

APPENDIX 6

Modelling Profile – Swimming Pools Bromsgrove

Sport England's National Facilities Analysis (February 2009 and 2019)

Supply of Facilities

		2009	2019
1	Number of Pools	5	6
2	Number of Sites	4	5
3	Water space - total waterspace - scaled by hours	1169 m ² 950 m ²	1268 m ² 955 m ²
4	Capacity - vpwpp	7721 vpwpp	7,721
5	% of County supply of total water space	17.3%	17.3%
6	Waterspace/1000 Region = 12.3m ² /1000 England =12.9m ² /1000	12.2m ² /1000	11.4m ² /1000

Commentary

- There 4 swimming pool sites: 1 of which is based at a school, 1 LA owned and 2 commercial pools. It should be noted that the Lido at John Lloyd is not counted in the FPM figures. Also the learner pool in the Dolphin Centre this is because there is a main pool attached. Sites with only learner pools are not counted in the FPM figures.
- Bromsgrove provides 17.3% of Worcestershire county's supply of water space
- Water space in Bromsgrove is the same as the Regional average which is lower than the national average in water space compared to population.

Demand for Swimming

		2009	2019
7	Population	92,718	102,221
8	Swims demanded – vpwpp	5044 vpwpp	5,379 vpwpp
9	% of county - vpwpp	17%	17%
10	Equivalent in waterspace – with comfort factor included	877 m ²	946 m ²
11	% of population without access to a car Region = 19.5% England = 19.5%	8.2 %	8.2 %

Commentary

- Bromsgrove provides 17.3 % of water space for Worcestershire but only 17% demand overall. However comparing the Water space Demand with the water space Supply there is almost twice the supply as there is of Demand within Bromsgrove. This is normal within rural areas.
- Note – for realistic/ comfortable provision, supply needs to be greater than demand. If supply only matches demand, then all pools would need to be full all of the time in order to meet all demand.

- 8.2% of population without access to a car compared to the regional figure of 17.2% – helps to show how mobile demand is.

Satisfied Demand - demand being met by supply

		2009	2019
12	Total number of visits which are met – satisfied demand by no. of visits	4830 vpwpp	5,60 vpwpp
13	% of total demand satisfied Region = 91.1% England = 90.8%	95.87%	94.1%
14	% of demand satisfied who travelled by road Region = 82.7% England = 82.3%	91.2%	91.2%
15	% of demand satisfied who travelled by foot Region = 17.3% England = 17.7%	8.8%	8.8%
16	Net Importer/Exporter Export – 2175 (2019 – 2507) Import – 3309 (2019 – 3018) Retain – 2655 (2019 – 2553)	41% Importer	37% Importer

Commentary

- Level of total satisfied demand compared to region and England is higher than national and regional average.
- This suggests the location and distribution of swimming pools has a very high level of accessibility with virtually all the demand being located inside the one of the 4 catchment areas for swimming pools (catchment areas are defined by car borne, public transport and walk to.) NB the total supply is double the demand in the district (See above).
- Note not all LA's satisfied demand will be met within LA because some of its residents will be located closer to pools in neighbouring boroughs and districts. Also the reverse will apply, in that some swimming demand from residents in neighbouring authorities will be located closer to a swimming pool located in Bromsgrove and this demand will be 'imported' into Bromsgrove.
- Nature of Satisfied Demand by car is higher than the national and regional averages.

It is estimated that the export/import effect is that Bromsgrove is a net importer of swimming demand and some 41% of the total demand for swimming is imported into the district, from residents in neighbouring authorities, whose closest pool is located within Bromsgrove. NB from the information available under the national analysis it is not possible to break down how much of this demand is exported/imported to/from which individual authorities, however it is possible to identify this in a detailed Bromsgrove Supply and Demand analysis for swimming).

Unmet Demand - demand not currently being met

		2009	2019
17	Total number of visits not currently being met	214 vpwpp	236 vpwpp
18	Equivalent in Water space m ² - with comfort factor	38 m ²	41 m ²
19	% of County unmet demand (vpwpp & m ² are the	11 %	6.4%

	same figure).		
20	Unmet Demand due to; Lack of Capacity - Outside Catchment -	0% 100%	0% 100%
21	Unmet demand who do not have access to a car (outside catchment) Region = 84.4% England = 80.7%	82.2%	91.2%
22	Unmet demand who have access to a car (outside catchment) Region = 14.8% England = 18.9%	17.2 %	8.8%

Commentary

- The unmet demand within Bromsgrove is not due to the lack of water space but rather by those living out side the designated 20mins catchment areas. It is also worth noting that there is a very low level of unmet demand within the district.
- Location of unmet demand is by and large due the rural nature of the District.
- Nature of unmet demand predominantly outside catchment and be will be walkers. Make link to car access % is by and large due the rural nature of the District. It is worth noting that that there is a higher car access than both regional and nationally within Bromsgrove.

Facilities - How well used are the facilities

		2009	2019
23	Total number of visits used of current capacity	5964 vpwpp	6299 vpwpp
24	% of overall capacity of pools used Regional = 62% England = 57.1%	77.2%	81.2%
25	% of visits made to pools by walk Region = 17.5% England = 17.7%	16%	15.3%
26	% of visits made to pools by road Region = 82.5% England = 82.3%	84%	84.7%

Commentary

- Amount of capacity of supply used – Bromsgrove has a good supply of water space and the overall capacity under the national regional usage. 70% usage is viewed as busy and comfortable. If the 100% is maximum capacity in peak periods was achieved, then there would be no space to carry out any activity, the figure of 80% is recognised as being the optimal comfort/capacity of a pool.
- Both commercial sites are equally, and Bromsgrove school is the least, mainly because it is on a school site.
- By and large all the pools in the district have a very high percentage of car visits.

Pools Included:

Facilities	Weightings % (2019) (by age)	Provider	Water Space (2019) M ²	Capacity VPWPP	Peak Period Demand	% this Demand of Capacity (2019)
BROMSGROVE SCHOOL	45 (63)	P	250	1055	769 (770)	72.9 (73)
DAVID LLOYD CLUB (BROMSGROVE)	99 (89)	C	325	2641	2268 (2641)	85.9 (100)
DOLPHIN CENTRE (BROMSGROVE)	81 (39)	P	413.9	2971	2103 (1357)	70.8 (45.7)
LIVINGWELL HEALTH CLUB (BROMSGROVE)	90 (65)	C	180	1055	824 (803)	78.1 (76.1)

Appendix - Background

Inclusion Criteria used for this analysis

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.¹
- Exclude all leisure pools where the area is less than 200m²
- Include all 'planned', 'under construction, and 'temporarily closed' facilities where identified.
- Where opening times were missing assumes on availability have been made based on similar facility types.
- Where the year built is missing assume date 1975².
- Facilities in Wales and the Scottish Borders included, as supplied by sportscotland and Sports Council for Wales. All facilities weighted 75% due to no data on age of facilities.

Attractiveness Weightings

Not all facilities are the same and users will find certain facilities more attractive to use than others. Attractiveness however, is very subjective. In attempt to reflect this in this modeling work, the facility age/year in it was last significantly refurbished has been used as an indicator of quality and therefore attractiveness.

The assumption used in this analysis is that the older a facility is, the less attractive it will be to users. It is recognized that this is a general assumption and that there will be examples where older facilities are more attractive than newly built ones due to excellent local management, programming and sports development.

¹ 160m is equivalent to a 20m x 8m pool. This assumption will exclude very small pools, such as plunge pools and hotel pools.

² Choosing a date in the mid '70s ensures that the facility is included, whilst not overestimating its impact within the run.

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.

Example of weighting factor; Year pool was built	Attractiveness Weighting
2007	100%
1998	96%
1988	86%
1978	76%
1960	58%
1950	48%
1920	20%

To reflect the increased cost element often associated with commercial facilities an additional weighing factor is incorporated within the model. 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.

Comfort Factor

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 =1user /6m² , halls = 3users /court). This gives each facility a "theoretical capacity".

If the facilities were full to their theoretical capacity then there would simple 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.

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.

The comfort factor is used in two ways;

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. 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.

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.

Maps

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Travel times Catchments

The model use travel times to define facility catchments. These travel times have been derived through national survey work, and so are based on actual travel patterns of users. With the exception of London where DoT travel speeds are used for Inner & Outer London Boroughs, these travel times are used across the country and so do not pick up on any regional differences, of example, longer travel times for remoter rural communities.

The model includes three different modes of travel, by car, public transport & walking. Car ownership levels are also taken into account, in areas of low car ownership, the model reduces the number of visits made by car, and increases those made on foot.

Overall, surveys have shown that the majority of visits made to swimming pools and sports halls are made by car, with a significant minority of visits being made on foot and the least number of visits made by public transport:

	Car	Public transport	Walking
Pool	76.5%	5.7%	17.8%
Hall	80.2%	4.3%	15.5%

The model also includes a distance decay function; where the further a user is from a facility, the less likely they will travel. The table shows 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 can be used as a rule of thumb for catchments for sports halls and pools.

Minutes	Sport halls		Swimming Pools	
	Car	Walk	Car	Walk
0-10	58%	66%	59%	62%
10-20	31%	23%	30%	23%
20 -40	8%	6%	9%	7%

NOTE: These are approximate figures, and should only used as a guide, particularly for walking where the distance used in the model has been converted to a travel time.

Utilised Capacity (used capacity of pools)

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

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. England figure for Feb 2008 Pools was only 57.6%.

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 users perspective, as the facility would completely full.

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

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%.

70% utilised capacity is used as a guide to indicate that pools are becoming busy.