

Facilities Planning Model Assessment of
Swimming Pool Provision for
Cotswold District Council

Bespoke Report

8 May 2026

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EXECUTIVE SUMMARY

Introduction

- 0.1 Cotswold District Council (also referred to as Cotswold, or the District) is reviewing its current provision of swimming pools and assessing future demand and level of provision required to 2043.
- 0.2 This report has been prepared based on an assessment using the Sport England Facilities Planning Model (FPM) spatial modelling tool. The FPM study is a quantitative, accessibility and spatial assessment of the supply, demand and access to swimming pools.
- 0.3 The FPM modelling runs are to provide the following:
- Run 1 – baseline assessment of provision in 2025
 - Run 2 – forward assessment of demand for swimming pools and its distribution, based on the projected changes in population between 2025 and 2043
- 0.4 The main report sets out the full set of findings under each of the seven assessment headings.
- 0.5 The next section of the report provides the headline strategic overview, and the key findings and interventions arising from the FPM study on supply, demand and accessibility.

Headline Strategic Overview

- 0.6 The headline strategic finding is that the current supply of swimming pools meets Cotswold's demand in the weekly peak period for swimming pools in 2025 and 2043, and there is no need to increase provision to meet demand. Satisfied demand is very high, with most being met within the District. Unmet demand is very low, and there is almost no unmet demand due to lack of capacity.
- 0.7 Based on population change and provision of 4,000 new housing units, there is a 10% increase in demand for swimming pools between 2025 and 2043. The District-wide level of swimming pool utilisation increases from 62% in the weekly peak period in 2025 to 66% in 2043. The increase in demand can be met by the current accessible supply in the weekly peak period. However, Cirencester Leisure Centre is estimated to be uncomfortably busy (more than 70% utilised) in 2025 and fully utilised at peak times in 2043. This is for the following reasons:
- Demand is highest in Cirencester in both years.
 - The largest housing growth sites are in the Cirencester area.
 - It is the most recent site to open and, therefore, highly attractive to residents.
 - In both years, the largest amount of imported demand to Cotswold is from Stroud, accounting for 39% of Cotswold's imported demand in 2025 and 41% in 2043. While The Pulse Dursley in south Stroud is relatively new and attractive, provision in Stroud is poor compared to demand.

Key Findings

0.8 The key findings that underpin the headline strategic overview are as follows:

1. Cirencester Leisure Centre, Bourton Leisure Centre and Westonbirt School and Leisure Centre are all available for the maximum 52.5 hours in the weekly peak period. Therefore, there is no scope to increase availability and capacity at peak times at these sites.
2. Cirencester Leisure Centre provides 34% of the available capacity in both 2025 and 2043. The four educational sites provide 53% of the available capacity and Fire Service College Sports Club provides 13%.
3. Cotswold's population is projected to increase by 15% between 2025 and 2043, resulting in a 10% increase in demand for swimming pools. The smaller increase in demand compared with the population growth is because of the ageing of the population in Cotswold between 2025 and 2043. There will be fewer residents in the age bands with the highest swimming participation (0-15 year olds and 25-39 year olds) in 2043 than in 2025. Cotswold has a larger proportion of residents over 65 years old than the national average.
4. Cotswold's demand is the equivalent of 57% of its available supply in 2025, increasing to 63% in 2043.
5. It is estimated that 4% of journeys by Cotswold residents to swimming pools are made by public transport or bicycle in 2025 and 2043. This is less than the regional proportion of 6% and the national proportion, which decreases from 10% in 2025 to 9% in 2043.
6. In 2025, 95% of Cotswold's demand is met; and 94% in 2043. However, the number of visits met in the weekly peak period increases from 5,761 in 2025 to 6,316 in 2043 due to the increase in demand in the District.
7. In 2025 and 2043, 71% of Cotswold's satisfied demand is met within the District. In terms of visits, 4,091 are retained in the weekly peak period in 2025, increasing to 4,473 in 2043.
8. Unmet demand in Cotswold is 52 sqm of water in 2025, and 62 sqm in 2043. Unmet demand that is too far from a facility is 98% in 2025, and 93% in 2043. Lack of capacity accounts for 1 sqm of water in 2025, and 4 sqm of water in 2043.
9. In 2043 the location in Cotswold where the most unmet demand can be met is Kingscote at 34 sqm of water. This is insufficient unmet demand to consider providing a new swimming pool.

Interventions and Next Steps

- 0.9 The assessment has identified that there is sufficient provision to meet demand in 2025 and 2043. Therefore, the strategic intervention focuses on managing Cirencester Leisure Centre to better meet demand so as to improve the balance between supply and demand. However, the scope for this is very limited.
- 0.10 Cirencester Leisure Centre is the only public leisure centre in Cotswold District Council and is located in the area of highest demand. It is the most recent site to open, and has the joint largest main pool and the only teaching pool in the District. For all these reasons, it is the most attractive site to residents.
- 0.11 Both pools at Cirencester Leisure Centre are available for the maximum peak period hours. Therefore, there is no scope to increase availability and capacity at peak times to reduce the proportion of used capacity.
- 0.12 Given the distance between Bourton Leisure Centre and Cirencester Leisure Centre, there appears to be limited scope to manage the programme of use for both sites collaboratively. The purpose here would be to increase utilisation at Bourton Leisure Centre and reduce it at Cirencester Leisure Centre.
- 0.13 However, Bourton Leisure Centre is the nearest pool site to Cirencester and is managed by the same operator. It has estimated utilisation of 43% in the weekly peak period in 2025, and 39% in 2043. It is recommended that any potential for collaborative management of the sites with a shared programme of use is investigated by Cotswold District Council.
- 0.14 The increasing level of utilisation at Cirencester Leisure Centre will impact on the condition of the site. In 2043 the centre will be 37 years old and in need of refurbishment. Adherence to the pools equipment and plant maintenance schedule is important in contributing to the site's containing attractiveness. This is also applicable to the other older sites that have not been refurbished, notably, the two educational sites that are older than Cirencester Leisure Centre. If a pool site suffers equipment failure, it may get moth balled possibly leading to long term closure.
- 0.15 Cotswold District Council should consider applying this assessment of need to develop planning policy to secure developer contributions towards the refurbishment of Cirencester Leisure Centre.
- 0.16 These interventions and suggested next steps are based on the FPM findings and should be considered as a key part of the all-round evidence base currently being developed to inform Cotswold District Council's strategic planning of swimming pools. Combining the FPM assessment with the wider review of provision will lead to well considered options on the best ways to meet the projected demand for swimming pools up to 2043 and beyond.

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1 INTRODUCTION

- 1.1 Cotswold District Council (also referred to as Cotswold or the District) is reviewing its current provision of swimming pools and assessing the future provision required to 2043.
- 1.2 This report has been prepared based on an assessment using the Sport England Facilities Planning Model (FPM) spatial modelling tool. The FPM study is a quantitative, accessibility and spatial assessment of the supply, demand and access to swimming pools.
- 1.3 The key drivers for the work are to understand the impact of the following:
- How well the supply of swimming pools meets demand in 2025 and 2043
 - The impact that population change and residential development have in changing the demand for swimming pools and its distribution up to 2043
- 1.4 The outputs from the FPM assessment will:
- Inform Cotswold's District Council's strategic planning review of swimming pool provision and future strategy
 - Provide an assessment of need that contributes to the evidence base for the development of planning policy on the provision of indoor sports facilities
 - Provide an assessment of need that contributes to the inward investment strategy for the provision of swimming pools
- 1.5 The sequence of work is based on assessments known as runs, and these are set out in the Executive Summary.

The Study Area

- 1.6 The assessments include the swimming pools and population in Cotswold and the neighbouring local authority areas, which comprise the study area (see Map 1.1).
- 1.7 A customer's choice of swimming pool does not respect local authority boundaries. There may be management and possibly pricing incentives for customers to use sports facilities in their local authority area. Other factors that influence the choice of swimming pool include:
- How close the venue is to where residents live or work
 - Other facilities at the same site, such as a gym or studio
 - Programming of the pool with swimming activities that appeal to residents and are available at times that fit with the lifestyle of residents
 - Age and condition of the facility and inherently its attractiveness
- 1.8 Increasingly, the quality of swimming pools and their offer are of more importance to residents in their choice of venues. New facilities will have a significant draw because of the enhanced quality of the venues.

- 1.9 In determining the position across Cotswold, it is important to take full account of the swimming pools and population in neighbouring local authority areas. The most attractive facility for some Cotswold residents may be outside the District (known as exported demand). For residents of neighbouring local authorities, their most attractive swimming pool may be inside Cotswold (known as imported demand).
- 1.10 To take account of these factors, a study area is established that places Cotswold at its centre and includes the neighbouring local authority areas.

Map 1.1: Study Area for Cotswold Swimming Pools Assessment



Report Structure, Content and Sequence

- 1.11 The findings for the Cotswold assessment are set out in a series of tables for both runs. This allows a 'read across' to see the specific impact of changes between Runs 1 and 2 and builds up the picture of change.
- 1.12 The headings for each table are:
- Supply
 - Demand
 - Accessibility
 - Satisfied Demand
 - Unmet Demand
 - Used Capacity
 - Local Share
- 1.13 The terms listed above are defined beneath the tables.
- 1.14 To support the findings, this report also includes maps that show swimming pool locations, demand, deprivation, driving and walking coverage, public transport access, exported satisfied demand, unmet demand, imported used capacity and local share.
- 1.15 Where valid, the findings for neighbouring local authorities are set out. A commentary is provided on these comparable findings. For example, some local authorities like to know how their findings on proportion of met demand compare with those of neighbouring local authorities.
- 1.16 The key findings in each of the sections are numbered and highlighted in bold typeface.
- 1.17 The facilities excluded from the study, with explanations, are listed in Appendix 1. Details of the swimming pools in the neighbouring local authority areas for the assessment are set out in Appendix 2. The FPM and its parameters are described in Appendix 3.
- 1.18 All maps for the study are provided in a separate document as layered PDFs.

2 SWIMMING POOL SUPPLY

There are seven swimming pools across six sites in Cotswold. There is one teaching pool at Cirencester Leisure Centre.

Two sites have a six-lane pool and can accommodate more than one activity at a time. Four sites have a four-lane pool and can accommodate all activities, but most likely only one at a time.

The educational sector is the dominant provider, having 53% of the available capacity in both 2025 and 2043.

Four swimming pool sites opened between 2000 and 2006. Cirencester Leisure Centre is the most recent site to open. Three swimming pool sites have been refurbished.

Table 2.1: Supply of Swimming Pools in Cotswold by Run

Supply	Run 1	Run 2
Cotswold	2025	2043
Number of pools	7	7
Number of pool sites	6	6
Total water space in sqm	1,563	1,563
Available sqm of water in weekly peak period	1,213	1,213
Unavailable supply in the weekly peak period	22%	22%
Supply in visits per week in peak period	10,611	10,611
Average age of all of sites	28	46
Average age of public leisure centres	19	37

Definition of supply – This is the supply or capacity of the swimming pools available for community and swimming club use in the weekly peak period. Supply is expressed in the number of visits that a pool can accommodate in the weekly peak period and in square metres of water.

Weekly peak period – This is when most visits take place and when users have most flexibility to visit. The peak period for swimming pools is one hour on weekday mornings, one hour on weekday lunchtimes, five and a half hours on weekday evenings, and seven and a half hours on weekend days. This gives a total of 52.5 hours per week. The modelling and recommendations are based on the ability of the public to access facilities during this weekly peak period.

2.1 In 2025 and 2043 there are seven swimming pools across six sites in Cotswold.

2.2 The facilities excluded from the study are listed in Appendix 1.

Table 2.2: Details of Swimming Pools in Cotswold included in the Runs

Site	Provider	Type	Dimensions (m)	Area (sqm)	Year Built	Year Refurb	Peak Period Hours	Available Hours	Capacity (visits)
Cirencester Leisure Centre	Public	6-lane	25 x 13	325	2006		52.5	100.5	3,640
		Teaching	13 x 7	91			52.5	100.5	
Bourton Leisure Centre	Educational (3rd party)	4-lane	25 x 9	225	2003		52.5	97.5	1,969
Cotswold Leisure Chipping Campden	Educational (3rd party)	4-lane	18 x 9	162	1996	2003	38.5	46.5	1,040
National Star College	Educational (in-house)	6-lane	25 x 13	325	2000	2008	15	28	813
Westonbirt School and Leisure Centre	Educational (in-house)	4-lane	25 x 8.4	210	2005		52.5	93	1,838
Fire Service College Leisure Club	Other (sport club)	4-lane	25 x 9	225	1977	2004	35	70	1,313

Providers

- 2.3 In Cotswold there is one public leisure centre, which is available to all residents and provides all the following swimming activities:
- Learn to swim
 - Casual recreational swimming
 - Lane and fitness swimming activities
 - Swimming development through clubs
- 2.4 There are four educational swimming pool sites:
- Bourton Leisure Centre and Cotswold Leisure Chipping Campden have dual-use with schools, and are operated by Freedom Leisure on behalf of Cotswold District Council.
 - National Star College and Westonbirt School and Leisure Centre are operated in-house.
- 2.5 National Star College is a specialist college for pupils with disability. Community use provides a learn to swim programme for babies and children, focusing on fun, water confidence, and skill-building. The College also provides a programme for disabled children and their families, featuring tailored lessons, recreational sessions, and focusing on a supportive setting for physical and social development.
- 2.6 Westonbirt School and Leisure Centre operates a learn to swim programme for children and adults. It also caters for private tuition and operates a lifeguard award scheme to teach water safety.
- 2.7 Given that nearly all the swimming pool stock is provided by the educational sector, this may restrict residents who require access during weekday daytimes; for example, stay-at-home parents, home workers, and the unemployed or retired. This places greater reliance on the more limited public leisure centre stock for these residents.
- 2.8 There is one other provider; Fire Service College Leisure Club. The centre is operated by Capita, primarily serving College staff and trainees. It is available for local community groups and commercial users to hire for recreational swimming.

Scale

- 2.9 Cirencester Leisure Centre is the largest site in Cotswold and the only site with two pools (a 25m x 13m six-lane pool and a 13m x 7m teaching pool). The site can provide all swimming activities, and the main pool is suitable for club development.
- 2.10 Bourton Leisure Centre and Cotswold Leisure Chipping Campden are single pool sites. Bourton Leisure Centre is the larger of the two sites with a 25m x 9m four-lane pool. Cotswold Leisure Chipping Campden has an 18m x 9m four-lane pool, which is the smallest main pool in the District. Both sites can only provide one swimming activity at a time.

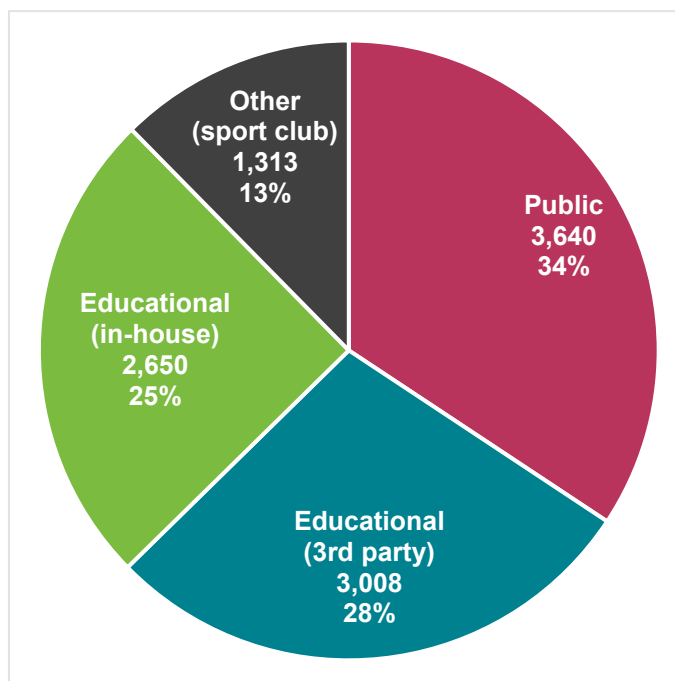
- 2.11 National Star College has a 25m x 13m six-lane pool, the same size as the main pool at Cirencester Leisure Centre.
- 2.12 Westonbirt School and Leisure Centre has a 25m x 8.4m four-lane pool. It is the second smallest pool in the District, but is suitable for its main activity of learn to swim.
- 2.13 Fire Service College Leisure Club has a 25m x 9m four-lane pool, which is a suitable size for its programme of use.

Availability

- 2.14 **Key finding 1** is that Cirencester Leisure Centre, Bourton Leisure Centre and Westonbirt School and Leisure Centre are available for the maximum 52.5 hours in the weekly peak period. Therefore, there is no scope to increase availability and capacity at peak times at these sites.
- 2.15 Educational pools are unlikely to be available for the maximum hours because the weekly peak period includes hours that fall during school time and when after school clubs are running. While Bourton Leisure Centre is an educational site, it is also a dual-use site and caters for community use in addition to educational use.
- 2.16 Westonbirt School and Leisure Centre availability is unusually high for an educational site, but it does have a very extensive learn to swim programme and employs seven instructors.
- 2.17 Availability in the weekly peak period at the other educational sites is:
- Cotswold Leisure Chipping Campden – 38.5 hours
 - National Star College – 15.0 hours
- 2.18 National Star College has the least availability of the swimming pool sites. However, it has a specialist programme of use, and the hours available probably reflect its needs.
- 2.19 Sport England has produced a resource to support schools in opening their facilities for community use in non-school hours. The resource covers how to get started, who can help, operating models, legal and governance, finance, marketing, operating safely and safeguarding, and can be found here: <https://www.sportengland.org/funding-and-campaigns/use-our-school>.
- 2.20 This resource can be used to support discussions with schools to open their sites for community use, either for the first time or to extend the hours available to the local community.
- 2.21 Fire Service College Leisure Club is available to its membership and hirers for 35.0 hours in the weekly peak period. There is scope to increase availability at peak times.

Capacity

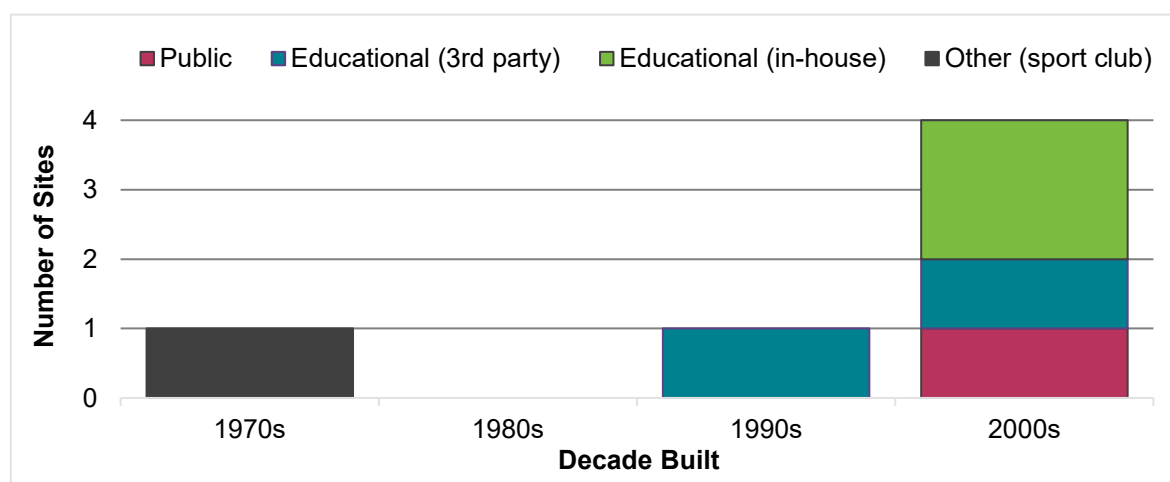
Chart 2.1: Proportion of Available Water Space by Provider in 2025 and 2043



- 2.22 **Key finding 2** is that Cirencester Leisure Centre provides 34% of the available capacity in both 2025 and 2043. The four educational sites provide 53% of the available capacity, and Fire Service College Sports Club provides 13%.

Age

Chart 2.2 Decade Built of Pools in Cotswold by Provider



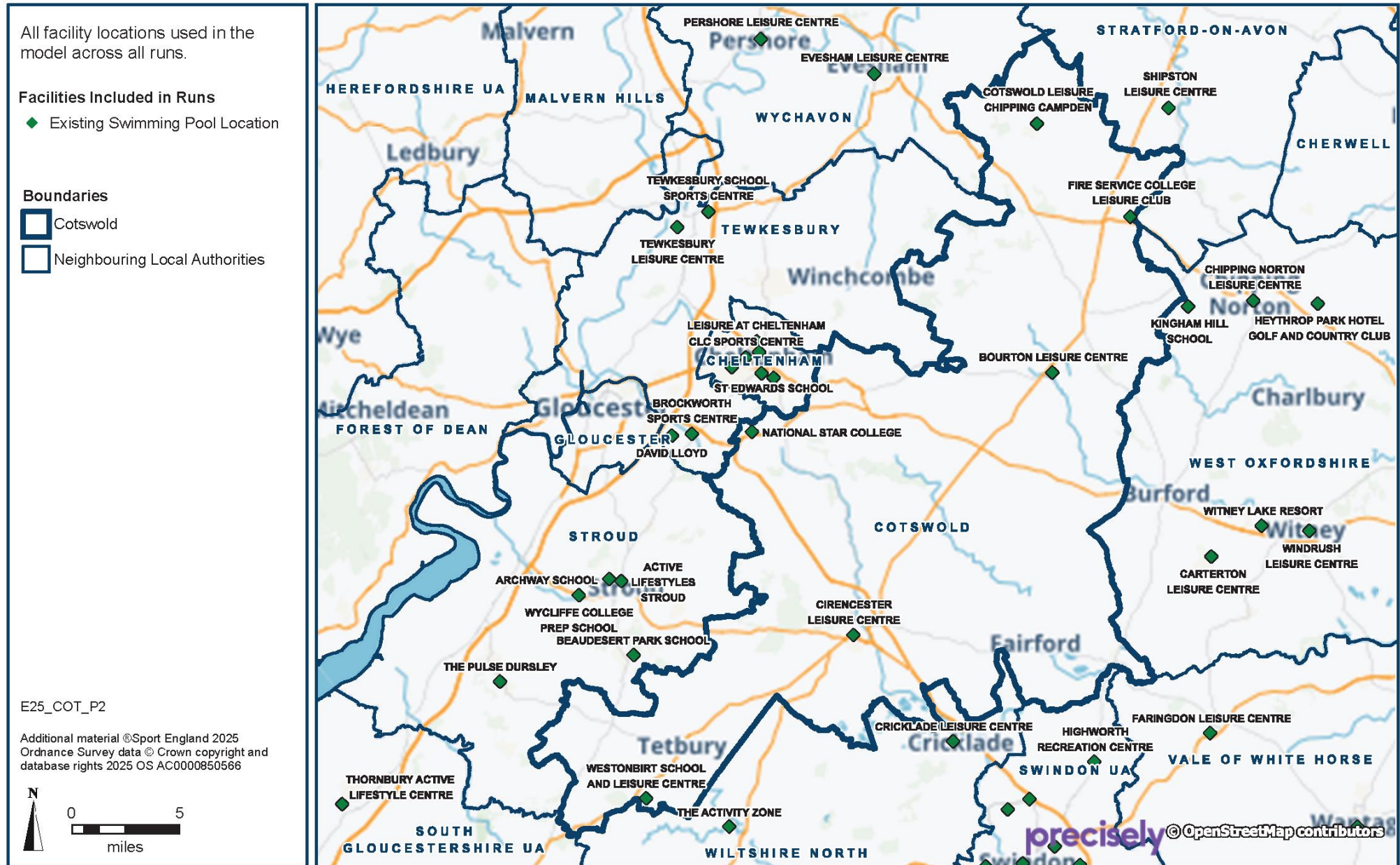
- 2.23 The average of all the swimming pool sites is 28 years in 2025, and 46 years in 2043. Cirencester Leisure Centre is 19 years old in 2025, and 37 years old in 2043.
- 2.24 The oldest swimming pool is Fire Service College Leisure Club, which opened in 1977 and was refurbished in 2004.

- 2.25 Cirencester Leisure Centre is the most recent site to open in 2006 and, therefore, the most attractive to residents.
- 2.26 The oldest unmodernised swimming pool is Bourton Leisure Centre, which opened in 2003.
- 2.27 The most recent site to have been modernised is National Star College in 2008.

Swimming Pool Locations

- 2.28 Cirencester Leisure Centre is located in the largest settlement in Cotswold (see Map 2.1). Cotswold Leisure Chipping Campden is located in the northeast of the District close to the border with Stratford-on-Avon and Wychavon. Bourton Leisure Centre is in the east of the District.
- 2.29 Three swimming pool sites are located very close to the border with neighbouring local authorities:
- Westonbirt School and Leisure Centre is in the southwest bordering North Wiltshire
 - National Star College in the west bordering South Gloucestershire
 - Fire Service College Leisure Club in the northeast bordering Stratford-on-Avon

Map 2.1: Location of Swimming Pools Across All Runs (2025 and 2043)



3 DEMAND FOR SWIMMING POOLS

Cotswold's population and demand for swimming pool provision both increase between 2025 and 2043, by 15% and 10% respectively.

Demand in Cotswold is less than its available supply in both years.

Demand is greatest in Cirencester in both years.

Cotswold has the third smallest increase in demand in sqm of water, but the smallest population in the study area.

Table 3.1: Demand for Swimming Pools in Cotswold by Run

Demand	Run 1	Run 2
Cotswold	2025	2043
Resident population	94,598	108,344
Visits demanded in weekly peak period	6,079	6,695
Demand in sqm of water with comfort factor included	1,000	1,101
% of demand in the 10% most deprived LSOAs nationally	0%	0%

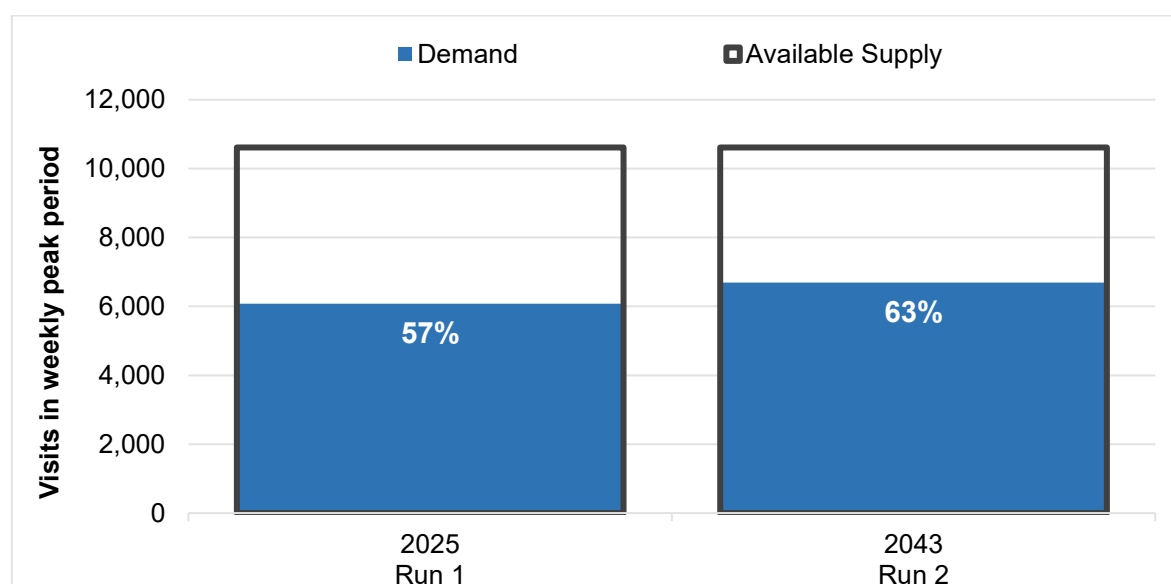
Definition of total demand – This represents the total demand for swimming by gender and for six age bands from 0 to 80+ and is calculated as the percentage of each age band/gender that participates. This is added to the frequency of participation in each age band/gender to arrive at a total demand figure, which is expressed in visits in the weekly peak period and square metres of water. The FPM parameters for the percentage of participation and frequency of participation, for gender and for different age bands, are calculated from Sport England's Active Lives survey up to November 2023 and are set out in Appendix 3.

- 3.1 Demand is calculated from the resident population. The geographical distribution of the population in the FPM for 2043 includes housing growth sites, the details of which were provided by Cotswold District Council that were known at the time of modelling. There are extensive housing growth sites to the south of Cirencester (see Map 3.1).
- 3.2 The latest development trajectory for Cotswold to 2043 has more dwellings than modelled and there are changes to the locations of the sites. However, the geographical distribution is similar to what was modelled and the differences per area are smaller when converted into demand. The total population forecast for Cotswold remains the same from the Office for National Statistics 2022-based subnational projection. Therefore, the changes in housing growth will not have a significant impact on the overall findings of this report.
- 3.3 **Key finding 3** is that Cotswold's population is projected to increase by 15% between 2025 and 2043, resulting in a 10% increase in demand for swimming pools. The smaller increase in demand compared with the population growth is because of the ageing of the population in Cotswold between 2025 and 2043. There will be fewer residents in the age bands with

the highest swimming participation (0-15 year olds and 25-39 year olds) in 2043 than in 2025. Cotswold has a larger proportion of residents over 65 years old than the national average.

- 3.4 The rate and frequency of swimming participation is assumed to be unchanged between the two years (for participation rates and frequency, see Appendix 3: Swimming Pools Parameters).
- 3.5 Of Cotswold's population (source: ONS Census 2021):
- Residents aged 65 and over represent 28% of the total population compared to the national average of 20%
 - Disabled residents account for 16% compared to the national average of 17%
 - Working from home residents are 39% compared to the national average of 32%

Chart 3.1: Demand as a Proportion of Available Supply in Cotswold by Run



- 3.6 **Key finding 4** is that Cotswold's demand is the equivalent of 57% of its available supply in 2025, increasing to 63% in 2043.

Demand in the Study Area

- 3.7 Demand is projected to increase in all of Cotswold's neighbouring local authorities.
- 3.8 Demand in Cotswold increases by 101 sqm of water. This is the third smallest increase in demand in sqm of water, but Cotswold has the smallest population in the study area.
- 3.9 The largest increase in demand in water space is in South Gloucestershire at 539 sqm of water, equating to a 16% increase. Demand increases in Stratford-on-Avon by 324 sqm of water, which is the highest percentage increase in the study area at 21%.
- 3.10 The smallest increase is in Cheltenham at 26 sqm of water, which is a 2% increase

Table 3.2: Demand for Swimming Pools by Area and Run

Demand in sqm of water considering a 'comfort factor'	Run 1	Run 2	Difference 2025 to 2043	
Area	2025	2043	Sqm of Water	% change
Cotswold	1,000	1,101	101	10%
Cheltenham	1,297	1,323	26	2%
South Gloucestershire	3,335	3,874	539	16%
Stratford-on-Avon	1,563	1,887	324	21%
Stroud	1,367	1,531	164	12%
Swindon	2,663	2,705	42	2%
Tewkesbury	1,113	1,290	177	16%
Vale of White Horse	1,645	1,897	252	15%
West Oxfordshire	1,299	1,439	139	11%
Wiltshire	5,665	5,918	253	4%
Wychavon	1,492	1,696	204	14%

Geographical Distribution of Demand

2025

- 3.11 Demand is highest in Cirencester, followed by Tetbury, Fairford and Bourton (see Map 3.2).
- 3.12 The greatest densities of demand per square kilometre are in Cirencester at 31 sqm of water (light blue square) and east of Cirencester Leisure Centre at 27 sqm of water (medium blue square).
- 3.13 Demand per square kilometre in other locations is highest in the following areas:
- Moreton-in-Marsh – 21 sqm of water (medium blue square)
 - Tetbury – 18 sqm of water (dark blue square)
 - Northleach – 15 sqm of water (dark blue square)
 - Rissington – 14 sqm of water (dark blue square)
- 3.14 The largest clusters of demand are as follows:
- Cirencester – 175 sqm of water across 18 square kilometres (Cirencester Leisure Centre is located in this area)
 - Tetbury – 53 sqm of water across five square kilometres
 - Moreton-in-Marsh – 39 sqm of water across three square kilometres (Fire Service College Leisure Club is located east of this area)
 - Bourton-on-the-Water – 34 sqm of water across six square kilometres (Bourton Leisure Centre is located in this area)

- Fairford – 32 sqm of water across five square kilometres
- South Cerney – 27 sqm of water across five square kilometres
- Lechlade – 22 sqm of water across four square kilometres
- Rissington – 19 sqm of water across three square kilometres
- Mickleton – 18 sqm of water across three square kilometres
- Chipping Camden – 17 sqm of water across six square kilometres (Cotswold Leisure Chipping Campden is located in this area)

3.15 Outside of these areas demand is less than 14 sqm of water per square kilometre (dark blue and purple squares).

2043

3.16 In 2043 demand in Cirencester increases to 222 sqm of water across a larger area of 23 square kilometres (see Map 3.3).

3.17 The changes in demand in other areas are as follows:

- Tetbury – decreases to 48 sqm of water across five square kilometres
- Moreton-in-Marsh – increases to 46 sqm of water across three square kilometres
- Fairford – increases to 46 sqm of water across a larger area of nine square kilometres
- Bourton-on-the-Water – decreases to 32 sqm of water across six square kilometres
- South Cerney – decreases to 24 sqm of water across five square kilometres
- Lechlade – increases to 23 sqm of water across four square kilometres
- Mickleton – increases to 22 sqm of water across three square kilometres
- Rissington – decreases to 15 sqm of water across three square kilometres
- Chipping Camden – unchanged at 17 sqm of water but across a larger area of seven square kilometres

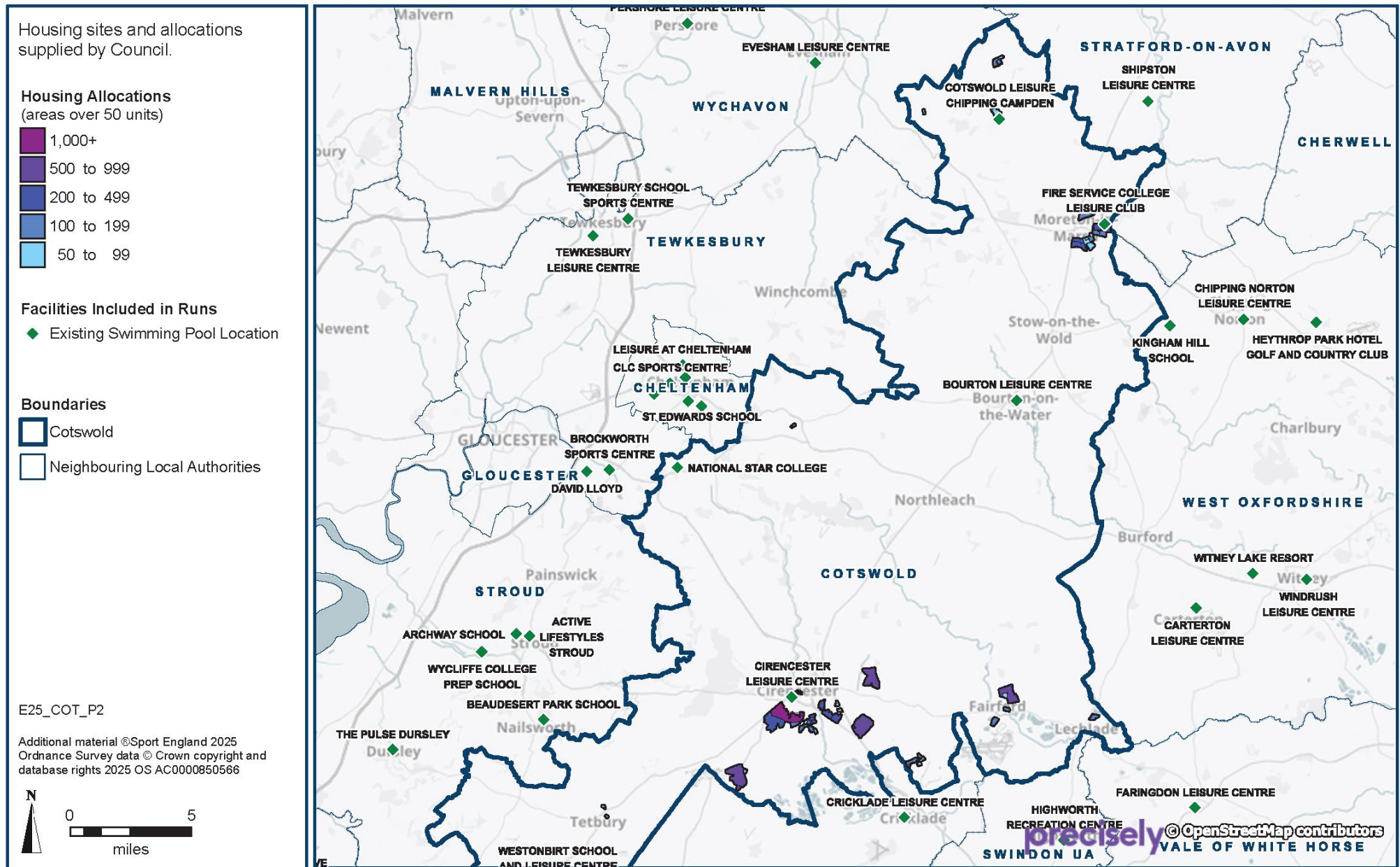
3.18 Outside of these areas demand is less than 15 sqm of water per square kilometre (dark blue and purple squares).

Deprivation

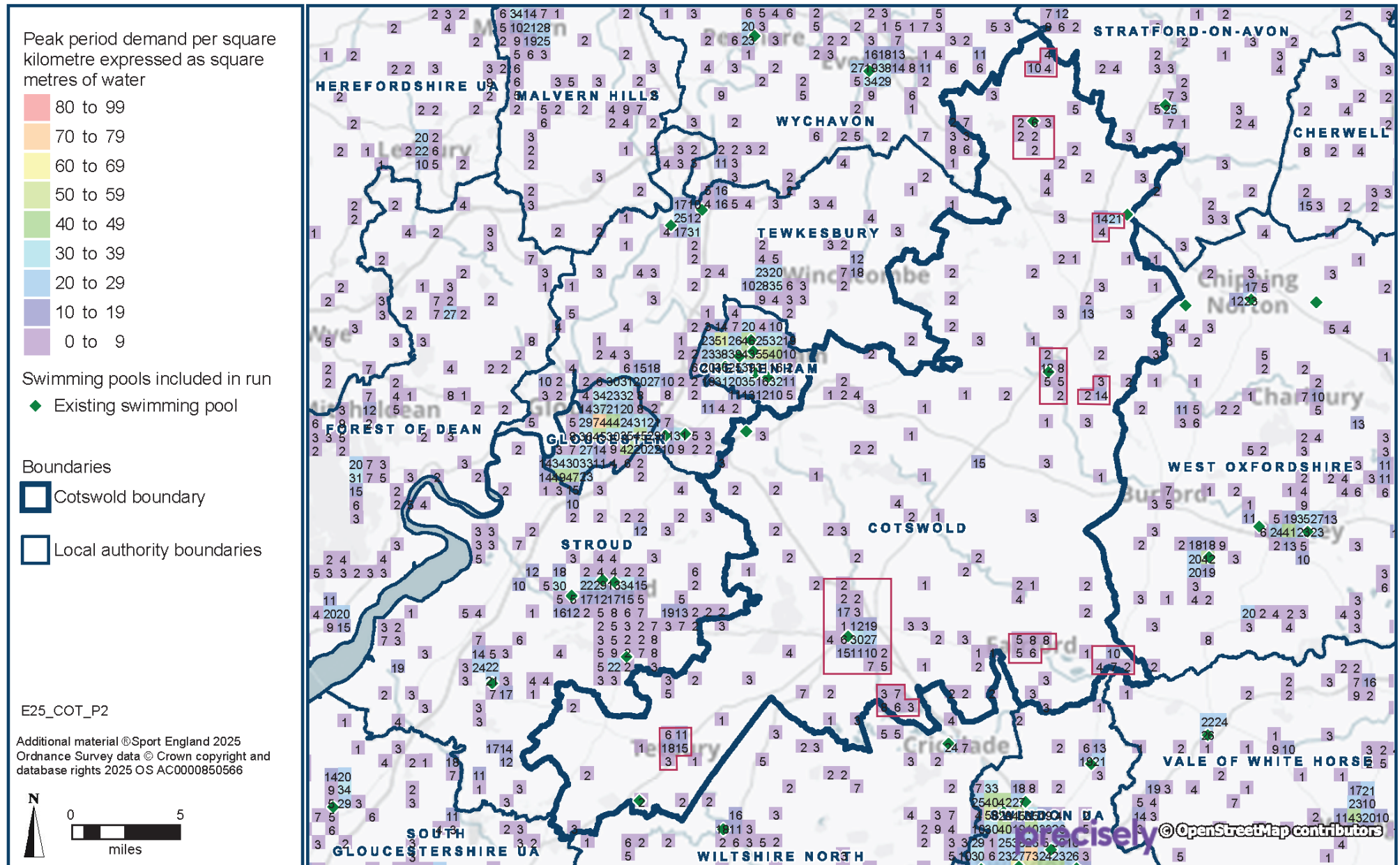
3.19 None of Cotswold's demand is in the 10% most-deprived lower super output areas (LSOAs) nationally. The area of greatest deprivation in Cotswold is in the 40% most-deprived LSOAs in south Cirencester (dark orange area in Map 3.4).

3.20 The Index of Multiple Deprivation (IMD) score is used in the FPM to limit whether people will use commercial facilities (see Appendix 3 for definition of IMD). A weighting factor is incorporated to reflect the cost element often associated with commercial facilities. The assumption is that the higher the IMD score (less affluence), the less likely the population of the LSOA would choose to go to a commercial facility.

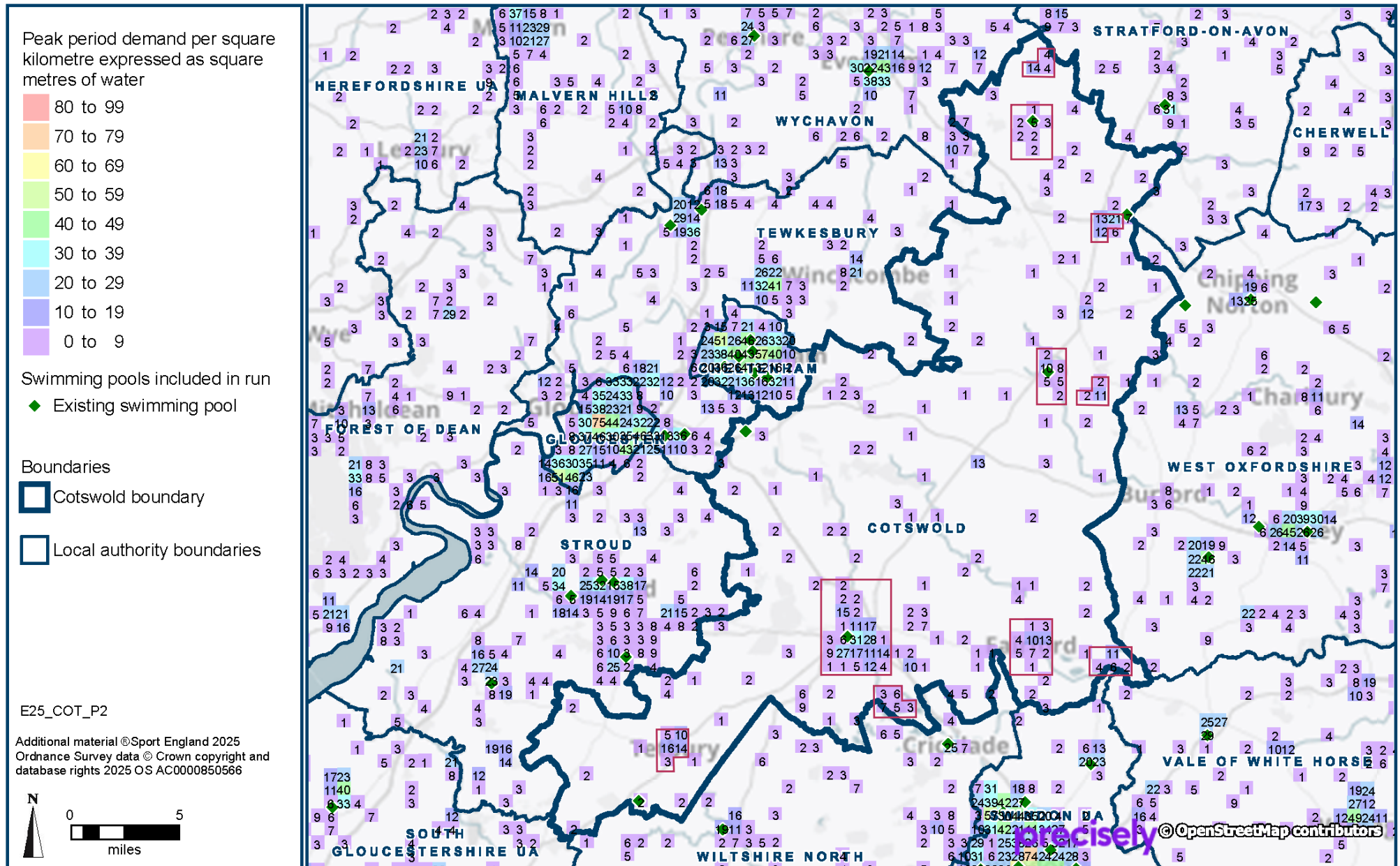
Map 3.1: Housing Growth Areas in Cotswold to 2043 (Run 2)



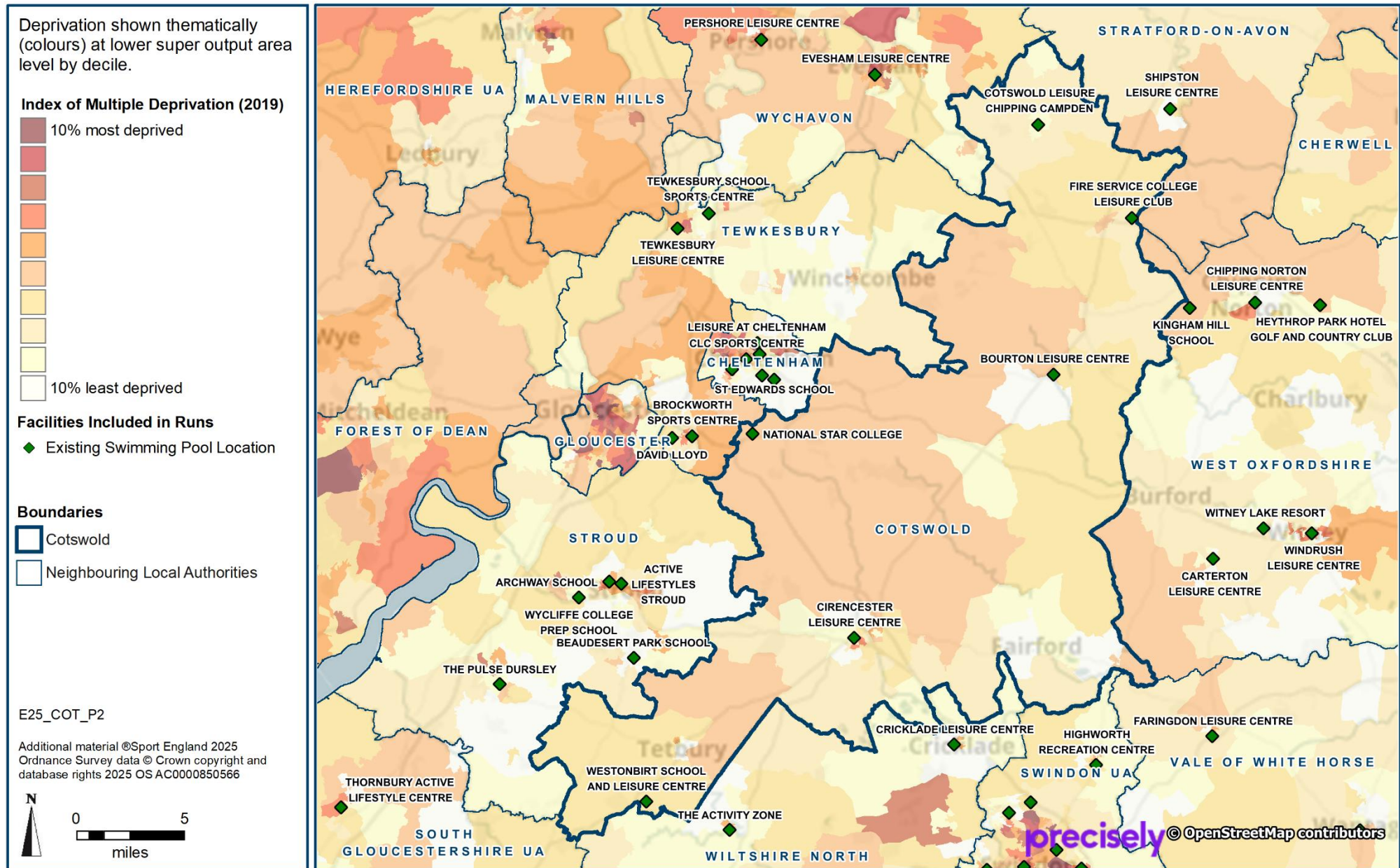
Map 3.2: Demand for Swimming Pools in 2025 (Run 1)



Map 3.3: Demand for Swimming Pools in 2043 (Run 2)



Map 3.4: Deprivation in 2019 (Runs 1 and 2)



4 ACCESSIBILITY

In 2025, 17% of Cotswold's residents are within a 20-minute walk of a swimming pool. This reduces slightly in 2043 to 16%. The proportion is smaller in 2043 due to the location of the housing growth sites.

Travel to swimming pools on foot accounts for 6% of all visits in both years. Travel by public transport or bicycle is 4% in both years.

All the swimming pools are within a five-minute walk of an existing bus stop.

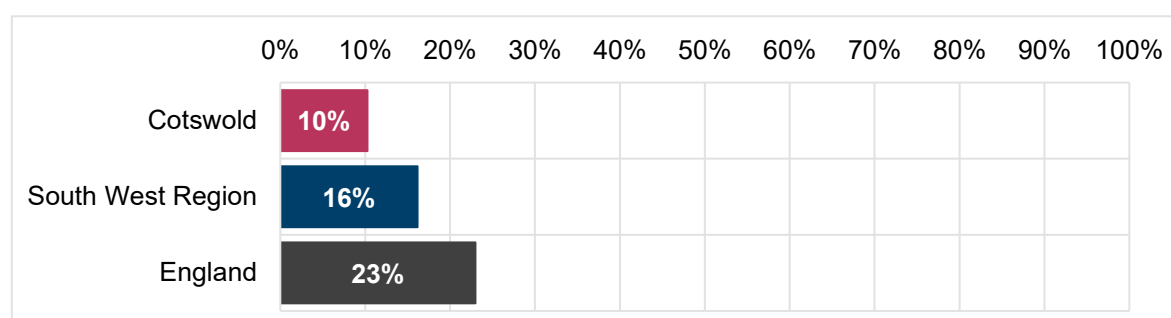
Access to swimming pools within a 20-minute drive is best in the west of the District.

Table 4.1: Travel Mode of Cotswold Demand to Swimming Pools by Run

Accessibility	Run 1	Run 2
Cotswold	2025	2043
% of total residents within a 20-minute walk of a swimming pool	17%	16%
% of demand satisfied when travelled:		
on foot	6%	6%
by public transport or bicycle	4%	4%
by car	90%	90%

Definition of accessibility – The FPM uses a distance decay function where the further a user is from a facility, the less likely they will travel. A description of the distance decay function is set out in Appendix 3. On average, a 20-minute travel time accounts for approximately 90% of visits to a swimming pool.

Chart 4.1: Proportion of Residents Without Access to a Car



- 4.1 In Cotswold 10% of residents do not have access to a car. This is lower than the regional average of 16% and the national average of 23%. For these residents, a network of accessible swimming pools is important in order to encourage swimming participation.

Walking Access

- 4.2 In 2025, 17% of Cotswold's residents are within a 20-minute walk of a swimming pool. This reduces slightly in 2043 to 16%.
- 4.3 The areas that are within a 20-minute walk of a swimming pool in 2025 and 2043 are shown in Map 4.1.
- 4.4 However, not all residents in these areas will walk to a swimming pool and some will travel further. It is estimated that 6% of journeys by Cotswold residents to swimming are made on foot in 2025 and 2043.

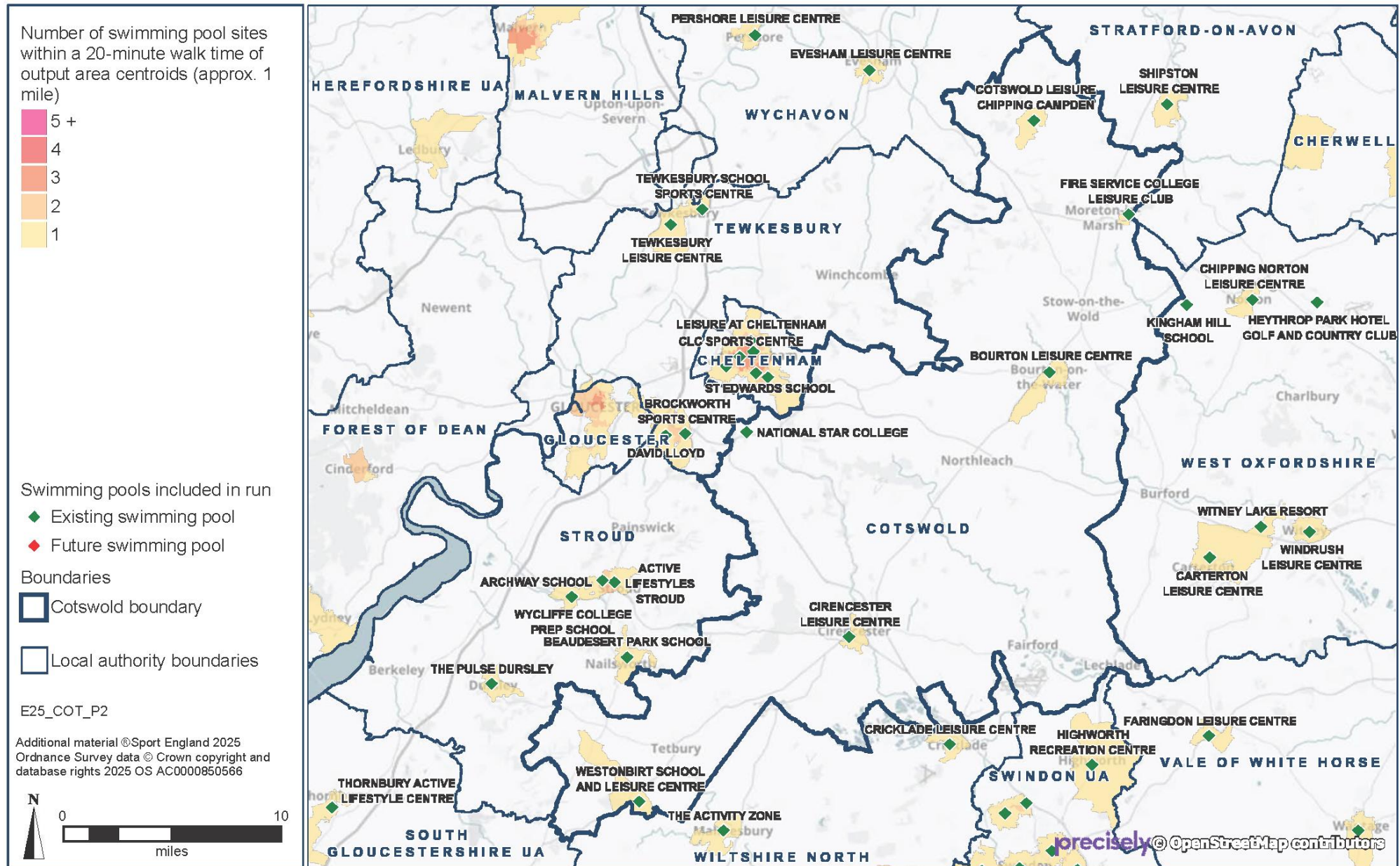
Public Transport Access

- 4.5 All the swimming pools are within a five-minute walk of an existing bus stop (pink areas in Map 4.2). However, the bus service is very limited, for example, in Southrop there is one return bus a day. This is the level of service in many villages.
- 4.6 None of the swimming pools are within a 15-minute walk of a railway station (purple areas).
- 4.7 It should be noted that, while most Cotswold residents can access an existing public transport stop, it may not mean they can get to a swimming pool within 20 minutes from home via a combination of walking and public transport.
- 4.8 **Key finding 5** is that it is estimated that 4% of journeys by Cotswold residents to swimming pools are made by public transport or bicycle in 2025 and 2043. This is less than the regional proportion of 6% and the national proportion, which decreases from 10% in 2025 to 9% in 2043.

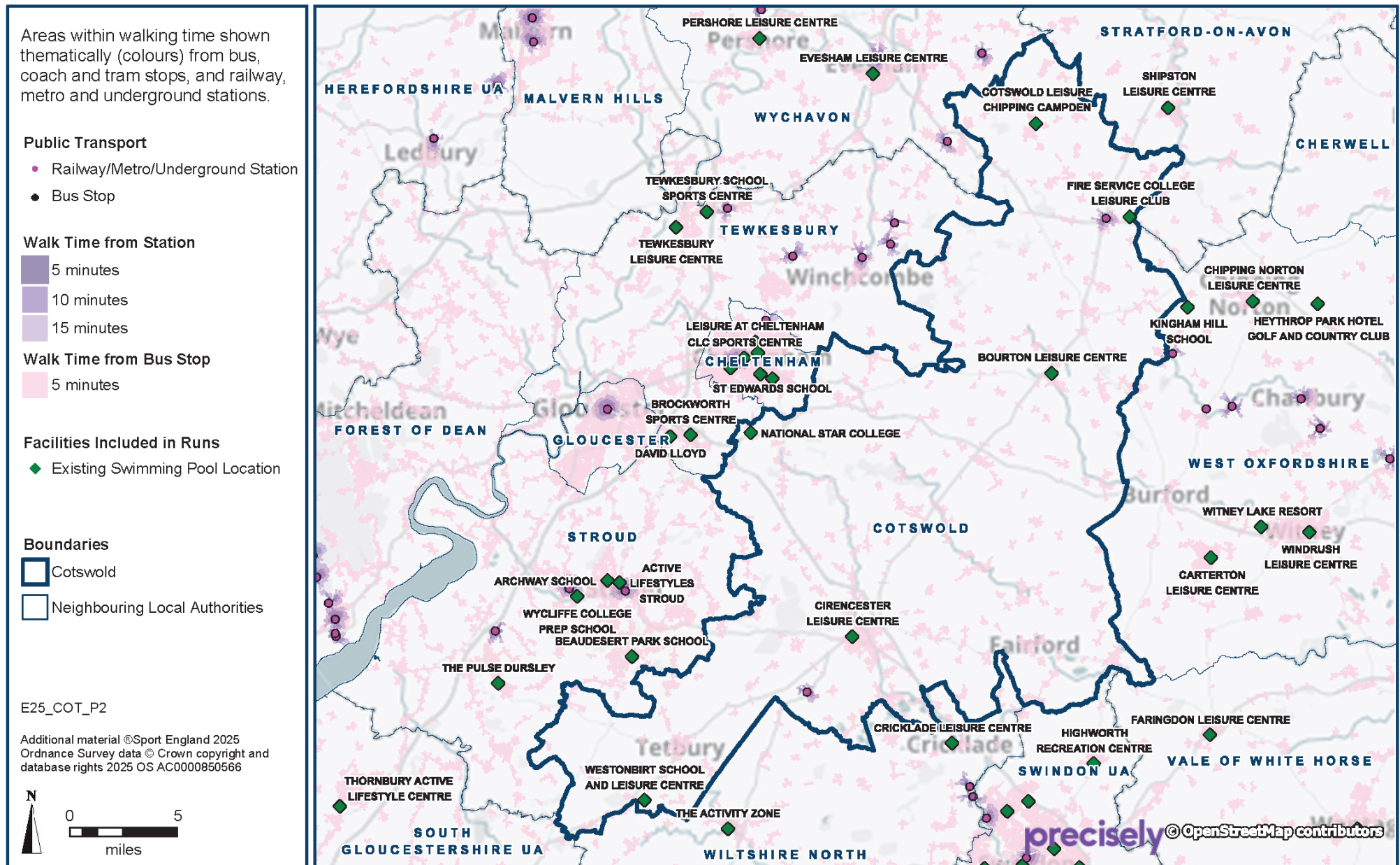
Driving Access

- 4.9 In both 2025 and 2043, all residents in Cotswold are within a 20-minute drive of at least one swimming pool (light green areas in Map 4.3). Access is highest in an area bordering south Tewkesbury and Cheltenham at between 15 and 19 swimming pool sites (dark blue area).
- 4.10 It is estimated that 90% of all journeys to swimming pools by Cotswold residents are made by car in 2025 and 2043.

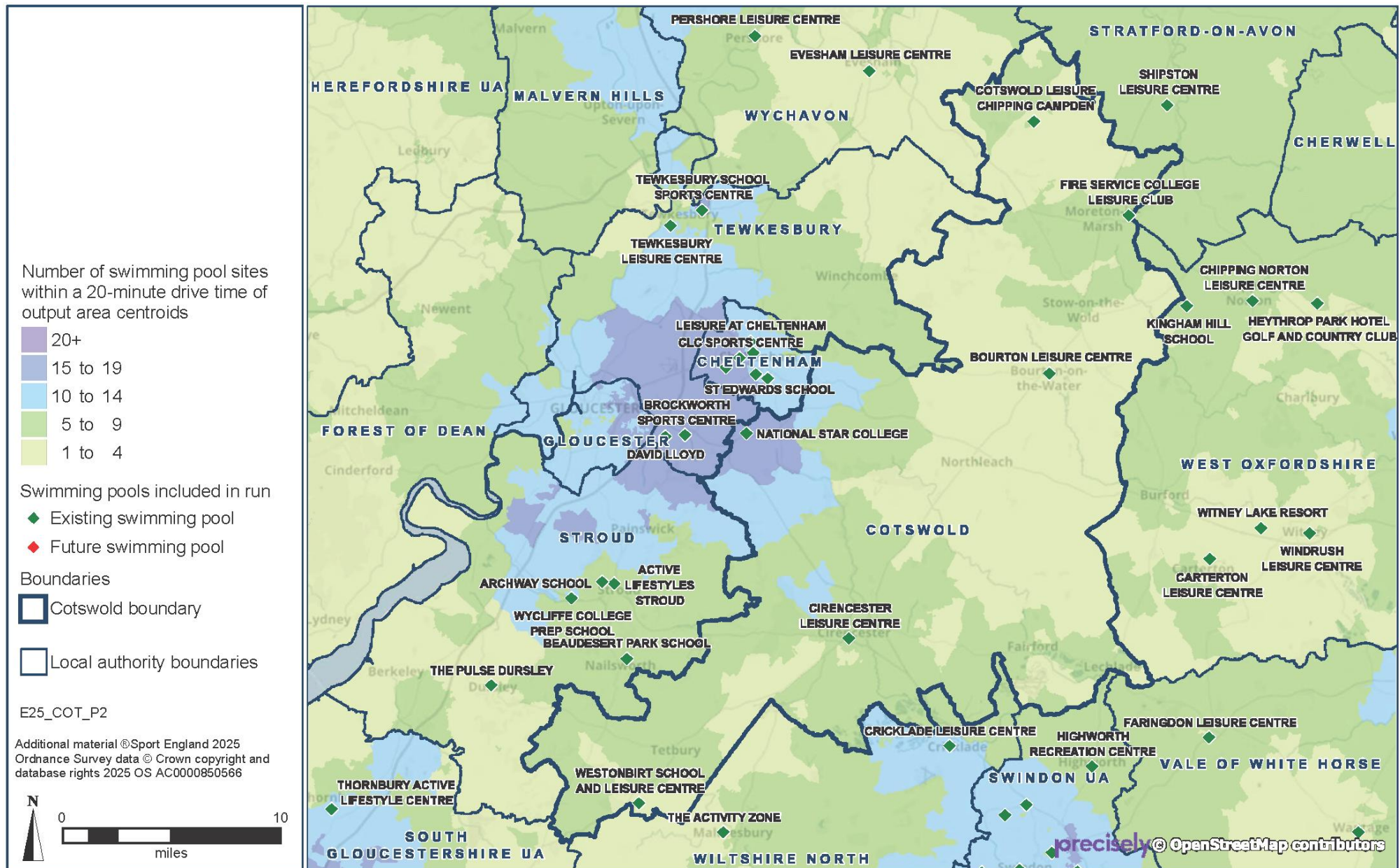
Map 4.1: Walking Access to Swimming Pools in 2025 and 2043 (Runs 1 and 2)



Map 4.2: Walking Access to Public Transport in 2025 and 2043 (Runs 1 and 2)



Map 4.3: Driving Access to Swimming Pools in 2025 and 2043 (Runs 1 and 2)



5 SATISFIED DEMAND FOR SWIMMING POOLS

Of Cotswold's demand, 95% is satisfied in 2025, and 94% in 2043.

In both years 29% of Cotswold's demand is exported and met in neighbouring local authorities.

The largest amount of exported demand goes to West Oxfordshire in both years.

Six local authorities in the study area export more visits in the weekly peak period than Cotswold. South Gloucestershire exports the most visits.

Table 5.1: Satisfied Demand for Swimming Pools in Cotswold by Run

Satisfied Demand	Run 1	Run 2
Cotswold	2025	2043
Number of visits which are met per week in peak period	5,761	6,316
% of total demand satisfied	95%	94%
Number of visits retained per week in peak period	4,091	4,473
Demand retained as a % of satisfied demand	71%	71%
Number of visits exported per week in peak period	1,670	1,843
Demand exported as a % of satisfied demand	29%	29%

Definition of satisfied demand – This represents the proportion of total demand that is met by the capacity at the swimming pools from Cotswold residents who live within the travel time of a pool. This includes pools located both within and outside Cotswold.

- 5.1 **Key finding 6** is that 95% of Cotswold's demand is met in 2025; and 94% in 2043. However, the number of visits met in the weekly peak period increases from 5,761 in 2025 to 6,316 in 2043 because of the increase in demand in the District.
- 5.2 Cotswold's proportion of demand met is higher than both the regional average and national average of 93% in both years.
- 5.3 In 2025 seven of the neighbouring local authorities in the study area have a higher proportion of met demand than Cotswold. Stratford-on-Avon and Wychavon have the same proportion as Cotswold, and Stroud has a lower proportion at 94%.
- 5.4 In 2043 all the neighbouring local authorities have a higher proportion of met demand at between 95% and 98%, with the exception of Stroud which has the same proportion.
- 5.5 Details of the swimming pools in the neighbouring local authority areas are listed in Appendix 2.

Table 5.2: Proportion of Demand Met by Area and Run

Proportion of Demand Met	Run 1	Run 2
Area	2025	2043
Cotswold	95%	94%
Cheltenham	98%	98%
South Gloucestershire	98%	97%
Stratford-on-Avon	95%	95%
Stroud	94%	94%
Swindon	96%	95%
Tewkesbury	96%	96%
Vale of White Horse	97%	96%
West Oxfordshire	96%	96%
Wiltshire	96%	96%
Wychavon	95%	95%
South West Region	93%	93%
England	93%	93%

Retained Demand

Definition of retained demand – A subset of the satisfied demand findings shows how much of Cotswold residents' demand for swimming pools is met at pools located within the District. This assessment is based on the travel time from Cotswold's swimming pools and residents in the District participating at these pools.

- 5.6 **Key finding 7** is that 71% of Cotswold's satisfied demand is met within the District in both 2025 and 2043. In terms of visits, 4,091 are retained in the weekly peak period in 2025, increasing to 4,473 in 2043.

Exported Demand

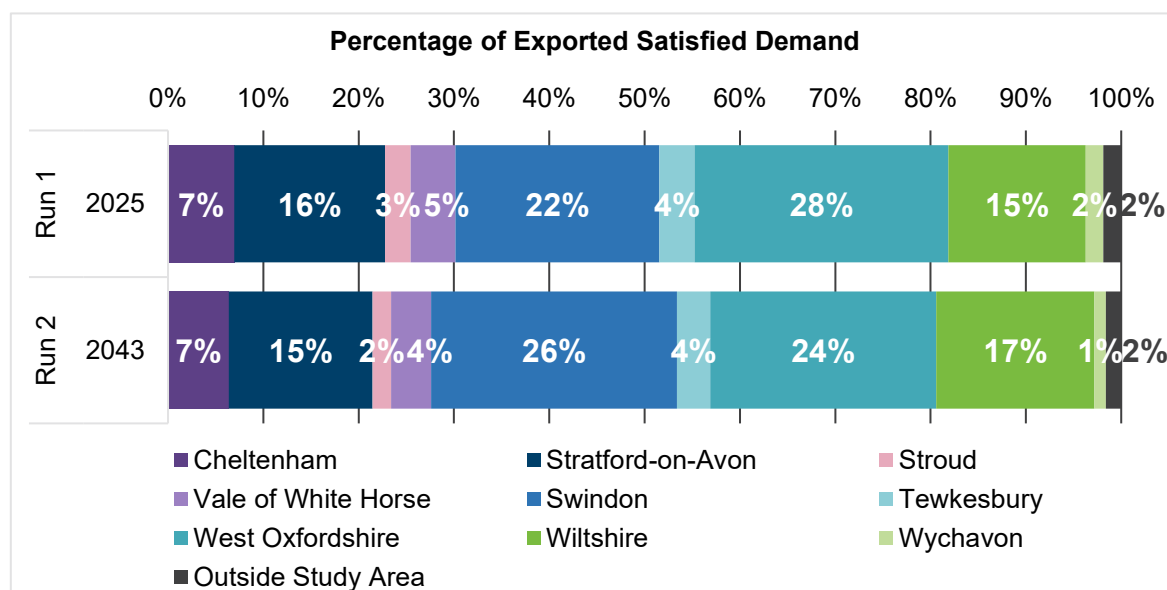
Definition of exported demand – The residue of satisfied demand, after retained demand, is exported demand. This is based on Cotswold residents who live within the travel time of a swimming pool located outside Cotswold and use that pool.

- 5.7 Of Cotswold's satisfied demand, 29% is met at swimming pools in neighbouring local authority areas in 2025 and 2043.
- 5.8 Across the study area, eight local authorities export more visits in the weekly peak period than Cotswold in 2025, and seven local authorities in 2043. The highest is South Gloucestershire at 3,648 visits in the weekly peak period in 2025, and 4,062 visits in 2043.

Table 5.3: Visits Exported by Area and Run

Visits Exported per Week in Peak Period	Run 1	Run 2
Area	2025	2043
Cotswold	1,670	1,843
Cheltenham	782	771
South Gloucestershire	3,648	4,062
Stratford-on-Avon	2,567	2,982
Stroud	2,560	2,914
Swindon	1,709	1,471
Tewkesbury	3,304	3,706
Vale of White Horse	2,011	2,489
West Oxfordshire	1,066	1,098
Wiltshire	3,300	3,152
Wychavon	2,455	3,034

Chart 5.1: Percentage of Exported Satisfied Demand by Destination and Run

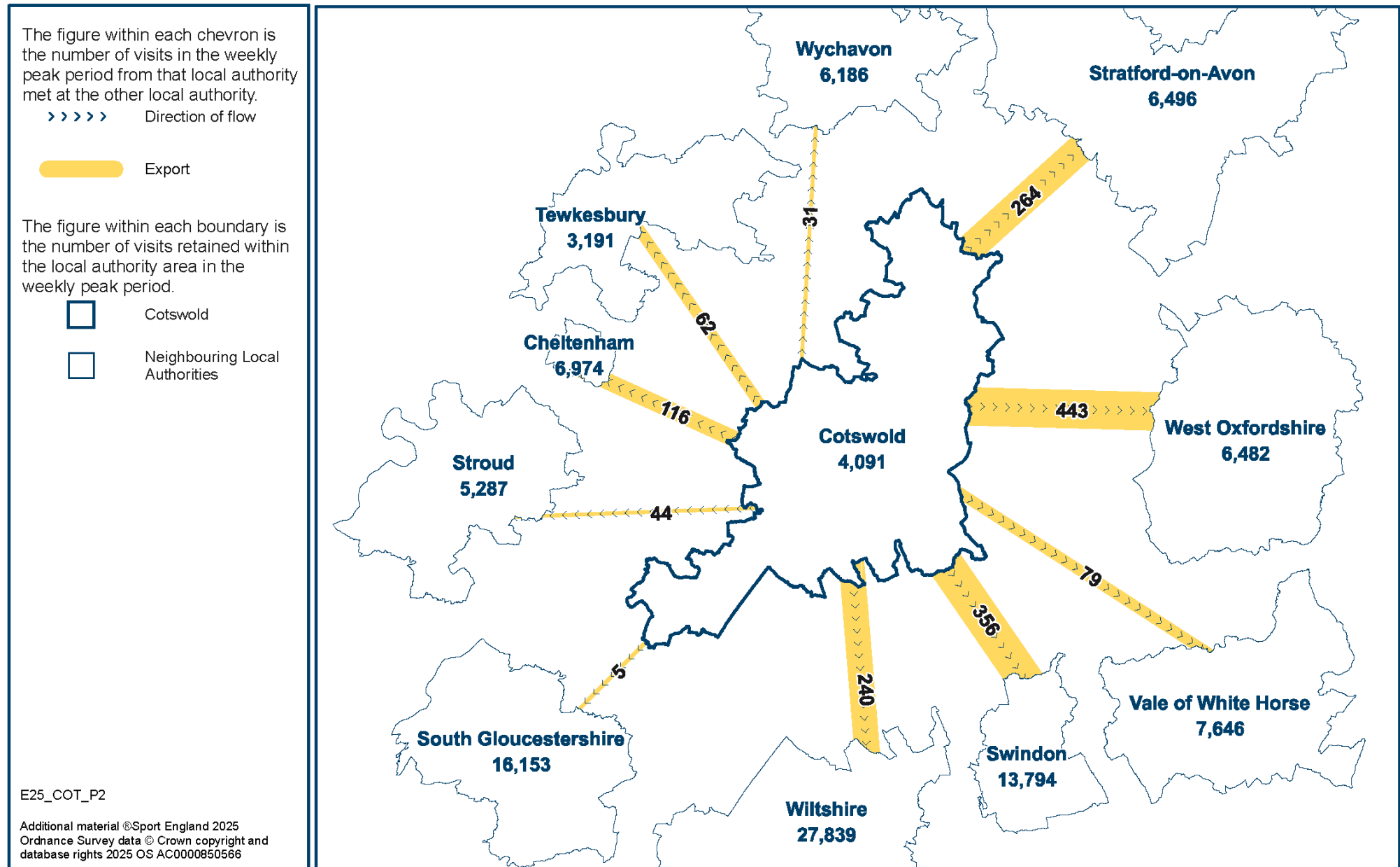


- 5.9 In 2025 the largest proportion of Cotswold's exported demand goes to West Oxfordshire, accounting for 28% and 443 visits in the weekly peak period (see Map 5.1).
- 5.10 There are three swimming pool sites in West Oxfordshire quite close to the border with Cotswold, including two public leisure centres. Carterton Leisure Centre opened in 2003 and is an extensive site with a 25m x 13m six-lane pool and a 10m x 7m teaching pool. Chipping Norton Leisure Centre opened in 2002 and has a 25m x 10m four-lane pool. Both are attractive sites in terms of their age and condition.
- 5.11 The second largest amount of exported demand goes to Swindon at 22% of Cotswold's exported demand and equating to 356 visits. There are no swimming pool sites in the

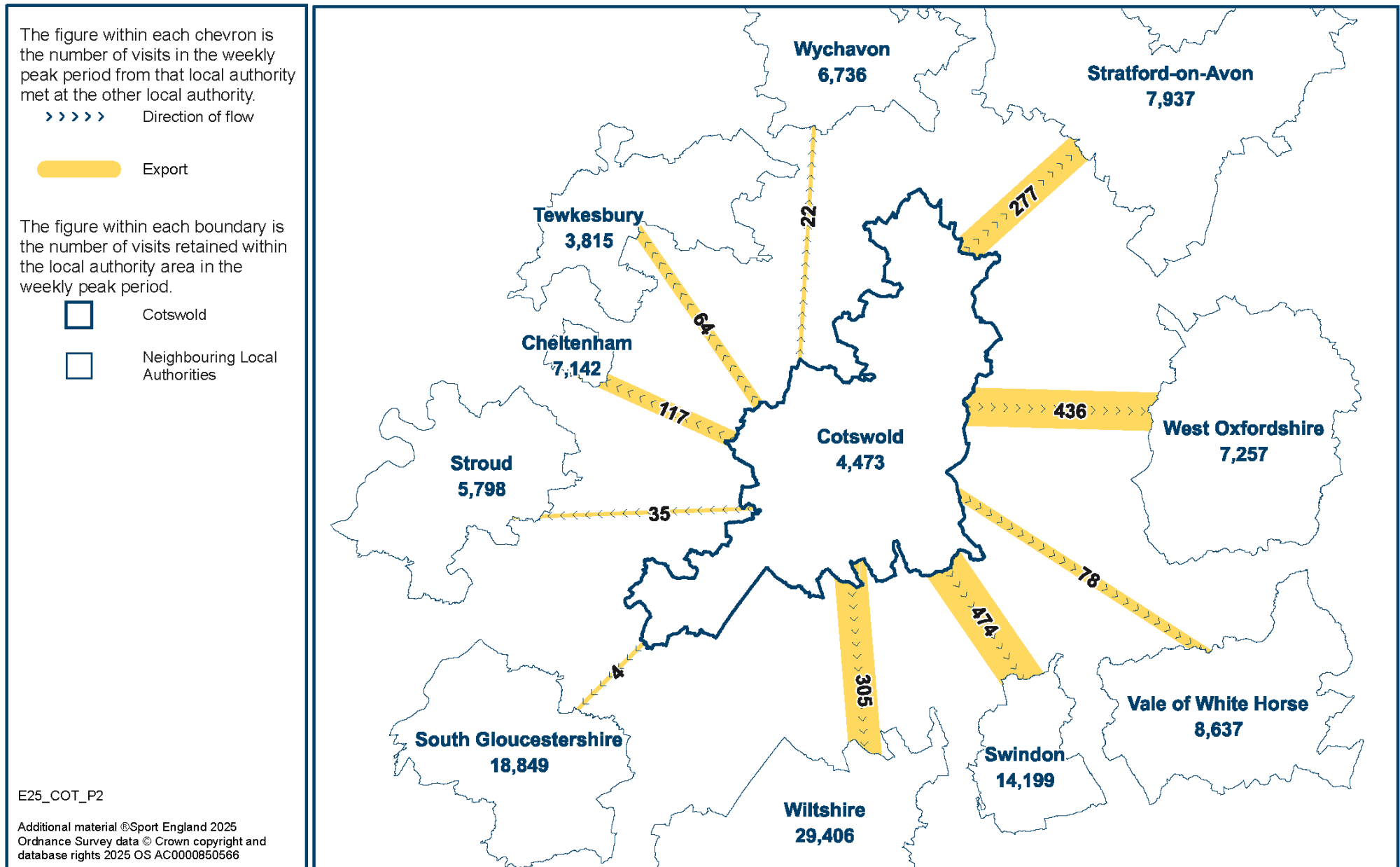
southeast of Cotswold. Highworth Recreation Centre in Swindon is accessible to some Cotswold residents. The centre has a 25m x 8.5m four-lane pool that opened in 1968 and was refurbished in 2008.

- 5.12 In 2043 the largest increase in the number of visits exported is to Swindon, accounting for 26% of Cotswold's exported demand and 474 visits in the weekly peak period (see Map 5.2). In Cotswold demand increases in Fairford as a result of housing growth and there being no change in supply.
- 5.13 The second largest increase in the number of exported visits in 2043 is to Wiltshire, accounting for 17% of Cotswold's exported demand and 305 visits in the weekly peak period (an increase from 240 visits in 2025).
- 5.14 Visits exported to West Oxfordshire decrease in 2043, but still account for 24% of Cotswold's exported demand and 436 visits in the weekly peak period.

Map 5.1: Export of Cotswold Satisfied Demand for Swimming Pools in 2025 (Run 1)



Map 5.2: Export of Cotswold Satisfied Demand for Swimming Pools in 2043 (Run 2)



6 UNMET DEMAND FOR SWIMMING POOLS

Cotswold's unmet demand equates to 5% of demand in 2025, and 6% in 2043.

Nearly all unmet demand is that which is too far from a facility. Unmet demand due to lack of swimming pool capacity is negligible.

Unmet demand is highest in Fairford and Cirencester at 4 sqm of water in both locations in 2025, and 7 sqm of water in 2043.

Table 6.1: Unmet Demand for Swimming Pools in Cotswold by Run

Unmet Demand	Run 1	Run 2
Cotswold	2025	2043
Number of visits unmet per week in peak period	318	380
Unmet demand as a % of total demand	5%	6%
Equivalent in sqm of water with comfort factor	52	62
% of unmet demand due to:		
Facility too far away:	98%	93%
% without access to a car	69%	67%
% with access to a car	29%	26%
Lack of facility capacity:	2%	7%
% without access to a car	1%	4%
% with access to a car	1%	3%

Definition of unmet demand – This has two parts; demand for swimming pools that cannot be met because either:

1. There is too much demand for any particular swimming pool within its travel time area and there is a lack of capacity.
2. The demand is located too far from any swimming pool that it can use (taking into account deprivation) or reach (taking into account car access) and is then classified as unmet demand.

- 6.1 Unmet demand in Cotswold increases from 318 visits in 2025 to 380 visits in 2043 due to the increase in demand and the ageing of the swimming pools.
- 6.2 **Key finding 8** is that unmet demand in Cotswold is 52 sqm of water in 2025, and 62 sqm in 2043. Unmet demand that is too far from a facility is 98% in 2025, and 93% in 2043. Lack of capacity accounts for 1 sqm of water in 2025, and 4 sqm of water in 2043.
- 6.3 Unmet demand that is too far from a swimming pool will always exist because it is not possible to achieve complete spatial coverage whereby all areas of a local authority are within walking distance of a swimming pool that is not commercial and not everyone will want, or is able, to drive the full distance.

- 6.4 The key point here is the scale of the unmet demand. Also, if it is clustered in one location, further provision should be considered to improve accessibility.

Location of Unmet Demand

2025

- 6.5 In 2025 unmet demand is highest in Cirencester, Tetbury and Fairford at 4 sqm of water in each location (see Map 6.1). Of the unmet demand in Cirencester, 3 sqm of water is east of Cirencester Leisure Centre.
- 6.6 There is unmet demand of 2 sqm of water in Northleach. Across the rest of Cotswold unmet demand is less than 2 sqm of water per square kilometre (dark blue and purple squares).

2043

- 6.7 In 2043 unmet demand across Cotswold increases by 10 sqm of water.
- 6.8 The changes in unmet demand are as follows (see Map 6.2):
- Fairford – increases by 3 sqm of water to 7 sqm of water
 - Cirencester – increases by 3 sqm of water to 7 sqm of water
 - Tetbury – decreases by 1 sqm of water to 3 sqm of water
 - Moreton-in-Marsh – increases by 1 sqm of water to 2 sqm of water
 - Northleach – decreases by 1 sqm of water to 1 sqm of water
- 6.9 There are negligible differences in the distribution of unmet demand across the remainder of Cotswold.

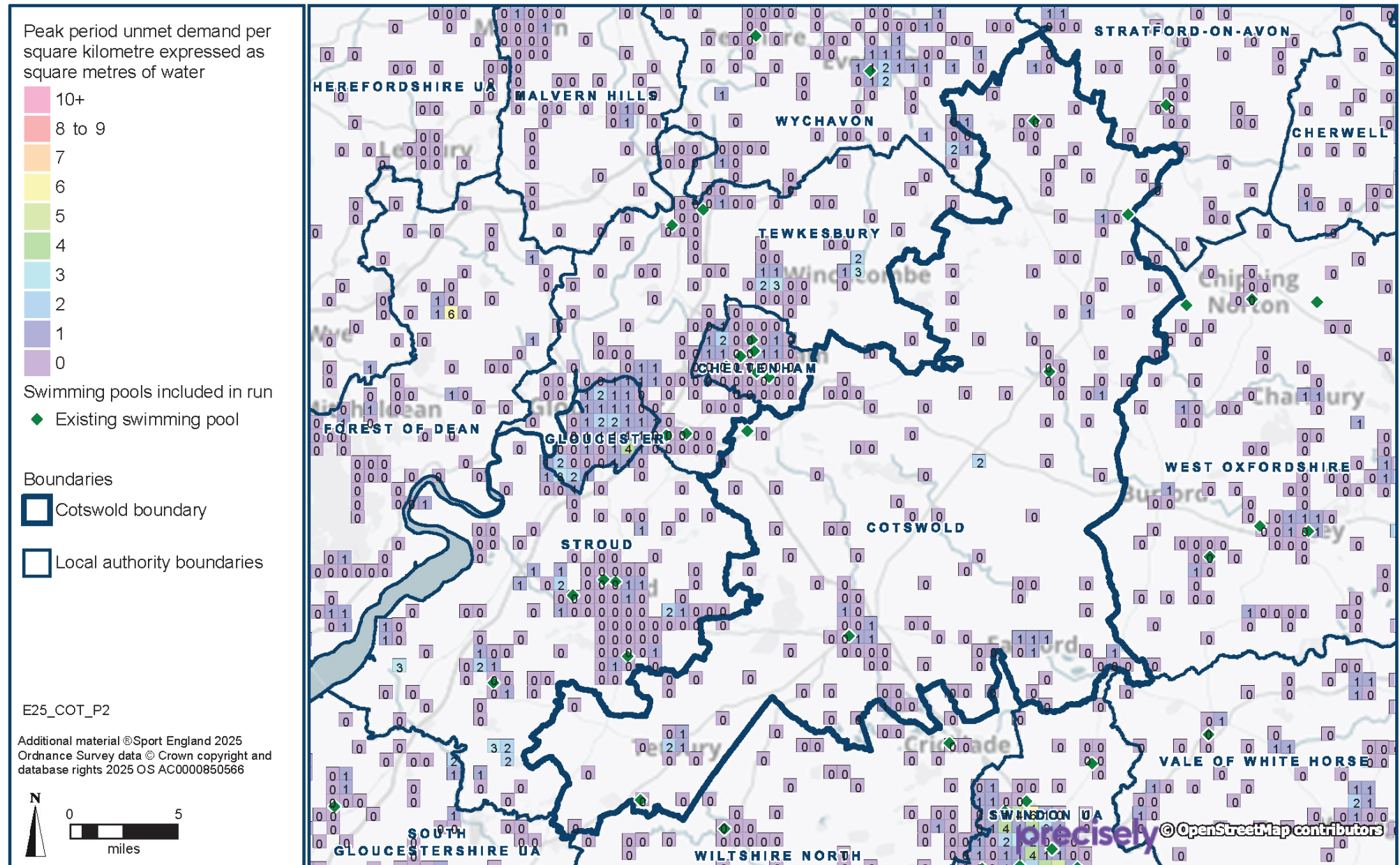
Meeting Unmet Demand

Definition of reachable unmet demand – Analysis of the spread of unmet demand shows the level of unmet demand that would be met by a potential new facility in any given location. This ‘reachable unmet demand’ is calculated for each one-kilometre grid square and figures are shown in the map.

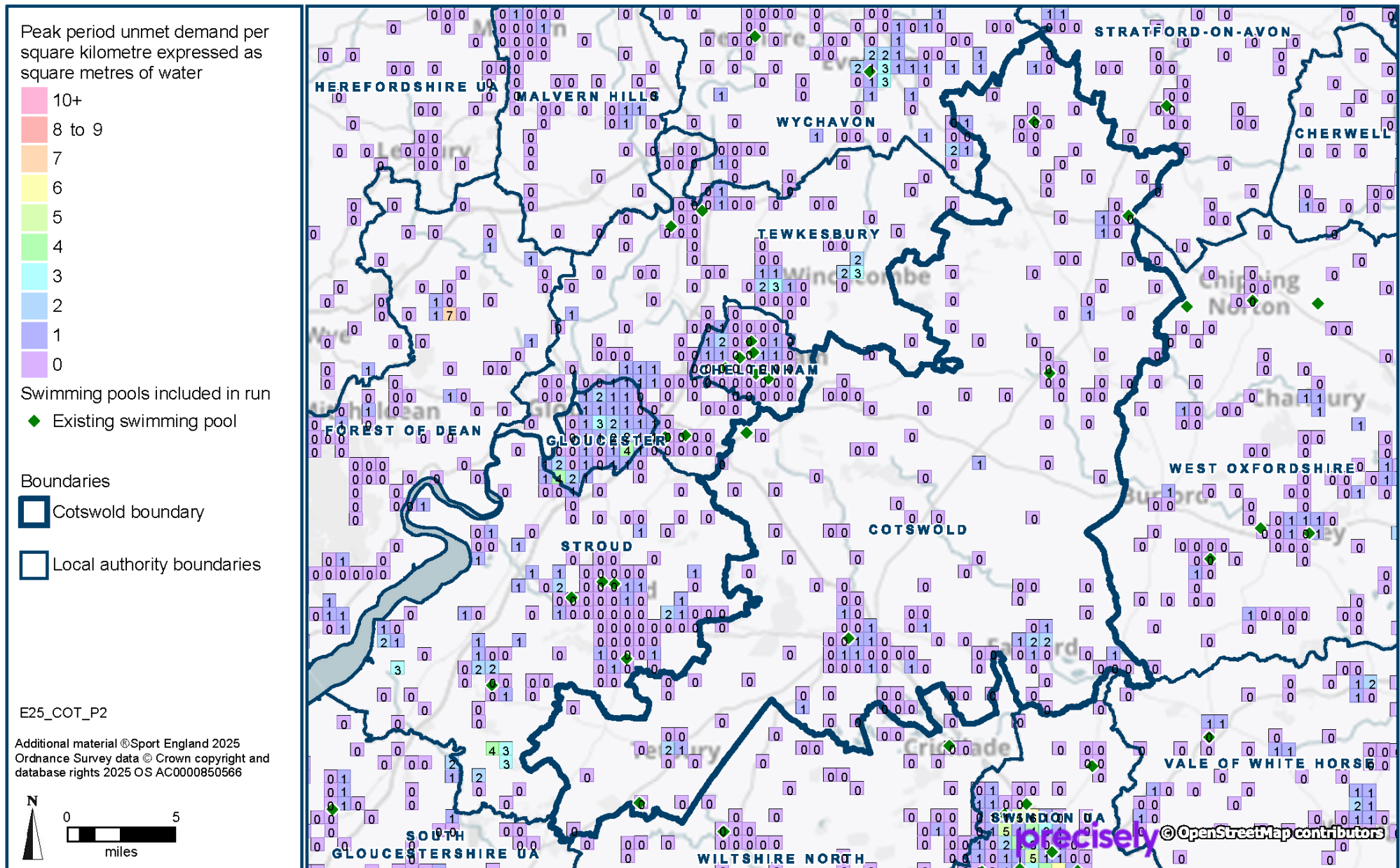
- 6.10 **Key finding 9** is that, in 2043, the location in Cotswold where the most unmet demand can be met is Kingscote at 34 sqm of water (yellow square in Map 6.3). This is insufficient unmet demand to consider providing a new swimming pool.

For context, the minimum amount of reachable water space required to justify a new pool would be 120 sqm, which is a 15m x 8m Sport England Leisure Local facility.

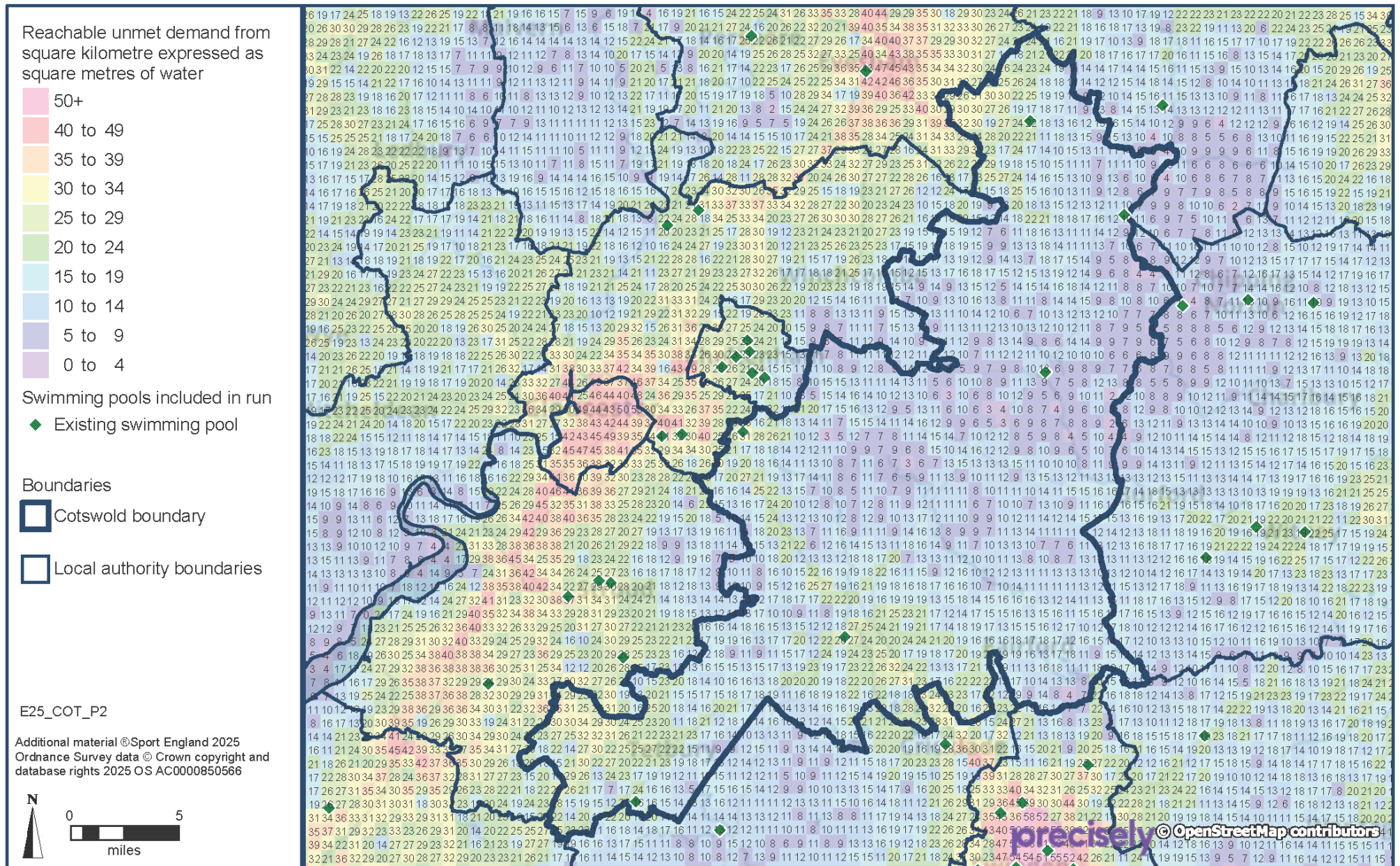
Map 6.1: Unmet Demand for Swimming Pools in 2025 (Run 1)



Map 6.2: Unmet Demand for Swimming Pools in 2043 (Run 2)



Map 6.3: Reachable Unmet Demand for Swimming Pools in 2043 (Run 2)



7 USED CAPACITY OF FACILITIES

Utilisation of Cotswold's swimming pools is 62% at peak times in 2025, and 63% in 2043. However, Cirencester Leisure Centre is estimated to be uncomfortably busy (more than 70% of capacity used) at peak times in 2025, and fully utilised in 2043.

Imported demand equates to 37% of the used capacity of Cotswold's swimming pools at peak times in 2025, and 36% in 2043.

The largest amount of imported demand to Cotswold is from Stroud in both years.

Cotswold imports slightly more visits than it exports.

Table 7.1: Used Capacity of Swimming Pools in Cotswold by Run

Used Capacity	Run 1	Run 2
Cotswold	2025	2043
Number of visits used of capacity in weekly peak period	6,533	6,988
% of overall capacity of pools used	62%	66%

Definition of used capacity – This is a measure of usage at swimming pools and estimates how well used or how full facilities are. The FPM is designed to include a 'comfort factor', beyond which the venues are too full. The pool itself becomes too crowded to swim comfortably, and the changing and circulation areas also become too congested. In the model, Sport England assumes that usage above 70% of capacity is busy and that the swimming pool is operating at an uncomfortable level.

- 7.1 In 2025, 6,533 visits are met at Cotswold's swimming pools in the weekly peak period. This increases to 6,988 visits in 2043.

Table 7.2: Weekly Peak Period Used Capacity of Cotswold Swimming Pools by Run

Used Capacity	2025 (Run 1)		2043 (Run 2)		Provider	Peak Hours	Year Built	Year Refurb
Sites	Visits Met	Proportion	Visits Met	Proportion				
Cirencester Leisure Centre	3,441	95%	3,640	100%	Public	52.5	2006	
Bourton Leisure Centre	829	42%	758	39%	Edu. (3rd party)	52.5	2003	
Cotswold Leisure Chipping Campden	669	64%	778	75%	Edu. (3rd party)	38.5	1996	2003
National Star College	572	70%	524	65%	Edu. (in-house)	15	2000	2008
Westonbirt School and Leisure Centre	778	42%	860	47%	Edu. (in-house)	52.5	2005	
Fire Service College Leisure Club	244	19%	428	33%	Other (sport club)	35	1977	2004

Site Utilisation Factors

- 7.2 The estimated used capacity should be reviewed with the facility operator. There are several reasons for the variation in estimated used capacity by site. Often it is difficult to identify which of these reasons apply because several could be interacting simultaneously, but variation is generally caused by any of the following factors.

Type of site operator (public/educational/other)

- Public leisure centres have a 'draw effect' because they:
 - Are accessible for public and swimming club use
 - Have extensive opening hours and are proactively managed to encourage and support swimming participation and physical activity
 - Unlike commercial swimming pools, do not require payment of a monthly membership fee
 - Provide all activities
- Access to swimming pools for community use at educational sites will be determined by the policy of each educational provider and affects the hours available for community use.

Age of the pool and its 'attractiveness'

- To assess their comparative attractiveness to customers, all swimming pools in the model are weighted to reflect their age and whether they have been modernised.
- The effect of refurbishment at a site decreases as the site gets older, and it becomes less attractive than a site built in the same year as the refurbishment.

Location of demand and competition from other sites

- Where swimming pools are located close together, the demand for these sites is shared between the venues, and this contributes to the level of used capacity at each.
- Conversely, where a swimming pool is remotely located, it benefits from having no competition for the local demand.

Capacity

- When reviewing the estimated used capacity, it is important to consider the capacity of the site and not just the proportion in isolation. Centres with the same or similar proportions of used capacity can accommodate very different levels of demand.
- The hours when a site is available for community use affects its capacity at peak times.

Imported demand

- If residents in neighbouring local authority areas participate at a site in Cotswold, their usage becomes part of the used capacity of Cotswold's swimming pools.

Highly Utilised Sites

- 7.3 Cirencester Leisure Centre is estimated to meet four times more visits in the weekly peak period than the other sites in Cotswold. It is highly utilised because it is the only public leisure centre in Cotswold, and is the only site in the area of highest demand in the District. It is the most recent site to open and has the largest capacity. The used capacity of the centre is estimated to increase from 95% in 2025 to 100% in 2043 due to the large housing growth sites around Cirencester. There is no scope to increase availability and capacity at peak times to reduce the proportion of used capacity.
- 7.4 Utilisation of Cotswold Leisure Chipping Campden is estimated to increase from 64% in 2025 to 75% in 2043. There are housing growth sites to the north of the swimming pool but also nearby in Moreton-in-Marsh. However, Cotswold Leisure Chipping Campden has the second smallest capacity in the District. There is some scope to increase availability at the site, but this is dependent on the usage of the school in the peak period.

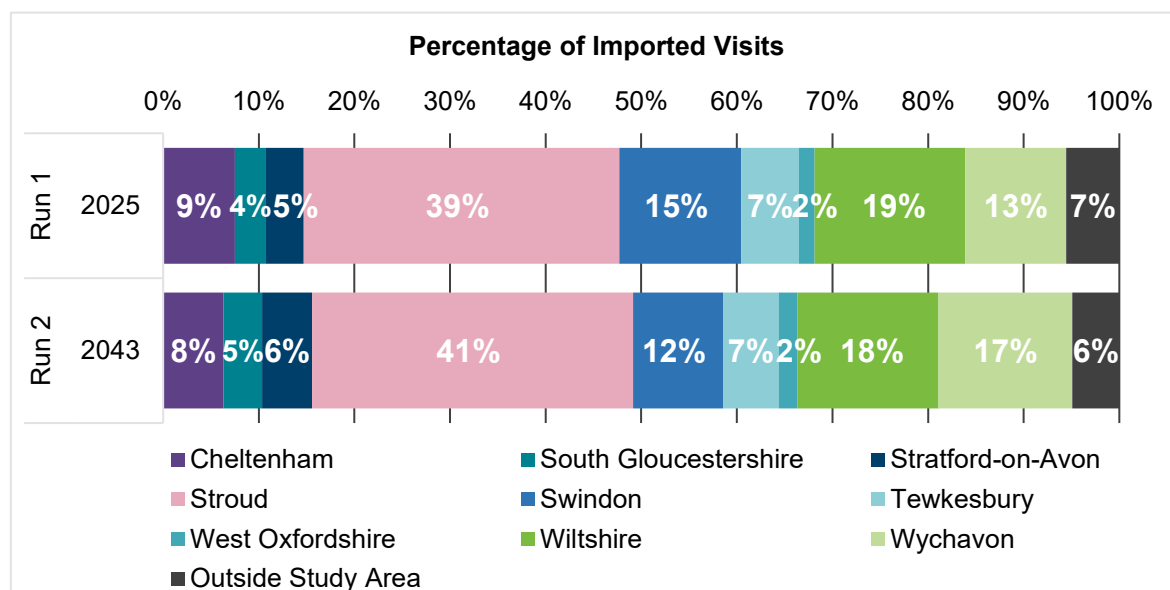
Imported Demand

Table 7.3: Imported Demand for Swimming Pools in Cotswold by Run

Imported Demand	Run 1	Run 2
Cotswold	2025	2043
Number of visits imported per week in peak period	2,442	2,516
As a % of used capacity	37%	36%
Difference between visits imported and exported	771	673

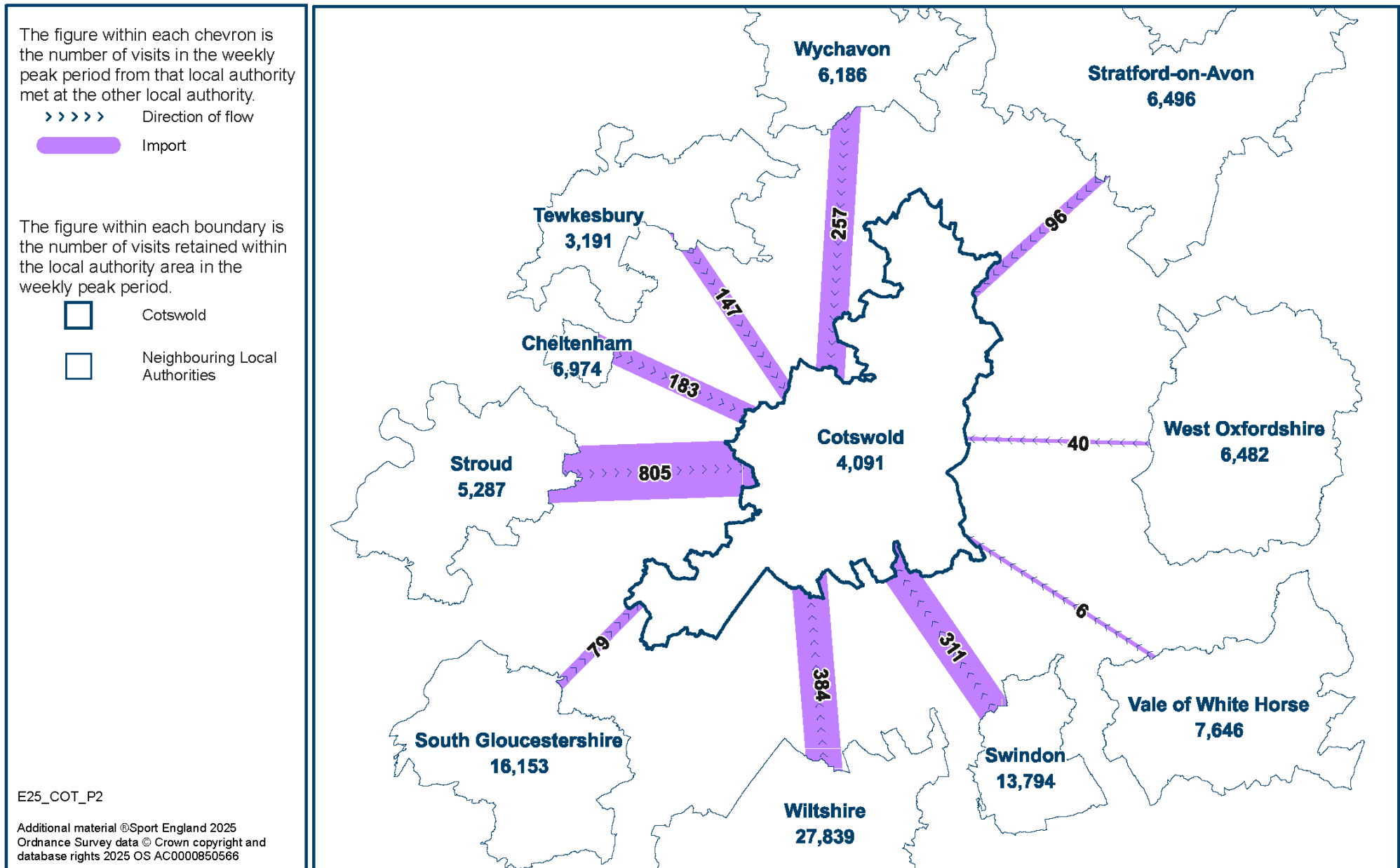
- 7.5 In 2025, 2,442 visits are imported to Cotswold's swimming pools in the weekly peak period. Imported demand rises to 2,516 visits in 2043 as demand increases across the study area.
- 7.6 Imported demand equates to 37% of the used capacity of Cotswold's swimming pools at peak times in 2025, and 36% in 2043.
- 7.7 Cotswold is a net importer of demand in both years. The difference is greatest in 2025 when 771 more visits in the weekly peak period are imported than exported, and smaller in 2043 at 673 more visits.

Chart 7.1: Percentage of Imported Visits by Origin and Run

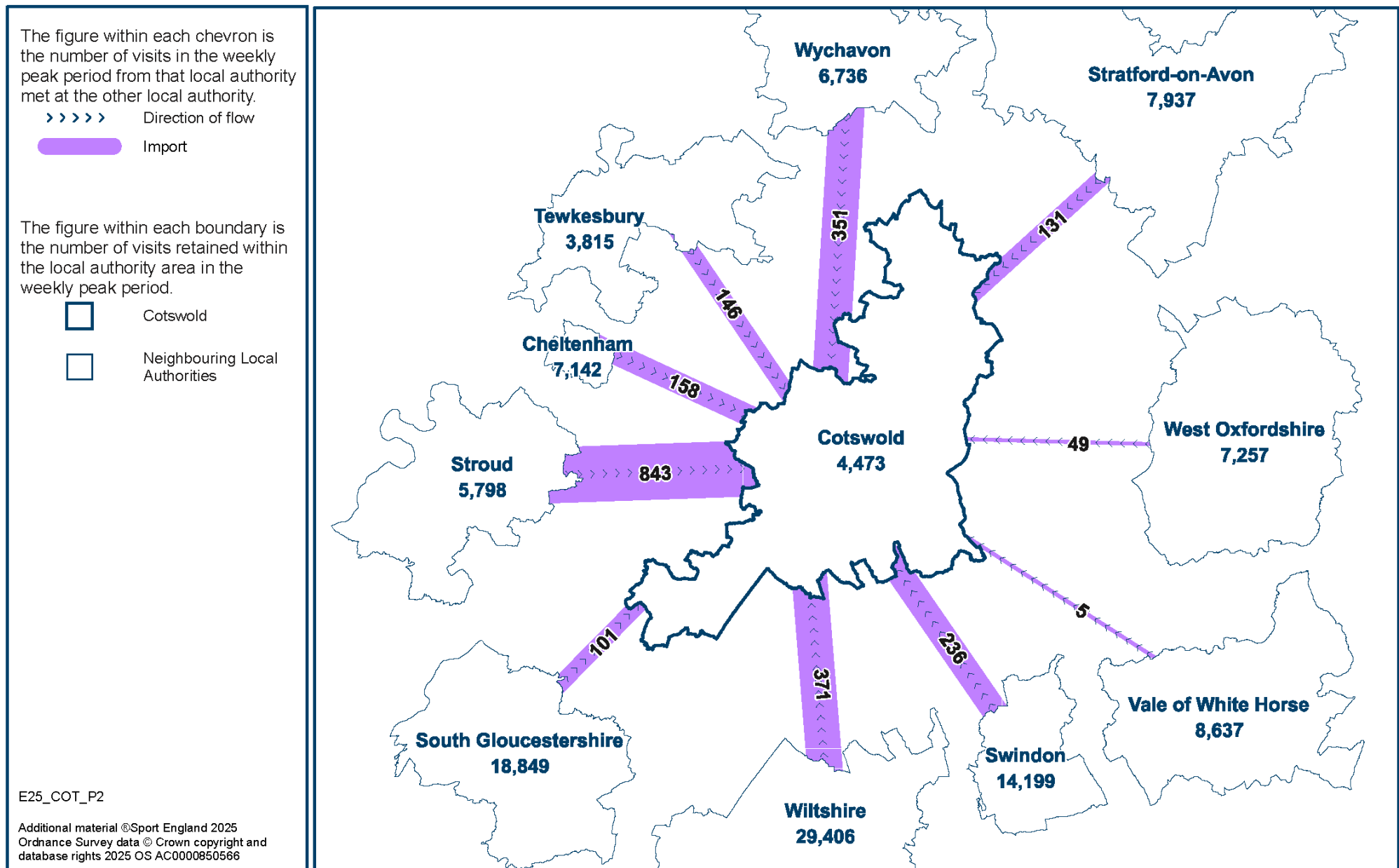


- 7.8 In 2025 the largest amount of imported demand to Cotswold is from Stroud, at 805 visits in the weekly peak period and the equivalent of 39% of Cotswold's imported demand (see Map 7.1). Demand in west Stroud can access more attractive swimming pools in Cotswold (see Appendix 2). While The Pulse Dursley in south Stroud is relatively new and attractive, provision in Stroud is poor compared to demand (see Local Share section).
- 7.9 The second largest amount of imported demand is from Wiltshire, at 384 visits in the weekly peak period and accounting for 19% of Cotswold's imported demand. Westonbirt School and Leisure Centre is located close to the Wiltshire border, and demand in north Wiltshire can also access Cirencester Leisure Centre.
- 7.10 In 2043 imported demand from Stroud increases slightly to 843 visits in the weekly peak period and equates to 41% of Cotswold's imported demand (see Map 7.2).
- 7.11 Imported demand from Wiltshire decreases very slightly to 371 visits in the weekly peak period and equates to 18% of imported demand. Cirencester Leisure Centre is fully utilised in 2043.

Map 7.1: Imported Demand for Swimming Pools to Cotswold in 2025 (Run 1)



Map 7.2: Imported Demand for Swimming Pools to Cotswold in 2043 (Run 2)



8 LOCAL SHARE OF FACILITIES

Cotswold's total water space per 1,000 population is above both the regional and national averages in 2025 and 2043. Cotswold has the joint second best provision in the study area in both years.

Table 8.1: Local Share of Swimming Pools in Cotswold by Run

Local Share	Run 1	Run 2
Cotswold	2025	2043
Local share of swimming pools relative to demand in local area: <1 = poorer, >1 = better	1.23	0.59

Definition of local share – This helps show which areas have a better or worse share of facility provision. It considers the size, availability and quality of facilities, and travel modes. Local share is useful for looking at 'equity' of provision. Local share is the available capacity that people want to visit in an area (considering deprivation), divided by the demand for that capacity in the area. Local share decreases as facilities age.

- 8.1 Local share shows how the access and share of swimming pools differs across the local authority area, as follows:
 - A value of 1 means that there is sufficient suitable supply reachable by the demand
 - A value of less than 1 indicates a shortage of suitable supply that can be reached by the demand
 - A value greater than 1 indicates a surplus of suitable supply that can be reached by the demand
- 8.2 Overall, local share identifies the areas of the local authority where the share of swimming pools is better and worse. The intervention is to try and increase access for residents in the areas with the poorest access to swimming pools.
- 8.3 In 2025 local share in Cotswold is 1.23, meaning that there is sufficient suitable provision that demand can access based on the age, used capacity and operation of the swimming pools. Demand is lower in 2025 than in 2043.
- 8.4 In 2043 local share is 0.59, meaning there is insufficient suitable provision that demand can access. Demand has increased, there is no change in capacity, and the swimming pools have aged and become less attractive to residents.

Geographical Distribution of Local Share

8.5 Local share varies across Cotswold.

2025

8.6 In 2025 local share is best east of Stow-on-the-Wold at 2.8 (purple squares in Map 8.1). Demand in this area is quite low, and there are two swimming pools in Cotswold close by as well as two sites in West Oxfordshire. Bourton Leisure Centre opened in 2003 and has the second largest capacity in Cotswold. The two sites in West Oxfordshire are of a similar age, and Chipping Norton Leisure Centre has a larger capacity.

8.7 Local share is very good in the northeast of Cotswold and around Tetbury at more than 1.2 (blue and purple squares).

8.8 Local share is poorest in Fairford and Lechlade at 0.8 (light green squares) where there are no swimming pools.

8.9 Local share is also poor around Cirencester at 0.9 (light green squares). Demand is high in the area and Cirencester Leisure Centre is highly utilised.

2043

8.10 In 2043 local share is best in the same area east of Stow-on-the-Wold but is lower at 1.3 (light blue squares in Map 8.2). The facilities nearby have aged but have spare capacity.

8.11 Local share is poorest in parts of Fairford at 0.3 (red squares) and is poor around Cirencester at 0.4 (orange squares). Demand has increased in these areas and Cirencester Leisure Centre has aged and is fully utilised.

Comparative Measure of Provision

8.12 A comparative measure of swimming pool provision is total water space per 1,000 population.

8.13 In 2025 Cotswold's provision is 17 sqm of water per 1,000 population. This is higher than the regional average of 13 sqm of water, and considerably above the national average of 11 sqm of water.

8.14 In 2043 Cotswold's provision decreases to 14 sqm of water per 1,000 population. Cotswold's comparatively better provision to the regional and national averages remains as these decrease to 11 sqm of water and 10 sqm of water respectively.

8.15 In both years Cotswold has the joint second highest provision in the study area with Vale of White Horse. Provision is only slightly below the best provision, which is in Cheltenham at 18 sqm of water per 1,000 population in 2025, and 17 sqm of water in 2043.

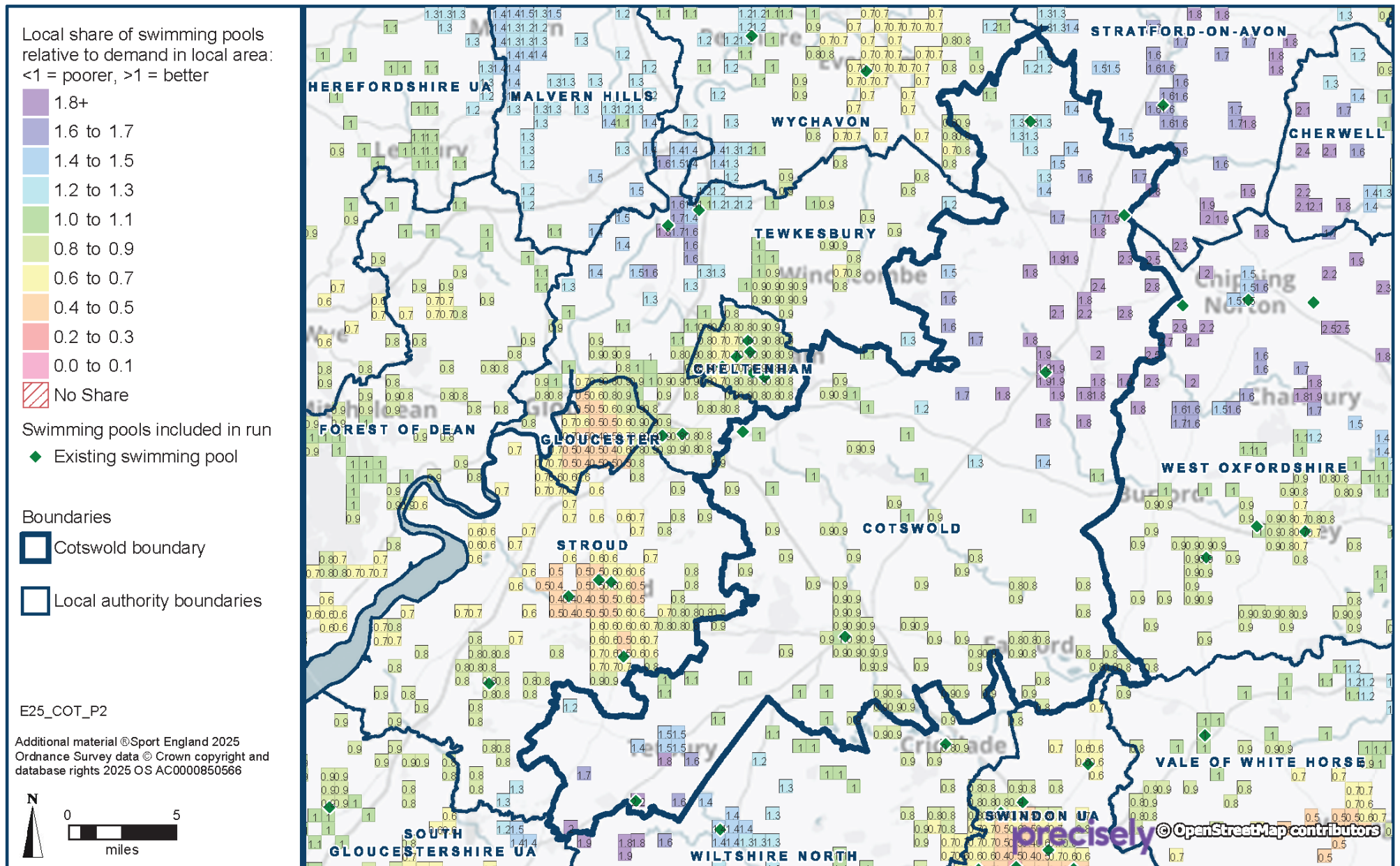
8.16 Provision is poorest in Stroud and Swindon at 8 sqm of water per 1,000 population in 2025, and 7 sqm of water in 2043.

Table 8.2: Water Space in sqm per 1,000 Population by Area and Run

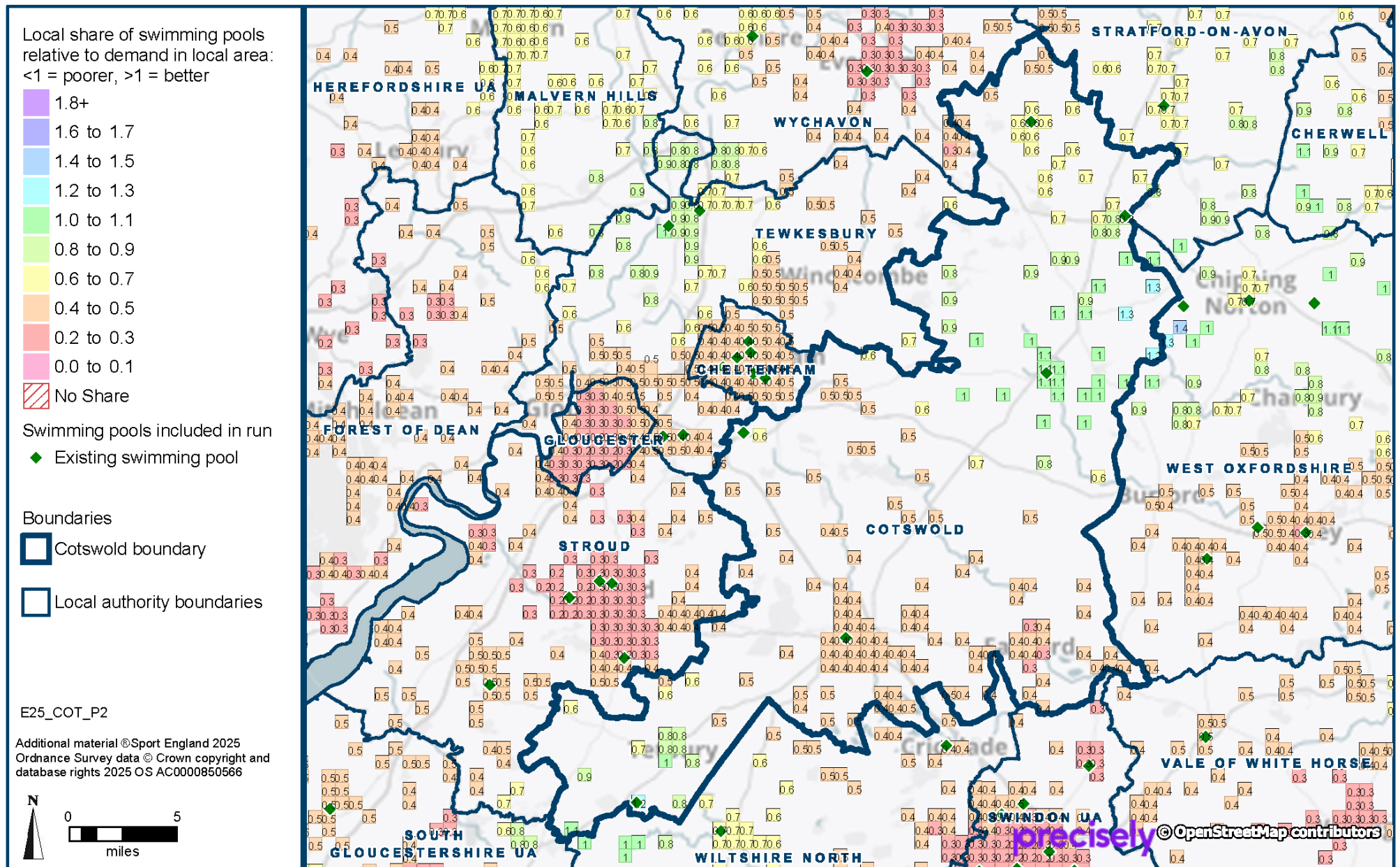
Sqm of water per 1,000 population	Run 1	Run 2
Area	2025	2043
Cotswold	17	14
Cheltenham	18	17
South Gloucestershire	11	10
Stratford-on-Avon	12	9
Stroud	8	7
Swindon	8	7
Tewkesbury	11	9
Vale of White Horse	17	14
West Oxfordshire	14	12
Wiltshire	13	12
Wychavon	9	8
South West Region	13	11
England	11	10

- 8.17 The findings on water space per 1,000 population are reported because some local authorities like to compare their quantitative provision with others; however, it does not set a standard of provision, and should not be used as such.
- 8.18 The supply and demand assessment for swimming pools in Cotswold District Council is based on the findings from the previous six headings analysed in this report.

Map 8.1: Local Share of Swimming Pools in 2025 (Run 1)



Map 8.2: Local Share of Swimming Pools in 2043 (Run 2)



APPENDIX 1: FACILITIES EXCLUDED

The audit excludes facilities that are deemed to be either for private use, too small, closed or there is a lack of information, particularly relating to hours of use. The following facilities were deemed to fall under one or more of these categories and therefore excluded from the modelling:

Site	Facility Type	Reason for Exclusion
Calcot Spa	Main	Too Small
Cirencester Open Air Pool	Lido x2	Lido
Hatherop Castle School	Lido	Private Use
Le Spa at Stratton Place	Main	Closed
Northleach Primary School	Lido	Private Use
Rendcomb College	Lido	Lido
SWR Leisure	Lido	Closed

APPENDIX 2: FACILITIES IN NEIGHBOURING LOCAL AUTHORITY AREAS INCLUDED IN THE ASSESSMENT

Site	Provider	Type	Dimensions (m)	Area (sqm)	Year Built	Year Refurb
Cheltenham						
Cheltenham College	Edu. (in-house)	6-lane	25 x 13	325	1996	
CLC Sports Centre	Edu. (3rd party)	6-lane	25 x 13.7	343	1994	
Dean Close School	Edu. (in-house)	4-lane	25 x 10	250	1971	2004
Everlast Gyms	Commercial	4-lane	20 x 10	200	2006	2010
Leisure at Cheltenham	Public	6-lane	33 x 12.8	422	1971	2008
Leisure at Cheltenham	Public	Teaching	23.8 x 9.65	230		
Leisure at Cheltenham	Public	Diving	12.8 x 12.8	164		
St Edward's School	Edu. (in-house)	4-lane	25 x 10	250	1965	2005
South Gloucestershire						
Bradley Stoke Active Lifestyle Centre	Public	6-lane	25 x 13	325	1999	2004
Bradley Stoke Active Lifestyle Centre	Public	Teaching	12 x 8	96		
David Lloyd (Bristol Emersons Green)	Commercial	4-lane	20 x 8	160	2019	
Elm Park Leisure Centre	Public	4-lane	25 x 10	250	1971	2002
Elm Park Leisure Centre	Public	Teaching	10 x 6	60		
Everlast Gyms (Bristol Filton)	Commercial	4-lane	20 x 9	180	2020	
Kingswood Active Lifestyle Centre	Public	6-lane	25 x 12.5	313	1961	2011
Kingswood Active Lifestyle Centre	Public	Teaching	12 x 8	96		
Longwell Green Active Lifestyle Centre	Public	6-lane	25 x 13	325	2007	
Longwell Green Active Lifestyle Centre	Public	Teaching	13 x 8	104		
Nuffield Health (Bristol North)	Commercial	4-lane	25 x 8	200	1997	2014
Thornbury Active Lifestyle Centre	Public	6-lane	25 x 12.5	313	1980	2003
Thornbury Active Lifestyle Centre	Public	Teaching	9 x 7	63		
Thornbury Active Lifestyle Centre	Public	Diving	7 x 5.5	39		
Tockington Manor School	Edu. (in-house)	3-lane	25 x 7.5	188	1947	2007
Village Gym (Bristol)	Commercial	4-lane	20 x 8.5	170	2018	
Winterbourne Academy	Edu. (in-house)	4-lane	25 x 10	250	1973	2011
Yate Active Lifestyle Centre	Public	6-lane	25 x 13	325	1972	2010
Yate Active Lifestyle Centre	Public	Teaching	10 x 8	80		

Stratford-on-Avon						
Bannatyne Health Club & Spa Wildmoor	Commercial	4-lane	20 x 8	160	2005	
Shipston Leisure Centre	Public	4-lane	25 x 10	250	2005	
Southam Leisure Centre	Public	4-lane	25 x 10	250	1988	2004
Stratford Leisure Centre	Public	5-lane	33 x 12	396	1975	2015
Stratford Leisure Centre	Public	Teaching	12 x 10	120		
Studley Leisure Centre	Public	4-lane	20 x 9	180	1971	2002
The Club & Spa at The Walton Hall Hotel	Commercial	Leisure	18 x 10	180	1987	2011
Vital Health & Wellbeing (Alveston Manor)	Commercial	4-lane	18 x 9	162	2003	
Stroud						
Active Lifestyles Stroud	Public	4-lane	25 x 10	250	1975	2011
Archway School	Edu. (3rd party)	4-lane	20 x 9	180	1953	1995
Beaudesert Park School	Edu. (in-house)	4-lane	18 x 10	180	1991	
The Pulse Dursley	Public	4-lane	25 x 8.5	213	2016	
Wycliffe College Prep School	Edu. (in-house)	3-lane	20 x 7.75	155	1999	
Swindon						
David Lloyd (Swindon)	Commercial	4-lane	25 x 10	250	2007	
Dorcan Better Health & Recreation Complex	Public	3-lane	20 x 7	140	1975	
Everlast Gyms (Swindon)	Commercial	4-lane	25 x 10	250	2003	2007
Health Hydro	Public	6-lane	33 x 12.5	413	1893	2000
Highworth Recreation Centre	Public	4-lane	25 x 8.5	213	1968	2008
Link Centre	Public	6-lane	25 x 12.5	313	1985	2025
Nuffield Health (Swindon)	Commercial	4-lane	20 x 8	160	1999	2016
Ridgeway Leisure Centre	Edu. (in house)	3-lane	25 x 7.5	188	1976	
Tewkesbury						
Brockworth Sports Centre	Edu. (3rd party)	4-lane	25 x 9	225	1968	2007
David Lloyd (Gloucester)	Commercial	4-lane	25 x 10	250	2008	
Tewkesbury Leisure Centre	Public	5-lane	25 x 10.5	263	2016	
Tewkesbury Leisure Centre	Public	Teaching	20 x 10.5	210		
Tewkesbury School Sports Centre	Edu. (in-house)	3-lane	20 x 7.35	147	1969	2014

Vale of White Horse						
Abingdon School and Sports Centre	Edu. (in-house)	7-lane	25 x 16.4	410	2008	
Faringdon Leisure Centre	Edu. (3rd party)	5-lane	25 x 10.5	263	1997	
Milton Hill Abingdon	Commercial	4-lane	20 x 10	200	2002	
Our Lady's Abingdon School	Edu. (3rd party)	4-lane	25 x 8	200	1978	2007
Park Club Milton	Other	4-lane	20 x 9	180	1998	
Radley College Sports Centre	Edu. (in-house)	5-lane	25 x 12	300	1985	2017
Radley College Sports Centre	Edu. (in-house)	Diving	10 x 10	100		
Wantage Leisure Centre	Public	6-lane	25 x 12.5	313	1976	2001
White Horse Leisure and Tennis Centre	Public	8-lane	25 x 18	450	2002	
White Horse Leisure and Tennis Centre	Public	4-lane	18 x 10	180		
West Oxfordshire						
Carterton Leisure Centre	Public	5-lane	25 x 12	300	2003	
Carterton Leisure Centre	Public	Teaching	10 x 7	70		
Chipping Norton Leisure Centre	Edu. (3rd party)	4-lane	25 x 10	250	2002	
Heythrop Park Hotel Golf & Country Club	Commercial	3-lane	20 x 7.5	150	2001	2009
Kingham Hill School	Edu. (in-house)	4-lane	25 x 10	250	2002	2010
Kingham Hill School	Edu. (in-house)	Teaching	10 x 5	50		
Windrush Leisure Centre	Public	6-lane	25 x 12.5	313	1975	
Windrush Leisure Centre	Public	Teaching	12 x 7	84		
Witney Lake Resort	Commercial	5-lane	17 x 12	204	1999	
Wiltshire Kennet						
Dauntsey's School	Edu. (in-house)	4-lane	25 x 10	250	1985	2005
Devizes Leisure Centre	Public	4-lane	25 x 9	225	1990	2006
Marlborough College	Edu. (in-house)	8-lane	25 x 18	450	2003	
Marlborough Leisure Centre	Public	4-lane	25 x 9	225	1992	2014
Tidworth Leisure Centre	Other	6-lane	25 x 13	325	2000	2018
Tidworth Leisure Centre	Other	Teaching	9 x 4	36		
Tidworth Leisure Centre	Other	Leisure	8 x 4	32		
Vale Community Campus	Public	6-lane	25 x 13	325	2018	

Wiltshire North						
Blackland Health Club	Commercial	4-lane	20 x 10	200	1997	
Blackland Health Club	Commercial	Teaching	8 x 5	40		
Calne Community Campus	Public	5-lane	25 x 11	275	1976	2020
Cricklade Leisure Centre	Other	Teaching	14.9 x 12	179	1978	
Lime Kiln Leisure Centre	Public	4-lane	25 x 8	200	1973	2024
Lucknam Park Leisure Spa	Commercial	4-lane	20 x 8	160	1987	2009
Olympiad Leisure Centre	Public	Leisure	25 x 17	425	1989	
Springfield Community Campus	Public	4-lane	25 x 10	250	1977	2016
St Marys Calne Sports Centre	Edu. (in-house)	6-lane	25 x 13	325	2002	2012
The Activity Zone	Public	4-lane	25 x 8.6	215	2004	
The Wiltshire Hotel Golf and Leisure Resort	Commercial	Leisure	18 x 9	162	2003	
The Wiltshire Hotel Golf and Leisure Resort	Commercial	Teaching	4 x 3	12		
Wiltshire Salisbury						
Durrington Swimming & Fitness Centre	Public	4-lane	25 x 9	225	1974	1994
Five Rivers Health and Wellbeing Centre	Public	8-lane	25 x 17.5	438	2002	2016
Five Rivers Health and Wellbeing Centre	Public	Leisure	12 x 10	120		
Five Rivers Health and Wellbeing Centre	Public	Teaching	10 x 7	70		
Odstock Health & Fitness Centre	Other	4-lane	20 x 10	200	1985	2000
Odstock Health & Fitness Centre	Other	Teaching	8 x 5	40		
Salisbury Health & Fitness Club	Commercial	4-lane	20 x 8	160	2006	
Wiltshire West						
Bradford On Avon Swimming Pool	Public	4-lane	25 x 9	225	1971	
Bradford On Avon Swimming Pool	Public	Teaching	12 x 7.5	90		
Melksham Community Campus	Public	6-lane	25 x 13	325	2022	
Melksham Community Campus	Public	Teaching	13 x 7	91		
Trowbridge Sports Centre	Public	6-lane	25 x 13	325	1996	2005
Warminster Sports Centre	Public	4-lane	25 x 10	250	1973	
Westbury Swimming Pool	Public	3-lane	20 x 6.75	135	1887	2013
Wychavon						
David Lloyd (Worcester)	Commercial	5-lane	25 x 12	300	2012	
Droitwich Spa Leisure Centre	Public	6-lane	25 x 13	325	1995	
Evesham Leisure Centre	Public	5-lane	25 x 11	275	2009	
Evesham Leisure Centre	Public	Teaching	12 x 7	84		
Pershore Leisure Centre	Public	5-lane	25 x 11	275	2002	

APPENDIX 3: MODEL DESCRIPTION, INCLUSION CRITERIA AND MODEL PARAMETERS

Included within this Appendix are the following:

- Model Description
- Facility Inclusion Criteria
- Model Parameters

Model Description

1 Background

- 1.1 The Facilities Planning Model (FPM) is a computer-based supply/demand model, which has been developed by Edinburgh University in conjunction with **sportscotland** and Sport England since the 1980s.
- 1.2 The model is a tool for helping to assess the strategic provision of community sports facilities in an area. It is currently applicable for use in assessing the provision of the following facilities that Sport England holds substantial demand data for:
- sports halls
 - swimming pools
 - indoor bowls centres
 - artificial grass pitches (AGPs)

2 Use of FPM

- 2.1 The FPM is one of Sport England's principal tools and has been developed as a means for:
- Assessing the requirements for different types of community sports facilities on a local, regional and national scale.
 - Helping local authorities to determine an adequate level of sports facility provision to meet their local needs.
 - Helping to identify strategic gaps in the provision of sports facilities.
 - Comparing alternative options for planned provision, taking account of changes in demand and supply. This includes testing the impact of opening, relocating and closing facilities, and the likely impact of population changes on the need for sports facilities.
- 2.2 The FPM has been used in the assessment of Lottery funding bids for community facilities and as a principal planning tool to assist local authorities in planning for the provision of community sports facilities.

3 How the Model Works

- 3.1 In its simplest form, the model seeks to assess whether the capacity of existing facilities for a particular sport is capable of meeting local demand for that sport, considering how far people are prepared to travel to such a facility.
- 3.2 In order to do this, the model compares the capacity of facilities (supply) within an area against the demand for that facility from the local population, similar to other social gravity models.
- 3.3 To do this, the FPM converts both demand (in terms of people) and supply (facilities) into a single comparable unit. This unit is 'visits in the weekly peak period'. Once converted, demand and supply can be compared.
- 3.4 The FPM uses a set of parameters to define how facilities are used and by whom. These parameters are primarily derived from a combination of data, including actual user surveys from a range of sites across the country in areas of good supply, together with participation survey data. These surveys provide core information on the profile of users such as their age and gender, how often they visit, the distance travelled, duration of stay, as well as information on the facilities themselves such as programming, peak times of use and capacity of facilities.
- 3.5 This survey information is combined with other data sources to provide a set of model parameters for each facility type. The original core user data for halls and pools comes from the National Halls and Pools survey undertaken in 1996. This data previously formed the basis for the National Benchmarking Service. For AGPs, the core data used comes from the user survey of AGPs carried out in 2005/06 jointly with **sportscotland**.
- 3.6 User survey data from the National Benchmarking Service and other appropriate sources are used to update the model's parameters on a regular basis. The parameters are set out at the end of the document, and the main data sources analysed are:
 - Active Lives:
 - For the adult survey, this data is collected by an online survey or paper questionnaire on behalf of Sport England. Each annual sample includes approximately 175,000 people and covers the full age/gender range. Detailed questions are asked about over 200 separate sport categories in terms of participation and frequency.
 - For the children and young people survey, this data is collected through schools, with up to three mixed ability classes in up to three randomly chosen year groups completing an online survey.
 - National Benchmarking Service (now ceased):
 - This was a centre-based survey whose primary purpose was to enable centres to benchmark themselves against other centres. Sample interviews were conducted on site. The number of people surveyed varied by year depending on how many centres took part. Approximately 10,000 swimmers and 3,500 sports hall users were surveyed per year. This data was used for journey

times, establishing proportions of particular activities in different hall types, the duration of activities and the time of activity (peak period).

- Moving Communities Customer Experience Survey:
 - Annual online survey distributed by participating local authorities and operators via email. Email invites are sent to any member or customer on their database who has attended their leisure centre in the last 3 months. The results inform the travel mode that residents use to access facilities.
- Scottish Health:
 - Annual survey of approximately 6,600 people (just under 5,000 adults). This data is primarily used to assess participation, frequency and activity duration.

3.7 Other data is used where available. For example, the following data sources are among those that have been used to cross-check results:

- Children's Participation in Culture and Sport, Scottish Government, 2008
- Young People's Participation in Sport, Sports Council for Wales, 2009
- Health and Social Care Information Centre, Lifestyle Statistics, 2012
- Young People and Sport, Sport England, 2002
- Data from Angus Council, 2013/14
- National Pools and Halls Survey, 1996
 - This survey was used to obtain capacities per sports hall for differing sport types for programming data.

4 Calculating Demand

- 4.1 Demand is calculated by applying the user information from the parameters, as referred to above, to the population¹. This produces the number of visits for that facility that will be demanded by the population.
- 4.2 Depending on the age and gender composition of the population, this will affect the number of visits an area will generate. In order to reflect the different population profiles of the country, the FPM calculates demand based on the smallest census groupings. These are output areas (OAs)².
- 4.3 The use of OAs in the calculation of demand ensures that the FPM is able to reflect and portray differences in demand in areas at the most sensitive level based on available census

¹ For example, it is estimated that 7.72% of 16-24 year old males will demand to use an AGP 1.67 times a week. This calculation is done separately for the 12 age/gender groupings.

² Census OAs are the smallest grouping of census population data and provide the population information on which the FPM's demand parameters are applied. A demand figure can then be calculated for each OA based on the population profile. There are over 178,600 OAs in England. An OA has a target value of 125 households per OA.

information. Each OA used is given a demand value in visits in the weekly peak period by the FPM.

5 Calculating Supply Capacity

5.1 A facility's capacity varies depending on the following factors:

- Its size (area of pool or hall, number of pitches or rinks)
- How many hours the facility is available for use by the community in the weekly peak period
- How many visits can be accommodated by the facility at any one time (pools = 1 user/6 sqm, main halls/barns = 8 users/court, activity halls/studios = 15 users/court, AGPs = 28 users/pitch, indoor bowls = 6 users/rink)

5.2 The FPM calculates the maximum number of visits that a facility can accommodate, which gives it a theoretical capacity in visits in the weekly peak period.

5.3 Based on travel time information (see Travel Time section) taken from the user surveys, the FPM then calculates how much demand would be met by the facility, having regard to its capacity and how much demand can travel to the facility. The FPM includes an important feature of spatial interaction. This feature takes account of the location and capacity of all the facilities, having regard to their access and the size of demand, and assesses whether the facilities are in the right place to meet the demand.

5.4 It is important to note that the FPM does not simply add up the total demand within an area and compare that to the total supply within the same area. This approach would not take account of the spatial aspect of supply against demand in a particular area. For example, if an area has a total demand for five facilities and there are currently six facilities within the area, it would be too simplistic to conclude that there is an over-supply of one facility as this approach would not take account of whether the five facilities are in the correct location for local people to use them within that area. It may be that all the facilities are in one part of the local authority area, leaving other areas under-provided. An assessment of this kind would not reflect the true picture of provision. The FPM is able to assess supply and demand within an area based on the needs of the population within that area.

5.5 In making calculations as to supply and demand, visits made to sports facilities are not artificially restricted or calculated by reference to administrative boundaries, such as local authority areas. Users are generally expected to use their closest facility. The FPM reflects this through analysing the location of demand against the location of facilities, allowing for cross-boundary movement of visits. For example, if a facility is on the boundary of a local authority, users will generally be expected to come from the population living close to the facility, but who may be in a neighbouring authority.

6 Calculating the Capacity of Sports Halls – Badminton Court Equivalents

6.1 The capacity of sports halls is calculated in the same way as described above, with each sports hall site having a capacity in visits in the weekly peak period. In order for this capacity to be meaningful, these visits are converted into the equivalent of main hall badminton

courts. This 'court' figure is often mistakenly read as being the same as the number of 'marked courts' at the sports halls in the Active Places data, but it is not the same. There will usually be a difference between this figure and the number of 'marked courts' in Active Places.

6.2 The reason for this is that the badminton court equivalents are of all the main and activity halls' capacities; this is calculated based on hall size (area) and whether it is a main hall or an activity hall. This gives a more accurate reflection of the overall capacity of the halls than simply using the 'marked courts' figure, for two reasons:

- In calculating the capacity of halls, the model uses a different at-one-time parameter for main halls and for activity halls. Activity halls have a greater at-one-time capacity than main halls. Marked courts can sometimes not properly reflect the size of the actual main hall. For example, a hall may be marked out with four courts, when it has space for three courts. As the model uses the 'courts' as a unit of size, it is important that the hall's capacity is included as a 'three-court unit' rather than a 'four-court unit'.
- It is often difficult to visualise how much hall space there is when expressed as visits in the weekly peak period. To make things more meaningful, this capacity is converted back into badminton court equivalents and is noted in the output tables as hall space in courts.

7 Facility Attractiveness – for Halls and Pools Only

7.1 Not all facilities are the same, and users will find certain facilities more attractive to use than others. The model attempts to reflect this by introducing an attractiveness weighting factor, which affects the way visits are distributed between facilities. Attractiveness, however, is very subjective. Currently weightings are only used for sports hall and swimming pool modelling.

7.2 Attractiveness weightings are based on the following:

- Age and refurbishment weighting (pools and halls): The older a facility is, the less attractive it will be to users. It is recognised that this is a general assumption and that there may be examples where older facilities are more attractive than newly built ones due to excellent local management, programming and sports development. Additionally, the date of any significant refurbishment is also included within the weighting factor; however, here attractiveness is set lower than a new build of the same year. It is assumed that a refurbishment that is older than 20 years will have a minimal impact on the facility's attractiveness. The information on year built/refurbished is taken from Active Places. A graduated curve is used to allocate the attractiveness weighting by year. This curve levels off at 70 years old with a 20% weighting. The refurbishment weighting is slightly lower than the new built year equivalent.
- Management and ownership weighting (halls only): Due to the large number of halls being provided by the education sector, an assumption is made that these halls will generally not provide as balanced a programme as halls run by local authorities, trusts, etc, with school halls more likely to be used by teams and groups through block booking. A less balanced programme is assumed to be less attractive to a general

pay-and-play user than a standard local authority leisure centre sports hall with a wider range of activities on offer.

7.3 To reflect this, two weighting curves are used:

- High weighted curve – includes non-education management (third party) and a more balanced programme, therefore more attractive
- Lower weighted curve – includes educational halls managed in-house, therefore less attractive

7.4 Commercial facilities (halls and pools): While there are relatively few sports halls provided by the commercial sector, an additional weighting factor is incorporated within the model to reflect the cost element often associated with commercial facilities. For each population OA, the Indices of Multiple Deprivation (IMD) score is used to limit whether people will use commercial facilities. The assumption is that the higher the IMD score (less affluence), the less likely the population of the OA would choose to go to a commercial facility.

7.5 The English Indices of Deprivation 2019, produced by the Ministry of Housing, Communities and Local Government, measure relative levels of deprivation in 32,844 lower super output areas in England. IMD is an overall relative measure of deprivation constructed by combining seven domains of deprivation according to their relative weights.

8 Used Capacity

8.1 Used capacity refers to how much of a facility's theoretical capacity is being used. At first this can appear to be unrealistically low, with local authority figures being in the 50-60% region. Without any further explanation, it would appear that facilities are half empty. The key point is not to see a facility's theoretical maximum capacity (100%) as being an optimum position. In practice this would mean that a facility would need to be completely full every hour it was open during the peak period. This would be both unrealistic from an operational perspective and undesirable from a user's perspective, as the facility would be completely full.

8.2 For example, a 25m four-lane pool has a theoretical capacity of 2,260 visits per week during a 52.5-hour peak period. Usage of a pool will vary throughout the evening, with some sessions being busier than others through programming, such as an aqua aerobics session between 19:00 and 20:00 and lane swimming between 20:00 and 21:00 (see table below). Other sessions will be quieter, such as between 21:00 and 22:00. This pattern of use would mean a total of 143 swims taking place. However, the pool's maximum theoretical capacity is 264 visits throughout the evening. In this instance the pool's used capacity for the evening would be 54%.

Visits per hour	16:00-17:00	17:00-18:00	18:00-19:00	19:00-20:00	20:00-21:00	21:00-22:00	Total visits for the evening
Theoretical maximum capacity	44	44	44	44	44	44	264
Actual usage	8	30	35	50	15	5	143
% of capacity used	18%	68%	80%	114%	34%	11%	54%

9 Comfort Factor – Halls and Pools

- 9.1 If the facilities were full to their theoretical capacity, there would simply not be the space to undertake the activity comfortably. In addition, there is a need to take account of a range of activities taking place which have different numbers of users; for example, aqua aerobics will have significantly more participants than lane swimming sessions. Additionally, there may be times and sessions that, while being within the peak period, are less busy and so will have fewer users.
- 9.2 To account for these factors the notion of a 'comfort factor' is applied within the model. For swimming pools, 70%, and for sports halls, 80%, of their theoretical capacity is considered as indicating where a facility starts to become uncomfortably busy. This should be seen only as a guide to help flag when facilities are becoming busier, rather than as a 'hard threshold'.
- 9.3 The comfort factor is also used to increase the capacity needed to comfortably meet unmet demand. If this comfort factor is not applied, then any facilities provided will be operating at their maximum theoretical capacity, which is not desirable as previously noted.
- 9.4 The comfort factor is not applied to AGPs due to the fact they are predominantly used by teams that have a set number of players, therefore, the notion of having a 'less busy' pitch is not applicable.

10 Travel Times

- 10.1 The model includes three different modes of travel:
- driving
 - walking and wheeling
 - public transport and cycling
- 10.2 Car access is also considered. In areas where there is less access to a car, the model reduces the number of visits made by car and increases those made on foot for shorter journeys and public transport for longer journeys.
- 10.3 Overall, surveys have shown that most visits to swimming pools, sports halls and AGPs are made by driving, with a significant minority of visits to facilities being made on foot.

Facility	Driving	Walking	Public Transport	Cycling
Swimming Pool	74%	18%	4%	4%
Sports Hall	76%	19%	2%	3%
AGP Combined	79%	18%	3%	unknown
AGP Football	74%	22%	4%	
AGP Hockey	97%	2%	1%	

- 10.4 The model includes a distance decay function where the further a user is from a facility, the less likely they will travel. Set out below is the survey data with the percentage of visits made

within each of the travel times. This shows that almost 90% of all visits, both by car and on foot, are made within 20 minutes. Hence, 20 minutes is often used as a rule of thumb for the coverage for sports halls and swimming pools.

Minutes	Swimming Pools		Sport Halls	
	Drive	Walk	Drive	Walk
0-10	56%	53%	54%	55%
11-20	35%	34%	36%	32%
21-30	7%	10%	7%	10%
31-45	2%	2%	2%	3%

- 10.5 For AGPs, there is a similar pattern to halls and pools, with hockey users observed as travelling slightly further (89% travel up to 30 minutes). Therefore, a 20-minute travel time can also be used for combined and football, and 30 minutes for hockey.

Minutes	AGP Combined		AGP Football		AGP Hockey	
	Drive	Walk	Drive	Walk	Drive	Walk
0-10	28%	38%	30%	32%	21%	60%
10-20	57%	48%	61%	50%	42%	40%
20-40	14%	12%	9%	15%	31%	0%

NOTE: These are approximate figures and should only be used as a guide

- 10.6 Ordnance Survey's Multi-Modal Network Roads average speed data is used to calculate the off-peak drive times between facilities and the population, observing any one-way and turn restrictions that apply. These travel times have been validated against national survey work, and therefore are based on the actual travel patterns of users.
- 10.7 The network is also used to calculate walk times along paths and roads, excluding motorways and trunk roads. A standard walking speed of 3 mph is used for all journeys.
- 10.8 Due to the complexity of public transport timetables, public transport travel times in the model are assumed to be twice as long as driving times.
- 10.9 A cycling speed of 12 mph is used for roads and shared use cycleways, which is approximately half the average speed of driving in urban areas. A speed of 7.5 mph is used for tracks and off-road travel.

Facility Inclusion Criteria

Swimming Pools

The following inclusion criteria were used for this analysis:

- Include all operational indoor pools available for community use ie, pay-and-play, membership, sports club/community association.
- Exclude all pools not available for community use, ie, private use.
- Exclude all outdoor pools, ie, lidos.
- Exclude all pools where the main pool is less than 20 metres in length, or the area is less than 160 square metres. If the principal pool is a leisure pool with an area less than 200 square metres, then all pools on the site should be excluded.
- For leisure pools, only the area of the water that is swimmable should be included. Water play or splash areas should be excluded from the useable space.
- Include all 'planned', 'under construction', and 'temporarily closed' facilities only where all data is available for inclusion.
- Where opening times are missing, availability is included based on similar facility types.
- Where the year built is missing, assume date 1975³.

Facilities over the border in Wales and Scotland are included, as supplied by **sportscotland** and Sport Wales.

³ Choosing a date in the mid-1970s ensures that the facility is included, while not overestimating its impact within the run.

Model Parameters

Swimming Pools Parameters

At-one-time Capacity	0.16667 per square metre = 1 person per 6 square meters																											
Coverage Maps	Car: 20 minutes Walking: 1.6 km Public transport: 20 minutes at about half the speed of a car NOTE: Travel times are indicative, within the context of a distance decay function of the model.																											
Duration	60 minutes																											
Percentage Participation	<table><tr><td>Age</td><td>0-15</td><td>16-24</td><td>25-39</td><td>40-59</td><td>60-79</td><td>80+</td></tr><tr><td>Male</td><td>15.6%</td><td>7.6%</td><td>10.9%</td><td>9.9%</td><td>6.7%</td><td>2.3%</td></tr><tr><td>Female</td><td>17.5%</td><td>9.2%</td><td>12.7%</td><td>11.7%</td><td>9.2%</td><td>3.0%</td></tr></table>							Age	0-15	16-24	25-39	40-59	60-79	80+	Male	15.6%	7.6%	10.9%	9.9%	6.7%	2.3%	Female	17.5%	9.2%	12.7%	11.7%	9.2%	3.0%
Age	0-15	16-24	25-39	40-59	60-79	80+																						
Male	15.6%	7.6%	10.9%	9.9%	6.7%	2.3%																						
Female	17.5%	9.2%	12.7%	11.7%	9.2%	3.0%																						
Frequency per Week	<table><tr><td>Age</td><td>0-15</td><td>16-24</td><td>25-39</td><td>40-59</td><td>60-79</td><td>80+</td></tr><tr><td>Male</td><td>1.07</td><td>0.91</td><td>0.77</td><td>0.92</td><td>1.21</td><td>1.54</td></tr><tr><td>Female</td><td>1.09</td><td>0.94</td><td>0.75</td><td>0.92</td><td>1.16</td><td>1.27</td></tr></table>							Age	0-15	16-24	25-39	40-59	60-79	80+	Male	1.07	0.91	0.77	0.92	1.21	1.54	Female	1.09	0.94	0.75	0.92	1.16	1.27
Age	0-15	16-24	25-39	40-59	60-79	80+																						
Male	1.07	0.91	0.77	0.92	1.21	1.54																						
Female	1.09	0.94	0.75	0.92	1.16	1.27																						
Peak Period	Weekday: 9:00 to 10:00, 12:00 to 13:00, 15:30 to 21:00 Weekend: 08:00 to 15:30 Total: 52.5 hours																											
Proportion in Peak Period	63%																											

