



**Strategic Assessment of Need for
Swimming Pool Provision Elmbridge Borough
Council**

Facility Planning Model

National Run Report 2017

October 2017

Contents

1.	Introduction.....	1
2.	Supply of swimming pools	2
3.	Demand for swimming pools	6
4.	Supply & Demand Balance	7
5.	Satisfied Demand - demand from Elmbridge residents being met by supply.....	8
6.	Unmet Demand - demand from Elmbridge residents not currently being met.....	10
7.	Used Capacity - How well used are the facilities?	12
8.	Local Share - equity share of facilities	16
9.	Summary report.....	18
	Appendix 1: Swimming Pools Included and Excluded from the assessment.....	24
	Appendix 2 – Model description, Inclusion Criteria and Model Parameters	26

1. Introduction

- 1.1 This report and the accompanying maps provide a strategic assessment of the current level of provision for swimming pools in the Elmbridge Borough Council area. The assessment applies Sport England's Facilities Planning Model (fpm) data from the National Run as of January 2017.
- 1.2 The report sets out the findings under seven headings and includes data tables and maps. The headings are defined at the start and include: total supply; total demand; supply and demand balance; satisfied/met demand; unmet demand; used capacity (how full the pools are); and local share of pools. Each heading is followed by a commentary on the findings. The data for the neighbouring authorities to Elmbridge Borough is included in all the data tables. Where applicable the findings for the neighbouring authorities are compared to those in Elmbridge Borough.
- 1.3 A summary of main findings is set out at the end of the report.
- 1.4 The report and its findings will be used by the Borough Council in the development of strategic planning for the future provision of swimming pools across the Borough.
- 1.5 The information contained within the report should be read alongside the two appendices. Appendix 1 sets out the details of the facilities within this assessment. Appendix 2 provides background to the fpm, facility inclusion criteria and the model parameters.
- 1.6 Fpm modelling and datasets builds in a number of assumptions as set out in Appendix 2, regarding the supply and demand of provision. This report should not be considered in isolation and it is recommended that this analysis should form part of a wider assessment of provision at the local level. This should include other available information and knowledge from (a) sports perspective (National Governing Bodies and local clubs), and (b) from a local perspective (the local authority /facility providers and operators and the local community).
- 1.7 This report has been prepared by Neil Allen Associates (naa) on behalf of Sport England. naa are contracted by Sport England to undertake facility planning model work on behalf of Sport England and local authorities.

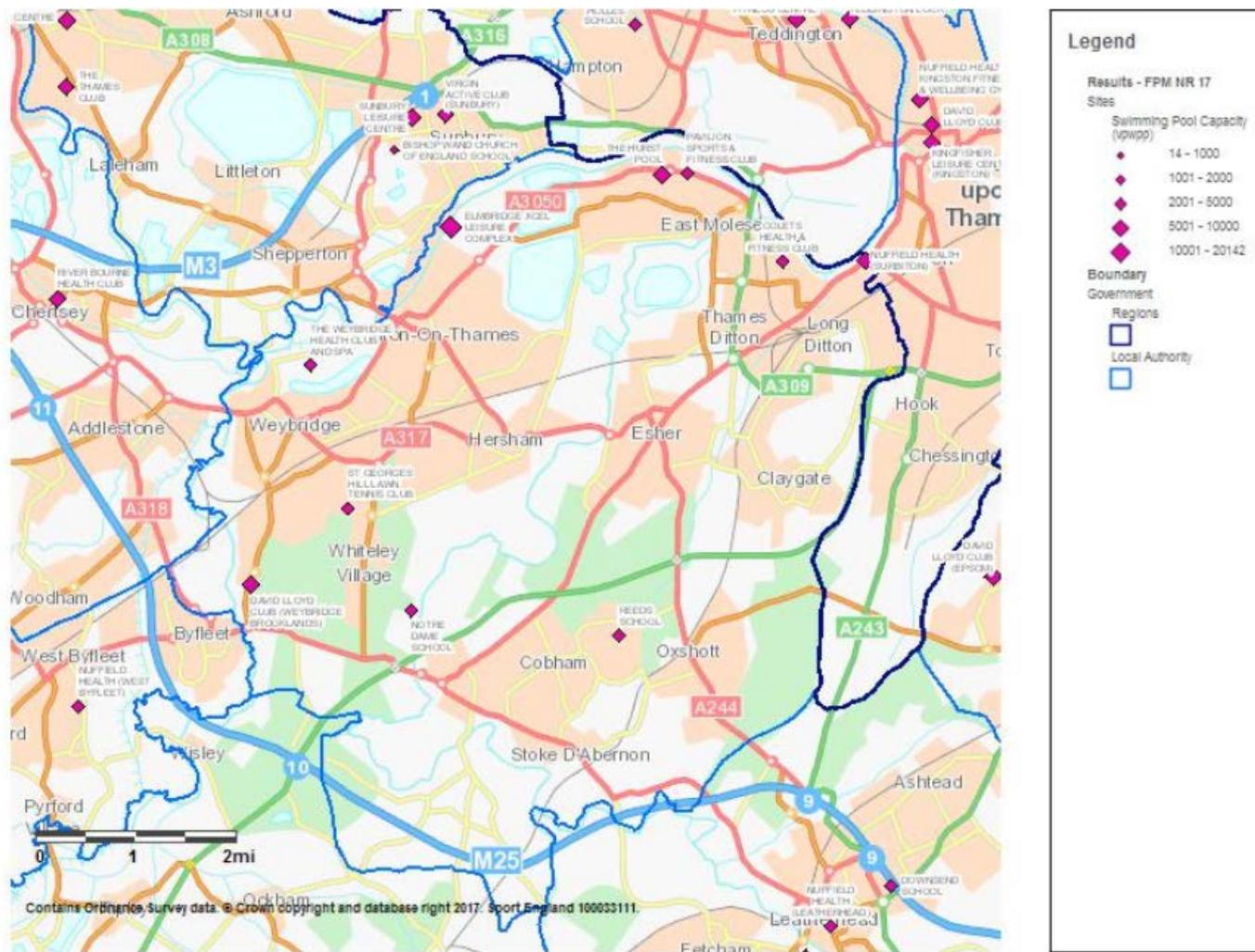
2. Supply of Swimming Pools

Total- Supply	Elmbridge	Guildford	Kingston upon Thames	Mole Valley	Richmond upon Thames	Runnymede	Spelthorne	Woking
Number of pools	14	10	7	8	11	4	8	5
Number of pool sites	10	7	4	5	8	3	5	3
Supply of total water space in sq m	3,032	3,086	1,275	1,600	2,395	716	1,423	874
Supply of publicly available water space in sq m available in the peak period)	2,766	2,141	1,190	1,357	2,024	597	1,323	781
Supply of total water space in visits per week peak period	23,980	18,561	10,320	11,768	17,550	5,175	11,466	6,773
Water space per 1,000 population	22	21	7	18	12	8	14	9

- 2.1 Definition of supply – this is the supply, or, capacity of the swimming pools which are available for public and club use in the weekly peak period. The supply is expressed in number of visits that a pool can accommodate in the weekly peak period and in sq metres of water.
- 2.2 There are fourteen individual pools on ten swimming pool sites in Elmbridge in 2017. The supply of water space available for community use in the weekly peak period is 2,766 sq metres of water. (Note; for context a 25m x 4 lane pool is between 210 – 250 sq metres of water, depending on lane width).
- 2.3 Based on a measure of water space per 1,000 population, Elmbridge has a total of 22 sq metres of water space per 1,000 population in 2017.
- 2.4 Elmbridge has the highest provision based on this measure, when compared with its neighbours. The next highest provision is in Guildford at 21 sq metres of water per 1,000 population, then Mole Valley at 18 sq metres of water and Spelthorne at 14 sq metres of water per 1,000 population. The lowest level of provision is in Kingston upon Thames at 7 sq metres of water per 1,000 population, so there is quite a range between Elmbridge as the highest and Kingston as the lowest.
- 2.5 The SE Region average is 13 sq metres of water per 1,000 population and the England average is 12 sq metres of water per 1,000 population. So the provision in Elmbridge is considerably above the regional average and national level of water space per 1,000 population.
- 2.6 The level of provision required in Elmbridge will be based on the supply and demand findings. This is simply one measure of the Elmbridge supply and compared with the neighbouring authorities. It is set out because some local authorities like to understand how their provision compares with others.

- 2.7 The location of the swimming pools sites in Elmbridge is set out in Map 2.1 below. The purple diamond is the pool site location and the size of the diamond is representative of the scale of the pool site in terms of the pool capacity.
- 2.8 Of note is that a lot of the pool locations are on the periphery of the Borough and this means they could well be the nearest pool for residents in neighbouring authorities. Based on residents using the nearest pool to where they live then this could mean there is a high level of imported demand and use of the Elmbridge pools.

Map 2.1: Location of swimming pool sites Elmbridge Borough 2017



- 2.9 A description of all the pools in Elmbridge Borough is set out in Table 2.1 overleaf. The average age of all the swimming pool sites is 23 years. The oldest pool site is the 25m x 4 lane pool at Colets Health and Fitness Club (which opened in 1977 and was modernised in 2001). The most recent pool site is the 20m x 4 lane pool at The Weybridge Health Club and Spa, which opened in 2007.

- 2.10 The Hurst Pool opened in 1996 and was modernised in 2006, whilst the Elmbridge XCEL Leisure Complex opened in 2006.
- 2.11 In terms of swimming pool scale, it is an extensive supply of pools across the Borough. The public pool sites are the largest sites, with the Elmbridge XCEL Centre having a 25m x 8 lane main pool (400 sq metres of water) and a separate teaching/learner pool of 200 sq metres of water. The Hurst Pool site has a 25m x 6 lane main pool of 313 sq metres of water and a separate teaching/learner pool of 72 sq metres of water.
- 2.12 So the public swimming pool sites will be able to provide for all the swimming activities of: learn to swim; public recreational swimming; fun and leisure activities; lane and fitness swimming; and swimming development through clubs.
- 2.13 There are five commercial swimming pool sites and again these are extensive in scale. The David Lloyd Centre in Weybridge (1995 and modernised in 2006) has, unusually for a commercial pool site, two individual pools, with a 25m x 6 lane main pool and a separate teaching learner pool of 120 sq metres of water - so an extensive swimming pool site.
- 2.14 The Nuffield Centre (1998) also has two pools but smaller in scale, with a 20m x 4 lane main pool and a separate splash pool of 50 sq metres of water. The three other commercial pool sites range in size from a 25m x 4 lane pool of 225 sq metres of water at The Colets Health and Fitness Club, to the 18m x 10m pool at the Pavilion Sports and Fitness Club (1993 and modernised in 2004) to the 20m x 8 m pool at the Weybridge Health Club and Spa (2007).
- 2.15 The commercial pool sites will be used for recreational swimming by the centre membership. Some commercial centres, most likely the health clubs, do operate day passes for recreational swimming, whilst some commercial centres also provide learn to swim programmes.
- 2.16 There are two pools within private independent schools, both schools have a 25m x 4 lane main pool, Notre Dame School (1976 and modernised in 2007) and Reeds School (1995). Based on the schools' web site information there is no swimming club or other community use/access to these pools.
- 2.17 Finally, the St George's Hill Lawn Tennis Club (1996 and modernised in 2016) has a 20m x 9 metre main pool.

Table 2.1: Swimming Pool Supply Elmbridge 2017

Name of Facility	Type	Dimensions	Area	Site Year Built	Site Year Refurbished
COLETS HEALTH & FITNESS CLUB	Main/General	25 x 9	225	1977	2001
DAVID LLOYD CLUB (WEYBRIDGE BROOKLANDS)	Main/General	25 x 15	375	1995	2006
DAVID LLOYD CLUB (WEYBRIDGE BROOKLANDS)	Learner/Teaching/Training	12 x 10	120		
ELMBRIDGE XCEL LEISURE COMPLEX	Main/General	25 x 18	450	2006	
ELMBRIDGE XCEL LEISURE COMPLEX	Main/General	20 x 10	200		
NOTRE DAME SCHOOL	Main/General	25 x 10	250	1976	2009
NUFFIELD HEALTH (SURBITON)	Main/General	20 x 10	200	1998	

Name of Facility	Type	Dimensions	Area	Site Year Built	Site Year Refurbished
NUFFIELD HEALTH (SURBITON)	Learner/Teaching/Training	10 x 5	50		
PAVILION SPORTS & FITNESS CLUB	Main/General	18 x 10	180	1993	2004
REEDS SCHOOL	Main/General	25 x 10	250	1995	
ST GEORGES HILL LAWN TENNIS CLUB	Main/General	20 x 9	188	1996	2016
THE HURST POOL	Main/General	25 x 13	313	1996	2006
THE HURST POOL	Learner/Teaching/Training	12 x 6	72		
THE WEYBRIDGE HEALTH CLUB AND SPA	Main/General	20 x 8	160	2007	

3. Demand for swimming pools

Total- Demand	Elmbridge	Guildford	Kingston upon Thames	Mole Valley	Richmond upon Thames	Runnymede	Spelthorne	Woking
Population	135,287	148,980	175,335	87,376	197,317	87,995	100,614	101,191
Swims demanded – visits per week peak period	8,792	9,618	11,669	5,432	13,024	5,678	6,424	6,586
Equivalent in water space – with comfort factor included	1,459	1,596	1,937	902	2,161	942	1,066	1,094
% of population without access to a car	10.90	13.20	23.70	11.40	23.60	14	14.20	14.50

- 3.1 Definition of total demand – it represents the total demand for swimming by both genders and for 14 five-year age bands from 0 to 65+. This 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, so as to arrive at a total demand figure, which is expressed in visits in the weekly peak period. Total demand is also expressed in sq metres of water.
- 3.2 The total population of Elmbridge Borough in 2017 is 135,287 people. There is quite a wide range for the total population across the authorities in the study area. It ranges from 197,317 people in Richmond upon Thames to 87,995 people in Runnymede.
- 3.3 The Elmbridge population generates a total swimming demand of 8,792 visits in the weekly peak period of week day lunchtimes (1 hour), weekday evenings (up to 5 hours per day) and weekend days (up to 7 hours per weekend day). This equates to a demand for 1,459 sq metres of water in the weekly peak period.
- 3.4 The percentage of the population without access to a car is recorded under the demand heading. In Elmbridge this is low. at 10.9% of the population and is the lowest percentage of all the local authorities across the study area.
- 3.5 The average for SE Region is 17.4% and for England wide it is 24.9% of the population who do not have access to a car.
- 3.6 The percentage of the population without access to a car is important because it influences travel patterns to pools. If it is low, as it is in Elmbridge, then car travel becomes the dominate travel mode. Given the drive time catchment area is the largest, at up to 20 minutes travel times, it means if there is high percentage of the population with access to a car and it is the dominate travel mode to pools, then there is increased access to a high number of pools by residents..
- 3.7 If there is a high percentage of the population without access to a car, then more people have to either walk or use public transport to access a pool. So a network of local accessible pools becomes more important.
- 3.8 The data is recording that in Elmbridge 86.8% of all visits to pools are by car, (20 minutes' drive time catchment area), with 8.5% are by walking (20 minutes/1 mile walk to catchment area) and 4.7% by public transport (20 minutes catchment area and about half the area of car travel).

4. Supply & Demand Balance

Supply/Demand Balance	Elmbridge	Guildford	Kingston upon Thames	Mole Valley	Richmond upon Thames	Runnymede	Spelthorne	Woking
Supply - Swimming pool provision (sq m) based on hours available for community use	2,766	2,141	1,190	1,357	2,024	597	1,323	781
Demand - Swimming pool provision (sq m) with a 'comfort' factor	1,459	1,596	1,937	902	2,161	942	1,066	1,094
Provision available compared to the minimum required to meet demand	1,307	545	-747	455	-137	-345	257	-313

- 4.1 Definition of supply and demand balance – supply and demand balance compares the total demand for swimming in Elmbridge with the total supply. It therefore represents an assumption that ALL the Elmbridge demand for swimming is met by ALL the supply in Elmbridge. (Note: supply and demand balance does exactly the same for the other authorities).
- 4.2 In short, supply and demand balance is NOT based on where the venues are located and their catchment area extending into other authorities. Nor, the catchment areas of pools in neighbouring authorities extending into Elmbridge. Most importantly supply and demand balance does NOT take into account the propensity/reasons for residents using facilities outside their own authority. The more detailed modelling based on the CATCHMENT AREAS of pools is set out under Satisfied Demand, Unmet Demand and Used Capacity headings.
- 4.3 The reason for presenting the supply and demand balance is because some local authorities like to see how THEIR total supply of pools compares with THEIR total demand for pools. Supply and demand balance presents this comparison.
- 4.4 When looking at this closed assessment, the resident population of Elmbridge in 2017 generates a demand for 1,459 sq metres of water. This compares to the total supply of 2,766 sq metres of water, which is available for community use in the weekly peak period. So there is a positive balance of 1,307 sq metres of water. (For context, a 25m x 4 lane pool is between 212 – 250 sq metres of water, depending on lane width).
- 4.5 This supply/demand balance reflects the large supply of swimming pools in the Borough, with 14 individual pools and 10 pool sites. The supply of swimming pools in Elmbridge is the highest of the eight authorities across the study area, whilst Elmbridge has the 4th highest population of the eight 8 local authorities and the 4th highest demand.
- 4.6 There is a positive balance in three of the other local authorities ranging from 257 sq metres of water in Spelthorne, to 545 sq metres of water in Guildford. There are negative balances in four authorities, ranging from 137 sq metres of water in Richmond upon Thames to 747 sq metres of water in Kingston upon Thames.
- 4.7 Overall, across the study area there is a positive supply and demand balance of 1,022 sq metres of water.
- 4.8 To repeat, supply and demand balance is simply comparing the Elmbridge demand with the Elmbridge supply of swimming pools. It is NOT based on the catchment area of pools, it would be wrong therefore to assume there is an “over supply” of 1,307 sq metres of water. The findings based on the location and the catchment area of swimming pools, and the distribution of demand across local authority boundaries are set out under the subsequent headings.

5. Satisfied Demand - demand from Elmbridge residents currently being met by supply

Satisfied Demand	Elmbridge	Guildford	Kingston upon Thames	Mole Valley	Richmond upon Thames	Runnymede	Spelthorne	Woking
Total number of visits which are met	8,493	9,233	11,091	5,204	12,622	5,250	6,097	6,115
% of total demand satisfied	96.60	96	95	95.80	96.90	92.50	94.90	92.90
% of demand satisfied who travelled by car	86.80	84.40	73.90	86.50	71.10	90	85.10	86.80
% of demand satisfied who travelled by foot	8.50	9.30	17.40	9.30	20.60	2.80	8.40	7.80
% of demand satisfied who travelled by public transport	4.70	6.30	8.80	4.20	8.40	7.20	6.50	5.30
Demand Retained	6,353	6,541	5,103	3,813	5,474	1,697	3,984	3,640
Demand Retained -as a % of Satisfied Demand	74.80	70.80	46	73.30	43.40	32.30	65.30	59.50
Demand Exported	2,141	2,692	5,988	1,391	7,148	3,553	2,113	2,476
Demand Exported -as a % of Satisfied Demand	25.20	29.20	54	26.70	56.60	67.70	34.70	40.50

5.1 Definition of satisfied demand – it represents the proportion of total demand that is met by the capacity at the swimming pools from residents who live within the driving, walking or public transport catchment area of a swimming pool.

5.2 In 2017, some 96.6% of the total demand for swimming from Elmbridge residents is being satisfied/met. So a very high level of the total demand for swimming is located inside the catchment area of a pool (pools both inside and outside the authority) and the pools have enough capacity to meet this level of total demand. Satisfied demand is above 90% of total demand in all the local authorities, so a very high level of total demand for swimming can be met. Satisfied demand is “lowest” in Woking but is still a very high 92.9% of total demand for swimming being met.

5.3 The reason there are high percentages of satisfied demand is because there is a total of 45 swimming pool sites and 67 individual pools across the eight local authorities. So when the assessment is made on the catchment area of pools, with residents using the nearest pool to where they live, irrespective of the local authority boundaries, there is a high number of pool sites which are accessible to residents.

Retained demand

5.4 There is a sub set of findings which are about how much of the Elmbridge demand for swimming is retained at the Elmbridge pools. This is based on the catchment area of the pools and residents using the nearest pool to where they live.

- 5.5 In 2017, some 74.8% of the total 96.6% of the total Elmbridge demand for swimming which is met/satisfied, is retained demand. This is a high level of retained demand and it demonstrates the nearest pool site for over seven out of ten visits to a pool by an Elmbridge resident, is a pool located in the Borough.
- 5.6 In short, the Elmbridge pool locations and catchment areas are in the right locations to retain the majority of the Elmbridge demand for swimming within the Borough. In any future assessment of need for swimming pools, it will be important to include the scale and location of new residential growth across the Borough, as this could change the distribution of swimming demand and the level of retained demand. The nearest pool for more of the Elmbridge population could then be pools in neighbouring authorities, with less of the Elmbridge demand being retained at the pool sites in the Borough.

Exported demand

- 5.7 The residual of satisfied demand, after retained demand, is exported demand. In 2017 the estimate is that just over 25% of the Elmbridge satisfied demand for swimming is met outside the authority. The data does not identify how much of the Elmbridge demand goes to which authority or pool, it just provides the total percentage figure.

6. Unmet Demand - demand from Elmbridge residents not currently being met

Unmet Demand	Elmbridge	Guildford	Kingston upon Thames	Mole Valley	Richmond upon Thames	Runnymede	Spelthorne	Woking
Total number of visits in the peak, not currently being met	299	385	578	228	401	428	327	471
Unmet demand as a % of total demand	3.40	4	5	4.20	3.10	7.50	5.10	7.10
Equivalent in water space m2 - with comfort factor	49	63	96	37	66	71	55	78
% of Unmet Demand due to ;								
Lack of Capacity -	0.60	0	1.70	0	0.80	0	0.60	0
Outside Catchment -	99.40	100	98.30	100	99.20	100	99.40	100

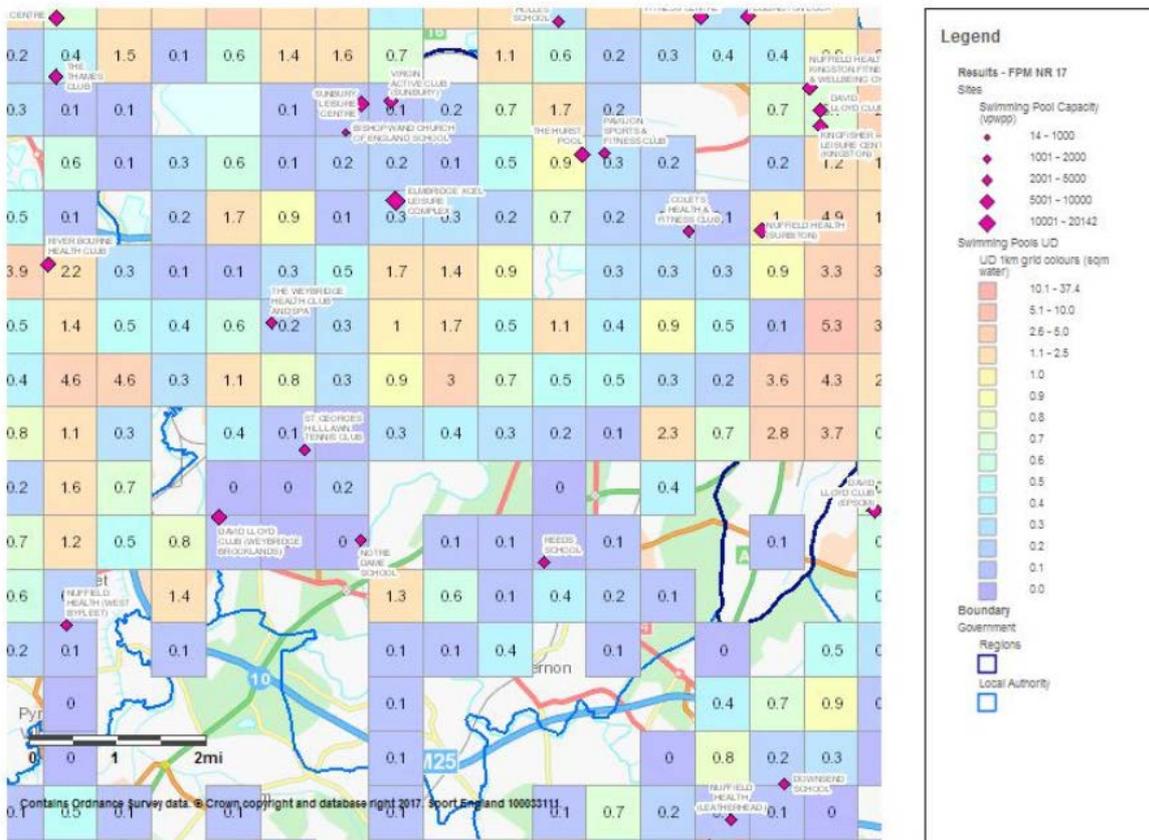
- 6.1 The unmet demand definition has two parts to it - demand for pools which cannot be met because (1) there is too much demand for any particular swimming pool within its catchment area; or (2) the demand is located outside the catchment area of any pool and is then classified as unmet demand.
- 6.2 In 2017 the Elmbridge unmet demand is 3.4% of total demand and this equates to 49 sq metres of water. Of this total 99.4% is under the second definition, unmet demand located outside the catchment area of a pool, with just under 0.6% from lack of swimming pool capacity.
- 6.3 So when the assessment is based on the catchment area of pools and across local authority boundaries the level of unmet demand is very low.
- 6.4 The unmet demand because of lack of access, is most likely by people who do not have access to a car and live outside the walk to catchment area of a pool, or, the public transport catchment of a pool. This is the significance of the low but still 10.9% of Elmbridge residents who do not have access to a car.
- 6.5 Unmet demand from residents who do not have access to a car and have to walk to pools or use public transport will always exist. This is because it is not possible to get complete geographic coverage whereby all areas of an authority are inside catchment, when the walking and public transport catchment areas are so small. The key point is not that unmet demand outside catchment exists, but the scale, and at 49 sq metres of water – from lack of access - it is not a large scale level of unmet demand.
- 6.6 Map 6.1 overleaf shows the location and scale of unmet demand for swimming across the Borough. The squares are colour coded and the values in each 1 kilometre grid square are in sq metres of water. The blue to green squares have values between 0.1 – 0.7 sq metres of water, so very low values. The yellow squares represent 0.8 – 1 sq metres of water, the lightest pink 1 – 2.5 sq metres of water and mid pink 2.5 – 5 sq metres of water.
- 6.7 Unmet demand is distributed in very low values across the Borough. There is no one area where there is a cluster of high unmet demand, it is highest in the Hersham and Esher areas with around 15 sq metres of water. Then unmet demand is located further

east, in the Thames Ditton and south to Claygate, the unmet demand in this area is around 5 sq metres. The remainder of the unmet demand is distributed in very low values across the Borough.

Map 6.1: Unmet demand for swimming Elmbridge 2017

Facilities Planning Model - National Runs - Swimming Pools 2017 Unmet Demand

Unmet Demand expressed as square metres of water (round to two decimal places). Data outputs shown thematically (colours) at either output area level or aggregated at 1km square (figure labels).



7. Used Capacity - How well used are the facilities?

Used Capacity	Elmbridge	Guildford	Kingston upon Thames	Mole Valley	Richmond upon Thames	Runnymede	Spelthorne	Woking
Total number of visits used of current capacity	12,413	8,870	8,092	4,919	9,462	2,802	8,254	4,549
% of overall capacity of pools used	51.80	47.80	78.40	41.80	53.90	54.10	72	67.20
% of visits made to pools by walkers	8.40	9.40	22.40	9.60	20.40	4.60	6.30	10.10
% of visits made to pools by road	91.60	90.60	77.60	90.40	79.60	95.40	93.70	89.90
Visits Imported;								
Number of visits imported	6,060	2,329	2,988	1,106	3,988	1,104	4,271	909
As a % of used capacity	48.80	26.30	36.90	22.50	42.10	39.40	51.70	20

- 7.1 Definition of used capacity - is a measure of usage and throughput at swimming pools and estimates how well used/how full facilities are. The facilities planning model is designed to include a 'comfort factor', beyond which, in the case of pools, the venues are too full. The model assumes that usage over 70% of capacity is busy and the swimming pool is operating at an uncomfortable level above that percentage.
- 7.2 In 2017, the pools in Elmbridge are estimated to be operating at 51.8% of pool capacity used in the weekly peak period, as a Borough average. A large part of the explanation for this finding is that the resident population of Elmbridge in 2017 generates a demand for 1,459 sq metres of water. This compares to the total supply of 2,766 sq metres of water which is available for community use in the weekly peak period. So there is a positive balance of 1,307 sq metres of water.
- 4.9 Furthermore, across the eight authorities in the study area, the supply of swimming pools in terms of sq metres of water, exceeds demand by 1,022 sq metres of water.
- 7.3 The Borough wide average used capacity does vary when viewing the findings for individual swimming pool sites, especially the public leisure centres which have a much higher used capacity. The findings on used and unused capacity for all the pool sites is set out in Table 7.1 overleaf (green columns).
- 7.4 The public leisure centres at Elmbridge Xcel Leisure Complex has an estimated used capacity of 78% in the weekly peak period and at The Hurst Pool it is an estimated 71% of pool capacity used at peak times.
- 7.5 The public swimming pools will provide for all the swimming activities of: learn to swim; public recreational swimming; fun and leisure activities; lane and fitness swimming; and swimming development through clubs.
- 7.6 The centres will be accessible for public use as well as club use. The opening hours will be extensive and the centres will be proactively managed to encourage and support swimming participation. Finally, as public leisure centres there is not the requirement to pay a monthly membership fee to access the swimming pools. All these factors contribute to higher levels of pool usage at the public swimming pool sites.

- 7.7 It is important to consider also the scale of each pool site and not view the used capacity percentage figure in isolation. The public swimming pool sites are the biggest pool sites in the Borough: the Elmburgh Xcel pool site has two individual pools and a total water area of 650 sq metres of water. Whilst the Hurst Pool site has a main pool of 25m x 6 lanes and 313 sq metres of water and a teaching learner pool of 72 sq metres of water, a total water area of 385 sq metres of water.
- 7.8 As they are very large pool sites, these pools will be able to accommodate a higher level of usage than, say, a 25m x 4 lane pool of 250 sq metres of water. So not only is the percentage of pool capacity used higher at the public pools, they can also because of their size, accommodate more use than the other pools in the Borough. To repeat, it is important to consider the scale of each pool site and not view the used capacity percentage figure in isolation.
- 7.9 The public swimming pools sites are busy pools with a used capacity which is on or above the Sport England pools full comfort level of 70% of pool capacity used at peak times. They are most likely accommodating most of the public swimming usage in the Borough, whilst also providing for the full range of swimming activities.
- 7.10 The commercial swimming pool sites have a range of pool capacity used in the weekly peak period, from 23% at the 188 sq metres of water pool at the St Georges Hill Lawn Tennis Club, to 53% at the Weybridge Health Club and Spa.
- 7.11 Most importantly, the type of use at the commercial pools will be recreational swimming by the centre membership. Some commercial pools may also provide learn to swim programmes. So the scope of swimming activity is limited, with the level of usage further limited to residents who wish to pay a monthly membership fee to access the pool (and other facilities at the commercial centres).
- 7.12 The estimated used capacity for the school pools for community use, not education use, ranges from 13% at Reeds School to 24% of pool capacity used at peak times at Notre Dame School. These are private independent schools and the type of community use will again be limited to recreational swimming and most likely by clubs, and/or extra-curricular use by pupils of the schools.
- 7.13 In short, there are two public swimming pool sites in the Borough, which provide for the full range of swimming activities and where access is widest, in terms of hours of use and swimming programmes. These two sites have an estimated used capacity which is at, or above, the Sport England benchmark measure of pools full at 70% of capacity in the weekly peak period, they are busy pools.
- 7.14 There are then eight other swimming pool sites which are either commercial pools or pools on independent school sites. They have much lower levels of use, in a range of 23% - 54% in the weekly peak period. Furthermore, the type of use is limited to recreational swimming by either the centre membership, or, community use agreed at the independent schools and which would appear to focus on extra-curricular use by school pupils.

Table 7.1: Used Capacity of Pool Sites Elmbridge 2017

Name of Site	Type	Dimen	Area	Site Year Built	Site Year Refurb	Public/Comm	% of Capacity Used	% of Capacity Not Used	Car % Demand	Public Tran % Demand	Walk % Demand
ELMBRIDGE							52%	48%	85%	7%	8%
COLETS HEALTH & FITNESS CLUB	Main/General	25 x 9	225	1977	2001	C	31%	69%	77%	5%	17%
DAVID LLOYD CLUB (WEYBRIDGE BROOKLANDS)	Main/General	25 x 15	375	1995	2006	C	44%	56%	92%	5%	3%
DAVID LLOYD CLUB (WEYBRIDGE BROOKLANDS)	Learner / Teaching / Training	12 x 10	120								
ELMBRIDGE XCEL LEISURE COMPLEX	Main/General	25 x 18	450	2006		P	78%	22%	89%	7%	4%
ELMBRIDGE XCEL LEISURE COMPLEX	Main/General	20 x 10	200								
NOTRE DAME SCHOOL	Main/General	25 x 10	250	1976	2009		24%	76%	91%	6%	4%
NUFFIELD HEALTH (SURBITON)	Main/General	20 x 10	200	1998		C	40%	60%	74%	8%	18%
NUFFIELD HEALTH (SURBITON)	Learner / Teaching / Training	10 x 5	50								
PAVILION SPORTS & FITNESS CLUB	Main/General	18 x 10	180	1993	2004	C	39%	61%	83%	6%	11%
REEDS SCHOOL	Main/General	25 x 10	250	1995		C	13%	87%	86%	5%	9%
ST GEORGES HILL LAWN TENNIS CLUB	Main/General	20 x 9	188	1996	2016	C	23%	77%	88%	5%	6%
THE HURST POOL	Main/General	25 x 13	313	1996	2006	P	71%	29%	84%	8%	8%
THE HURST POOL	Learner / Teaching / Training	12 x 6	72								
THE WEYBRIDGE HEALTH CLUB AND SPA	Main/General	20 x 8	160	2007		C	53%	47%	87%	6%	8%

Imported demand

7.15 Imported demand is reported under used capacity because it measures the demand from residents who live outside Elmbridge but the nearest pool to where they live is inside the Borough. So if they use the pool nearest to where they live this becomes part of the used capacity of the Elmbridge pools.

7.16 In 2017 a very high estimated 48% of the used capacity of the Elmbridge pools is imported. As Map 2.1 illustrates seven of the ten pool sites are located on the periphery of the Borough. So for many residents in neighbouring Boroughs, the nearest pool to where they live is located in Elmbridge and hence the high level of imported demand. As with exported demand, the data only reports the total imported demand and not how much demand comes from each authority.

7.17 Also, if any of the pools in the neighbouring authorities are full, and if residents in these neighbouring authorities live within the drive time catchment area of a pool in Elmbridge, then the model will re-distribute this demand to the Elmbridge pools. This could be another reason for the high level of imported demand being met at the Elmbridge pools.

8. Local Share - equity share of facilities

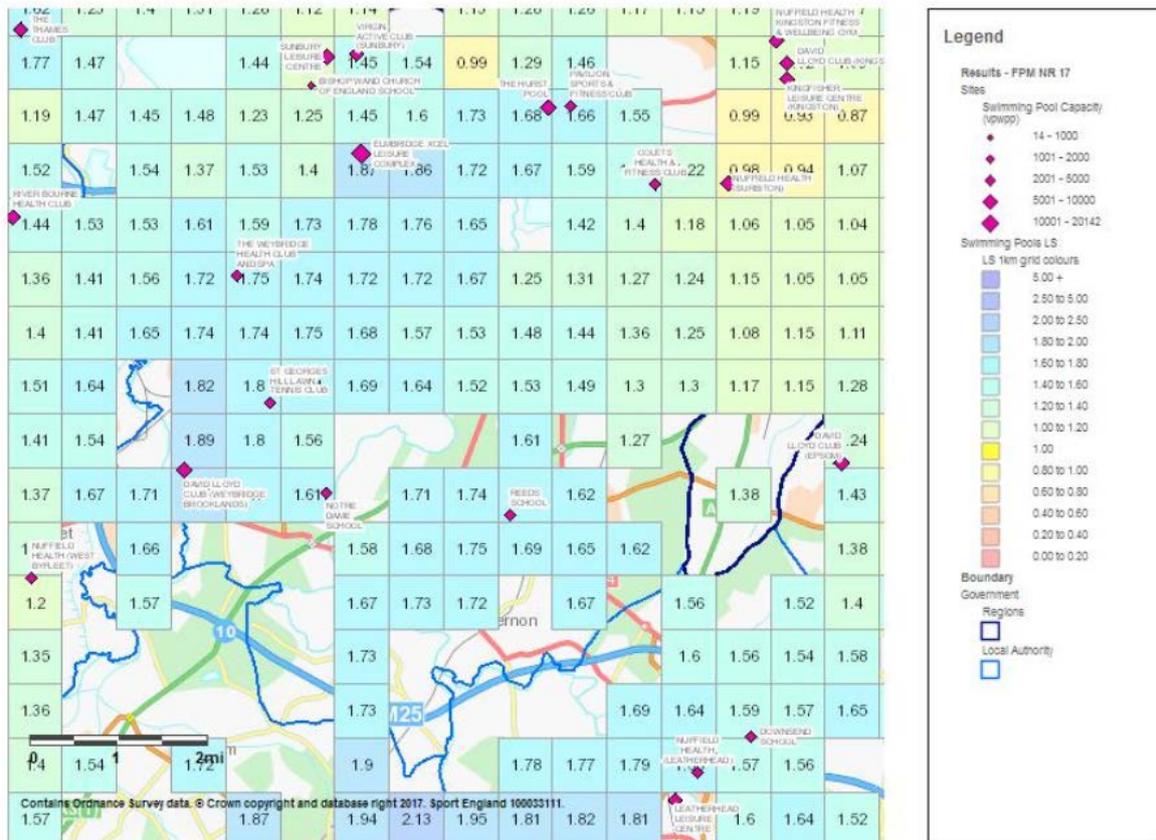
Local Share	Elmbridge	Guildford	Kingston upon Thames	Mole Valley	Richmond upon Thames	Runnymede	Spelthorne	Woking
Local Share: <1 capacity less than demand, 1> capacity greater than demand	1.60	1.70	1.10	1.70	1.40	1.50	1.30	1.20

- 8.1 Local share has quite a complicated definition - it helps to show which areas have a better or worse share of facility provision. It takes into account the size and availability of facilities as well as travel modes. Local share is useful at looking at 'equity' of provision.
- 8.2 Local share is the available capacity that can be reached in an area divided by the demand for that capacity in the area. A value of 1 means that the level of supply just matches demand, while a value of less than 1 indicates a shortage of supply and a value greater than 1 indicates a surplus.
- 8.3 Elmbridge has a local share across the Borough of 1.6 and so supply is greater than demand in terms of local share of pools. Local share is also above 1 in all the neighbouring authorities, with Elmbridge having the highest local share figure.
- 8.4 Local share does vary across Elmbridge and its distribution is set out in Map 8.1 overleaf. The two shades of green squares have a value of 1. – 1.20, 1.20 – 1.40. Whilst the two shades of turquoise squares have a value of between 1.40 - 1.60, 1.60 – 1.80 and the yellow squares have a value of 1 – 0.80.
- 8.5 Local share is highest in and around Weybridge and Cobham and it may well be that population density is lower in these parts of the Borough but there are pools located in these areas. So there is possibly a bigger supply to share amongst a population which is lower in these areas than elsewhere in the Borough.

Map 8.1: Local Share of Swimming Pools Elmbridge 2017

Facilities Planning Model - National Runs - Swimming Pools 2017 Local Share

Share of water divided by demand. Data outputs shown thematically (colours) and aggregated at 1km square (figure labels). Local Share Values: 1 – Supply equals Demand, 2 – Supply is double Demand, 0.5 – Supply is half Demand.



9. Summary report

Report Context

- 9.1 The fpm assessment provides a hard evidence base of findings relating to swimming pool provision across Elmbridge in 2017. It is for one year and the findings need to be placed in a longer term assessment of swimming pool provision. Plus the wider role swimming pools play in meeting the objectives of Elmbridge Borough Council.

Swimming Pool Supply

- 9.2 There are fourteen individual pools on ten swimming pool sites in Elmbridge in 2017. The supply of water space available for community use in the weekly peak period is 2,766 sq metres of water. (For context a 25m x 4 lane pool is between 210 – 250 sq metres of water, depending on lane width).
- 9.3 Of note, is that most of the pool locations are on the periphery of the Borough and this means they could well be the nearest pool location for residents in neighbouring authorities. Assuming residents use the nearest pool to where they live, then this could mean there is high level of imported demand and use of the Elmbridge pools (reported under used capacity of pools).
- 9.4 The average age of all the swimming pool sites is 23 years. The oldest pool site is the 25m x 4 lane pool at Colets Health and Fitness Club (which opened in 1977 and was modernised in 2001). The most recent pool site is the 20m x 4 lane pool at The Weybridge Health Club and Spa, which opened in 2007.
- 9.5 The public Hurst Pool site opened in 1996 and was modernised in 2006, whilst the Elmbridge XCEL leisure complex opened in 2006.
- 9.6 In terms of swimming pool scale, it is an extensive scale of swimming pools across the Borough. The two public pool sites are the largest sites, with the Elmbridge XCEL Centre having a 25m x 8 lane main pool (400 sq metres of water) and a separate teaching/learner pool of 200 sq metres of water. The Hurst Pool site has a 25m x 6 lane main pool of 313 sq metres of water and a separate teaching/learner pool of 72 sq metres of water.
- 9.7 So both public swimming pool sites will be able to provide for all the swimming activities of: learn to swim; public recreational swimming; fun and leisure activities; lane and fitness swimming; and swimming development through clubs.
- 9.8 There are five commercial swimming pool sites and again these are quite extensive in scale. The David Lloyd Centre in Weybridge (1995 and modernised in 2006) has, unusually for a commercial pool site, two individual pools, with a 25m x 6 lane main pool and a separate teaching learner pool of 120 sq metres of water - so an extensive swimming pool site.
- 9.9 The Nuffield Centre (1998) also has two pools but smaller in scale, with a 20m x 4 lane main pool and a separate splash pool of 50 sq metres of water. The three other commercial pool sites range in size from, a 25m x 4 lane pool of 225 sq metres of water at The Colets Health and Fitness Club, to the 18m x 10m pool at the Pavilion Sports and Fitness Club (1993 and modernised in 2004) to the 20m x 8 m pool at the Weybridge Health Club and Spa (2007).
- 9.10 The commercial pool sites will be used for recreational swimming by the centre membership. Some commercial centres, most likely the health clubs, do operate day passes for recreational swimming, whilst some commercial centres also provide learn to swim programmes.

9.11 There are two pools within private independent schools, both schools have a 25m x 4 lane main pool, Notre Dame School (1976 and modernised in 2007) and Reeds School (1995). Based on the schools' web site information there is no swimming club or other community use/access to these pools. They are used for after school clubs outside of the school day.

9.12 Finally, the St George's Hill Lawn Tennis Club (1996 and modernised in 2016) has a 20m x 9 metre main pool.

Measure of Provision

9.13 Based on a measure of water space per 1,000 population, Elmbridge has a total of 22 sq metres of water space per 1,000 population in 2017.

9.14 Elmbridge has the highest provision based on this measure, when compared with its neighbours. The next highest provision is in Guildford at 21 sq metres of water per 1,000 population and the lowest level of provision is in Kingston upon Thames at 7 sq metres of water per 1,000 population. So there is a wide range of provision between Elmbridge as the highest and Kingston as the lowest.

9.15 The SE Region average is 13 sq metres of water per 1,000 population and the England average is 12 sq metres of water per 1,000 population. So the provision in Elmbridge is considerably above the regional and national averages for water space per 1,000 population.

9.16 The level of provision required in Elmbridge will be based on the supply and demand findings. This is simply one measure of the Elmbridge supply and compared with the neighbouring authorities. It is set out because some local authorities like to understand how their provision compares with others.

Supply and Demand for Swimming Pools

9.17 When simply comparing the Elmbridge Borough demand for swimming pools with the supply of swimming pools in the Borough, the resident population of Elmbridge in 2017 generates a demand for 1,459 sq metres of water. This compares to the total supply of 2,766 sq metres of water which is available for community use in the weekly peak period.

9.18 So there is a positive balance of 1,307 sq metres of water. (Again, for context, a 25m x 4 lane pool is between 212 – 250 sq metres of water, depending on lane width).

9.19 This supply/demand balance reflects the large supply of swimming pools in the Borough, with 14 individual pools and 10 pool sites. The supply of swimming pools in Elmbridge is the highest of the eight authorities across the study area, whilst Elmbridge has the 4th highest population of the eight 8 local authorities and the 4th highest demand.

9.20 There is a positive balance in three of the other local authorities ranging from 257 sq metres of water in Spelthorne, to 545 sq metres of water in Guildford. There are negative balances in four authorities, ranging from 137 sq metres of water in Richmond upon Thames to 747 sq metres of water in Kingston upon Thames.

9.21 Overall, across the study area there is a positive supply and demand balance of 1,022 sq metres of water.

9.22 To repeat, supply and demand balance is simply comparing the Elmbridge demand with the Elmbridge supply of swimming pools. It is NOT based on the catchment area of pools, and it would be wrong therefore to assume there is an "over supply" of 1,307 sq metres of water. The findings based on the location and the catchment area of swimming pools, and the distribution of demand across local authority boundaries are set out under the subsequent heading.

Satisfied or Met Demand for Swimming

- 9.23 Satisfied or met demand represents the proportion of total demand that is met by the capacity at the swimming pools from residents who live within the driving, walking or public transport catchment area of a swimming pool.
- 9.24 In 2017, some 96.6% of the total demand for swimming from Elmbridge residents is being satisfied/met. So a very high level of the total demand for swimming is located inside the catchment area of a pool (pools both inside and outside the authority) and the pools have enough capacity to meet this level of total demand.
- 9.25 Satisfied demand is above 90% of total demand in all the local authorities, so a very high level of total demand for swimming can be met. Satisfied demand is “lowest” in Woking but is still a very 92.9% of total demand for swimming being met.
- 9.26 The reason there are high percentages of satisfied demand is because there is a total of 45 swimming pool sites and 67 individual pools across the eight local authorities. So when the assessment is made on the catchment area of pools and residents accessing the nearest pool to where they live, irrespective of the local authority boundaries, there is a high number of pool sites which are accessible to residents.

Retained Demand

- 9.27 There is a sub set of findings which are about how much of the Elmbridge demand for swimming is retained at the Elmbridge pools. This is based on the catchment area of the pools and residents using the nearest pool to where they live.
- 9.28 In 2017, some 74.8% of the total 96.6% of the total Elmbridge demand for swimming which is met/satisfied, is retained demand. This is a high level of retained demand and it demonstrates the nearest pool site for over seven out of ten visits to a pool by an Elmbridge resident, is to a pool located in the Borough.
- 9.29 In short, the Elmbridge pool locations and catchment areas are in the right locations to retain the majority of the Elmbridge demand for swimming within the Borough.

Unmet Demand for Swimming Pools

- 9.30 Unmet demand has two parts to it – unmet demand because (1) there is too much demand for any particular swimming pool within its catchment area; or (2) the demand is located outside the catchment area of any pool and is then classified as unmet demand.
- 9.31 In 2017 the Elmbridge unmet demand is 3.4% of total demand and this equates to 492 sq metres of water. Of this total 99.4% is under the second definition, unmet demand located outside the catchment area of a pool, with just under 0.6% from lack of swimming pool capacity.
- 9.32 So when the assessment is based on the catchment area of pools and across local authority boundaries the level of unmet demand is very low.
- 9.33 The unmet demand from lack of access, is most likely by people who do not have access to a car and live outside the walk to catchment area of a pool, or, the public transport catchment of a pool. This is the significance of the low but still 10.9% of Elmbridge residents who do not have access to a car.
- 9.34 Unmet demand from residents who do not have access to a car and have to walk to pools or use public transport will always exist. This is because it is not possible to get complete geographic coverage whereby all areas of an authority are inside catchment, when the walking and public transport catchment areas are so small.

- 9.35 The key point is not that unmet demand outside catchment exists, but the scale, and at 49 sq metres of water – from lack of access - it is a very low level of unmet demand.
- 9.36 Unmet demand is distributed in very low values across the Borough. There is no one area where there is a cluster of high unmet demand. Unmet demand is highest in the Hersham and Esher areas, with around 15 sq metres of water. After that, unmet demand in the Thames Ditton and south to Claygate, is around 5 sq metres. The remainder of the unmet demand is distributed in very low values across the Borough. (Map 6.1 illustrates the scale and location of unmet demand).

Used Capacity (how full are the Swimming Pools?)

- 9.37 The findings on pool capacity used are possibly the most important set of findings.
- 9.38 The fpm is designed to include a 'comfort factor', beyond which the venues are too full. The model assumes that swimming pool usage over 70% of capacity is busy and the swimming pool is operating at an uncomfortable level above that percentage. The pool itself becomes too full to swim and the changing and circulation areas become crowded.
- 9.39 In 2017, the pools in Elmbridge are estimated to be operating at 51.8% of pool capacity used in the weekly peak period, as a Borough average. A large part of the explanation for this finding is that the resident population of Elmbridge in 2017 generates a demand for 1,459 sq metres of water. This compares to the total supply of 2,766 sq metres of water which is available for community use in the weekly peak period. So there is a positive balance of 1,307 sq metres of water.
- 9.40 Furthermore, across the eight authorities in the study area, the supply of swimming pools in terms of sq metres of water, exceeds demand by 1,022 sq metres of water.
- 9.41 The Borough wide average used capacity does vary at individual pool sites, based on the scale of the pool site and how accessible the pools are for public and swimming club use.
- 9.42 The public leisure centres at Elmbridge XCEL Leisure Complex has an estimated used capacity of 78% in the weekly peak period and at The Hurst Pool it is an estimated 71% of pool capacity used at peak times.
- 9.43 The public swimming pools do provide for all the swimming activities of: learn to swim; public recreational swimming; fun and leisure activities; lane and fitness swimming; and swimming development through clubs.
- 9.44 The centres will be accessible for public use as well as club use. The opening hours will be extensive and the centres will be proactively managed to encourage and support swimming participation. Finally, as public leisure centres there is not the requirement to pay a monthly membership fee to access the swimming pools. All these factors contribute to higher levels of pool usage at the public swimming pool sites.
- 9.45 It is important to consider also the scale of each pool site and not view the used capacity percentage figure in isolation. The public swimming pool sites are the biggest pool sites in the Borough: the Elmbridge XCEL pool site has two individual pools and a total water area of 650 sq metres of water.
- 9.46 Whilst the Hurst Pool site has a main pool of 25m x 6 lanes and 313 sq metres of water and a teaching learner pool of 72 sq metres of water, a total water area of 385 sq metres of water.
- 9.47 As they are large pool sites, these pools will be able to accommodate a higher level of usage than, say, a 25m x 4 lane pool of 250 sq metres of water. So not only is the percentage of pool capacity used higher at the public pools, they can because of their size,

also accommodate more use than the other pools in the Borough. To repeat, it is important to consider the scale of each pool site and not view the used capacity percentage figure in isolation.

- 9.48 The finding is that the public swimming pools sites are busy pools, with a used capacity which above the Sport England pools full comfort level of 70% of pool capacity used at peak times. They are most likely accommodating most of the public swimming usage in the Borough, whilst also providing for the full range of swimming activities.
- 9.49 The commercial swimming pool sites have a range of pool capacity used in the weekly peak period, from 23% at the 188 sq metres of water pool at the St Georges Hill Lawn Tennis Club, to 53% at the Weybridge Health Club and Spa.
- 9.50 Most importantly, the type of use at the commercial pools will be recreational swimming by the centre membership. Some commercial pools may also provide learn to swim programmes. So the scope of swimming activity is limited and the level of usage is further limited to residents who wish to pay a monthly membership fee to access the pool and other facilities at the commercial centres.
- 9.51 The estimated used capacity for the school pools for community use, not education use, ranges from 13% at Reeds School to 24% of pool capacity used at peak times at Notre Dame School. These are private independent schools and the type of use appears to be limited to extra-curricular use by pupils at the schools.

Overall Summary

- 9.52 Elmbridge Borough has an extensive supply of swimming pools with 10 pool sites and 14 individual pools. The supply is also extensive in scale and in terms of the sq metres of water. The Elmbridge swimming pool supply is higher than any of the neighbouring local authorities.
- 9.53 By contrast, Elmbridge has the fourth highest level of total demand for swimming in terms of water area, when compared with the neighbouring local authorities.
- 9.54 These contrasting supply and demand balance findings mean the assessment findings are that, as a Borough wide average, the pools are estimated to be operating at 51% of pool capacity used in the weekly peak period. However the public leisure centres at Elmbridge XCEL Leisure Complex has an estimated used capacity of 78% in the weekly peak period and at The Hurst Pool it is an estimated 71% of pool capacity used at peak times.
- 9.55 In short, there are two public swimming pool sites in the Borough, which provide for the full range of swimming activities and where access is widest, in terms of hours of use and swimming programmes. These two sites have an estimated used capacity which is at, or above, the Sport England benchmark measure of pools full at 70% of capacity in the weekly peak period - they are busy pools.
- 9.56 There are then eight other swimming pool sites which are either commercial pools, or, pools on independent school sites. They have much lower levels of use, in a range of 13% - 54% in the weekly peak period. Furthermore, the type of use is limited to recreational swimming by either the centre membership, or, extra-curricular use by school pupils.
- 9.57 The overall assessment from the analysis of the Sport England 2017 data is that, across the Borough, the supply of swimming pools in Elmbridge is meeting demand. Furthermore, there is an extensive amount of water space capable of absorbing more demand. The conundrum or challenge is that access to most of the swimming pools is constrained because they are not public swimming pools. Access at most of these pools is by residents who chose to pay a monthly membership, and the type of use is for recreational swimming.

- 9.58 This means the full range of swimming activities is being met at the two public swimming pool sites and these are much busier pools sites.
- 9.59 Finally, the location of most of the pool sites on the periphery of Elmbridge means their catchment area extends into the neighbouring authorities. For many residents of these authorities, the nearest pool to where they live is in Elmbridge Borough (and possibly the quality of these pools is higher than pools in their own Boroughs).
- 9.60 Based on these residents choosing to swim at the nearest pool to where they live, then the finding is that a very large percentage of the usage of the pools in Elmbridge is by residents of neighbouring Boroughs. This does contribute to the financial performance of the Elmbridge pools and is a benefit therefore.

Appendix 1: Swimming Pools included and excluded in the assessment

Swimming Pools Included

Name of Facility	Type	Dimensions	Area	Site Year Built	Site Year Refurbished
COLETS HEALTH & FITNESS CLUB	Main/General	25 x 9	225	1977	2001
DAVID LLOYD CLUB (WEYBRIDGE BROOKLANDS)	Main/General	25 x 15	375	1995	2006
DAVID LLOYD CLUB (WEYBRIDGE BROOKLANDS)	Learner/Teaching/Training	12 x 10	120		
ELMBRIDGE XCEL LEISURE COMPLEX	Main/General	25 x 18	450	2006	
ELMBRIDGE XCEL LEISURE COMPLEX	Main/General	20 x 10	200		
NOTRE DAME SCHOOL	Main/General	25 x 10	250	1976	2009
NUFFIELD HEALTH (SURBITON)	Main/General	20 x 10	200	1998	
NUFFIELD HEALTH (SURBITON)	Learner/Teaching/Training	10 x 5	50		
PAVILION SPORTS & FITNESS CLUB	Main/General	18 x 10	180	1993	2004
REEDS SCHOOL	Main/General	25 x 10	250	1995	
ST GEORGES HILL LAWN TENNIS CLUB	Main/General	20 x 9	188	1996	2016
THE HURST POOL	Main/General	25 x 13	313	1996	2006
THE HURST POOL	Learner/Teaching/Training	12 x 6	72		
THE WEYBRIDGE HEALTH CLUB AND SPA	Main/General	20 x 8	160	2007	

Swimming Pools 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 Name	Facility Sub Type	Reason for Exclusion
ACS COBHAM INTERNATIONAL SCHOOL	Main/General	Private Use.
CLAREMONT FAN COURT SCHOOL	Lido	Private Use. Lido.
DANES HILL SCHOOL	Lido	Private Use. Lido.
ESHER CHURCH OF ENGLAND HIGH SCHOOL	Lido	Closed. Private Use. Lido.
ESHER CHURCH SCHOOL	Lido	Private Use. Too Small. Lido.
FELTONFLEET SCHOOL	Main/General	Private Use. Too Small.

Site Name	Facility Sub Type	Reason for Exclusion
IMBER COURT SPORTS CLUB	Main/General	Too Small.
LIVINGWELL HEALTH CLUB (COBHAM)	Learner/Teaching/Training	Too Small.
ST ANDREW'S CHURCH OF ENGLAND PRIMARY SCHOOL	Lido	Lido.
WALTON SWIMMING POOL (CLOSED)	Main/General	Closed.
WALTON SWIMMING POOL (CLOSED)	Learner/Teaching/Training	Closed.

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 to help 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; and
 - 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.
- 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. For example, the FPM was used to help assess the impact of a 50m swimming pool development in the London Borough of Hillingdon. The Council invested £22 million in the sports and leisure complex around this pool and received funding of £2,025,000 from the London Development Agency and £1,500,000 from Sport England¹.

¹ Award made in 2007/08 year.

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, taking into account 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 2005/6 jointly with SportScotland.
- 3.6 User survey data from the NBS and other appropriate sources are used to update the models parameters on a regular basis. The parameters are set out at the end of the document, and the range of the main source data used by the model includes:
- National Halls & Pools survey data –Sport England
 - Benchmarking Service User Survey data –Sport England
 - UK 2000 Time Use Survey – ONS
 - General Household Survey – ONS
 - Scottish Omnibus Surveys – Sport Scotland
 - Active People Survey - Sport England
 - STP User Survey - Sport England & SportScotland
 - Football participation - The FA
 - Young People & Sport in England – Sport England
 - Hockey Fixture data - Fixtures Live
 - Taking Part Survey - DCMS

4. Calculating Demand

- 4.1 This is calculated by applying the user information from the parameters, as referred to above, to the population². This produces the number of visits for that facility that will be demanded by the population.

² 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.

- 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 (OA)³.
- 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, hall, pitch number), 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. (See parameters in Section C).
- 5.3 Based on travel time information⁴ 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 borough, 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. Facility Attractiveness – for halls and pools only

- 6.1 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 effects the way visits are distributed between facilities. Attractiveness

³ Census Output Areas (OA) are the smallest grouping of census population data, and provides 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.

⁴ 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.

however, is very subjective. Currently weightings are only used for hall and pool modelling, with a similar approach for AGPs is being developed.

6.2 Attractiveness weightings are based on the following:

6.1.1. Age/refurbishment weighting – pools & 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 facilities 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.

6.1.2. Management & 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 program than halls run by LAs, 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.

6.3 To reflect this, two weightings curves are used for education and non-education halls, a high weighted curve, and a lower weighted curve;

6.1.3. High weighted curve - includes Non education management - better balanced programme, more attractive.

6.1.4. Lower weighted curve - includes Educational owned & managed halls, less attractive.

6.4 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. Comfort Factor – halls and pools

7.1 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's available for community use and the 'at one time capacity' figure (pools =1 user /6m2 , halls = 6 users /court). This gives each facility a "theoretical capacity".

7.2 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, whilst being within the peak period, are less busy and so will have fewer users.

7.3 To account of these factors the notion of a 'comfort factor' is applied within the model. For swimming pools 70%, and for sports halls 80%, of its theoretical capacity is considered as being the limit where the 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 and so the notion of having 'less busy' pitch is not applicable).

7.4 The comfort factor is used in two ways;

7.1.1. Utilised Capacity - How well used is a facility? 'Utilised capacity' figures for facilities are often seen as being very low, 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.

7.1.2. Adequately meeting Unmet Demand – the comfort factor is also used to increase the amount of facilities that are needed to comfortably meet the unmet demand. If this comfort factor is not added, then any facilities provided will be operating at its maximum theoretical capacity, which is not desirable as a set out above.

8. Utilised Capacity (used capacity)

8.1 Following on from Comfort Factor section, here is more guidance on Utilised Capacity.

8.2 Utilised capacity refers to how much of facilities 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 facilities theoretical maximum capacity (100%) as being an optimum position. This, in practise, would mean that a facility would need to be completely full every hour it was open in the peak period. This would be both unrealistic from an operational perspective and undesirable from a user's perspective, as the facility would completely full.

8.3 For examples:

A 25m, 4 lane pool has Theoretical capacity of 2260 per week, during 52 hour peak period.

	4-5pm	5-6pm	6-7pm	7-8pm	8-9pm	9-10pm	Total Visits for the evening
Theoretical max capacity	44	44	44	44	44	44	264
Actual Usage	8	30	35	50	15	5	143

8.4 Usage of a pool will vary throughout the evening, with some sessions being busier than others though programming, such as, an aqua-aerobics session between 7-8pm, lane swimming between 8-9pm. Other sessions will be quieter, such as between 9-10pm. This pattern of use would give a total of 143 swims taking place. However, the pool's maximum capacity is 264 visits throughout the evening. In this instance the pools utilised capacity for the evening would be 54%.

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

9. Travel times Catchments

- 9.1 The model uses travel times to define facility catchments in terms of driving and walking.
- 9.2 The Ordnance Survey (OS) Integrated Transport Network (ITN) for roads has been used to calculate the off-peak drive times between facilities and the population, observing one-way and turn restrictions which apply, and taking into account 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, and geographical location of the road, for example 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 & Outer London Boroughs have been further enhanced by data from the Department of Transport.
- 9.3 The walking catchment uses the OS Urban Path Network to calculate travel times along paths and roads, excluding motorways and trunk roads. A standard walking speed of 3 mph is used for all journeys.
- 9.4 The model includes three different modes of travel, by car, public transport & walking. Car access is also taken into account, in areas of lower access to a car, the model reduces the number of visits made by car, and increases those made on foot.
- 9.5 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	76%	15%	9%
Sports Hall	77%	15%	8%
AGP			
Combined	83%	14%	3%
Football	79%	17%	3%
Hockey	96%	2%	2%

- 9.6 The model includes a distance decay function; where the further a user is from a facility, the less likely they will travel. The set out below is the survey data with the % of visits made within each of the travel times, which shows that almost 90% of all visits, both car borne or walking, are made within 20 minutes. Hence, 20 minutes is often used as a rule of thumb for catchments for sports halls and pools.

Minutes	Sport halls		Swimming Pools	
	Car	Walk	Car	Walk
0-10	62%	61%	58%	57%
10-20	29%	26%	32%	31%
20 -40	8%	11%	9%	11%

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

Inclusion Criteria used within analysis 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 meters OR is less than 160 square meters.
- 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 1975⁵.

Facilities in Wales and the Scottish Borders included, as supplied by sportscotland and Sports Council for Wales.

Model Parameters used in the Analysis

Pool Parameters

At one Time Capacity	0.16667 per square metre = 1 person per 6 square meters																											
Catchment Maps	Car: 20 minutes Walking: 1.6 km Public transport: 20 minutes at about half the speed of a car NOTE: Catchment times are indicative, within the context of a distance decay function of the model.																											
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>10.39</td> <td>7.58</td> <td>9.39</td> <td>8.05</td> <td>4.66</td> <td>1.74</td> </tr> <tr> <td>Female</td> <td>13.78</td> <td>14.42</td> <td>16.04</td> <td>12.50</td> <td>7.52</td> <td>1.56</td> </tr> </tbody> </table>							Age	0 - 15	16 - 24	25 - 39	40 - 59	60-79	80+	Male	10.39	7.58	9.39	8.05	4.66	1.74	Female	13.78	14.42	16.04	12.50	7.52	1.56
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⁵ Choosing a date in the mid '70s ensures that the facility is included, whilst not overestimating its impact within the run.

Peak Period	Weekday: 12:00 to 13:30; 16:00 to 22:00 Saturday: 09:00 to 16:00 Sunday: 09:00 to 16:30 Total: 52 Hours
Percentage in Peak Period	63%