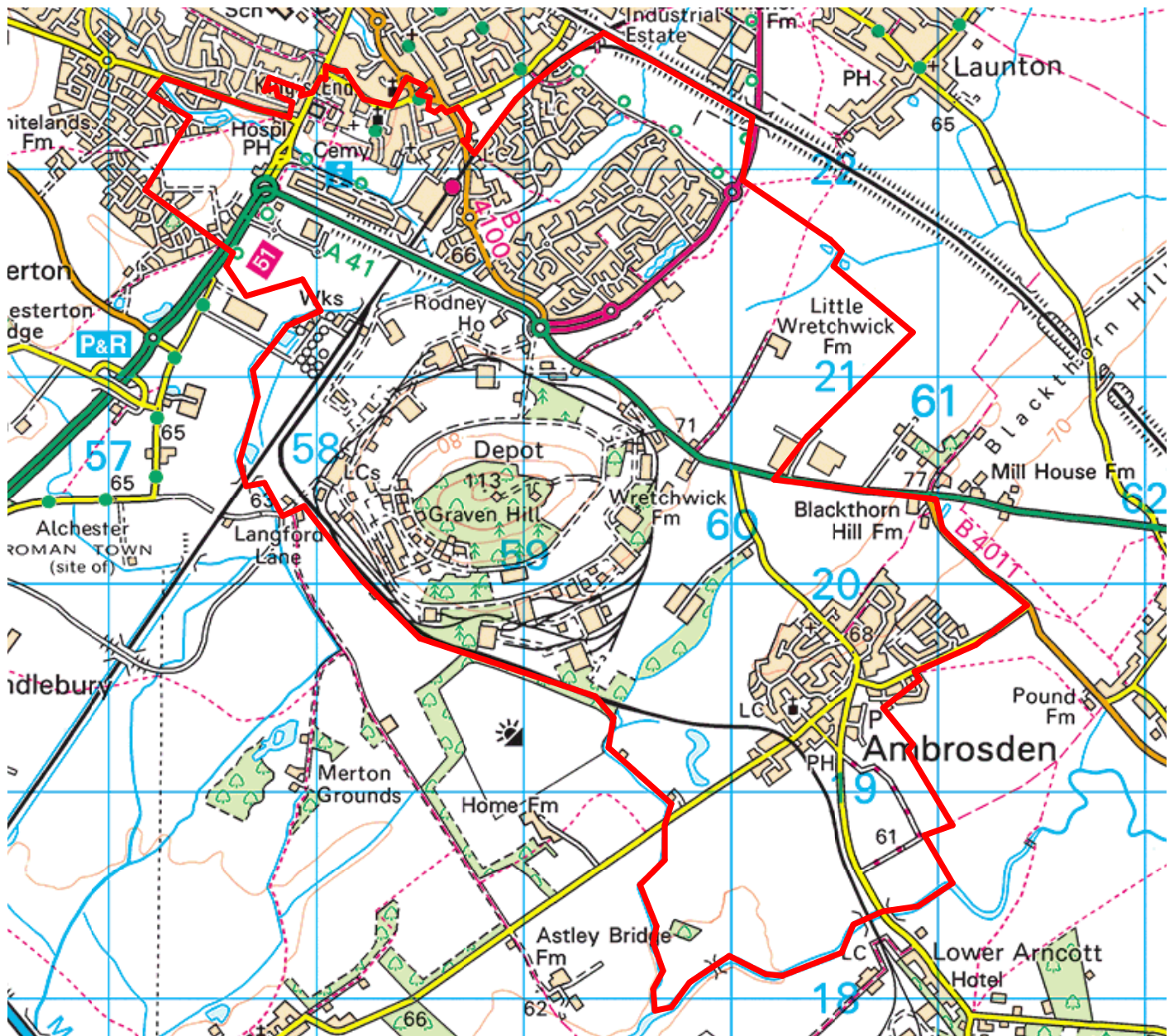
## Thresholds for indicators that are compared against a goal

Indicator Name	Green	Amber	Red
12 Estimated dementia diagnosis rate (aged 65 and over)	>= 66.7% (significantly)	similar to 66.7%	< 66.7% (significantly)

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Presentation map



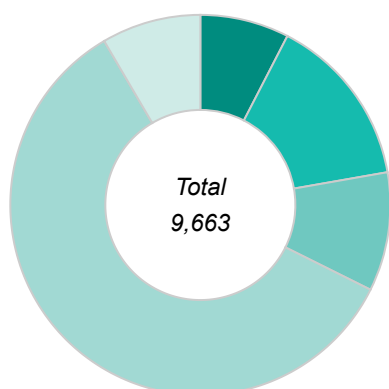


Study area **Bicester South and Ambrosden (Ward 2020)**, compared with **England**

## LOCAL HEALTH: REPORT PART 1 - POPULATION

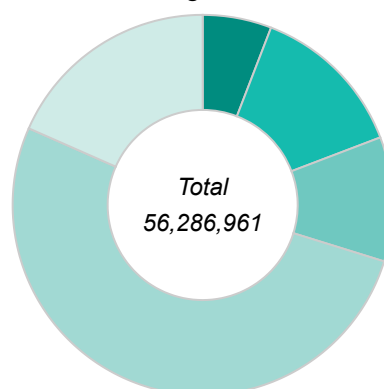
### Population by age group, 2019

Bicester South and Ambrosden



- Population aged under 5 years
- Population aged 5 to 15 years
- Population aged 16 to 24 years
- Population aged 25 to 64 years
- Population aged 65 years and over

England



Source: ONS + Office for National Statistics (ONS) Small Area Mid-year Population Estimates + Office for National Statistics (ONS) Small area population estimates, England and Wales: mid-2019

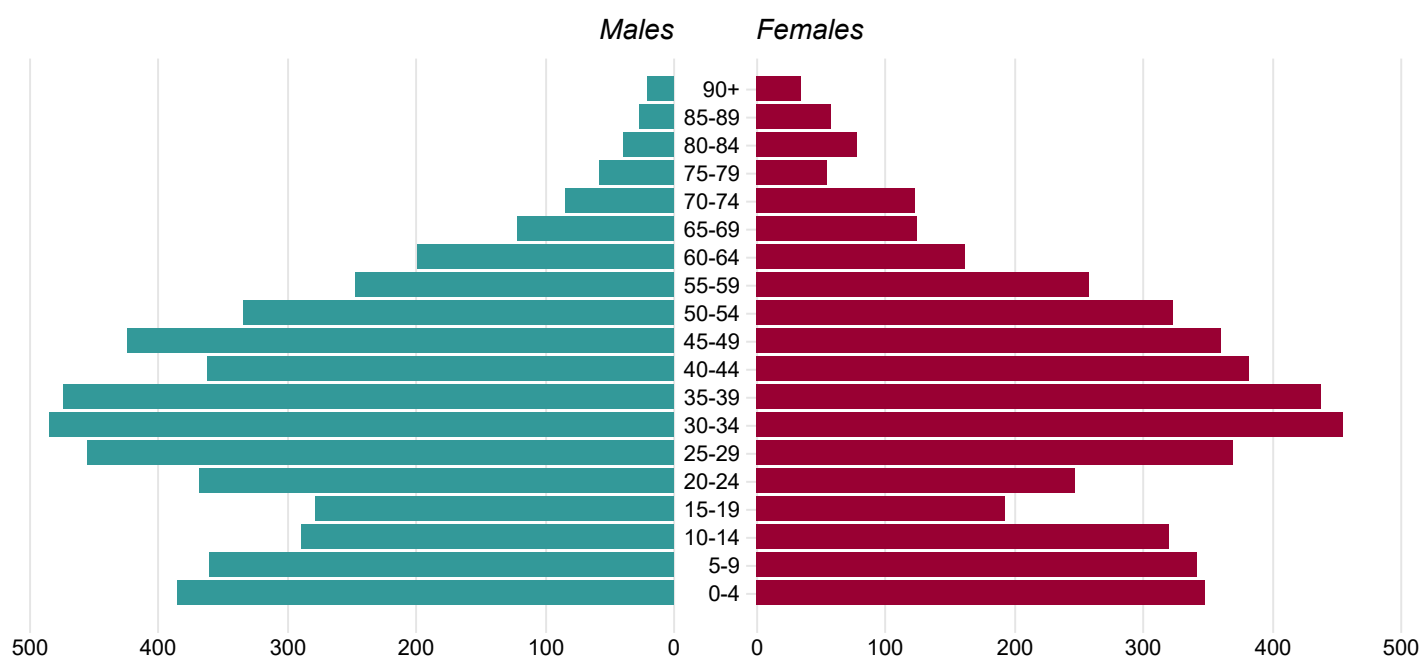
### Population by age group, 2019, numbers

Indicators	Bicester South and Ambrosden	Cherwell (LTLA 2021)	Oxfordshire (UTLA 2021)	England
Population aged under 5 years	732	9,489	39,432	3,299,637
Population aged 5 to 15 years	1,417	20,729	91,941	7,517,042
Population aged 16 to 24 years	977	12,935	81,557	5,953,505
Population aged 25 to 64 years	5,721	79,857	350,611	29,163,061
Population aged 65 years and over	816	27,493	128,126	10,353,716
Total population	9,663	150,503	691,667	56,286,961

Source: ONS + Office for National Statistics (ONS) Small Area Mid-year Population Estimates + Office for National Statistics (ONS) Small area population estimates, England and Wales: mid-2019

### Age pyramid for selection: male and female numbers per five-year age group, 2019

Bicester South and Ambrosden



Source: Office for National Statistics (ONS) Small Area Mid-year Population Estimates, 2019



Study area **Bicester South and Ambrosden (Ward 2020)**, compared with **England**

## LOCAL HEALTH: REPORT PART 1 - ETHNICITY & LANGUAGE

### Ethnicity and Language, 2011, numbers

Indicators	Bicester South and Ambrosden	Cherwell (LTLA 2021)	Oxfordshire (UTLA 2021)	England
Black and Minority Ethnic Population	672	11,107	59,794	7,731,314
Population whose ethnicity is not 'White UK'	1,237	19,377	106,997	10,733,220
Population who cannot speak English well or at all	65	1,496	5,540	843,845

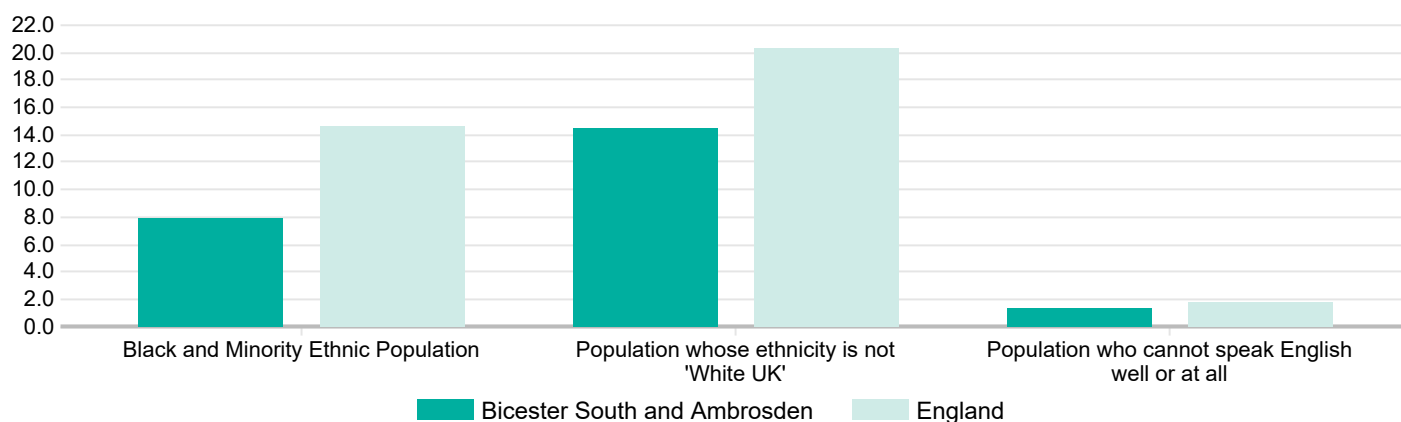
Source: Office for National Statistics (ONS) Census 2011

### Ethnicity and Language, 2011, %

Indicators	Bicester South and Ambrosden	Cherwell (LTLA 2021)	Oxfordshire (UTLA 2021)	England
Black and Minority Ethnic Population (%)	7.8	7.8	9.1	14.6
Population whose ethnicity is not 'White UK' (%)	14.4	13.7	16.4	20.2
Population who cannot speak English well or at all (%)	1.2	1.1	0.9	1.7

Source: Office for National Statistics (ONS) Census 2011

### Ethnicity and language, 2011, %



Source: Office for National Statistics (ONS) Census 2011



Study area **Bicester South and Ambrosden (Ward 2020)**, compared with **England**

## LOCAL HEALTH: REPORT PART 1 - DEPRIVATION

### Indices of Deprivation, 2019, Score

Indicators	Bicester South and Ambrosden	Cherwell (LTLA 2021)	Oxfordshire (UTLA 2021)	England
IMD Score, 2019	6.2	14.4	11.7	21.7

Source: Ministry of Housing and Local Government 2019

### Deprivation indicators, 2019, numbers

Indicators	Bicester South and Ambrosden	Cherwell (LTLA 2021)	Oxfordshire (UTLA 2021)	England
Income Deprivation, Number of people	264	10,944	46,573	7,036,442
Child Poverty, Number of children	96	3,010	12,719	1,777,642
Older People in Deprivation, Number of older people	50	2,880	12,324	1,790,712

Source: Ministry of Housing and Local Government 2019

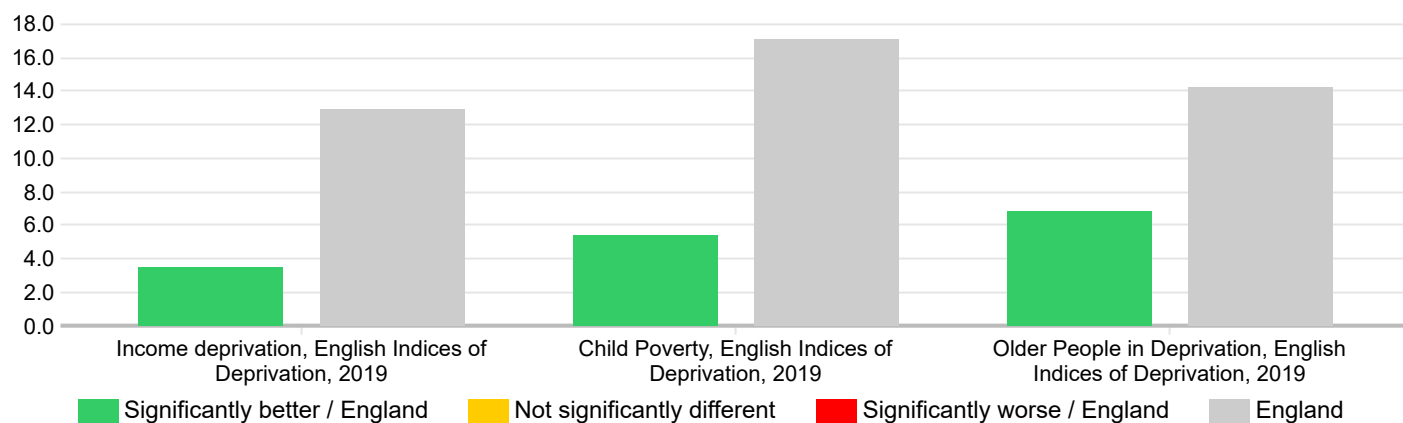
### Deprivation indicators, 2019, %

Indicators	Bicester South and Ambrosden	Cherwell (LTLA 2021)	Oxfordshire (UTLA 2021)	England
Income deprivation, English Indices of Deprivation, 2019 (%)	3.4	7.6	6.9	12.9
Child Poverty, English Indices of Deprivation, 2019 (%)	5.3	10.5	10.1	17.1
Older People in Deprivation, English Indices of Deprivation, 2019 (%)	6.8	8.8	8.1	14.2

Source: Ministry of Housing and Local Government 2019

### Deprivation indicators, 2019, %

Bicester South and Ambrosden



Source: Ministry of Housing and Local Government 2019





### Housing and living environment indicators

#### Housing and living environment indicators

##### Housing and living environment indicators, number of people or households

Indicators	Bicester South and Ambrosden	Cherwell (LTLA 2021)	Oxfordshire (UTLA 2021)	England
Older people living alone, 2011	198	5,967	29,852	2,725,596
Overcrowded houses, 2011	274	3,461	17,827	1,928,596
Fuel Poverty, 2018	135	4,498	22,109	2,400,297

Source: Source: ONS Census 2011 / Department of Energy & Climate Change, 2018

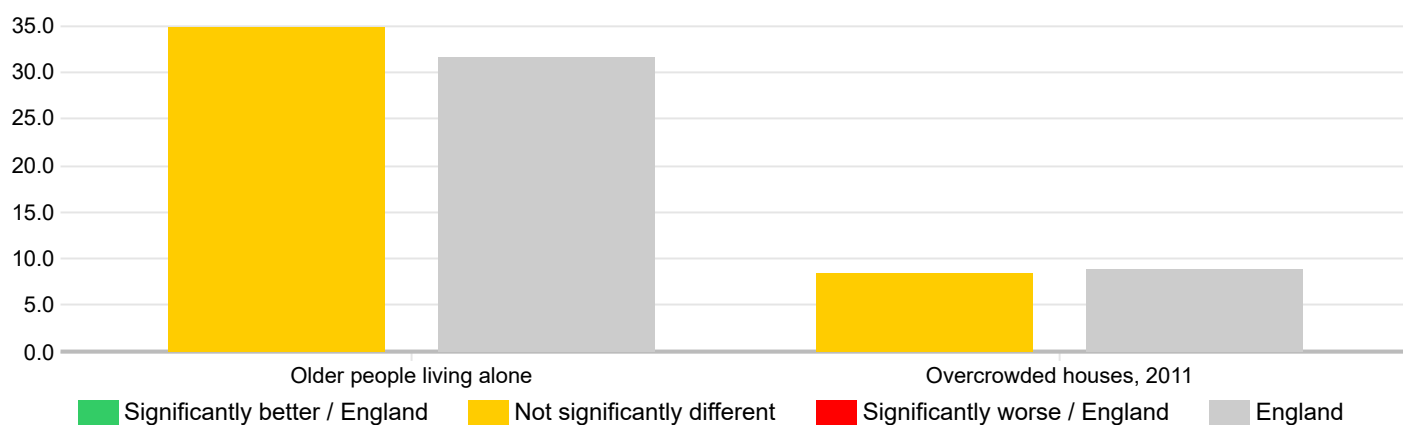
##### Housing and living environment indicators, %

Indicators	Bicester South and Ambrosden	Cherwell (LTLA 2021)	Oxfordshire (UTLA 2021)	England
Older people living alone (%)	34.7	27.5	28.8	31.5
Overcrowded houses, 2011 (%)	8.3	6.1	6.9	8.7
Fuel Poverty, 2018 (%)	4.5	7.4	8.0	10.3

Source: Source: ONS Census 2011 / Department of Energy & Climate Change, 2018

##### Housing and living environment

###### Bicester South and Ambrosden



Source: Office for National Statistics (ONS) Census 2011

Fuel poverty not displayed on charts as it does not have confidence intervals



Study area **Bicester South and Ambrosden (Ward 2020)**, compared with **England**

## LOCAL HEALTH: REPORT PART 1 - EMPLOYMENT

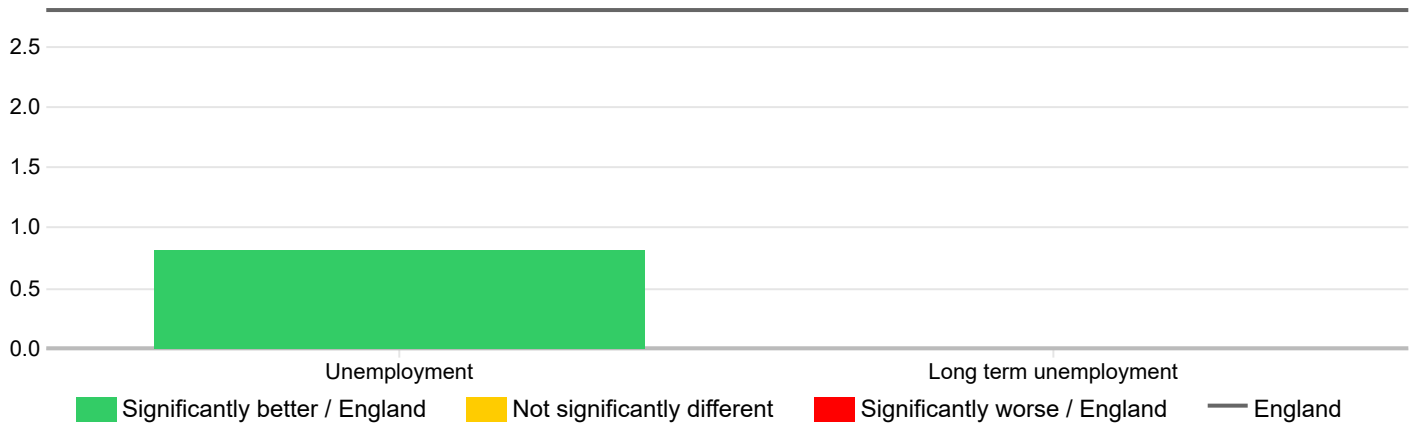
### Employment Indicators, 2019 to 2020, %

Indicators	Bicester South and Ambrosden	Cherwell (LTLA 2021)	Oxfordshire (UTLA 2021)	England
Unemployment (%)	0.8	1.4	1.4	2.8
Long term unemployment (Crude rate per 1,000)	0.0	0.2	0.7	3.2

Source: NOMIS Labour Market Statistics

### Employment Indicators, 2019 to 2020, %

Bicester South and Ambrosden



Source: NOMIS Labour Market Statistics





Study area **Bicester South and Ambrosden (Ward 2020)**, compared with **England**

## LOCAL HEALTH: REPORT PART 1 - LONG-TERM HEALTH CONDITIONS AND MORBIDITY

### Long-term health conditions and morbidity, 2011, numbers

Indicators	Bicester South and Ambrosden	Cherwell (LTLA 2021)	Oxfordshire (UTLA 2021)	England
Limiting long term illness or disability	700	20,072	89,756	9,352,586
Back pain prevalence, 2012	N/A	N/A	N/A	N/A
Severe back pain prevalence, 2012	N/A	N/A	N/A	N/A

Source: Office for National Statistics (ONS) Census 2011 + Musculoskeletal (MSK) Calculator produced by Imperial College London for Arthritis Research UK based on data from the Health Survey for England (HSE)

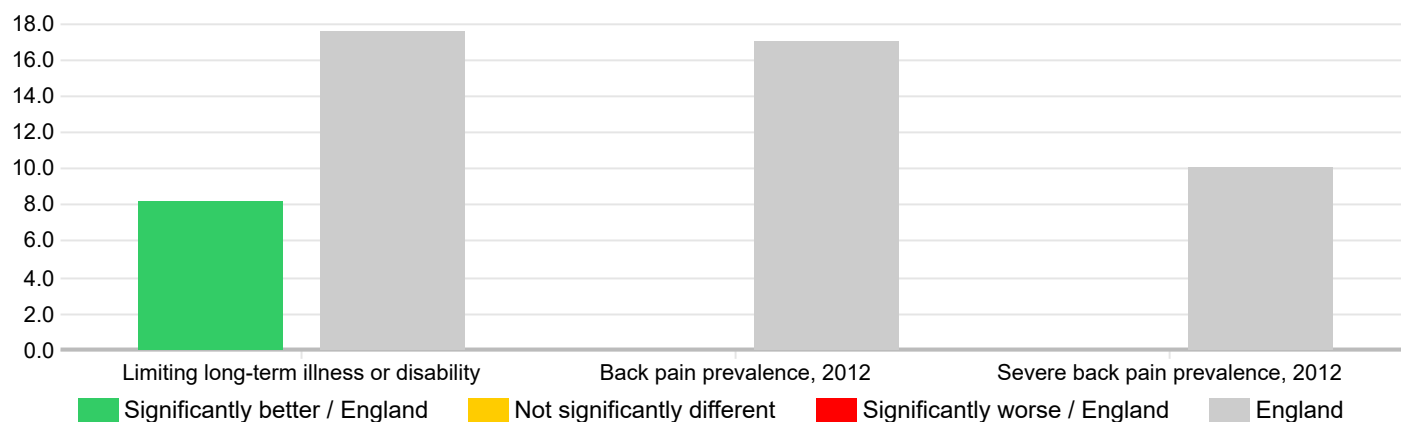
### Long-term health conditions and morbidity, 2011, %

Indicators	Bicester South and Ambrosden	Cherwell (LTLA 2021)	Oxfordshire (UTLA 2021)	England
Limiting long-term illness or disability (%)	8.2	14.1	13.7	17.6
Back pain prevalence, 2012	N/A	N/A	N/A	17
Severe back pain prevalence, 2012	N/A	N/A	N/A	10

Source: Office for National Statistics (ONS) Census 2011 + Musculoskeletal (MSK) Calculator produced by Imperial College London for Arthritis Research UK based on data from the Health Survey for England (HSE)

### Long-term health conditions and morbidity, %

Bicester South and Ambrosden



Source: Office for National Statistics (ONS) Census 2011 + Musculoskeletal (MSK) Calculator produced by Imperial College London for Arthritis Research UK based on data from the Health Survey for England (HSE)



Study area **Bicester South and Ambrosden (Ward 2020)**, compared with **England**

## LOCAL HEALTH: REPORT PART 1 - CHILDREN'S WEIGHT (NCMP)

### Children's weight indicators, 2017 to 2018, to 2019 to 2020, %

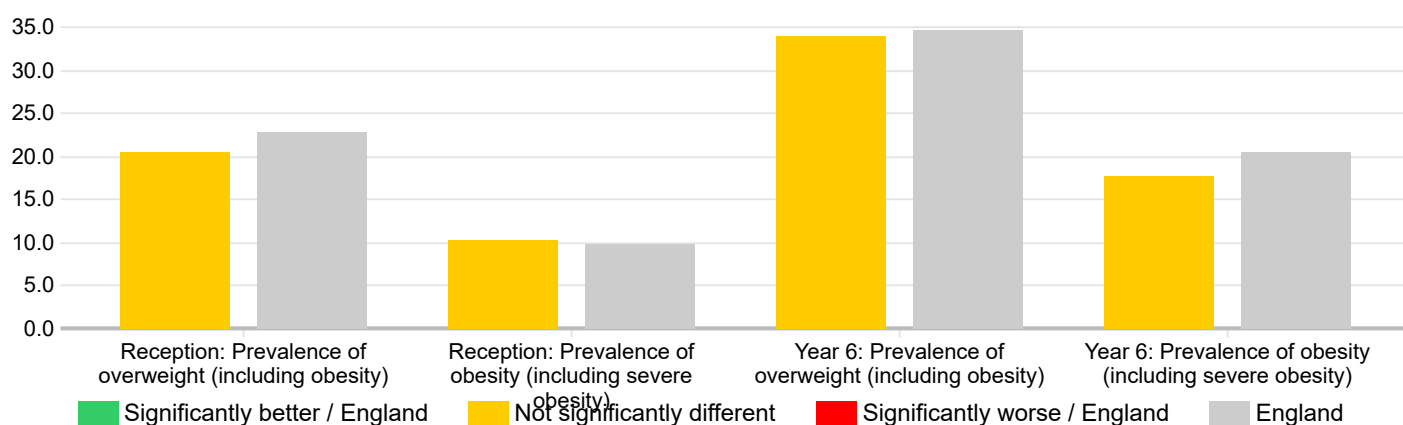
There have been data collection issues related to lockdown between 2019 to 2020, please see metadata for details

Indicators	Bicester South and Ambrosden	Cherwell (LTLA 2021)	Oxfordshire (UTLA 2021)	England
Reception: Prevalence of overweight (including obesity) (%)	20.3	19.9	19.3	22.6
Reception: Prevalence of obesity (including severe obesity) (%)	10.1	8.2	7.4	9.7
Year 6: Prevalence of overweight (including obesity) (%)	33.8	32.0	29.3	34.6
Year 6: Prevalence of obesity (including severe obesity) (%)	17.6	18.7	16.0	20.4

Source: National Child Measurement Programme (NCMP), NHS Digital

### Children's weight indicators, 2017 to 2018, to 2019 to 2020, %

There have been data collection issues related to lockdown between 2019 to 2020, please see metadata for details - Bicester South and Ambrosden



Source: National Child Measurement Programme (NCMP), NHS Digital



Study area **Bicester South and Ambrosden (Ward 2020)**, compared with **England**

## LOCAL HEALTH: REPORT PART 1 - CHILDREN'S HEALTH CARE ACTIVITY

### Children's health care activity indicators, values

Emergency and A&E admission 2017 to 2018, to 2019 to 2020, Emergency admissions for injuries 2015 to 2016, to 2019 to 2020

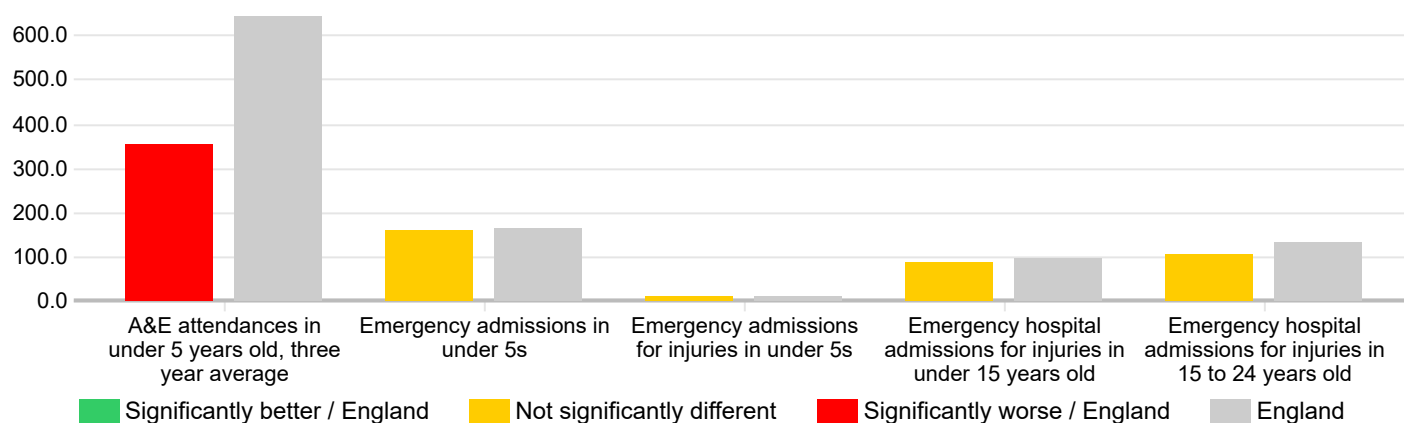
Indicators	Bicester South and Ambrosden	Cherwell (LTLA 2021)	Oxfordshire (UTLA 2021)	England
A&E attendances in under 5 years old, three year average (Crude rate per 1,000)	354.5	438.9	437.9	642.5
Emergency admissions in under 5s (Crude rate per 1,000)	158.4	182.1	153.7	162.1
Emergency admissions for injuries in under 5s (Crude rate per 10,000)	9.8	13.6	11.9	12.3
Emergency hospital admissions for injuries in under 15 years old (Crude rate/10,000 aged 0-15)	89.4	102.1	95.6	97.8
Emergency hospital admissions for injuries in 15 to 24 years old ((Crude rate per 10,000))	105.2	147.3	129.4	132.1

Source: Source: Hospital Episode Statistics (HES) NHS Digital; Mid-year Population Estimates, Office for National Statistics + Hospital Episode Statistics (HES) NHS Digital; Small Area Mid-year Population Estimates, Office for National Statistics

Please see metadata: Counts, denominators and rates are based on rounded values, confidence intervals are based on actual values.

### Children's health care activity indicators, values

Emergency and A&E admission 2017 to 2018, to 2019 to 2020, Emergency admissions for injuries 2015 to 2016, to 2019 to 2020 - Bicester South and Ambrosden



Source: Source: Hospital Episode Statistics (HES) NHS Digital; Mid-year Population Estimates, Office for National Statistics + Hospital Episode Statistics (HES) NHS Digital; Small Area Mid-year Population Estimates, Office for National Statistics

Please see metadata: Counts, denominators and rates are based on rounded values, confidence intervals are based on actual values.



Study area **Bicester South and Ambrosden (Ward 2020)**, compared with **England**

## LOCAL HEALTH: REPORT PART 1 - CHILD AND MATERNAL HEALTH

### Child and maternal health, numbers

Deliveries to teen mothers, 2015 to 2016, to 2019 to 2020, Fertility rate and Low birth weight, 2015 to 2019

Indicators	Bicester South and Ambrosden	Cherwell (LTLA 2021)	Oxfordshire (UTLA 2021)	England
Deliveries to teenage mothers (%)	N/A	20	130	21,817
General fertility rate: live births per 1,000 women aged 15-44 years	612	9,037	37,654	3,210,504
Low birth weight of live babies	36	449	1,841	222,460

Source: Hospital Episode Statistics (HES), NHS Digital Office for National Statistics (ONS)

### Child and maternal health, %

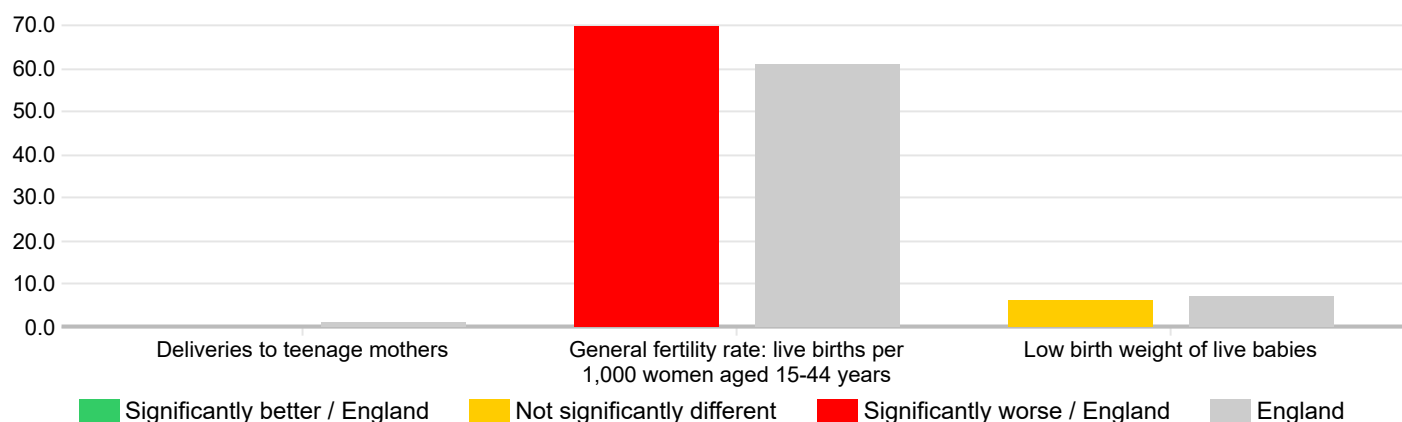
Deliveries to teen mothers, 2015 to 2016, to 2019 to 2020, Fertility rate and Low birth weight, 2015 to 2019

Indicators	Bicester South and Ambrosden	Cherwell (LTLA 2021)	Oxfordshire (UTLA 2021)	England
Deliveries to teenage mothers (%)	N/A	0.2	0.4	0.7
General fertility rate: live births per 1,000 women aged 15-44 years (%)	69.5	67.0	58.3	60.6
Low birth weight of live babies (%)	5.9	5.0	4.9	6.9

Source: Hospital Episode Statistics (HES), NHS Digital, Office for National Statistics (ONS)

### Child and maternal health

Deliveries to teen mothers, 2015 to 2016, to 2019 to 2020, Fertility rate and Low birth weight, 2015 to 2019 - Bicester South and Ambrosden



Source: Hospital Episode Statistics (HES), NHS Digital, Office for National Statistics (ONS)



Study area **Bicester South and Ambrosden (Ward 2020)**, compared with **England**

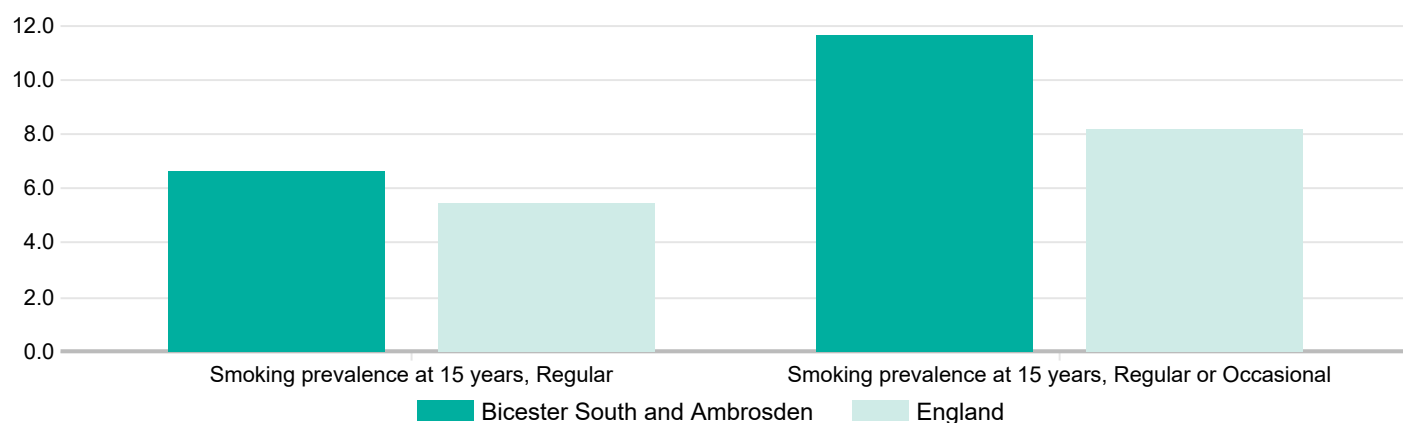
## LOCAL HEALTH: REPORT PART 1 - BEHAVIOURAL RISK FACTORS

### Smoking prevalence, 2014, % (modelled estimates)

Indicators	Bicester South and Ambrosden	Cherwell (LTLA 2021)	Oxfordshire (UTLA 2021)	England
Smoking prevalence at 15 years, Regular (%)	6.6	5.7	5.7	5.4
Smoking prevalence at 15 years, Regular or Occasional (%)	11.6	10.4	10.4	8.2

Source: Department of Geography, University of Portsmouth and Department of Geography and Environment, University of Southampton; Mid year population estimates, Office for National Statistics.

### Smoking prevalence, 2014, % (modelled estimates)



Source: Department of Geography, University of Portsmouth and Department of Geography and Environment, University of Southampton; Mid year population estimates, Office for National Statistics.

### Wooler England Adults (aged 16+): Estimated prevalence of obesity, including overweight, by national quintile (Number)

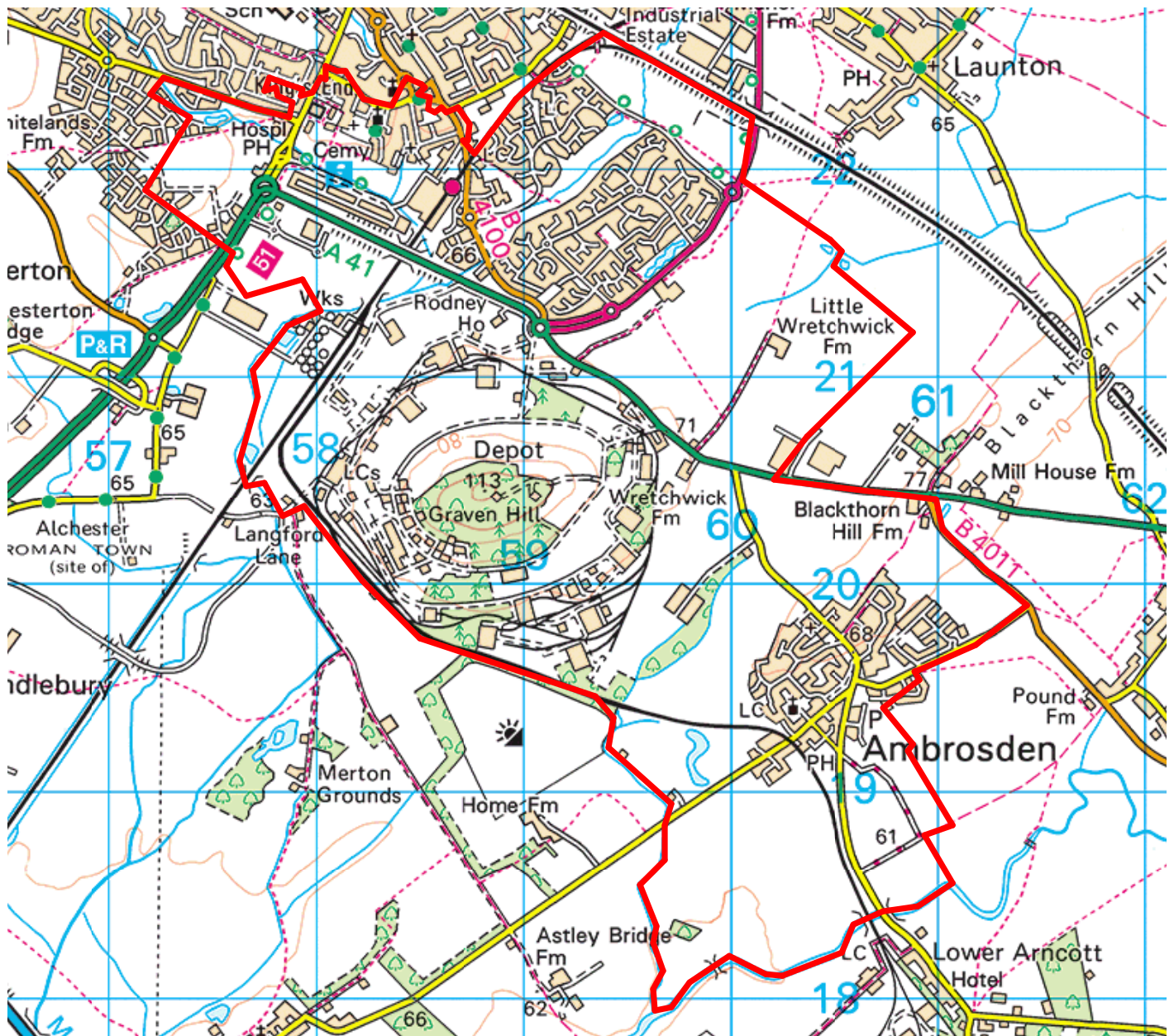
Quintile 1 is the highest 20% and Quintile 5 is the lowest 20%

Indicators	Bicester South and Ambrosden	Cherwell (LTLA 2021)	Oxfordshire (UTLA 2021)	England
Adults (aged 16+): Estimated prevalence of obesity, including overweight, by national quintile (Number)	4	4	5	N/A

Source: Department of Geography and Environment, University of Southampton and Department of Geography, University of Portsmouth.



Presentation map





Study area **Bicester South and Ambrosden (Ward 2020)**, compared with **England (Country 2021)**

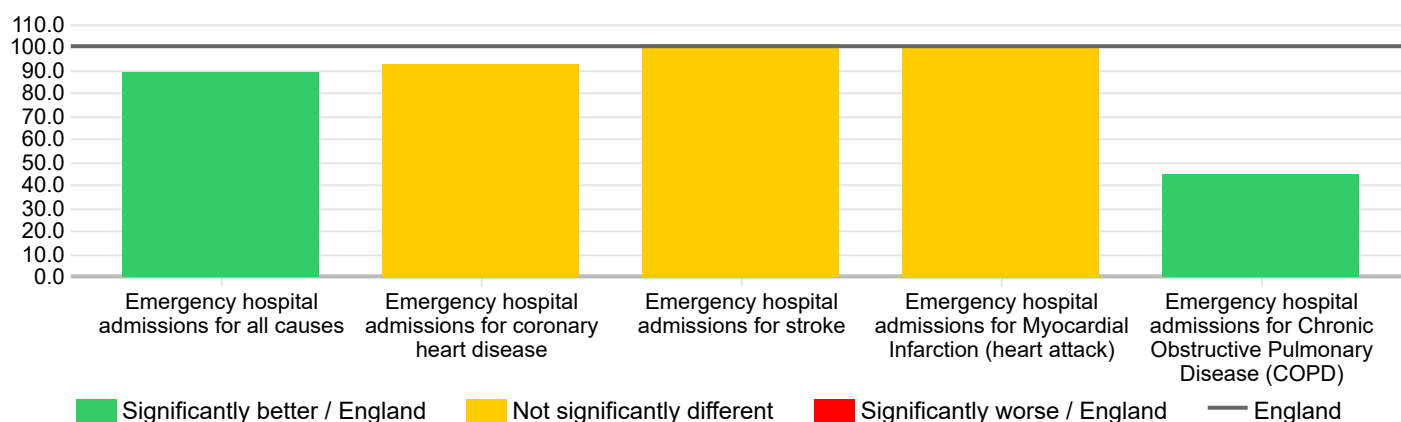
## LOCAL HEALTH: REPORT PART 2 - EMERGENCY HOSPITAL ADMISSIONS

### Emergency Hospital Admissions, 2015 to 2016, to 2019 to 2020, Standardised Admission Ratios (SARs)

Indicators	Bicester South and Ambrosden	Cherwell (LTLA 2021)	Oxfordshire (UTLA 2021)	England
Emergency hospital admissions for all causes (SAR)	89.0	102.9	91.9	100.0
Emergency hospital admissions for coronary heart disease (SAR)	92.3	85.7	73.6	100.0
Emergency hospital admissions for stroke (SAR)	101.6	88.2	83.3	100.0
Emergency hospital admissions for Myocardial Infarction (heart attack) (SAR)	99.2	95.5	81.6	100.0
Emergency hospital admissions for Chronic Obstructive Pulmonary Disease (COPD) (SAR)	44.5	83.5	63.6	100.0

Source: Hospital Episode Statistics (HES) NHS Digital

### Emergency Hospital admissions, 2015 to 2016, to 2019 to 2020, Standardised Admission Ratios (SARs), Bicester South and Ambrosden



Source: Hospital Episode Statistics (HES) NHS Digital





Study area **Bicester South and Ambrosden (Ward 2020)**, compared with **England (Country 2021)**

## LOCAL HEALTH: REPORT PART 2 - HOSPITAL ADMISSIONS - HARM AND INJURY

### Hospital admissions - harm and injury

Indicators	Bicester South and Ambrosden	Cherwell (LTLA 2021)	Oxfordshire (UTLA 2021)	England
Hospital stays for self harm (SAR)	64.8	91.3	102.0	100.0
Hospital stays for alcohol related harm (Broad definition) (SAR)	N/A	N/A	N/A	100.0
Hospital stays for alcohol related harm (Narrow definition) (SAR)	N/A	N/A	N/A	100.0
Emergency hospital admissions for hip fracture in 65+ (SAR)	116.0	107.4	100.0	100.0

Source: Hospital Episode Statistics (HES) NHS Digital

### Hospital admissions - harm and injury,

Bicester South and Ambrosden



Source: Hospital Episode Statistics (HES) NHS Digital





Study area **Bicester South and Ambrosden (Ward 2020)**, compared with **England (Country 2021)**

## LOCAL HEALTH: REPORT PART 2 - CANCER INCIDENCE

### Cancer Incidence, 2012 to 2016, numbers

Due to disclosure rules this data is not available at MSOA or CCG level, please see metadata for details.

Indicators	Bicester South and Ambrosden	Cherwell (LTLA 2021)	Oxfordshire (UTLA 2021)	England
All cancer	144	4,101	18,522	1,546,574
Breast cancer	23	641	3,000	231,643
Colorectal cancer	16	472	2,154	176,113
Lung cancer	8	482	1,924	194,515
Prostate cancer	27	697	3,052	215,422

Source: English cancer registration data from the National Cancer Registration and Analysis Services' Cancer Analysis System (AV2018 CASREF01), National Statistical Postcode Lookup (May 2020)

### Cancer Incidence, 2012 to 2016, standardised incidence ratio (SIR)

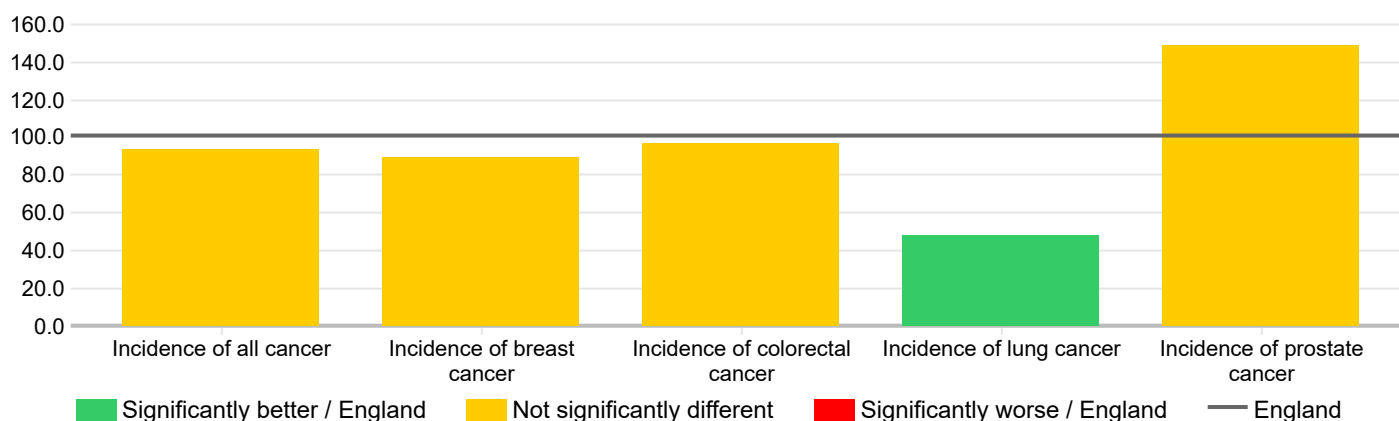
Due to disclosure rules this data is not available at MSOA or CCG level, please see metadata for details.

Indicators	Bicester South and Ambrosden	Cherwell (LTLA 2021)	Oxfordshire (UTLA 2021)	England
Incidence of all cancer (SIR per 100)	93.3	99.7	97.8	100.0
Incidence of breast cancer (SIR per 100)	88.4	103.5	106.4	100.0
Incidence of colorectal cancer (SIR per 100)	96.3	101.1	99.6	100.0
Incidence of lung cancer (SIR per 100)	47.7	93.9	80.7	100.0
Incidence of prostate cancer (SIR per 100)	147.8	121.1	115.5	100.0

Source: English cancer registration data from the National Cancer Registration and Analysis Services' Cancer Analysis System (AV2018 CASREF01), National Statistical Postcode Lookup (May 2020)

### Cancer Incidence, 2012 to 2016, standardised incidence ratio (SIR)

Due to disclosure rules this data is not available at MSOA or CCG level, please see metadata for details. - Bicester South and Ambrosden



Source: English cancer registration data from the National Cancer Registration and Analysis Services' Cancer Analysis System (AV2018 CASREF01), National Statistical Postcode Lookup (May 2020)



Study area **Bicester South and Ambrosden (Ward 2020)**, compared with **England (Country 2021)**

## LOCAL HEALTH: REPORT PART 2 - LIFE EXPECTANCY

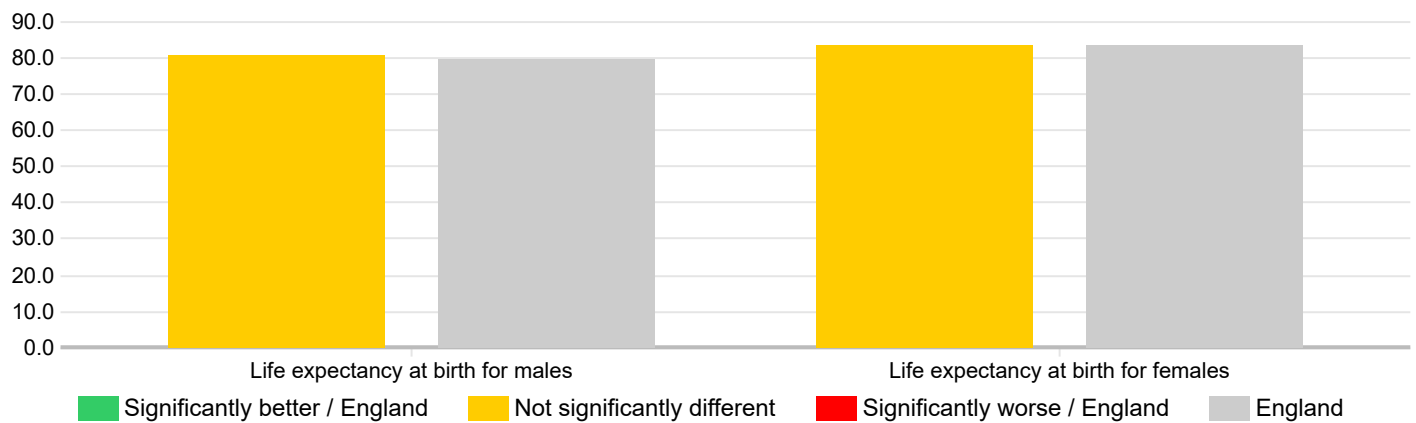
### Life expectancy, 2015 to 2019, years

Indicators	Bicester South and Ambrosden	Cherwell (LTLA 2021)	Oxfordshire (UTLA 2021)	England
Life expectancy at birth for males (years)	80.7	81.1	81.6	79.7
Life expectancy at birth for females (years)	83.3	83.8	84.8	83.2

Source: Office for National Statistics (ONS)

### Life expectancy, compared to England. 2015 to 2019, years

Bicester South and Ambrosden



Source: Office for National Statistics (ONS)



Study area **Bicester South and Ambrosden (Ward 2020)**, compared with **England (Country 2021)**

## LOCAL HEALTH: REPORT PART 2 - MORTALITY AND CAUSES OF DEATH - PREMATURE MORTALITY

### Causes of deaths - premature mortality, 2015 to 2019, numbers

Indicators	Bicester South and Ambrosden	Cherwell (LTLA 2021)	Oxfordshire (UTLA 2021)	England
Deaths from all causes, under 75 years	59	1,829	7,526	786,709
Deaths from all cancer, under 75 years	24	795	3,274	312,706
Deaths from circulatory disease, under 75 years	13	358	1,464	169,705
Deaths from causes considered preventable, under 75 years, SMR	21	760	3,047	342,988

Source: Public Health England, produced from Office for National Statistics (ONS) data, Public Health England Annual Mortality Extracts (based on Office for National Statistics source data)

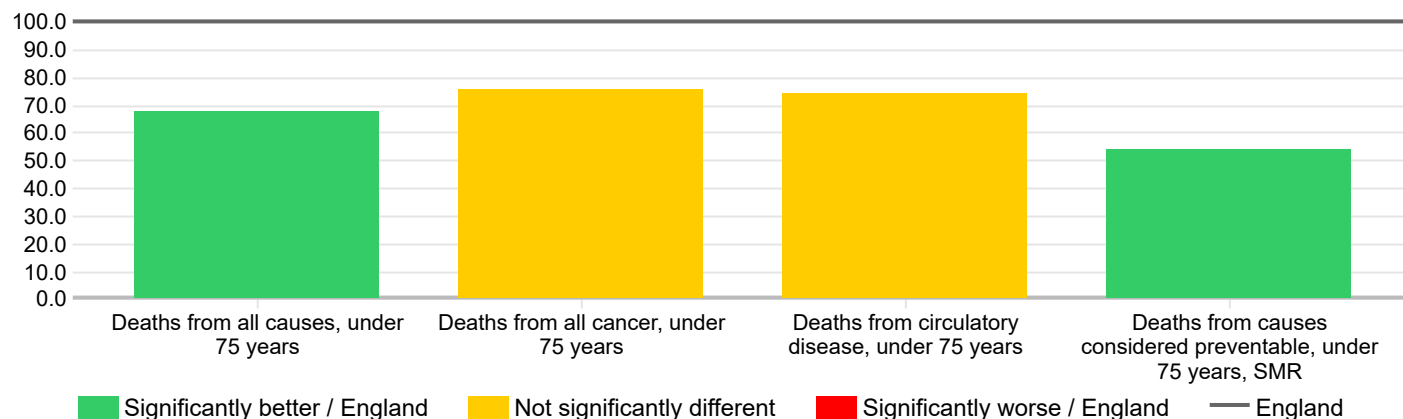
### Causes of deaths - premature mortality, 2015 to 2019, Standardised Mortality Ratios (SMR)

Indicators	Bicester South and Ambrosden	Cherwell (LTLA 2021)	Oxfordshire (UTLA 2021)	England
Deaths from all causes, under 75 years (Standardised mortality ratio (SMR))	67.5	86.8	79.0	100.0
Deaths from all cancer, under 75 years (Standardised mortality ratio (SMR))	75.3	95.0	86.6	100.0
Deaths from circulatory disease, under 75 years (Standardised mortality ratio (SMR))	73.9	78.7	71.3	100.0
Deaths from causes considered preventable, under 75 years, SMR (Standardised mortality ratio (SMR))	53.9	82.7	73.3	100.0

Source: Public Health England, produced from Office for National Statistics (ONS) data, Public Health England Annual Mortality Extracts (based on Office for National Statistics source data)

### Causes of deaths - premature mortality, 2015 to 2019, Standardised Mortality Ratios (SMR)

Bicester South and Ambrosden



Source: Public Health England, produced from Office for National Statistics (ONS) data, Public Health England Annual Mortality Extracts (based on Office for National Statistics source data)



Study area **Bicester South and Ambrosden (Ward 2020)**, compared with **England (Country 2021)**

## LOCAL HEALTH: REPORT PART 2 - MORTALITY AND CAUSES OF DEATH

### Causes of deaths - all ages, 2015 to 2019, numbers

Indicators	Bicester South and Ambrosden	Cherwell (LTLA 2021)	Oxfordshire (UTLA 2021)	England
Deaths from all causes, all ages	263	6,138	27,400	2,487,211
Deaths from all cancer, all ages	46	1,703	7,531	683,919
Deaths from circulatory disease, all ages	66	1,348	6,377	622,286
Deaths from coronary heart disease, all ages	30	561	2,521	267,144
Deaths from stroke, all ages	14	336	1,743	149,721
Deaths from respiratory diseases, all ages	38	829	3,544	344,055

Source: Public Health England, produced from Office for National Statistics (ONS) data

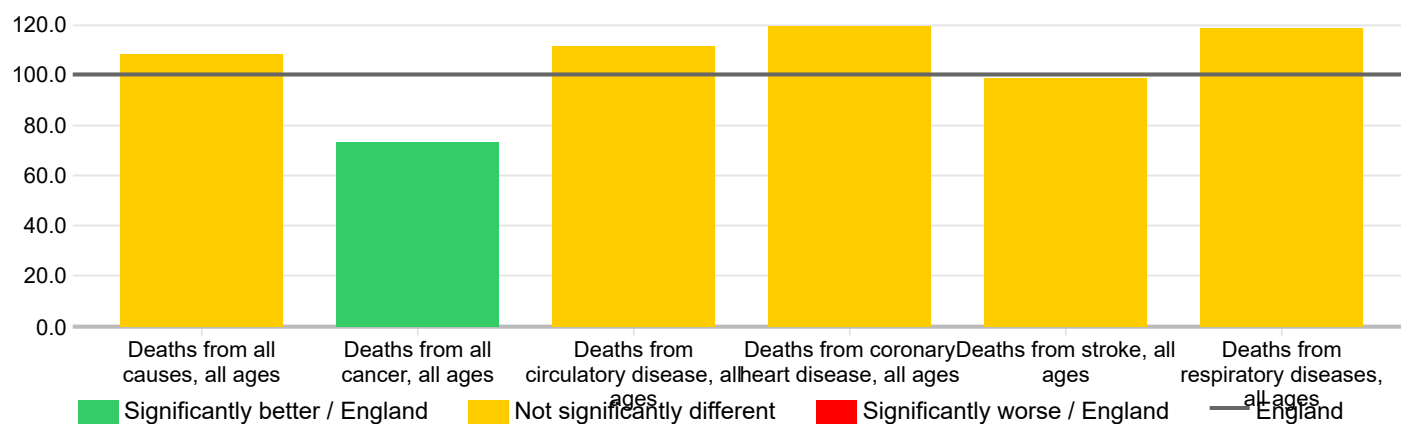
### Causes of deaths - all ages, 2015 to 2019, Standardised Mortality Ratios (SMR)

Indicators	Bicester South and Ambrosden	Cherwell (LTLA 2021)	Oxfordshire (UTLA 2021)	England
Deaths from all causes, all ages (Standardised mortality ratio (SMR))	107.8	93.8	87.6	100.0
Deaths from all cancer, all ages (Standardised mortality ratio (SMR))	72.6	94.0	88.9	100.0
Deaths from circulatory disease, all ages (Standardised mortality ratio (SMR))	111.0	82.4	81.2	100.0
Deaths from coronary heart disease, all ages (Standardised mortality ratio (SMR))	119.6	79.6	75.3	100.0
Deaths from stroke, all ages (Standardised mortality ratio (SMR))	98.2	85.6	91.8	100.0
Deaths from respiratory diseases, all ages (Standardised mortality ratio (SMR))	118.5	92.0	81.5	100.0

Source: Public Health England, produced from Office for National Statistics (ONS) data

### Causes of deaths - all ages, 2015 to 2019, Standardised Mortality Ratios (SMR)

Bicester South and Ambrosden



Source: Public Health England, produced from Office for National Statistics (ONS) data