

Sustainability Appraisal (SA) of the Swindon Local Plan

Scoping Report

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Quality information

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Table of Contents

Executive summary	i
1. Introduction	1
2. Air quality	4
3. Biodiversity.....	9
4. Climate change adaptation	19
5. Climate change mitigation.....	28
6. Communities, equality and health	34
7. Economy and employment.....	52
8. Historic environment	58
9. Housing.....	66
10. Landscape	70
11. Soils and resources	79
12. Transport.....	84
13. Water	93
14. Next steps	101

Executive summary

Overview

Swindon Borough Council is currently preparing a new Local Plan and AECOM is commissioned to lead on a parallel process of Sustainability Appraisal (SA).

SA is a mechanism for considering and communicating the effects of an emerging plan, and alternatives, with a view to minimising adverse effects and maximising the positives. SA is required for local plans.

Scoping is the first step in the SA process. It involves gathering evidence and determining the breadth of sustainability issues and objectives that will be a focus of subsequent appraisal stages. Specifically, the subsequent appraisal is focused on the 'significant effects' of the emerging draft local plan and 'reasonable alternatives'.

The aim of this report is to introduce the SA scope. Also, not that draft of this report was published for consultation in 2023 and then updated / finalised.

Structure of this report

This report is structured under a series of 12 sustainability topic headings. The topics were selected on the basis of AECOM's experience of the broad scope of sustainability issues and objectives in terms of which there tends to be the potential to identify significant effects in the context of local plans.

Under each topic, the aim is to review evidence before listing key sustainability issues. Each list of key issues is then distilled into one or more objectives.

The aim is for the resulting list of topics, objectives and issues to be used as a methodological 'framework' under which to undertake subsequent appraisal work, ensuring that it is suitably structured, focused and concise.

Introducing the broad scope

The scope of SA is comprehensive, in the context of the National Planning Policy Framework (NPPF), which sets out that: *"The purpose of the planning system is to contribute to the achievement of sustainable development."* In other words, scoping begins from a blank sheet and without any established parameters.

Further discussion of sustainable development is presented in Section 2 of the NPPF, which explains that there are three overarching objectives, relating to the environment, communities and the economy ('pillars' of sustainable development).

With regards to the communities 'pillar', it is common for local plans to also be subject to a stand-alone Equalities Impact Assessment (EqIA), in light of the Public Sector Equality Duty introduced by the Equality Act 2010. However, the aim here is to fully integrate equalities considerations, therefore negating the need for a stand-alone EqIA. Similarly, stand-alone Health Impact Assessment (HIA) is sometimes undertaken for local plans, but the intention here is to fully integrate health considerations (i.e. issues and objectives) as part of the SA process, therefore negating the need for a standalone HIA. See further discussion in the main report.

The table below introduces the broad scope of issues and objectives covered under each of 12 sustainability topic headings that are used to structure this report.

SA topic	Brief introduction to the scope of issues
 Air quality	<ul style="list-style-type: none"> • Air quality management areas (AQMA) and other known air pollution hotspots • Means of addressing air quality through the plan
 Biodiversity	<ul style="list-style-type: none"> • International, national, and local designations • Non-designated priority habitat and broad areas • Proactive planning for a nature recovery network
 Climate change adaptation	<ul style="list-style-type: none"> • The scope of relevant climate change impacts • Flood risk as a key issue
 Climate change mitigation	<ul style="list-style-type: none"> • Key sources of greenhouse gas emissions, particularly: A) Transport; and B) Built environment • Steps that can be taken through local plans
 Communities, equality, health	<ul style="list-style-type: none"> • Access to community and green/blue infrastructure • Addressing relative deprivation and inequalities • Links between the local plan and health determinants
 Economy and employment	<ul style="list-style-type: none"> • Planning for key economic sectors • Meeting employment land needs • Education, skills and productivity
 Historic environment	<ul style="list-style-type: none"> • Designated and non-designated assets and areas • Historic character at wider scales, e.g. landscapes
 Housing	<ul style="list-style-type: none"> • Meeting housing needs, including affordable housing • Housing mix (size, type and tenure) • Specialist accommodation needs
 Landscape	<ul style="list-style-type: none"> • Nationally protected areas • Character areas and varying sensitivity • Town and village-scape
 Soils and resources	<ul style="list-style-type: none"> • Protecting best and most versatile agricultural land • Avoiding sterilisation of minerals resources • Strategic planning for minerals and waste facilities
 Transport	<ul style="list-style-type: none"> • Minimising the need to travel • Supporting modal shift to 'sustainable transport' • Avoiding / addressing traffic congestion
 Water	<ul style="list-style-type: none"> • Water supply / resource management • Water quality including wastewater treatment

The SA framework

The table below presents the draft SA framework for consultation, which takes the form of a list of sustainability topics each with an associated objective.

An immediate point to note is that there are 14 topics, in contrast to the 12 topics listed in the table above. This is because the review of evidence and issues under the ‘Communities, health and equalities’ heading in the main report led to a conclusion that there is a need to subdivide this broad topic into three, namely:

- Accessibility – an opportunity to focus attention on accessibility to community infrastructure, which is very often a priority issue for local plans, e.g. directing growth to account for school capacity and/or potential to deliver new capacity.
- Communities and health – this is an opportunity for a broad discussion, including around the implications of the local plan (and reasonable alternatives) for wide-ranging determinants of health. The decision was taken not to assign health its own topic heading, with a view to a concise appraisal (avoiding repetition).
- Equalities – the reality is that it is difficult to draw conclusions on significant cause-effect linkages between a local plan and groups with protected characteristics under the Equality Act 2010. Nonetheless, it will be appropriate to give matters stand-alone consideration as part of forthcoming appraisal.

There are three final introductory points to note:

- Each of the objectives aims to be a concise distillation of key issues / opportunities (henceforth ‘issues’) identified following a review of evidence. However, there is a need to strike a balance between comprehensiveness and conciseness. Each of the objectives should be read alongside the corresponding bullet point lists of key issues within the main report.
- As part of the forthcoming appraisal the aim will be to simply appraise the merits of the local plan and alternatives in terms of each topic / objective in turn. No assumptions will be made regarding the degree of importance, or ‘weight’, that should be assigned to each topic, nor is the intention that each topic should be assumed to have equal weight in decision-making. As such, no attempt will be made through the appraisal to arrive at overall conclusions on sustainability (although the Council will draw overall conclusions informed by the appraisal).

In turn, there are no inherent concerns regarding the fact that there are more environmental topic headings within the SA framework than communities and economic-focused topics. This is simply a reflection of the environmental pillar of sustainable development lending itself to being confidently broken down into discrete topics for the purposes of appraising a local plan and reasonable alternatives. In contrast, the scope of appraisal in respect of the communities and economy pillars must be defined loosely at this stage, or else risk defining the scope incorrectly, i.e. in such a way that it proves to be poorly suited to appraisal down-the-line, given the scope of the plan / reasonable alternatives.

- It is naturally the case that there is flexibility to make modest adjustments to the SA framework over the course of the plan-making/ SA process, in response to evidence and the scope of the emerging plan / reasonable alternatives.

The draft SA framework (for consultation)

SA topic	SA objective
Accessibility	Support accessibility to community infrastructure, including by delivering infrastructure enhancements - including strategic infrastructure, e.g. new schools and health hubs - that deliver benefits to existing as well as new communities ('planning gain').
Air quality	Take steps to locate, design and deliver development so as to avoid air pollution (NO ₂ and PM _{2.5}) and support the achievement of air quality objectives, including within the one AQMA.
Biodiversity	Conserve and enhance designated sites, in accordance with their significance, and also account for non-designated habitat and known priority areas, applying the mitigation hierarchy (avoid, mitigate, compensate). Take a landscape-scale approach to biodiversity, focused on a nature recovery networks and resilience, and support a strategic approach to Biodiversity Net Gain (BNG).
Climate change adaptation	Avoid vulnerable uses in flood risk zones and plan strategically for flood risk to ensure flood risk is reduced across the Borough, taking into account the impacts of climate change. Also ensure the resilience of communities, the economy and infrastructure to wider climate change impacts, including overheating. Linked to biodiversity objectives, support restoration of natural processes and avoid actions that impact the natural environment's resilience.
Climate change mitigation	Contribute to radical reductions in per capita emissions from both transport and the built environment, in line with 'net zero' targets. This should include consideration of 'net zero developments', and strategic consideration of matters relating to renewable heat and electricity generation, transmission and storage. Also, support larger scale renewable energy schemes (e.g. solar farms) and carbon sequestration (e.g. new woodlands, carefully located).
Communities, and health	Support wide-ranging objectives (beyond community infrastructure-related; see above), including addressing known issues in respect of determinants of health. Amongst other things, support: active travel; access to green/blue infrastructure, sports pitches/facilities and other recreational facilities; a hierarchy of vibrant and resilient centres that serve a range of functions; reducing issues of relative deprivation, including through targeted regeneration initiatives (also see discussion below under 'Equalities'); and a strategic approach to masterplanning and design e.g. use of agreed design codes.
Economy & employment	Meet the full range of employment land needs and more widely reflect the objectives set out in the NPPF, including boosting productivity. Build on local strengths (e.g. advanced manufacturing), counter any weaknesses (e.g. a town centre in need of regeneration) and address the challenges of the future, including guided by higher level strategy. Recognise Swindon's unique role at the intersection of the South West (e.g. Western Gateway sub-region) and South East (e.g. England's Economic Heartland Sub-region).

SA topic	SA objective
Equalities	Plan for Swindon's diverse communities and, in particular, reduce inequality experienced by individuals and groups with protected characteristics. Address relative deprivation as it can be a proxy for equalities issues and given good understanding of how relative deprivation varies spatially across the Borough at strategic scales most relevant to preparation of the local plan. Ensure ongoing evidence gathering around key strategic issues / opportunities.
Historic environment	Conserve and enhance the historic environment, with a focus on designated assets, but also non-designated assets (including archaeology). Account for specific factors that make an asset or area valuable in historic environment terms, for example, and notably, industrial and railways heritage in the Swindon context. Consider links to character, sense of place and place-making.
Housing	Provide for objectively assessed housing needs (or Local Housing Need, LHN) in line with NPPF paragraphs 11 and 61. Provide for affordable housing and specialist housing / accommodation to meet needs, ensure an appropriate housing mix in terms of size, type and tenure, consider locally rising needs within the Borough and also ensure a focus on delivery / minimising delivery risks.
Landscape	Recognise broad variation in topography, geology, land use and landscape - e.g. raised landscapes versus river valleys - and the relationship to historic and potential future settlement / built form. Protect and enhance the character, quality and setting of valued landscapes at all scales, accounting for varying significance including the nationally significance of the North Wessex Downs. Recognise links to wider objectives (e.g. biodiversity, green infrastructure, heritage). Support comprehensive masterplanning with a long-term perspective and strategic green infrastructure.
Soils and resources	Ensure efficient use of land including a focus on avoiding the loss of best and most versatile (BMV) agricultural land, as far as possible, particularly better quality BMV land. Support minerals and waste planning and seek to reflect circular economy principles.
Transport	Support the achievement of 'modal shift', including through the location and design of development, and support for strategic or otherwise coordinated growth locations. Support the Local Transport Plan, for example in respect of transport infrastructure upgrades, addressing congestion hotspots (and, in turn, supporting public and active transport) and future mobility. Recognise close links to 'accessibility' objectives and - particularly within the main urban area - ensure an integrated approach in terms of targeted growth at centres and along key corridors, e.g. new homes to support new infrastructure.
Water	Direct growth to minimise pressure on water resources and water quality, including accounting for wastewater treatment capacity and any water resource zones associated with particular water stress. Realise opportunities for growth to support new infrastructure.

1. Introduction

1.1 Introducing the Swindon Local Plan

- 1.1.1 The Borough of Swindon (hereafter referred to as “the Borough”) is a local government authority in South West England, centred on the urban area and town of Swindon and forming part of the ceremonial county of Wiltshire. The Borough also encompasses the market town of Highworth as well as several villages, including Wroughton. The Borough is served by a total of 20 parish and town councils, and approximately 25% of the Borough is urban.¹
- 1.1.2 Swindon Borough Council (SBC) is the local authority. It is a unitary authority, having the powers of a non-metropolitan county and district council combined. As such, it is administratively separate from the rest of Wiltshire.
- 1.1.3 The new Local Plan², once adopted, will supersede the current Local Plan (2015) and set the strategy for growth and change for the Borough for a period of at least 15 years. It will allocate sites to deliver the strategy, identify other designations which will be shown on a Policy Map (e.g. areas where employment uses are to be protected) and establish policies against which planning applications will be determined.
- 1.1.4 The Local Development Scheme (LDS) sets out the timetable for preparing the new Local Plan - see **Table 1.1**.

Table 1.1 Timetable for preparing the new Local Plan

Key stage	Estimated date
Public consultation under Regulation 18	Summer 2024
Publication of the proposed submission plan (Regulation 19)	Winter 2024
Submission to Secretary of State (Regulation 22)	By 30 th June 2025
Examination in Public	2025
Adoption	2026

¹ SBC (no date): 'Parish and town councils', [online] available to access via [this link](#)

² SBC (no date): 'New Local Plan', [online] available to access via [this link](#)

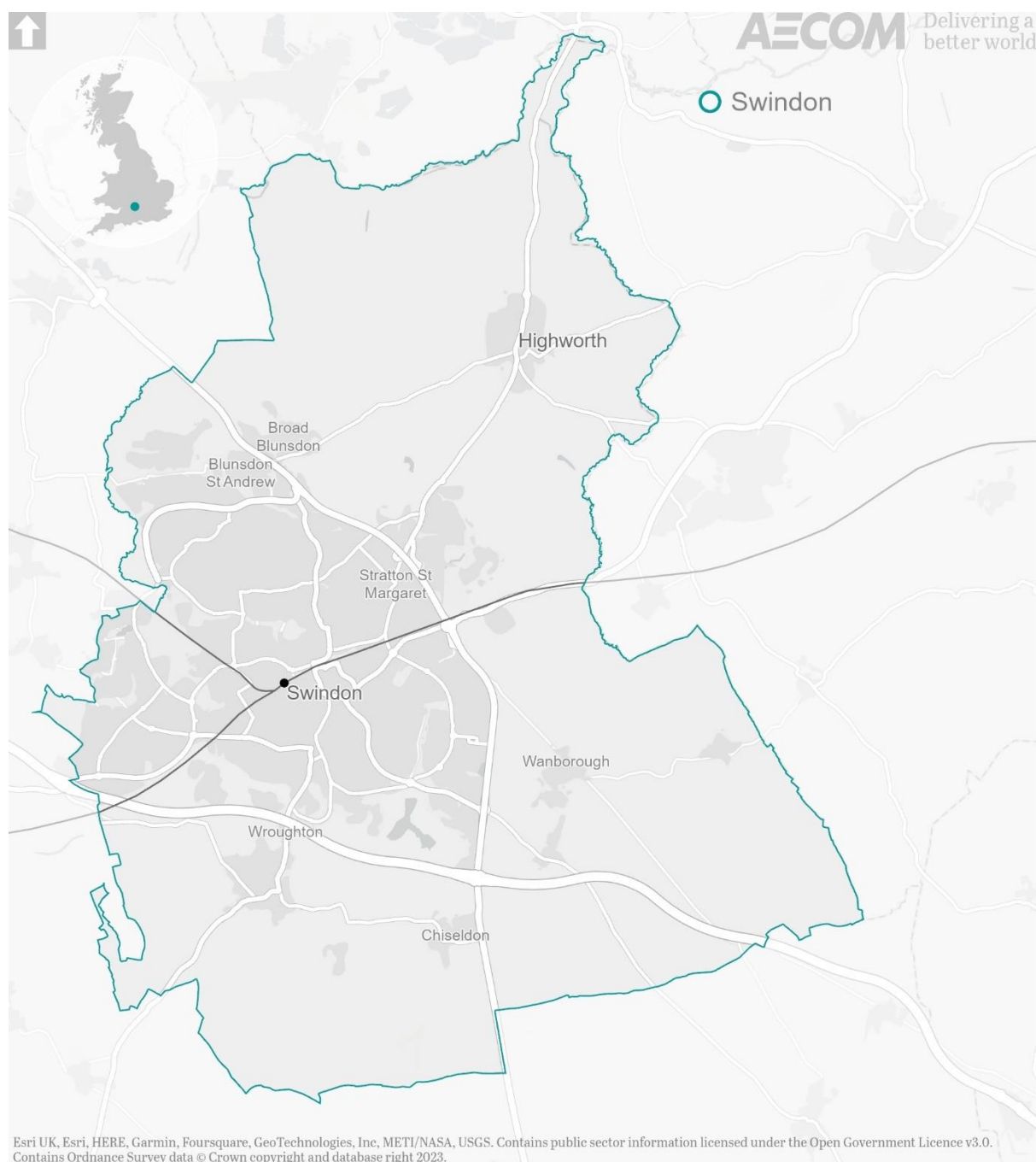


Figure 1.1 Swindon Borough (the plan area)

1.2 Sustainability Appraisal (SA) explained

- 1.1.5 SA is a mechanism for considering and communicating the effects of an emerging plan, and alternatives, with a view to minimising adverse effects and maximising the positives. SA is required for local plans.
- 1.1.6 Scoping is the first step in the SA process. It involves gathering evidence and determining the breadth of sustainability issues and objectives that will be a focus of subsequent appraisal stages.
- 1.1.7 Specifically, the subsequent appraisal is focused on the 'significant effects' of the emerging draft local plan and 'reasonable alternatives'.
- 1.1.8 The aim of this report is to introduce the SA scope. This is the final version of the report, with a draft having previously been published for consultation.

1.3 Structure of this SA Scoping Report

- 1.1.9 This report is structured under a series of 12 sustainability topic headings, which were selected on the basis of AECOM's experience of the broad scope of sustainability issues and objectives in terms of which there tends to be the potential to identify significant effects in the context of local plans.
- 1.1.10 Under each topic, the aim is to review evidence before listing key sustainability issues. Each list of key issues is then distilled into one or more objectives. The aim is for the resulting list of topics, objectives and issues to be used as a methodological 'framework' under which to undertake subsequent appraisal work, ensuring that it is well structured and focused.

1.4 Integrating equalities and health

- 1.1.11 Under the 'Communities, health and equalities' topic heading the aim is to give explicit consideration to matters relating to both equalities and health, as the first step in a process of 'integrating' both Equalities Impact Assessment (EqIA) and Health Impact Assessment (HIA).
- 1.1.12 With regards to EqIA, whilst no reference is made within the NPPF or the Planning Practice Guidance (PPG), it is common for EqIA to be undertaken alongside local plan-making, in light of the Public Sector Equality Duty introduced under the Equality Act 2010. Under the Duty, the Council must reduce inequality having regard to the following protected characteristics: age, disability, gender re-assignment, marriage / civil partnership, pregnancy, maternity, ethnicity, religion/belief, gender and sexual orientation.
- 1.1.13 HIA is not seen as standard practice but is increasingly advocated as the importance of local plan-making for good health rises up the agenda.
- 1.1.14 In respect of both EqIA and HIA, it is important to note that there are no procedural requirements over-and-above those for SA. As such, 'integration' primarily involves ensuring that the SA scope has a good focus on key issues. However, it is recognised that those with a particular interest in EqIA and/or HIA will also wish to see findings reported in a stand-alone way. See further discussion under the 'Next steps' heading at the end of this report.

2. Air quality

- 2.1.1 Set out below is an evidence review followed by a discussion of key issues and objectives. The evidence review focuses on existing issues in respect of air pollution / air quality in the borough (also mindful of sensitivities outside of the borough) before also briefly considering of noise pollution.

1.5 Evidence review

- 2.1.2 Set out below is a list of key evidence sources, and then a discussion under thematic headings.

Table 2.1 Key sources of evidence relating to the air quality topic

Document title	Date
National	
<u>DEFRA Air Quality Strategy: framework for local authority delivery</u>	2023
<u>A Green Future: Our 25 Year Plan to Improve the Environment</u>	2018
<u>National Planning Policy Framework</u>	2023
<u>Noise Policy Statement for England (NPSE)</u>	2010
<u>The Clean Air Strategy</u>	2019
<u>The Environmental Noise (England) Regulations 2006</u>	2006
<u>UK plan for tackling roadside nitrogen dioxide concentrations</u>	2017
Local	
<u>Kingshill Air Quality Action Plan</u>	2023
<u>Air Quality Annual Status Report 2023</u>	2023
<u>Joint Strategic Needs Assessment (JSNA) for Swindon 2021-2022</u>	2022
<u>Draft Air Quality Action Plan</u>	2019
<u>Swindon Local Transport Plan 3: 2011-2026</u>	2011

Air pollution

- 2.1.3 Poor air quality can negatively impact upon human health. Air pollutants can be linked to a number of health conditions, including (but not limited to) asthma, cardiovascular diseases, respiratory diseases, and immune system disorders. Air pollution issues can also affect different population groups disproportionately – especially in deprived areas, where most of those with the greatest health needs and the majority of vulnerable people live.
- 2.1.4 The NPPF requires planning policies and decisions to comply with relevant limit values or national objectives for pollutants, appropriately considering the presence of Air Quality Management Areas (AQMAs). Opportunities to improve air quality or mitigate impacts should be identified, such as traffic and travel management and the creation or enhancement of green infrastructure. Local air quality action plans should be considered.

- 2.1.5 Road transportation is a major contributor of air pollution in Swindon. There are a number of traffic hotspots potentially associated with sensitive receptors (e.g. homes or a school); however, there is only one AQMA in Swindon – Kingshill Road, Swindon AQMA – which is located along a section of the A4289 in the southern part of Swindon Town (as shown in **Figure 2.1** overleaf). This AQMA was declared because regular monitoring of nitrogen dioxide (NO₂) in this location indicates that this location is currently in breach of the annual average air quality objective of 40µg/m³.
- 2.1.6 In response to this, work is currently underway on an Air Quality Action Plan (AQAP). SBC formally consulted on a draft AQAP between December 2018 and February 2019. The draft AQAP was subsequently updated in March 2019. Within the most recent draft, it is outlined that in order to meet the annual average limit of 40mcg/m³, NO₂ produced via use of the road must be reduced by 30%. In essence, emissions generated on Kingshill Road must be reduced by 30% from today's base and maintained as the number of miles travelled in Swindon grows in line with the town's growth. As Swindon is a large growth town, this will likely be challenging to achieve.
- 2.1.7 According to Swindon's 2023 Air Quality Annual Status Report (ASR), the air quality is monitored through a network of 42 diffusion tubes at 38 sites across the Borough. The results from the 2022 monitoring year show no significant change from 2021; the average across the monitoring network showed a <1% increase in NO₂ levels. The two monitoring sites with the biggest increase over 2021 levels were significantly disrupted by major roadworks during 2021 and were also annualised to account for several missing months' data. Hence, the 2021 results for these locations were likely not representative. Excluding the large apparent changes at these two locations, the network showed a slight average improvement of 1%; 19 sites showed improved results, whilst 19 sites show slightly worsened results.
- 2.1.8 Since its declaration, air quality at the Kingshill Road AQMA has improved across the seven monitoring locations within the AQMA, such that in 2022, only one monitoring location remained just outside of the limit level at 41.7 µg/m³. Measured NO₂ levels within the AQMA very slightly reduced in 2022, in line with the rest of the Borough, by around 1%.
- 2.1.9 As in most locations in England, especially in the south, fine particulate matter (PM_{2.5}) is a concern. The Environment Act 2021 led to a new national PM_{2.5} target value of 10µg/m³ by 2040, and Swindon is in a relatively good position with regard to this target. Alongside it, a Population Exposure Reduction Target of 35% by 2040 was also introduced, which may be more difficult to achieve without real behaviour change. Due to the transboundary nature of PM_{2.5}, these are principally central government's targets to meet, and SBC is therefore waiting to see how local authorities will be expected to help meet it. However, as PM_{2.5} has arguably a greater health impact than NO₂, SBC will fully engage in any centrally led effort to reduce PM_{2.5} locally.
- 2.1.10 No new major emission sources were identified during 2020 in Swindon. Honda Motor Company closed its large vehicle and engine manufacturing plant in Swindon in mid-2021, and this has led to assumed reductions in volatile organic compounds and particulates from the paint and engine casting processes there. The site is currently being developed into a commercial and distribution hub.

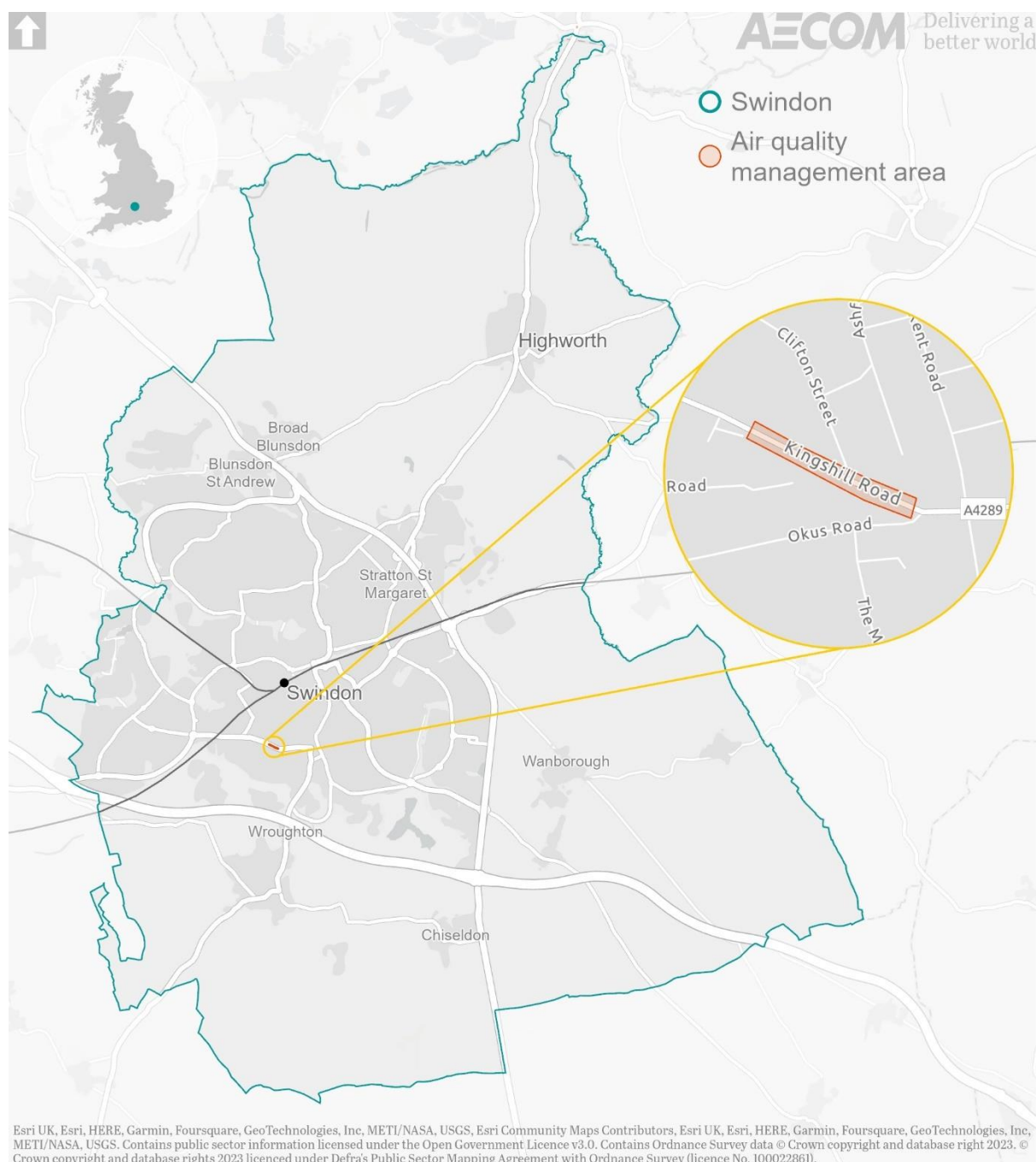


Figure 2.1 The one AQMA declared in Swindon

Noise pollution

- 2.1.11 Transport is a major cause of noise pollution, especially near major roads and railway lines. Swindon's Local Transport Plan 3 (LTP3) outlines that noise from the A419 is a particular issue along the northeastern edge of Swindon Town. Other identified sources of noise include the Great Western Way, Cirencester Way and Queens Drive. Other than transport infrastructure, there are a range of other potential sources of noise pollution that are a strategic consideration, including noise pollution from industry.

1.6 Key sustainability issues

- 2.1.12 Key issues and opportunities, which might be a focus of appraisal, include:

- **Air Quality Management Areas (AQMA)** – there is only one AQMA in Swindon, at Kingshill Road. Monitoring in 2023 showed a slight reduction in NO₂ levels within the AQMA, in line with the rest of the Borough, and there is an Action Plan to secure further reductions.
- **Other hotspots** – outside of AQMAs it is difficult to identify air pollution hotspots with certainty, and the available evidence base would ideally be stronger in this respect. In respect of NO₂, the focus is on urban roads with heavy traffic, particularly where houses are in close proximity to roads; however, concerns around NO₂ have reduced over recent years.

Conversely, concerns have not reduced regarding particulates (PM_{2.5}) pollution and, whilst Swindon meets legal limits for PM_{2.5} (20mcg/m³), several grid squares in Swindon have PM_{2.5} levels currently above the incoming limit of 10mcg in 2040, and may struggle to meet the 35% Population Exposure Reduction Target too, by the same date. On top of this, the WHO evidence backed advisory limit is in fact 5mcg/m³; a level which none of the 1km grid squares in Swindon currently meet. There is also a need to layer vulnerability indicators on top of air quality.

- **Traffic and transport** – air quality issues link closely to those discussed under the 'Transport' heading. As well as directing growth to avoid increased traffic air quality hotspots, there is a need to support wider 'sustainable transport' objectives, including switchover to electric vehicles (EVs). The New Local Plan's spatial strategy and site selection process has a key role to play, for example by directing growth to the most accessible and well-connected locations; supporting strategic growth locations that can achieve relatively high self-containment/ trip internalisation; and supporting new / upgraded transport infrastructure.
- **Green infrastructure** – is a cross-cutting issue, but also of key relevance to planning for air quality. In air pollution hotspot areas there is a need to recognise the importance of greenspace as a refuge.
- **Biodiversity** – nitrogen deposition is an issue for low nutrient habitats where in close proximity to busy roads (up to 200m, but deposition decreases rapidly with distance). Within the Borough Coate Water SSSI and Burderop Wood SSSI are in proximity to the M4 and Haydon Meadow SSSI is also of note. Another key issue is internationally important North Meadow & Clattinger Farm SAC, which is located a short distance to the north west of the Borough, close to the A419.

- **Cross-boundary issues** – there is a need to consider sensitive road corridors in neighbouring areas that could be affected by traffic generated in Swindon. The M4 and A419/ A346 cross the Borough's border into Wiltshire, whilst the A420 crosses the Borough's border into Oxfordshire. Both Oxford and Marlborough (located in the northeastern part of Wiltshire, south of Swindon) are covered by large AQMAs, and are accessible via these cross-border roads. There is also the North Meadow & Clattinger Farm SAC issue, as discussed above.
- **Larger than local issues** – it is difficult to suggest that Swindon is particularly constrained in the sub-regional context in respect of air quality. Neighbouring areas subject to heavy or significant constraint, as mentioned above, include Oxfordshire and parts of Wiltshire. Whilst Gloucestershire contains several AQMAs, these are largely constrained to single sections of road, similar to the AQMA in Swindon.

2.1.13 In light of these key issues, the following objective will be employed in order to guide appraisal of the draft plan, and reasonable alternatives, under the 'air quality' topic heading, with a view to a suitably focused appraisal:

Take steps to locate, design and deliver new development so as to avoid worsening air pollution (NO₂ and PM_{2.5}) and support the achievement of air quality objectives, including within the one AQMA.

3. Biodiversity

- 3.1.1 Set out below is an evidence review followed by a discussion of key issues and objectives. The evidence review focuses on the hierarchy of designated sites and wider areas of sensitivity (also potentially opportunity) and also considers key potential impact pathways of relevance to the local plan.

1.7 Evidence review

- 3.1.2 Set out below is a list of key evidence sources, and then a discussion under thematic headings.

Table 3.1 Key sources of evidence relating to the biodiversity topic

Document title	Date
International	
<u>The Conservation of Habitats and Species Regulations 2017</u>	2017
National	
<u>Local Nature Recovery Strategy Guidance</u>	2023
<u>A Green Future: Our 25 Year Plan to Improve the Environment</u>	2018
<u>Biodiversity 2020: A strategy for England's wildlife and ecosystem services</u>	2011
<u>Countryside and Rights of Way Act 2000</u>	2000
<u>Defra Policy Paper: Changes to the Habitat Regulations 2017</u>	2021
<u>Environment Act 2021</u>	2021
<u>National Planning Policy Framework</u>	2023
<u>Natural Environment and Rural Communities Act 2006</u>	2006
<u>The Natural Choice: securing the value of nature</u>	2011
<u>UK Biodiversity Action Plan</u>	2007
<u>Wildlife and Countryside Act 1981</u>	1981
Local	
<u>A Green Infrastructure Strategy for Swindon 2010-2026</u>	2011
<u>Wiltshire and Swindon Local Nature Recovery Strategy</u>	-
<u>North Meadow and Clattinger Farm Interim Recreation Mitigation Strategy 2023-2028</u>	2023

Internationally designated sites

- 3.1.3 To ensure the European Directives were operable in the UK after the end of the EU transition period, changes were made by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. In this respect, Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) in the UK no longer form part of the EU Natura 2000 ecological network. Instead, the 2019 Regulations propose the creation of a national

site network within the UK territory.³ The network comprises the designated sites already designated under the Nature Directives (i.e., 79/409/EEC and 92/43/EEC), along with any additional sites which are designated under the 2019 Regulations. The national site network continues to operate in parallel with other designations and contributes towards the UK's international commitments for protected areas.

- 3.1.4 The Ramsar Convention on Wetlands is the intergovernmental treaty that provides the framework for the conservation and wise use of wetlands and their resources. Since it came into force in 1975, almost 90% of UN member states have become “Contracting Parties”, including the UK, which designated its first Ramsar Sites in 1976. Since then, many more have been designated.
- 3.1.5 Swindon does not contain any internationally designated sites (as shown in **Figure 3.1** overleaf); however, the following SACs are within a 15km radius of the SBC boundary:
- **North Meadow and Clattinger Farm SAC** – this site is located to the northwest of Cricklade in Wiltshire, approximately 3.1km northwest of Swindon.
 - **River Lambourn SAC** – located approximately 4.6km east of the SBC boundary, starting in Lambourn in West Berkshire.
 - **Hackpen Hill SAC** – this site is located approximately 9.2km east of the SBC in the neighbouring Vale of White Horse district.
 - **Kennet and Lambourn Floodplain SAC** – located approximately 10km southeast / south of the SBC boundary, and within Wiltshire.
 - **Pewsey Downs SAC** – this site is located approximately 12.7km south / southwest of the SBC boundary, located north of Alton Barnes in Wiltshire.
 - **River Avon SAC** – located approximately 14.5km south of the SBC boundary, to the north of Pewsey in Wiltshire.

Nationally designated sites

- 3.1.6 Sites of Special Scientific Interest (SSSI) are protected by law to conserve their wildlife or geology. Natural England is a statutory consultee on development proposals that might impact on SSSIs. Swindon contains several SSSIs (as shown in **Figure 3.2** overleaf), which are:
- **Bincknoll Dip Woods SSSI** – this site is partially located in the southwestern part of Swindon, in Wroughton Parish, to the southwest of Basset Down. This site comprises three units, which are all in a ‘favourable’ condition.
 - **Burderop Wood SSSI** – this site is located in the central southern part of Swindon, in Chiseldon Parish, to the south of the M4. This site is in an ‘unfavourable recovering’ condition.

³ DEFRA (2021): Policy Paper: Changes to the Habitats Regulations 2017', [online] available to access [here](#)

- **Clout's Wood SSSI** – this site is located in the southwestern part of Swindon, in Wroughton Parish, to the southwest of Wroughton Village. This site is in an 'unfavourable recovering' condition.
 - **Coate Water SSSI** – this site is located in the central southern part of Swindon, in Central Swindon South Parish, to the south of Marlborough Road and north of the M4. This site comprises two units, which are both in a 'favourable' condition.
 - **Great Quarry, Swindon SSSI** – comprising three areas, this site is located in the central southern part of Swindon, in Central Swindon South Parish, to the south of Bath Road and north of Westlecot Road. This site comprises three units; two are in a 'favourable' condition, whilst one is in an 'unfavourable declining' condition.
 - **Haydon Meadow SSSI** – this site is located in the central western part of Swindon, in Haydon Wick Parish, to the northwest of Thamesdown Drive. This site is in an 'unfavourable declining' condition.
 - **Okus Quarry SSSI** – this site is located in the central southern part of Swindon, in Central Swindon South Parish, to the south of Okus Road. This site is in an 'unfavourable recovering' condition.
 - **Old Town Railway Cutting, Swindon SSSI** – this site is located in the central southern part of Swindon, in Central Swindon South Parish, intersecting with Westlecot Road and to the west of Devizes Road/ Croft Road. This site is in an 'unfavourable declining' condition.
 - **The Coombs, Hinton Parva SSSI** – this site is located in the southeastern part of Swindon, in Bishopstone Parish, to the south of Hinton Parva Village. This is in a 'favourable' condition.
- 3.1.7 SSSI Impact Risk Zones (IRZ) are a GIS tool/ dataset which maps zones around each SSSI according to the sensitivities of the features for which it is notified. They specify the types of development that have the potential to have adverse impacts at a given location. Swindon is covered by several IRZs, forming a buffer around the SSSIs that fall within/ fall partially within with the Borough or are located near the border of the Borough.
- 3.1.8 Some SSSIs are also designated as a National Nature Reserves (NNR), typically to reflect special characteristics and/or potential for recreation and learning. There is one NNR near to Swindon, namely:
- **North Meadow and Clattinger Farm NNR** – this site is located to the northwest of Cricklade in Wiltshire, approximately 3.1km northwest of Swindon. The site is the subject of an Interim Recreational Mitigation Strategy (linked to the SAC designation of this site), which seeks to address the recreational impacts linked to development. Air quality is also a potential impact pathway of note, given the nearby A419.

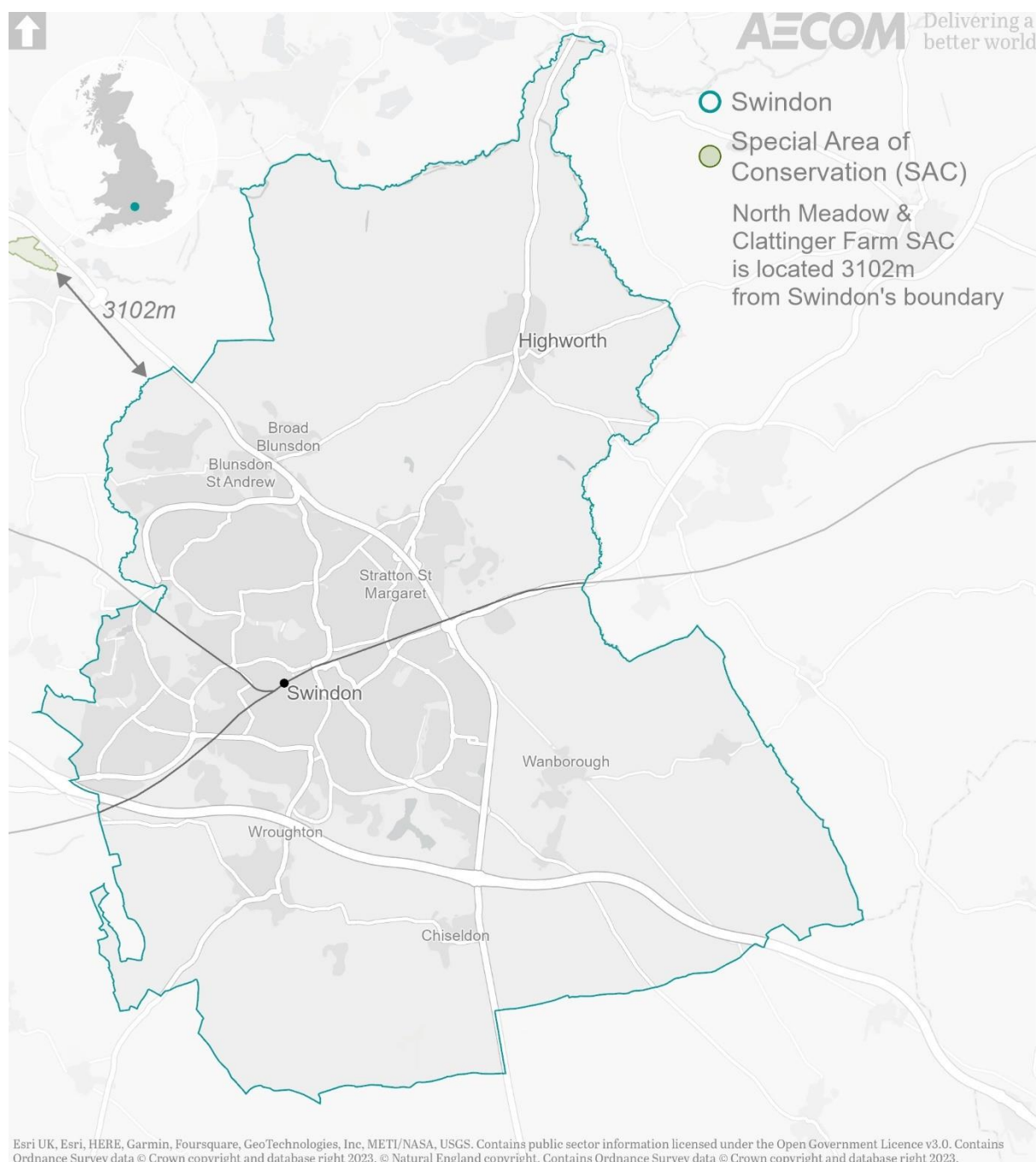


Figure 3.1 The location of North Meadow and Clattinger Farm SAC

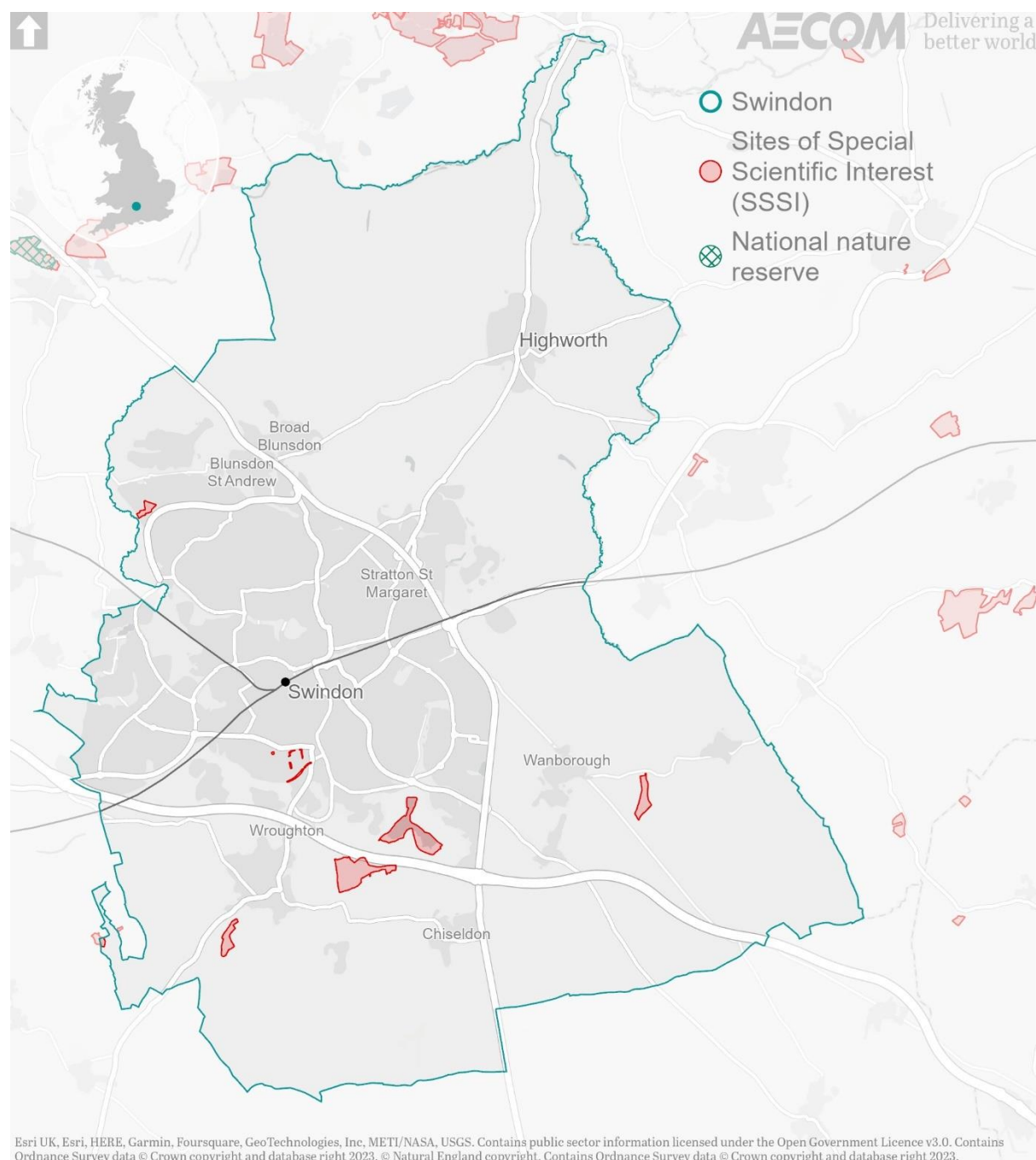


Figure 3.2 Nationally designated sites for biodiversity in and around Swindon

Locally designated sites

- 3.1.9 The Borough contains several County Wildlife Sites (CWSs) (as shown in **Figure 3.3** overleaf). These are largely concentrated in the southern part of the Borough. CWSs are wildlife-rich sites which are locally designated according to their value for local nature conservation and include sites which meet locally determined criteria. These sites often contain important, distinctive and threatened species and habitats.
- 3.1.10 Swindon's strategic green corridors (as shown in **Figure 3.3**), which cover Swindon Town, connects several CWSs in this location.

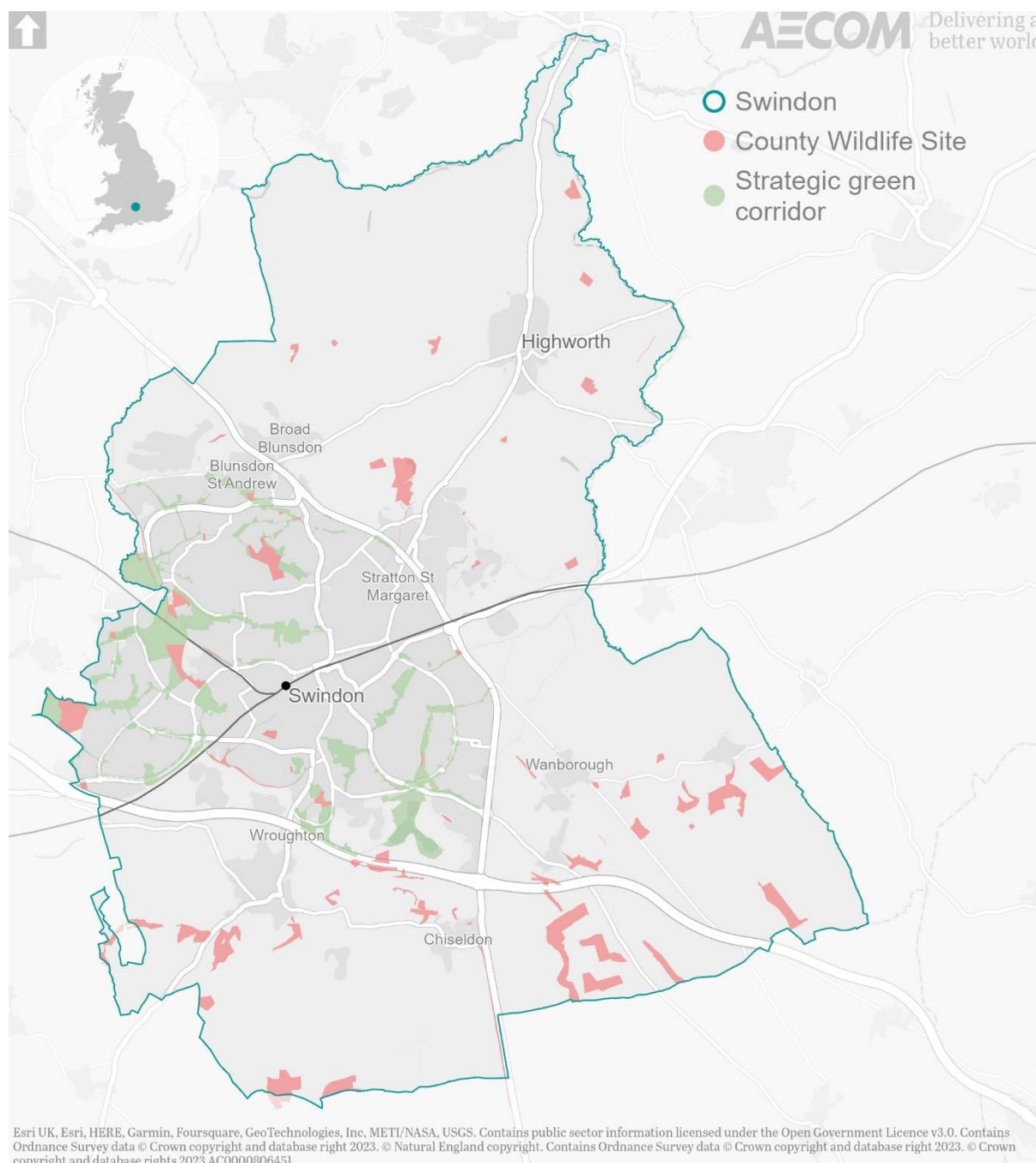


Figure 3.3 County Wildlife Sites in Swindon and their relationship with the strategic green corridors in Swindon Town

Key habitats and priority areas

- 3.1.11 The UK Biodiversity Action Plan (BAP) identifies priority species and habitats requiring conservation action. Although the UK BAP has been superseded, BAP priority species and habitats have been used to draw up statutory lists of priority species and habitats in England.
- 3.1.12 There are a variety of BAP Priority Habitats that wholly or partially intersect with the Borough (as shown in **Figure 3.4** overleaf), which include:
- Deciduous woodland.
 - Good quality semi-improved grassland.
 - Lowland calcareous grassland.
 - Lowland fens.
 - Lowland meadows.
 - Wood-pasture and parkland.
 - River and streams
 - Standing open waters and canals
- 3.1.13 There are several areas of ancient woodland scattered across the Borough (as shown in **Figure 3.4** overleaf), with the two largest areas located south of Stanton Fitzwarren (Great Wood) and east of Wroughton (Burdorpe Wood). In terms of the National Forest Inventory, the Borough primarily contains areas of broadleaved woodland and young trees.
- 3.1.14 With regards to broad priority areas, the Environment Act identifies a general duty to conserve and enhance biodiversity, including through local nature recovery strategies. Such strategies will identify biodiversity priorities for the strategy area as well as a local habitat map. Furthermore, habitat maps are expected to include recovery and enhancement areas which are or could become of importance for biodiversity. Account will also be taken of the National Habitat Network spatial dataset currently available at magic.gov.uk.
- 3.1.15 Support is given through the NPPF to establishing coherent ecological networks that are more resilient to current and future pressures. Networks can exist at a range of scales, including within urban areas, where parks, street trees, gardens and linear green/blue infrastructure play a keyrole.
- 3.1.16 At a much broader scale, it will be important that Swindon works with neighbouring local authorities when considering biodiversity as ecological networks cross boundaries. The New Local Plan should be consistent with those of neighbouring local authorities to ensure biodiversity is protected at functional landscape scales. It will also be necessary to work with key partner organisations such as Wiltshire Wildlife Trust.

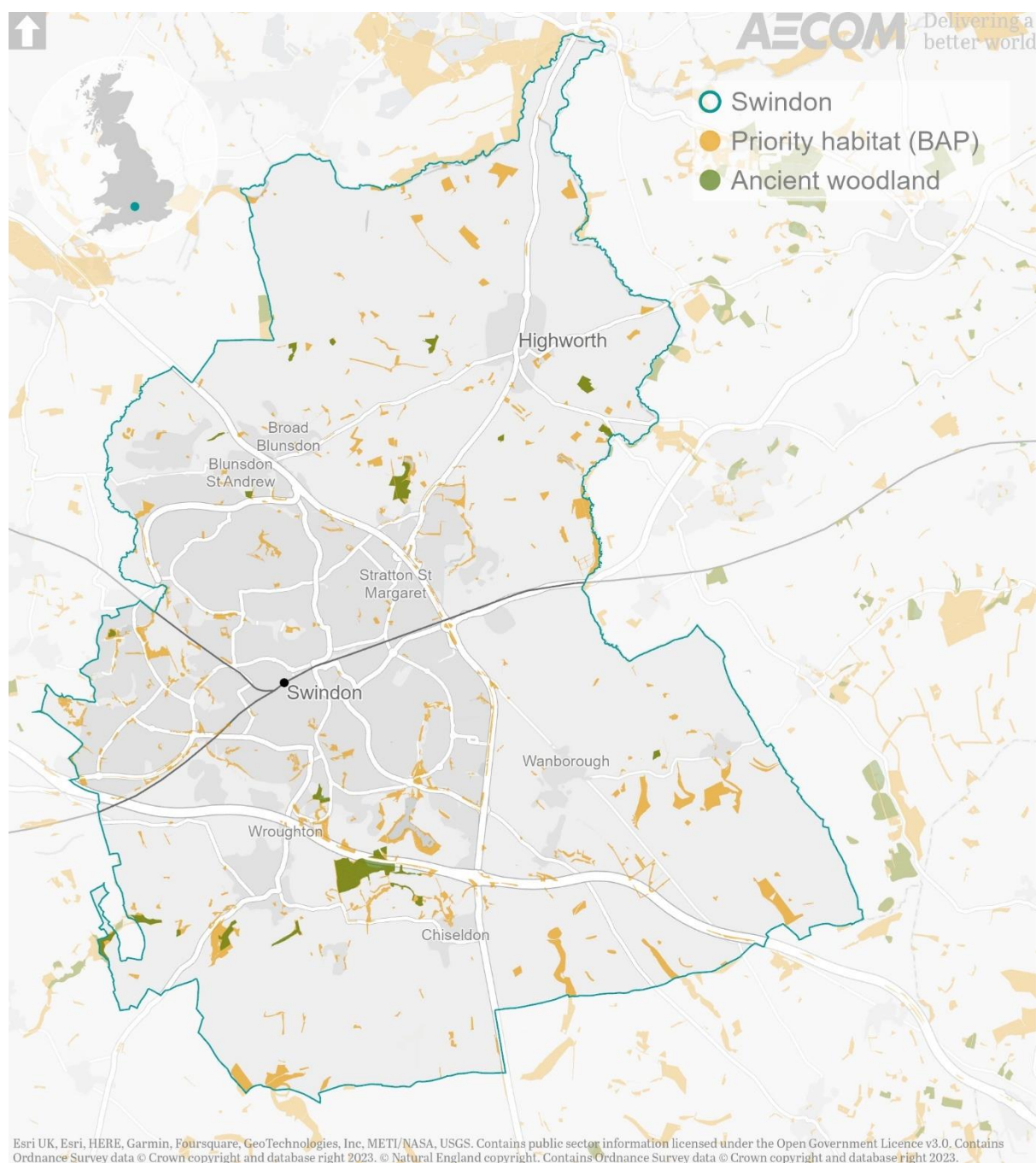


Figure 3.4 Priority habitat and ancient woodland in Swindon

N.B. this figure does not show either river and streams or standing open waters and canals, both of which are important priority habitats.

1.8 Key sustainability issues

3.1.17 Key issues and opportunities, which might be a focus of appraisal, include:

- **Sites, networks and landscapes** - as well as avoiding impacts to designated sites, accounting for their significance (e.g. international or national), there is a need to view sites within their landscape context. In doing so, account should be taken of established landscape-scale conservation/ enhancement objectives, including as understood from the Wiltshire and Swindon Local Nature Recovery Strategy. With this strategic perspective, all habitat (not just valued sites) should be scrutinised in terms of its current or potential biodiversity value, including with the aim of ensuring networks that are resilient to climate change. River corridors need always be a focus attention, but other landscape-scale priority areas should also be a focus of protection/enhancement.
- **Development-related issues and opportunities** – whilst there is clearly a need to direct development away from sensitive areas, there is also a need to consider that development can deliver investment in the local area including with a focus on achieving biodiversity objectives alongside other ecosystem services, such as recreation, flood risk attenuation, heritage, and character. There is also a need to recall the new legal requirement, under the Environment Act, for all development to achieve at least a 10% biodiversity net gain. Strategic growth locations can give rise to particularly opportunities to deliver well targeted measures, both onsite (green/blue infrastructure) and offsite.
- **North Meadow and Clattinger Farm SAC** (or simply 'Cricklade North Meadow') – this is a key issue for the local plan. Recreational pressure is a key impact pathway, and whilst an Interim Mitigation Strategy is in place, this currently runs only to 2028 (albeit an extension is likely). Also, the reality is that any mitigation strategy has limits - in terms of the quantum of homes that can be mitigated - and is associated with risks and uncertainties. As such, there will be a need to give weight to avoidance, i.e. directing growth away from the SAC.
- **Larger than local issues** – Swindon is broadly associated with the headwaters of the Thames Valley, between the Cotswolds to the north and the North Wessex Downs to the south. There is extensive constraint associated with the Thames corridor at the southern extent of Cotswold District (including Cricklade North Meadow, but also more widely), and it is recognised that this area within Cotswold District (south of Cirencester) is notably located outside of the Cotswolds National Landscape. However, it is difficult to envisage biodiversity serving as a strong reason for Cotswold exporting unmet need to Swindon.

- 3.1.18 In light of these key issues, the following objective will be employed in order to guide appraisal of the draft plan, and reasonable alternatives, under the 'biodiversity' topic heading, with a view to a suitably focused appraisal:

Conserve and enhance designated sites, in accordance with their significance, and also account for non-designated habitat and known priority areas, applying the mitigation hierarchy (avoid, mitigate, compensate). Take a landscape-scale approach to biodiversity, focused on a nature recovery networks and resilience, and support a strategic approach to Biodiversity Net Gain (BNG).

- 3.1.19 Finally, we note that the Environment Agency recommended three key indicators: 1) amount of Green and Blue Infrastructure that is protected and provided; 2) hectares of Priority Habitat; and 3) kilometres of watercourse enhanced via River Corridor and Ecological Buffer Zone policy. We agree that all three indicators could be a focus of monitoring, but it is not possible to commit to quantifying the performance of the plan in terms of these indicators as part of the SA process. Ongoing consideration will be given to the potential to quantify the performance of the plan in these respects and, regardless, qualitative consideration can be given to the performance of the plan and reasonable alternatives in these respects.

4. Climate change adaptation

- 4.1.1 Set out below is an evidence review followed by a discussion of key issues and objectives. The evidence review focuses on flood risk, as a key climate change adaptation consideration in the context of local plan-making, but it is recognised that there are other wide ranging considerations of relevance.

1.9 Evidence review

- 4.1.2 Set out below is a list of key evidence sources, and then a discussion under thematic headings.

Table 4.1 Key sources of evidence relating to climate change adaptation

Document title	Date
National	
A Green Future: Our 25 Year Plan to Improve the Environment	2018
Flood and Water Management Act 2010	2010
Flood Risk Assessments: Climate change allowances	2022
Climate Change Committee - 2023 Progress Report to Parliament	2023
National Planning Policy Framework	2023
National Infrastructure Assessment	2021
Flood risk and coastal change – Planning practice guidance	2022
The National Adaptation Programme	2018
UK Climate Change Risk Assessment 2017	2017
Climate Change Committee - Adaptation Monitoring Framework	2023
Local	
Strategic Flood Risk Assessment (SFRA) Level 1	2019
Swindon Local Flood Risk Management Strategy	2014
Swindon Preliminary Flood Risk Assessment	2011
Thames River Basin District Flood Risk Management Plan	2016
Thames River Basin District River Basin Management Plan	2022

Overview of climate change impacts

- 4.1.3 The UK Climate Projections (UKCP18) programme is a climate analysis tool that provides the most up-to-date assessment on potential future climatic changes in the UK based on climate model simulations.⁴ Projections can be downscaled to a regional level across the UK, allowing for specific evaluations of a selected area.

⁴ Information about UKCP18 and key data can be accessed [here](#).

4.1.4 The effects of climate change, based on the high emissions 'worst case' scenario RCP 8.5⁵, for the South West during the period 2061 to 2080, compared to the period 1981 to 2000, are projected to be as follows:

- 2.95°C increase in winter mean average air temperature, and a 5.07°C increase in summer mean average air temperature.
- 0.86mm/ day increase in winter mean precipitation rate, and a 0.86mm/ day decrease in summer mean precipitation rate.
- 0.67% decrease in winter relative humidity, and a 7.97% decrease in summer relative humidity.

4.1.5 As a result of these changes, Swindon may face increasing risks related to climate change, including:

- Effects on water resources from climate change.
- Reduction in availability of groundwater for extraction and potential for increased groundwater flooding.
- Adverse effect on water quality from low stream levels and turbulent stream flow after heavy rain.
- Increased risk of flooding, including increased vulnerability to 1:100-year floods.
- A need to increase the capacity of wastewater treatment plants and sewers.
- Maintenance of flood defences.
- Soil erosion due to flash flooding.
- Loss of species that are at the edge of their southerly global distribution.
- Spread of species at the northern edge of their global distribution.
- Increased demand for air-conditioning.
- Increased drought and flood related problems such as soil shrinkages and subsidence.
- Risk of road surfaces melting more frequently due to increased temperature; and
- Flooding of roads.

4.1.6 It is likely these risks will be experienced at varying levels across different communities, which has the potential to exacerbate inequality in the Borough. As such, there are close links between climate change adaptation / resilience and addressing communities and equalities objectives.

⁵ The RCP 8.5 emissions scenario assumes there will be fast population growth, a low technical development rate, slow GDP growth, a large increase in world poverty and high energy use and emissions. It also assumes no climate change mitigation or adaptation techniques will be engaged with.

A focus on flood risk

- 4.1.7 Climate change adaptation/ resilience to the impacts of climate change is relevant to the discussion under most of the topic headings within this report. However, for local plans, flood risk (fluvial, surface water and groundwater) is a key issue that warrants being a focus of attention here. Storms are predicted to become more severe, and could become more frequent, and changes to land uses and the infiltration rates of soil could also have a bearing on flood risk.
- 4.1.8 Beyond flood risk, another key issue is responding to overheating risk, specifically overheating during heatwaves, which are likely to become more prevalent and more severe due to climate change. This is an issue with a bearing on the types of homes and other buildings that are supported, on the masterplanning and design of development schemes and also on the matter of planning for green and blue infrastructure. However, implications for spatial strategy and site selection are not as readily apparent as is the case for flood risk.

Flood risk in Swindon

- 4.1.9 Swindon falls within the Thames River Basin District⁶, specifically the Gloucestershire and the Vale Management Catchment, which covers the majority of the Borough, and the Kennet and Trib Management Catchment, which covers the very southern part of the Borough, south of Overtown and Chiseldon, and southeast of Liddington, covering Draycot Foliat and Fox Hill.
- 4.1.10 The two main rivers flowing through Swindon are the River Ray and the River Cole, both of which are tributaries of the River Thames. The Thames River Basin District has an up-to-date Flood Risk Management Plan (2016), which sets out the district's flood risk during the period 2021 to 2027 and summarises the aims and actions needed to manage this risk.
- 4.1.11 The Swindon Local Flood Risk Management Strategy (2014) provides thorough detail on SBC's work on flooding. The Strategy outlines that river flooding (linked to the River Ray and River Cole) and sewer flooding are key issues for Swindon.
- 4.1.12 As shown in **Figure 4.1** overleaf, fluvial flood risk is concentrated in the northern and central parts of the Borough.
- 4.1.13 In the central part of the Borough, fluvial flood risk is linked to the River Ray (west Swindon) and River Cole (east Swindon). These rivers are both tributaries to the River Thames. There is a network of watercourses (streams and ditches) across the Borough that flow into these two rivers. In periods of heavy and/ or prolonged rainfall, some of these watercourses become inundated, which can result in flooding. However, areas of Flood Zone 2/3 are largely limited to the paths of these rivers and their tributaries.

⁶ Environment Agency (no date): 'Thames River Basin District', [online] available to access via [this link](#)

4.1.14 Fluvial flood risk in the northern part of the Borough is linked to the River Thames, which has a much larger floodplain when compared to the River Ray and River Cole. The main path of the River Thames runs through Lechlade, in Gloucestershire, which is located to the north of the Borough, approximately 3.3km north of Highworth. Several sources/ tributaries to the River Thames flow through Swindon/ along the Borough's boundaries. These include:

- **Bydemill Brook (Source to Thames)** – a source to the River Thames, this brook flows from Stanton Park, near the northern settlement boundary of Swindon Town, to Lechlade, flowing to the west of Highworth. Whilst the area immediately surrounding this brook falls within Flood Zone 3, there are no settlements in this area.
- **Cole (Bower Bridge to Thames)** – a tributary to the River Thames, this river flows along the eastern boundary of the Borough, flowing from the west of Watchfield, in Oxfordshire, to Lechlade, flowing to the east of Highworth. Nearby settlement Upper Inglesham falls partially within Flood Zone 2.
- **Ray (Lydiard Brook to Thames)** – a tributary to the River Thames, this river flows from Sparcells, in the northwest of Swindon Town, to the east of Cricklade, in Wiltshire, where it joins the Thames (Churn to Coln). Part of the built-up area in Sparcells falls within Flood Zone 2/3.
- **Thames (Churn to Coln)** – a tributary to the River Thames, this river flows from Cricklade, in Wiltshire, to Lechlade and flows along the northern boundary of Swindon. Nearby settlements Castle Eaton, Hannington Wick and Inglesham all fall partially within Flood Zone 2/3.

4.1.15 As shown in **Figure 4.2** overleaf, surface water flood risk is also concentrated in the northern and central parts of the Borough. Notable areas with a high risk of surface water flooding (1 in 30 years) are found to the north and west of Highworth, and to the south and east of Swindon Town.

4.1.16 **Figure 4.3** overleaf shows areas of surface water flood risk which are not identified as at risk of fluvial flooding. These areas roughly cover the same areas as those shown in **Figure 4.2** overleaf.

4.1.17 With regards to groundwater, the geology of Swindon is such that the risk of flooding from groundwater is low, and it is a localised issue with very few properties potentially impacted by internal flooding from groundwater.



Figure 4.1 Fluvial flood risk in Swindon

N.B. the figure does not include flood risk from unmodelled watercourses (Kingsdown Brook and Wroughton Brook). Please see section 3.3.4 of the Level 1 SFRA (2019) for more information flood risk associated with these watercourses.

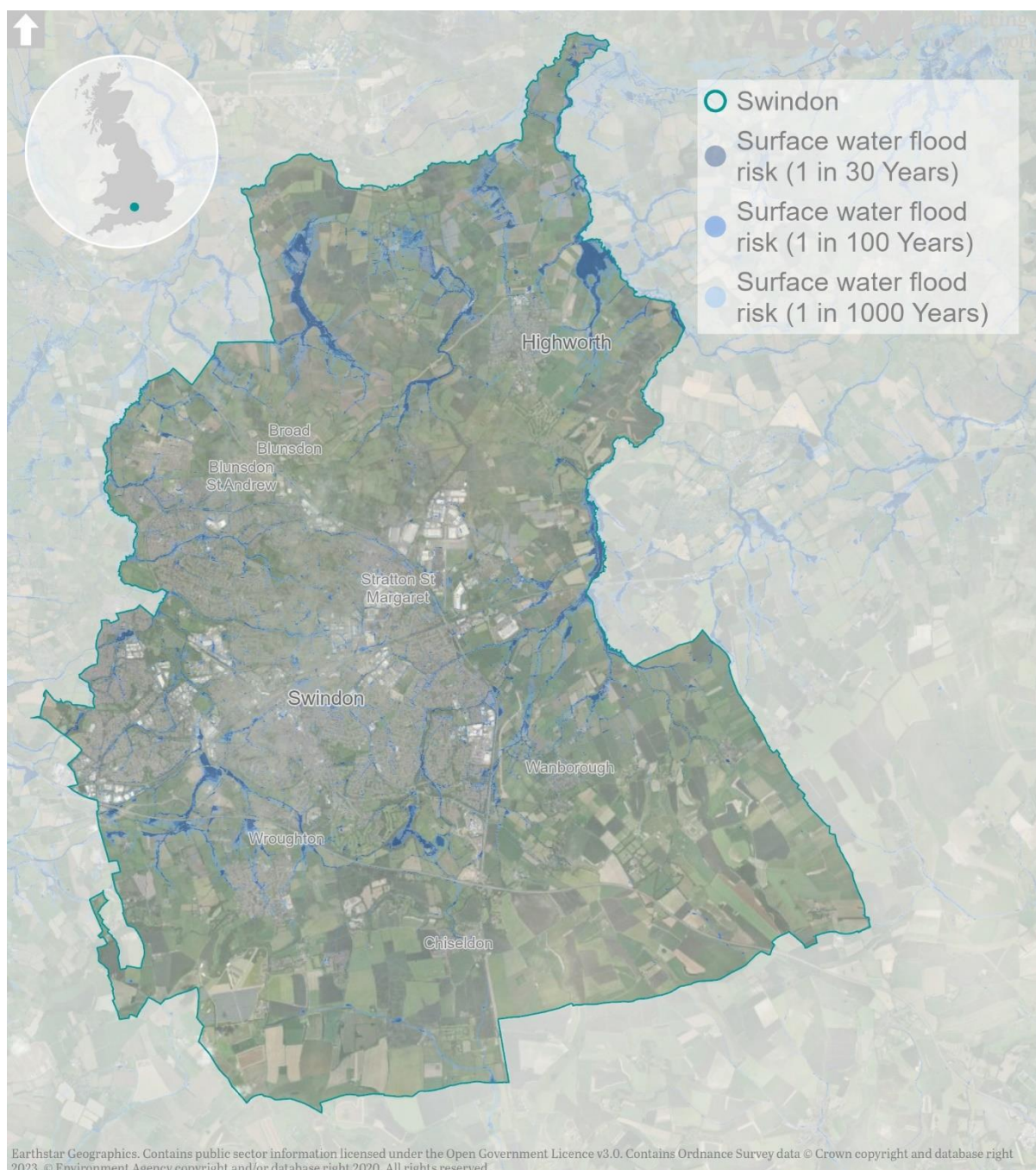


Figure 4.2 Surface water flood risk in Swindon

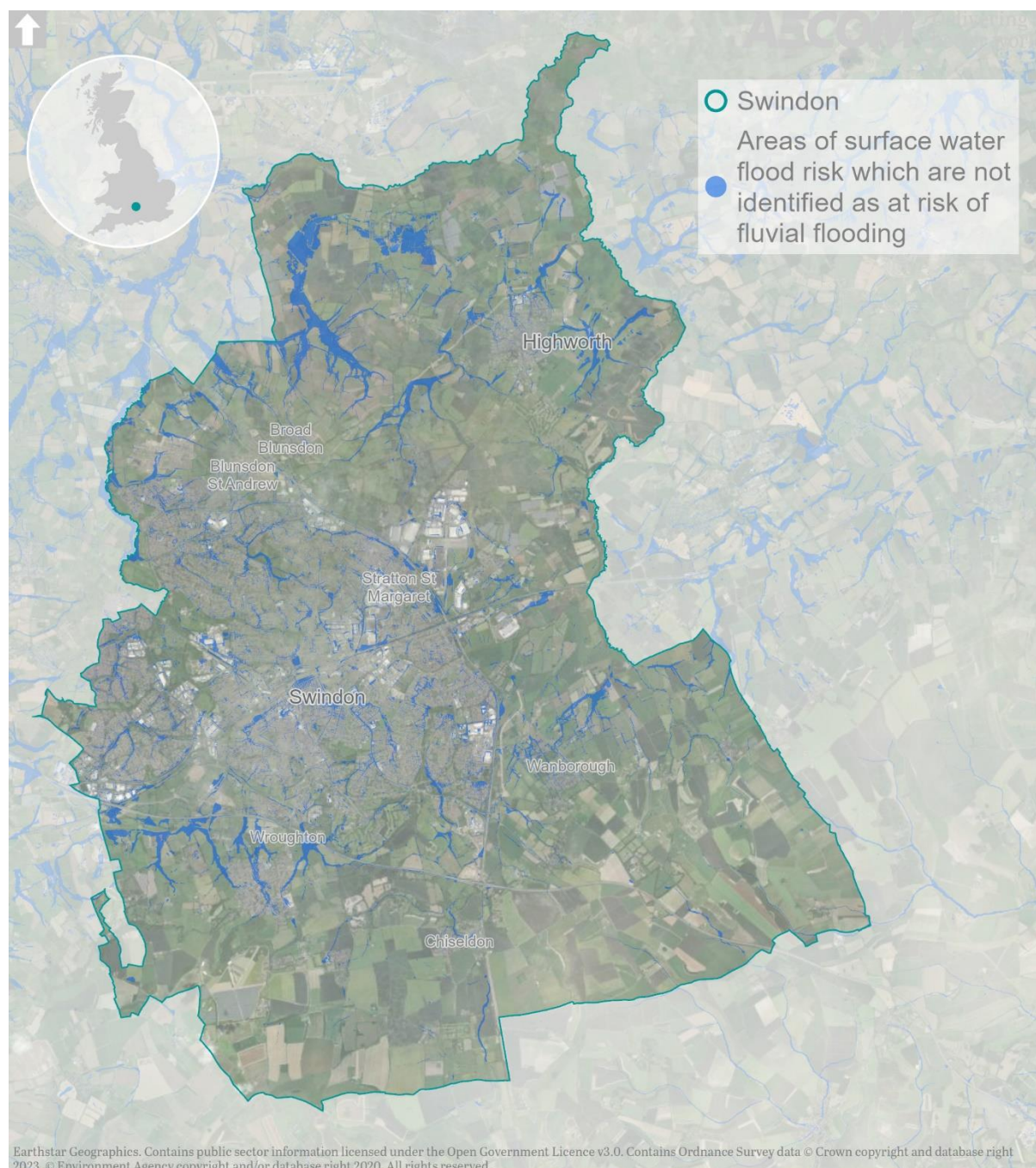


Figure 4.3 Areas of surface water flood risk (1 in 1,000 years) which are not identified as at risk of fluvial flood risk in Swindon

1.10 Key sustainability issues

4.1.18 Key issues and opportunities, which might be a focus of appraisal, include:

- **Fluvial flood risk** – is spatially concentrated at a range of scales, e.g. broadly within the northern and central parts of the Borough, where the River Thames and its tributaries are associated with wide flood plains. However, of greater importance is building an understanding of those urban or otherwise built up areas constrained by flood risk, including those that could come into consideration for an intensification of uses through the local plan.
- **Surface water flood risk** – is a strategic constraint but can often be suitably mitigated, including via Sustainable Drainage Systems (SuDS), which are also important for addressing water quality issues, and which must be designed with local geology in mind, particularly over chalk.
- **Other sources** - many areas in the Borough are at flood risk from a combination of sources such as fluvial, pluvial and sewer flooding ('combined flood risk'). Also, the Borough is 'prone to flash floods and there can be a very short time between rainfall and flooding' as set out in Table 2-1 of the 2019 SFRA, from the Thames Catchment Flood Management Plan. Flooding that occurred in the Borough in Autumn 2023 was of this nature, with flooding occurring during and straight after very heavy rainfall and that did not last for a prolonged period.
- **Avoiding flood risk** – there is a clear need to take a sequentially locate development in order to avoid flood risk from all sources. However, there is flexibility in national policy to deliver certain uses ([categorised](#) according to vulnerability) within a flood risk zone, where the benefits outweigh the risk, and given good potential to mitigate risk through masterplanning and design. A sequential approach can be taken to avoiding flood risk within sites, and design measures to mitigate risk include avoiding vulnerable uses on the ground floor; measures to ensure safe access/ egress; flood resistant design (to prevent water from entering the building); and flood resilient design (to ensure the structural integrity is maintained and to facilitate drying/ cleaning). In this light, there can be arguments for intensification of brownfield sites (e.g. for residential) that have historically been seen as appropriate for low vulnerability uses (e.g. industrial or retail) due to flood risk. However, there is a need to ensure a sequential and precautionary approach.
- **Downstream flood risk** – there is a distinction between the risk of development: A) increasing surface water run-off; and B) reducing flood storage capacity. In respect of (A), it is difficult to highlight risks without detailed work, given national standard practice in respect of high-quality SuDS. In respect of (B), there is a need to note that the Planning Practice Guidance on flood risk has recently been updated, stating:

“Whilst the use of stilts and voids below buildings may be an appropriate approach to mitigating flood risk to the buildings themselves, such techniques should not normally be relied upon for compensating for any loss of floodplain storage. This is because voids do not allow water to freely flow through them, trash screens get blocked, voids get silted up, they have limited capacity, and it is difficult to stop them being used for storing belongings or other materials.”

- **Development related opportunities** – strategic growth opportunities will often be located close to flood risk zones, reflecting the current/ historic built form of settlements. In turn, there can be opportunities to direct developer funding towards enhancements of river corridors, with a view to wide-ranging ecosystem service benefits, including flood water attenuation upstream of settlements or other areas sensitive to flood risk.
 - **Flood risk evidence** – there will be a need for SFRA work in support of the Local Plan. Also, a [Section 19](#) flood investigation is currently being created following recent flooding across Swindon in Autumn 2023, and should also feed in, including to a possible update of Swindon’s Flood Risk Management Strategy.
 - **Wider adaptation/ resilience issues** – other than flood risk, a key issue is responding to overheating risk, particularly overheating during heatwaves, which are likely to become more frequent and severe due to climate change. This is an issue with a bearing on: the types of homes and other buildings that are supported; masterplanning and design of development schemes; and the planning for green and blue infrastructure (to provide shading and minimise urban heat islands).
 - **Larger than local issues** – numerous nearby towns and cities are notably constrained, e.g. Cricklade, Lechlade and Oxford, which are all located along the River Thames. However, because flood risk is quite a localised issue, there is little to be gained from questioning how constrained Swindon is in the sub-regional context.
- 4.1.19 In light of these key issues, the following objective will be employed in order to guide the appraisal of the draft plan, and reasonable alternatives, under the ‘climate change adaptation’ topic heading, with a view to a suitably focused appraisal:

Avoid vulnerable uses in flood risk zones and plan strategically for flood risk to ensure flood risk is reduced across the Borough, taking into account the impacts of climate change. Also ensure the resilience of communities, the economy and infrastructure to wider climate change impacts, including overheating. Linked to biodiversity objectives, support restoration of natural processes that reduce flood risk to communities and avoid actions that impact the natural environment’s resilience.

5. Climate change mitigation

- 5.1.1 Set out below is an evidence review followed by a discussion of key issues and objectives. The evidence review introduces the range of greenhouse gas emissions locally, but particularly focuses on the built environment. Transport emissions are of equal or even greater importance, as a key issue for the local plan, but can be a focus more under the 'Transport' heading.

1.11 Evidence review

- 5.1.2 Set out below is a list of key evidence sources, and then a discussion under thematic headings.

Table 5.1 Key sources of evidence relating to the climate change mitigation

Document title	Date
International	
<u>UN Paris Agreement</u>	2016
National	
<u>Heat networks zoning: Guidance</u>	2024
<u>Climate Change Act 2008</u>	2008
<u>Net Zero Strategy: Build Back Greener</u>	2021
<u>National Infrastructure Assessment</u>	2021
<u>National Planning Policy Framework</u>	2023
<u>The Clean Air Strategy 2019</u>	2019
<u>The Clean Growth Strategy</u>	2017
<u>The UK Low Carbon Transition Plan: National strategy for climate and energy</u>	2009
<u>The UK Sixth Carbon Budget</u>	2020
Local	
<u>Net Zero Emissions Action Plan</u>	2023
<u>Swindon Borough Council Carbon Reduction Strategy 2020</u>	2020
<u>Climate Change in Swindon</u>	N.D.

Contribution to climate change

- 5.1.3 As shown in **Figure 5.1** below, the largest contributing sector to CO₂ emissions in Swindon is the transport sector. This sector has only seen a 16% change (decrease) in emissions between 2005 and 2021, with emissions peaking in 2016 at 466.8 kt CO₂. Comparatively, the commercial sector has seen a 79.2% change (decrease) in emissions during this time period, whilst the public sector has seen a 57.2% change (decrease); the industry sector a 49.5% change (decrease); and the domestic sector a 36.4% change (decrease). The decrease in emissions seen for the commercial sector has been so significant that it is now the fourth largest contributing sector, with industry now being the third largest.

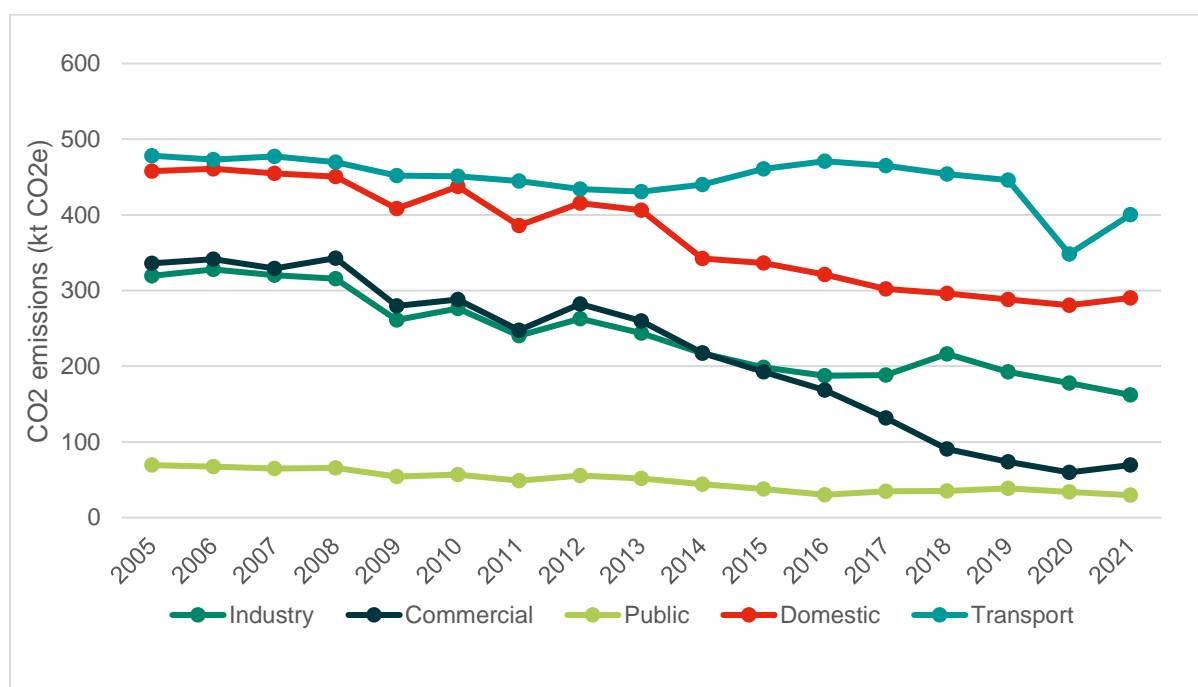


Figure 5.1 CO₂ emissions (kt CO₂) by sector in Swindon between 2005-2021

- 5.1.4 In Swindon, 42.6% of total emissions in 2021 came from transport. Notably, emissions from transport dipped significantly in 2020. However, this can be attributed to the lockdowns associated with the Covid-19 pandemic during this year. This resulted in the majority of the population working/ studying from home, except for essential workers. In 2021, this trend already began to reverse, with emissions from transport increasing from 2020.
- 5.1.5 The uptake of Ultra Low Emission Vehicles (ULEVs) will contribute positively towards the reduction of road transport related emissions. In line with assumptions made by the Department for Transport's 'Road to Zero' report (2018), it is assumed that ULEV uptake will increase rapidly in the coming decade and therefore, aside from HGVs, all vehicles could be ultra-low emission (powered either by hydrogen or electricity) by 2030.

5.1.6 Domestic CO₂ emissions are the second highest source of emissions in Swindon, representing 28% of total emissions in 2019. Looking at household consumption of gas and electricity, **Figure 5.2** and **Figure 5.3** show that rural areas tend to have higher rates of consumption than urban areas. Notably, the east of the Borough has a higher consumption of both gas and electricity than the west of the Borough. Also, the central and northeastern parts of Swindon, including Swindon Town and Highworth, have larger areas and more people off the gas network when compared to the rest of the Borough. As a result, electricity consumption is likely higher here.⁷

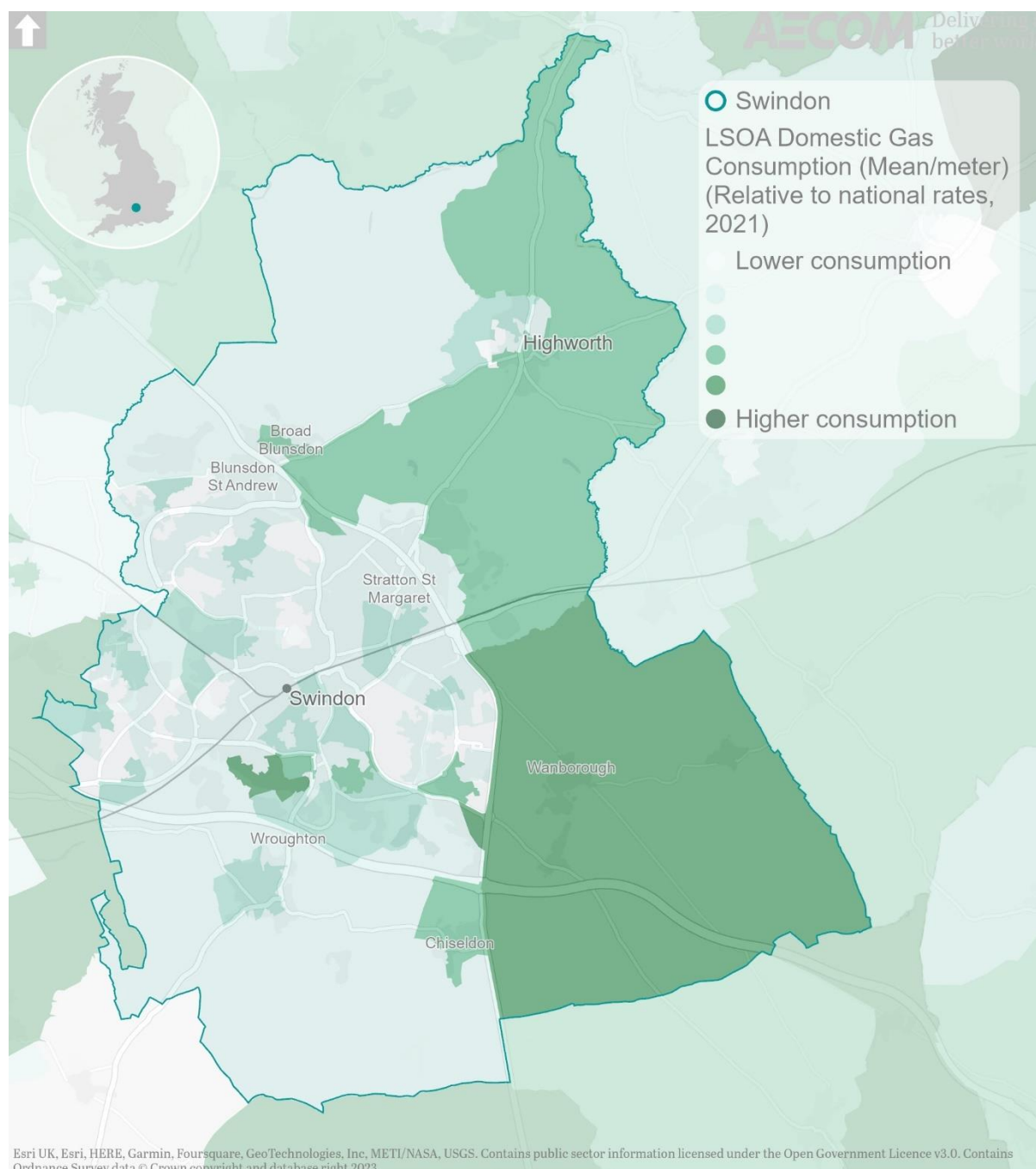


Figure 5.2 Map showing domestic gas consumption in Swindon

⁷ Non-Gas Map (no date): 'The non-gas map', [online] available to access via [this link](#)

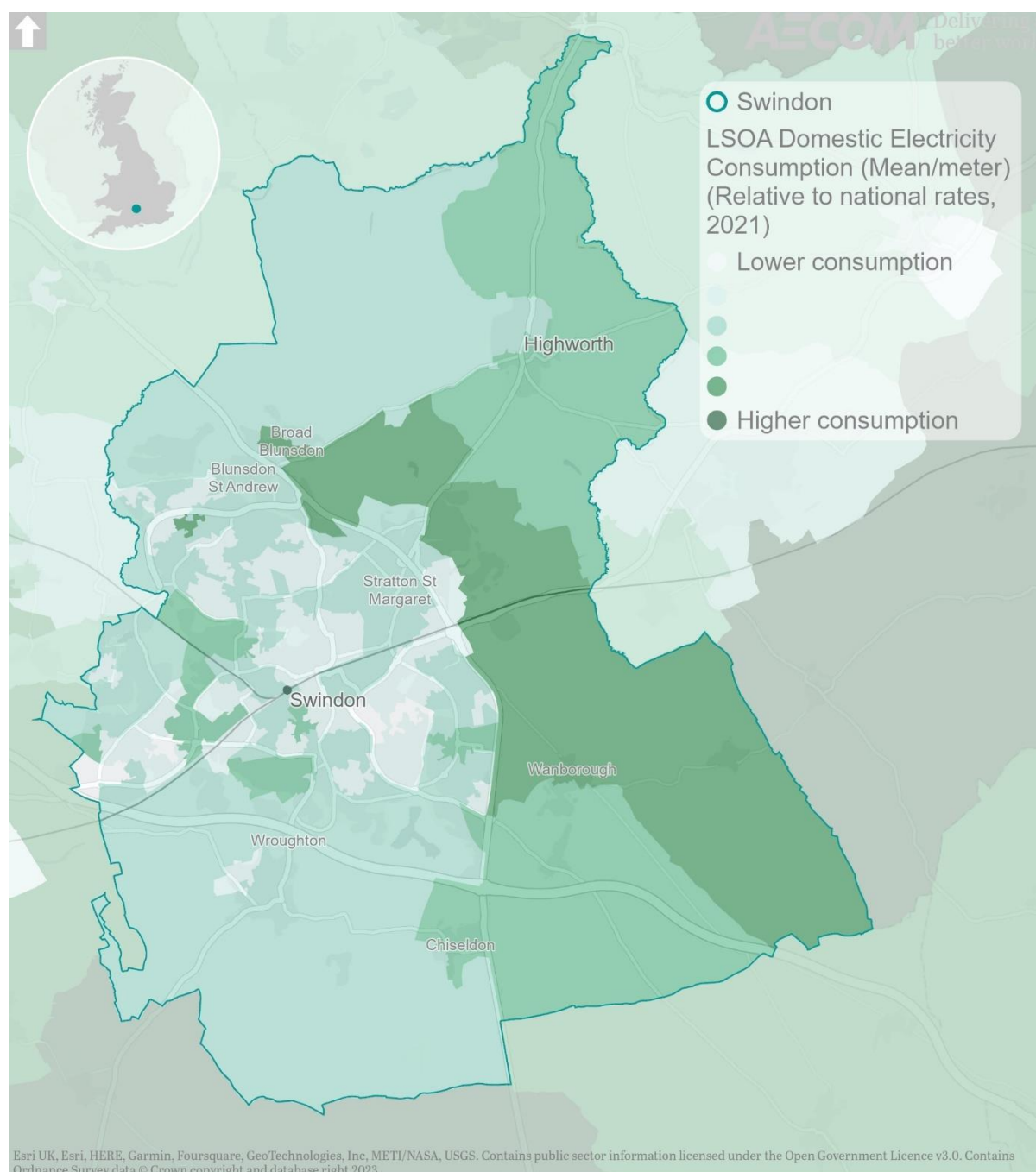


Figure 5.3 Map showing domestic electricity consumption in Swindon

- 5.1.7 As shown in **Figure 5.4** below, CO₂ emissions per capita in Swindon have remained broadly consistent with regional and national averages during the period 2005 to 2021. Swindon has seen a 53.2% decrease in emissions during this period, whilst the South West and England have experienced a 45.9% and 46.2% decrease respectively. In this respect, emissions in Swindon have reduced at a greater rate than the regional and national averages during this period.

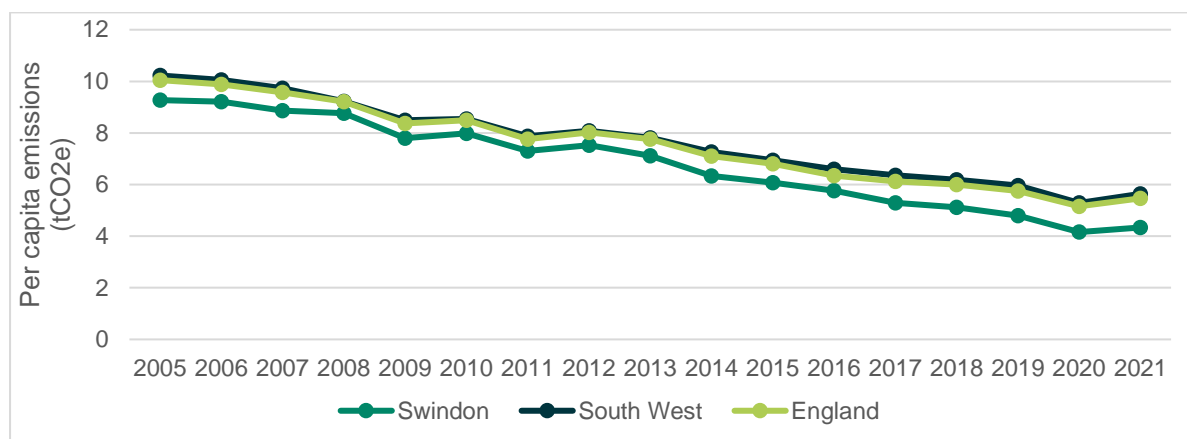


Figure 5.4 CO₂ emissions per capita (t) between 2005-2021 – a comparison of Swindon with the regional and national averages

- 5.1.8 CO₂ emissions per capita (t) in Swindon may continue to decrease with the adoption of further energy efficiency measures, renewable energy production and new technologies such as Electric Vehicles (EVs). Nevertheless, increases in the built footprint of Swindon would contribute to increases in the absolute levels of CO₂ emissions.
- 5.1.9 SBC are currently working on the latest version of their Net Zero Emissions Action Plan (2023), which sets out an updated set of actions to progress their ambitions to: A) achieve net zero in the SBC's organisational greenhouse gas emissions by 2030; and B) support the community on the journey to achieve net zero greenhouse gas emissions by 2050, which links to the UK-wide same date target set by the UK Government.

1.12 Key sustainability issues

5.1.10 Key issues and opportunities, which might be a focus of appraisal, include:

- **Per capita emissions** – refers to average emissions per person. This metric must naturally be a focus of plan-making, more so than total borough-wide emissions (because climate change is a global issue).
- **Transport emissions** – are justifiably a focus of attention as part of local plan-making nationally. Transport emissions are set to decrease, due to the national switch-over to EVs, but there are still many key opportunities to be realised through spatial strategy / site selection and policy. See further discussion below, under the 'Transport' heading.
- **Built environment emissions** – risk remaining stubbornly high, both nationally and locally, without policy intervention, notably in respect of use of natural gas for heating. The role of the New Local Plan should not be overstated, as it primarily deals with new development, i.e. has limited bearing on the key issue of 'retrofitting'. However, the New Local Plan nonetheless has a major role to play. Attention tends to focus on development management policy, but there is also a major role for spatial strategy/ site selection. Perhaps first and foremost, there is a need to support growth locations, sites and schemes with strong development viability, such that funds are available to direct towards decarbonisation measures. Also, and importantly, certain locations, sites

and schemes can be associated with a particular decarbonisation opportunity, e.g. in terms of heat networks, power generation and smart networks (likely with a central role for battery storage).

- **Embodied emissions** – as well as ‘operational’ built environment emissions, there is also a major focus nationally on ‘non-operational’ built environment emissions, particularly the embodied emissions within buildings (e.g. steel and concrete). There is an important role for applying ‘circular economy’ principles, e.g. re-using buildings ahead of demolition and designing buildings for adaptability, re-use and ease of recycling. Modern methods of construction (MMC), often involving modular building, are supported as a means of reducing embodied emissions, and MMC can also support operational efficiency, e.g. through good air tightness and innovative building ventilation.
- **EV charging infrastructure** – is also a key priority nationally and something that is highly relevant to the New Local Plan, linking to both transport and built environment emissions. One issue relates to capacity of the local power supply network, which can vary considerably, and serves as a reason to minimise strain on the national grid through decentralised power supply and smart networks where possible.
- **Carbon sequestration** – there is a need to take account of the full range of ecosystem services provided by areas of habitat that might be impacted by development. However, the role that habitats play in respect of carbon sequestration (the process of capturing and storing atmospheric carbon dioxide) will not necessarily be a primary consideration, particularly in more sensitive / valued landscapes. Whilst tree-planting and other habitat creation aimed at carbon sequestration is broadly supported, it is important not to focus overly on mitigating climate change in this way, at the risk of reducing focus on avoiding emissions in the first instance. There is also a need to ensure the right type of tree planting in the right locations, e.g. accounting for biodiversity and landscape objectives. Soil carbon storage is another consideration.
- **Larger than local issues** – climate change mitigation is the epitome of a ‘larger than local’ issue, in that the decisions taken through the New Local Plan will impact more widely. There is a need to align with latest national policy, for example the NPPF (2021) requirement to “*shape places in ways that contribute to radical reductions in greenhouse gas emissions*”. There is also a need to account for any larger-than-local strategy that aims to direct growth in order to minimise transport and / or built environment emissions, e.g. by supporting transport infrastructure.

5.1.11 In light of these key issues, the following objective will be employed in order to guide appraisal of the draft plan, and reasonable alternatives, under the ‘climate change mitigation’ topic, with a view to a suitably focused appraisal:

Contribute to radical reductions in per capita emissions from both transport and the built environment, in line with ‘net zero’ targets. This should include consideration of ‘net zero developments’, and strategic consideration of matters relating to renewable heat and electricity generation, transmission and storage. Also, support larger scale renewable energy schemes (e.g. solar farms) and carbon sequestration (e.g. new woodlands, carefully located).

6. Communities, equality and health

- 6.1.1 Set out below is an evidence review followed by a discussion of key issues and objectives. The evidence review begins with an analysis of census data and the Index of Multiple Deprivation, with a view to exploring the diversity of communities and outcomes experienced locally, before going on to consider the key issue of community infrastructure.

1.13 Evidence review

- 6.1.2 Set out below is a list of key evidence sources, and then a discussion under thematic headings.

Table 6.1 Key sources of evidence relating to the communities, equality and health topic

Document title	Date
National	
<u>A Green Future: Our 25 Year Plan to Improve the Environment</u>	2018
<u>Equalities Act 2010</u>	2010
<u>Green Infrastructure and the Urban Fringe: Learning lessons from the Countryside in and Around Towns programme</u>	2007
<u>Healthy and safe communities - Planning practice guidance</u>	2019
<u>Health Equity in England: The Marmot Review 10 Years On</u>	2020
<u>Healthy Lives, Healthy People: Our strategy for public health in England</u>	2010
<u>National Planning Policy Framework</u>	2023
<u>Natural England's Green Infrastructure Guidance</u>	2009
<u>Noise Policy Statement for England (NPSE)</u>	2010
<u>Planning for Sport Guidance</u>	2019
<u>Public Health England: Healthy High Streets</u>	2018
<u>Public Health England: Spatial Planning for Health</u>	2017
<u>Space for people: Targeting action for woodland access</u>	2017
<u>The Office for Health Improvement and Disparities (OHID) Public Health Outcomes Framework</u>	2021
Local	
<u>Joint Strategic Needs Assessment (JSNA) for Swindon 2021-2022</u>	2022
<u>Achieving a smokefree society: A Tobacco Control Strategy for Swindon</u>	2023
<u>Public Health Outcomes Framework - at a glance summary: Swindon</u>	2021
<u>Get Swindon Active Strategy</u>	2022
<u>A Green Infrastructure Strategy for Swindon 2010-2026</u>	2011

Document title	Date
<u>Bath and North East Somerset, Swindon and Wiltshire (BSW) NHS</u>	2023
<u>School Population Brochure</u>	2021
<u>Swindon Retail and Leisure Needs Assessment</u>	2017
<u>BSW Integrated Care System: Our Integrated Care Strategy 2023-2028</u>	2023

Census data

- 6.1.3 According to the 2021 Census, the **population** of Swindon increased by 11.6% between 2011 and 2021.⁸ This is higher than the overall increase for the South West (7.8%) and England (6.6%). Nearby areas like Vale of White Horse and Cotswold have seen their populations increase by around 14.8% and 9.6%, respectively, whilst Wiltshire saw smaller growth (8.4%).
- 6.1.4 In terms of **age structure**, Swindon broadly aligns with national averages, although Swindon notably has the highest proportion of children and young people when compared to other areas in the South West. Between 2011 and 2021, Swindon has seen an increase of 12.4% in children aged under 15 years, an increase of 8.0% in people aged 15 to 64 years, and an increase of 28.6% in people aged 65 years and over. Hence, Swindon is experiencing an ageing population, with implications for health services, plus there is a need to consider provision for specialist accommodation and associated locational criteria, e.g. parking and ease of access to local shops.

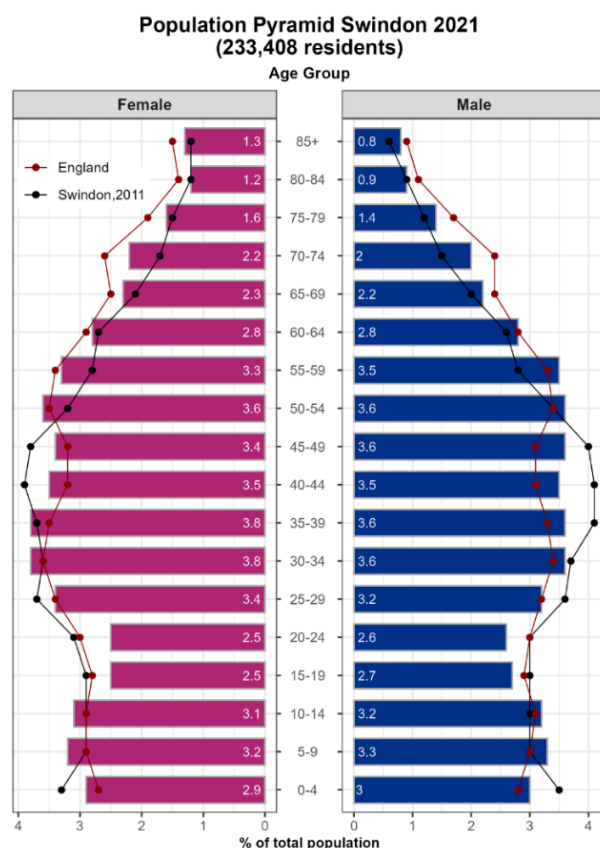


Figure 6.1: Population pyramid for Swindon

⁸ ONS (2022): 'How the population changed where you live: Census 2021', [online] available to access via [this link](#)

- 6.1.5 With regards to **gender**, the percentage of males in the Borough decreased by 0.3% between 2011 - 2021, whilst the percentage of females increased.⁹
- 6.1.6 With regards to **health**, according to the 2021 Census, 48.1% of all people in Swindon class themselves as being in 'very good' health; 35.2% in 'good' health; 12.3% in 'fair' health; 2.5% in 'bad' health; and 0.9% in 'very bad' health. Swindon performs slightly better than the wider South West region.

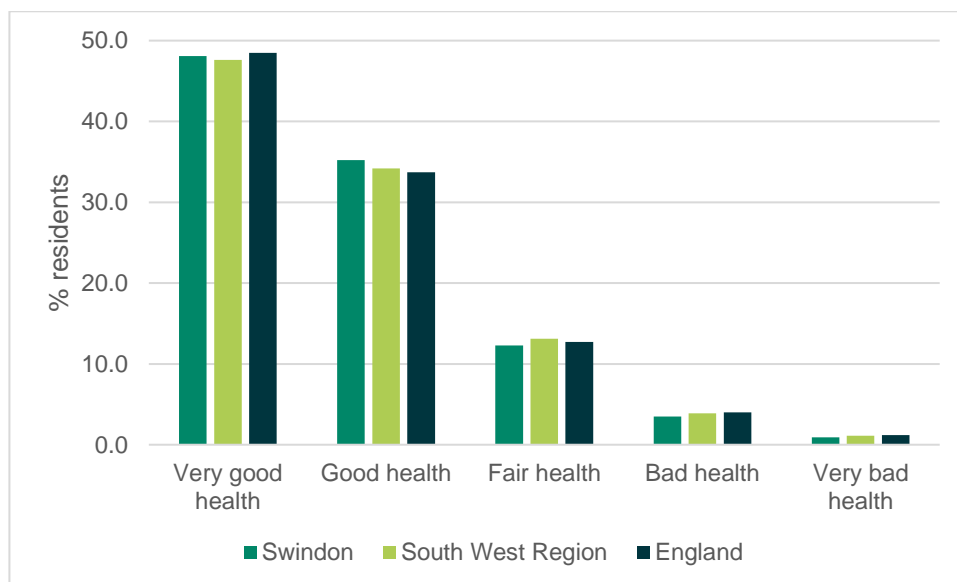


Figure 6.2: Health in Swindon versus regional and national trends.

- 6.1.7 Further information comes from the Public Health Profiles prepared by Public Health England. The latest summary report for was released in 2021;¹⁰ headline findings include:
- The life expectancy of women and men in Swindon is above the average for England, but the suicide rate – 11.5 per 100,000 people – is worse.
 - The percentage of adults (aged 18 and over) classified as overweight or obese in Swindon (69.1%) is above the average for England (63.8%).
 - The estimated dementia diagnosis rate (aged 65 and over) in Swindon is lower (52.4%) than the average for England (62%).
 - Deprivation scores reflect the findings of 39 indicators across deprivation domains (as discussed below). Swindon's overall deprivation score is 18.6, which is lower than the average for England (21.7).
- 6.1.8 Moving on to **education**, data from the 2021 Census highlights that 45.5% of the residents hold a Level 1, 2 or 3 qualification, 27.9% hold a Level 4 qualification or above, 17.3% hold no qualifications, 5.9% hold an apprenticeship, and 3.4% hold other qualifications. A comparison to 2011 Census data is presented below in **Figure 6.3**.

⁹ ONS (2021): 'Census maps – Sex', [online] available to access via [this link](#)

¹⁰ Office for Health Improvement & Disparities (2021): 'Local Authority Health Profiles', [online] available to access via [this link](#)

- 6.1.9 Swindon's Economic Strategy highlights that the Borough has had decades of very low participation in Higher Education (HE) with the 10th lowest participation rate in the country amongst young people. Compared to national averages, Swindon residents are more likely to have NVQ Levels 1 and 2 qualifications and are less likely to have university Level 4.
- 6.1.10 Swindon's Economic Strategy also outlines that Swindon performs at close to the national average for sustained learning destinations past age 16. The Borough has seen strong growth in apprenticeships from 1,560 to 1,920 between 2013 and 2016. In addition, Swindon imports 4,000 graduates from neighbouring authorities to meet the needs of its businesses. Notably, five of the top ten UK universities are within an hour of Swindon.

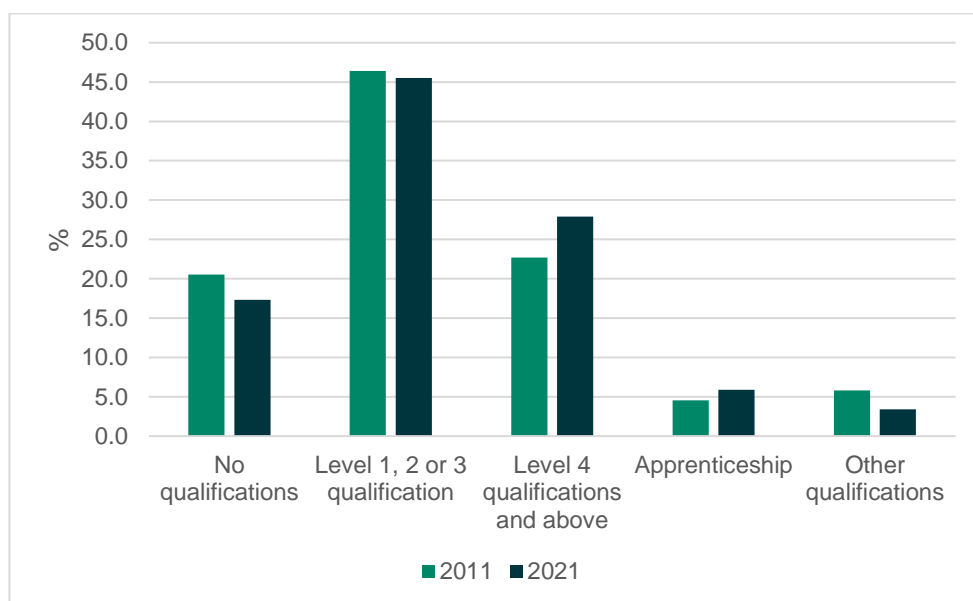


Figure 6.3: Highest level of qualification in 2011 and 2021

- 6.1.11 With regards to **economic activity**, 66.2% of Swindon's population (aged 16 years and over) are economically active; of this population, 63% are in employment, whilst 3.2% are unemployed. The remaining 33.8% are economically inactive. This is broadly in line with national averages.
- 6.1.12 Finally, with regards to **deprivation**,¹¹ the census categorises households based on the following characteristics.
- **Education** – A household is classified as deprived if no one has at least level 2 education and no one aged 16 to 18 years is a full-time student.
 - **Employment** – A household is classified as deprived if any member, not a full-time student, is either unemployed or economically inactive due to long-term sickness or disability.
 - **Health** – A household is classified as deprived if any person has general health that is bad or very bad or is identified as disabled.
 - **Housing** – A household is classified as deprived if accommodation is overcrowded, a shared dwelling, or has no central heating.

¹¹ www.ons.gov.uk/census/census2021dictionary/variablesbytopic/demographyvariables/census2021/householddeprivation

6.1.13 Almost half (49.3%) of households locally are not deprived in any dimension, which aligns with the national average (48.4%). Of the remaining households, 33.8% are deprived in one dimension; 13.4% are deprived in two dimensions; 3.3% are deprived in three dimensions; and 0.2% are deprived in four dimensions, also broadly aligning with the national picture.

Index of Multiple Deprivation

6.1.14 The Index of Multiple Deprivation (IMD)¹² is an overall relative measure of deprivation constructed by combining seven domains of deprivation, as described below. The seven deprivation domains are as follows:

- **Income:** The proportion of the population experiencing deprivation relating to low income, including those individuals that are out-of-work and those that are in work but who have low earnings (satisfying the respective means tests).
- **Employment:** The proportion of the working-age population in an area involuntarily excluded from the labour market, including those individuals who would like to work but are unable to do so due to poor employment opportunities, sickness or disability, or caring responsibilities.
- **Education, Skills and Training:** The lack of attainment and skills.
- **Health Deprivation and Disability:** The risk of premature death and the impairment of quality of life through poor physical or mental health. Morbidity, disability, and premature mortality are also considered, excluding the aspects of behaviour or environment that may be predictive of future health deprivation.
- **Crime:** The risk of personal and material victimisation at local level.
- **Barriers to Housing and Services:** The physical and financial accessibility of housing and local services, with indicators categorised in two sub-domains.
 - ‘Geographical Barriers’: relating to the physical proximity of services
 - ‘Wider Barriers’: relating to access to housing, such as affordability.
- **Living Environment Deprivation:** The quality of the local environment, with indicators falling categorised in two sub-domains.
 - ‘Indoors Living Environment’ measures the quality of housing.
 - ‘Outdoors Living Environment’ measures air quality and road traffic accidents.
- Two supplementary indices (subsets of the Income deprivation domains), are also included:
 - **Income Deprivation Affecting Children Index:** The proportion of all children aged 0 to 15 living in income deprived families.
 - **Income Deprivation Affecting Older People Index:** The proportion of all those aged 60 or over who experience income deprivation.

¹² DCLG (2019): Index of Multiple Deprivation, [online interactive map] available to access [here](#)

6.1.15 Lower Super Output Areas (LSOAs) are a geographic hierarchy designed to improve the reporting of small area statistics in England and Wales. They are standardized geographies designed to be as consistent in population as possible, with each LSOA containing approximately 1,000 to 1,500 people. There are 32,844 LSOAs in England and Wales, and the most deprived LSOA is ranked 1.

Table 6.2: The ranking of Swindon wards based on their average IMD 2019 rank

Ward	Average Rank
Walcot and Park North	7556.0
Gorsehill and Pinehurst	8737.9
Liden, Eldene and Park South	9778.0
Penhill and Upper Stratton	10,603.5
Rodbourne Cheney	12023.9
Central	12392.2
Mannington and Western	15784.7
Lydiard and Freshbrook	18236.2
Eastcott	18867.5
Covingham and Dorcan	20597.10
Blunsdon and Highworth	21257.1
St Margaret and South Marston	21451.2
Wroughton and Wichelstowe	22012.1
Old Town	25197.6
Haydon Wick	25842.6
Shaw	26033.3
Lawn and Chiseldon	26370.2
St Andrews	26774.8
Priory Vale	27471.8
Ridgeway	28628.4

6.1.16 **Figure 6.4** overleaf illustrates the overall level of deprivation across Swindon (organised by LSOA, based on data from 2019). The ranking of the Swindon wards based on the overall IMD is presented in the Table 6.2.

6.1.17 As the overall level of deprivation data is based on an average across the seven deprivation domains, it is also useful to explore the data for some of the individual domains. **Figure 6.5** overleaf illustrates the level of deprivation in Swindon based on the 'Barriers to Housing and Services' domain. This is relatively high across Swindon, particularly in the more rural parts of the Borough to the north and east of Swindon Town. However, only one LSOA – Swindon 012F within Mannington and Western ward – is

amongst the 10% most deprived neighbourhoods in the country with respect to this domain. This implies that the physical and financial accessibility of housing and local services is poorest in these areas.

- 6.1.18 **Figure 6.6** overleaf illustrates the level of deprivation in Swindon based on the 'Living Environment Deprivation' domain. Whilst this is relatively low across the Borough, especially when compared to the 'Barriers to Housing and Services' domain, there are still pockets of deprivation. These are concentrated in Swindon Town, with three LSOAs amongst the 10% most deprived neighbourhoods in the country with respect to this domain. This implies that the quality of the local environment is poorest in these areas. This could be related to either the 'indoors' living environment, which measures the quality of housing, or the 'outdoors' living environment, which measures air quality and road traffic accidents.
- 6.1.19 A final dataset to consider is the ONS's **Socio-economic Classification** (NS-SeC), which indicates a person's socio-economic position based on their occupation and other job characteristics. According to the 2021 Census, in Swindon the NS-SeC breakdown of people aged 16 years and over is as follows (compared to the national average):

Table 6.3: Socio-economic classification in Swindon versus national average

NS-SeC	Swindon	National average
1, 2 and 3 – higher managerial, administrative and professional occupations	12.7%	13.2%
4, 5 and 6 – lower managerial, administrative and professional occupations	19%	19.9%
7 – intermediate occupations	13%	11.4%
8 and 9 – small employers and own account workers	9%	10.6%
10 and 11 – lower supervisory and technical occupations	6.1%	5.3%
12 – semi-routine occupations	13%	11.3%
13 – routine occupations	15%	12%
14.1 and 14.2 – never worked and long-term unemployed	7.1%	8.5%
15 – full time students	5.1%	7.7%

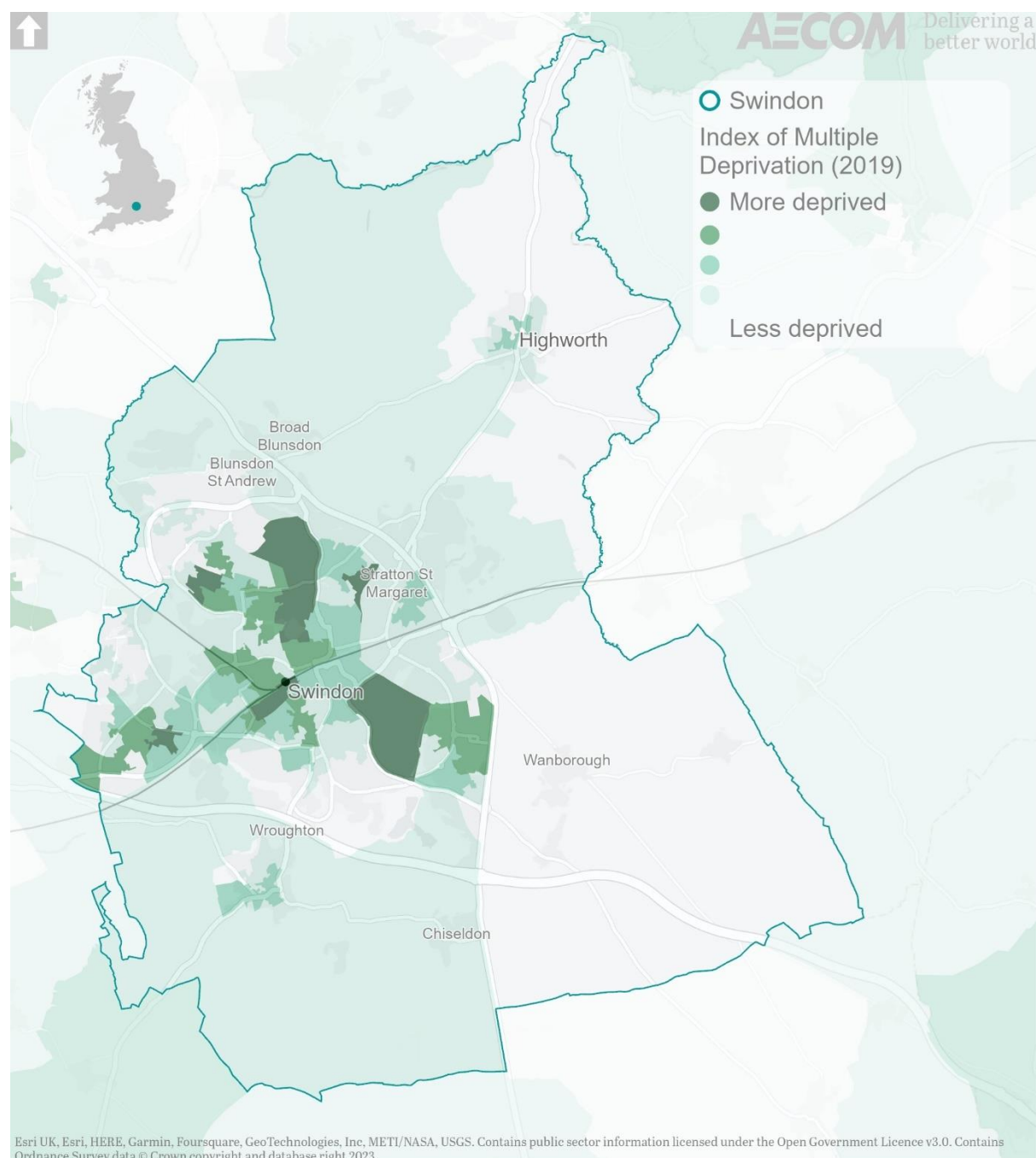


Figure 6.4 Overall deprivation level (Index of Multiple Deprivation, 2019) in Swindon by LSOA

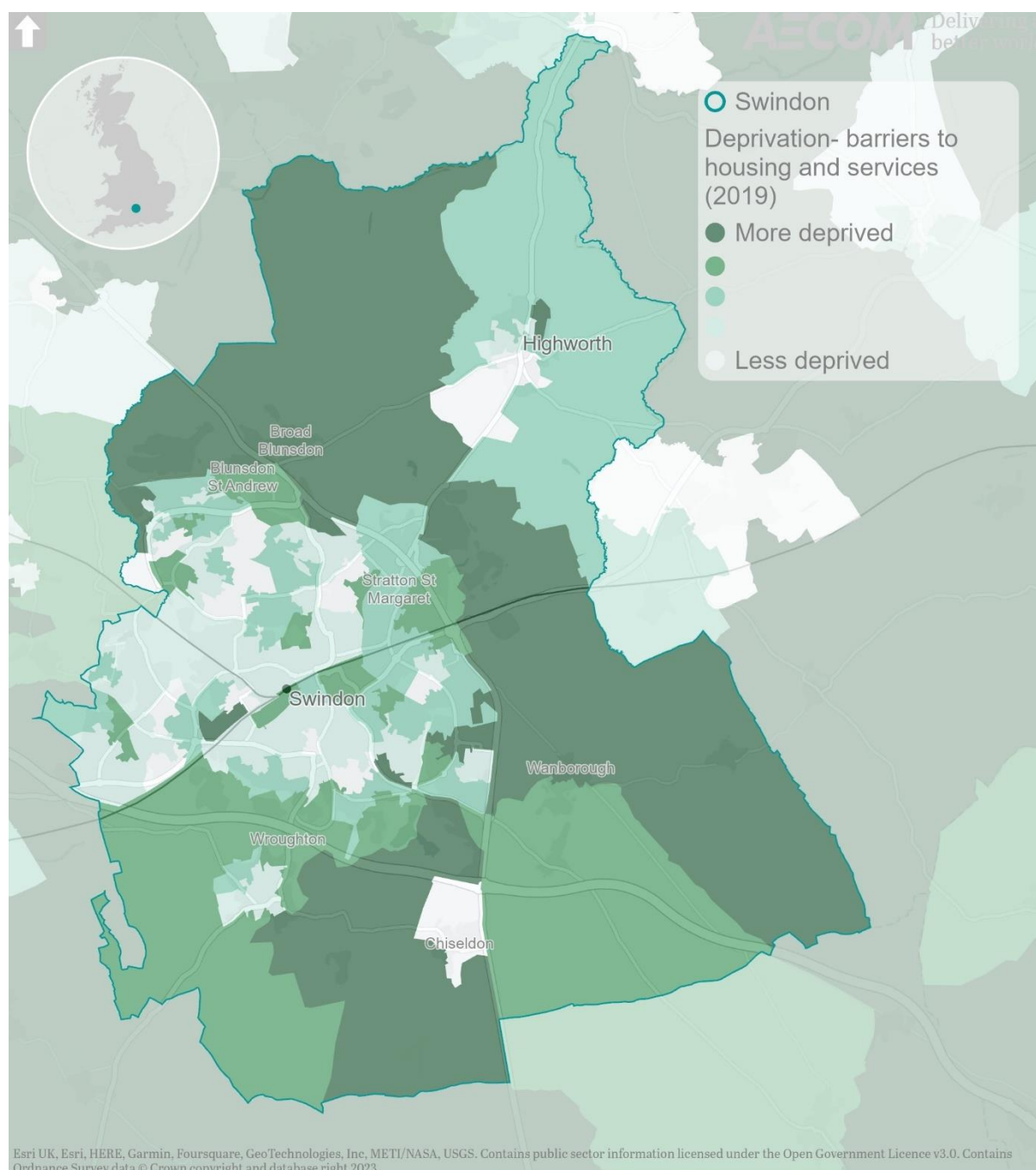


Figure 6.5 Deprivation in terms of the ‘Barriers to Housing and Services’ domain in Swindon by LSOA

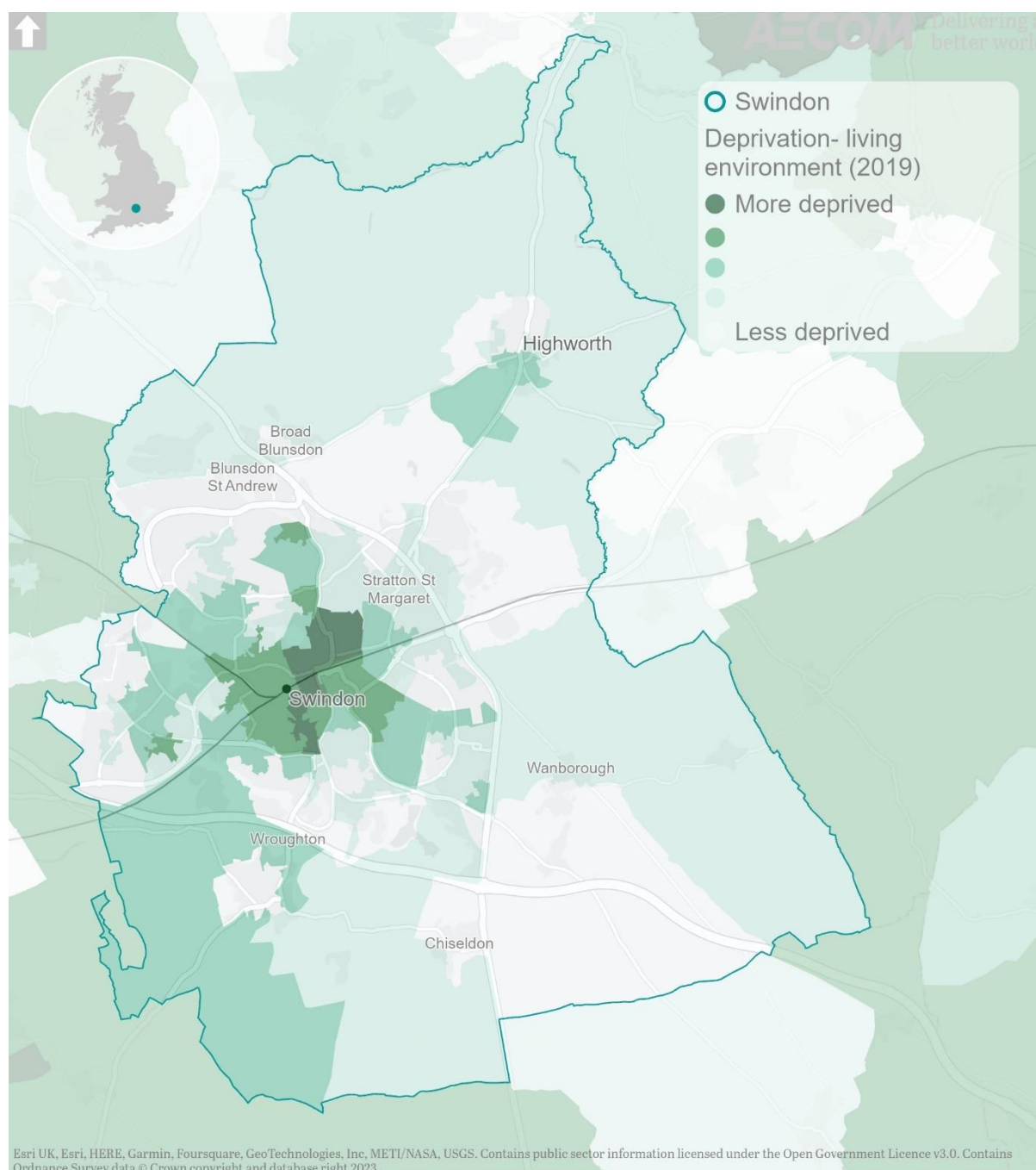


Figure 6.6 Deprivation in terms of the ‘Living Environment Deprivation’ domain in Swindon by LSOA

Community infrastructure

- 6.1.20 Beginning with **schools**, according to SBC’s School Population Brochure (2021), there are 22,783 children in primary school (20,863 excluding nursery) and 28,516 children/ teenagers in secondary school in Swindon.
- 6.1.21 Regarding the number of schools in the Borough, there are three infant schools, three junior schools, 17 primary schools, 55 academies, seven special schools, and one Pupil Referral Unit (PRU). This brings the total number of schools in Swindon to 86. The majority of schools in the Borough are found in Swindon Town (as shown in **Figure 6.7**).

6.1.22 Notably, 11 of the 86 schools in the Borough currently have a 'requires improvement' or 'inadequate' Ofsted rating. Of these 11 schools, 10 have a 'requires improvement' Ofsted rating. These are:

- Bishopstone Church of England Primary School – primary school located in Bishopstone.
- Green Labyrinth – independent learning provider in the centre of Swindon Town.
- Highworth Warneford School – secondary school in Highworth.
- Holy Cross Catholic Primary School – primary school in the centre of Swindon Town.
- Holy Family Catholic Primary School – primary school in the east of Swindon Town.
- Lawn Manor Academy – secondary school in the southeast of Swindon Town.
- New College Swindon – general further education and tertiary in the east of Swindon Town.
- Seven Fields Primary School – primary school in the north of Swindon Town.
- The Chalet School – special school in the southeast of Swindon Town.
- UTC Swindon – secondary school in the centre of Swindon Town.

6.1.23 The one school with an 'inadequate' Ofsted rating is:

- Maranatha Christian School – independent school in Sevenhampton.

6.1.24 There are a number of further education facilities within in the Borough, including UTC Swindon, and New College Swindon, which 'requires improvement' according to Ofsted. Whilst many teenagers across the Borough chose to attend New College Swindon to complete their A levels or apprenticeships, Cirencester College, which is a 16 plus school in Gloucestershire, is also a popular choice, particularly with teenagers in the northern part of the Borough. Notably, Highworth and the surrounding villages in the northern part of the Borough do not have immediate access to a school with a sixth form, nor a 16 plus school.

6.1.25 With regards to **libraries**, Swindon Library and Information Service provide Swindon's statutory public library service for SBC. This service is delivered through five core libraries: Central Library (with Local Studies collection), Highworth Library, North Swindon Library, Park Library and West Swindon Library.¹³ The Service also supports eight community libraries, which do not form part of the statutory service.

¹³ SBC (no date): 'Library locations and opening hours', [online] available to access via [this link](#)

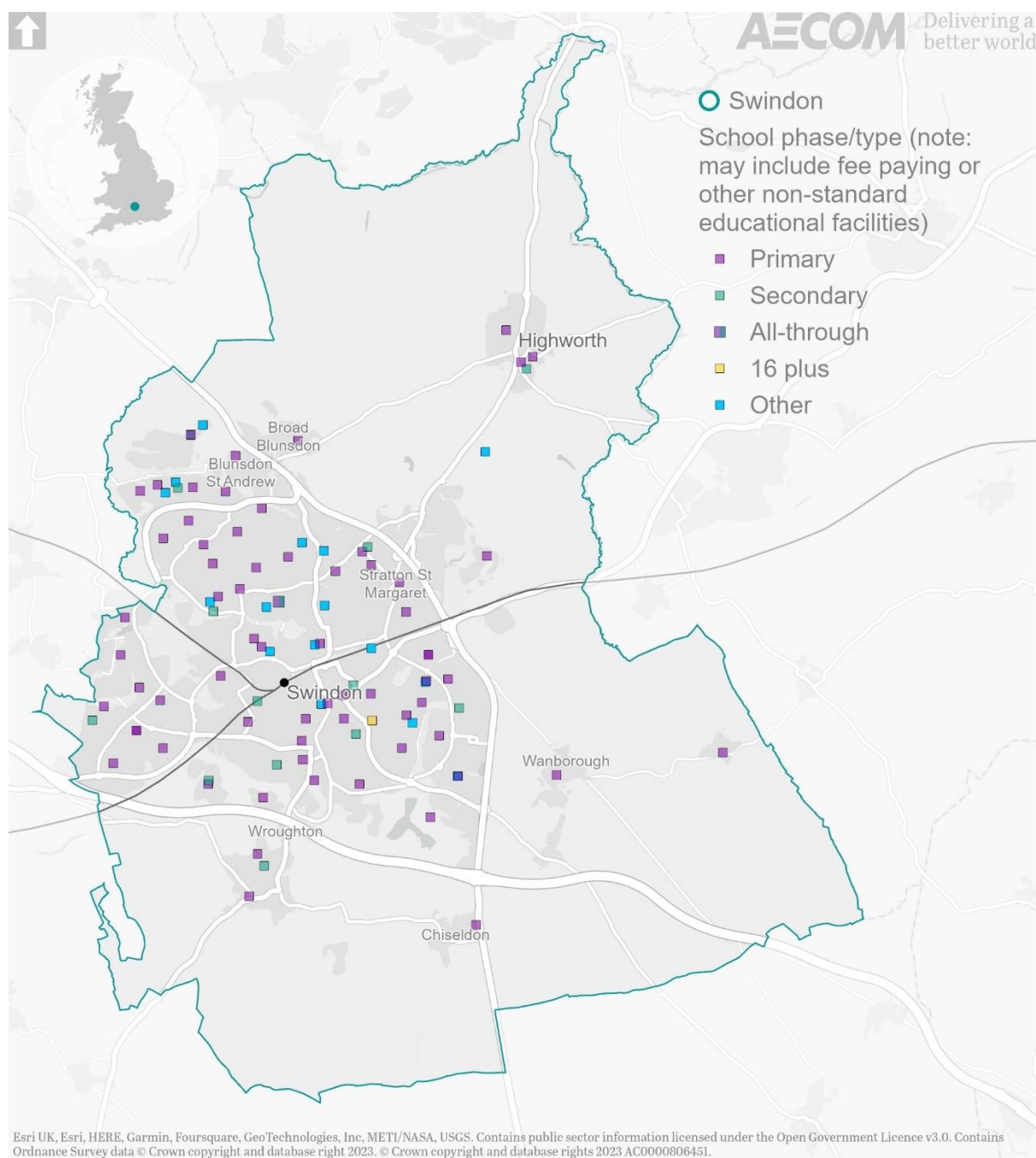


Figure 6.7 Educational facilities in Swindon

- 6.1.26 With regards to health services and facilities, Great Western Hospitals NHS Foundation Trust provide a range of healthcare services across Swindon, including community services, day care services, emergency care, surgery, diagnostics, paediatrics, maternity, and other patient services.¹⁴ The health services in Swindon are largely concentrated in Swindon and Highworth, though it is noted a new facility is being developed in Wichelstowe.
- 6.1.27 The Trust's Strategy (2019-2024)¹⁵ outlines that Swindon remains a challenged health system that has experienced significant increases in acute admissions, with Emergency Department (ED) attendances in December 2018 the highest number of December attendances for four years.
- 6.1.28 As the population of Swindon continues to age, this could potentially place an increasing strain on health services in the Borough.
- 6.1.29 With regards to **leisure facilities** Swindon is home to several leisure centres and parks and open spaces, including, but not limited to, Coate Water Country Park, Show Forest Park, Stanton Park, and Town Gardens.¹⁶
- 6.1.30 It is recognised that leisure centres face a number of challenges, including in respect of energy bills and other increasing running costs. SBC is currently prioritising the reopening of the Oasis Leisure Centre, which has been closed since November 2020.¹⁷ SBC is also working to refurbish Health Hydro, in order to enhance leisure and swim experiences. Work on this began in April 2023 and is anticipated to continue for 18 months.¹⁸ The Council is currently updating the Integrated Sports Assessment for the new Local Plan which comprises of an update to the PPS, Indoor Facilities Assessment and Spatial Strategy.

Green and blue infrastructure

- 6.1.31 A final matter for consideration under this 'Communities, health and equalities' topic heading is green and blue infrastructure, albeit this is clearly a cross-cutting subject also relevant to discussion under biodiversity and other topic headings. In Swindon, there is an extensive green and blue infrastructure network, and open space, greenspace and/or accessible woodland is shown the figure overleaf. The Borough has an extensive network of public rights of way, helping to better connect communities to green infrastructure. Notable green and blue infrastructure networks include:
- The Ridgeway National trail – this National Trail passes through a remote part of southern central England between Avebury (Wiltshire) and Ivinghoe Beacon (Buckinghamshire). A small part of the trail passes through the south-eastern part of Swindon, in the North Wessex Downs Area of Outstanding Natural Beauty (AONB). The trail is characterised by wide, open views of rolling chalk down land and is in proximity to many archaeological monuments.

¹⁴ Great Western Hospitals NHS Foundation Trust (no date): 'The services we offer', [online] available to access via [this link](#)

¹⁵ Great Western Hospitals NHS Foundation Trust (2019): 'Our Strategy 2019-2023', [online] available to access via [this link](#)

¹⁶ SBC (no date): 'Parks and open spaces', [online] available to access via [this link](#)

¹⁷ BBC (2023): 'Swindon Borough Council to prioritise Oasis reopening', [online] available to access via [this link](#)

¹⁸ Better (2023): 'Health Hydro', [online] available to access via [this link](#)

- The Wilts & Berks Canal – in Swindon, much of the original canal route has been built over since it was formally abandoned in 1914.¹⁹ However, there is still evidence of its existence in Coate Water and from King's Hill to Wichelstowe. There is a footpath along the old route through town from Kingshill Road along Canal Walk, Fleming Way, across the Magic Roundabout and on to Greenbridge and Stratton. The route of the North Wilts Canal goes under the railway just west of the station along the back of the Oasis and through Cheney Manor. The partially restored canal forms the Western edge of Mouldon Hill Country Park.

6.1.32 **Figure 6.8** overleaf shows that access to open space, greenspace and/or accessible woodland is greatest in and around Swindon Town and Highworth, and to a lesser degree, Wroughton and Wanborough. In addition, the strategic green corridors provide links between these areas of open space, greenspace and/or accessible woodland.

6.1.33 Local Nature Reserves (LNRs) are a statutory designation made under Section 21 of the National Parks and Access to the Countryside Act 1949 by principal local authorities. They are places with wildlife or geological features that are of special interest locally, offering people opportunities to study or learn about nature or simply enjoy it. Several LNRs fall within the Borough (shown in **Figure 6.8** overleaf), which are:

- Barbury Castle LNR – this site is located in the southern part of Swindon, in Wroughton Parish, to the south of Overtown.
- Coate Water LNR – this site is located in the central southern part of Swindon, in Central Swindon South Parish, to the south of Marlborough Road and north of the M4.
- Quarry Wildlife Garden LNR – this site is located in the central western part of Swindon, in Central Swindon South Parish, to the north of Westlecot Road.
- Radnor Street Cemetery LNR – this site is located in the central western part of Swindon, in Central Swindon South Parish, to the north of Kingshill Road.
- Rushey Platt Canalside Park LNR – this site is located in the central western part of Swindon, in Central Swindon South Parish, to the south of Wootton Bassett Road.
- Seven Fields LNR – this site is located in the central western part of Swindon, in Haydon Wick Parish, to the north of Whitworth Road (B4006).
- Stanton Park LNR – this site is located in the central northern part of Swindon, in Stanton Fitzwarren Parish, to the west of Highworth Road (A361).

¹⁹ Wilts & Berks Canal Trust (2021): 'Swindon Branch', [online] available to access via [this link](#)

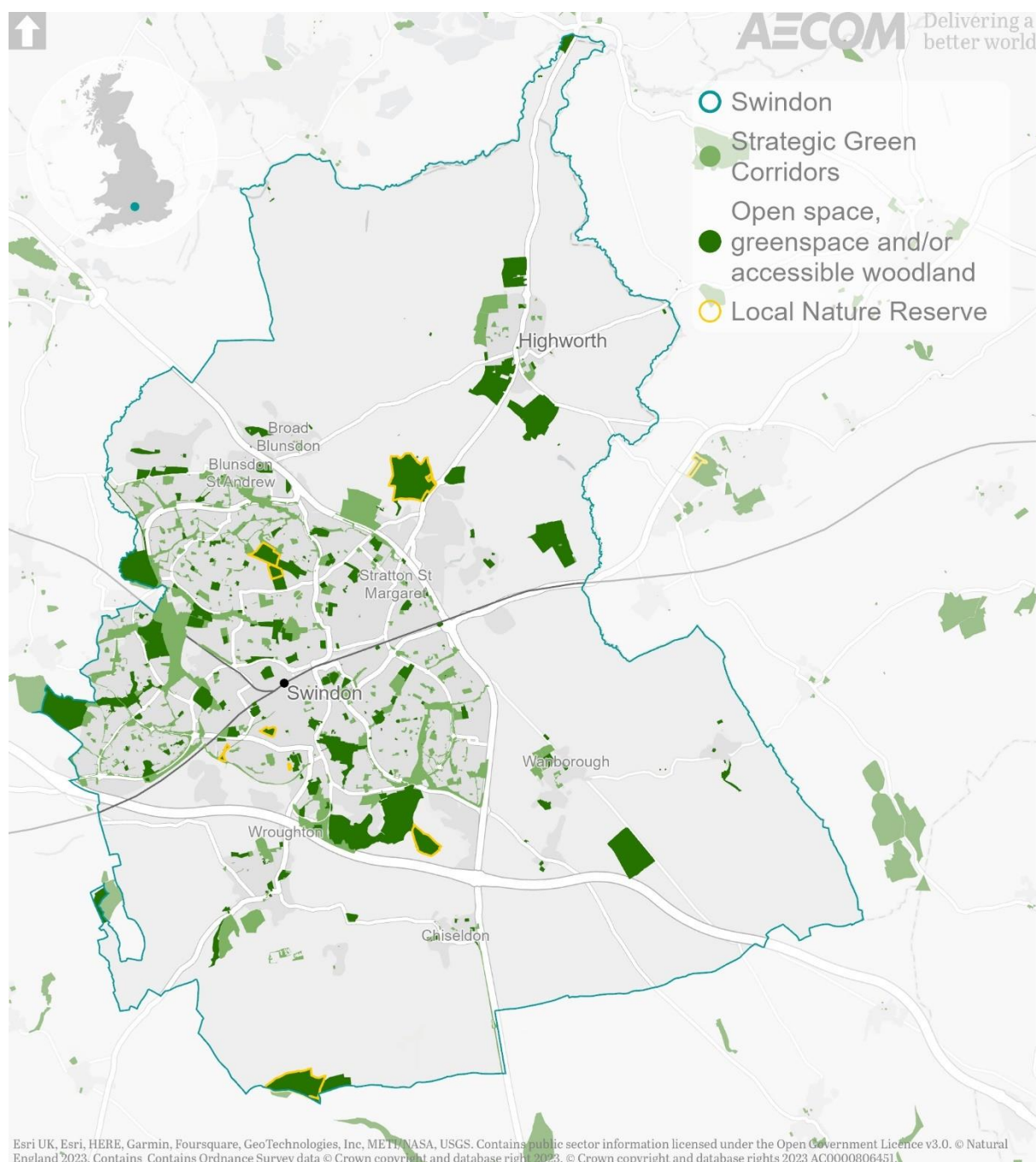


Figure 6.8 Formal green space, local nature reserves and open access land

1.14 Key sustainability issues

6.1.34 Key issues and opportunities, which might be a focus of appraisal, include:

- **Community infrastructure** – there are many inter-related ‘communities’ issues and opportunities of relevance to the New Local Plan. However, a headline consideration relates to ensuring that new and existing communities have good access to community infrastructure (with capacity), including schools, health infrastructure and facilities for sports and recreation. As part of this, there is a need to avoid creating or exacerbating capacity issues and direct growth so as to deliver new or upgraded community infrastructure, including in response to existing issues/ opportunities (such that there is ‘planning gain’). For example, the New Local Plan could be an important vehicle for exploring the delivery of strategic healthcare hubs or delivering one or more new secondary schools to address an existing shortfall of school places within a local area. Another issue can also be ensuring community infrastructure has sufficient patronage/ use to remain viable.
- **Relative deprivation** – deprivation in Swindon is lower than the national average; however, several pockets of deprivation exist, e.g. within Penhill, Upper Stratton, Pinehurst, Walcot, Park North and Park South. There are also localised issues of rural deprivation, typically linked to poor accessibility. The local plan can direct growth so as to deliver new infrastructure and support regeneration initiatives to address issues.
- **Inequalities** – there is a need to consider communities, or sectors of the population, with protected characteristics under the Equality Act (2010), although it can be challenging to identify strategic spatial trends. Key issues and opportunities for the local plan include access to employment, access to community and transport infrastructure²⁰ and ensuring a safe and inclusive urban realm, including walking routes.²¹ Town centre regeneration is clearly a priority issue.
- **Health inequalities** – the characteristics and factors that contribute to health inequalities are: **1)** protected characteristics (9 in total); **2)** socio-economic status and deprivation (this includes the impact of wider determinants such as education, low income, occupation, unemployment and housing); **3)** inclusion health (socially excluded, stigma, not captured in databases) and vulnerable groups (migrants, Gypsy, Roma, homeless, offenders, sex workers); and **4)** geography: built and natural environment, population composition, urban/rural distinction.

The causes of health inequalities are: **1)** Wider determinants of health (see above); **2)** Physiological impacts (e.g. blood pressure, anxiety/depression); **3)** Health-related behaviours (smoking, diet, alcohol, physical activity); and **4)** Psychosocial factors (isolation, social networks/support, self-esteem / self-worth).²²

²⁰ For example see this report on transport and inequality:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/953951/Transport_and_inequality_report_document.pdf

²¹ See <https://sustainablemobility.iclei.org/rethinking-public-transportation-for-womens-safety-and-security>

²² See <https://www.gov.uk/government/publications/health-disparities-and-health-inequalities-applying-all-our-health/health-disparities-and-health-inequalities-applying-all-our-health>

- **Green and blue infrastructure (GBI)** – is a cross-cutting issue that is highly relevant to the New Local Plan. As well as delivering high quality GBI within sites, development can deliver or facilitate strategic offsite enhancements. For example, developer funding might be directed towards formal facilities (e.g. parks, sports pitches) or improved access to the countryside, including improved access to river/ stream corridors, woodlands and potentially historic parklands. This is already apparent in the new development at Wichelstowe, where the Wilts & Berks Canal has been bought back to life as a key piece of blue infrastructure with pedestrian access²³. There can also be the potential to achieve large-scale ambitions, such as new country or even regional parks.
- **Town centre regeneration** – is a focus of discussion below, under the ‘Economy’ heading, but is also highly relevant here. There is a need to consider the possibility of reimagining the role of town centres, in light of changing retail trends and also the experience of the Covid-19 pandemic. In Swindon it is highly notable that 54 shops stood empty in 2021²⁴, with Marks & Spencer being the most recent shop to announce its closure. Boosting the number of people living in town centres is an option to consider, but there is a need to strike a balance with other town centre uses, plus higher densities can give rise to challenges and also challenging development viability can limit potential to deliver affordable housing. Town centre regeneration can also give rise to a decarbonisation opportunity, e.g. a fifth-generation heat network.
- **Environmental health and safety** – there is a need to address traffic congestion and support road safety, for motorists, cyclists, pedestrians and other highway users. This is an issue for both urban and rural areas, for example, ‘rat running’ along rural lanes and through village centres can be an issue. A related issue is noise pollution, with a need to consider the merits of new homes in close proximity to the strategic road network and railway lines, e.g. given risks of impacts on childhood development. However, there is often good potential to mitigate noise pollution through barriers and design measures.
- **Existing communities** – housing development is often resisted by existing communities due to the perceived impacts of development. There is a need to minimise the impacts of development on existing communities; however, there are also arguments for directing growth to the most accessible locations (e.g. in terms of services/ facilities and employment) and where there is existing infrastructure with capacity. Key to minimising concerns is supporting high quality development, in terms of such matters as design and infrastructure delivery. This can have cost/ viability implications, which again serves to highlight viability as a strategic consideration for the New Local Plan.

²³ Wichelstowe (no date): ‘Canal’, [online] available to access via [this link](#)

²⁴ Swindon Advertiser (2021): ‘Pictured: All 54 shops standing empty in Swindon’s town centre’, [online] available to access via [this link](#)

- **Larger than local issues** – Swindon serves a rural hinterland that extends into neighbouring local authority areas. Also, an important consideration is the close links between Swindon and the town of Royal Wootton Bassett (Wiltshire); also Cricklade (Wiltshire), and Lechlade (Gloucestershire).

6.1.35 In light of the discussion above, it is considered appropriate to progress the following three topics / objectives to the SA framework:

- **Accessibility - Support accessibility to community infrastructure, including by delivering infrastructure enhancements - including strategic infrastructure, e.g. new schools and health hubs - that deliver benefits to existing as well as new communities ('planning gain').**
- **Communities and health - Support wide-ranging objectives (beyond community infrastructure-related; see above), including addressing known issues in respect of determinants of health. Amongst other things, support: active travel; access to green/blue infrastructure, sports pitches/facilities and other recreational facilities; a hierarchy of vibrant and resilient centres that serve a range of functions; reducing issues of relative deprivation, including through targeted regeneration initiatives (also see discussion below under 'Equalities'); and a strategic approach to masterplanning and design e.g. use of agreed design codes.**
- **Equalities - Plan for Swindon's diverse communities and, in particular, reduce inequality experienced by individuals and groups with protected characteristics. Address relative deprivation as it can be a proxy for equalities issues and given good understanding of how relative deprivation varies spatially across the Borough at strategic scales most relevant to preparation of the local plan. Ensure ongoing evidence gathering around key strategic issues / opportunities.**

7. Economy and employment

- 7.1.1 Set out below is an evidence review followed by a discussion of key issues and objectives. The evidence review provides an overview of the local economy before discussing economic strategy.

1.15 Evidence review

- 7.1.2 Set out below is a list of key evidence sources, and then a discussion under thematic headings.

Table 7.1 Key sources of evidence relating to the economy and employment

Document title	Date
National	
National Planning Policy Framework	2023
Local	
Swindon Employment Land Review	2017
Swindon and Wiltshire Delivery Plan for Sustainable Economic Growth 2022-23	2022
Swindon and Wiltshire Strategic Economic Plan	2016
Swindon Economic Strategy to 2026	2016
Swindon and Wiltshire Local Economic Assessment	2023

Overview of the local economy

- 7.1.3 The median gross annual salary in Swindon in 2022 was £34,545. This is an increase of 8.7% from 2020. The national average salary in 2022 was £33,197, whilst the average for the South West region was £31,339.
- 7.1.4 Swindon has particular strengths in advanced manufacturing, together with financial and professional services and digital sectors. Swindon is notably home to a number of large businesses including Nationwide, RWENpower, Research Councils UK, Zurich, BMW, National Trust, Intel, WHSmith HQ, Catalent (pharmaceuticals), and English Heritage. Honda was previously included in this list; however, the factory has now closed and plans to redevelop the land around the former factory have recently been approved.²⁵
- 7.1.5 Swindon has a unique economic role at the meeting point of the south west and the south east. The Borough falls within the Swindon and Wiltshire Local Enterprise Partnership (SWLEP) area but is adjacent to three other LEP areas. Looking beyond LEPs, Swindon is located at the eastern extent of the [Western Gateway](#) sub-region, linking closely to Bristol, and the Oxford to Cambridge ([OxCam](#)) Arc sub-region is adjacent to the east. Swindon Borough works with the OxCam Arc authorities under the banner of [England's Economic Heartland](#).

²⁵ BBC News (2023): 'Swindon Honda: Plans for car manufacturer's site waved through', [online] available to access via [this link](#)

Economic strategy

- 7.1.6 Swindon's Economic Strategy highlights that Swindon is one of the UK's fastest growing and productive towns, witnessing strong growth in population, housing and its economy. Swindon has excellent motorway connections to key locations in the South East and South West via the M4 (via Junction 16 and 16), as well as strong strategic rail connections. The electrification of the main Great Western Railway (GWR) line in 2018 reduced the journey time to London to just 45 minutes.
- 7.1.7 The following sectors and industries either have strong representation in Swindon or have good prospects for growth. Despite the uncertainties surrounding Brexit, these sectors are still expected to perform strongly and be of significant value to the Swindon economy. These are consistent with the priority sectors in the SWLEP's Strategic Economic Plan and include:
- **Automotive, aerospace and advanced manufacturing** – this sector is worth £450 million every year (Gross Value Added (GVA)) to Swindon's economy and is growing at 4% year-on-year. Although employment in this sector is in decline nationally, modest growth is anticipated in Swindon over the next twenty years. Swindon has the 7th largest employment cluster of automotive manufacturing in the UK, with over 7,000 people employed in this sector.
 - **The digital economy** – this sector is worth £274 million every year (GVA) to Swindon's economy and is growing at 4% year-on-year. If this sector expands in the way predicted, it will mean growth of over 3,000 employees in Swindon between 2016 and 2026, taking total employment in the sector to 10,000 employees. Swindon is geographically close to the Bristol and Bath digital tech cluster, which is recognised to be a globally significant cluster (and the 2nd largest in the UK). Swindon is in the top third nationally in terms of employment in the digital economy.
 - **Financial and professional services** – this sector is worth £1 billion every year (GVA) to Swindon's economy and is growing at over 10% year-on-year. This sector is predicted to support 4,000 more employees in Swindon between 2016 and 2026, taking total employment in the sector to nearly 20,000 employees. Swindon's location on the London-Bristol railway line is a significant advantage. Companies such as Nationwide choose to locate their UK headquarters here, and Swindon has significant representation from other corporates such as Zurich.
 - **Pharmaceuticals** – Swindon has a particular strength in the manufacturing of pharmaceuticals, with over 1,000 high value jobs. Swindon's location and comparative cost advantages (amongst the lowest commercial property and residential prices in the south) make Swindon an ideal choice for knowledge-intensive businesses. Swindon's close proximity to Oxford, which is a hub for life sciences, means Swindon could play a strategic role in complementing the Oxford life science cluster. Swindon has the 8th largest cluster in the UK.
 - **Low carbon economy** – Swindon is currently developing its low carbon economy. The SBC's target of 200MW of renewable energy by 2020 has driven the creation of three publicly backed solar farms.

- 7.1.8 The Swindon and Wiltshire Local Enterprise Partnership (SWLEP) Strategic Economic Plan identifies the need to build upon the Borough's known strengths in advanced manufacturing and commerce, making Swindon more attractive to investors. The regeneration of Swindon town centre, as well as the delivery of major housing developments and employment sites at Junctions 15 and 16 of the M4, have been identified as key growth drivers.
- 7.1.9 The SWLEP has negotiated Growth Deals aimed at growing the economy. There is £0.5 billion of planned investment for the Town Centre over 5–10 years and there is also £100 million secured through the Local Growth Fund to deliver significant transport infrastructure improvements to support growth and maintain Swindon's position as a competitive business location. The large-scale regeneration of the Town Centre and the 100-hectare investment opportunity surrounding the railway station will include Kimmerfields Central Business District, Carriageworks, Swindon Museum and Art Gallery, North Star, Aspen House, and the Corn Exchange (Locarno).
- 7.1.10 Swindon's key employment areas are primarily located in and around Swindon Town (as shown in **Figure 7.1** overleaf). The largest of these is located on the northeastern edge of Swindon Town – this is South Marston Industrial Estate, which is home to, most notably, the Aldi Regional Office and Distribution Centre, Amazon UK Logistics, the B&Q Distribution Centre, Honda Motor Europe Logistics, and the Marks & Spencer Warehouse. There is also a key employment area in Highworth.
- 7.1.11 Figure 7.1 also shows the location of the New Eastern Villages (NEV)²⁶, which is one of the new communities allocated in the adopted Local Plan and one of the largest greenfield developments in the country. It will consist of 8,000 homes, new schools, employment spaces, and community and leisure facilities once complete.

²⁶ SBC (no date): 'About the New Eastern Villages (NEV)', [online] available to access via [this link](#)

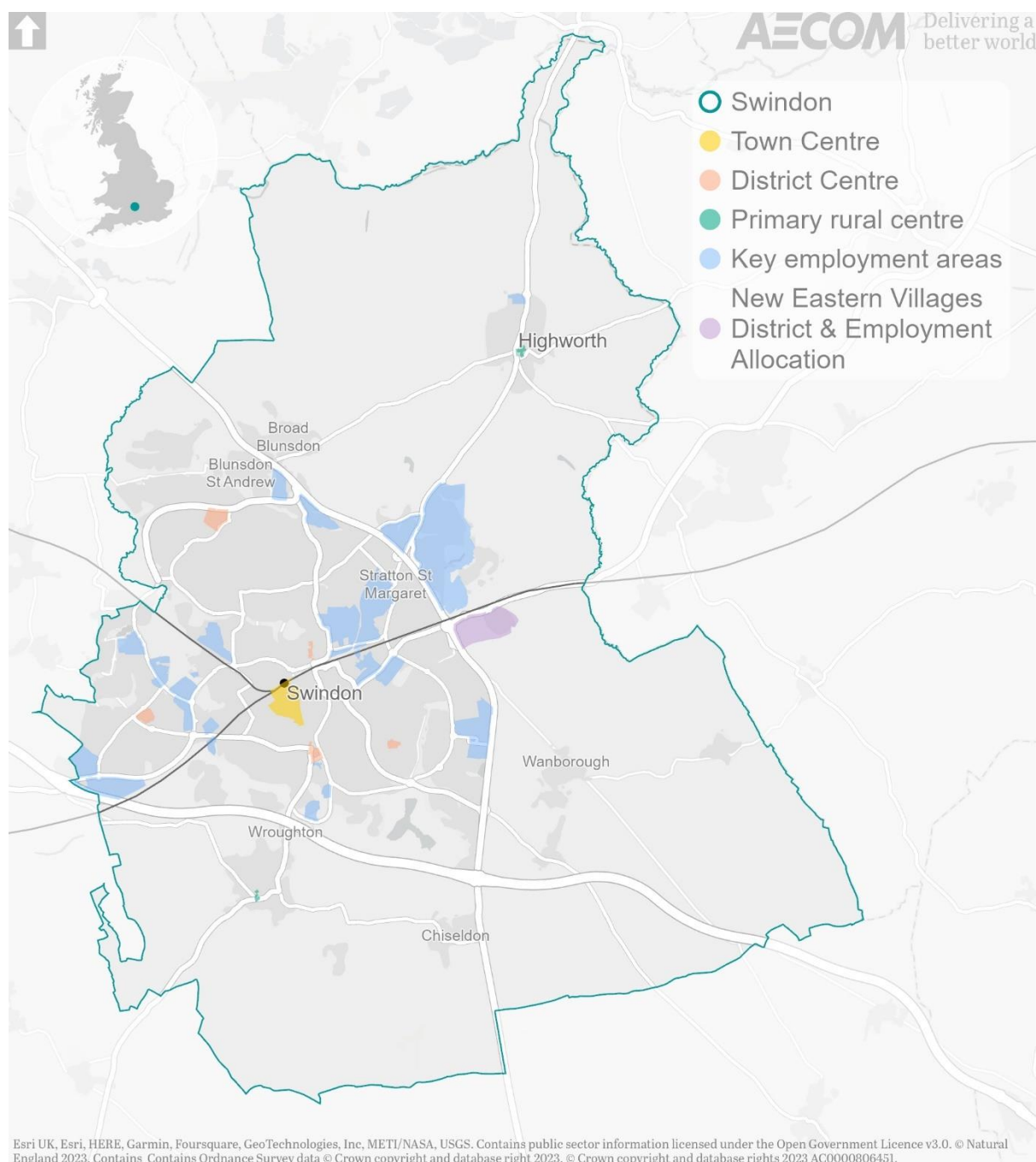


Figure 7.1 Town, district and primary rural centres, key employment areas, and the new Eastern Villages District & Employment Allocation in Swindon

1.16 Key sustainability issues

7.1.12 Key issues and opportunities, which might be a focus of appraisal, include:

- **Meeting employment land needs** – a key task for the New Local Plan will be to establish needs (which can be an involved task, given uncertainty regarding economic forecasting and employment land trends) and then ensure sufficient land supply to meet needs, as far as possible. As well as supporting key objectives for the national economy (see Section 6 of the NPPF), delivering new employment land can be important in order to avoid unsustainable commuting patterns and can support place-making and wider communities' objectives. Targeted support for new employment land / floorspace can support sectors of local importance and can help to diversify the local employment offer with a view to ensuring economic resilience.
- **Specific needs** – as well as a headline 'quantitative' need, there will be a need to consider more fine-grained 'qualitative' needs, including the needs of key sectors, e.g. offices, research and development, warehousing and industry. At a more fine-grained level still, there is a need to recognise the diverse needs of businesses in terms of such things as a need for 'high grade' versus affordable space, and there is also a need to consider the needs of small businesses, including micro-businesses and start-up, not suited to operating from a large strategic employment areas.
- **Protecting employment land** – meeting employment land needs is not only a question of allocating new land, but also considering the future of existing employment land and existing employment sites, which can tend to come under pressure for conversion to housing. This is often where existing employment land is under-used or not meeting the needs of modern businesses, and the land in question is often relatively well-suited to housing, e.g. given existing infrastructure and good accessibility credentials. However, there is a need to strike a balance through local plans, taking account of both quantitative and qualitative employment land needs. There is typically a need to establish a clear typology / hierarchy of existing employment land, for the purposes of assigning protection and employment regeneration through policy.
- **Town and local centres** – despite changing retail trends, the experience of the Covid-19 pandemic has served to emphasise the importance of taking steps through local plans to support a hierarchy of town, village/ local and neighbourhood centres, acting as hubs for business and the community. Regeneration priorities should be identified and actioned, and the 'offer' of town and local centres diversified, e.g. with a focus on shared workspaces and an offer for those working from home. Related to the matter of supporting a hierarchy of centres, there is an ongoing need to consider the role of large retail parks and edge/out of town retail.
- **Education and skills** – this is a cross-cutting issue, but clearly warrants mention as part of any discussion of economic / employment objectives. Opportunities for further education, apprenticeships and skills training could all be supported through the Local Plan to some extent.

- **Housing needs** – the effects of not meeting housing needs are wide-ranging, e.g. relating to commuting / road traffic, business decision-making, investment, productivity, inequality, health and meeting the needs of specific sectors of the population, including families and older people. A report on The Case for Housebuilding (January 2022), notably concluded: *“The fundamental case for housebuilding is that without it, Britain will become a less productive, less equal, less fair and less happy country. If we want to rebuild our economy after the pandemic, and create a better society, we need to get building.”*
- **Larger than local issues** – Swindon must play its role in terms of supporting the sub-regional and even national economy, recognising that the Borough falls at the meeting point of four LEPs, which are widely recognised as being of local and national significance in terms of supporting economic growth. There is also a need to consider settlement-specific issues and opportunities; for example, Bristol and Bath are hubs for digital tech, whilst Oxford is a hub for life sciences.

7.1.13 In light of these key issues, the following objective will be employed in order to guide appraisal of the draft plan, and reasonable alternatives, under the ‘economy’ topic heading, with a view to a suitably focused appraisal:

Meet the full range of employment land needs and more widely reflect the objectives set out in the NPPF, including the headline objective of boosting productivity. Build on local strengths (e.g. advanced manufacturing), counter any weaknesses (e.g. a town centre in need of regeneration) and address the challenges of the future, including guided by strategy defined at key larger-than-local functional scales. Recognise Swindon’s unique role at the intersection of the South West (e.g. Western Gateway sub-region) and South East (e.g. England’s Economic Heartland Sub-region).

8. Historic environment

- 8.1.1 Set out below is an evidence review followed by a discussion of key issues and objectives. The evidence review provides an overview of key assets and also presents a targeted discussion of Swindon's railway heritage.

1.17 Evidence review

- 8.1.2 Set out below is a list of key evidence sources, and then a discussion under thematic headings.

Table 8.1 Key sources of evidence relating to the historic environment topic

Document title	Date
International	
<u>UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage</u>	1972
National	
<u>A Green Future: Our 25 Year Plan to Improve the Environment</u>	2018
<u>Ancient Monuments and Archaeological Areas Act 1976</u>	1979
<u>Historic England Advice Note 1: Conservation Area Appraisal Designation and Management (second edition)</u>	2019
<u>Historic England Advice Note 3: The Historic Environment and Site Allocations in Local plans</u>	2015
<u>Historic England Advice Note 8: Sustainability Appraisal (SA) and Strategic Environmental Assessment (SEA)</u>	2016
<u>Historic England Advice Note 12: Statements of Heritage Significance: Analysing Significance in Heritage Assets</u>	2019
<u>Historic England Good Practice Advice in Planning: 3 The Setting of Heritage Assets (second edition)</u>	2017
<u>Historic England: Conservation Principles, Policies and Guidance</u>	2008
<u>Historic England Good Practice Advice in Planning 1: The Historic Environment in Local plans</u>	2015
<u>National Model Design Code</u>	2021
<u>National Planning Policy Framework</u>	2023
<u>Planning (Listed Buildings and Conservation Areas) Act 1990</u>	1990
<u>Planning Practice Guidance</u>	2019
<u>The National Design Guide</u>	2019
Local	
<u>Swindon Heritage Strategy</u>	2013
<u>Swindon Borough Council – Buildings of Significant Local Interest</u>	2004

Designated heritage assets and areas

- 8.1.3 Historic England is the statutory body that helps people care for, enjoy, and celebrate England's spectacular historic environment. Guidance and advice notes provide essential information for local planning authorities, neighbourhood groups, developers, consultants, landowners, and other interested parties on historic environment considerations, and are regularly reviewed and updated considering legislative changes.
- 8.1.4 Of particular relevance to this report, Historic England's Advice Note 8: Sustainability Appraisal (SA) and Strategic Environment Assessment (SEA) provides support to all stakeholders involved in assessing the effects of certain plans on the historic environment. It offers guidance on how to appropriately consider heritage during each stage of the SA/ SEA process and establishes the basis for robust and comprehensive assessments.
- 8.1.5 The historic environment is protected through the planning system, via conditions imposed on developers and other mechanisms. Historic England is the statutory consultee for certain categories of listed building consent and all applications for scheduled monument consent. As shown in the figure overleaf, Swindon contains numerous designated heritage assets and features, including conservation areas, Historic Parks and Gardens, and Scheduled Monuments. This is in addition to Listed Buildings, which are mapped in **Figure 8.2** overleaf. These are discussed in more detail overleaf.

Listed buildings

- 8.1.6 Listed Buildings are nationally designated buildings which are protected through the Planning (Listed Buildings and Conservation Areas) Act (1990). A structure can be designated for its architectural and/or historical interest. Furthermore, a structure can be listed to ensure its preservation; for its architectural and/or historic contribution, for a specific feature on the structure, or for the land within the curtilage of the structure.
- 8.1.7 According to the National Heritage List for England compiled by Historic England, there are 664 listed buildings in Swindon. This includes 14 Grade I, 29 Grade II* and 621 Grade II. Notable clusters of listed buildings are seen in Swindon Town Centre, near the Railway Station, Old Town, Highworth, Wanborough, Bishopstone, Wroughton and Chiseldon. The only Grade I listed building which is not a church is Lydiard Park, is a historic estate located on the western edge of Swindon comprising a Palladian House, Church and Walled Garden in 260 acres of parkland.
- 8.1.8 All listed assets are associated with descriptions setting out reasons for listing, and these will be taken into account through forthcoming appraisal.

Scheduled Monuments

- 8.1.9 The Ancient Monuments and Archaeological Areas Act (1979) allows the investigation, presentation and recording of matters of archaeological or historical interest and makes provision for the regulation of operations or activities which may affect ancient monuments and archaeological areas. Scheduled Monuments are nationally designated sites that are protected under the Ancient Monuments and Archaeological Areas Act.

- 8.1.10 According to the National Heritage List for England, there are 53 Scheduled Monuments in Swindon. Whilst these are quite widespread, notable clusters can be seen to the northwest and east of Highworth and along the southern boundary of the Borough, south of Overtown and Fox Hill.

Registered Parks and Gardens

- 8.1.11 Historic England's 'Register of Parks and Gardens of Special Historic Interest in England', established in 1983, currently lists over 1,600 sites nationally. There are three Grade II registered parks and gardens in Swindon. These are: Lydiard Park, Queen's Park and Town Gardens.

Conservation areas

- 8.1.12 Conservation areas are designated because of their special architectural and historic interest, and Historic England's Advice Note 1 on conservation areas emphasises the importance of understanding the various types of architectural and historic interest that underpin designations. Conservation area appraisals are a tool to demonstrate an area's special interest, explaining reasons for designation and articulating key aspects of character.
- 8.1.13 There are 27 conservation areas in Swindon,²⁷ including several in the oldest parts of Swindon Town – Stratton St Margaret, Rodbourne Cheney, Old Town, and the Railway Station area.

Locally important heritage features

- 8.1.14 Not all of Swindon's environment features are subject to statutory designations, with non-designated features contributing a large part of what people encounter on a day-to-day basis. Although not designated, many buildings and areas are of historic interest and are important to local communities, including open spaces and key distinctive buildings.
- 8.1.15 The Wiltshire and Swindon Historic Environment Record (HER)²⁸ identifies important and distinctive structures or features that positively contribute to the local sense of place and distinctiveness of the county and its archaeological recourse. Following a high-level review of the HER, via the Heritage Gateway, it can be seen that there are 12,526 records within Swindon. During the next stages of the SA process and subject to the availability of information, the HER will be reviewed in greater detail to determine the potential impacts to non-designated heritage features resulting from the provisions within the New Local Plan.
- 8.1.16 Also of relevance is SBC's Buildings of Significant Local Interest (2004), which sets out criteria for assessing a 'building of significant local interest'. The report highlights that there are many buildings of significant local historic or architectural importance in the Borough which do not have the protection afforded by listed status.

²⁷ SBC (no date): 'Conservation areas', [online] available to access via [this link](#)

²⁸ Wiltshire Council (no date): 'Wiltshire and Swindon Historic Environment Record', [online] available to access via [this link](#)

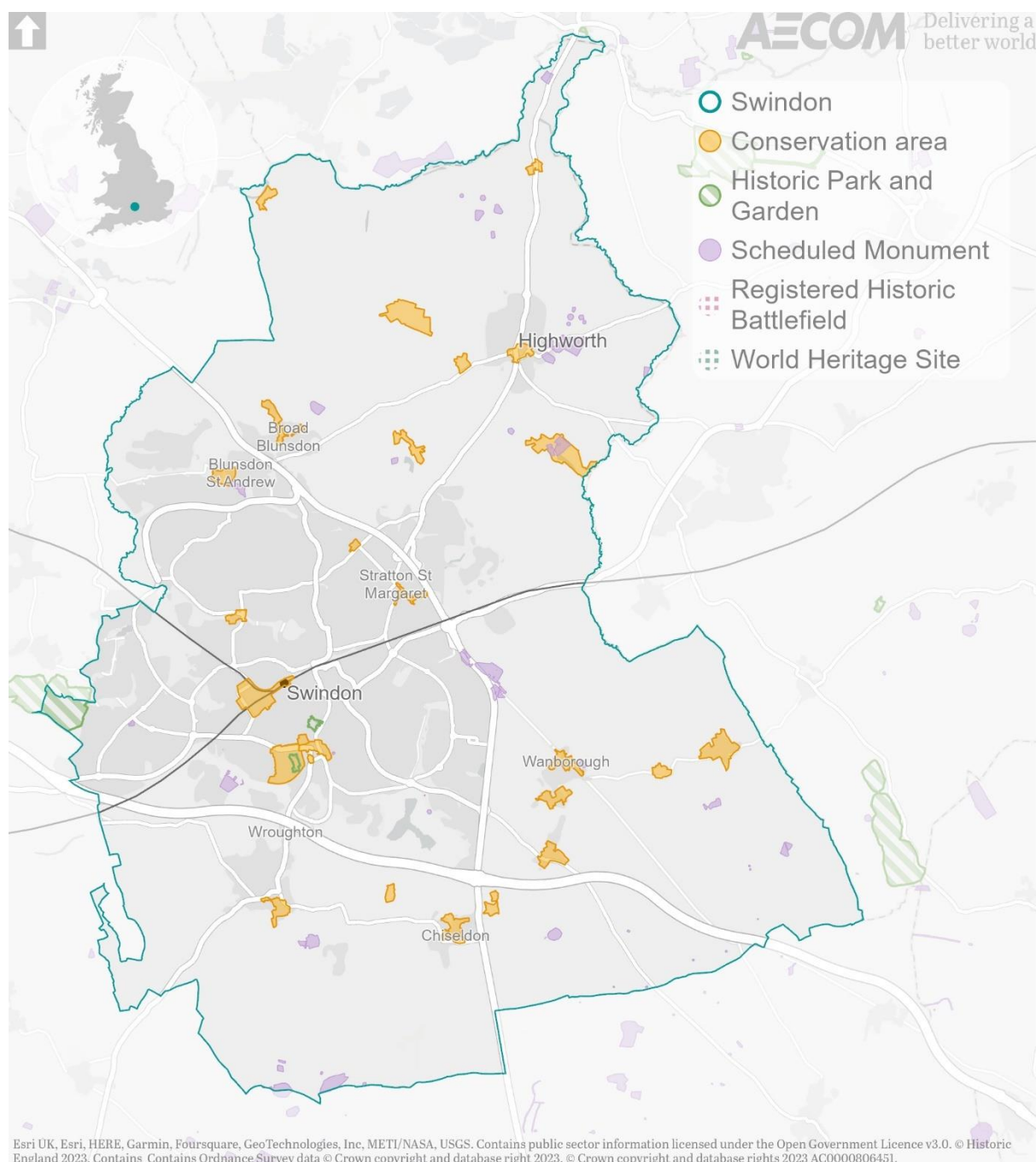


Figure 8.1 Designated heritage assets and features in Swindon

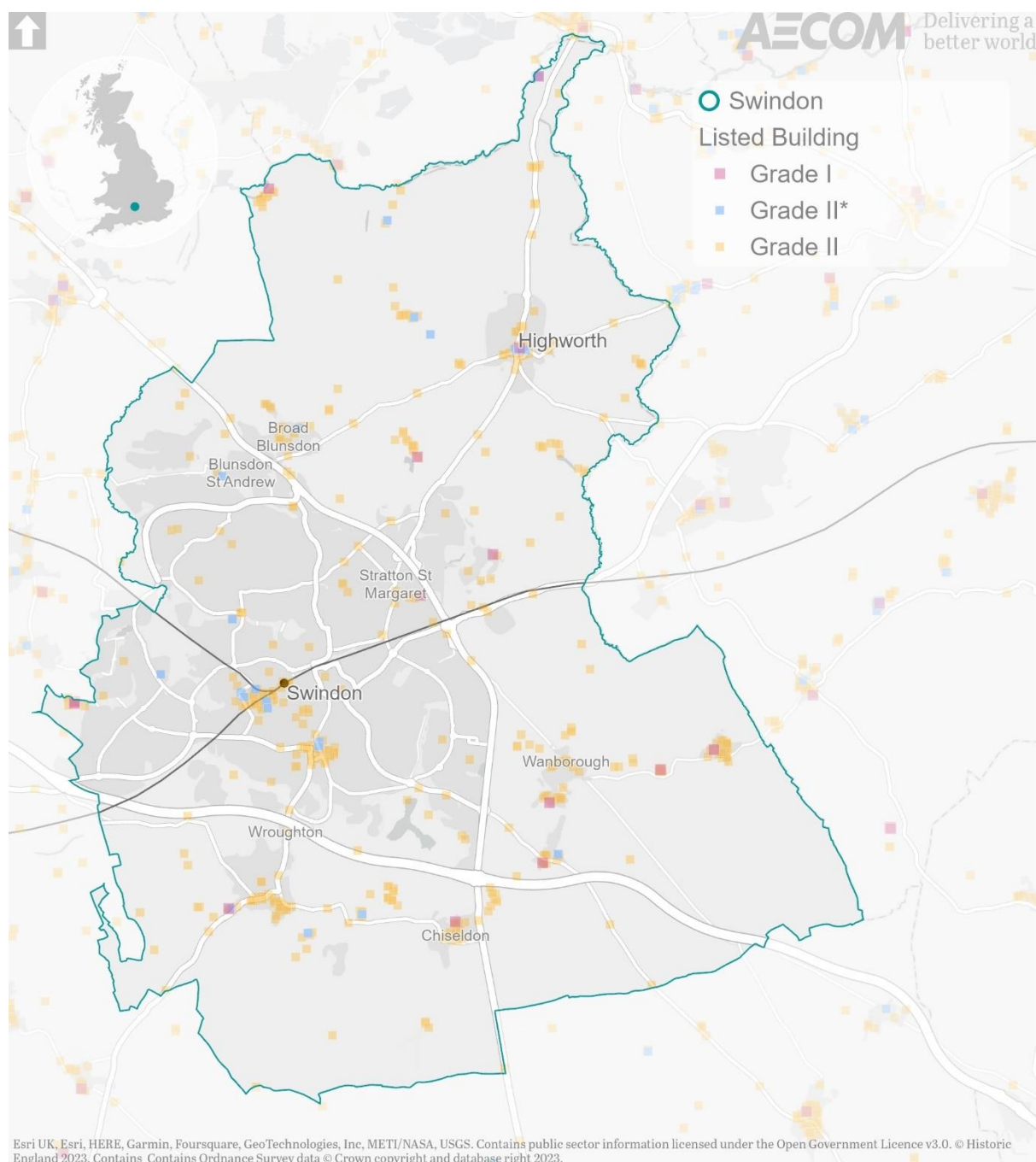


Figure 8.2 Listed buildings in Swindon

Swindon's railway heritage

- 8.1.17 The most significant aspect of Swindon's local heritage is arguably its railway heritage. Swindon Railway Works opened in January 1843 as a repair and maintenance facility for the new Great Western Railway (GWR).²⁹ By 1900, the works had expanded dramatically and employed over 12,000 people. At its peak in the 1930s, the works covered over 300 acres and was capable of producing three locomotives a week.
- 8.1.18 The railway dominated the fortunes of Swindon until after the Second World War, when new industries moved to the area. The completion of the last steam locomotive for British Railways – Evening Star – at Swindon in 1960, marked a watershed in the history of the works, and in 1963 a large part of the old carriage and wagon works on the eastern side of the Gloucester branch line was closed and sold for redevelopment. Despite a brief renaissance in the 1970s, the works finally closed in 1986.
- 8.1.19 Today, the Swindon Railway Works is a Grade II listed building within the Swindon Railway Conservation Area. It is occupied by STEAM – a museum of the GWR. The museum tells the story of the men and women who built, operated and travelled on the GWR.
- 8.1.20 The Swindon Heritage Action Zone (HAZ), which was launched in June 2019, is an ambitious five-year plan to revitalise the town's unique railway heritage.³⁰ The HAZ is a partnership between Historic England, SBC and other organisations. More than £24 million has already been invested.
- 8.1.21 In 2022, the HAZ was rebranded 'The Works' following a consultation with local residents and organisations. The Works does not seek to rename the Railway Village or other areas, but instead is a name that encompasses the town's historic railway quarter both north and south of the rail track and including the Railway Village and Health Hydro, STEAM Museum and the Swindon Designer Outlet. It will be used to promote the former HAZ area and Swindon town centre as a destination and place of historical interest.

Heritage at risk

- 8.1.22 Since 2008, Historic England has produced an annual Heritage at Risk Register which highlights historic environment assets that are seen to be 'at risk'. The Register, which gets regularly updated, can be found [here](#). According to the 2022 Heritage at Risk Register for the South West, there are eleven heritage assets at risk in Swindon. This includes one building and structure entry and ten archaeology entries. The condition of the assets ranges from 'generally unsatisfactory' to 'extensive significant problems'.
- 8.1.23 Moving forward, the Register will be reviewed in greater detail to determine whether any heritage features which are currently at risk are likely to be impacted by the proposals within the New Local plan. It is important to recognise that Heritage at Risk registers for areas outside of London do not contain information about the status of Grade II listed buildings.

²⁹ STEAM (no date): 'STEAM and the history of Swindon Works', [online] available to access via [this link](#)

³⁰ SBC (no date): 'The Swindon Heritage Action Zone', [online] available to access via [this link](#)

1.18 Key sustainability issues

8.1.24 Key issues and opportunities, which might be a focus of appraisal, include:

- **Designated assets** – there is a need to recognise the varying significance of nationally designated assets (e.g. Grade I vs Grade II* vs Grade II listed buildings, also registered Historic Parks and Gardens) and protect that significance. The specific valued characteristics of assets must be understood, including relationship to other assets and association with a landscape or townscape setting. By way of an example, the significance of scheduled monuments comprising below ground archaeology can relate, at least in part, to a landscape setting that might have changed little for many centuries.
- **Conservation areas** – are a local designation but are of key strategic importance. Key characteristics and sensitivities are set out in Conservation Area Appraisals, but these are variable in terms of age, content etc. Viewing the location of conservation areas serves as a helpful way of understanding 20th and 21st century settlement growth. Also, the distribution / varying density of conservation areas across Swindon (and neighbouring areas) is a means of understanding variation in historic character at landscape scales (including reflecting historic land uses, industries, movement corridors). There is also a need to villages, hamlets, neighbourhoods etc can be associated with readily apparent and valued historic character but fall short of warranting conservation area designation (N.B. there are not grades of conservation areas).
- **Setting** – accounting for the landscape setting of historic environment assets is often a key issue for local plans. For example, and notably, parish churches (which are often Grade I listed) tend to be located and designed so as to be highly prominent across a wide landscape. Also, many stately homes and associated landscaped parks and gardens (which may be nationally designated, or otherwise recognised as of value) will often be designed with certain landscape vistas in mind. There is also often a need to consider the agricultural setting of traditional farm buildings (which are often grouped as part of a historic farmstead) and potentially rural villages (particularly where there is a designated conservation area). Setting will often be appreciated from key vantage points including roads and footpaths.
- **Non-built assets** – rural lanes, tracks / paths and field boundaries contribute strongly to historic character. Such assets have often changed little for centuries, and with the potential to be interpreted by historians. The pre-1914 OS map is freely available online and is a key means of understanding patterns of settlement, land use and transport connectivity prior to 20th century growth.
- **Historic character** – there is a need to consider how designated and non-designated assets function collectively, and as part of a wider landscape / townscape, in order to generate a sense of time-depth. Many clusters and spatial patterns of historic environment assets can be identified when observing at landscape scales; for example, historic settlement correlates strongly with: topography (with a strong concentration along river / stream valleys); transport connectivity (historic

routes overwhelmingly follow valleys, albeit with exceptions, e.g. the Ridgeway, canals and Roman roads); historic land use (e.g. agricultural land quality or easily worked soils, the latter being a key influence on the earliest settlement and, in turn, distribution of scheduled monuments); and historic industry (which again leads to a correlation with water-courses utilised for power and transport). The North Wessex Downs is a prime example of valued historic landscape, and also an asset associated with a very extensive landscape setting.

- **Other available resources** – the Historic Environment Register shows non-designated assets, primarily archaeological finds from across the years and decades, although a challenging can relate to understanding significance. Also, the [Wiltshire and Swindon History Centre](#) holds 35,000 records of archaeological sites, whilst the [Wiltshire Buildings Record](#) holds 18,000 records of individual buildings and dateable features, collected over 40 years.
- **Victorian heritage** – Victorian heritage is a key consideration locally, particularly with respect to Swindon's railway heritage, which continues to be a vital part of the town's identity and a source of pride for many.
- **Realising opportunities** – within towns regeneration can be 'heritage-led', including regeneration of industrial areas that might be seen as somewhat 'run down', with repurposing of historic buildings. Strategic growth can also support enhancements at landscape scales, e.g. historic river corridors, as per the discussion above under 'biodiversity' and 'climate change adaptation'. The historic environment should be considered as part of any landscape-scale interventions, including with a view to supporting character and sense of place.

8.1.25 In light of these key issues, the following objective will be employed in order to guide appraisal of the draft plan, and reasonable alternatives, under the 'historic environment' topic heading, with a view to a suitably focused appraisal:

Conserve and enhance the historic environment, with a focus on designated assets, but also non-designated assets (including archaeology). Account for specific factors that make an asset or area valuable in historic environment terms, for example, and notably, industrial and railways heritage in the Swindon context. Consider links to character, sense of place and place-making.

9. Housing

- 9.1.1 Set out below is an evidence review followed by a discussion of key issues and objectives. The evidence review provides an overview discussion of housing needs and affordability, but this is only an initial discussion, recognising that detailed work is underway in the form of a Housing and Economic Development Needs Assessment (HEDNA). Also, there is a brief discussion of Gypsy and Traveller Accommodation Needs, but again work is ongoing that will feed into the local plan / SA process moving forward.

1.19 Evidence review

- 9.1.2 Set out below is a list of key evidence sources, and then a discussion under thematic headings.

Table 9.1 Key sources of evidence relating to the housing topic

Document title	Date
National	
Homes England strategic plan 2023 to 2028	2023
Fixing our broken housing market	2017
National Planning Policy Framework	2023
Planning Policy for Traveller Sites	2023
Local	
Swindon and Wiltshire Functional Economic Market Area Assessment	2016
Swindon and Wiltshire Strategic Housing Market Assessment	2017
Affordable Housing Position Statement	2016

Housing affordability

- 9.1.3 According to data from the 2021 census, there are 95,900 households in Swindon. 82% of households in Swindon are detached homes, 17.8% are flats and 0.2% are a caravan or other mobile / temporary structure. Also, according to data from the 2021 census, 10.9% of households in Swindon have one bedroom, 26.5% have two bedrooms, 41.3% have three bedrooms, and 21.3% have four or more bedrooms.
- 9.1.4 29.2% of households own their home outright, which is slightly lower than the national average (32.5%). Of the remaining households, 35.8% own their home with a mortgage, loan or shared ownership; 15.6% live in socially rented accommodation; and 19.5% live in privately rented accommodation or live rent free.
- 9.1.5 Data from the ONS shows that the median house price in Swindon was £250,000 in the year ending September 2022, which represents an 8.7% increase from the average house price of £230,000 in the year ending September 2020. The average house price in the South West region was £295,000. Hence, house prices in Swindon are relatively low.

- 9.1.6 The ratio of median house price to median gross annual workplace-based earnings in Swindon was 7.24 in 2022. This means that full-time employees could typically expect to spend around 7.24 times their workplace-based annual earnings on purchasing a home. Notably, this ratio stood at 7.24 in 2020, marking no change in housing affordability in Swindon in two years.
- 9.1.7 It is worth noting the variance in house prices in the more urban parts of the Borough differ from the house prices in the more rural parts, which could make the average more nuanced.

Gypsies, Travellers and Travelling Showpeople

- 9.1.8 An Accommodation Assessment is in preparation, but a recent report prepared for neighbouring Wiltshire Council (2022)³¹ suggests that need for the period 2019 – 2035 may stand in the region of 20 pitches for Gypsies and Travellers and 14 plots for Travelling Showpeople. The report also explains that SBC recorded 21 unauthorised encampments taking place in the Borough between March 2016 and November 2017. The average length of stay for encampments was four days. In most instances, action was taken by the local authority or police to remove the unauthorised encampment.
- 9.1.9 Providing for the accommodation needs of Gypsies, Travellers and Travelling Showpeople is a key equalities consideration. The implications of not meeting Traveller accommodation needs are wide ranging. For Travellers, poor accommodation can be a barrier to maintaining the traditional way of life, can lead to tensions with settled communities and contributes to acute issues of relative deprivation, with Travellers tending to have poor outcomes in terms of health and wellbeing, educational attainment and a range of other indicators (see evidence available [here](#)).
- 9.1.10 There is typically a need to consider broad strategy options, for example exploring questions around such matters as: the merits of new sites versus intensification and/or expansion of existing sites; the appropriate size of sites; whether it is appropriate to deliver new sites as part of strategic housing-led developments; the extent to which needs should be met in close / very close proximity to where they arise from; and whether certain sites can be associated with delivery risk (e.g. sites within urban extensions or employment areas).

1.20 Key sustainability issues

- 9.1.11 Key issues and opportunities, which might be a focus of appraisal, include:
- **Meeting needs** – there is a need to establish objectively assessed housing needs and then provide for needs as far as possible, consistent with the achievement of wider sustainable development objectives. This means establishing a housing requirement (the number of homes that the Council commits to delivering, for monitoring purposes) and a supply that exceeds the housing requirement (to account for unforeseen delivery issues, which are fairly inevitable).

³¹ See https://www.wiltshire.gov.uk/media/8940/2022-Wiltshire-Gypsy-and-Traveller-Accommodation-Assessment/pdf/2022_Wiltshire_GTAA_Final_Report.pdf?m=637834604566400000

- **Unmet needs** – there is a need to consider whether there are, or are likely to be, unmet housing needs from a neighbouring area that might more appropriately be provided for within Swindon.
- **Housing mix** – there is a need to meet the full range of needs, including needs for specific types and tenures of housing, including lower cost market housing and different tenures of affordable housing. There is also a need to consider specialist housing, most notably older persons housing, and again there are a range of types and tenures to consider, with the Planning Practice Guidance discussing: age restricted housing, retirement living or sheltered housing, enhanced sheltered housing, extra care housing and residential care homes or nursing homes. There is also a need to consider homes for younger people, including affordable housing and homes for first time buyers.
- **Types of site** – strategic sites can be well suited to delivering a good housing mix, including affordable housing in-line with policy requirements, specialist housing and potentially plots for self-build housing, as well as sites for gypsy and traveller communities. However, there is a need for a good mix of sites, in terms of size and also geographic spread, including with a view to ensuring a robust delivery trajectory / avoiding delivery risk (associated with an over concentration of supply). Also, small sites are suited to delivery by smaller housebuilders, which is important both from a perspective of supporting local businesses and also ensuring a diversity of housing products on the market. The Government strongly supports a healthy supply of smaller sites, including as part of ‘gentle densification’ of urban areas.
- **Deliverability** – there is a need to recognise delivery risks; for example, at complex brownfield sites associated with abnormal development costs that affect development viability; also, any site with multiple landowners. There is a need to support sites that are demonstrably deliverable or developable. However, there is the potential to account for delivery risk by ensuring a healthy ‘supply buffer’, i.e. a level of identified supply that is greater than the housing requirement that will be employed for the purposes of monitoring (e.g. 5 or 10%).
- **Affordable housing** – a key issue for any local plan is setting policy in respect of affordable housing, balancing affordable housing objectives with a need to direct limited funds towards the achievement of wider objectives, including space and accessibility standards for new homes. In turn, there is a clear argument for supporting sites with strong development viability credentials, with a view to ensuring that affordable housing policy is fully implemented in practice. Also, there can be an argument for delivering market housing at a rate above objectively assessed needs as a means of more fully meeting affordable housing needs, in line with the Government’s Planning Practice Guidance: *“An increase in the total housing figures included in the plan may need to be considered where it could help deliver the required number of affordable homes.”* Finally, a consideration for the local plan is supporting targeted 100% affordable schemes if possible, e.g. if publicly funded. Finally, with regards to affordable housing, it is important to note qualitative aspirations relating to space standards (e.g. kitchens large enough to support healthy eating and access to green spaces).

- **Travellers** – as per ‘bricks-and-mortar’ housing, there is a need to establish and provide for the accommodation needs of Gypsies, Travellers and Travelling Showpeople, as far as possible (consistent with wider sustainable development objectives), including with a particular focus on the early years of the plan period (as per bricks-and-mortar).
- **Larger-than-local issues** – as discussed, meeting housing needs is a key issue giving rise to a need for close collaboration between local authorities, recognising that housing market areas cross administrative boundaries, and the constraints to housing growth / availability of suitable land varies considerably sub-regionally.

9.1.12 In light of these key issues, the following objective will be employed in order to guide appraisal of the draft plan, and reasonable alternatives, under the ‘housing’ topic heading, with a view to a suitably focused appraisal:

Provide for objectively assessed housing needs (or Local Housing Need, LHN) in line with NPPF paragraphs 11 and 61. Provide for affordable housing and specialist housing / accommodation to meet needs, ensure an appropriate housing mix in terms of size, type and tenure, consider locally rising needs within the Borough and also ensure a focus on delivery / minimising delivery risks.

10. Landscape

- 10.1.1 Set out below is an evidence review followed by a discussion of key issues and objectives. The evidence review covers the North Wessex Downs Area of Outstanding Natural Beauty (AONB), borough-wide landscape character areas and then the discrete matter of Tree Protection Orders.

N.B. AONBs have recently been rebranded as National Landscapes, and this terminology will be used moving forward.

1.21 Evidence review

- 10.1.2 Set out below is a list of key evidence sources, and then a discussion under thematic headings.

Table 11.1 Key sources of evidence relating to the landscape topic

Document title	Date
International	
<u>The European Landscape Convention</u>	2000
National	
<u>A Green Future: Our 25 Year Plan to Improve the Environment</u>	2018
<u>National Character Area profiles</u>	N/a
<u>National Model Design Code</u>	2021
<u>National Planning Policy Framework</u>	2023
<u>The National Design Guide</u>	2019
Local	
<u>North Wessex Downs AONB Management Plan 2019-2024</u>	2019
<u>Swindon Borough Council – Landscape Character Areas</u>	2004

Nationally protected landscapes

- 10.1.3 The southern quarter of Swindon overlaps with the North Wessex Downs Area of Outstanding Natural Beauty (AONB) (see **Figure 11.1** overleaf). The AONB covers the area between Swindon, Reading and Basingstoke, excluding Newbury and the land directly to the east of Newbury. It also overlaps Wiltshire Council, Oxfordshire County Council, West Berkshire Council and Hampshire County Council. It abuts the Chilterns AONB along the River Thames in the Goring Gap area north west of Reading. The North Wessex Downs AONB is within a 20 minutes' drive for 1.1 million people.
- 10.1.4 The greater part of the North Wessex Downs AONB is underlain by chalk, resulting in the dramatic scarps and gentle rolling topography characteristic of the area. The steep scarp slopes of the chalk and Upper Greensand, with their expansive viewpoints, and the gentle rolling open chalk plateaux are very obviously influenced by the underlying geology. These chalk landscapes were traditionally in sheep grazing – the wool being the source

of much of England's historic wealth. However, much of the chalk grassland has since been ploughed, and the resulting extensive, open arable land is now the most frequent landscape of the chalk downs. Herb-rich chalk grassland remains in fragments on the steeper scarps.

10.1.5 According to the North Wessex Downs AONB Management Plan (2019), the Landscape Character Types (LCTs) and Areas (LCAs) of the AONB that overlap Swindon include:

- **LCT 1: Open Downland** – The Open Downland forms the backbone of the North Wessex Downs as an elevated plateau of the hard Middle and Upper Chalks. The landscape is of open, smoothly rounded downland dissected by dry valleys and long sinuous steep scarps and is devoid of surface water. Tree cover is limited to distinctive beech clumps crowning summits and occasional linear shelter belts. This is a remote, tranquil landscape of panoramic views where the sky forms a key part of the landscape, including the effect of cloud shadows on the ground and the wind creating swells through the crops. The dominant land use is of vast sweeping arable fields with small remnant patches of chalk grassland on steeper slopes. Settlement is extremely sparse and limited to scattered farmsteads and racing stables.
- **LCT 5: Downs Plain and Scarp** – The landscape of the Downs Plain and Scarp extends along the entire length of the northern boundary of the North Wessex Downs. The plain is formed by the eroded surface of the Lower Chalk, creating a low-level surface extending as a wide ledge at the foot of the high Open Downland. The distinctive northern scarp plunges down from the chalk plain to the Vale of White Horse, creating a dramatic recognisable horizon when viewed from the north. This area is characterised by some of the most emblematic features of the North Wessex Downs: The Ridgeway, the Uffington White Horse and Avebury. The Downs Plain is characterised by vast arable fields, lack of surface water and a general absence of settlement. Conversely the dramatic scarp slope, cut by springs, creates a convoluted edge alternately under woodland and pasture, including significant areas of remnant chalk grassland. This is a landscape that feels as though it has hardly changed over the centuries, although it is increasingly affected by development at its foot, outside the AONB boundary.
- **LCT 6: Vales** – The Vale of Pewsey separates the two main upland chalk blocks that dominate the North Wessex Downs. The towering shapes of the adjacent chalk scarps contain and enclose this Greensand vale. Numerous springs issue from the chalk and Greensand boundary where the water table comes to the surface, their streams meandering across the Vale floor. Rich loamy and alluvial soils create a productive agricultural landscape with a mix of arable, orchards and pasture now replacing a once predominantly pastoral scene important for dairy farming. The concentration of settlements is a defining feature of the Vale, including compact nucleated villages and hamlets, with widespread scattered farmsteads. The Vales character type also occurs at the northeastern edge of the North Wessex Downs, with the sections of the Thames Valley floor that lie within this AONB. The eastern part of the Thames Valley floor here lies within the adjoining Chilterns AONB. LCAs within this LCT that overlap with Swindon include:

10.1.6 The North Wessex Downs AONB Management Plan presents an agreed agenda for the AONB during the period 2019-2024. It sets out strategic objectives for AONB partners that are judged to be realistic and achievable during the Plan period, and policies which support the long-term goals set out in the Vision Statement.

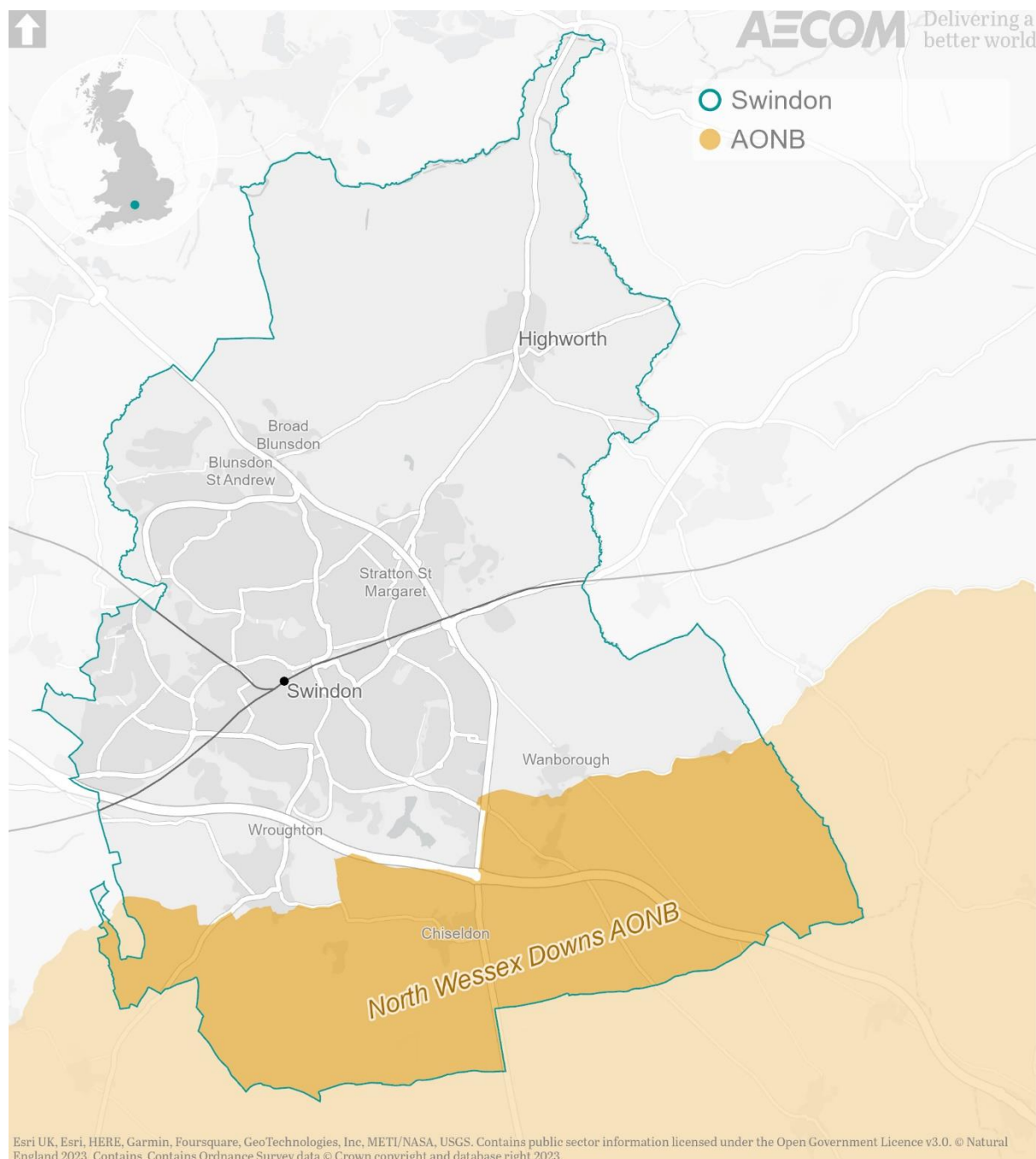


Figure 11.1 The North Wessex Downs AONB in Swindon

National Character Areas

10.1.7 National Character Area (NCA) Profiles are published by Natural England and divide England in 159 distinct natural areas based on their landscape, biodiversity, geodiversity, historic, cultural, and economic characteristics. NCAs follow natural features in the landscape and are not aligned with administrative boundaries. NCA profiles describe the features which shape each of these landscapes, providing a broad context to its character. They also provide Statements of Environmental Opportunities to protect and enhance the special qualities of these areas. Additionally, the Government's 25 Year Environment Plan states the intention to work with relevant authorities to deliver environmental enhancements within all 159 NCAs.

10.1.8 Swindon overlaps with three NCAs (as shown in **Figure 11.2** overleaf):

- **108: Upper Thames Clay Vales** – This NCA is a broad belt of open, gently undulating lowland farmland on predominantly Jurassic and Cretaceous clays. Blenheim Palace World Heritage Site falls within the NCA, along with around 5,000ha of the North Wessex Downs AONB and smaller areas of the Chilterns AONB and the Cotswolds AONB. There are contrasting landscapes, including enclosed pastures of the claylands with wet valleys, mixed farming, hedges, hedge trees and field trees and more settled, open, arable lands. Mature field oaks give a parkland feel in many places.
- **109: Midvale Ridge** – This NCA is a band of low-lying limestone hills stretching east–west from the Vale of Aylesbury in Buckinghamshire to Swindon. It is surrounded by the flat lands of the Oxfordshire clay vales, giving extensive views across the surrounding countryside. It is a predominantly agricultural area with a mixed arable/ pastoral farming landscape, cereals being the most important arable crop. The main towns are Swindon, at the western end, and Oxford, which lies across the centre of the area, but otherwise the settlement pattern is characterised by small, nucleated villages along the top of the ridge and along the springline.
- **116: Berkshire and Marlborough Downs** – Vast arable fields stretch across the sparsely settled, rolling Chalk hills of this NCA. There are extensive views from the escarpment in particular, punctuated by landmarks including chalk-cut horse figures, beech clumps and ancient monuments. Historic routeways, including the Ridgeway National Trail, provide public access across this landscape. Writers and artists have been inspired by this landscape, whilst monuments around Avebury have attracted historians and antiquarians. Avebury stone circle is a popular visitor destination and part of a World Heritage Site and there are numerous other Scheduled Monuments and heritage features. Heritage features are at risk from damage by cultivation and animal burrowing.

10.1.9 Further to this, **Figure 11.2** overleaf shows the variation in topography across the Borough; the North Wessex Downs, in the south of the Borough, has the highest elevation.

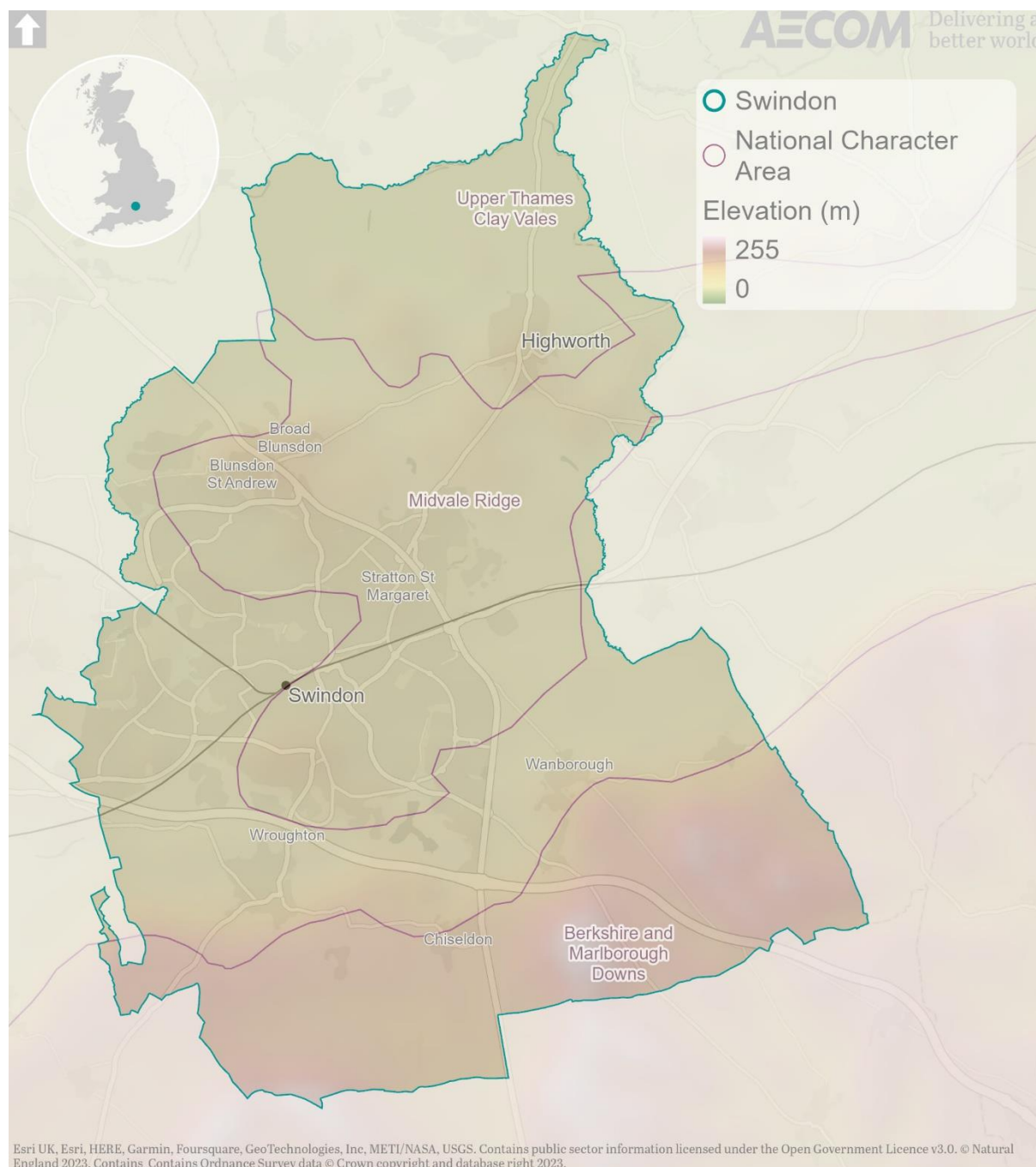


Figure 11.2 National character areas and topography

Landscape, townscape and village-scape character

10.1.10 Landscape, townscape, and villagescape character play an important part in understanding the relationship between people and place, identifying recognisable and distinct patterns which make one area different from another. Landscape, townscape, and villagescape character can assist in the assessment of the likely significance of effects of change resulting from development and the value of landscape, both in visual and amenity terms.

10.1.11 SBC's Landscape Character Areas (2004) supplementary planning guidance determines different LCAs across Swindon. It identifies the specific characteristics unique to each LCA and highlights the key issues relating to each LCA that should be addressed when considering development proposals. There are eight LCAs in the Borough, which are:

- **Thames Vale** – located in the northern part of the Borough, this LCA comprises a generally flat, low-lying large-scale valley, with occasional areas of higher ground. There are extensive views across to the Midvale Ridge and Highworth, and churches form important focal points in the landscape (Lechlade). This LCA is dominated by the Thames, Cole and Ray, as well as the smaller Bydemill Brook. There are a few scattered villages on high areas of ground, and the A361 runs south-north towards the River Thames crossing point at Lechlade, whilst the A419 runs north-south from Cricklade to Blunsdon. Large scale fields cover this LCA, with hedgerows generally forming field boundaries.
- **Vale of the White Horse** – located in the eastern part of the Borough, this LCA comprises a broad, flat, low-lying valley with extensive views towards the Downs and Midvale Ridge. Numerous small streams flow across the vale from south to north, joining the River Cole. Fields are bounded by hedgerows with scattered standard trees. There are a few scattered farms in the less accessible areas, and the A419, A420 and the London to Bristol railway line form the boundaries.
- **Wroughton Vale** – located in the southern part of the Borough, this LCA comprises a low lying, generally level vale with several small, raised areas. It is enclosed by the Scarp slope and Swindon Hill. The relatively open landscape allows for moderate distant views in an east-west direction along the Vale floor, with wide ranging views south towards the Scarp slope and north to Swindon Hill. Several chalk streams flow northwards across the valley, forming tributaries of the River Ray. Wroughton dominates the eastern end of the Vale. Fields are generally of moderate size and enclosed by hedgerows with standard oak trees or post and wire fencing.
- **Scarp** – located in the southern part of the Borough, this LCA comprises a steep, northwest facing hillside overlooking the Clay Vales, dissected at intervals by very steep sided coombes (Liddington). There are sweeping views northwards towards Swindon, Vale of the White Horse, Midvale Ridge and the Cotswolds. Numerous chalk springs can be found along the lower part of the scarp slope flowing northwards (Clouts Wood). There is also the Wroughton reservoir, which was formed by damming a spring. Substantial woodlands cover the scarp west of Chiseldon (Burderop Wood). There are a number of springline

settlements (Bishopstone) and several large country houses and associated parkland (Burderop House). Small, twisting, sunken roads connect the villages and the M4 forms the northern boundary of the area at Burderop. Small scale fields are generally enclosed by hedgerows with standard trees.

- **Downs Plains** – located in the southern part of the Borough, this LCA comprises a high plain gently falling from north to south and of varying width. It lies between the Lower and Middle Chalk escarpments. There are sweeping views south across the open landscape towards the High Downs, Iron Age Hill forts and tree clumps. A limited number of minor watercourses flow southwards into the River Og. There are a small number of dispersed farms and agricultural buildings, and settlements generally relate to military developments (Wroughton Airfield). The M4 runs east-west through the area around Foxhill. There are large, extensive fields with boundaries often defined by post and wire fencing.
- **High Downs** – located in the southern part of the Borough, this LCA comprises a high, rolling landform, northwest facing escarpment, with dry river valleys running southwards. There are sweeping views northwards across the Downs Plain towards the Midvale Ridge and the Cotswolds beyond. There are dominant tree clumps located along the crest of the downs. The only A road running through this LCA is the A346, and there is a limited number of well dispersed agricultural buildings. There are large, extensive fields with boundaries often defined by post and wire fencing.
- **Midvale Ridge** – located primarily in the northern part of the Borough, this LCA comprises a rolling landform of valleys, ridge, hill and plateau tops. The ridge is dissected by the south-north valleys of the Rivers Ray and Cole. There are open views across the Vale of the White Horse towards the High Downs, as well as open views across the Thames Vale towards the Cotswolds. The Rivers Ray and Cole run north-south through the area, with numerous tributaries draining the main valleys. Important lakes can be found in Stanton Fitzwarren, Sevenhampton and Coate Water. There are numerous substantial woodlands and shelter belts linked by hedgerows with standard trees (Stanton Great Wood). Important settlements occupy the highest hilltops (Blunsdon and Highworth), whilst smaller villages lie within the valleys. The A419 and A361 cross this LCA, the B4019 runs east-west along the ridge, and the M4 runs along the southern boundary in the Coate area. Fields are generally moderate in size and enclosed by hedgerows and woodland.
- **Lydiard Ridge** – located in the western part of the Borough, this small LCA forms a raised plateau above the clay vales. Woodland encloses much of the area (Quarr plantation). In the north there are views across West Swindon, whilst in the south there are views towards the North Wessex Downs. Two small streams flow northwards through the area. There are substantial areas of parkland, woodland, parkland trees and hedgerows. Most of the LCA is in Lydiard Country Park. Fields lie within remnant parkland and are of moderate size, with boundaries a mixture of hedgerows, woodland and post and wire fencing.

10.1.12 New development has the potential to lead to incremental but small changes in landscape, townscape and villagescape character and quality in and around Swindon. This includes from the loss of landscape features and areas with an important visual amenity value. An increase in population also has the potential to negatively impact landscape character.

Tree Preservation Orders

10.1.13 Implemented by local planning authorities, Tree Preservation Orders (TPOs) are designated to protect specific trees, groups of trees or woodlands in the interests of their amenity value. When considering 'amenity'; the local planning authority will likely take into consideration the following criteria³²:

- **Visibility:** the extent to which the trees or woodlands can be seen by the public; and
- **Individual, collective, and wider impact:** considering the importance of the trees or woodlands in relation to their cultural or historic value, contribution to and relationship with the landscape and/or their contribution to the character or appearance of a conservation area.

10.1.14 TPOs in the Borough can be viewed on an [online map](#). They are largely concentrated around the settlement edge of Swindon Town.

1.22 Key sustainability issues

10.1.15 Key issues and opportunities, which might be a focus of appraisal, include:

- **North Wessex Downs AONB** – the North Wessex Downs are of great national significance, hence there is a need to take careful account of the established objectives and policies within the AONB management plan, and more generally work closely with stakeholders with an interest in the North Wessex Downs. A key issue is the setting of the AONB. N.B. AONBs have recently been rebranded as National Landscapes.
- **Landscape character** – varies at a wide range of scales, from the nationally defined National Character Areas, to parcels of land surrounding settlements. Targeted work to understand variation in landscape character and sensitivity is typically a key input to local plan spatial strategy and site selection.
- **Links to other topics** – landscape character is a function of natural and human influences, such that it links closely to wide-ranging sustainability issues / objectives, including as discussed above. Landscape character areas are often an appropriate scale to target policy efforts / interventions with a view to delivering a wide range of ecosystem service benefits, including due to links with river catchments and historic patterns of settlement and transport connectivity.

³² GOV.UK (2014): 'Tree Preservation Orders – General', [online] available to access [here](#)

- **Larger than local** – the south of the Borough is highly constrained by the AONB. Central and northern parts of the Borough also include landscapes likely to be of larger-than-local significance, for example landscapes associated with high points along the Midvale Ridge. Furthermore, a number of key settlements are inherently constrained in landscape-terms. However, most neighbouring authorities are also subject to significant landscape constraint, particularly those strongly associated with the North Wessex Downs and Cotswolds AONBs.

10.1.16 In light of these key issues, the following objective will be employed in order to guide appraisal of the draft plan, and reasonable alternatives, under the 'landscape' topic heading, with a view to a suitably focused appraisal:

Recognise broad variation in topography, geology, land use and landscape - e.g. raised landscapes versus river valleys - and the relationship to historic and potential future settlement / built form. Protect and enhance the character, quality and setting of valued landscapes at all scales, accounting for varying significance including the nationally significance of the North Wessex Downs. Recognise links to wider objectives (e.g. biodiversity, green infrastructure, heritage). Support comprehensive masterplanning with a long-term perspective and strategic green infrastructure.

11. Soils and resources

11.1.1 Set out below is an evidence review followed by a discussion of key issues and objectives. The evidence review covers agricultural land quality, minerals resources and planning for sustainable waste management.

1.23 Evidence review

11.1.2 Set out below is a list of key evidence sources, and then a discussion under thematic headings.

Table 10.1 Key sources of evidence relating to the land, soils and resources

Document title	Date
National	
<u>A Green Future: Our 25 Year Plan to Improve the Environment</u>	2018
<u>National Planning Policy for Waste</u>	2014
<u>National Planning Policy Framework</u>	2023
<u>Safeguarding our Soils: A Strategy for England</u>	2009
<u>Waste Management Plan for England</u>	2021
Local	
<u>Swindon Waste Strategy 2019-2029</u>	2019
<u>Wiltshire and Swindon Aggregate Minerals Site Allocations Local Plan</u>	2013
<u>Wiltshire and Swindon Minerals Core Strategy 2006-2026</u>	2009

Soil resources

- 11.1.3 The NPPF seeks to protect high-quality soil resources, recognising the wider benefits of natural capital and the need to consider the long-term implications of climate change and ways in which to build resilience. It encourages efficient land use, utilising brownfield land opportunities and land remediation schemes where appropriate and delivering environmental gains.
- 11.1.4 The Agricultural Land Classification (ALC) classifies land into six grades (plus 'non-agricultural land' and 'urban'), where Grades 1 to 3a are recognised as being the 'best and most versatile' (BMV) land, whilst Grades 3b to 5 are of poorer quality. In this context, there is a need to avoid loss of higher quality BMV agricultural land.
- 11.1.5 The provisional ALC dataset provided by Natural England demonstrates that the majority of Swindon is underlain by Grade 3 'Good to Moderate' agricultural land (as shown in the figure overleaf). There are also pockets of Grade 2 ('Very Good') land, particularly around Chiseldon in the south of the Borough, as well as Grade 4 'Poor' land, although this is less prevalent.

- 11.1.6 Natural England's 'Predictive BMV Assessment' for the South West indicates that Swindon is made up of relatively equal areas with a high (>60%), moderate (20-60%) and low (<20%) likelihood of comprising BMV land.³³ The areas with a high likelihood of BMV land include the area around Chiseldon, Badbury and Liddington, in the south of the Borough, as well as some of the area around Highworth. The areas with a medium likelihood include the area around Stanton Fitzwarren, Wroughton and Hinton Parva. Lastly, the areas with a low likelihood include the areas to the east and west of Swindon Town, as well as the area to the south of Castle Eaton.
- 11.1.7 As shown in **Figure 10.2** overleaf, more detailed surveying of land and soil quality has taken place in some places, commonly surrounding existing built-up areas. This shows a large area of primarily Grade 3b agricultural land, but also Grades 2 and 3a, to the north and east of Swindon Town. Although smaller in size, areas of Grade 2 and / or Grade 3a / 3b agricultural land can also be found along the northern boundary of the Borough, to the north of Hannington Wick and east of Castle Eaton, and in the southern part of the Borough, to the north and west of Chiseldon.

Mineral resources

- 11.1.8 Mineral resources are defined as natural concentrations of minerals or bodies of rock that have the potential to be of economic interest in the present or the future due to their inherent properties. As minerals are a finite resource, minerals safeguarding is deployed as the process through which it is ensured that non-minerals development does not needlessly prevent the future extraction of mineral resources.³⁴
- 11.1.9 The Wiltshire and Swindon Minerals Core Strategy (MCS) forms the land use planning strategy for minerals development for the period 2006 to 2026. It provides guidance on the level of minerals development needed to support growth and where in the county (including Swindon Borough) such development should go. As such, development proposals must adhere to the guidelines and policies contained within the MCS.
- 11.1.10 It is important to note that safeguarding is not absolute, as explained by the Minerals Safeguarding Practice Guidance (Mineral Products Association, 2019): *"Allocation of sites for non-minerals development within [minerals safeguarding areas, MSAs] should be avoided where possible... However, safeguarding is not absolute. Where other considerations indicate that a proposed site allocation within an MSA is appropriate... mitigation measures to reduce the area and amount of resource sterilised should be considered."*

Waste

- 11.1.11 The Waste Management Plan for England aims to move towards a circular economy in which resources are kept in use for longer.
- 11.1.12 Swindon's Waste Strategy (2019-2029) aims to increase the SBC's recycling rate to 60% by 2029, a year ahead of the national target. The Strategy outlines that in 2017/18, 38.4% of all waste was recycled.

³³ See <https://publications.naturalengland.org.uk/publication/5624668800679936?category=5208993007403008>

³⁴ UK Government (2014) 'Guidance: Minerals'

11.1.13 The Strategy outlines that of the 92,522 tonnes of waste and recycling collected in Swindon in 2017/18, 56% was converted into fuel at Swindon's solid recovered fuel plan in Cheney Manor, whilst 4% was sent to landfill. The remainder was re-used, recycled or composted.

11.1.14 The Strategy highlights population and housing growth as a key challenge. The amount of waste to be managed will continue to grow and the way waste is collected will need to change in order to drive waste reduction and encourage maximum participation in recycling schemes.

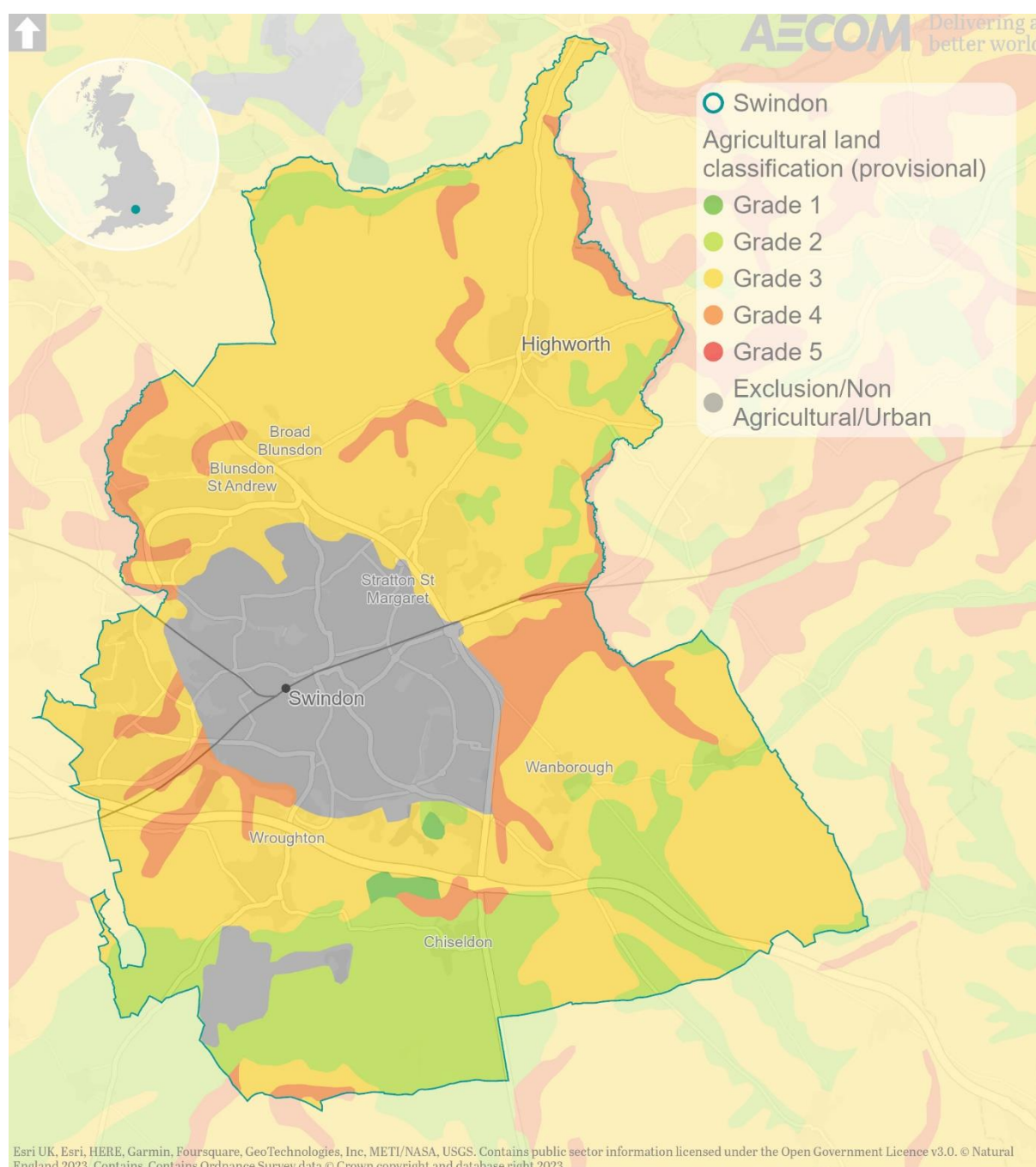


Figure 10.1 Provisional Agricultural Land Classification (ALC)

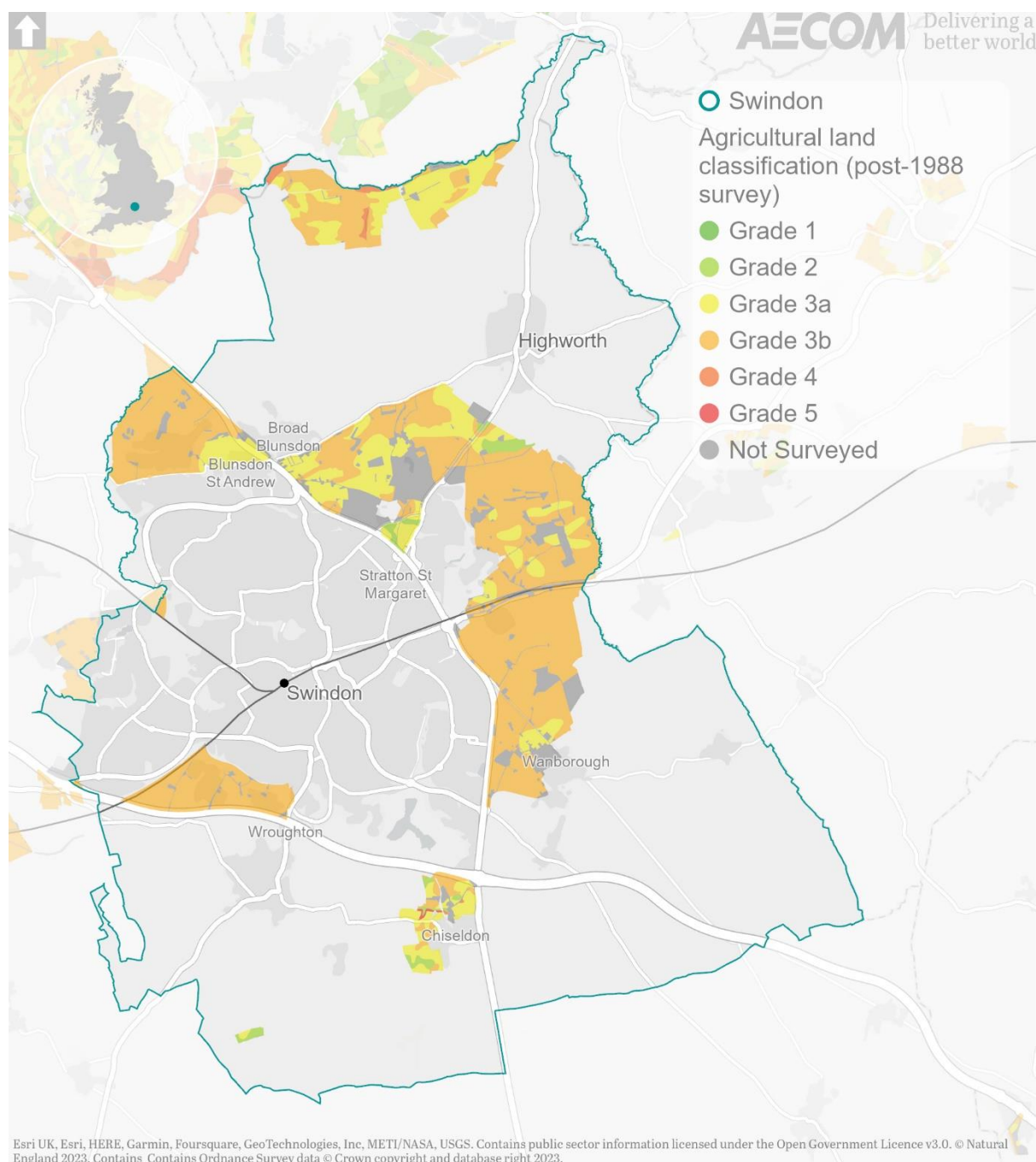


Figure 10.2 Post-1988 survey Agricultural Land Classification (ALC)

1.24 Key sustainability issues

11.1.15 Key issues and opportunities, which might be a focus of appraisal, include:

- **Agricultural land** - the nationally available 'provisional' agricultural land quality dataset shows spatial variation across the Borough, including a prevalence of better-quality agricultural land in the south. However, there is a need to use this dataset with caution, as it is very low accuracy, and does not differentiate between Grade 3a land (classified as best and most versatile, BMV) and Grade 3b land (which is not BMV). A further dataset is available that shows agricultural land quality with a high degree of accuracy (based on field investigations), but this dataset is very patchy, with data typically submitted as part of planning applications (despite little potential to avoid loss of agricultural land at this stage). The need to take a proactive approach to protecting BMV land as part of spatial strategy and site selection is increasingly recognised (food security), although it is difficult to assign significance to potential loss, as agricultural land is primarily a national resource.
- **Minerals** – there is a need to avoid sterilisation of resources that could potentially be viably extracted, accounting for safeguarding areas within Wiltshire and Swindon Minerals Core Strategy.
- **Minerals and waste infrastructure** – the Wiltshire and Swindon Minerals and Waste Core Strategies were both adopted in 2009, setting out a range of important designations and policies for consideration as part of preparing the Swindon Local Plan. There remains the possibility of the Local Plan taking on responsibility for planning in respect of waste.
- **Waste management** – good waste management must factor into masterplanning and building design (e.g. adequate space for waste sorting, storage and collection). Construction waste management is another important consideration, and links to the discussion of 'circular economy' principles above, under 'climate change mitigation'. Reusing existing buildings, where possible, is a priority.
- **Efficient use of land and resources** – it almost goes without saying that there is a need to make efficient use of land, including by making best use of previously developed / brownfield land. There is also a need to make best use of existing buildings, ahead of demolition and rebuild.
- **Larger than local issues** – Swindon is arguably subject to relatively low agricultural land quality constraint in the sub-regional context, e.g. the nationally available dataset shows much Grade 2 quality land across Wiltshire and Oxfordshire. Wiltshire also contains a band of Grade 1 quality land that runs between Devizes and Marten.

11.1.16 In light of these key issues, the following objective will be employed in order to guide appraisal of the draft plan, and reasonable alternatives, under the 'land and soils' topic heading, with a view to a suitably focused appraisal:

Ensure efficient use of land including a focus on avoiding the loss of best and most versatile (BMV) agricultural land as far as possible, particularly better quality BMV land. Support minerals and waste planning and seek to reflect circular economy principles.

12. Transport

12.1.1 Set out below is an evidence review followed by a discussion of key issues and objectives. The evidence review considers data from the census on travel patterns and then introduces the Borough's transport network.

1.25 Evidence review

12.1.2 Set out below is a list of key evidence sources, and then a discussion under thematic headings.

Table 12.1 Key sources of evidence relating to the transport topic

Document title	Date
National	
Bus back better	2021
Future of Mobility: Urban Strategy	2019
National Planning Policy Framework	2023
National Infrastructure Strategy	2020
Noise Policy Statement for England (NPSE)	2010
Planning Practice Guidance	2019
The Environmental Noise (England) Regulations 2006	2006
Transport Investment Strategy	2017
UK electric vehicle infrastructure strategy	2022
Decarbonising Transport: A Better, Greener Britain	2021
Decarbonising Transport: One Year On	2022
Local	
Swindon Borough Council – Bus Service Improvement Plan	2021
Swindon Local Cycling and Walking Infrastructure Plan	2022
Swindon Local Transport Plan 3: 2011-2026	2011
Swindon Local Transport Plan 4: Refresh	2022

Transport strategy

12.1.3 There is an anticipated move towards a more vision-based approach to transport planning (rather than predict and provide). There is emerging best practice in this field (Oxford County Council) and technical guidance ([TRICS](#)), and the aim may be to reflect this approach in transport modelling (also potentially carbon modelling) for the Local Plan. Specifically, there may be the potential to assume higher levels of modal split to active travel and public transport modes as part of modelling work, if underpinned by practical infrastructure proposals to deliver the step changes required.

12.1.4 The Swindon Local Cycling and Walking Implementation Plan will be central to this. An initial LCWIP was published in 2022, but there will be a need for ongoing work, and potentially an 'LCWIP+' in support of an aspirational shift to vision-based / 'decide and provide' transport planning.

1. Town Centre – Bridge Street link
2. Town Centre – Station Road and Manchester Road Corridors
3. Town Centre – Faringdon Road Farnsby Street/ Emlyn Square/ Milton Road Junction
4. Highworth to South Marston
5. Highworth Leisure routes
6. Moonrakers cycle bypass
7. Whitehill Way – Windmill Hill Business Park to Mead Way
8. Northern Route – Great Western Way (Route 45) to Orbital District Centre
9. Gorse Hill – Magic Roundabout/Corporation Street to Kembrey Park
10. Liden and Great Western Hospital
11. Dorcan Way – gap between existing Routes
12. Stratton cycle link
13. Marlowe Avenue to Queens Drive
14. Wichelstowe to Wroughton (Off Road)
15. Wichelstowe to Wroughton (On Road)
16. Royal Wootton Bassett to Windmill Hill
17. R45 to Moreton Pump Track
18. Kingsdown Lane
19. Tadpole to Blunsdon Hill
20. Marlborough Road
21. Old Town Railway
22. New Eastern Villages (NEV) A420 Missing Link
23. NEV Southern Connector - Upgrade of active travel

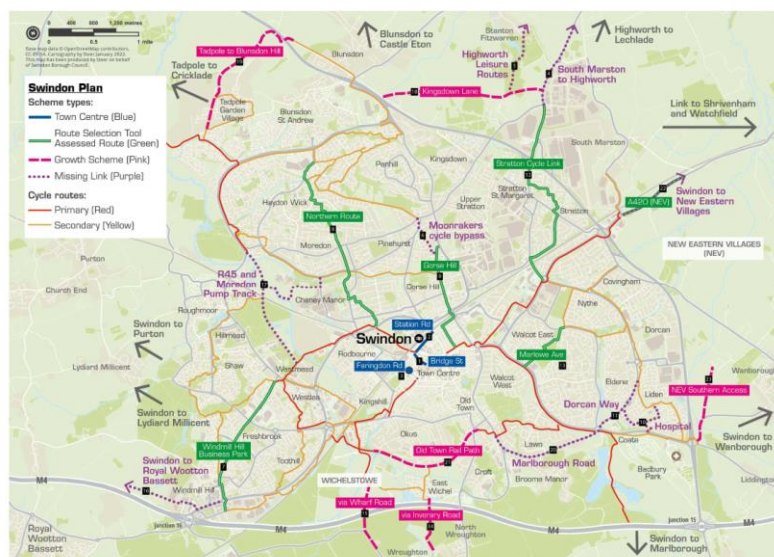


Figure 12.1: LCWIP priority routes / corridors

Census data

- 12.1.5 According to data from the 2021 Census, 46.9% of people aged 16 years and over in employment in Swindon drive a car or van to work, which is broadly in line with the national average (44.5%). Meanwhile, 30.6% of people in Swindon work mainly at or from home, which is also broadly in line with the national average (31.5%). Of the remaining people in Swindon, 6.4% walk to work, 5.6% travel by bus, minibus or coach to work, 5.1% are a passenger in a car or van, 2.8% cycle to work, 0.7% travel by taxi to work, 0.5% ride a motorcycle, scooter or moped to work, and 0.4% travel by train.
- 12.1.6 This is visualised in **Figure 12.2** below, which is compared to data from the 2011 Census. This figure demonstrates the number of people travelling to work via private vehicle has decreased over the last ten years, and the number of people working from home has substantially increased.
- 12.1.7 Focusing on distance travelled to work, 43.3% of people aged 16 years and over in employment in Swindon travel less than 10km to work, which is higher than the national average (35.4%). Of the remaining people in Swindon, 30.6% work mainly from home, 6.6% travel 10-30km to work, 5.9% travel 30km+ to work, and 13.6% of people who participated in the 2021 Census selected 'other'. This implies that Swindon is relatively self-contained in terms of employment, with most residents either travelling a short distance to work (<10km) or working mainly from home.

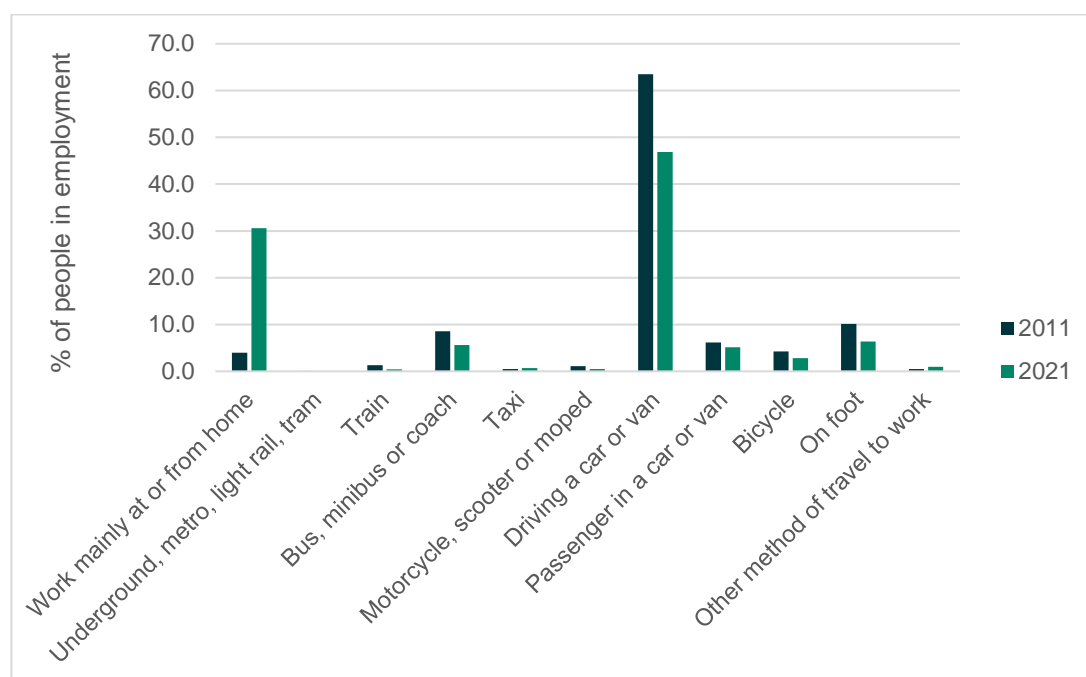


Figure 12.2: Method of travelling to work

Rail network

- 12.1.8 As noted under the historic environment SA topic, the presence of the railway in Swindon was a key reason behind the initial development of the town. As such, it has played an important part in transport to/ from Swindon, albeit with less paramount importance in the present day than in the past.
- 12.1.9 Swindon Railway Station, which is located in the centre of Swindon Town, is on the Great Western Railway (GWR) main line, operated by First Great Western (as shown in **Figure 12.1** overleaf). This line provides a regular, direct service to key employment centres in Bath Spa (25 mins), Bristol Temple Meads (35 mins) and Cardiff Central (1 hr) to the west, and Reading (30 mins) and London Paddington (50 mins) to the east. In addition, Oxford is accessible via a change at Didcot Parkway (40 mins). Swindon's good rail connectivity makes it an attractive location for the working age population.
- 12.1.10 LTP3 highlights that, by design, Swindon Railway Station tends to cater for long distance journeys. There is no suburban rail or rapid transit provision within Swindon, despite the presence of three major railway lines. This means that Swindon suffers from the severance caused by these railway lines, without reaping the benefits that a rail system could bring.
- 12.1.11 Whilst Swindon has good rail links via the GWR main line, some rail issues exist. These include:
- Constraints exist on the rail network on all approaches to Swindon.
 - Two-track sections between Swindon and Wootton Bassett junction, to the west, and between Swindon and Didcot to the east, limit day-to-day capacity for service expansion, and requires lengthy diversions or rail replacement bus services for maintenance.

- The single-track section between Swindon and Kemble, along with long signalling blocks between Kemble and Standish junction, limits capacity between Swindon and Gloucester.
- Despite the presence of three railway lines converging at the town's main station, there are no other stations and no use is made of rail for intra-urban journeys. Swindon effectively has the severance caused by railway lines without making full use of them; and
- Rail fares to/from Swindon can be very high, particularly for peak-time journeys to/from places east of Swindon.

12.1.12 Consultation for the Swindon Transport Strategy also specifically noted that access to the railway station is poor, and that the station itself is also not well-regarded, with a lack of north-south linkages across the station also cited. Parking at the station is considered an inhibitor to increasing rail use.

Freight routes and terminals

12.1.13 According to LTP3, Swindon Railway Station currently has freight terminals for metals and cars, with another terminal catering for aggregates nearby at Wootton Bassett. Notable movements include car exports from the Honda factory to the continent via the Channel Tunnel (N.B. the Honda factory is now closed), and steel for the car industry from the Hawksworth terminal (including BMW Mini panels). SBC worked very closely with BMW to develop the steel pressing unit in Swindon, which has resulted in steel now coming in by train and Mini parts going out by train. This has helped to safeguard production in the town as well as transfer freight successfully from road to rail. In comparison, the rail freight depot at Stratton, which is well-located for the A419, has been relatively unsuccessful, due in part to the plot size being unattractive for business operation at the terminal.

Bus network

12.1.14 Swindon's bus network is focused on a substantial town network (as shown in **Figure 12.1**), beyond which a number of inter-urban routes operate regularly, some on a high-frequency basis. As well as providing connectivity to Wroughton and Highworth, and across the Borough's boundaries, these services perform an important role on some radial corridors within the town. Timetables and maps for Swindon's bus network can be found [here](#).

12.1.15 According to SBC's Bus Service Improvement Plan (BSIP) (2021), which constitutes the public transport element of LTP3, bus patronage between 2011 and 2019 was remarkably stable overall, despite significant changes in the town. The total number of local bus passenger journeys (i.e. boardings) in Swindon fell from 12.5 million to 11.9 million between 2011 and 2019, with total passenger numbers fluctuating throughout this time period. This masks a steady rise on boardings on most out-of-town services, and a general decline on many town routes, though the picture is mixed.

12.1.16 Notably, 95% of mileage within the Borough is operated commercially. A smaller number of uncommercial services cover smaller rural communities, many of which are financially supported and administered by neighbouring authorities, principally Wiltshire and West Berkshire, which Swindon Borough Council financially contributes to.

12.1.17 Reflecting the industry structure prior to deregulation in 1986, SBC has two major commercial bus operators:

- The former municipal organisation, since 2017 owned by Go-Ahead Group as part of Go South Coast (GSC), trading as Swindon's Bus Company, operate the majority of routes solely within the built-up area. GSC had separately operated hourly into Swindon from Salisbury, under its Salisbury Reds brand, which continues to date.
- The former National Bus Company subsidiary, now part of Stagecoach West, have a minority share of the town network, but operate the great majority of inter-urban services extending beyond the town and as far as Chippenham, Oxford and Cheltenham.

12.1.18 Additional bus operators operate cross-boundary bus services into the Borough, under contract to neighbouring authorities, but these are very limited in scope and frequency.

12.1.19 Swindon has recently embarked on a renewed rapid growth trajectory over the 2021-2036 period, after several years of consolidation, across four planned expansion areas:

- Wichelstowe
- Kingsdown (east of A419)
- New Eastern Villages (NEV)
- Tadpole Garden Village

12.1.20 LTP3, and the accompanying Swindon Transport Strategy, incorporated three Quality Bus Corridors (QBCs) offering fast, frequent and reliable bus services to three of the four planned expansion areas (Wichelstowe, NEV and Tadpole Garden Village). These QBCs also serve existing parts of the town enroute. Progress has been made towards delivering parts of QBC1 (Cricklade Road), with a £3.8m junction improvement scheme recently completed, as well as QBC2 (Wichelstowe). QBC3 will be aligned to the delivery of the NEV.

12.1.21 SBC has recently commenced enabling works for a new Bus Boulevard. The £33m scheme, which is due to be completed in September 2024, will deliver a new public transport interchange as part of wider town centre regeneration. The Bus Boulevard is adjacent to Kimmerfields, the flagship of the town centre regeneration. In addition, Zurich – one of the town's major employers – is currently building its new state-of-the-art offices as part of this development.

12.1.22 The evidence base for the LTP4 refresh concedes that no meaningful progress has been made achieving some of the objectives of LTP3. There has been reverse modal shift towards a higher level of car dependency; congestion and car journey times have worsened markedly; and there has been a small but clear reduction in the bus mode share, which the growth of the town cannot fully mask in patronage statistics. In fact, bus use from the newest developments is exceptionally low.

Road network and congestion

- 12.1.23 Swindon is well-located on the motorway network, being immediately adjacent to the M4 (as shown in **Figure 12.1** overleaf), with two junctions serving the town: one at its eastern edge (Junction 15) and the other (Junction 16) to the west. This allows easy access via the strategic road network to both London and the Thames valley, as well as the west of England and South Wales.
- 12.1.24 The A419 runs north-south, broadly along the eastern edge of Swindon Town, continuing north (as the A417 from Cirencester) to join the M5 near Gloucester (Junction 11A). In addition, the A420 runs northeast from the east of Swindon Town to Oxford, whilst the A346 runs south from Junction 15 of the M4 to Marlborough, continuing south (as the A338) to Salisbury and Bournemouth).
- 12.1.25 According to LTP3, the Base Year (2006) model shows that the heaviest congestion during the AM peak occurs mainly on the western and eastern approaches into Swindon. In total, there are six sections of the road network that experience this level of heavy congestion. The two main locations are accessing M4 Junction 16 and sections of the A420 within Swindon (west of the A419).
- 12.1.26 There are numerous other locations that are also congested, where traffic is regularly delayed on key corridors throughout the town. Many junctions suffer from some form of congestion-related delay in the AM peak. Key locations include:
- Dorcan Way
 - Marlborough Road (B4006)
 - Thamesdown Drive (B4534); and
 - Cricklade Road (A4311) (this road provides the main route to the town centre directly from the north).
- 12.1.27 During the PM peak, congestion is less widespread than in the AM peak and there are fewer congested locations. The Swindon Transport Strategy contends that this is as would be expected, as the AM peak is a more marked peak. The most heavily congested parts of the network in the PM peak are: Wootton Bassett Road (A3102) (east of the railway line); and Junction of Hyde Road and Kingsdown Road (north east of the town centre).
- 12.1.28 Other areas where PM peak congestion is notable include Mannington roundabout (and other junctions on Great Western Way), Cricklade Road, and Drakes Way / A420 corridor.

EV charging

- 12.1.29 According to the LTP4 refresh, growth in the numbers of licensed ultra-low emission vehicles (ULEVs) in Swindon appears broadly comparable to the UK overall. However, the number of public charging points in Swindon appears to be low compared to other areas.

Active travel routes

- 12.1.30 According to LTP3, Swindon has been developed (at least in the last 50 years) almost entirely to meet the needs of the private car. The comparatively low density of housing in newer areas of Swindon results in relatively long distances between residential areas and potential workplaces, retail areas or other facilities, all of which is not particularly conducive to walking or cycling. This is compounded when combined with a generally poor pedestrian environment and streetscape.
- 12.1.31 New development has provided new quality infrastructure, but highlights missing links, and substandard infrastructure in the older parts of town. Swindon's town centre, built up around the railway and supporting the car, is particularly lacking in safe, useable routes.
- 12.1.32 There is also a legacy of a canal network in Swindon, with some sections now being utilised as footpaths and cycle paths. There is scope, particularly in the longer term to integrate canal routes to enhance the cycling and walking network in the Borough.
- 12.1.33 According to Swindon's Local Cycling and Walking Infrastructure Plan (2022), there are over 100km of cycle path around Swindon. Much is traffic free, with segregated provision for cycling and walking. "*Flyer routes*" were developed under the Local Sustainable Transport Fund (LSTF), resulting in three 2-mile commuter routes to the town centre from the west, south and east. In addition, National Cycle Network route 'Swindon to Marlborough Railway Path'³⁵ runs from the centre of Swindon Town all the way to Marlborough in Wiltshire. This route is 21.6km long and mostly traffic-free.
- 12.1.34 Two national trails intersect with Swindon: the Thames Path and The Ridgeway. The Thames Path³⁶, which runs along the northern boundary of the Borough (as shown in **Figure 12.3** overleaf), is 298km long and runs from the source of the Thames, just north of Kemble in Gloucestershire, to Woolwich in London, following the path of the River Thames. The Ridgeway³⁷, which passes through the southeastern part of the Borough, is 140km long and runs from Avebury in Wiltshire to Ivinghoe Beacon in Buckinghamshire, following a ridge of chalk hills.
- 12.1.35 The main issues identified in the Swindon Transport Strategy when considering walking and cycling in Swindon were:
- Declining proportion of work trips undertaken on foot and by bicycle.
 - High car ownership; convenience of use.
 - Rail line dissecting the town centre from the north of Swindon.
 - Highly permeable network of streets, but difficult to navigate; and
 - Major roads and junctions not conducive to walking and cycling.

³⁵ Sustrans (no date): 'Swindon to Marlborough Railway Path', [online] available to access via [this link](#)

³⁶ National Trails (no date): 'Thames Path', [online] available to access via [this link](#)

³⁷ National Trails (no date): 'The Ridgeway', [online] available to access via [this link](#)

12.1.36 Consultation for the Swindon Transport Strategy identified a number of issues relating to walking and cycling. The key points included the lack of priority facilities for cyclists in a number of locations or corridors.

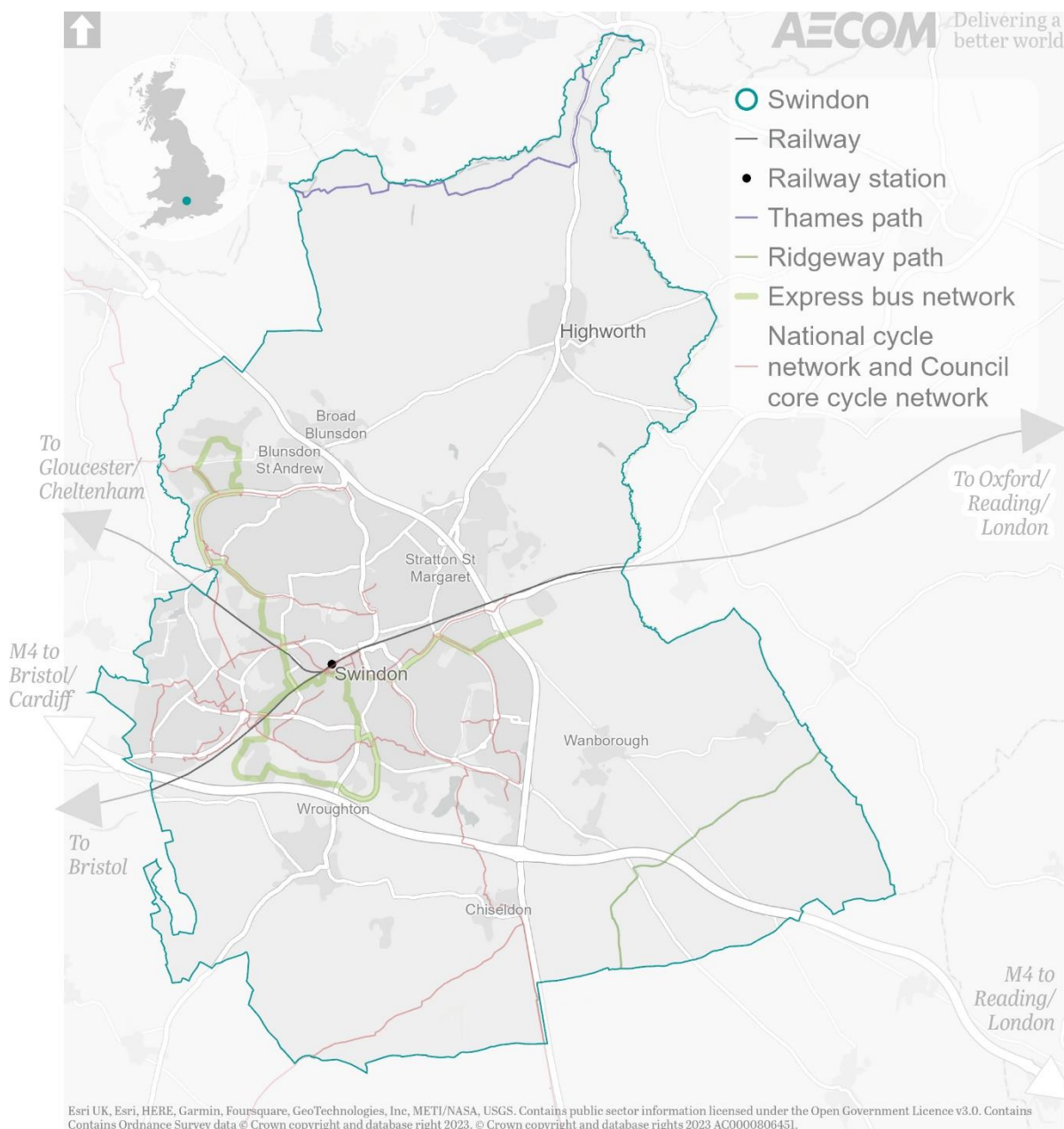


Figure 12.3 Key transport assets in Swindon

1.26 Key sustainability issues

12.1.37 Key issues and opportunities, which might be a focus of appraisal, include:

- **Strategy** – SBC have recently published the LTP4 refresh, which adopts an ‘avoid-shift-improve approach’. This approach aims to reshape the understanding of how traditionally car-based transport systems are improved to meet future demand. It considers human factors relating to the need for private mobility and promotes reducing and mitigating this need, instead of simply providing for demand for road space for cars.
- **Strategic corridors** – a key consideration for the New Local Plan may be in respect of directing growth to support the achievement of established objectives for strategic transport corridors, e.g. enhancing bus services; delivering new cycle routes; improving walkable routes (e.g. providing better lighting and natural surveillance for improved safety); and delivering road/ junction upgrades in order to address traffic congestion and support bus services and cycle safety.
- **20-minute neighbourhoods** – strategic growth locations can deliver a mix of uses onsite and new infrastructure (community, transport, green) alongside new housing, with enabling more people to meet their needs locally. Equally, growth can be directed to support aspirations for existing communities to develop into 20-minute neighbourhoods.
- **Urban and rural areas** – are associated with specific sets of transport issues and objectives. For example, in rural areas there is a need to consider the ability to easily take a bus to school, and rural roads/ lanes can be associated with particular road safety issues. Traffic through historic or otherwise constrained village centres can also be an issue. In addition, there is a need to understand variation in rural bus services, albeit this is inherently challenging as services are subject to change.
- **Cross-boundary issues** – there is a clear need to plan for transport corridors in collaboration with neighbouring areas. Neighbouring strategies include Oxfordshire’s Local Transport and Connectivity Plan (2022), Gloucestershire’s LTP (2022), and Wiltshire’s LTP3 (2011).
- **Larger than local** – should there be a need to deal with unmet needs within the sub-region, then it will be the case that a key consideration is providing for unmet need in locations well linked to the source.

12.1.38 In light of these key issues, the following objective will be employed in order to guide appraisal of the draft plan, and reasonable alternatives, under the ‘transport’ topic heading, with a view to a suitably focused appraisal:

Support the achievement of ‘modal shift’, including through the location and design of development, and support for strategic or otherwise coordinated growth locations. Support the Local Transport Plan, for example in respect of transport infrastructure upgrades, addressing congestion hotspots (and, in turn, supporting public and active transport) and future mobility. Recognise close links to ‘accessibility’ objectives and - particularly within the main urban area - ensure an integrated approach in terms of targeted growth at centres and along key corridors, e.g. new homes to support new infrastructure.

13. Water

13.1.1 Set out below is an evidence review followed by a discussion of key issues and objectives. The evidence review provides an overview of the baseline situation, in respect of water resources and water quality, before going on to consider the key issue of wastewater treatment and other specific matters.

1.27 Evidence review

13.1.2 Set out below is a list of key evidence sources, and then a discussion under thematic headings.

Table 13.1 Key sources of evidence relating to the water topic

Document title	Date
International	
<u>The Water Environment Regulations</u>	2017
National	
<u>A Green Future: Our 25 Year Plan to Improve the Environment</u>	2018
<u>Future Water: The Government's water strategy for England</u>	2011
<u>National Planning Policy Framework</u>	2023
<u>Planning Practice Guidance</u>	N/a
<u>The Water Environment (Water Framework Directive) (England and Wales)</u>	
<u>Water for Life</u>	2011
<u>An overview of Drainage and Wastewater Management Plans</u>	2019
<u>Drainage and wastewater management plans: guiding principles for the water industry</u>	2022
Local	
<u>Thames River Basin District River Basin Management Plan</u>	2022
<u>Thames Water – Drainage and Wastewater Management Plan 2025-2050</u>	2023
<u>Thames Water – Water Resources Management Plan 2024</u>	2024

Water resources and quality

13.1.3 The Water Environment Regulations (2017) applies to surface water and groundwater and details the need to prevent further deterioration in aquatic ecosystems, as well as to ensure the protection, enhancement and restoration of water bodies is a key consideration in development proposals. Similarly, the NPPF states that new and existing development should be prevented from contributing to, being at risk from, or being adversely affected by unacceptable levels of water pollution. Therefore, the New Local Plan must take these requirements into consideration.

13.1.4 Swindon is served by Thames Water (water and sewerage services). The Water Resources Management Plan (WRMP) (2020-2100) sets out the

actions Thames Water will take to provide a secure and sustainable supply of water for their customers within Swindon and beyond.

- 13.1.5 There are six Water Resource Zones (WRZs) within the Thames Water supply area. Swindon falls within the Swindon and Oxfordshire (SWOX) WRZ, which is the second largest zone after the London WRZ. The SWOX WRZ is supplied mainly from groundwater (60%), supported by river abstraction and a reservoir, sited near Oxford.
- 13.1.6 The WRMP highlights that the London and SWOX WRZs have significant and complex water resource challenges. Notably, the population of the SWOX WRZ is forecast to increase by 27.4% between 2016-2045, making it the second highest growing WRZ after Guildford (27.5%). In the SWOX WRZ, an increase in demand of approximately 6 Ml/d is predicted.
- 13.1.7 The Water Framework Directive (WFD) created a statutory obligation for monitoring the ecological status of water bodies with the aim of achieving 'good ecological status' (that is, the biota is the same as or only slightly different from that expected in the absence of human activity) for all water bodies. Annex V of the WFD provides definitions of ecological status in rivers and lakes that are based on four biological quality elements (BQEs): 'phytoplankton', 'macrophytes and phytobenthos', 'benthic invertebrate fauna', and 'fish fauna'. The water bodies in the northern part of the Borough are classified as 'moderate', whilst the water bodies in the central part of the Borough are classified as 'poor'.
- 13.1.8 The Water Framework Directive (WFD) encourages a catchment-based approach for water management for the 100 water catchments in England and Wales. Swindon falls within the Thames River Basin District, or more specifically, the following two management/ operational catchments:
- Gloucestershire and the Vale Management Catchment – this management catchment covers the majority of the Borough, with Swindon falling within the following operational catchment:
 - Thames Upper Operational Catchment – fourteen water bodies within this operational catchment fall within the Borough. These are: Bydemill Brook, Coate Water, Cole (Acorn Bridge to Bower Bridge), Cole (Bower Bridge to Thames), Cole (Source to Lenta Brook), Haydon Wick Brook, Liden Brook, Lydiard Brook, Ray (Lydiard Brook to Thames), Ray (Source to Lydiard Brook), Share Ditch, South Marston Brook, Thames (Churn to Coln), and Westrop Brook.
 - Kennet and Trib Management Catchment – this management catchment covers the southern boundary of the Borough, with Swindon falling within the following operational catchment:
 - Kennet Operational Catchment – three water bodies within this operational catchment – Upper Kennet to Marlborough, Og, and Lambourn (source to Newbury) – fall just within the southern boundary of the Borough.
- 1.28 The Thames River Basin District River Basin Management Plan (RBMP) (DEFRA and EA, 2015) outlines the significant water management issues that are preventing water bodies from achieving 'good' status. These include:

- Physical modifications (e.g. from flood defences) which affect 44% of water bodies in the Thames River Basin.
- Pollution from wastewater affects 45% of water bodies.
- Pollution from towns, cities and transport affecting 17% of water bodies.
- Changes to natural flow and water levels affecting 12% of water courses.
- Invasive species affecting 3% of water bodies.
- Pollution from rural areas through approaches to land affecting 27% of water bodies. This includes soil/ sediment being washed off carrying phosphorous in the water bodies leading to excessive algae growth (eutrophication). Other sources of pollution include Nitrate from fertilisers building up in groundwater and livestock slurry and pesticides from farming.
- Climate change effects such as increasing temperatures, droughts, more frequent storm events and sea level rise.

13.1.9 It is noted that the SBC area is within a nutrient neutrality zone for the River Lambourn SAC. This is linked to elevated levels of phosphorus.

Wastewater treatment

1.29 The Thames River Basin District RBMP indicates that pollution from wastewater affects 45% of water bodies in the Thames River Basin District. The RBMP proposes the following measures to address this issue:

- Mitigate/ remediate point source impacts on receptor.
- Reduce point source pollution at source.
- Reduce diffuse pollution at source.
- Reduce point source pathways (i.e. control entry to water environment).

1.30 Thames Water has recently released its first Drainage and Wastewater Management Plan (DWMP) (2023). The DWMP sets out the future challenges for Thames Water's drainage and wastewater systems and the actions needed to manage them over a 25-year period. Key challenges are:

- Population growth: Thames Water expect the population in its region to grow by more than 2 million people by 2045.
- Climate change: impacts from climate change are already being seen, and these are forecast to increase, with more extreme weather expected. This includes droughts, heatwaves and summer rainstorms becoming up to 20% more extreme.
- Loss of green space: green and permeable areas are continually being lost to housing, transport infrastructure, and many other uses. This means that more rainwater cannot soak into the ground, and it runs into sewers and rivers more quickly, increasing the risk of flooding.
- An environment in need: of the 501 waterbodies in the River Thames Basin District, 94% are at less than 'good' ecological status. This is principally attributed to activities such as urban and transport, and agricultural and rural land management.

- 13.1.10 An interactive digital map produced by Thames Water identifies live raw sewage discharge via storm overflows.³⁸ Whilst overflows exist to stop effluent backing up into properties during storm events, there are major concerns regarding the frequency of their use. At the precise time of writing (October 2023), the interactive digital map indicates the majority of monitoring locations are not discharging but there are a number that have recorded discharge in the last 48 hours, and one is currently discharging.

Nitrate Vulnerable Zones

- 13.1.11 Nitrate Vulnerable Zones (NVZs) represent areas at risk from agricultural nitrate pollution, where rules pertaining to fertiliser use and water pollution prevention, are in place. A large proportion of the Borough overlaps with NVZs (as shown in **Figure 13.1** overleaf). The northern part of the Borough and western part of Swindon Town overlap with the Thames (Churn to Coln) NVZ for surface water. The eastern part of Highworth overlaps with the small Highworth Corallian NVZ for groundwater. Finally, the southern part of the Borough overlaps with the Berkshire Downs NVZ for groundwater.

Drinking Water Safeguard Zones

- 13.1.12 Drinking Water Safeguard Zones (DWSZs) for surface water are catchment areas that influence the water quality for their respective Drinking Water Protected Area (DWPA). They are identified where the protected area has been assigned as being "at risk" of failing the drinking water protection objectives of the Water Environment (Water Framework Directive) (England & Wales) Regulations 2017. DWSZs are one of the main tools for delivering the drinking water protection objectives. They are a non-statutory, joint initiative between the Environment Agency and water companies that define areas where actions and measures will be targeted to address water contamination and avoid or minimise extra treatment needed by water companies. Impacts, sources, actions and measures proposed for each DWSZ are provided in accompanying Action Plans which are periodically reviewed and updated.
- 13.1.13 DWSZs for groundwater are established around public water supplies where additional pollution control measures are needed. The Water Framework Directive requires that DWPAs are identified (WFD Article 7.1) and that they are given the necessary protection (WFD Article 7.3) with the aim of avoiding deterioration in their quality in order to reduce the level of purification treatment required in the production of drinking water. The geometry of DWSZs for groundwater are based on Source Protection Zones (SPZs), usually Zone 2, and use additional assessment to identify areas, which may or may not coincide with the SPZ, where additional measures are required to ensure that abstraction waters meet Article 7.3 of the WFD.
- 13.1.14 A large proportion of the Borough overlaps with a DWSZ for surface water (as shown in **Figure 13.2** overleaf). Two smaller areas of the Borough, overlapping its southern boundary, fall within DWSZs for groundwater.

³⁸ Thames Water (2023): 'Event duration monitoring (EDM) map', [online] available to access via [this link](#)

Source Protection Zones

13.1.15 Source Protection Zones (SPZs) are defined around large and public potable groundwater abstraction sites. The purpose of SPZs is to provide additional protection to safeguard drinking water quality through constraining the proximity of an activity that may impact upon a drinking water abstraction. This is part of an initial screening process in assessing impacts to groundwater resources. The following subdivisions are defined within SPZs:

- **Zone 1 (Inner Protection Zone)** – This zone is defined by a travel time of 50-days or less from any point within the zone at, or below, the water table. Additionally, the zone has as a minimum a 50-metre radius. It is based principally on biological decay criteria and is designed to protect against the transmission of toxic chemicals and water-borne disease.
- **Zone 2 (Outer Protection Zone)** – This zone is defined by the 400-day travel time from a point below the water table. Additionally, this zone has a minimum radius of 250 or 500 metres, depending on the size of the abstraction. The travel time is derived from consideration of the minimum time required to provide delay, dilution and attenuation of slowly degrading pollutants.
- **Zone 3 (Total Catchment)** – This zone is defined as the total area needed to support the abstraction or discharge from the protected groundwater source.

13.1.16 As shown in **Figure 13.2** overleaf, only a small proportion of the Borough overlaps with SPZs. A small area within Zone 2 overlaps the northern boundary of the Borough, near Castle Eaton. Meanwhile, several areas within Zone 3 overlap the southern boundary of the Borough, with the largest area located to the south of Wroughton. There is also an area within Zone 1/2 to the south of Chiseldon.

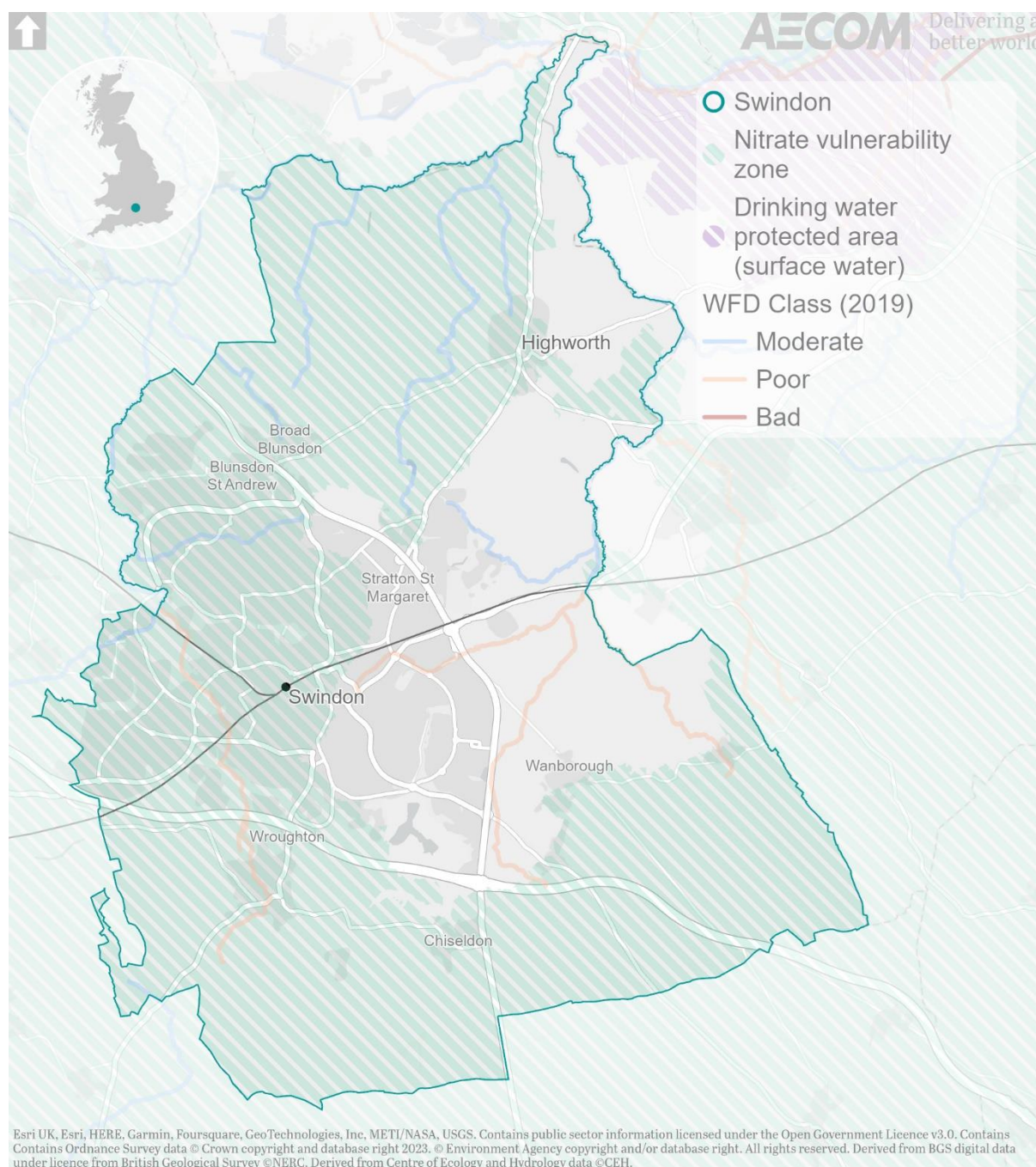


Figure 13.1 Nitrate Vulnerability Zones, drinking water protected areas (surface water) and WFD classes (2019) in Swindon

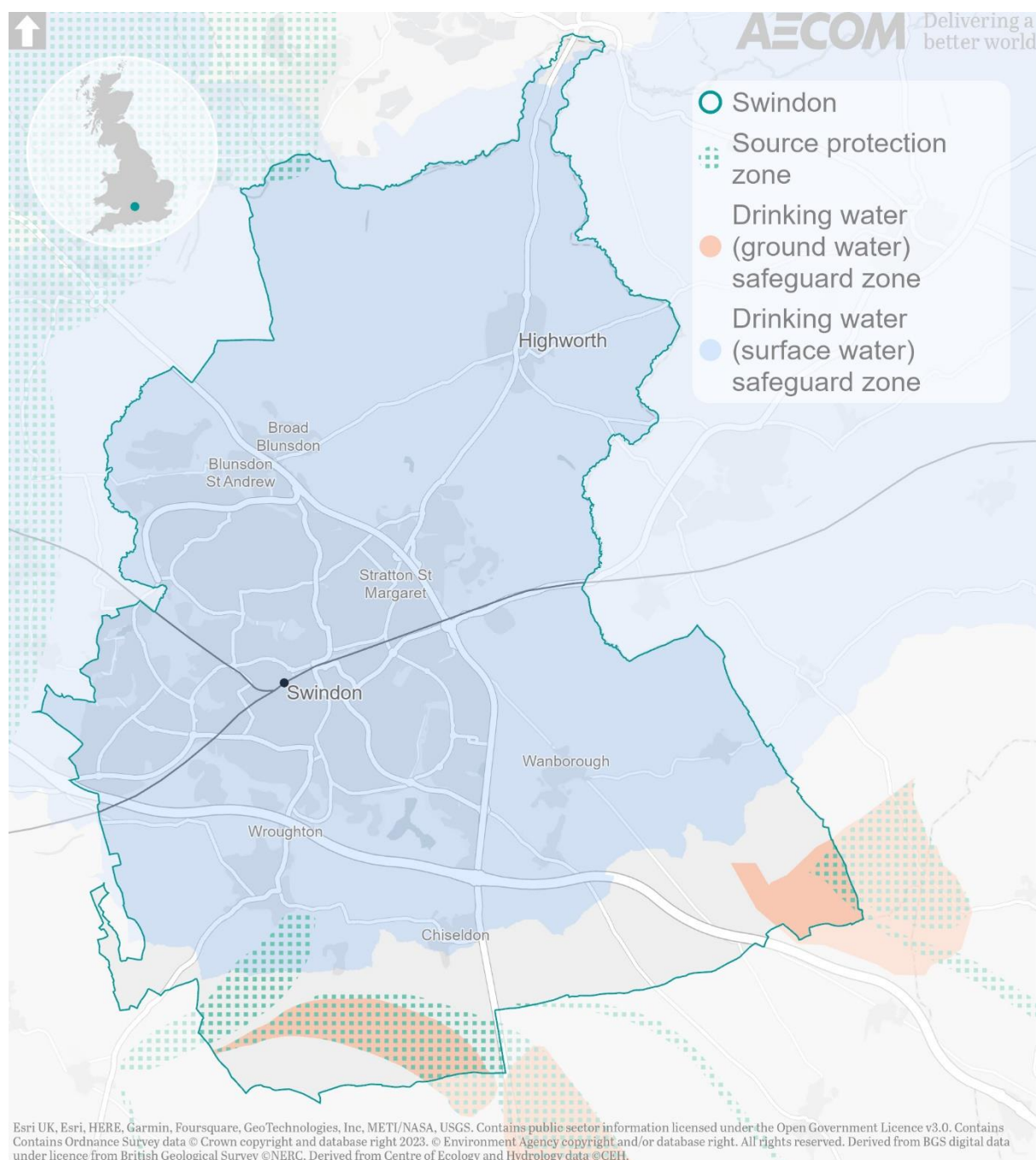


Figure 13.2 Source Protection Zones and drinking water safeguard zones (groundwater and surface water) in Swindon

1.31 Key sustainability issues

13.1.17 Key issues and opportunities, which might be a focus of appraisal, include:

- **Wastewater treatment** – is often a key issue for local plans, with discharge of water from storm overflows high on the agenda nationally. Capacity at existing treatment works can often be increased to accommodate increased flows (at least hydraulic capacity of the works; whether the water can be treated to the standard necessary not to impact on water quality during times of dry weather flow is another matter). However, there are major cost and lead in time implications, and a risk of unforeseen issues and further delays. As such, there is merit to directing growth to locations with existing capacity and/or where growth could support delivery of a new treatment works where possible.
- **Water quality** – is a consideration for local plans beyond matters relating to wastewater treatment. However, growth within a sensitive catchment (e.g. associated with a chalk aquifer / chalk streams) will not normally lead to issues given the potential to implement national best practice in respect of Sustainable Drainage Systems (SuDS).
- **Water supply** – can be a key issue within problematic water resource zones, as established by the work of water companies. As well as leading to impacts for potable water supply, ‘water stress’ also affects the natural environment, for example (and notably) there is a risk of problematic low flows / prolonged periods of no flow affecting Swindon’s internationally important chalk streams, located in the south of the Borough. However, the water companies put in place long term plans to balance water supply and demand, and there are not currently any water resource zones that are known to be problematic to the extent that there is a clear constraint to strategic growth. The plan may consider requiring standards of water efficiency over-and-above the baseline requirement set out in Building Regulations, e.g. via use of greywater harvesting.
- **Cross border issues** – there is a need to contribute to cross-border objectives for water resource zones, catchments and river corridors, including for the River Thames in the northern part of the Borough and the Rivers Ray and Cole in the central part of the Borough.
- **Larger than local issues** – around the country several river catchments and also water resource zones have been identified that are constrained to such an extent that housebuilding must be limited or stopped entirely. This includes the nutrient neutrality zone linked to the River Lambourn SAC (designated due to phosphorus issues). It is not clear that this is currently an issue with a direct bearing on Swindon, or any of its neighbouring authorities, but this will need to be kept under review.

13.1.18 In light of these key issues, the following objective will be employed in order to guide appraisal of the draft plan, and reasonable alternatives, under the ‘water’ topic heading, with a view to a suitably focused appraisal:

Direct growth to minimise pressure on water resources and water quality, including accounting for wastewater treatment capacity and any water resource zones associated with particular water stress. Realise opportunities for growth to support new infrastructure.

14. Next steps

- 14.1.1 The next step is consultation on a Draft Local Plan, which is anticipated in late 2024. An **Interim SA Report** will be published alongside that essentially presents: A) an appraisal of the plan and reasonable alternatives; and B) an outline of the reasons for selecting the alternatives dealt with. The report will also present proposed monitoring indicators.
- 14.1.2 The appraisal will be guided by the SA framework and the agreed scope more broadly, as set out in this report, although (and to reiterate) there is also a need for flexibility. If there are any significant updates to the SA scope these will be reported and, in turn, be made available for comment.
- 14.1.3 With regards to the scope of reasonable alternatives (RAs), the requirement is to reflect “the objectives and geographical scope of the plan”. This is taken to mean essentially alternative key diagrams, or ‘growth scenarios’. However, there is a need for further work to consider the scope of RAs.
- 14.1.4 Subsequent to the Draft Plan / Interim SA Report consultation, the next step will be to finalise the Local Plan for publication (Regulation 19). The formally required **SA Report** will be published alongside.

