



**Facilities Planning Model Assessment of  
Swimming Pools Provision for  
Chichester District Council**

**Standard Report**

**8 February 2024**

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Population distribution based on 2021 Census data for output areas. Population for 2023 modified by 2018-based Subnational Population Projections for Local Authorities. Adapted from data from the Office for National Statistics licensed under the Open Government Licence v.3.0. London boroughs modified by © GLA 2021-based demographic projections - ward populations, identified capacity scenario.

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## EXECUTIVE SUMMARY

- 0.1 This report for Chichester District Council (also referred to as Chichester or the District) provides an initial assessment of the current supply and demand for provision of swimming pools in the District in 2023. It has been prepared based on an assessment using the Sport England Facilities Planning Model (FPM) spatial modelling tool.
- 0.2 The key element to be taken from this report is that Chichester has an adequate supply of swimming pools to meet most of its demand, but it is partially reliant on the commercial sector and neighbouring local authorities for over a third of its met demand.
- 0.3 As the only one public leisure centre, which is also the oldest and largest site in the District, it will be important that Westgate Leisure Centre remains open. The centre provides 47% of the available capacity in Chichester, and is the only site with a learner pool.

### *Key Findings*

- 0.4 The key findings from the supply, demand and access assessment are as follows:
1. The total water space in Chichester is 1,203 sqm of water. When scaled against the amount available during the weekly peak period, this reduces to 1,080 sqm.
  2. The swimming pool stock in Chichester is aging and there is a need for modernisation.
  3. The resident population generates demand for 7,784 visits in the weekly peak period, which equates to 1,280 sqm of water with a comfort factor included. The visits demanded amount to less than Chichester's available supply. However, with a comfort factor applied, more water space is required than is currently available in the District.
  4. Of the demand for swimming pools from Chichester residents, 81% is met in 2023.
  5. Of Chichester's satisfied demand, 35% is exported and met at swimming pools outside the District.
  6. Only 12% of Chichester's residents are within a 20-minute walk of a swimming pool.
  7. Unmet demand totals 238 sqm of water.
  8. Westgate Leisure Centre is estimated to be the most utilised site, at 74% of capacity used at peak times.
  9. Chichester exports 1,221 more visits than it imports in the weekly peak period.
  10. Chichester has a local share value of 0.95, meaning that there is not quite sufficient suitable provision to meet demand.
  11. Chichester has 10 sqm of water per 1,000 population. This is the second lowest in the study area, and is lower than the regional average of 13 sqm of water and the national average of 12 sqm of water.

### *Strategic Overview*

- 0.5 There is an uneven distribution of swimming pools across the District. However, demand is highest in Chichester city centre, which is where Westgate Leisure Centre is located.

- 0.6 The proportion of Chichester's demand that is met is lower than the regional and national averages. Chichester relies on swimming pools in the neighbouring local authority areas to meet 35% of its satisfied demand. Therefore, any future changes to provision in these areas would impact Chichester's residents. The data from the National FPM Run does not identify how much of Chichester's demand goes to which other local authority area. The destination of exported demand and amount could be confirmed in a bespoke FPM run.
- 0.7 Deprivation in Chichester is low and access to a car is high. The rural nature of the District means that only a small proportion of residents are within walking distance of a swimming pool, and most of the journeys to swimming pools are estimated to be by car.
- 0.8 All the unmet demand is from residents who are too far from a swimming pool and is not due to lack of capacity. Unmet demand is highest in Selsey, but there is not enough unmet demand to justify the provision of a new swimming pool.
- 0.9 The overall estimated used capacity of the swimming pools in Chichester is low, but Westgate Leisure Centre is estimated to be operating at an uncomfortable level at peak times. However, it is not available for community use for the full peak period. The opening hours of both pools could be extended by 4.5 hours in weekly peak period, which would increase the capacity of the site at peak times and reduce the used capacity to a more comfortable level.

### *Next Steps*

- 0.10 Chichester District Council, in reviewing the findings of this report, may also wish to consider applying the evidence base to ensure that the benefits from the strategic direction being set by Sport England are realised.
- 0.11 It is important to reiterate that this is a one-year assessment and provides the evidence base as of now. The findings should be consulted on to provide a rounded evidence base and address the findings set out.
- 0.12 Given the strategic overview, the following will be significant:
- Retention and further modernisation of Westgate Leisure Centre has the greatest importance.
  - A projected large population growth in Chichester in the future, particularly in one area or on the borders of the District.
  - Known committed changes in the current available supply of swimming pools, especially in the neighbouring local authority areas close to Chichester. Any reduction in supply will reduce access for Chichester residents and increase unmet demand.
- 0.13 To understand the impact of these possible changes it would be beneficial to undertake a longer-term local bespoke assessment using Sport England's FPM. This should include population projections, with options for changing the swimming pool supply and assessing the collective impact this has on the future demand for swimming pools and the distribution of that demand.

0.14 Such an evidence base can be applied in strategic planning and the Local Plan policy and can be used for securing inward investment.

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## 1 Introduction

- 1.1 This assessment uses Sport England's Facilities Planning Model (FPM) and outputs from the National Run using Active Places data as of March 2023.
- 1.2 The supply assessment is based on swimming pools being open and accessible for community use. If swimming pools are closed temporarily because of Covid-19 or for any other reasons, the local authority should inform Sport England Active Places Power via the contact us link at <https://www.activeplacespower.com>.
- 1.3 This standard run provides an initial assessment of the current supply and demand for the provision of swimming pools in the Chichester Council area. The assessment does not include future population growth projections but is a baseline evidence base for swimming pools provision.
- 1.4 To help with comparative analysis, data outputs for the neighbouring local authorities, together with regional and national findings, are included in the data tables.

### *Context*

- 1.5 The report should form part of a wider assessment of provision at local level, which then provides a rounded assessment and evidence base report. This should include other available information and knowledge from:
- A sports perspective, such as national sports governing bodies and other sports organisations
  - A local perspective from the local authority, the facility operator and local sports clubs
- 1.6 The findings from this FPM standard report should be reviewed and applied with reference to the strategic direction being set by Sport England on:
- The policies, programmes and interventions proposed to increase sports participation and physical activity
  - The application of the research applied by Sport England in determining the strategy and the evidence base
  - The role sports facilities can play in increasing sports participation and physical activity
- 1.7 The strategy can be accessed at [Uniting the Movement | Sport England](#).

### *Future Assessment*

- 1.8 Longer-term bespoke FPM local assessments for future provision can be undertaken based on:
- Review of these findings
  - Projected population growth and inclusion of residential sites identified in the Local Plan

- Options for changes in supply – closures/new openings at the same or different locations and on different scales

1.9 The purpose is to identify the impact of these changes on access to swimming pools for residents in future years and whether changes in supply meet future demand.

1.10 These findings can be applied as an evidence base in Local Plan policy, and the future assessments can also inform a long-term evidence base for securing inward investment – grant aid applications and prototype developments, for example, Sport England Leisure Local.

### *Report Structure, Content and Sequence*

1.11 This report sets out the full findings under six assessment headings as follows:

- Supply – How many facilities are there and what is their capacity?
- Demand – Who wants to use facilities?
- Satisfied Demand – How many people use the facilities? Where do people use facilities (inside and outside the authority) and how do they travel there?
- Unmet Demand – Who is unable to use facilities and why? Is there insufficient capacity or are people too far away from facilities?
- Used Capacity – How full are the facilities and where are people coming from (inside and outside the authority)?
- Local Share – Which areas have better or worse provision, considering the number of people who want to use them?

1.12 Each assessment heading has a table of main findings, followed by a full definition of these. Each key finding is numbered and in bold typeface. All tables include the findings for the neighbouring authorities, together with regional and England-wide findings. This is because the assessments are based on catchment areas, and catchments extend across local authority boundaries.

1.13 Where valid to do so, the findings for the neighbouring local authorities are compared with the findings for Chichester, for example, proportion of demand met.

1.14 Maps to support the findings on facility locations, demand, deprivation, public transport access, unmet demand and local share are also included.

1.15 The facilities excluded from the study, with explanations, are listed in Appendix 1. The facility planning inclusion criteria and model parameters are described in Appendix 2.



## 2 Swimming Pool Supply

Supply	Chichester	Arun	East Hampshire	Havant	Horsham	Waverley	South East Region	England
Number of pools	5	6	9	6	6	13	534	2,950
Number of pool sites	4	4	5	3	5	8	369	2,047
Supply in sqm of water	1,203	1,516	1,731	1,419	1,572	2,857	120,022	672,587
Supply in sqm of water scaled with hours available in peak period	1,080	1,421	1,498	1,349	1,187	2,268	102,993	579,308
Supply in visits per week in peak period	9,452	12,432	13,104	11,801	10,390	19,845	901,187	5,068,949
Average year built of all sites	1998	1996	2009	1984	2002	1994	1994	1990
Average year built of public sites	1987	2019	2011	1983	2000	1990	1995	1988

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

**Weekly peak period** – This is when the majority of visits take place and when users have most flexibility to visit. The peak period hours for swimming pools (see Appendix 2) total 52.5 per week. The modelling and recommendations are based on the ability of the public to access facilities during this weekly peak period.

- 2.1 There are five indoor swimming pools across four sites in Chichester that are available for community use. The facilities excluded from the study are listed in Appendix 1.
- 2.2 **Key finding 1** is that the total water space in the District is 1,203 sqm of water. When scaled against the amount available during the weekly peak period, this reduces to 1,080 sqm.
- 2.3 Of the water space in Chichester, 10% is unavailable for community use in the weekly peak period, which equates to 123 sqm of water.
- 2.4 The swimming pools can accommodate a total of 9,452 visits per week in the peak period.

*Swimming Pools Included in Chichester (2023)*

Site	Operation	Facility Type	Dimensions (m)	Water Area (sqm)	Year Built	Year Refurb	Weekly Peak Hours	Total Hours Open per Week	Site Capacity (visits per week in peak period)
Champneys Forest Mere	Commercial	Main	25 x 10	250	1997		52.5	107.5	2,188
Highfield and Brookham Schools	Educational	4-lane	20 x 8	160	2004		27.5	27.5	733
Nuffield Health	Commercial	Main	20 x 12	240	2003		52.5	98.5	2,100
Westgate Leisure Centre	Public	6-lane	33.3 x 13	433	1987	2005	48.0	84.4	4,431
		Learner	12 x 10	120			48.0	78.0	

### *Public Leisure Centres (pay-and-play access)*

- 2.5 Westgate Leisure Centre is the only public site with pay-and-play access in the District. It is operated by Everyone Active on behalf of Chichester District Council.
- 2.6 The site has a 33m six-lane pool and a 12m x 10m pool. It has the only learner pool in Chichester. It has the largest amount of water space in the District at 553 sqm, and the greatest capacity at 4,431 visits per week in the peak period.
- 2.7 Both the pools are available for 48 hours in the weekly peak period. Therefore, the capacity of the site at peak times could be increased by 4.5 hours to the maximum of 52.5 hours.
- 2.8 Westgate Leisure Centre provides 47% of the available capacity in the District in the weekly peak period.
- 2.9 The configuration of the site allows specific activities to take place in dedicated pools and can accommodate the following swimming activities:
- Casual recreational swimming
  - Lane and fitness swimming
  - Learn to swim
  - Swimming development through clubs
  - Fun family-based activities

### *Commercial Sites (registered membership)*

- 2.10 There are two commercial sites in Chichester, which provide recreational swimming for their members only. Both pools are available for the maximum 52.5 hours in the weekly peak period and have the most availability off-peak.
- 2.11 Champneys Forest Mere has a 25m pool and 250 sqm of water space. It has the second largest capacity in the District at 2,188 visits per week in the peak period.
- 2.12 Nuffield Health provides a swim school in its 20m pool. It has a similar amount of water space at 240 sqm and a capacity of 2,100 visits per week in the peak period.
- 2.13 In total, the commercial pools provide 45% of the available capacity in the weekly peak period.

### *Educational Providers (sports club/community association use)*

- 2.14 Highfield and Brookham Schools have a 20m x 8m pool. It is the smallest pool in the District at 160 sqm of water, but the most recent to open in 2004.
- 2.15 The pool is available for hire and has a swim school. It is modelled with availability to the community of 27.5 hours in the weekly peak period. It has the smallest capacity of 733 visits per week in the peak period and accounts for only 8% of the District's supply.

### *Age*

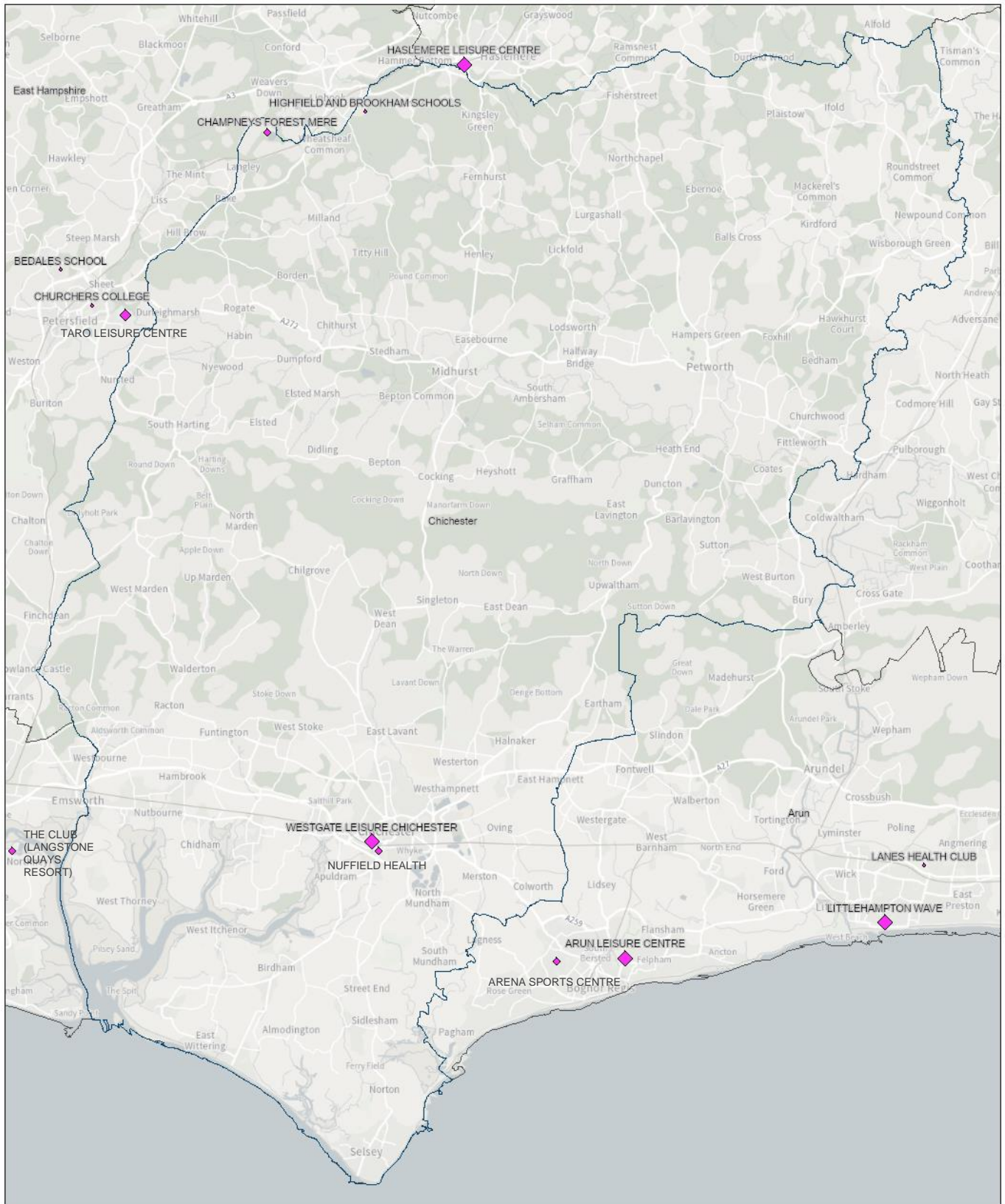
- 2.16 **Key finding 2** is that the swimming pool stock in Chichester is aging and there is a need for modernisation.
- 2.17 Westgate Leisure Centre is the oldest swimming pool in the District. It was built in 1987 and refurbished in 2005.
- 2.18 The other three sites were built between 1997 and 2004 and have not been refurbished.

### *Locations*

- 2.19 Westgate Leisure Centre and Nuffield Health are in the city of Chichester (see Map 2.1), both to the southwest of the city centre, near the railway station.
- 2.20 Champneys Forest Mere and Highfield and Brookham Schools are in the northwest of the District, in South Downs National Park and on the border with East Hampshire.
- 2.21 There are five public leisure centres in neighbouring local authority areas close to Chichester District boundary:
- Haslemere Leisure Centre, Waverley, in the north
  - Taro Leisure Centre, East Hampshire, in the northwest
  - Billingshurst Leisure Centre, Horsham, in the northeast
  - Havant Leisure Centre, Havant, in the southwest
  - Arun Leisure Centre, Arun, in the southeast

## Map 2.1: Swimming Pool Locations in 2023

The size of the pink diamond is representative of the capacity of the swimming pool site.



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Swimming Pool Facilities (by capacity) ◆ 4,274 - 8,418

• 26 - 1,368

◆ 1,369 - 2,533

◆ 2,534 - 4,273

□ Areas of Interest

□ Level 1 (Local Authorities & Old Districts)

1:130,000

0 1.5 3 6 mi

0 2.25 4.5 9 km

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### 3 Demand for Swimming Pools

Demand	Chichester	Arun	East Hampshire	Havant	Horsham	Waverley	South East Region	England
Population	125,102	167,167	125,031	130,427	149,766	126,984	9,366,792	57,406,131
Visits demanded per week in peak period	7,784	10,358	7,994	8,323	9,637	8,244	611,848	3,765,557
Demand in sqm of water with comfort factor included	1,280	1,703	1,315	1,369	1,585	1,356	100,612	619,208
% of demand in the 10% most deprived LSOAs nationally	0%	4%	0%	7%	0%	0%	3%	10%

**Definition of total demand** – This represents the total demand for swimming pools 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 water space. 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 March 2020 and are set out in Appendix 2.

#### *Resident Population Demand*

- 3.1 The Office for National Statistics 2018-based population projection for Chichester is 125,102 in 2023.
- 3.2 **Key finding 3** is that the resident population generates demand for 7,784 visits in the weekly peak period, which equates to 1,280 sqm of water with a comfort factor included. The visits demanded amounts to less than the District’s available supply. However, with a comfort factor applied, more water space is required than is currently available in the District.

#### *Geographical Distribution of Demand*

- 3.3 Demand for swimming pools is highest in the A27 corridor area of Chichester (see Map 3.1). In the Manhood area of the District, there are two clusters of higher demand in Selsey, and in East Wittering and Bracklesham. Demand is very low and dispersed in the National Park area of the District, with large areas where there is no demand.
- 3.4 Demand is greatest in Chichester city centre, totalling 198 sqm of water across nine square kilometres (blue and green squares). The greatest densities of demand per square kilometre are 37 sqm of water, east of Westgate Leisure Centre and Nuffield Health, and 30 sqm of water, north of Westgate Leisure Centre and Nuffield Health (light green squares).



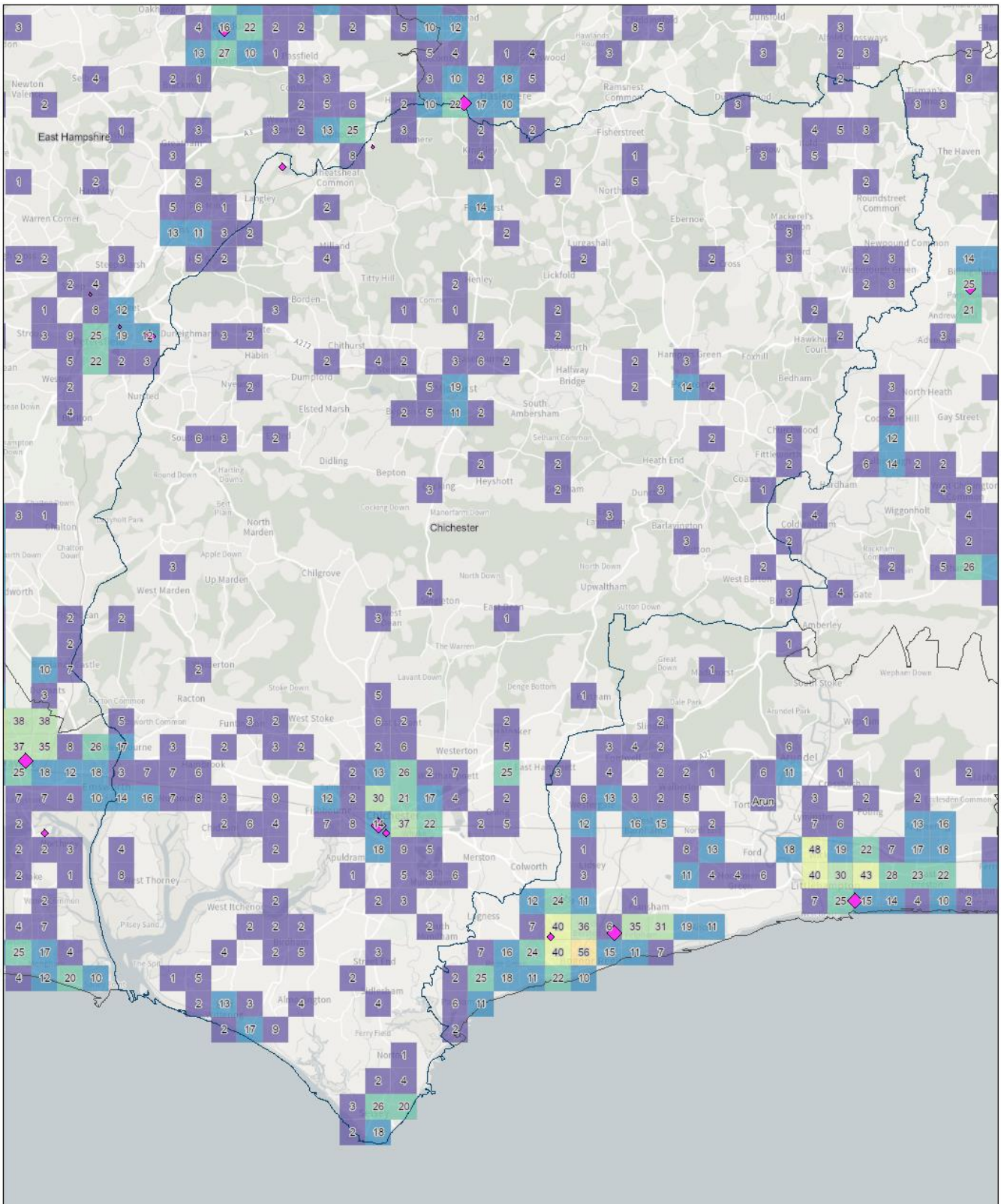
- 3.5 The area of next highest demand is in Selsey, on the southern coast of the District, with demand totalling 76 sqm of water across eight square kilometres (green, blue and purple squares).
- 3.6 There is a high density of demand in Tangmere, east of Chichester city, at 25 sqm of water per square kilometre (dark green square).
- 3.7 There are five areas of Chichester where the density of demand is between 11 and 19 sqm of water per square kilometre (blue squares):
- East Wittering and Bracklesham
  - Emsworth and Southbourne
  - Midhurst
  - Fernhurst
  - Petworth

### *Deprivation*

- 3.8 None of Chichester's demand is in the 10% most-deprived lower super output areas (LSOAs) nationally.
- 3.9 The areas of highest deprivation in Chichester are northeast of the city centre, in Portfield, and south of the city centre, east of Nuffield Health (see Map 3.2). The next highest areas of deprivation in the District are:
- Northeast of the city centre
  - North Selsey
  - Bracklesham
- 3.10 The Index of Multiple Deprivation (IMD) score is used in the FPM to limit whether people will use commercial facilities such as Nuffield Health and Champneys Forest Mere (see Appendix 2 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: Demand for Swimming Pools in 2023

FPM peak period demand aggregated at 1km square grid expressed as water space and shown thematically (colours).



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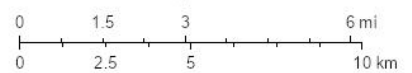
Swimming Pool Facilities (by capacity)

- ◆ 26 - 1,368
- ◆ 1,369 - 2,533
- ◆ 2,534 - 4,273
- ◆ 4,274 - 8,418
- Areas of Interest
- Level 1 (Local Authorities & Old Districts)

Demand (1km grid)

- <10
- 10-19
- 20-29
- 30-39
- 40-49
- 50-59

1:140,000

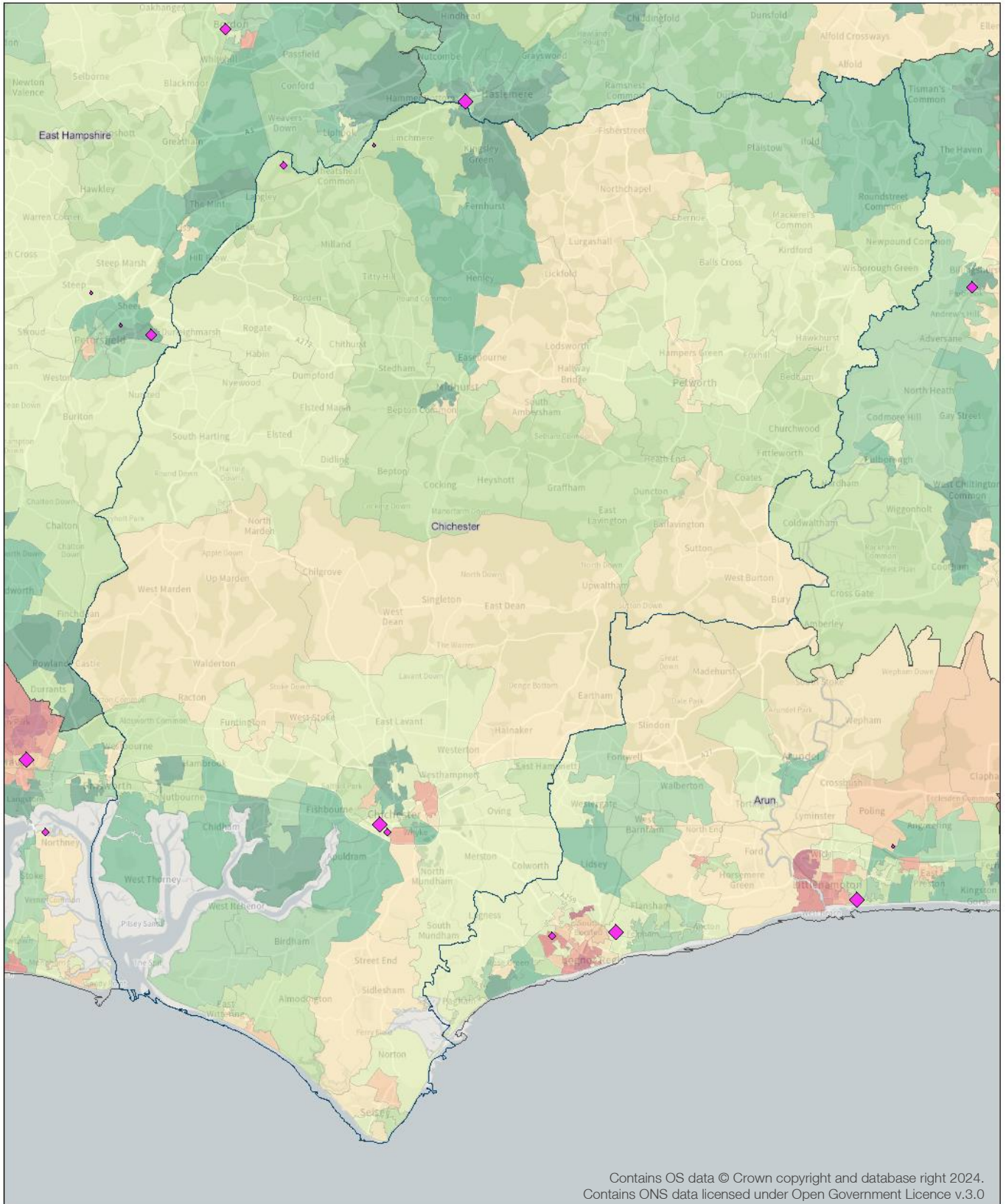


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### Map 3.2: Deprivation in 2019

Deprivation shown thematically (colours) at lower super output area level by decile.



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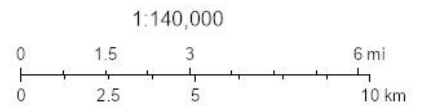
Swimming Pool Facilities (by capacity)

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- ◆ 4,274 - 8,418

Areas of Interest

Indices of Multiple Deprivation (IMD) 2019

- 10% Most Deprived
- 10% Least Deprived



## 4 Satisfied Demand

Demand from Chichester residents currently being met by supply

Satisfied Demand	Chichester	Arun	East Hampshire	Havant	Horsham	Waverley	South East Region	England
Number of visits met per week in peak period	6,334	9,447	7,439	7,459	8,850	7,796	564,322	3,419,316
% of total demand satisfied	81%	91%	93%	90%	92%	95%	92%	91%
Number of visits retained per week in peak period	4,140	8,163	5,144	5,978	7,195	6,522	552,938	3,417,079
Demand retained as a % of satisfied demand	65%	86%	69%	80%	81%	84%	98%	100%
Number of visits exported per week in peak period	2,194	1,284	2,295	1,481	1,655	1,274	11,383	2,237
Demand exported as a % of satisfied demand	35%	14%	31%	20%	19%	16%	2%	0%

**Definition of satisfied demand** – This represents the proportion of total demand that is met by the capacity at the swimming pools from Chichester residents who live within the driving, walking or public transport travel time of a swimming pool. This includes swimming pools located both within and outside Chichester.

### *Demand Met*

- 4.1 **Key finding 4** is that 81% of the demand for swimming pools from Chichester residents is met in 2023. This is lower than both the regional average of 92% and the England-wide average of 91%.
- 4.2 The proportion of satisfied demand in the neighbouring local authority areas is greater than in Chichester. Satisfied demand ranges from 90% in Havant to 95% in Waverley.
- 4.3 The model iteratively allocates demand to facilities using a set of distance decay functions and choice parameters. The model also considers the quality of a site based on its age and management, as supported by Sport England’s research. Increasingly, there are other factors that influence which swimming pools residents chose to use, such as other facilities being on the same site, for example, a gym or studio, ease of parking, or a swimming pool programme that provides activities at times when residents wish to participate.

### *Retained Demand*

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

- 4.4 Of Chichester’s satisfied demand, only 65% is met at swimming pools within the District. Chichester is partially reliant on its neighbouring local authorities to meet its demand.

### *Exported Demand*

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

- 4.5 **Key finding 5** is that 35% of Chichester’s satisfied demand is exported and met at swimming pools outside the District. This equates to 2,194 visits in the weekly peak period.
- 4.6 The data from the National FPM Run does not identify how much of Chichester’s demand goes to which other local authority area or swimming pool, but only provides the total figure for exported demand. The destination of exported demand could be identified in a bespoke FPM run.

### *Travel Patterns*

Accessibility	Chichester	Arun	East Hampshire	Havant	Horsham	Waverley	South East Region	England
% of population without access to a car	13%	16%	9%	18%	11%	10%	16%	23%
% of total population within a 20-minute walk of a pool	12%	21%	20%	18%	21%	30%	31%	37%
% of 10% most deprived population within a 20-minute walk from a pool	-	0%	-	2%	-	-	1%	4%
% of demand satisfied when travelled:								
by car	90%	85%	90%	85%	90%	86%	82%	75%
on foot	5%	8%	7%	7%	6%	10%	11%	14%
by public transport	5%	7%	3%	8%	4%	5%	7%	11%

**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 2. On average, a 20-minute travel time accounts for approximately 90% of journeys to swimming pools.

### *Car Access*

- 4.7 In Chichester only 13% of the population does not have access to a car. This is lower than the regional average of 16% and the England-wide average of 23%.

- 4.8 The percentage of the population without access to a car influences travel patterns to swimming pools. A low percentage means that there is likely to be a larger number of journeys to swimming pools by car. For residents without access to a car, travel to swimming pools by public transport and on foot become the choices of travel mode.
- 4.9 It is estimated that 90% of journeys to swimming pools by Chichester residents are by car. This is higher than the regional average of 82% and the national average of 75%, and reflects the rural nature of the District.

### *Walking Access*

- 4.10 **Key finding 6** is that only 12% of Chichester's residents are within a 20-minute walk of a swimming pool.
- 4.11 Residents southwest of the city centre can access the most swimming pools within a 20-minute walk because they are close to Westgate Leisure Centre and Nuffield Health (dark pink area in Map 4.1). Some residents on the border with Waverley are within a 20-minute walk of Haslemere Leisure Centre.
- 4.12 However, not all residents in these areas will walk to a swimming pool and some will travel further. It is estimated that 5% of all journeys to swimming pools are on foot.

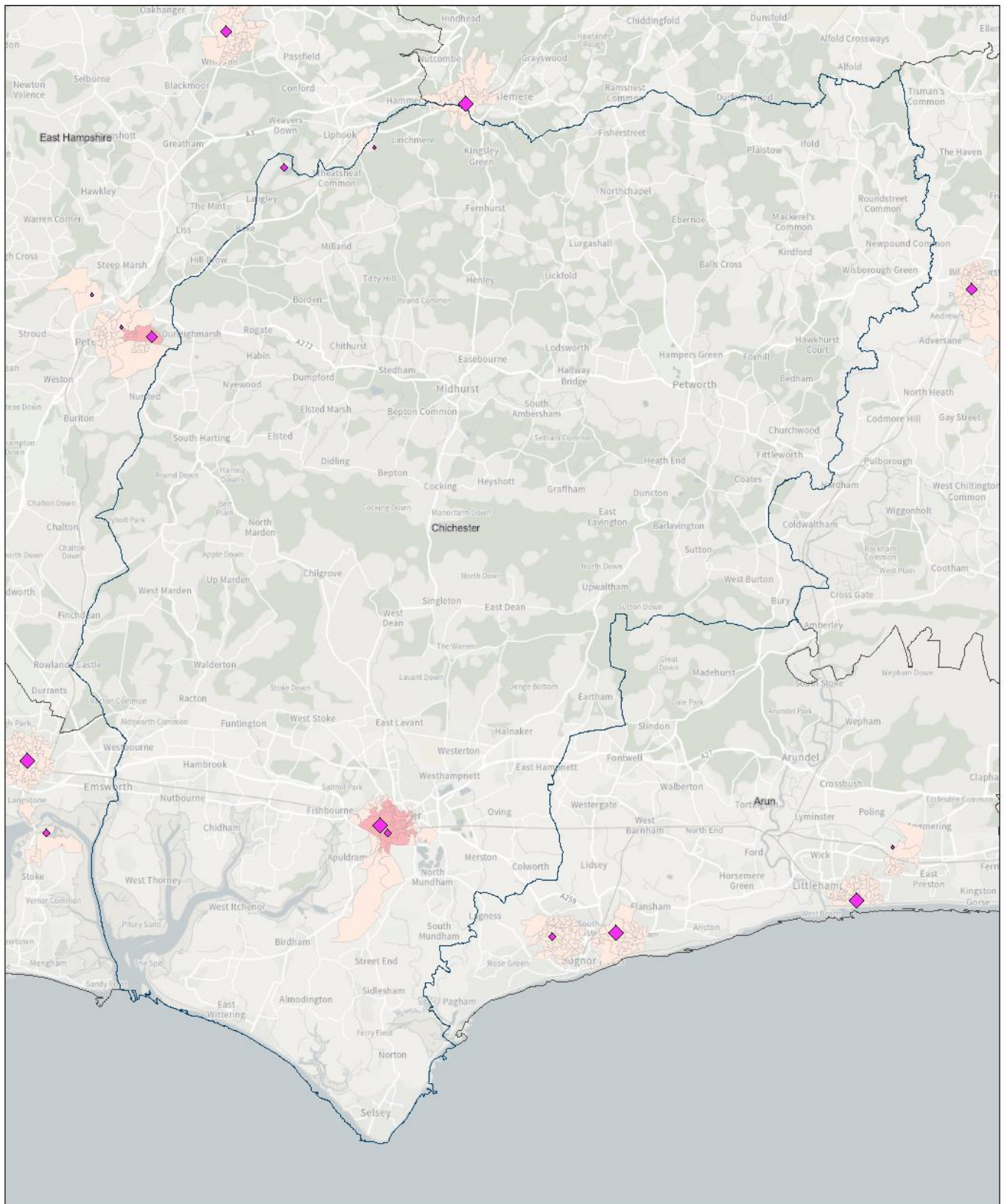
### *Public Transport Access*

- 4.13 Visits to swimming pools by public transport are estimated to account for only 5% of all journeys.



### Map 4.1: Walking Access to Swimming Pools in 2023

FPM coverage shown thematically (colours) at output area level expressed as the number of swimming pool sites within 20 minutes' walk of output area centroid.



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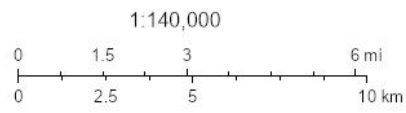
Swimming Pool Facilities (by capacity)  Areas of Interest

- 26 - 1,368
- ◆ 1,369 - 2,533
- ◆ 2,534 - 4,273
- ◆ 4,274 - 8,418

Level 1 (Local Authorities & Old Districts)

Facility Walk Times

- 1
- 2



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## 5 Unmet Demand

Demand from Chichester residents not currently being met

Unmet Demand	Chichester	Arun	East Hampshire	Havant	Horsham	Waverley	South East Region	England
Number of visits unmet per week in peak period	1,450	911	555	864	787	448	47,526	346,242
Unmet demand as a % of total demand	19%	9%	7%	10%	8%	5%	8%	9%
Equivalent in sqm of water with comfort factor included	238	150	91	142	129	74	7,815	56,936
% of 10% most deprived demand unmet	0%	1%	0%	1%	0%	0%	0%	1%
% of unmet demand due to:								
Facility too far away:	100%	99%	100%	100%	95%	97%	92%	88%
Without access to a car	41%	78%	64%	78%	60%	67%	68%	66%
With access to a car	59%	21%	36%	22%	35%	30%	24%	22%
Lack of facility capacity:	0%	1%	0%	0%	5%	3%	8%	12%
Without access to a car	0%	0%	0%	0%	2%	1%	5%	8%
With access to a car	0%	1%	0%	0%	4%	2%	3%	4%

**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 pools that it can use (taking into account deprivation) or reach (taking into account car access) and is then classified as unmet demand.

### *Causes of Unmet Demand*

- 5.1 Unmet demand accounts for 19% of demand and 1,450 visits in the weekly peak period.
- 5.2 **Key finding 7** is that unmet demand totals 238 sqm of water. All the unmet demand is from residents who are too far from a swimming pool and is not due to lack of capacity.
- 5.3 Demand located 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.
- 5.4 Of the unmet demand, 41% are residents who do not have access to a car.

- 5.5 The overall key point is not that unmet demand too far from a facility exists, but the scale of that unmet demand. Also, if this unmet demand is clustered in one location, further provision should be considered in order to improve accessibility for residents.

### *Geographical Distribution*

- 5.6 Unmet demand is widely spread across Chichester, but in low values per square kilometre.
- 5.7 The greatest density of unmet demand is in Selsey, at 11 sqm of water per square kilometre (dark orange square in Map 5.1). There is also unmet demand of 10 sqm of water and 9 sqm of water per square kilometre in the south and east of Selsey (dark orange and light orange squares).
- 5.8 The areas of next highest unmet demand per square kilometre are:
- Petworth, at 8 sqm of water (light orange square)
  - Bracklesham, at 6 sqm of water (dark yellow square)
  - East Wittering, at 5 sqm of water (light yellow square)
  - Midhurst, at 5 sqm of water and 4 sqm of water (light yellow squares)
- 5.9 The areas with the highest totals of unmet demand across seven square kilometres are:
- Selsey, at 36 sqm of water
  - Between West Wittering, and Bracklesham and Earnley, at 18 sqm of water
  - Around Midhurst, at 16 sqm of water across
  - Chichester city centre, at 13 sqm of water

### *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.

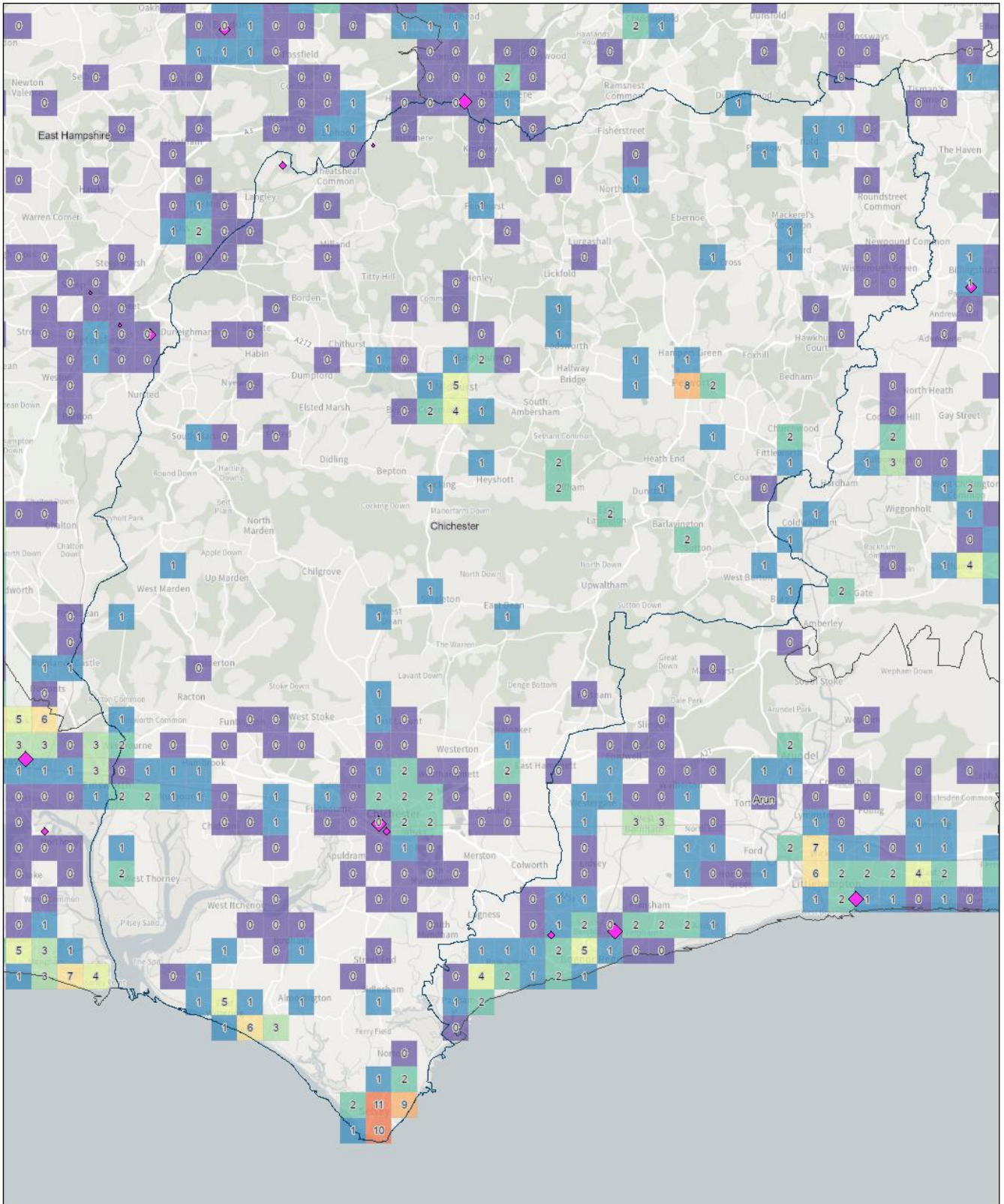
- 5.10 The location in Chichester where the most unmet demand can be met is in Stockbridge, south of Westgate Leisure Centre, at 63 sqm of water (light green square in Map 5.2). However, this amount is insufficient to consider building a new swimming pool at this location. It also includes unmet demand from Havant and Arun due to the road network. It does not cover future growth of demand, which would need to be considered separately in a bespoke report.

*For context, the minimum amount of reachable water space required to justify a new pool would be 160 sqm, which is a 20m x 8m four-lane pool.*



### Map 5.1: Unmet Demand for Swimming Pools in 2023

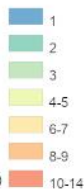
FPM unmet demand aggregated at 1km square grid expressed as water space and shown thematically (colours).



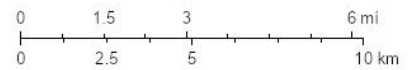
22/01/2024, 09:54:11

Swimming Pool Facilities (by capacity)

- ◆ 26 - 1,368
- ◆ 1,369 - 2,533
- ◆ 2,534 - 4,273
- ◆ 4,274 - 8,418
- Areas of Interest
- Level 1 (Local Authorities & Old Districts)
- Unmet (1km grid)
- <1



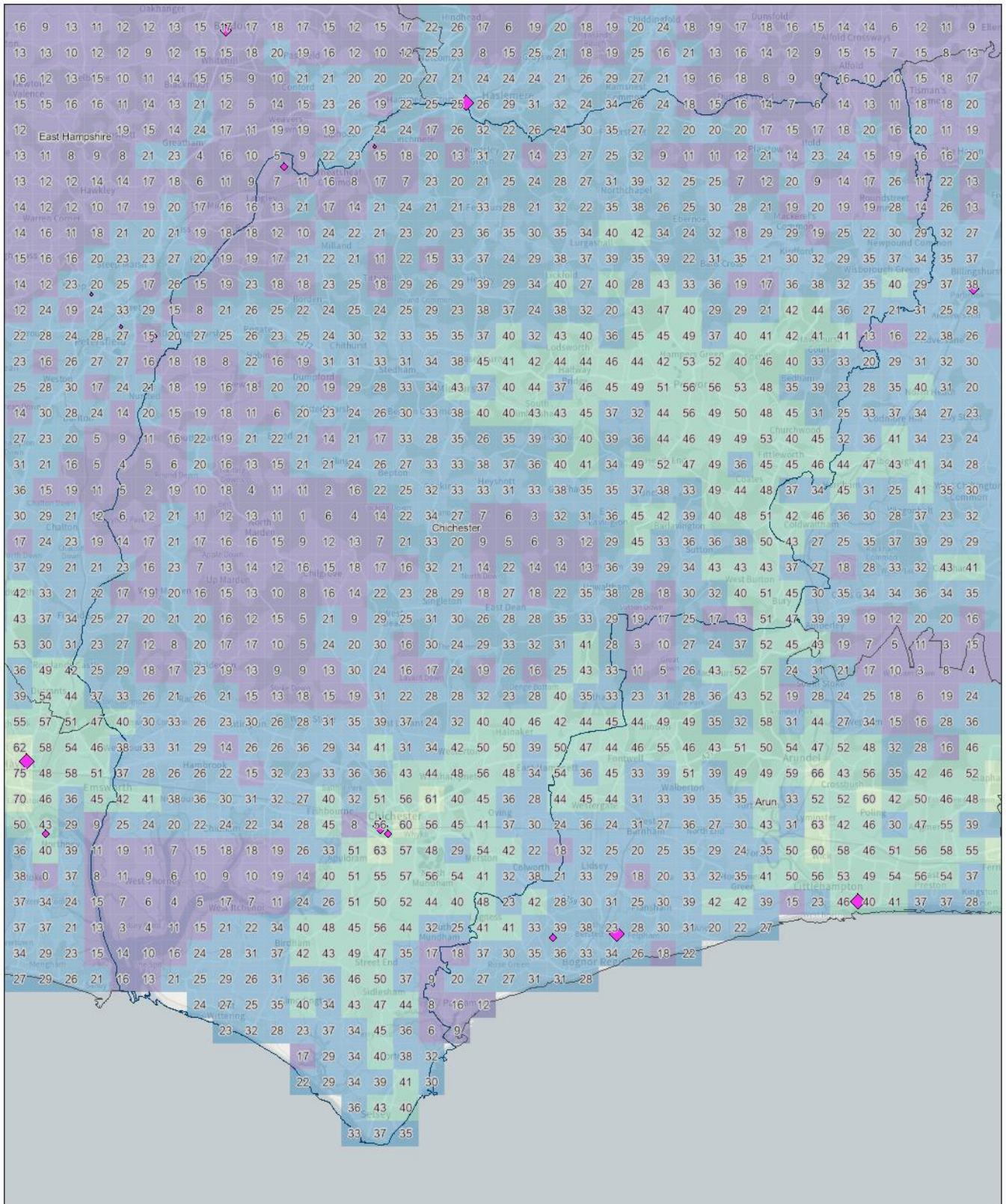
1:140,000





### Map 5.2: Reachable Unmet Demand for Swimming Pools

FPM reachable unmet demand aggregated at 1km square grid expressed as water space (figure labels) and shown thematically (colours).



22/01/2024, 09:49:37

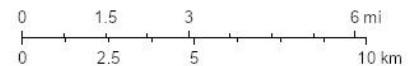
Swimming Pool Facilities (by capacity)  Level 1 (Local Authorities & Old Districts)

- 26 - 1,368
- ◆ 1,369 - 2,533
- ◆ 2,534 - 4,273
- ◆ 4,274 - 8,418
- Areas of Interest

Reachable Unmet (1km grid)

- 0-19
- 20-39
- 40-59
- 60-79

1:140,000



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## 6 Used Capacity

How well used are the facilities?

Used Capacity	Chichester	Arun	East Hampshire	Havant	Horsham	Waverley	South East Region	England
Number of visits used of capacity per week in peak period	5,112	8,735	5,739	8,559	8,078	9,842	573,805	3,419,163
% of overall capacity of pools used	54%	70%	44%	73%	78%	50%	64%	67%

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

### *District Used Capacity*

- 6.1 The overall estimated used capacity of swimming pools in Chichester during the weekly peak period is 54%. This is much lower than the regional and national proportions of 64% and 67% respectively. However, there is wide variation in the used capacity of the neighbouring local authority areas, ranging from 44% in East Hampshire to 77% in Horsham.
- 6.2 Chichester’s swimming pools meet a total of 5,112 visits in the weekly peak period.

*Used Capacity of Swimming Pools in Chichester (2023)*

Site	Operation	Year Built	Year Refurb	Peak Hours	Total Hours	Site Capacity (visits per week in peak period)	% of Capacity Used	Visits Met in Weekly Peak Period
Champneys Forest Mere	Commercial	1997		52.5	107.5	2,188	6%	121
Highfield and Brookham Schools	Educational	2004		27.5	27.5	733	34%	250
Nuffield Health	Commercial	2003		52.5	98.5	2,100	69%	1,444
Westgate Leisure Centre	Public	1987	2005	48.0	84.4	4,431	74%	3,297

### *Site Used Capacity*

- 6.3 The estimated utilisation of the swimming pool sites at peak times in Chichester ranges from 6% to 74%.
- 6.4 Variation in the estimated used capacity of sites is primarily caused by the interaction of the following factors (more detail is provided in the subsequent paragraphs):
- Type of site operator (public/commercial/educational)
  - Scale and capacity
  - Location in relation to demand and competition from other sites
  - Age of the facility and its 'attractiveness' weighting
  - Imported demand

### **Westgate Leisure Centre**

- 6.5 **Key finding 8** is that Westgate Leisure Centre is estimated to be the most utilised site, at 74% of capacity used at peak times. It also meets the most visits, at 3,297 in the weekly peak period, and accounts for 64% of the visits met in the District.
- 6.6 As a public leisure centre, Westgate Leisure Centre has a higher used capacity than the offer sites because of its 'draw effect', as it:
- Is accessible for public use and sports club use
  - Has extensive opening hours and is proactively managed to encourage and support participation and physical activity
  - Unlike commercial facilities, does not require payment of a monthly membership fee
  - Provides all the activities and has the only learner pool in the District
- 6.7 Nuffield Health is close to Westgate Leisure Centre, therefore, the demand that can reach both sites is shared between the venues. However, as a commercial site, Nuffield Health is not accessible to all residents and, therefore, Westgate Leisure Centre will meet more visits. Also, both sites are close to the area of highest demand in Chichester.
- 6.8 In the FPM usage of more than 70% of capacity is busy and the swimming pool is considered to be operating at an uncomfortable level above that percentage. Westgate Leisure Centre is not available for community use for the full peak period. The opening hours of both pools at the site could be extended by 4.5 hours in weekly peak period. This would increase the capacity of the site at peak times and reduce the used capacity to a more comfortable 68%.
- 6.9 This finding should be reviewed with the facility operator.



### **Nuffield Health**

- 6.10 Nuffield Health is estimated to be 69% utilised at peak times and meets the second highest number of visits in the weekly peak period, at 1,444.
- 6.11 Commercial sites provide recreational participation through membership. The centres are not available for public pay-and-play or for club development. Therefore, they offer a more limited programme of use than public leisure centres and are less utilised. Nuffield Health does operate a learn to swim school for the membership.
- 6.12 Nuffield Health is the second highest used facility because it is close to the area of greatest demand, and deprivation in Chichester is low.
- 6.13 To assess their comparative attractiveness to customers, all swimming pools in the model are weighted to reflect their age, condition 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.
- 6.14 Nuffield Health is the second newest swimming pool in the District and, therefore, has a high attractiveness. Westgate Leisure Centre was refurbished two years after Nuffield Health was built, but Westgate Leisure Centre's attractiveness is lower because it was built in 1987.

### **Champneys Forest Mere**

- 6.15 Champneys Forest Mere is estimated to be only 6% utilised in the weekly peak period.
- 6.16 It is a commercial venue in an area of very low demand. It has the second lowest attractiveness in Chichester because it was built in 1997 and has not been refurbished.
- 6.17 It is important to consider the scale of the swimming pool site when looking at estimated used capacity and not just the percentage figure in isolation. Champneys Forest Mere has the second largest capacity in the District, however, meets the fewest visits at 121 in the weekly peak period.

### **Highfield and Brookham Schools**

- 6.18 Highfield and Brookham Schools swimming pool has low utilisation at 34%. It also only meets 250 visits in the weekly peak period.
- 6.19 The facility is located in an area of very low demand.
- 6.20 It is available for 27.5 hours of community use in the weekly peak period. The hours available for community use will influence the estimated used capacity of swimming pools. A swimming pool on an educational site that is only available for a few hours a week and with an irregular pattern of use is very different from a public leisure centre with a full programme of use. Highfield and Brookham Schools swimming pool is available for community use for the fewest hours in the weekly peak period and has the smallest capacity.

6.21 Educational venues are not available to the public for recreational pay-and-swim. Access to swimming pools for community use is determined by the policy of each educational provider:

- Some schools and colleges actively promote community use
- At some venues there is little differentiation between educational and wider community use, with community access based on a membership system (classed as commercial)
- Other educational venues hire out their swimming pools to sports clubs or community groups on a termly basis, or for shorter periods

### *Imported Demand*

Imported Demand	Chichester	Arun	East Hampshire	Havant	Horsham	Waverley	South East Region	England
Number of visits imported per week in peak period	972	572	595	2,580	883	3,320	20,867	2,084
As a % of used capacity	19%	7%	10%	30%	11%	34%	4%	0%
Difference between visits imported and exported	-1,221	-711	-1,700	1,100	-772	2,046	9,484	-153

**Definition of imported demand** – If residents of neighbouring local authority areas participate at a site in Chichester, their usage becomes part of the used capacity of Chichester’s swimming pools.

6.22 Imported demand accounts for 19% of used capacity in the District. Chichester’s swimming pools cater for 972 visits in the weekly peak period from residents of neighbouring local authorities.

6.23 **Key finding 9** is that Chichester exports 1,221 more visits than it imports in the weekly peak period.

6.24 Of the neighbouring local authorities, only Havant and Waverley import more visits than they export.

## 7 Local Share of Facilities

Equity share of facilities

Local Share	Chichester	Arun	East Hampshire	Havant	Horsham	Waverley	South East Region	England
Local share of swimming pools relative to demand in local area: <1 = poorer, >1 = better	0.95	1.07	1.79	0.81	1.00	1.41	1.06	0.98

**Definition of local share** – This helps to show which areas have a better or worse share of facility provision. It considers the size, availability and quality of facilities, as well as 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, divided by the demand for that capacity in the area (considering deprivation). Local share decreases as facilities age.

### *Share of Supply*

- 7.1 Local share shows how access and share of swimming pools differs across the local authority area, as follows:
- A value of 1 means that there is enough 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
- 7.2 Overall, local share identifies the areas of the 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.
- 7.3 **Key finding 10** is that Chichester has a local share value of 0.95, meaning that there is not quite sufficient suitable provision to meet demand.
- 7.4 The geographical distribution of local share varies across the District (see Map 7.1).
- 7.5 Local share is very good in the northwest of the District at over 2.0 (purple squares), where demand is low but located close to Champneys Forest Mere and Highfield and Brookham Schools, as well as swimming pools just over the border in East Hampshire and Waverley. Local share is good in the northeast of the District, at more than 1.0 (green squares).
- 7.6 Local share in the A27 corridor area of Chichester is mainly between 0.7 and 0.9 (light orange squares), which means that there is insufficient suitable supply to meet demand.

- 7.7 Local share is poorest in small areas in the east of District at between 0.1 and 0.3 (red squares),. Demand is very low in these areas, but their remoteness makes it difficult to reach swimming pools via the road network.
- 7.8 Local share is poor in the south of the District, along the coast, at 0.4 and 0.5 (dark orange squares). Demand is higher in this area and cannot reach enough suitable provision.

### *Comparative Measure of Provision*

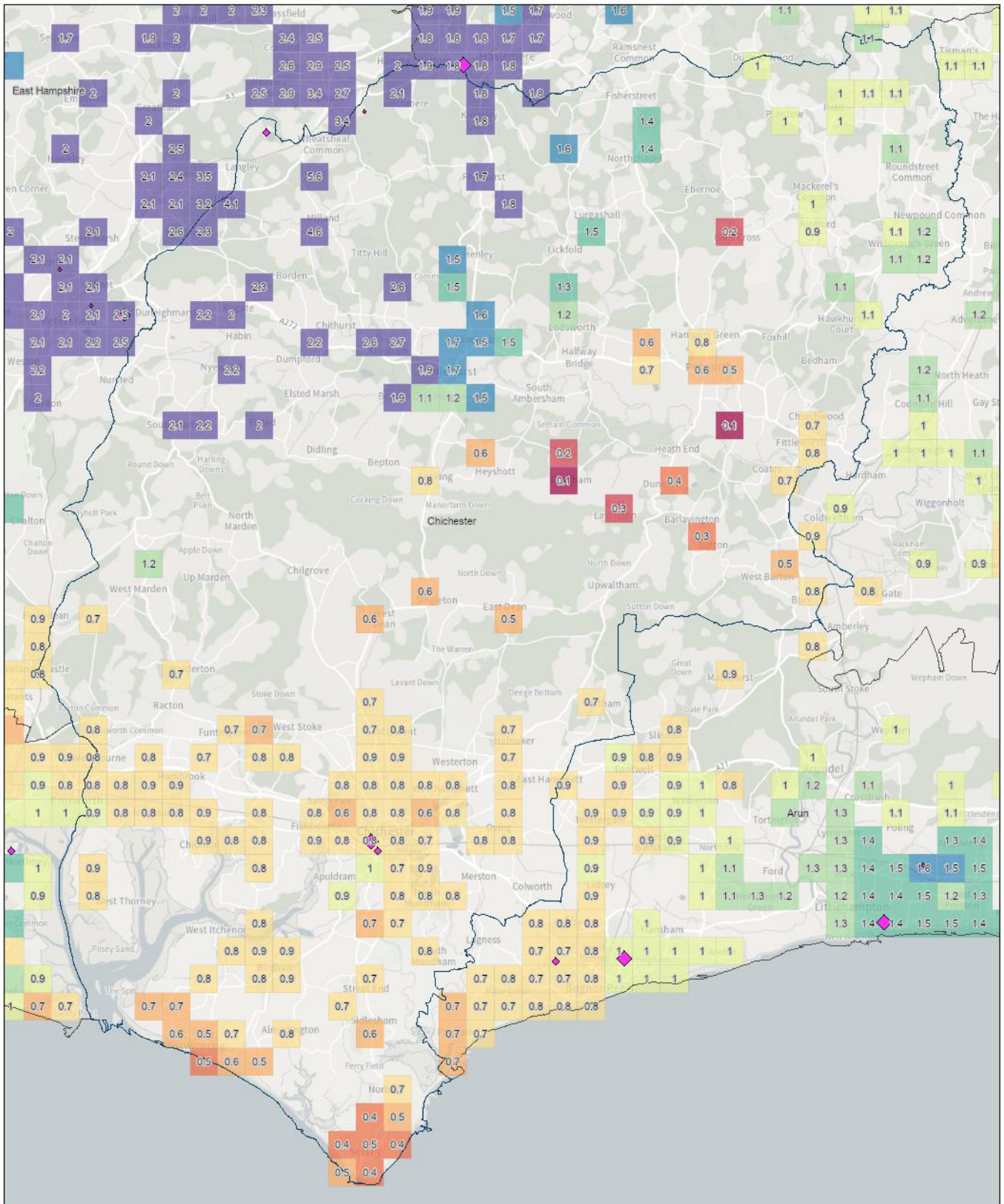
Share	Chichester	Arun	East Hampshire	Havant	Horsham	Waverley	South East Region	England
Water space per 1,000 population	10	9	14	11	11	23	13	12

- 7.9 A comparative measure of swimming pool provision is water space per 1,000 population.
- 7.10 **Key finding 11** is that Chichester has 10 sqm of water per 1,000 population. This is the second lowest in the study area. It is lower than the regional average of 13 sqm of water and the national average of 12 sqm of water.
- 7.11 Of the neighbouring local authorities, Waverley has the highest level of provision per 1,000 population at 23 sqm of water, and Arun has the lowest at 9 sqm of water.
- 7.12 **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.**
- 7.13 The supply and demand assessment for swimming pools in Chichester is based on the findings from the previous five headings analysed in this report.



### Map 7.1: Local Share of Swimming Pools in 2023

FPM share of water space divided by demand aggregated at 1km square and shown thematically (colours).



08/02/2024, 09:42:35

Swimming Pool Facilities (by capacity)

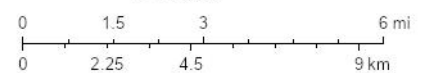
- 26 - 1,368
- ◆ 1,369 - 2,533
- ◆ 2,534 - 4,273
- ◆ 4,274 - 8,418
- Areas of Interest

Level 1 (Local Authorities & Old Districts)

- Local Share
- <0.2
  - 0.2-0.3
  - 0.4-0.5
  - 0.6-0.7

- 0.8-0.9
- 1.0-1.1
- 1.2-1.3
- 1.4-1.5
- 1.6-1.7
- ≥1.8

1:130,000



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## 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
Birdham C of E Primary School	Lido	Outdoor
<i>Bury C of E Primary School</i>	<i>Lido</i>	<i>Closed</i>
Champneys Forest Mere	Lido	Outdoor
Chichester Park Hotel Leisure Club	Learner	Principal pool too small
Dorset House School	Lido	Private use
<i>Easebourne C of E Primary School (closed)</i>	<i>Lido</i>	<i>Closed</i>
East Wittering Community Primary School	Lido	Outdoor
Fittleworth C of E Village School	Lido	Outdoor
Fordwater School	Learner	Private use
Great Ballard School	Lido	Outdoor
<i>Lavant House (closed)</i>	<i>Lido</i>	<i>Closed</i>
Littlegreen Academy	Lido	Outdoor
<i>Midhurst C of E Primary School</i>	<i>Lido</i>	<i>Closed</i>
Northchapel Community Primary School	Lido	Outdoor
Oakwood School	Main	Private use
Rake C of E Primary School	Lido	Private use
<i>Rogate C of E Primary School</i>	<i>Lido</i>	<i>Closed</i>
Seaford College	Leisure	Private use
Spread Eagle Spa	Leisure	Principal pool too small
St Anthony's School	Learner	Principal pool too small
Tangmere Primary Academy	Lido	Outdoor
<i>The Academy Selsey</i>	<i>Lido</i>	Outdoor
The Goodwood Hotel and Health Club	Learner	Principal pool too small
<i>The Prebendal School</i>	<i>Lido</i>	<i>Closed</i>
West Dean C of E Primary School	Lido	Outdoor
Westbourne House Boarding School	Main	Private use
Westbourne Primary School	Lido	Outdoor
<i>Westgate Leisure Chichester</i>	<i>Leisure</i>	<i>Closed</i>
Wisborough Green Primary School	Lido	Outdoor

## Appendix 2: 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 sports halls, swimming pools, indoor bowls centres and artificial grass pitches.

#### 2. Use of FPM

- 2.1. Sport England uses the FPM as one of its principal tools in helping to assess the strategic need for certain community sports facilities. The FPM has been developed as a means of:
  - Assessing requirements for different types of community sports facilities on a local, regional, or 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 needs for sports facilities.
- 2.2. Its current use is limited to those sports facility types for which Sport England holds substantial demand data, i.e., swimming pools, sports halls, indoor bowls, and artificial grass pitches (AGPs).
- 2.3. 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 number of facilities (supply) within an area against the demand for that facility (demand) that the local population will produce, similar to other social gravity models.
- 3.3. To do this, the FPM works by converting both demand (in terms of people) and supply (facilities) into a single comparable unit. This unit is 'visits per week in the peak period' (VPWPP). 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, the age and gender of users, how often they visit, the distance travelled, duration of stay, and on the facilities themselves, such as, programming, peak times of use, and capacity of facilities.
- 3.5. This survey information is combined with other sources of data 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 formed the basis for the National Benchmarking Service (NBS). 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 NBS 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 about 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
    - This is a centre-based survey whose primary purpose is to enable centres to benchmark themselves against other centres. Sample interviews are conducted on site. The number of people surveyed varies by year depending on how many centres take part. Approximately 10,000 swimmers and 3,500 sports hall users are surveyed per year. This data is used for journey



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

- Scottish Health
  - The annual survey is of about 6,600 people (just under 5,000 adults). This data is primarily used to assess participation, frequency, and activity duration.

Other data is used where available. For example, the following data sources are among those which 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 & Social Care Information Centre, Lifestyle Statistics, 2012
- Young People and Sport, Sport England, 2002
- Data from Angus Council, 2013/14
- National Pools & Halls Survey, 1996
  - This survey has been 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 population<sup>1</sup>. This produces the number of visits for that facility that will be demanded by the population.
- 4.2. Depending on the age and gender make-up of the population, this will affect the number of visits an area will generate. In order to reflect the different population make-up of the country, the FPM calculates demand based on the smallest census groupings. These are Output Areas (OAs)<sup>2</sup>.
- 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 information. Each OA used is given a demand value in VPWPP by the FPM.

#### **5. Calculating Supply Capacity**

- 5.1. A facility's capacity varies depending on its size (i.e., size of pool or hall, or number of pitches), and how many hours the facility is available for use by the community.
- 5.2. The FPM calculates a facility's capacity by applying each of the capacity factors taken from the model parameters, such as the assumptions made as to how many 'visits' can be accommodated by the particular facility at any one time. Each facility is then given a capacity figure in VPWPP.

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<sup>1</sup> 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.

<sup>2</sup> Census Output Areas (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 171,300 OAs in England. An OA has a target value of 125 households per OA.

- 5.3. Based on travel time information<sup>3</sup> taken from the user survey, the FPM then calculates how much demand would be met by the particular facility, having regard to its capacity and how much demand is within the facility's catchment. 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 location 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 had a total demand for 5 facilities, and there were currently 6 facilities within the area, it would be too simplistic to conclude that there was an oversupply of 1 facility as this approach would not take account of whether the 5 facilities are in the correct location for local people to use them within that area. It might be that all the facilities were 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 an adjoining authority.

## **6. Calculating the Capacity of Sports Halls – Hall Space in Courts (HSC)**

- 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 VPWPP. In order for this capacity to be meaningful, these visits are converted into the equivalent of main hall courts and referred to as 'Hall Space in Courts' (HSC). This 'court' figure is often mistakenly read as being the same as the number of 'marked courts' at the sports halls that are 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 HSC is the 'court' equivalent of all the main and activity halls capacities; this is calculated based on hall size (area) and whether it is the main hall or a secondary (activity) hall. This gives a more accurate reflection of the overall capacity of the halls than simply using the 'marked courts' figure. This is due to two reasons:
- In calculating the capacity of halls, the model uses a different 'At-One-Time' (AOT) parameter for main halls and for activity halls. Activity halls have a greater AOT capacity than main halls – see below. Marked courts can sometimes not properly reflect the size of the actual main hall. For example, a hall may be marked out with 4 courts, when it has

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<sup>3</sup> To reflect the fact that as distance to a facility increases, fewer visits are made, the FPM uses a travel time distance decay curve, where the majority of users travel up to 20 minutes. The FPM also takes account of the road network when calculating travel times. Car ownership levels, taken from census data, are also taken into account when calculating how people will travel to facilities.

space for 3 courts. As the model uses the 'courts' as a unit of size, it is important that the hall's capacity is included as a '3-court unit' rather than a '4-court unit'.

- The model calculates the capacity of the sports hall as 'visits per week in the peak period' (VPWPP), and then uses this unit of capacity to compare with demand, which is also calculated as VPWPP. It is often difficult to visualise how much hall space there is when expressed as VPWPP. To make things more meaningful, this capacity in VPWPP is converted back into 'main hall court equivalents' and is noted in the output table 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 hall and pool modelling, and a similar approach for AGPs is being developed.

7.2. Attractiveness weightings are based on the following:

- Age/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, the 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 around 1920 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, in general, these halls will not provide as balanced a programme than 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 & 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 weightings curves are used for education and non-education halls, a high weighted curve, and a lower weighted curve.

- High weighted curve – includes non-education management and a better balanced programme, more attractive.
- Lower weighted curve – includes educational owned and managed halls, less attractive.

7.4. Commercial facilities – halls and pools: Whilst there are relatively few sports halls provided by the commercial sector, an additional weighing factor is incorporated within the model to reflect the cost element often associated with commercial facilities. For each population

output area 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 (LSOAs) in England. IMD is an overall relative measure of deprivation constructed by combining seven domains of deprivation according to their relative weights.

## **8. Comfort Factor – Halls and Pools**

- 8.1. As part of the modelling process, each facility is given a maximum number of visits it can accommodate based on its size, the number of hours it is available for community use, and the 'at one time capacity' figure (pools = 1 user/6m<sup>2</sup>, halls = 8 users/court). This gives each facility a 'theoretical capacity'.
- 8.2. If the facilities were full to their theoretical capacity, then 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.
- 8.3. 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 being the limit where a facility starts to become uncomfortably busy. (Currently, the comfort factor is not applied to AGPs due to the fact they are predominantly used by teams which have a set number of players, therefore the notion of having a 'less busy' pitch is not applicable.)
- 8.4. The comfort factor is used in two ways:
- Utilised capacity – How well used is a facility? 'Utilised capacity' figures for facilities are often seen as being very low at 50-60%; however, this needs to be put into context with 70-80% comfort factor levels for pools and halls. The closer utilised capacity gets to the comfort factor level, the busier the facilities are becoming. You should not aim to have facilities operating at 100% of their theoretical capacity, as this would mean that every session throughout the peak period would be being used to its maximum capacity. This would be both unrealistic in operational terms and unattractive to users.
  - Adequately meeting unmet demand – the comfort factor is also used to increase the number of facilities 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 noted previously.

## **9. Utilised Capacity (Used Capacity)**

- 9.1. Following on from the comfort factor section, here is more guidance on utilised capacity.



- 9.2. Utilised capacity refers to how much of a facility’s theoretical capacity is being used. This can, at first, appear to be unrealistically low, with area 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. This, in practice, 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.
- 9.3. For example, a 25m, four-lane pool has a theoretical capacity of 2,260 per week, during a 52.5-hour peak period.
- 9.4. As set out in the table below, 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 7pm and 8pm and lane swimming between 8 and 9pm. Other sessions will be quieter, such as between 9 and 10pm. 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 utilised capacity for the evening would be 54%.

Visits per hour	4-5pm	5-6pm	6-7pm	7-8pm	8-9pm	9-10pm	Total visits for the evening
Theoretical maximum capacity	44	44	44	44	44	44	264
Actual usage	8	30	35	50	15	5	143

- 9.5. As a guide, 70% utilised capacity is used to indicate that pools are becoming busy, and this is 80% for sports halls. This should be seen only as a guide to help flag when facilities are becoming busier, rather than as a ‘hard threshold.’

## 10. Travel Times

- 10.1. The model uses travel times to define facility coverage in terms of driving and walking.
- 10.2. Ordnance Survey’s (OS) MasterMap Highways Network Roads was used to calculate the off-peak drive times between facilities and the population, observing any one-way and turn restrictions which apply and taking account of delays at junctions and car parking. Each street in the network is assigned a speed for car travel based on the attributes of the road, such as the width of the road, the geographical location of the road, and the density of properties along the street. These travel times have been derived through national survey work, and so are based on actual travel patterns of users. The road speeds used for inner and outer London Boroughs have been further enhanced by data from the Department of Transport.
- 10.3. OS MasterMap Highways Network Paths is 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.

10.4. The model includes three different modes of travel – car, public transport, and walking. Car access is also considered. In areas of lower access to a car, the model reduces the number of visits made by car and increases those made on foot.

10.5. Overall, surveys have shown that the majority of visits made to swimming pools, sports halls and AGPs are made by car, with a significant minority of visits to pools and sports halls being made on foot.

Facility	Car	Walking	Public Transport
Swimming Pool	72%	18%	10%
Sports Hall	74%	17%	9%
AGP			
Combined	79%	18%	3%
Football	74%	22%	4%
Hockey	97%	2%	1%

10.6. 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 catchments for sports halls and swimming pools.

Minutes	Swimming Pools		Sport Halls	
	Car	Walk	Car	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%

10.7. 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	Artificial Grass Pitches					
	Combined		Football		Hockey	
	Car	Walk	Car	Walk	Car	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.

### *Facility Inclusion Criteria*

#### **Swimming Pools**

The following inclusion criteria were used for this analysis;

- Include all operational indoor pools available for community use i.e. pay and play, membership, sports club/community association.
- Exclude all pools not available for community use i.e. private use.
- Exclude all outdoor pools i.e. 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 has been included based on similar facility types.
- Where the year built is missing assume date 1975<sup>4</sup>.

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

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<sup>4</sup> Choosing a date in the mid '70s ensures that the facility is included, whilst 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	<p>Car: 20 minutes  Walking: 1.6 km  Public transport: 20 minutes at about half the speed of a car</p> <p>NOTE: Travel times are indicative, within the context of a distance decay function of the model.</p>																					
Duration	60 minutes for tanks and leisure pools																					
Percentage Participation	<table border="1"> <thead> <tr> <th>Age</th> <th>0 - 15</th> <th>16 - 24</th> <th>25 - 39</th> <th>40 - 59</th> <th>60-79</th> <th>80+</th> </tr> </thead> <tbody> <tr> <td>Male</td> <td>14.5</td> <td>6.9</td> <td>10.4</td> <td>8.6</td> <td>5.4</td> <td>1.6</td> </tr> <tr> <td>Female</td> <td>16.2</td> <td>10.2</td> <td>13.8</td> <td>11.8</td> <td>7.7</td> <td>1.5</td> </tr> </tbody> </table>	Age	0 - 15	16 - 24	25 - 39	40 - 59	60-79	80+	Male	14.5	6.9	10.4	8.6	5.4	1.6	Female	16.2	10.2	13.8	11.8	7.7	1.5
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Peak Period	<p>Weekday: 09:00 to 10:00, 12:00 to 13:00, 15:30 to 21:00  Weekend: 08:00 to 15:30  Total: 52.5 Hours</p>																					
Proportion in Peak Period	63%																					