

Facilities Planning Model Assessment of
Swimming Pool Provision for
Southend-on-Sea City Council

Bespoke Report

8 June 2026

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EXECUTIVE SUMMARY

Introduction

- 0.1 Southend-on-Sea City Council (also referred to as Southend-on-Sea, or the City) is reviewing its current provision of swimming pools and assessing future demand and level of provision required to 2045.
- 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 2026
 - Run 2 – forward assessment of demand for swimming pools and its distribution, based on the projected changes in population between 2026 and 2045, and including 9,800 dwellings identified in the Local Plan to 2045
 - Run 3 – forward assessment of demand for swimming pools and its distribution, based on the projected changes in population between 2026 and 2045, and including a further 14,700 dwellings identified in the Local Plan to 2045 (high growth scenario)
- 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, 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 nearly all of Southend-on-Sea's demand modelled in the three different scenarios can be met by the available supply. There is a substantial increase in demand for swimming pools in Run 3 (high growth scenario). Most demand is met within the City across all runs, and unmet demand is low.
- 0.7 Southend Leisure and Tennis Centre is estimated to be completely full in all three runs. Belfairs Swim Centre is uncomfortably full (more than 70% utilised) at peak times in Runs 2 and 3.

Key Findings

- 0.8 The key findings that underpin the headline strategic overview are as follows:
1. In all three runs, the total water space in Southend-on-Sea is 1,649 sqm of water and the available water space in the weekly peak period is 1,628 sqm of water. Therefore, 1% of the water space is unavailable.

2. The public leisure centres provide 66% of the available capacity in all three runs. Southend Leisure and Tennis Centre has a capacity almost double that of Belfairs Swim Centre.
3. Southend-on Sea's population is projected to increase by 4% between Run 1 and Run 2, and by 10% between Run 1 and Run 3. Demand is projected to be unchanged in Run 2 when compared with Run 1, and to increase by 6% in Run 3 when compared with Run 2.
4. Southend-on-Sea's demand is the equivalent of 85% of its available supply in Runs 1 and 2, and 90% in Run 3.
5. In all three runs, 93% of Southend-on-Sea's demand is met. The number of visits met in the weekly peak period is 11,332 visits in Run 1, 11,221 visits in Run 2, and is highest in Run 3 at 11,920 visits due to the increase in demand.
6. A large proportion of Southend-on-Sea's satisfied demand is met within the City at 84% in Runs 1 and 3, and 85% in Run 2.
7. Unmet demand in Southend-on-Sea equates to 130 sqm of water in Run 1, 143 sqm of water in Run 2, and 157 sqm of water in Run 3. Unmet demand too far from a facility is 99% of unmet demand in Run 1, 95% in Run 2, and 90% in Run 3. Unmet demand from lack of capacity is 1 sqm of water in Run 1, 7 sqm of water in Run 2, and 16 sqm of water in Run 3.
8. The estimated overall used capacity of Southend-on-Sea's swimming pools in the weekly peak period is 80% in Run 1, 81% in Run 2, and 84% in Run 3. However, Southend Leisure and Tennis Centre is estimated to be completely full at peak times in all runs. Belfairs Swim Centre is uncomfortably full at peak times in Runs 2 and 3, and Shoeburyness Leisure Centre is uncomfortably full in Run 3.

Interventions and Next Steps

- 0.9 The assessment has identified that the projected 4% increase in the population of Southend-on-Sea in Run 2 does not generate an increase in demand for swimming. However, the 10% population increase in Run 3 compared to Run 1 (high growth scenario) projects a 6% increase in demand.
- 0.10 The two interventions needed to meet this increase in demand are to increase availability and capacity to accommodate more demand at the following sites:
- Belfairs Swim Centre – Availability for the main pool can be increased by three hours at peak times, and for the teaching pool by six hours if there is sufficient demand for learn to swim.
 - Southend Leisure and Tennis Centre – Review the programme of use and level of utilisation for the diving pool. This 20m x 17m pool provides 41% of the water space at the Centre. Depending on the diving programme, there may be scope to programme other activities and accommodate more demand. This does depend on the depth of the pool being suitable and safe for other activities.

- 0.11 These interventions are limited in the scope they provide for meeting the projected increase in demand. One consideration could therefore be to increase swimming pool provision, with the objective of creating more capacity and reducing pool utilisation to a comfortable level. This is not, however, recommended for the following reasons:
- Unmet demand is very low at 157 sqm of water in Run 3, of which 16 sqm of water is due to lack of capacity.
 - The location where the most unmet demand can be met is Southend city centre and equates to 85 sqm of water. This amount of unmet demand is insufficient to consider providing a new swimming pool to meet unmet demand. (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.)
 - There is capacity at David Lloyd to accommodate more demand. This site is 55% utilised at peak times in Run 3. At present David Lloyd provides 21% of the available capacity at peak times in all runs. The centre has a 25m x 12m pool and a small 10m x 3m teaching pool. While it can accommodate more demand, access is only available through membership.
 - Increasing pool provision will attract more imported demand into Southend-on-Sea, particularly from Rochford. In Run 3, 16% of the used capacity of the City's pools at peak times is imported, and Rochford accounts for 81% of Southend-on-Sea's imported demand.
- 0.12 The swimming pool stock is ageing. In Runs 2 and 3 the average age of all the sites will be 54 years, and for the public leisure centres 48 years. Southend Leisure and Tennis Centre is the most recent site to open, although this was in 2010. Belfairs Swim Centre opened in 1985 and is unmodernised.
- 0.13 The rise in demand will increase the costs of maintaining the centres. It is essential they are refurbished to improve the offer, ensure demand can continue to be met and is retained in Southend-on-Sea.
- 0.14 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 the Southend-on-Sea Built Facilities Strategy. 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 2045 and beyond.

Contents

1	Introduction	1
2	Swimming Pool Supply	4
3	Demand for Swimming Pools	10
4	Accessibility	20
5	Satisfied Demand for Swimming Pools	25
6	Unmet Demand for Swimming Pools	31
7	Used Capacity of Facilities.....	39
8	Local Share of Facilities	48
	Appendix 1: Facilities Excluded	54
	Appendix 2: Facilities in Neighbouring Local Authority Areas Included in the Assessment	55
	Appendix 3: Model Description, Inclusion Criteria and Model Parameters	56

1 INTRODUCTION

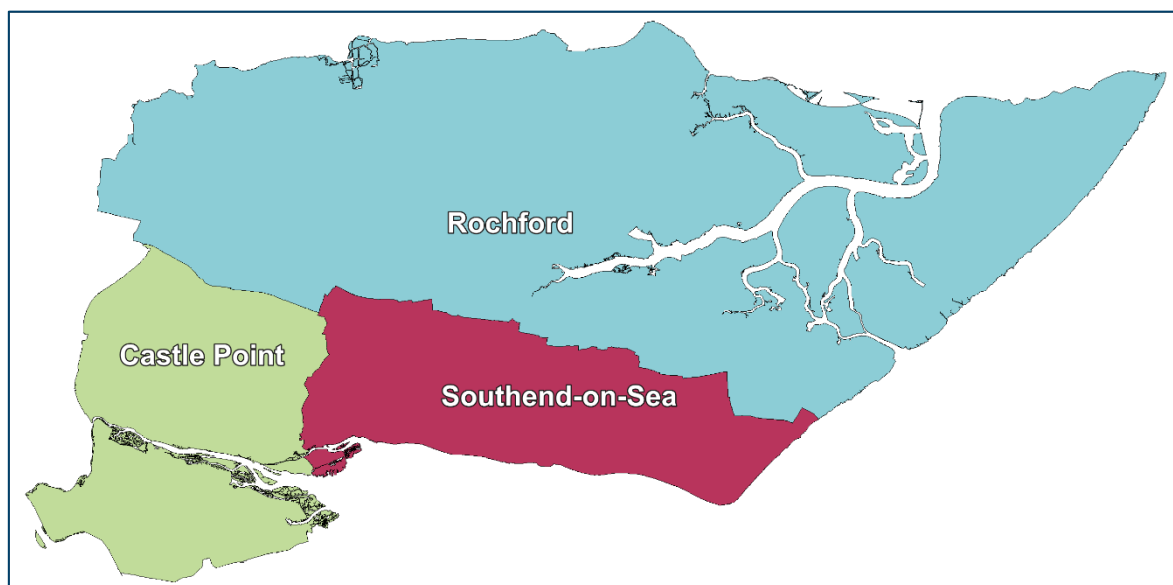
- 1.1 Southend-on-Sea City Council (also referred to as Southend-on-Sea or the City) is reviewing its current provision of swimming pools and assessing the future provision required to 2045.
- 1.2 This report has been prepared based on an assessment using the Sport England Facilities Planning Model (FPM) 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 Southend-on-Sea City Council are to understand the following:
- How well the supply of swimming pools meets demand in 2026 and 2045
 - The impacts that population change and residential development have in meeting the demand for swimming pools and its distribution up to 2045
- 1.4 The outputs from the FPM assessment will:
- Inform Southend-on-Sea City Council's strategic planning review of swimming pools provision and update the Council's Built Facilities Strategy
 - Inform an evidence base that contributes to the development of planning policy for the provision of indoor sports facilities
 - Provide an assessment of need that contributes to the inward investment strategy for 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 Southend-on-Sea 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 Southend-on-Sea, it is important to take full account of the swimming pools and population in the neighbouring local authority areas. The most attractive facility for some Southend-on-Sea residents may be outside the City (known as exported demand). For residents of neighbouring local authorities, their most attractive swimming pool may be inside Southend-on-Sea (known as imported demand).
- 1.10 To take account of these factors, a study area is established that places Southend-on-Sea at its centre and includes the neighbouring local authority areas.

Map 1.1: Study Area for Southend-on-Sea Swimming Pools Assessment



Report Structure, Content and Sequence

- 1.11 The findings for the Southend-on-Sea assessment are set out in a series of tables for all runs. This allows a 'read across' to see the specific impact of changes between Runs 1 and 3 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 included in 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 nine swimming pools across four sites in Southend-on-Sea. Three sites have two pools, and Southend Leisure and Tennis Centre has three pools. There are three teaching pools.

There are three different providers. Two sites are public leisure centres, there is one educational site and one commercial site.

The pools at three sites are available for the maximum 52.5 hours in the weekly peak period. There is no scope to increase availability and capacity at peak times at these sites. There is some scope to increase availability and capacity at Belfair's Swim Centre.

The oldest swimming pool is at Shoeburyness Leisure Centre, which opened in 1967 and was refurbished in 2012. The oldest unmodernised swimming pool is Belfairs Swim Centre, which opened in 1985.

Table 2.1: Supply of Swimming Pools in Southend-on-Sea by Run

Supply	Run 1	Run 2	Run 3
Southend-on-Sea	2026	2045	2045
Number of pools	9	9	9
Number of pool sites	4	4	4
Total water space in sqm	1,649	1,649	1,649
Available sqm of water in weekly peak period	1,628	1,628	1,628
Unavailable supply in the weekly peak period	1%	1%	1%
Supply in visits per week in peak period	14,249	14,249	14,249
Average age of all of sites	35	54	54
Average age of public leisure centres	29	48	48

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 all three modelling runs, there are nine swimming pools across four sites in Southend-on-Sea that are available for community use in the weekly peak period. The facilities excluded from the modelling are listed in Appendix 1.

Table 2.2: Details of Swimming Pools in Southend-on-Sea Included in the Runs

Site	Provider	Facility Type	Dimensions (m)	Area (sqm)	Year Built	Year Refurb	Peak Hours	Total Hours	Capacity (visits in weekly peak period)
Belfairs Swim Centre	Public	4-lane Teaching	25 x 8 10 x 8	200 80	1985		49.5 46.5	84 72.5	2,270
Southend Leisure and Tennis Centre	Public	8-lane Leisure Diving	25 x 16 10 x 8 20 x 17	400 80 340	2010		52.5 52.5 52.5	102 102 102	7,175
Shoeburyness Leisure Centre	Educational (3rd party)	4-lane Teaching	20 x 7 10 x 7	140 70	1967	2012	52.5 52.5	85 85	1,838
David Lloyd	Commercial	Main Teaching	25 x 12 13 x 3	300 39	2005	2016	52.5 52.5	109.3 109.3	2,966

Providers

- 2.2 In Southend-on-Sea there are two public leisure centres available to all residents, which provide all the following swimming activities:
- Learn to swim
 - Casual recreational swimming
 - Lane and fitness swimming activities
 - Swimming development through clubs
 - Fun and family-based activities (leisure pool at Southend Leisure and Tennis Centre)
 - Diving (at Southend Leisure and Tennis Centre)
- 2.3 **Shoeburyness Leisure Centre** is a dual-use facility attached to Shoeburyness High School. The site is managed by Freedom Leisure in partnership with Southend-on-Sea City Council.
- 2.4 There is one commercial site (David Lloyd). Commercial swimming pools are membership-based and provide recreational swimming. The centre also operates a learn to swim school for children aged up to 16 years as well as adult classes, ranging from beginner to advanced Master Swim sessions.

Scale

- 2.5 **Key finding 1** is that, in all three runs, the total water space in Southend-on-Sea is 1,649 sqm of water, and the available water space in the weekly peak period is 1,628 sqm of water. Therefore, 1% of the water space is unavailable.
- 2.6 Southend Leisure and Tennis Centre is the largest site in Southend-on-Sea and is the only site with three pools (an eight-lane 25m x 16m pool, a 10m x 8m leisure pool and a 20m x 17m diving pool). This site provides all swimming activities, and the main pool is suitable for club development and gala events.
- 2.7 Belfairs Swim Centre has a four-lane 25m x 8m main pool and a 10m x 8m teaching pool. The scale of the main pool means that it can likely provide for only one activity at a time.
- 2.8 Shoeburyness Leisure Centre is the smallest swimming pool site in the City. It has a main pool of 20m x 7m and a 10m x 7m teaching pool.
- 2.9 David Lloyd is the second largest main pool in the City, with dimensions of 25m x 12m. David Lloyd's teaching pool is the smallest in the City, at 13m x 3m.

Availability

- 2.10 The only scope to increase availability and capacity at peak times is at Belfairs Swim Centre. Availability and capacity can be increased by three hours in the weekly peak period for the main pool, and six hours for the teaching pool, as long as there is sufficient demand for learn to swim.

- 2.11 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>.
- 2.12 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.
- 2.13 This could be useful in the case of Shoeburyness Leisure Centre. However, as the centre is a dual-use site operated by Freedom Leisure and not by the school, it may be less applicable.

Capacity

- 2.14 **Key finding 2** is that the public leisure centres provide 66% of the available capacity in all three runs. The capacity at Southend Leisure and Tennis Centre is almost double that of Belfairs Swim Centre.
- 2.15 Southend Leisure and Tennis Centre's available capacity is 4,200 visits in the weekly peak period. By comparison, Belfairs Swim Centre has a capacity of 2,270 visits in the weekly peak period.
- 2.16 Shoeburyness Leisure Centre provides 13% of the available capacity. As it has the least amount of water space, it has the smallest capacity at 1,838 visits in the weekly peak period.
- 2.17 David Lloyd provides 21% of the available capacity. This is the second largest capacity in the City at 2,966 visits in the weekly peak period.

Age

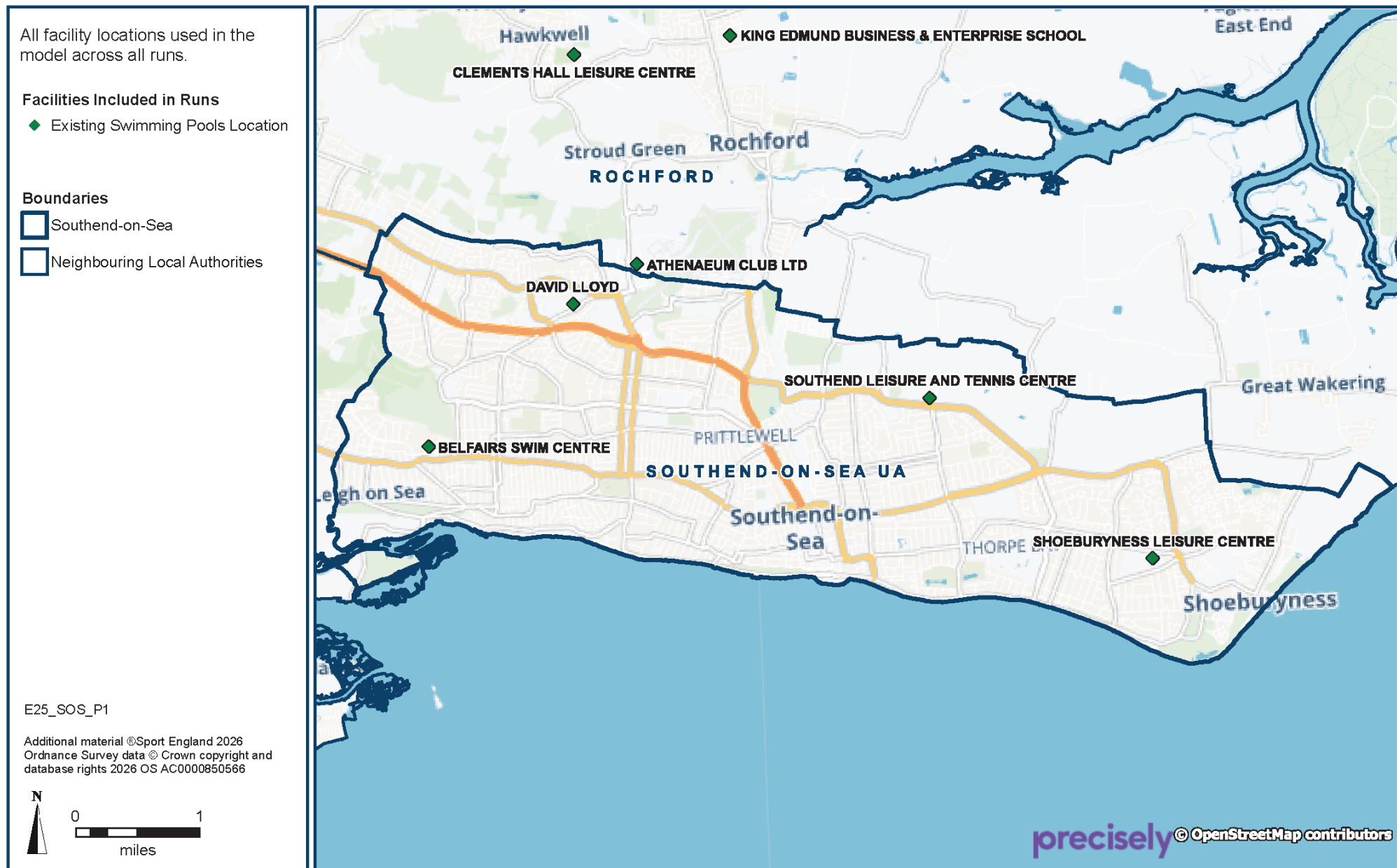
- 2.18 The stock of swimming pools in Southend-on-Sea is ageing. The average age of all the swimming pool sites is 35 years in Run 1, and 54 years in Runs 2 and 3. The public leisure centres are slightly newer, with an average age of 29 years in Run 1 and 48 years in Runs 2 and 3.
- 2.19 The oldest swimming pool is at Shoeburyness Leisure Centre, which opened in 1967 and was refurbished in 2012.
- 2.20 Southend Leisure and Tennis Centre is the most recent site to open, albeit in 2010. It is the most attractive site to residents.
- 2.21 The oldest unmodernised swimming pool is Belfairs Swim Centre, which opened in 1985.

Swimming Pool Locations

- 2.22 Southend Leisure and Tennis Centre is located on the eastern edge of the town centre (see Map 2.1).

- 2.23 Belfairs Swim Centre and David Lloyd are located in the west of the City, and Shoeburyness Leisure Centre in the east.
- 2.24 Athenaeum Club is located in Rochford but is very close to the border with Southend-on-Sea. This is a commercial site and has a single pool with dimensions of 26m x 12.5m.

Map 2.1: Location of Swimming Pools Across All Runs (2026 and 2045)



3 DEMAND FOR SWIMMING POOLS

The population of Southend-on-Sea increases by 4% between Run 1 and Run 2, and by 10% between Run 1 and Run 3. There is a 6% increase in demand in Run 3 compared with Run 2.

Demand in Southend-on-Sea is less than its available supply in all three runs.

Demand is greatest in Southend-on-Sea city centre in all three runs.

In Run 3 demand increases most in North Shoebury.

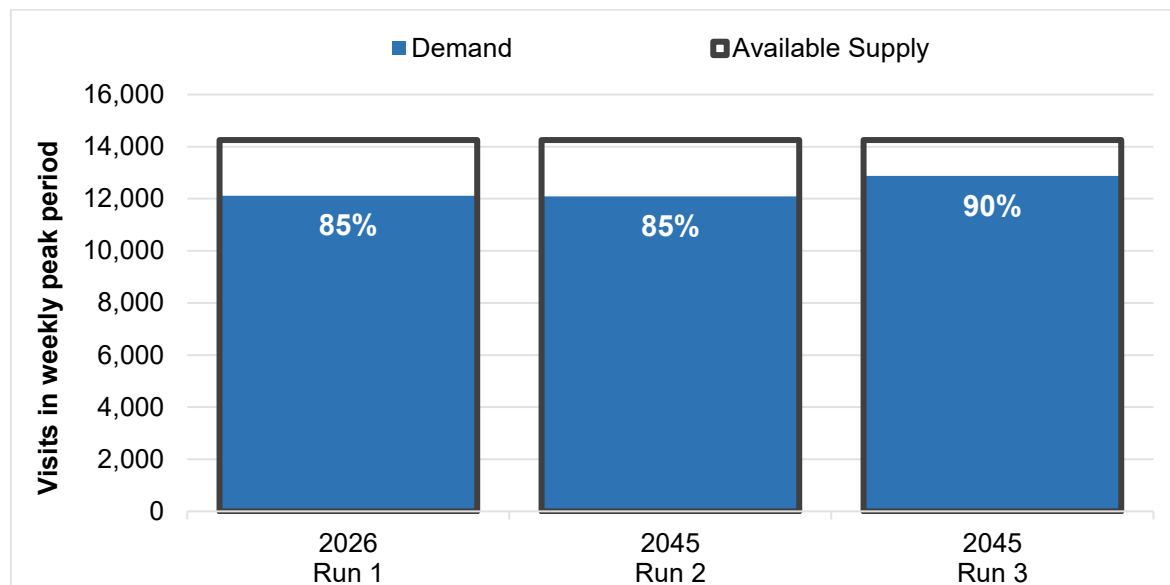
Table 3.1: Demand for Swimming Pools in Southend-on-Sea by Run

Demand	Run 1	Run 2	Run 3
Southend-on-Sea	2026	2045	2045
Resident population	183,181	190,528	202,020
Visits demanded in weekly peak period	12,121	12,092	12,877
Demand in sqm of water with comfort factor included	1,993	1,988	2,118
% of demand in the 10% most deprived LSOAs nationally	10%	13%	12%

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. Southend-on-Sea City Council provided its population forecast for Runs 2 and 3. The geographical distribution of the population in the FPM for Runs 2 and 3 include housing growth sites provided by the City Council, and are shown on Maps 3.1 and 3.2 respectively.
- 3.2 **Key finding 3** is that the population of Southend-on Sea is projected to increase by 4% between Run 1 and Run 2, and by 10% between Run 1 and Run 3. Demand is projected to be unchanged in Run 2 compared with Run 1, and to increase by 6% in Run 3 compared with Run 2.
- 3.3 The smaller increase in demand compared with the population growth is due to the ageing of the population in Southend-on-Sea between Run 1 and Runs 2 and 3. There will be fewer residents in the age bands with the highest swimming participation (0-15 year olds and 25-39 year olds) in Runs 2 and 3 than in Run 1. 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).

Chart 3.1: Demand as a Proportion of Available Supply in Southend-on-Sea by Run



- 3.4 **Key finding 4** is that Southend-on-Sea's demand is the equivalent of 85% of its available supply in Runs 1 and 2, and 90% in Run 3.

Demand in the Study Area

Table 3.2: Demand for Swimming Pools by Area and Run

Demand in sqm of Water Considering a 'Comfort' Factor	Run 1	Run 2	Run 3	Difference Run 1 to Run 2		Difference Run 2 to Run 3	
Area	2026	2045	2045	Sqm of Water	%	Sqm of Water	%
Southend-on-Sea	1,993	1,988	2,118	5	0%	129	6%
Castle Point	965	978	978	13	1%	0	0%
Rochford	964	1,030	1,030	66	7%	0	0%

- 3.5 Southend-on-Sea has the most demand in the study area in all three runs. In all three runs, the City's demand is roughly equivalent to the combined demand of Castle Point and Rochford.
- 3.6 Based on the ONS projection, the increase in demand in the neighbouring local authority areas between Run 1 and Run 2 is 1% for Castle Point and 7% for Rochford. There is no change in the demand in the neighbouring local authority areas between Run 2 and Run 3.

Geographical Distribution of Demand

Run 1

- 3.7 In Run 1 demand is greatest in the following areas across four square kilometres (see Map 3.3):
- Southend city centre – 261 sqm of water
 - Thorpe Bay – 245 sqm of water
 - Leigh-on-Sea – 184 sqm of water (Belfairs Swim Centre is located in this area)
 - Eastwood – 126 sqm of water (David Lloyd is located in this area)
 - Shoeburyness – 106 sqm of water (Shoeburyness Leisure Centre is located in this area)
- 3.8 Outside of these areas demand is mainly between ten and 19 sqm of water per square kilometre (dark blue squares).
- 3.9 Demand is lowest in the northeast of the City at 24 sqm of water across four square kilometres (some of this demand is shared with Rochford). Southend Leisure and Tennis Centre is located in this area.

Run 2

- 3.10 In Run 2 demand across Southend-on-Sea increases by 5 sqm of water. Run 2 includes 9,800 dwellings included in the Local Plan.
- 3.11 The changes in demand are (see Map 3.4):
- Southend city centre – increases by 1 sqm of water to 262 sqm of water
 - Thorpe Bay – increases by 11 sqm of water to 256 sqm of water
 - Leigh-on-Sea – decreases by 12 sqm of water to 172 sqm of water
 - Eastwood – decreases by 10 sqm of water to 116 sqm of water
 - Shoeburyness – increases by 2 sqm of water to 108 sqm of water
- 3.12 Demand in the northeast of the City decreases by 2 sqm of water to 22 sqm of water.

Run 3

- 3.13 In Run 3 demand across Southend-on-Sea increases by a further 129 sqm of water when compared with Run 2. This run includes a further 14,700 dwellings identified in the Local Plan.
- 3.14 Demand increases most in North Shoebury by 36 sqm of water to 59 sqm of water across two square kilometres between Run 2 and Run 3 (see Map 3.5).
- 3.15 The changes in demand in Run 3 when compared with Run 2 in other areas are as follows:

- Southend city centre – increases by 1 sqm of water to 263 sqm of water
- Thorpe Bay – increases by 3 sqm of water to 259 sqm of water
- Leigh-on-Sea – increases by 1 sqm of water to 173 sqm of water
- Eastwood – unchanged
- Shoeburyness – unchanged

3.16 Outside of these areas demand remains mainly between ten to 19 sqm of water per square kilometre.

Deprivation

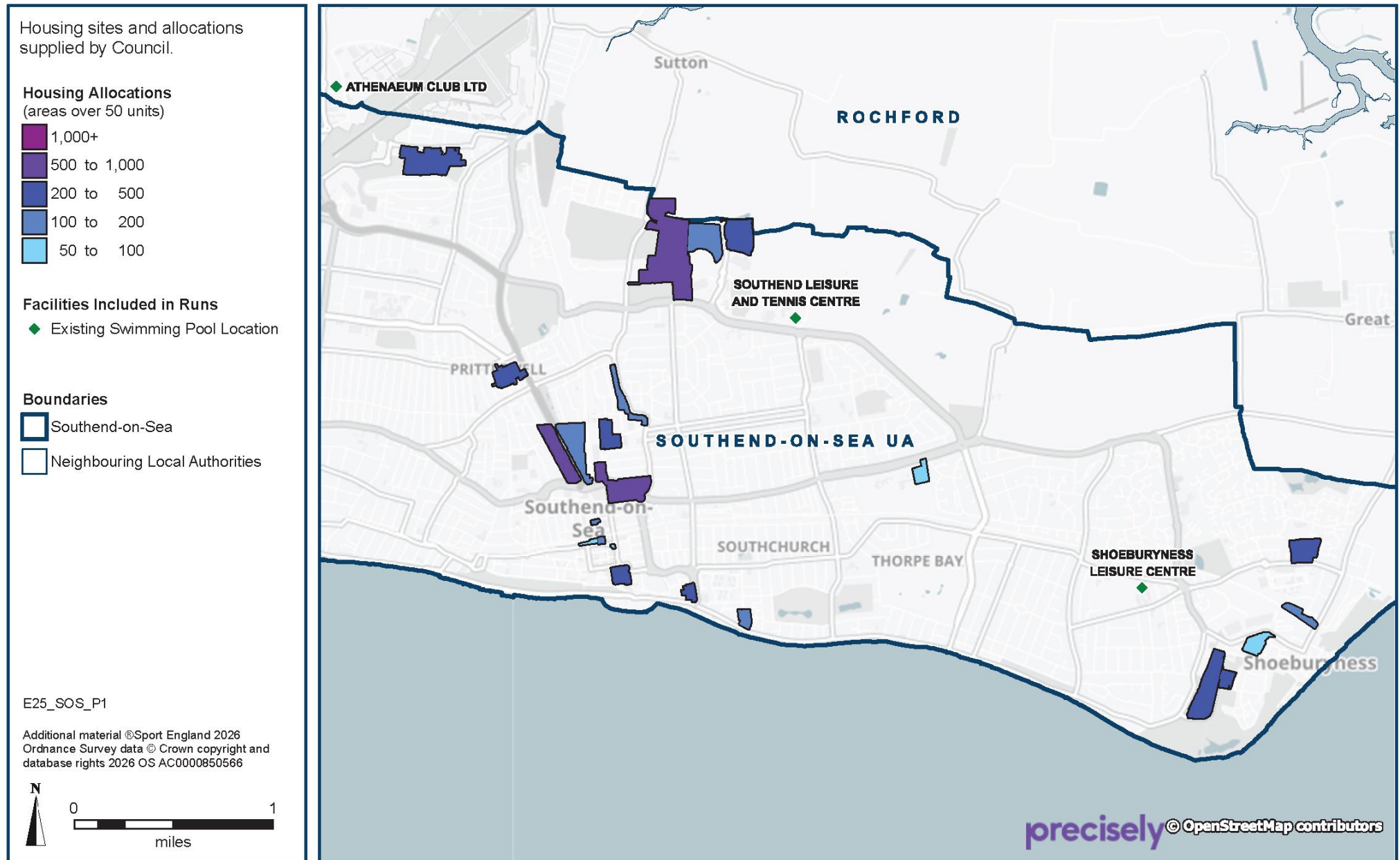
3.17 Of Southend-on-Sea's demand, 10% is in the 10% most-deprived lower super output areas (LSOAs) nationally in Run 1, increasing to 13% in Run 2 under population scenario 1, and to 12% in Run 3 under population scenario 2.

3.18 There are no swimming pools in the areas of highest deprivation (dark brown areas in Map 3.6). These areas are:

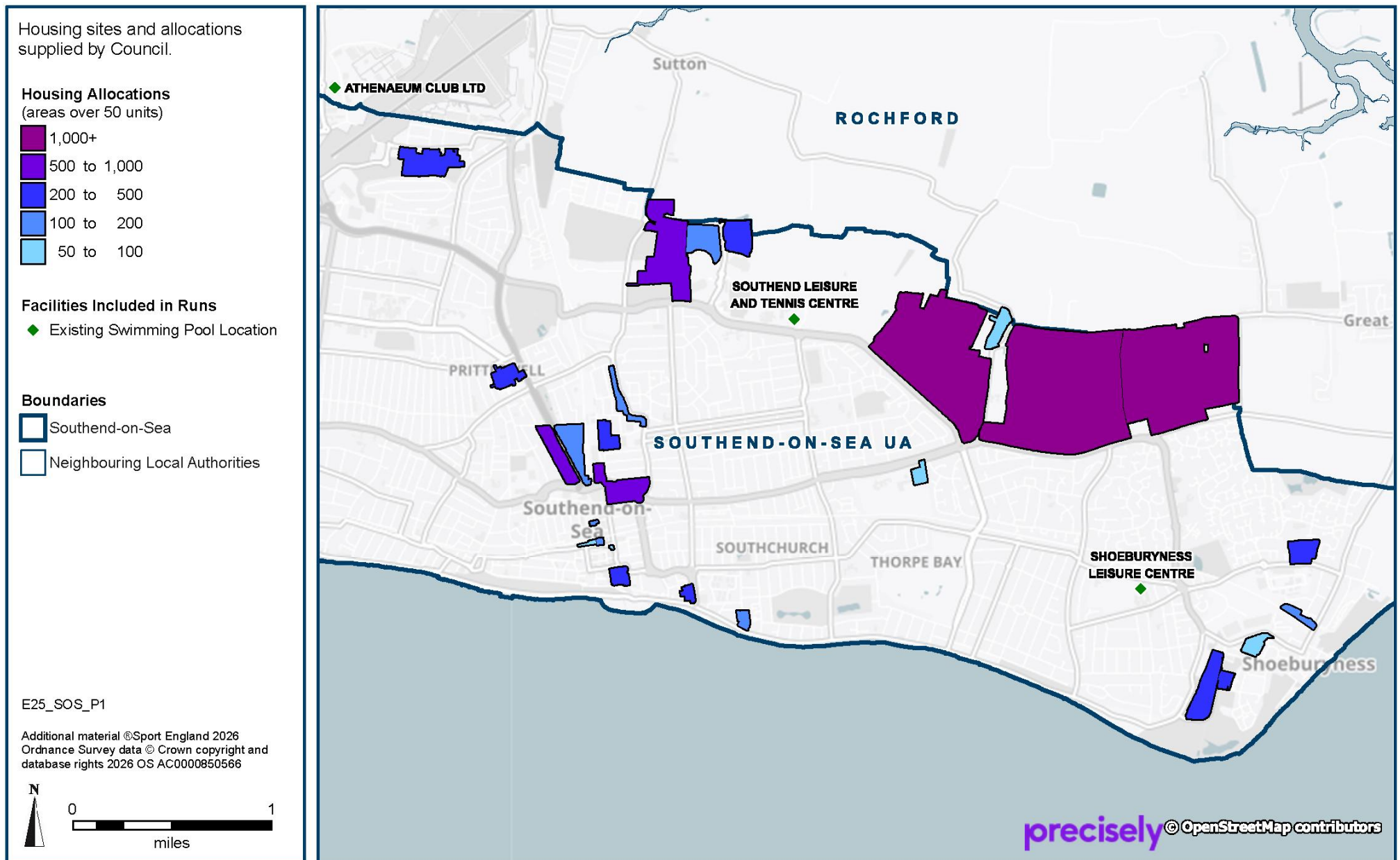
- Southend Airport bordering Rochford
- North Shoebury, southeast of Southend Sports and Tennis Centre
- Southchurch
- Shoeburyness, west and northeast of Shoeburyness Leisure Centre

3.19 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.

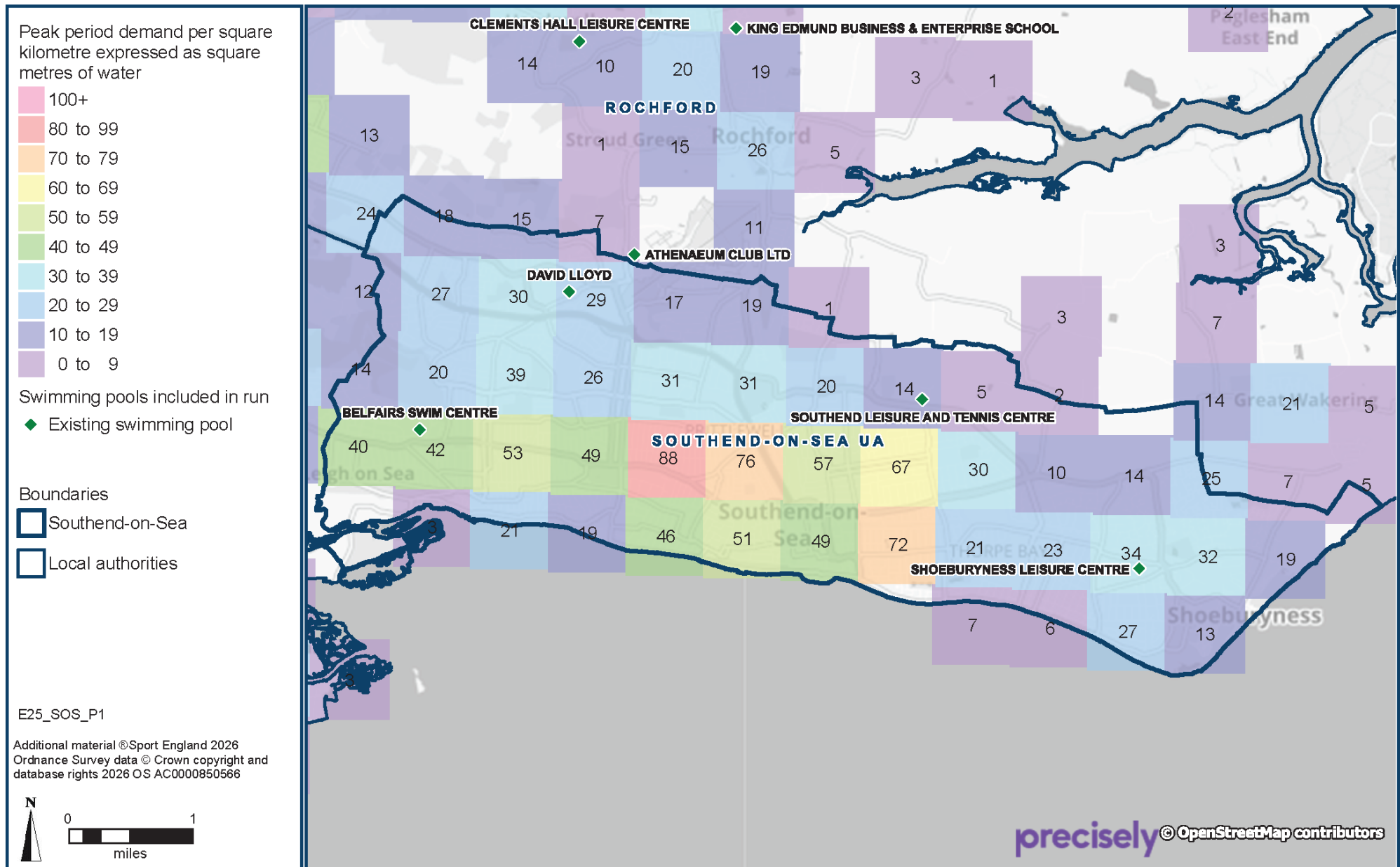
Map 3.1: Housing Growth Areas in Southend-on-Sea to 2045 (Run 2 – Low Growth Scenario)



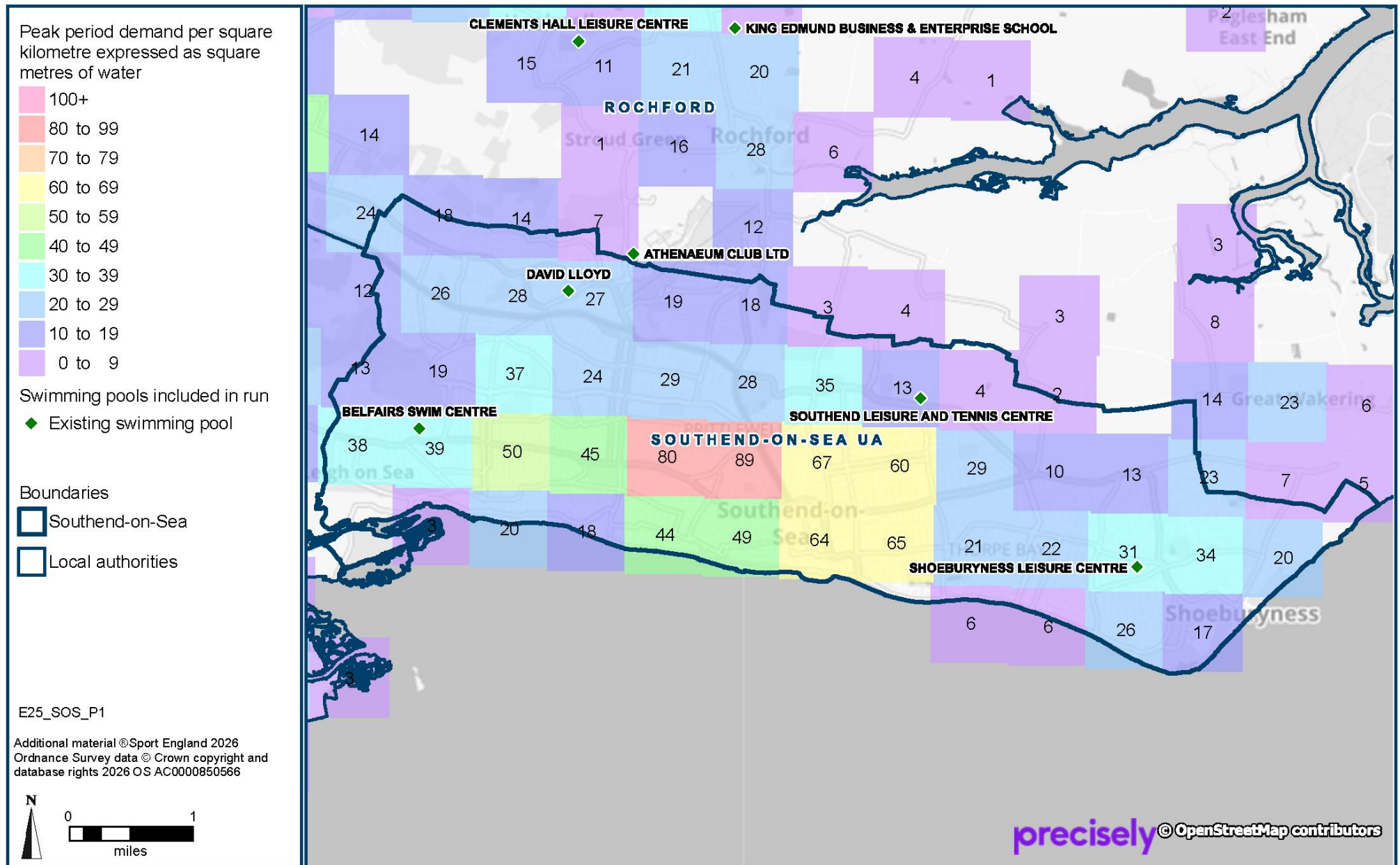
Map 3.2: Housing Growth Areas in Southend-on-Sea to 2045 (Run 3 – High Growth Scenario)



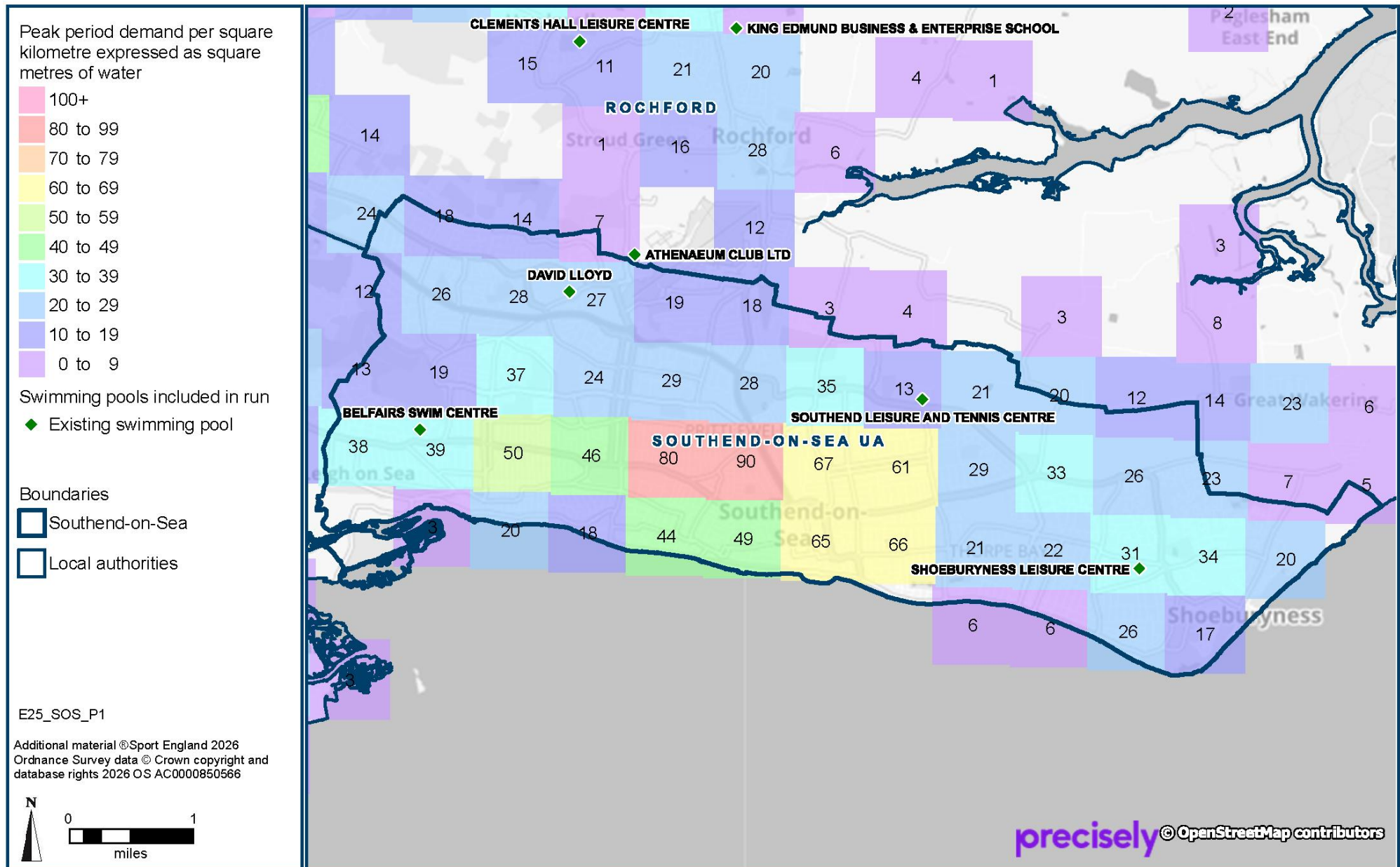
Map 3.3: Demand for Swimming Pools in Run 1 (2026)



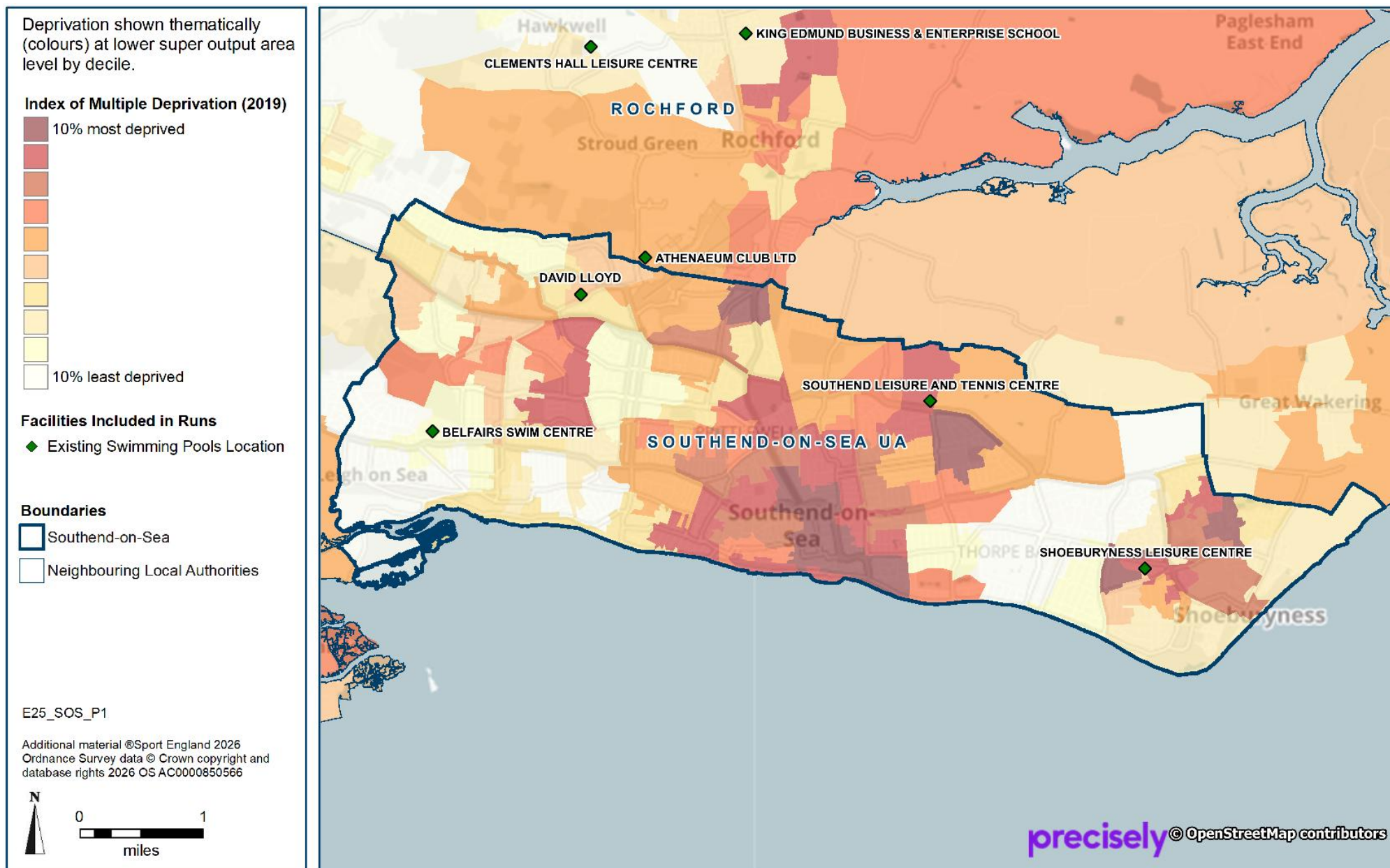
Map 3.4: Demand for Swimming Pools in Run 2 (2045)



Map 3.5: Demand for Swimming Pools in Run 3 (2045)



Map 3.6: Deprivation in 2019 (Runs 1 to 3)



4 ACCESSIBILITY

In Run 1, 35% of Southend-on-Sea's residents are within a 20-minute walk of a swimming pool. This decreases to 33% in Run 2 and 32% in Run 3.

All the swimming pool sites are within a five-minute walk of an existing bus stop. Shoeburyness Leisure Centre and Belfairs Swim Centre are on the edge of a 15-minute walk from a railway station.

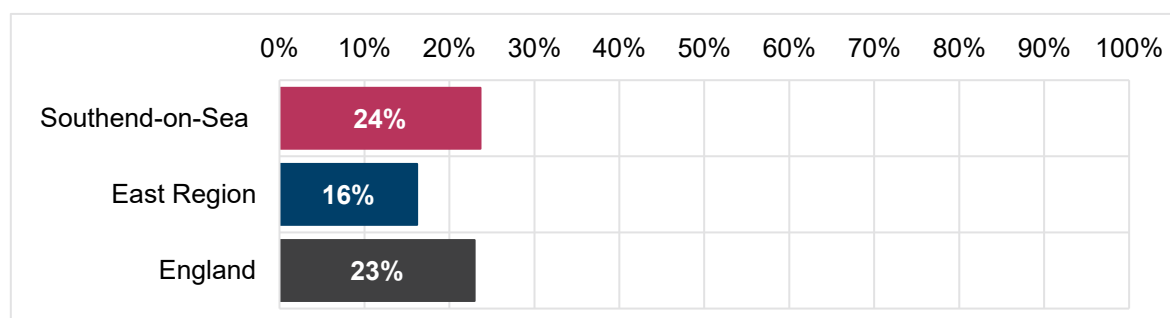
Access to swimming pools within a 20-minute drive is best in the west of the City.

Table 4.1: Travel Mode of Southend-on-Sea Demand to Swimming Pools by Run

Accessibility	Run 1	Run 2	Run 3
Southend-on-Sea	2026	2045	2045
% of total residents within a 20-minute walk of a pool	35%	33%	32%
% of 10% most deprived residents within a 20-minute walk of a pool	31%	22%	22%
% of demand satisfied when travelled:			
on foot	13%	12%	12%
by public transport or bicycle	13%	14%	13%
by car	74%	74%	75%

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 Southend-on-Sea 24% of residents do not have access to a car. This is higher 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 Of Southend-on-Sea's residents, 35% are within a 20-minute walk of a swimming pool in Run 1, decreasing to 33% in Run 2 when the housing growth sites are included and the supply is unchanged. The proportion falls again to 32% in Run 3 when the Land North of Southend (LNOS) housing growth sites are included and the supply remains unchanged.
- 4.3 Residents in the Eastwood area can reach David Lloyd and Athenaeum Club located in Rochford within a 20-minute walk (light orange area 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 13% of all journeys to swimming pools by Southend-on-Sea residents are made on foot in Run 1, and 12% in Runs 2 and 3.

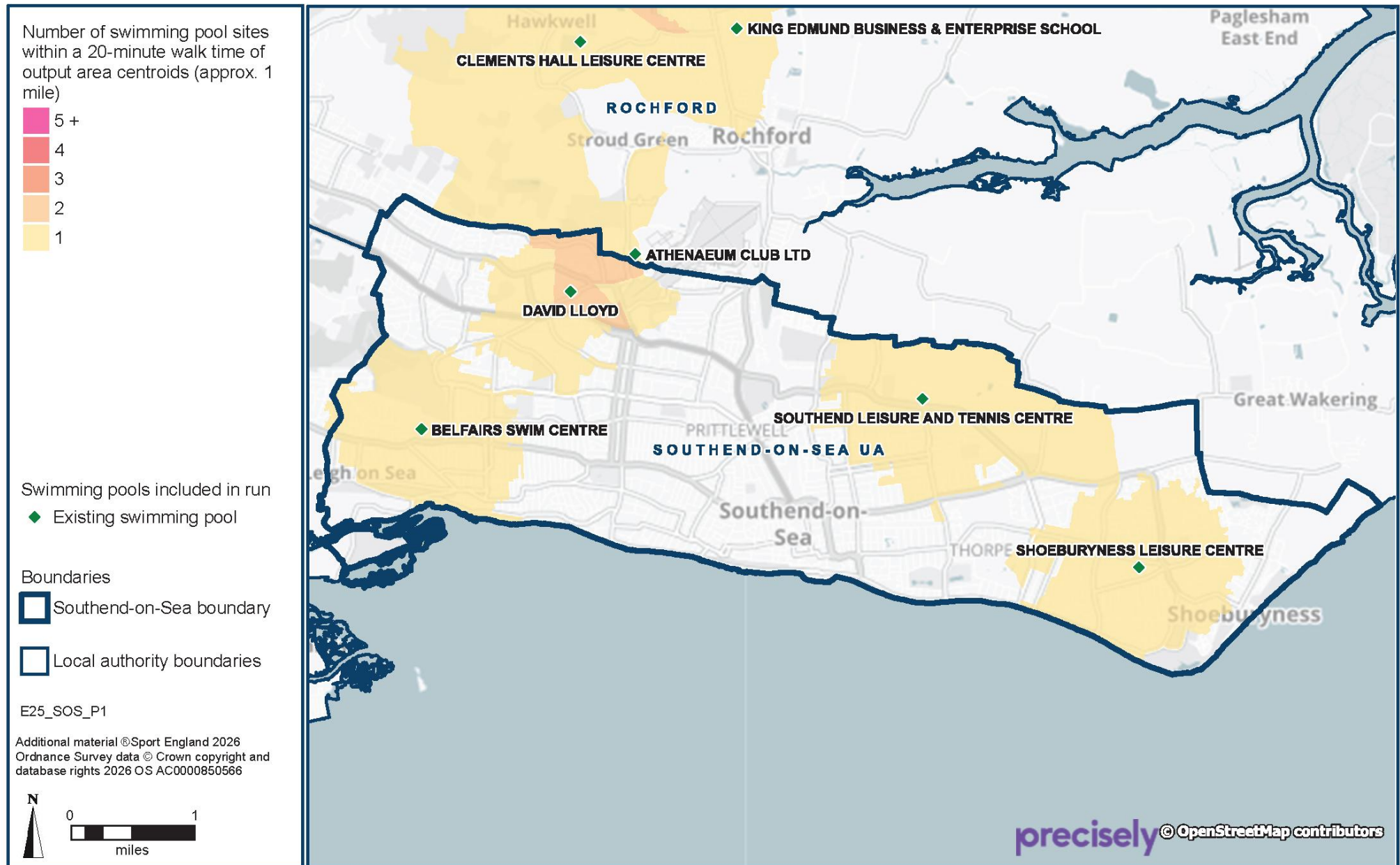
Public Transport Access

- 4.5 All the swimming pool sites are within a five-minute walk of an existing bus stop (pink areas in Map 4.2).
- 4.6 Shoeburyness Leisure Centre and Belfairs Swim Centre are on the edge of a 15-minute walk of a railway station (purple areas).
- 4.7 It should be noted that, while most Southend-on-Sea 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 It is estimated that 13% of all journeys to swimming pools by Southend-on-Sea residents are made by public transport or bicycle in Runs 1 and 3, and 14% in Run 2.

Driving Access

- 4.9 In all runs residents in the centre and east of Southend-on-Sea are within a 20-minute drive of between five and nine swimming pool sites (dark green areas in Map 4.3). Access is poorest in a small area of Shoeburyness where residents can drive to between one and four sites within 20 minutes (light green area).
- 4.10 Access is better in the west of the City where residents can drive to between ten and 14 sites within 20 minutes (light blue areas). Residents in the very northwest corner of the City have the best access, at more than 20 sites within a 20-minute drive (purple areas).
- 4.11 It is estimated that 74% of all journeys to swimming pools by Southend-on-Sea residents are made by car in Runs 1 and 2, and 75% in Run 3.

Map 4.1: Walking Access to Swimming Pools in Runs 1 to 3 (2026 and 2045)



Map 4.2: Walking Access to Public Transport in 2026 (Runs 1 to 3)

Areas within walking time shown thematically (colours) from bus, coach and tram stops, and railway, metro and underground stations.

Public Transport

- Railway/Metro/Underground Station

Walk Time from Station

- 5 minutes
- 10 minutes
- 15 minutes

Walk Time from Bus Stop

- 5 minutes

Facilities Included in Runs

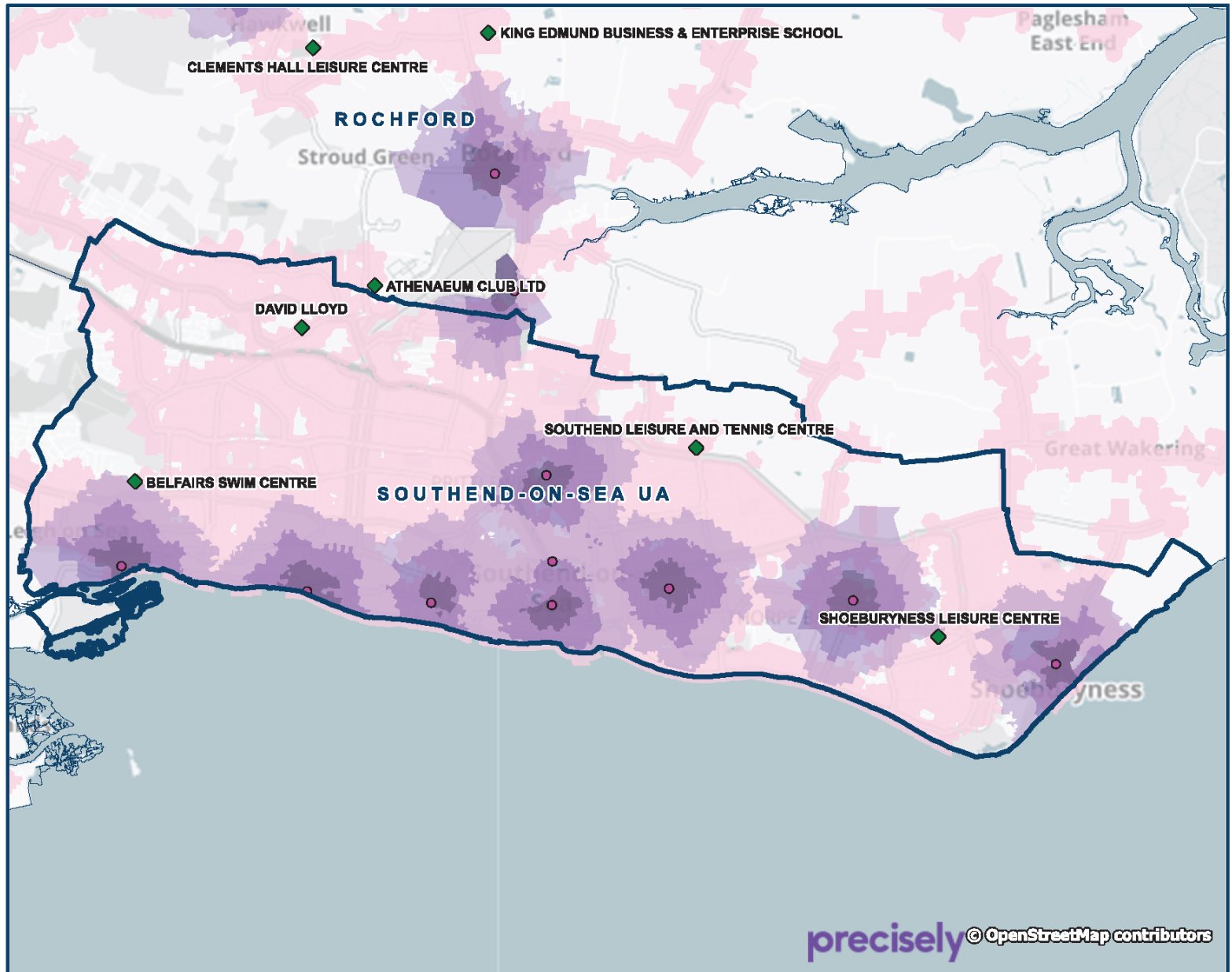
- ◆ Existing Swimming Pools Location

Boundaries

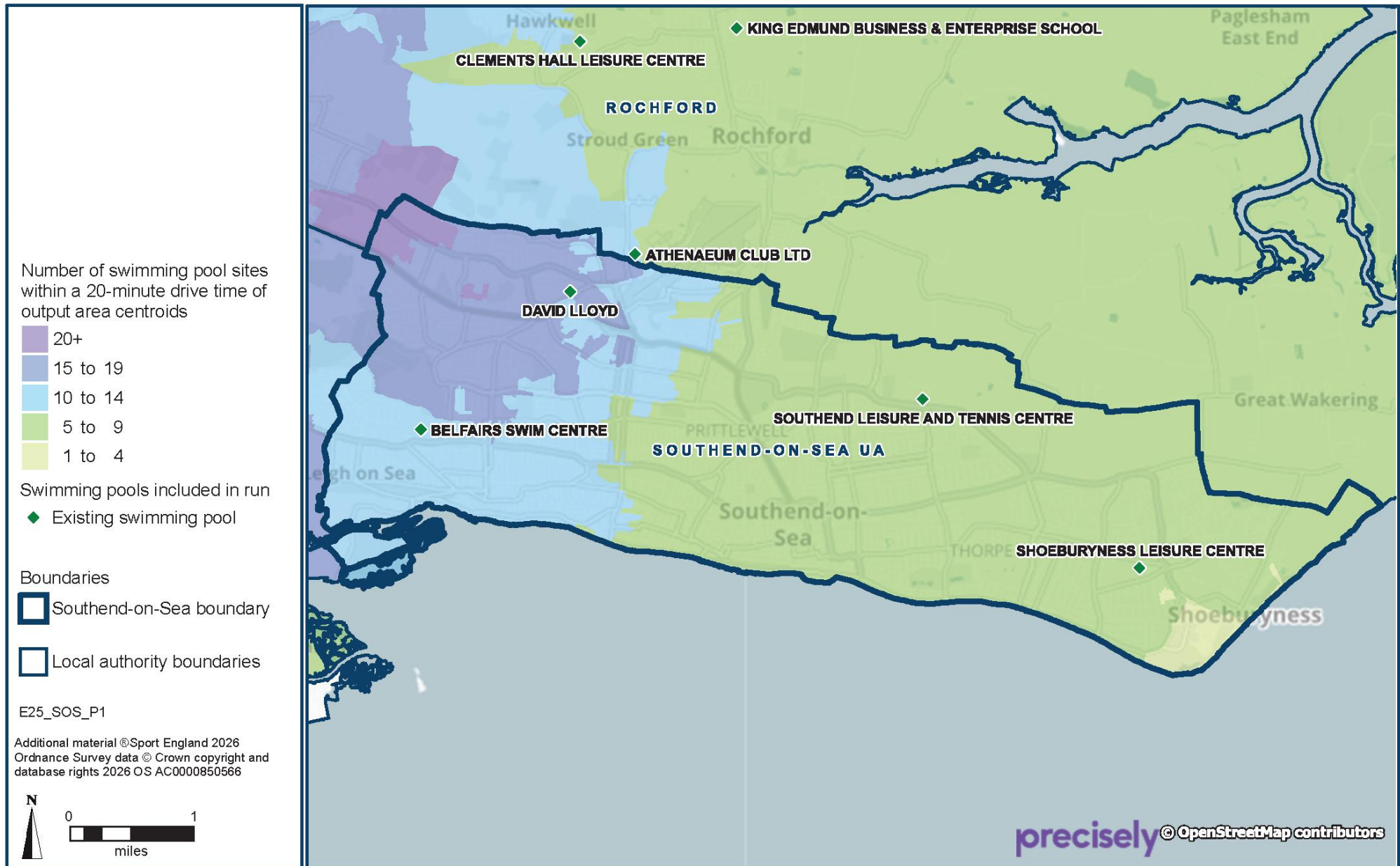
- Southend-on-Sea
- Neighbouring Local Authorities

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Map 4.3: Driving Access to Swimming Pools in Runs 1 to 3 (2026 and 2045)



5 SATISFIED DEMAND FOR SWIMMING POOLS

Of Southend-on-Sea's demand, 93% is met in all three runs. A large proportion of this satisfied demand is met within the City.

Across all runs around one-sixth of Southend-on-Sea's demand is exported and met in other local authorities.

The largest amount of exported demand goes to Rochford in all three runs.

Table 5.1: Satisfied Demand for Swimming Pools in Southend-on-Sea by Run

Satisfied Demand	Run 1	Run 2	Run 3
Southend-on-Sea	2026	2045	2045
Number of visits which are met per week in peak period	11,332	11,221	11,920
% of total demand satisfied	93%	93%	93%
Number of visits retained per week in peak period	9,565	9,511	10,029
Demand retained as a % of satisfied demand	84%	85%	84%
Number of visits exported per week in peak period	1,767	1,709	1,891
Demand exported as a % of satisfied demand	16%	15%	16%

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

- 5.1 **Key finding 5** is that 93% of Southend-on-Sea's demand is met in all three runs. The number of visits met in the weekly peak period is 11,332 visits in Run 1, 11,221 visits in Run 2, and is highest in Run 3 at 11,920 visits due to the increase in demand.

Table 5.2: Proportion of Demand Met by Area and Run

Proportion of Demand Met	Run 1	Run 2	Run 3
Area	2026	2045	2045
Southend-on-Sea	93%	93%	93%
Castle Point	96%	96%	96%
Rochford	96%	96%	96%
East Region	93%	93%	93%
England	93%	93%	93%

- 5.2 Southend on Sea's proportion of demand met is equal to the regional and national averages of 93% in all three runs.
- 5.3 Castle Point and Rochford have a larger proportion of demand met than Southend-on-Sea at 96% in all three runs.

- 5.4 Details of the swimming pools in the neighbouring local authority areas are listed in Appendix 2.

Retained Demand

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

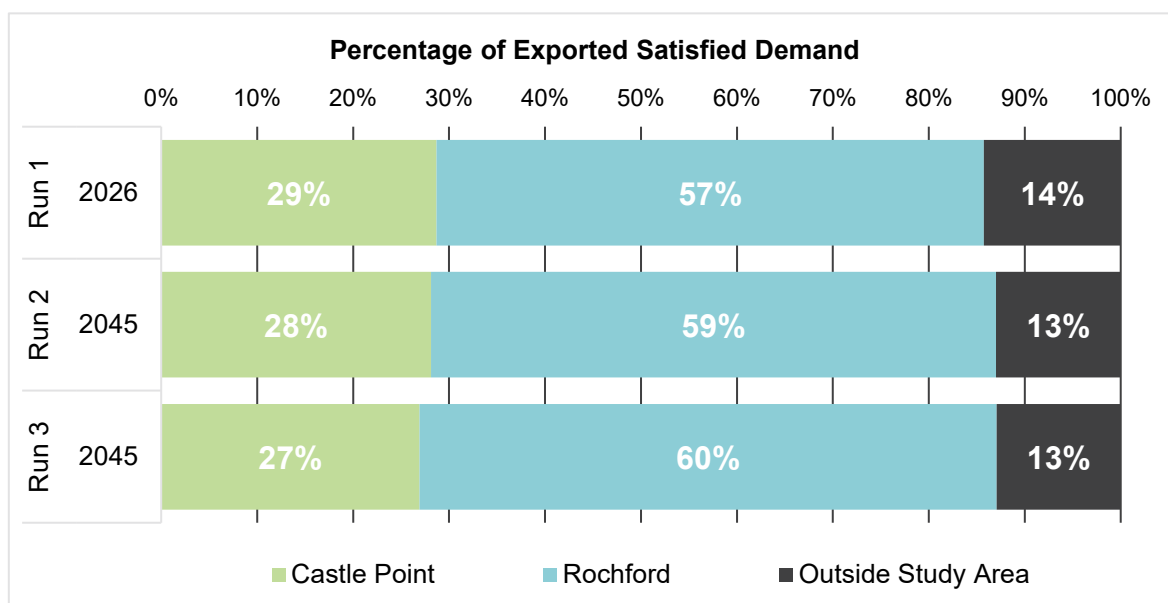
- 5.5 **Key finding 6** is that a large proportion of Southend-on-Sea's satisfied demand is met within the City, at 84% in Runs 1 and 3, and 85% in Run 2.
- 5.6 In terms of visits, most demand is retained in Run 3 at 10,029 visits in the weekly peak period when demand is highest. Retained demand is 9,565 visits in the weekly peak period in Run 1, and 9,511 visits in Run 2.

Exported Demand

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

- 5.7 Of Southend-on-Sea's satisfied demand, 16% is met at swimming pools in other local authorities in Runs 1 and 3, and 15% in Run 2. In terms of visits in the weekly peak period, this equates to 1,767 visits in Run 1, 1,709 visits in Run 2, and 1,891 visits in Run 3.

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

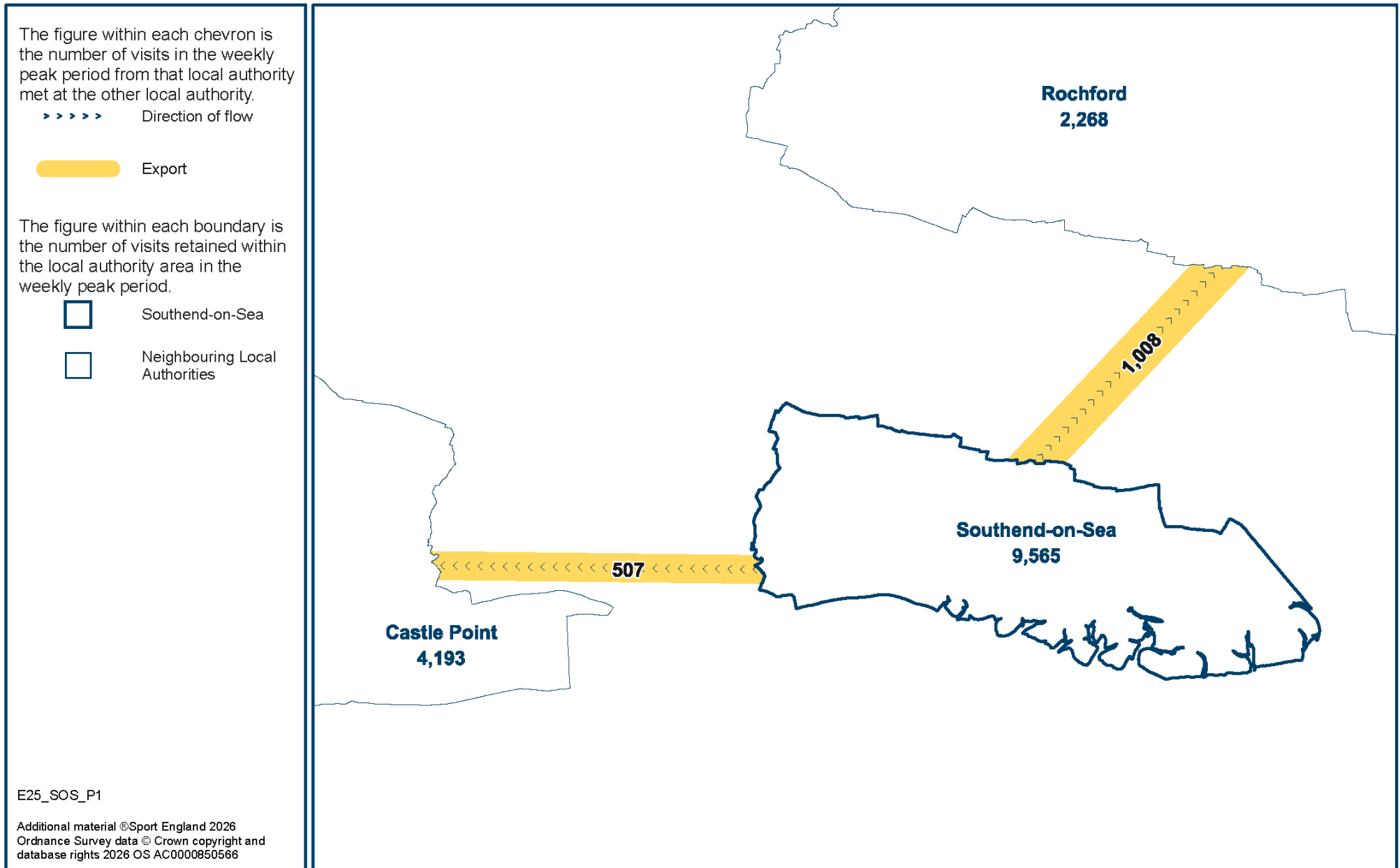


- 5.8 In Run 1 the largest proportion of Southend-on-Sea's exported demand goes to Rochford, accounting for 57% of exported demand and the equivalent of 1,008 visits in the weekly

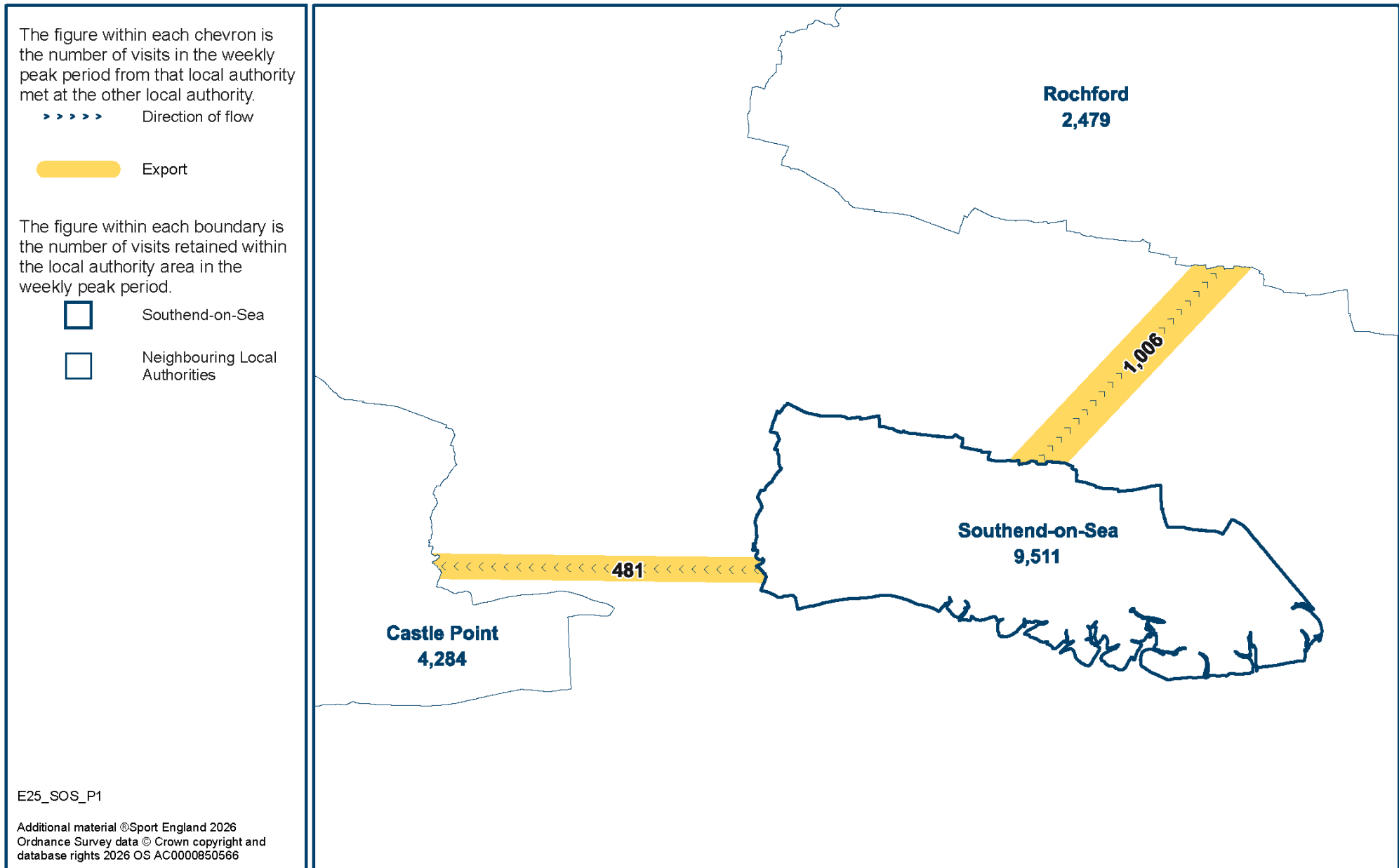
peak period (see Map 5.1). Athenaeum Club in Rochford is the closest swimming pool to the Southend-on-Sea border. It has a 25m x 12m pool and opened in 2003. This commercial centre and pool will be accessible to some Southend-on-Sea residents prepared to pay the membership fee.

- 5.9 Exported demand to Castle Point is 507 visits in the weekly peak period, accounting for 29% of exported demand. Demand is high in Leigh-on-Sea, and Belfairs Swim Centre is the only swimming pool in the area. Virgin Active in Castle Point is 2.5 kilometres from the border with Southend-on-Sea. The site has a 25m x 12m main pool and a 12m x 10m teaching pool. This commercial site opened in 2004 and will be accessible to some Southend-on-Sea residents prepared to pay the membership fee.
- 5.10 In Run 2 the number of visits exported from Southend-on-Sea and met in other local authorities in the weekly peak period decreases by 58.
- 5.11 The destination for most exported demand remains Rochford. The proportion increases to 59%, but the number of visits exported in the weekly peak period decreases by 2 visits to 1,006 (see Map 5.2).
- 5.12 Exported demand to Castle Point decreases to 28%, equating to a decrease of 26 visits to 481 visits in the weekly peak period.
- 5.13 In Run 3 Southend-on-Sea's exported demand increases by 182 visits in the weekly peak period.
- 5.14 The largest proportion of exported demand remains to Rochford and increases to 60%, the equivalent of 1,137 visits in the weekly peak period (see Map 5.3). Exported demand met in Castle Point accounts for 27% and equates to 509 visits in the weekly peak period.
- 5.15 The proportion of exported demand met outside the study area is 14% in Run 1, and 13% in Runs 2 and 3.

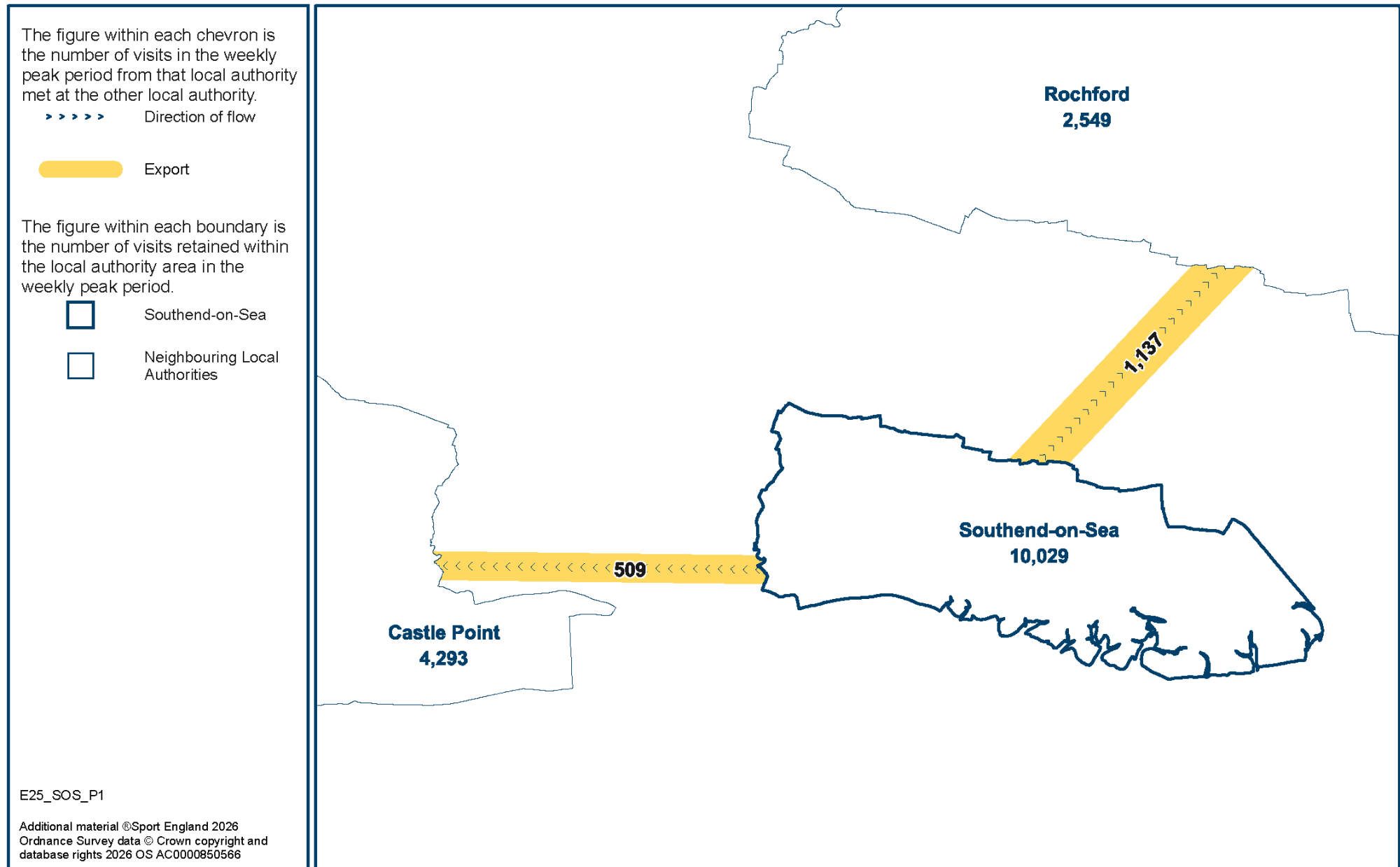
Map 5.1: Export of Southend-on-Sea Satisfied Demand for Swimming Pools in Run 1 (2026)



Map 5.2: Export of Southend-on-Sea Satisfied Demand for Swimming Pools in Run 2 (2045)



Map 5.3: Export of Southend-on-Sea Satisfied Demand for Swimming Pools in Run 3 (2045)



6 UNMET DEMAND FOR SWIMMING POOLS

Southend-on-Sea's unmet demand account for 7% of demand in all three runs.

Almost all unmet demand is that which is too far from a facility. Unmet demand due to lack of swimming pool capacity is highest in Run 3 at 16 sqm of water.

Unmet demand in all three runs is highest across an area of eight square kilometres covering the southern half of Westcliff-on-Sea from Chalkwell in the west to Prittlewell in the northeast and Marine Parade in the southwest.

Table 6.1: Unmet Demand for Swimming Pools in Southend-on-Sea by Run

Unmet Demand	Run 1	Run 2	Run 3
Southend-on-Sea	2026	2045	2045
Number of visits unmet per week in peak period	789	872	958
Unmet demand as a % of total demand	7%	7%	7%
Equivalent in sqm of water with comfort factor	130	143	157
% of 10% most deprived demand unmet	12%	15%	16%
% of unmet demand due to:			
Facility too far away:	99%	95%	90%
% without access to a car	94%	90%	86%
% with access to a car	5%	5%	4%
Lack of facility capacity:	1%	5%	10%
% without access to a car	1%	5%	9%
% with access to a car	0%	0%	1%

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 Southend-on-Sea is lowest in Run 1 at 789 visits in the weekly peak period, and highest in Run 3 at 958 visits. It increases in Run 3 due to the increase in demand.
- 6.2 **Key finding 7** is that unmet demand in Southend-on-Sea equates to 130 sqm of water in Run 1, 143 sqm of water in Run 2, and 157 sqm of water in Run 3. Unmet demand too far from a facility is 99% of unmet demand in Run 1, 95% in Run 2, and 90% in Run 3. Unmet demand from lack of capacity is 1 sqm of water in Run 1, 7 sqm of water in Run 2, and 16 sqm of water in Run 3.

- 6.3 Unmet demand 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

Run 1

- 6.5 In Run 1 the highest density of unmet demand per square kilometre in Southend-on-Sea is 12 sqm of water in the south of Westcliff-on-Sea (pink square in Map 6.1).
- 6.6 The areas of highest unmet demand across four square kilometres are:
- Westcliff-on-Sea to Prittlewell – 31 sqm of water
 - Chalkwell to Marine Parade – 34 sqm of water
- 6.7 Unmet demand across the remainder of the City is mainly 2 sqm of water per square kilometre (light blue squares) and 1 sqm of water (dark blue squares).
- 6.8 Unmet demand is lowest in Shoeburyness and is less than 1 sqm of water (purple squares) across six square kilometres.

Run 2

- 6.9 In Run 2 unmet demand across Southend-on-Sea increases by 13 sqm of water.
- 6.10 Unmet demand remains highest in the same areas (see Map 6.2), and increases as follows:
- Westcliff-on-Sea to Prittlewell – increases by 4 sqm of water to 35 sqm of water
 - Chalkwell to Marine Parade – increases by 5 sqm of water to 39 sqm of water
- 6.11 Unmet demand in one area of Westcliff-on-Sea decreases by 1 sqm of water to 1 sqm of water.
- 6.12 The scale and distribution of unmet demand across the remainder of the City is unchanged.

Run 3

- 6.13 In Run 3 unmet demand across Southend-on-Sea increases by a further 14 sqm of water compared with Run 2 (see Map 6.3).
- 6.14 Unmet demand increases in the following areas:
- Westcliff-on-Sea to Prittlewell – increases by 3 sqm of water to 38 sqm of water
 - Chalkwell to Marine Parade – increased by 2 sqm of water to 41 sqm of water

- 6.15 Across the remainder of Westcliff-on-Sea unmet demand increases in two grid squares by 1 sqm of water each.
- 6.16 There is also a new area of unmet demand in North Shoebury with 4 sqm of water at the location of the additional housing growth sites in Run 3, where in Run 2 unmet demand was less than 1 sqm of water per square kilometre.
- 6.17 The scale and distribution of unmet demand across the remainder of the City is unchanged.

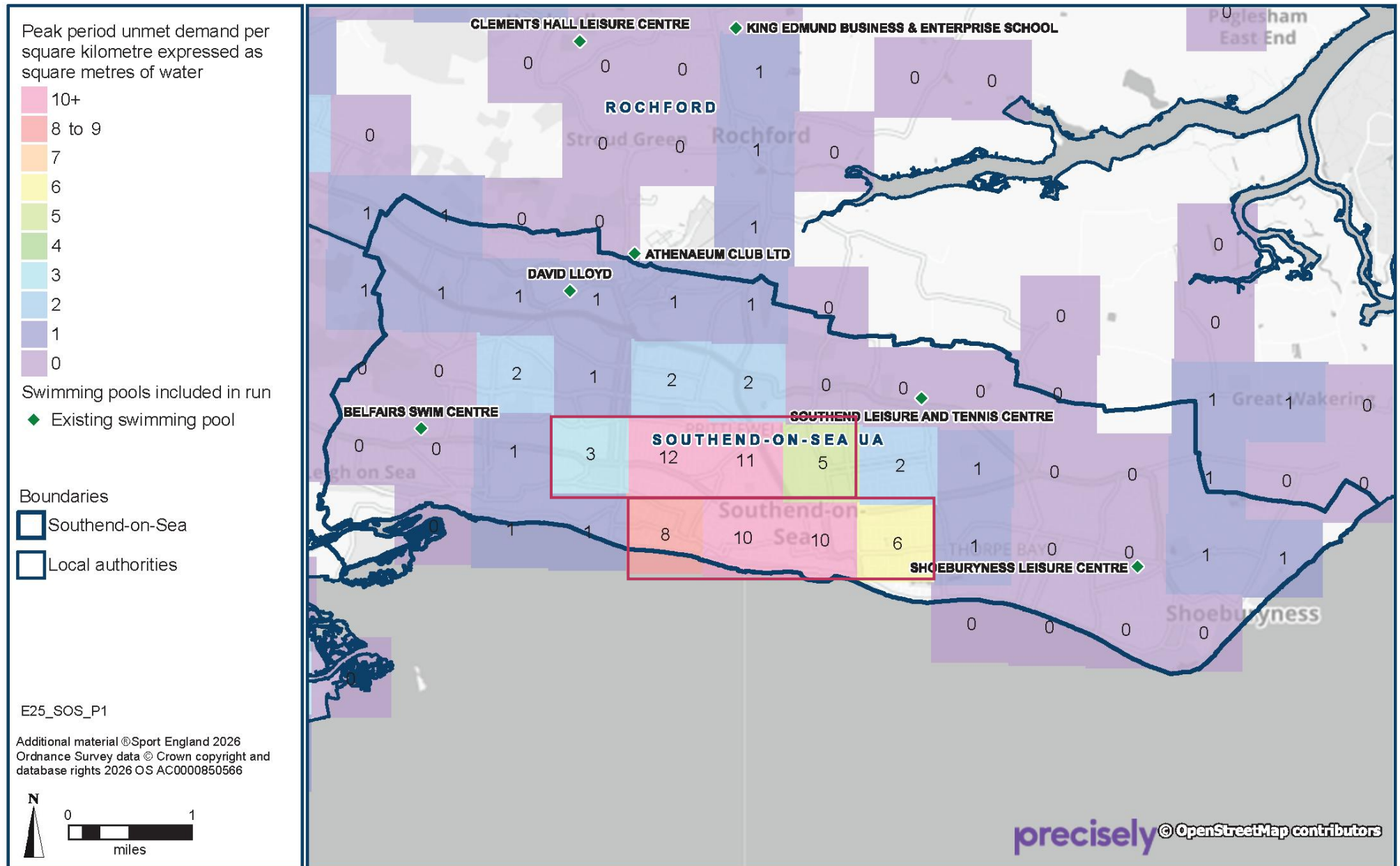
Meeting Unmet Demand

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.

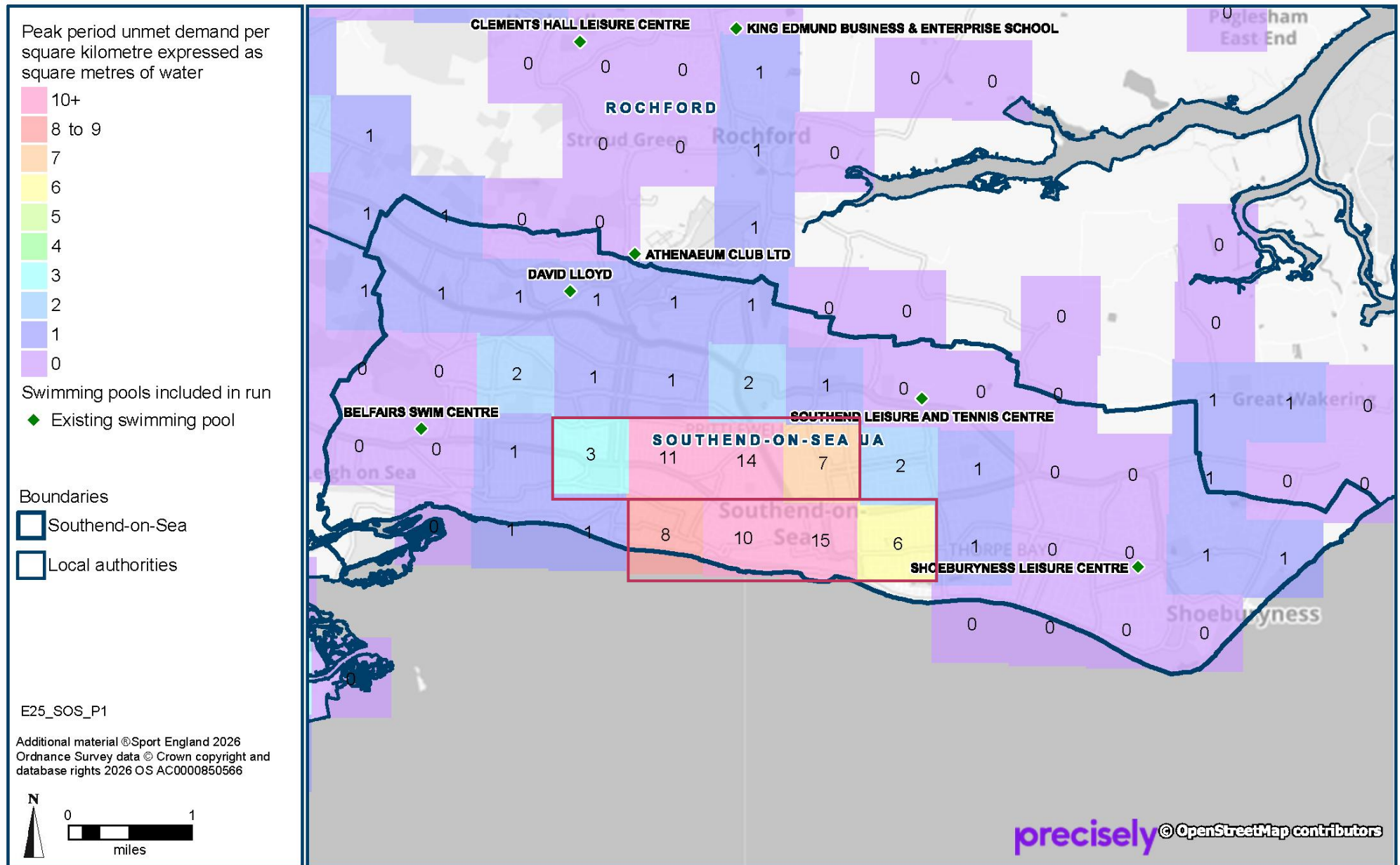
- 6.18 In Run 2 the location in Southend-on-Sea where the most unmet demand can be met is north of the city centre in Prittlewell at 79 sqm of water (orange square in Map **6.4**). This is an insufficient amount to consider providing a new swimming pool to meet unmet demand; however, this is where modern capacity needs to be increased.
- 6.19 In Run 3 the location in Southend-on-Sea where the most unmet demand can be met is in the same location at Prittlewell and has increased to 85 sqm of water (red square in Map **6.5**). This amount of unmet demand remains insufficient to consider providing a new swimming pool to meet unmet demand.

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.

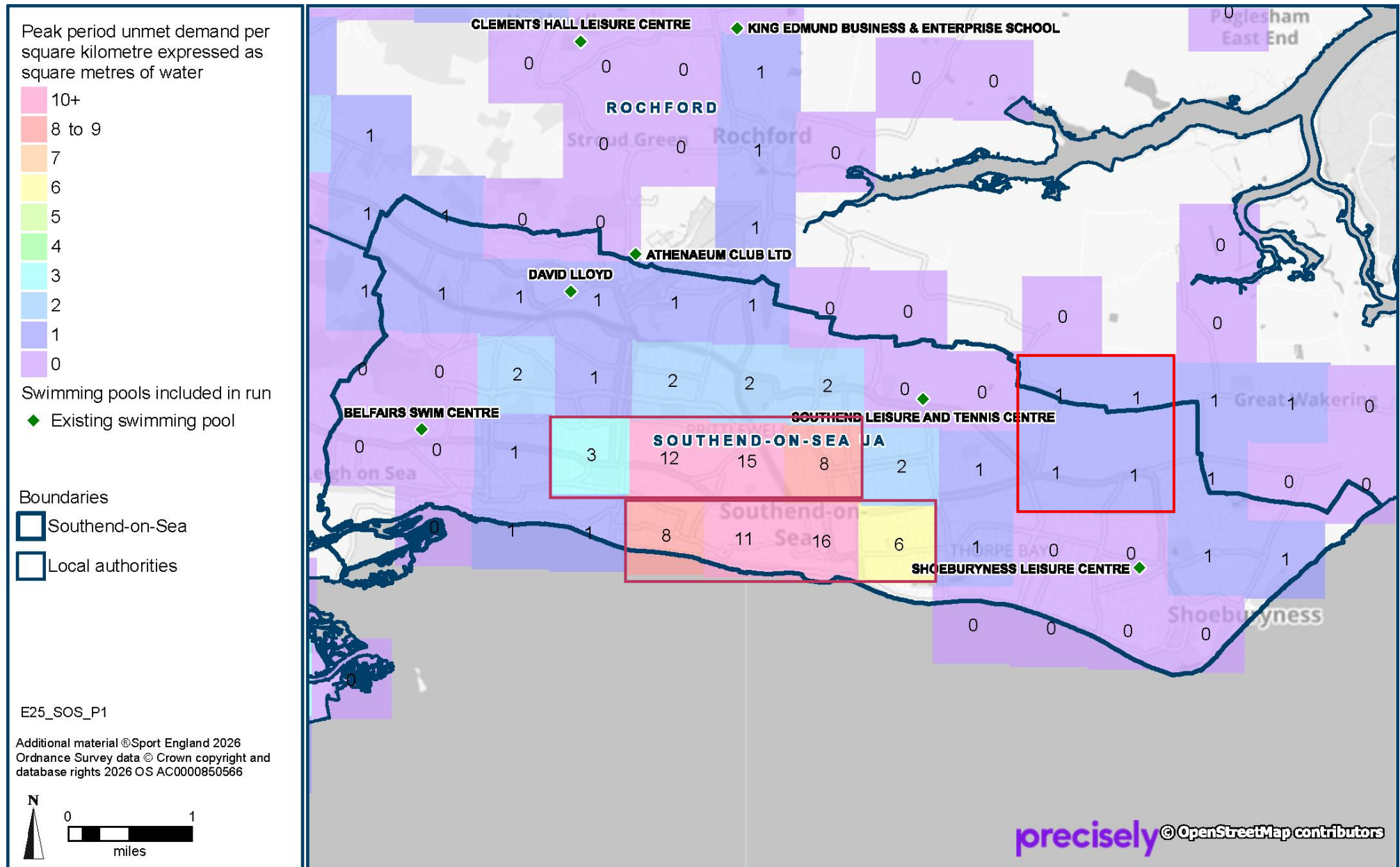
Map 6.1: Unmet Demand for Swimming Pools in Run 1 (2026)



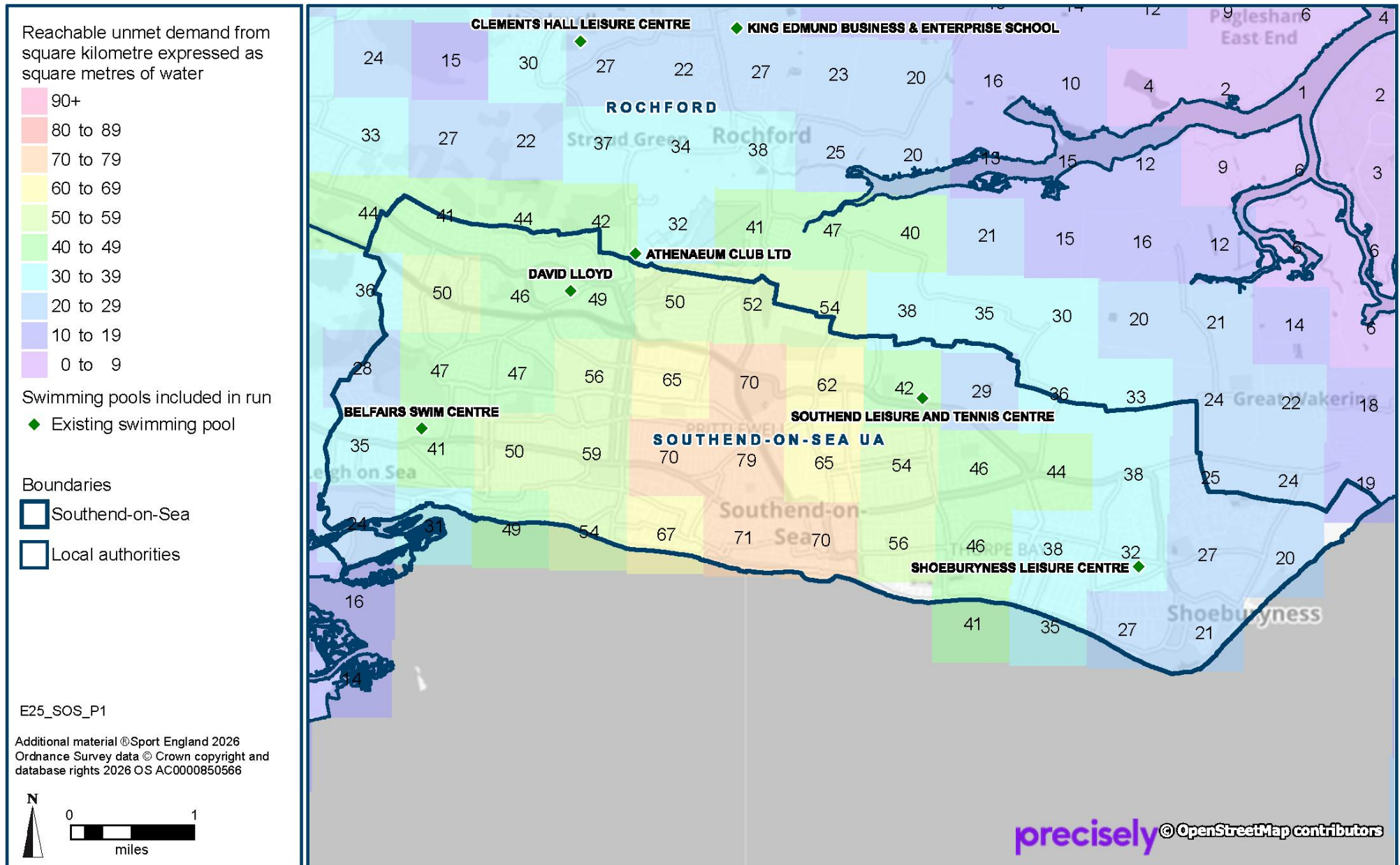
Map 6.2: Unmet Demand for Swimming Pools in Run 2 (2045)



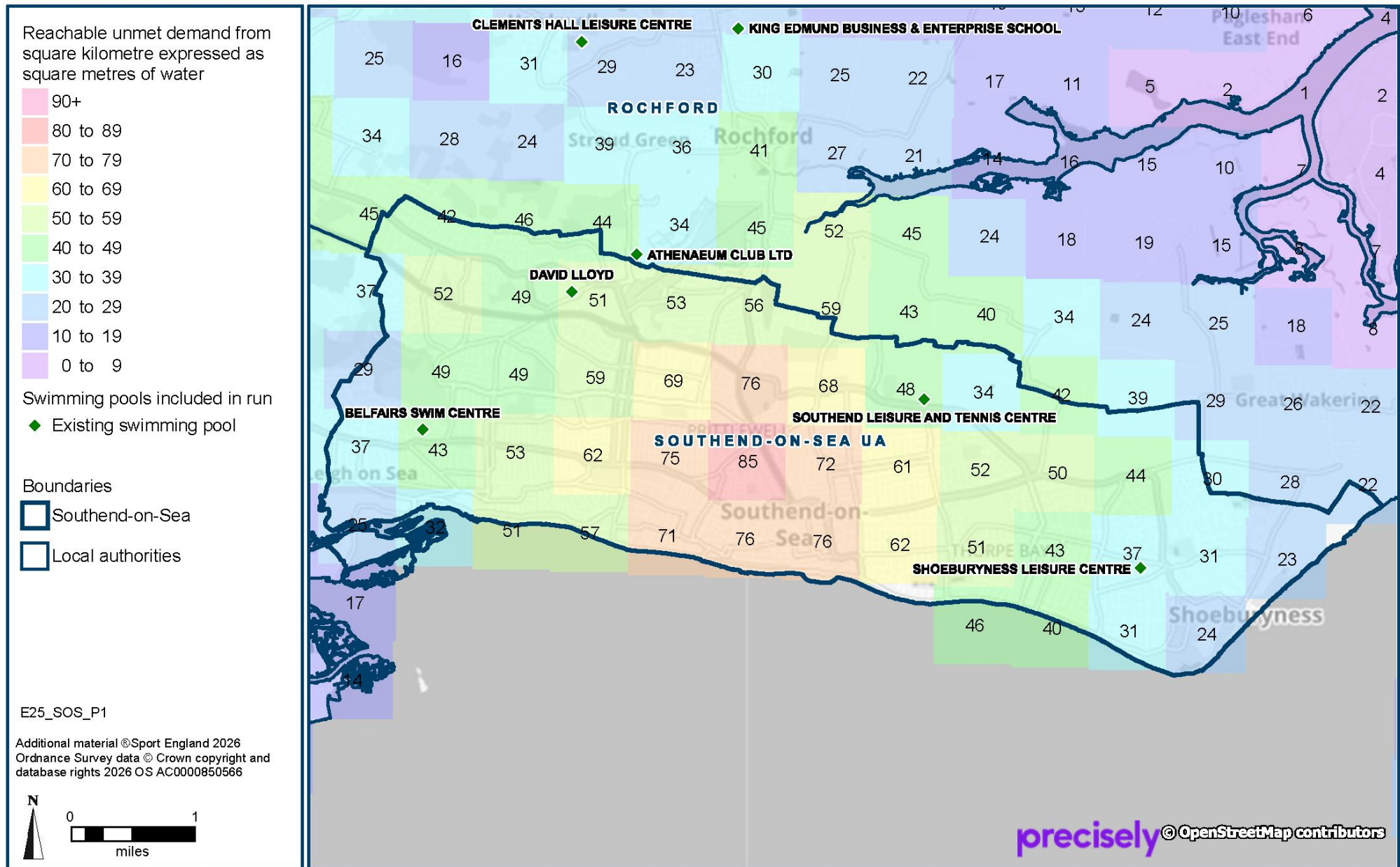
Map 6.3: Unmet Demand for Swimming Pools in Run 3 (2045)



Map 6.4: Reachable Unmet Demand for Swimming Pools in Run 2 (2045)



Map 6.5: Reachable Unmet Demand for Swimming Pools in Run 3 (2045)



7 USED CAPACITY OF FACILITIES

Three of Southend-on-Sea's swimming pool sites are either uncomfortably full (more than 70% utilised) or completely full at peak times. The exception to this is David Lloyd.

Imported demand equates to 16% of the used capacity of the City's swimming pools at peak times in Runs 1 and 3, and 17% in Run 2.

The largest amount of imported demand to Southend-on-Sea is from Rochford in all three runs.

Southend-on-Sea imports more visits in the weekly peak period than it exports in Runs 1 and 2. The City exports just five more visits than it imports in Run 3.

Table 7.1: Used Capacity of Swimming Pools in Southend-on-Sea by Run

Used Capacity	Run 1	Run 2	Run 3
Southend-on-Sea	2026	2045	2045
Number of visits used of capacity in weekly peak period	11,455	11,497	11,915
% of overall capacity of pools used	80%	81%	84%

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 Run 1, 11,455 visits are met at Southend-on-Sea's swimming pools in the weekly peak period. In Run 2 this increases slightly to 11,497 visits in the weekly peak period. In Run 3 the increase in demand means that 11,915 visits are met in the weekly peak period.
- 7.2 **Key finding 8** is that the estimated overall used capacity of Southend-on-Sea's swimming pools in the weekly peak period is 80% in Run 1, 81% in Run 2, and 84% in Run 3. However, Southend Leisure and Tennis Centre is estimated to be completely full at peak times in all runs. Belfairs Swim Centre is uncomfortably full at peak times in Runs 2 and 3, and Shoeburyness Leisure Centre is uncomfortably full in Run 3.

Table 7.2: Weekly Peak Period Used Capacity of Southend-on-Sea Swimming Pools by Run

Used Capacity	Run 1		Run 2		Run 3		Provider	Peak Hours	Year Built	Year Refurb
Individual Sites	Proportion	Visits	Proportion	Visits	Proportion	Visits				
Belfairs Swim Centre	68%	1,548	74%	1,673	78%	1,781	Public	49.5	1985	
Southend Leisure and Tennis Centre	100%	7,175	100%	7,175	100%	7,175	Public	52.5	2010	
Shoeburyness Leisure Centre	57%	1,043	59%	1,077	72%	1,327	Educational	52.5	1967	2012
David Lloyd	57%	1,689	53%	1,572	55%	1,632	Commercial	52.5	2005	2016

Site Utilisation Factors

- 7.3 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/commercial)

- 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.
- Commercial swimming pools provide recreational swimming through membership and operate a learn to swim school. The centres are not available for public pay and swim or for club development. Therefore, they offer a more limited programme of use than public leisure centres and are less utilised.

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 Southend-on-Sea, their usage becomes part of the used capacity of the City's swimming pools.

Highly Utilised Sites

7.4 The findings for the highly utilised sites are as follows:

- Southend Leisure and Tennis Centre
 - 100% utilised in all three runs
 - Meets the most visits at 7,175 visits in the weekly peak period in all runs, because it has the largest capacity
 - Very attractive because it is the most recent site to open in 2010
 - Located close to the housing growth sites in the high growth scenario in Run 3
 - No scope to increase availability to reduce the proportion of capacity used in Run 1 or meet unmet demand in Runs 2 and 3 because all three pools are available for the maximum 52.5 hours in the weekly peak period
- Belfairs Swim Centre
 - 74% utilised in Run 2, and 78% utilised in Run 3
 - Second smallest site
 - Located in an area of high demand in all runs
 - Only pool site in Leigh-on-Sea, therefore, has less competition for demand in the area
 - Provides all swimming activities, but programmed for only one activity at a time
 - Scope to increase availability and capacity of the main pool by 3.0 hours in the weekly period and reduce the proportion of used capacity
 - Availability of the teaching pool could be increased by 6.0 hours at peak times, if there is sufficient demand for learn to swim
- Shoeburyness Leisure Centre
 - 72% utilised in Run 3
 - Only swimming pool site in Shoeburyness
 - Significant increase in visits met in Run 3 because of the high growth scenario with housing sites east of the centre
 - Smallest site and meets the fewest visits in all three runs
 - Located in an area of high deprivation
 - No scope to increase availability to reduce the proportion of capacity used in Run 3

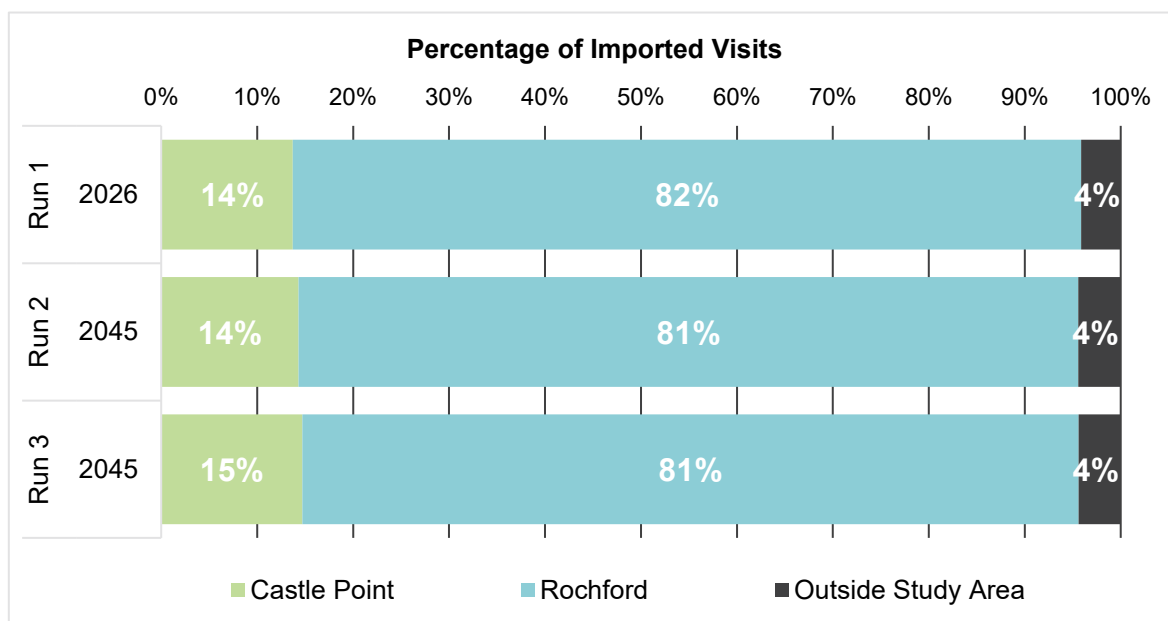
Imported Demand

Table 7.3: Imported Demand for Swimming Pools in Southend-on-Sea by Run

Imported Demand	Run 1	Run 2	Run 3
Southend-on-Sea	2026	2045	2045
Number of visits imported per week in peak period	1,890	1,985	1,886
As a % of used capacity	16%	17%	16%
Difference between visits imported and exported	123	276	-5

- 7.5 Imported demand to Southend-on-Sea's swimming pools in Run 1 accounts for 1,890 visits in the weekly peak period. In Run 2 this is 1,985 visits, and in Run 3 it is 1,886 visits. This equates to 16% of the used capacity of the City's swimming pools at peak times in Runs 1 and 3, and 17% in Run 2.
- 7.6 Southend-on-Sea is a net importer of visits in Runs 1 and 2, importing 123 more visits in the weekly peak period than it exports in Run 1, and 276 more visits in Run 2. The City is a net exporter in Run 3, exporting just five more visits than it imports.

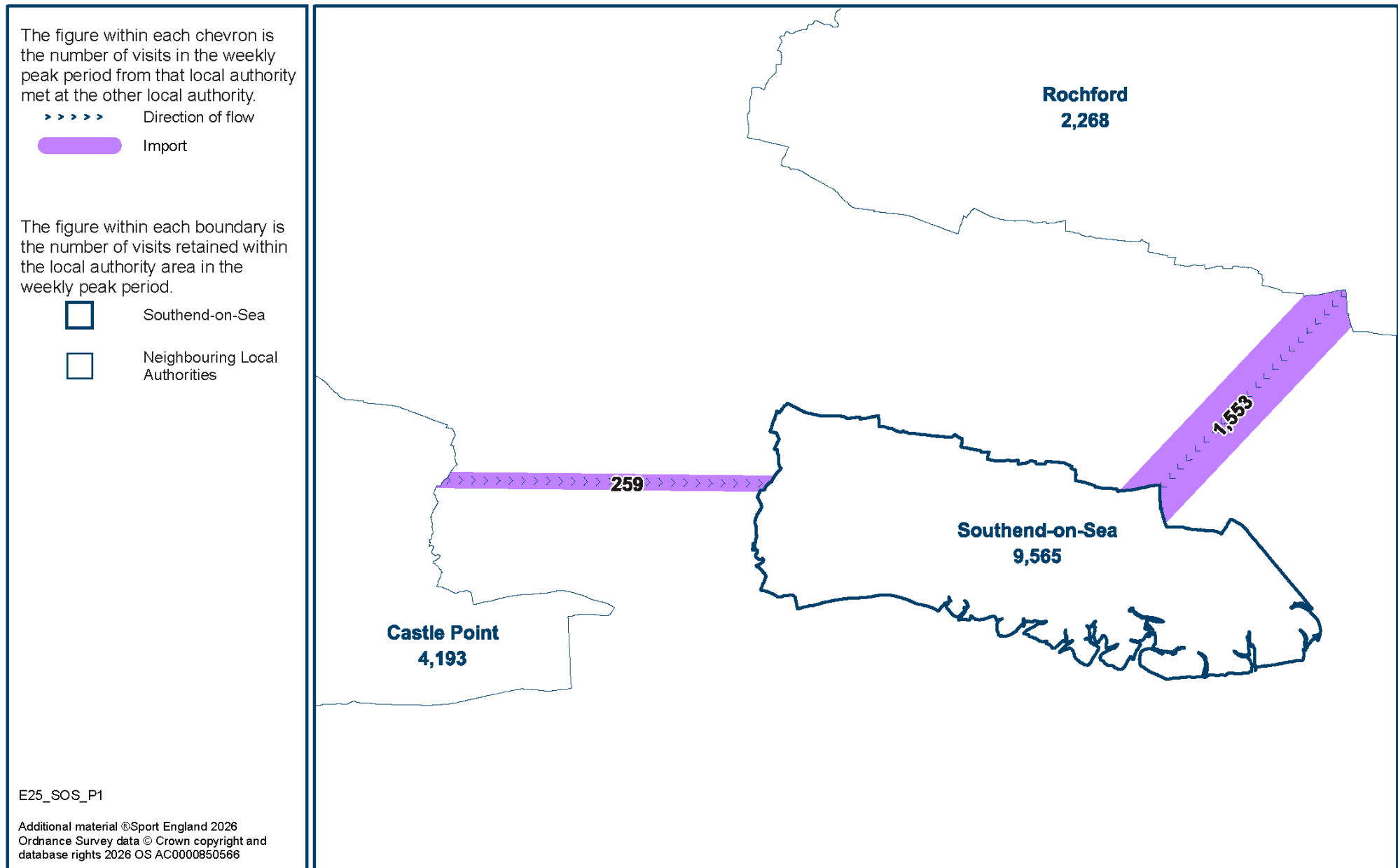
Chart 7.1: Percentage of Imported Visits by Origin and Run



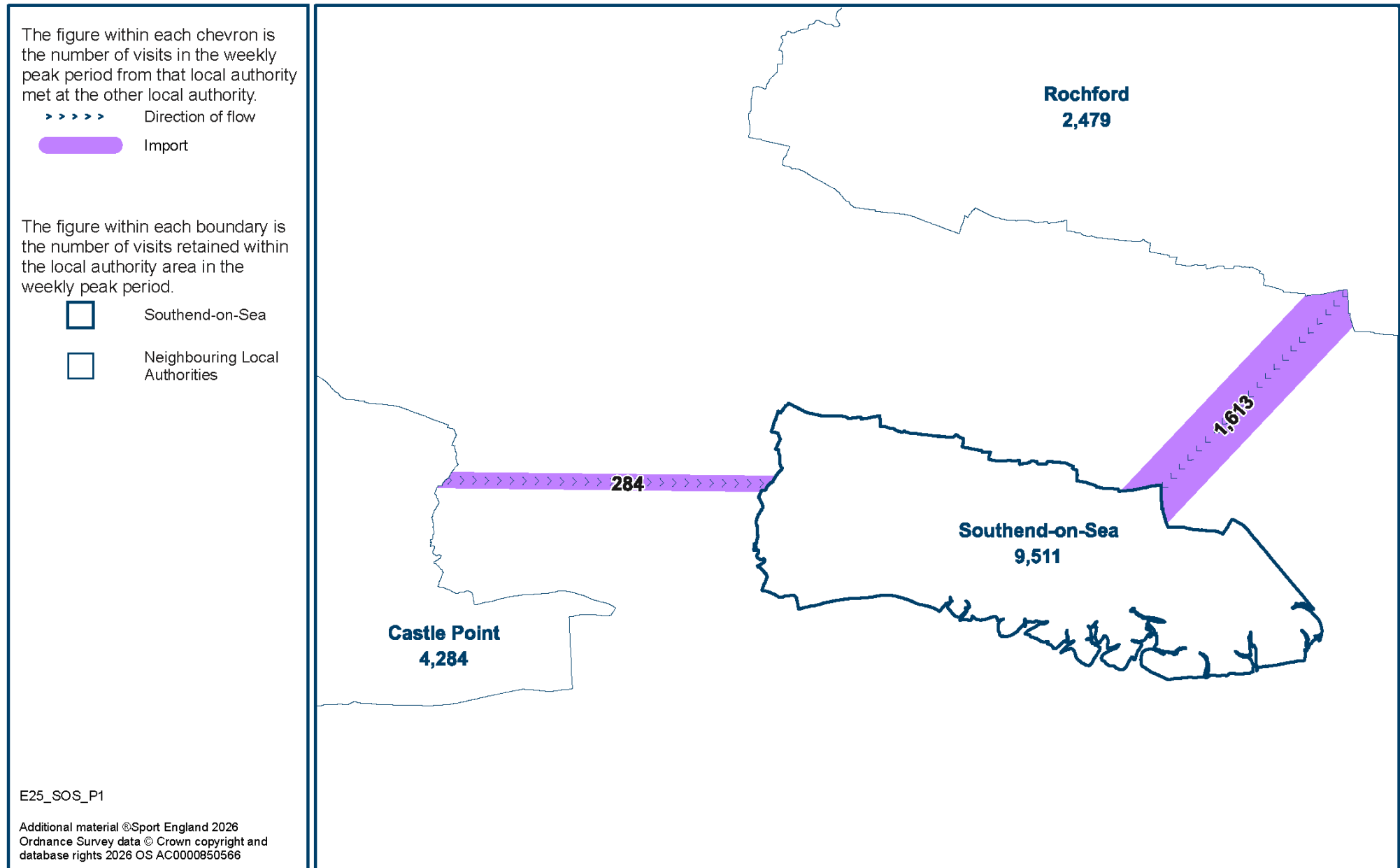
- 7.7 In Run 1 the largest amount of imported demand to Southend-on-Sea is from Rochford at 1,553 visits in the weekly peak period, and accounts for 82% of the City's imported demand (see Map 7.1).
- 7.8 Demand is lower in the east of Rochford where there are no swimming pool sites. Some Rochford residents in this area will be able to access Southend Leisure and Tennis Centre.

- 7.9 Visits from Castle Point account for 14% of Southend on Sea's imported demand, the equivalent of 259 visits in the weekly peak period. The A13 provides access to residents from Castle Point to Belfairs Swim Centre.
- 7.10 In Run 2 the number of imported visits increases slightly from both Rochford and Castle Point. Imported demand from Rochford increases by 60 visits to 1,613 visits in the weekly peak period, accounting for 81% of the City's imported demand (see Map 7.2). Imported demand from Castle Point increases by just 25 visits to 284 visits in the weekly peak period.
- 7.11 In Run 3 there is a small decrease in imported demand from Rochford, by 87 visits to 1,526 visits in the weekly peak period and equating to 81% of Southend-on-Sea's imported demand (see Map 7.3). Imported demand from Castle Point decreases by just 7 visits to 277 visits in the weekly peak period, accounting for 15% of imported demand.

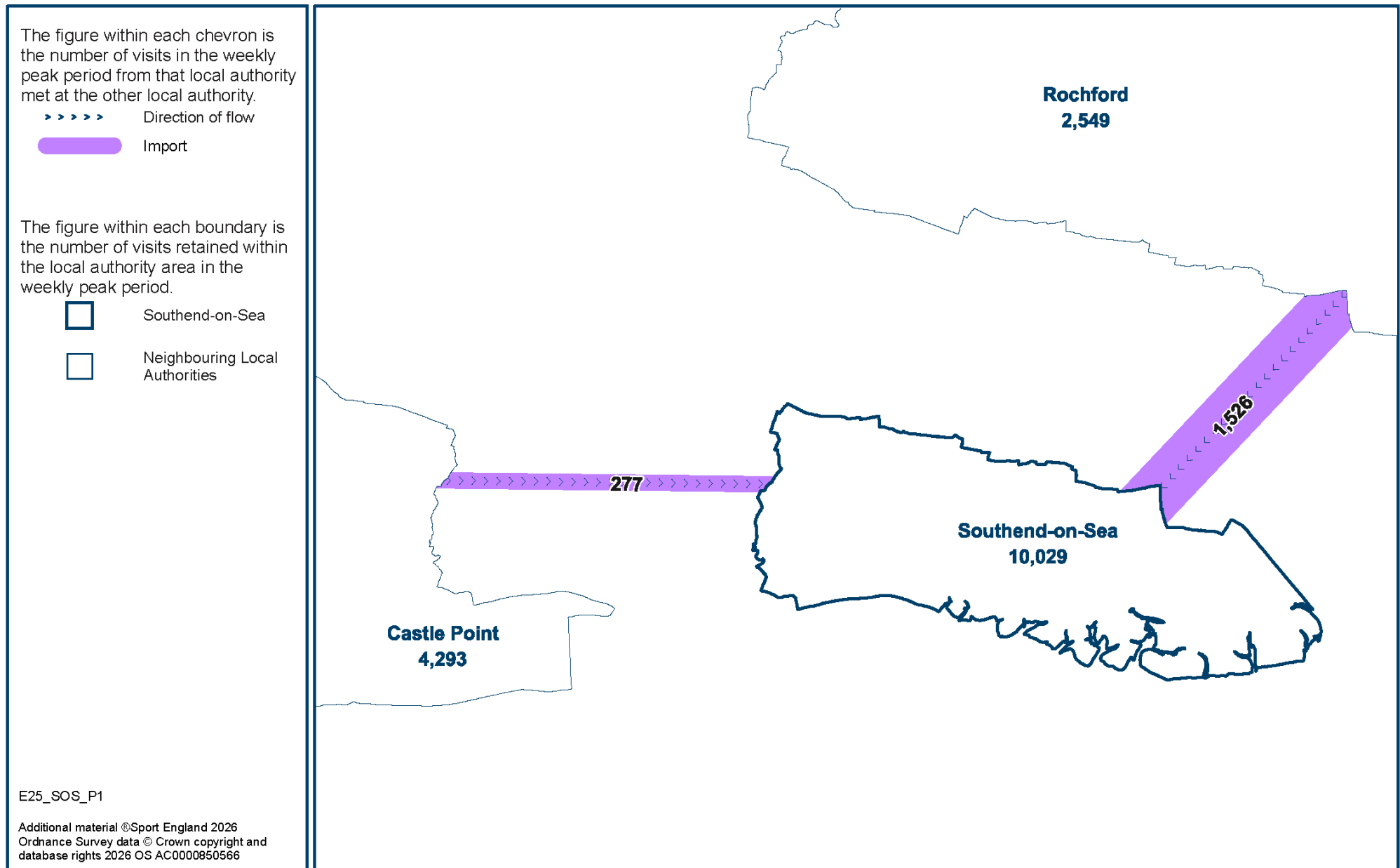
Map 7.1: Imported Demand for Swimming Pools to Southend-on-Sea in Run 1 (2026)



Map 7.2: Imported Demand for Swimming Pools to Southend-on-Sea in Run 2 (2045)



Map 7.3: Imported Demand for Swimming Pools to Southend-on-Sea in Run 3 (2045)



8 LOCAL SHARE OF FACILITIES

Local share in Southend-on-Sea is best in Run 1. Demand is lowest and the pools are very attractive to residents because they are newer.

Southend-on-Sea's total water space per 1,000 population is lower than the regional and national averages in all three runs, and is also the lowest in the study area.

Castle Point has the best provision in the study area in all three runs.

Table 8.1: Local Share of Swimming Pools in Southend-on-Sea by Run

Local Share	Run 1	Run 2	Run 3
Southend-on-Sea	2026	2045	2045
Local share of swimming pools relative to demand in local area: <1 = poorer, >1 = better	0.92	0.48	0.45

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 to 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 Run 1, when demand is lowest, local share in Southend-on-Sea is 0.92 meaning that there is insufficient suitable provision that demand can access based on the age, used capacity and operation of the swimming pools.
- 8.4 In Run 2 local share decreases to 0.48. Demand is similar to Run 1 and there is no change in capacity, but the swimming pools have aged and become less attractive to residents. One swimming pool site is estimated to be completely full and another is uncomfortably full at peak times.

- 8.5 In Run 3 local share further decreases to 0.45. Demand has increased and there is no change to the supply from Run 2. One swimming pool site is estimated to be completely full and two sites are uncomfortably full at peak times.

Geographical Distribution of Local Share

- 8.6 Local share varies across Southend-on-Sea in all runs.

Run 1

- 8.7 In Run 1 local share is best in Eastwood at 1.3 and 1.2 (light blue squares in Map **8.1**). Demand in this area is quite high but there are two swimming pool sites that demand can access. These are David Lloyd (opened in 2005 and the most recent swimming pool site to be refurbished in 2016), and Athenaeum Club in Rochford (opened in 2003). Deprivation is low in most of the area and, therefore, demand should be able to access these membership-only centres.
- 8.8 Local share is poorest in the Clifftown Parade area at 0.7 (yellow squares). Demand and deprivation are high in this area, and there are no sports halls nearby.

Run 2

- 8.9 In Run 2 local share is best in Eastwood but has decreased to 0.7 and 0.6 (yellow squares in Map **8.2**).
- 8.10 Local share is poorest in Southchurch, Thorpe Bay and Shoeburyness at 0.4 (orange squares). The nearest swimming pool to Southchurch and Thorpe Bay is Southend Leisure and Tennis Centre, which is fully utilised. Demand is high in all three areas.

Run 3

- 8.11 In Run 3 the high growth scenario creates a large increase in demand. Local share remains best in Eastwood at 0.6 (yellow squares in Map **8.3**). There are a number of small housing growth sites in this area, but demand is unchanged and David Lloyd continues to be under-utilised.
- 8.12 Local share is poorest in the city centre at 0.3 (red square). Demand is high in the area and Shoeburyness Leisure Centre is uncomfortably full at peak times.

Comparative Measure of Provision

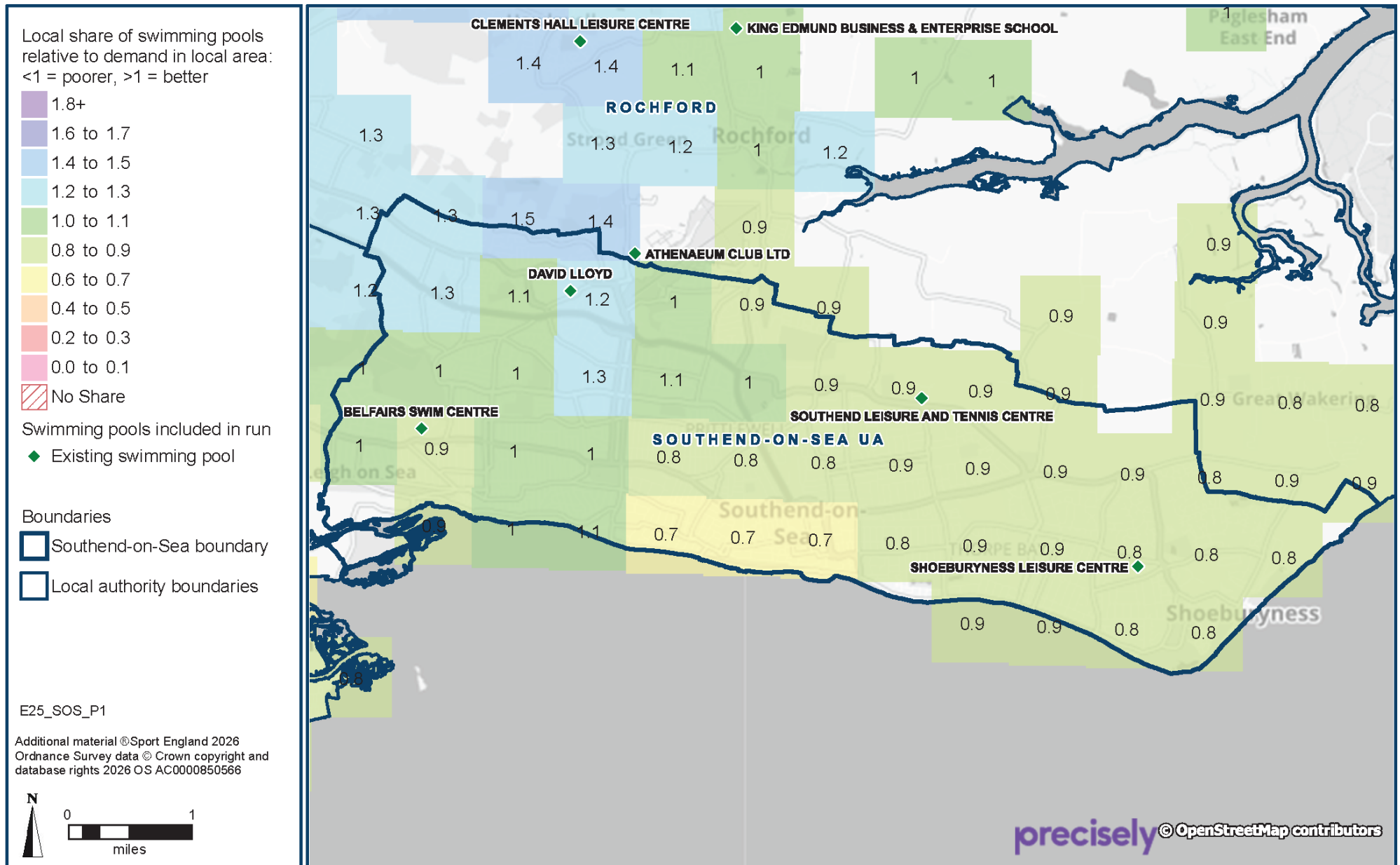
- 8.13 A comparative measure of swimming pool provision is total water space per 1,000 population.

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

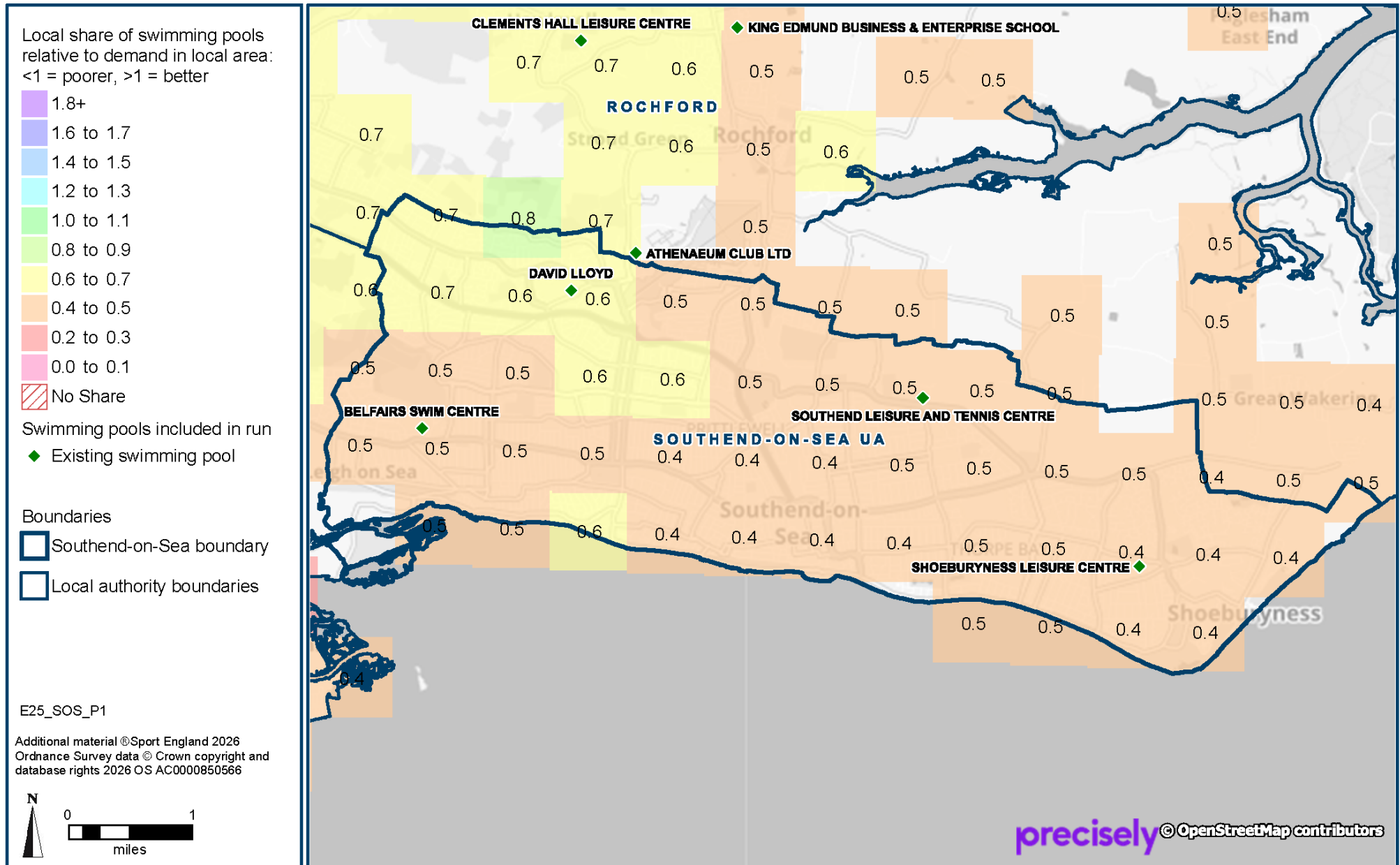
Sqm of Water per 1,000 population	Run 1	Run 2	Run 3
Area	2026	2045	2045
Southend-on-Sea	9	9	8
Castle Point	14	13	13
Rochford	11	10	10
East Region	12	11	11
England	11	10	10

- 8.14 Southend-on-Sea has the lowest provision in the study area at 9 sqm of water per 1,000 population in Runs 1 and 2, and 8 sqm of water per 1,000 population in Run 3.
- 8.15 The City's provision is lower than both the regional and national averages in all three runs. The regional average is 12 sqm of water per 1,000 population in Run 1, and 11 sqm of water in Runs 2 and 3. The national average is 11 sqm of water per 1,000 population in Run 1, and 10 sqm of water in Runs 2 and 3.
- 8.16 Castle Point has the best provision at 14 sqm of water per 1,000 population in Run 1, and 13 sqm of water in Runs 2 and 3.
- 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 the Southend-on-Sea is based on the findings from the previous six headings analysed in this report.

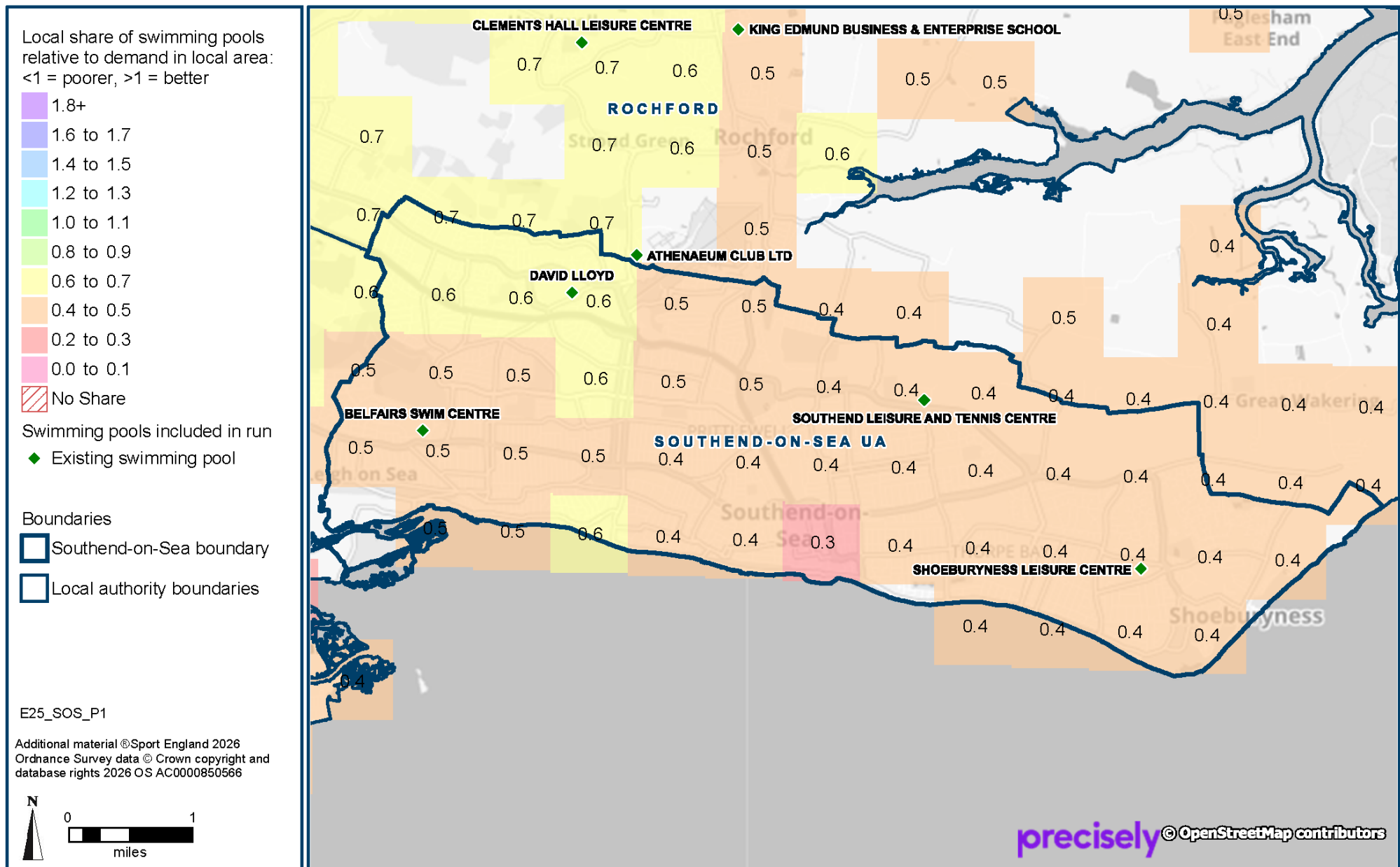
Map 8.1: Local Share of Swimming Pools in Run 1 (2026)



Map 8.2: Local Share of Swimming Pools in Run 2 (2045)



Map 8.3: Local Share of Swimming Pools in Run 3 (2045)



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
Blenheim Primary School and Childrens Centre	Lido	Outdoor pool
Bournes Green Junior School	Lido	Outdoor pool
David Lloyd	Lido x 2	Outdoor pool
Earls Hall Primary School	Learner	Private use
Hamstel Junior School	Main	Closed
Heycroft Primary School	Lido	Outdoor pool
Leigh North Street Primary School	Learner	Private use
Temple Sutton Primary School	Lido	Outdoor pool
The Eastwood Academy	Main	Principal pool too small
The St Christopher's School	Learner	Principal pool too small
Trugym (Thorpe Bay)	Main	Principal pool too small
Warriors Swim Centre	Main	Closed
	Learner	Closed
	Diving	Closed

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

Site	Provider	Facility Type	Dimensions (m)	Area (sqm)	Year Built	Year Refurb
Castle Point						
Runnymede Leisure Centre	Public	6-lane	25 x 13	325	1973	2011
		Teaching	12 x 7	84		
Virgin Active (Thundersley)	Commercial	5-lane	25 x 12	300	2004	
		Teaching	12 x 10	120		
Waterside Farm Leisure Centre	Public	6-lane	25 x 13	325	1976	2013
		Teaching	13 x 7	91		
Rochford						
Athenaeum Club	Commercial	5-lane	25 x 12	300	2003	
Clements Hall Leisure Centre	Public	8-lane	25 x 17	425	1979	2010
		Teaching	12 x 7	84		
King Edmund Business and Enterprise School	Educational	4-lane	18 x 10	180	1997	2009

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 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 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%																											

