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Creating a lifelong sporting habit

Strategic Assessment of need for Swimming Pools Provision in Winchester City Council

Facilities Planning Model

National Run

2016 Profile Report

June 2016

Contents

1. Introduction

1.1. This report and the accompanying maps provide a strategic assessment of the current level of provision for swimming pools in Winchester. This assessment uses Sport England's Facilities Planning Model and the data from National Facilities Audit run as of January 2016.

1.2. The information contained within the report should be read alongside the two appendices. Appendix 1 sets out the facilities that have been included within this analysis together with those that have been excluded. Appendix 2 provides background to the Facilities Planning Model (FPM), facility inclusion criteria and the model parameters.

1.3. The FPM modelling and dataset 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, using other available information and knowledge. The FPM outputs should be used in conjunction with other data and information provided by (a) sports perspective (NGB and local clubs & teams), and for; (b) a local perspective (from the LA/facility providers/community).

1.4. To help with comparative analysis, the data outputs for Winchester are compared with national and regional averages and also data for a number of the adjacent neighbouring authorities (Basingstoke & Deane, East Hampshire, Eastleigh and Test Valley) too.

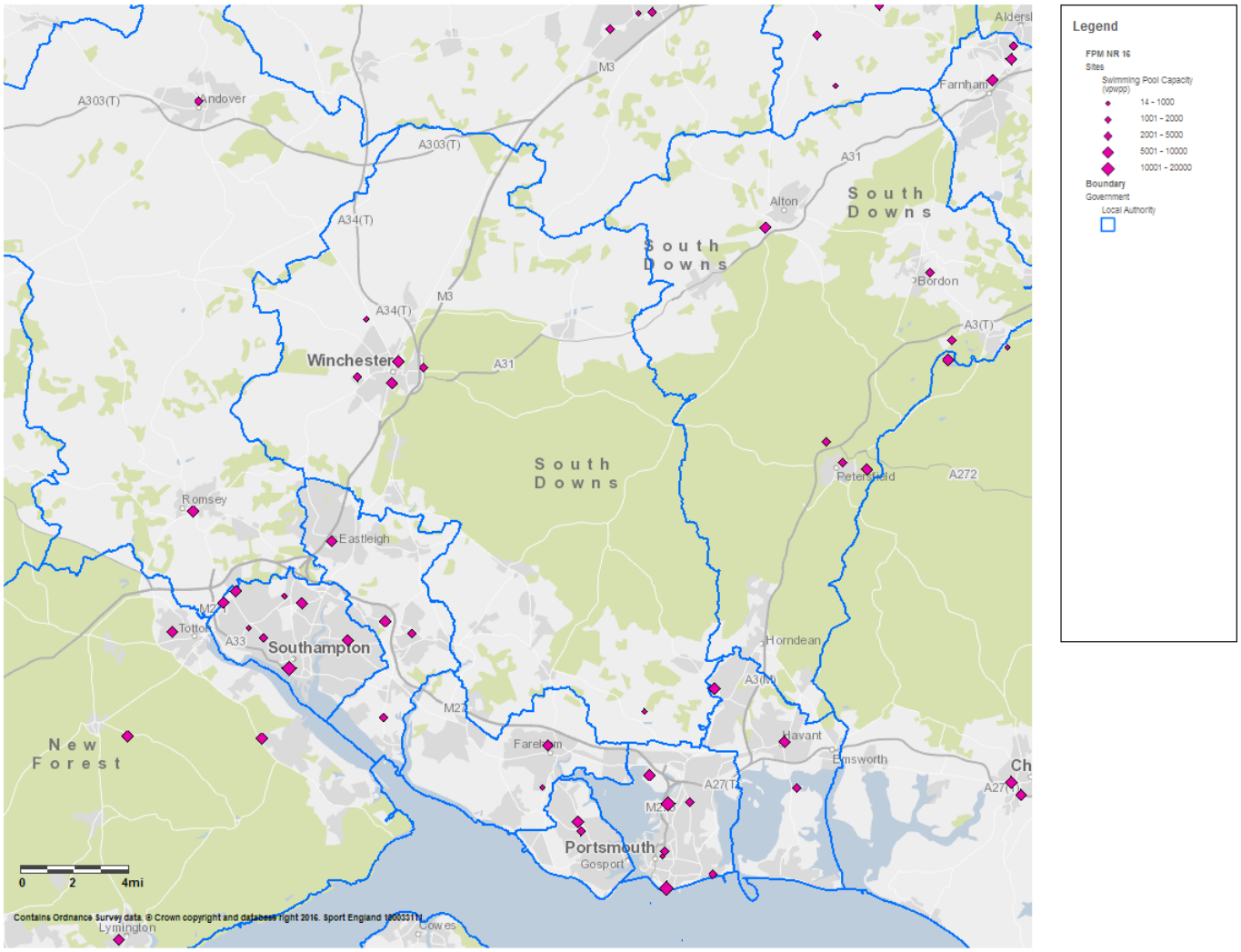
2. Supply of Swimming Pools

Table 1 - Supply	Winchester	England	South East	B'stoke & Deane	East Hants	Eastleigh	Test Valley
Number of pools	8	3,051	557	9	13	6	5
Number of pool sites	6	2,136	382	6	6	4	2
Supply of total water space in sqm	2,046	685,276	122,818	1,983	1,823	1,166	860
Supply of publicly available water space in sqm (scaled with hrs avail in pp)	1,223.39	572,957.34	100,185.48	1,774.70	1,458.24	946.02	629.68
Supply of total water space in VPWPP	10,607	4,967,540	868,608	15,387	12,643	8,202	5,459
Waterspace per 1000	16.85	12.45	13.66	11.11	15.34	8.87	7.25

2.1. The analysis, using the Active Places database, identifies a supply of 8 swimming pools at 6 different sites within Winchester:

Facility Name	Pool Size	Lanes	Date Built	Refurbished	Public/Commercial
Army Training Regiment Winchester	25x13m – 325m²	6			P
Kings School Sports Centre	25x10.9m – 272.5m²	5	2000	2010	P
MOD Southwick Park	22x12m - 264m²	3	1991	2008	P
River Park Leisure Centre Main Pool and Teaching Pool	25x12.5m – 312.5m² 15x10.5m – 157.5m²	6 0	1974		P
St Swithuns School Main Pool and Teaching Pool	25x13m – 325m² 13x5m – 65m²	6 0	1996		P
Winchester College PE Centre	25x13m – 325m²	6	1968	2005	P

2.2. The following map illustrates the location of the swimming pools within Winchester, highlighting the limited spread of the pools across the authority area – 5 of the 6 sites are found within and around the city itself.



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2.3. Winchester has a supply of 16.85m² of water space per 1,000 of population. This figure is higher than the figures for England and the South East Region. It is also higher than all of the neighbouring authority areas included in this analysis.

2.4. All 6 of the sites are classified as being public although it must be noted that 2 of the sites are MOD, 2 are Independent Schools, 1 is a community school and the other site is a local authority facility. This does have an impact on accessibility of the swimming pool provision.

2.5. Unsurprisingly, the number of hours available a week does vary a great deal from site to site. The main pool at River Park Leisure Centre is available for 102 hours per week whilst the one at St Swithuns School is available for 27.75 hours per week. The pools at Kings School and Winchester College are available for 52.5 hours and 89 hours respectively. The pools at the 2 MOD sites are available for a lot less hours - 26 and 14 hours per week.

3. Demand for Swimming Pools

Table 2 - Demand	Winchester	England	South East	B'stoke & Deane	East Hants	Eastleigh	Test Valley
Population	121,412	55,041,149	8,990,890	178,491	118,823	131,495	118,575
Swims demanded – vpwpp	7,690	3,560,619	576,974	11,691	7,448	8,477	7,491
Equivalent in waterspace – with comfort factor included	1,276.22	590,910.33	95,753.06	1,940.27	1,235.97	1,406.88	1,243.22
% of population without access to a car	13.50	24.90	17.60	14.50	10.40	12.60	12.70

3.1. The model predicts that Winchester's population generates an amount of swimming pool demand that equates to 7,690 visits per week in the peak period (vpwpp).

3.2. The model analyses this demand and converts it to a facility equivalent – 1,276.22m² of water space in this case. This includes a built-in comfort factor that helps to ensure that any "target figure" includes additional space so as to make sure that any facilities are not going to be at 100% of their theoretical capacity. For more information on the Comfort Factor see notes in Appendix 2.

3.3. The % of Winchester's population without access to a car is 13.5% which is lower than the national and regional averages. This suggests that the demand created within the district is likely to be mobile.

4. Supply & Demand Balance

Table 3 - Supply/Demand Balance	Winchester	England	South East	B'stoke & Deane	East Hants	Eastleigh	Test Valley
Supply - Swimming pool provision (sqm) scaled to take account of hours available for community use	1,223.39	572,957.34	100,185.48	1,774.70	1,458.24	946.02	629.68
Demand - Swimming pool provision (sqm) taking into account a 'comfort' factor	1,276.22	590,910.33	95,753.06	1,940.27	1,235.97	1,406.88	1,243.22
Supply / Demand balance - Variation in sqm of provision available compared to the minimum required to meet demand	- 52.83	- 17,952.99	4,432.42	- 165.57	222.27	- 460.86	- 613.54

4.1. The analysis suggests that the current supply of water space may well be insufficient to meet the demand that is generated by the current population of Winchester.

4.2. The Supply/Demand Balance identifies a small 'shortfall' of circa 53m² of water space. This is a very simplistic picture of the overall supply and demand across Winchester. The resident population

is estimated to generate a demand for 1,276.22m² worth of water space. This compares to a current available supply of 1,223.39m² of water space giving a negative supply/demand balance of 52.83m² of water space.

Please Note: This section only provides a 'global' view of provision and does not take account of the location, nature and quality of facilities in relation to demand; how accessible facilities are to the resident population (by car and on foot); nor does it take account of facilities in adjoining authority areas. These are covered in the more detailed modelling set out in the following sections.

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

Table 4 - Satisfied Demand	Winchester	England	South East	B'stoke & Deane	East Hants	Eastleigh	Test Valley
Total number of visits which are met - vpwpp	7,144	3,264,096	537,564	10,896	7,014	8,019	6,299
% of total demand satisfied	92.90	91.70	93.20	93.20	94.20	94.60	84.10
% of demand satisfied who travelled by car	86.53	75	82.44	84.33	90.09	88.14	90.81
% of demand satisfied who travelled by foot	9.20	15.60	11	10.80	6.10	6.70	6
% of demand satisfied who travelled by public transport	4.24	9.40	6.59	4.88	3.81	5.15	3.22
Demand Retained	4,544	3,262,183	523,535	9,772	4,662	4,933	3,330
Demand Retained - as a % of Satisfied Demand	63.60	99.90	97.40	89.70	66.50	61.50	52.90
Demand Exported	2,600	1,913	14,030	1,123	2,352	3,087	2,968
Demand Exported - as a % of Satisfied Demand	36.40	0.10	2.60	10.30	33.50	38.50	47.10

5.1. The model suggests that 92.9% of the demand generated by the residents of Winchester is currently being met. This is above both the national figure and just below the regional figure.

5.2. This level of satisfied demand is also below the figures that are found in 3 of the 4 neighbouring authority areas included within this analysis.

5.3. The model suggests that 63.6% of the demand that is currently satisfied is being met by swimming pool provision within Winchester – a figure that equates to 4,544 visits per week in the peak period.

5.4. Therefore, the model is forecasting that 36.4% (2,600 vpwpp) of the demand satisfied is being exported out of Winchester and being met by facility provision in neighbouring authorities.

5.5. The model forecasts that circa 87% of the demand that is being satisfied is from people that travel by car – this is above national and regional figures. This data suggests that the demand within Winchester is likely to be mobile.

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

Table 5 - Unmet Demand	Winchester	England	South East	B'stoke & Deane	East Hants	Eastleigh	Test Valley
Total number of visits in the peak, not currently being met	546	296,523	39,410	796	434	458	1,192
Unmet demand as a % of total demand	7.10	8.30	6.80	6.80	5.80	5.40	15.90
Equivalent in Water space m2 - with comfort factor	91	49,210	6,540	132	72	76	198
% of Unmet Demand due to;							
Lack of Capacity -	8.30	11.20	6.80	6.30	0	19	48.10
Outside Catchment -	91.70	88.80	93.20	93.70	100	81	51.90
Outside Catchment;	91.70	88.80	93.20	93.70	100	81	51.90
% Unmet demand who do not have access to a car	58.43	68.79	71.79	61.03	70.67	67.63	32.06
% of Unmet demand who have access to a car	33.30	20.04	21.44	32.63	29.33	13.33	19.81
Lack of Capacity;	8.30	11.20	6.80	6.30	0	19	48.10
% Unmet demand who do not have access to a car	1.32	8.60	4.07	0.09	0	12.73	11.24
% of Unmet demand who have access to a car	6.96	2.57	2.70	6.26	0	6.31	36.88

6.1. The scale of unmet demand has been highlighted by the analysis – the model predicts that 546 visits per week in the peak period, (a figure that is 7.1% of the total demand created in Winchester) are currently not being met. As a percentage, the level of unmet demand is lower than the national figure and just above the regional figure. It is also higher than the levels found in 3 of the 4 neighbouring authorities included within this analysis.

6.2. The model equates the level of unmet demand to an equivalent amount of water space – 91m² in this instance.

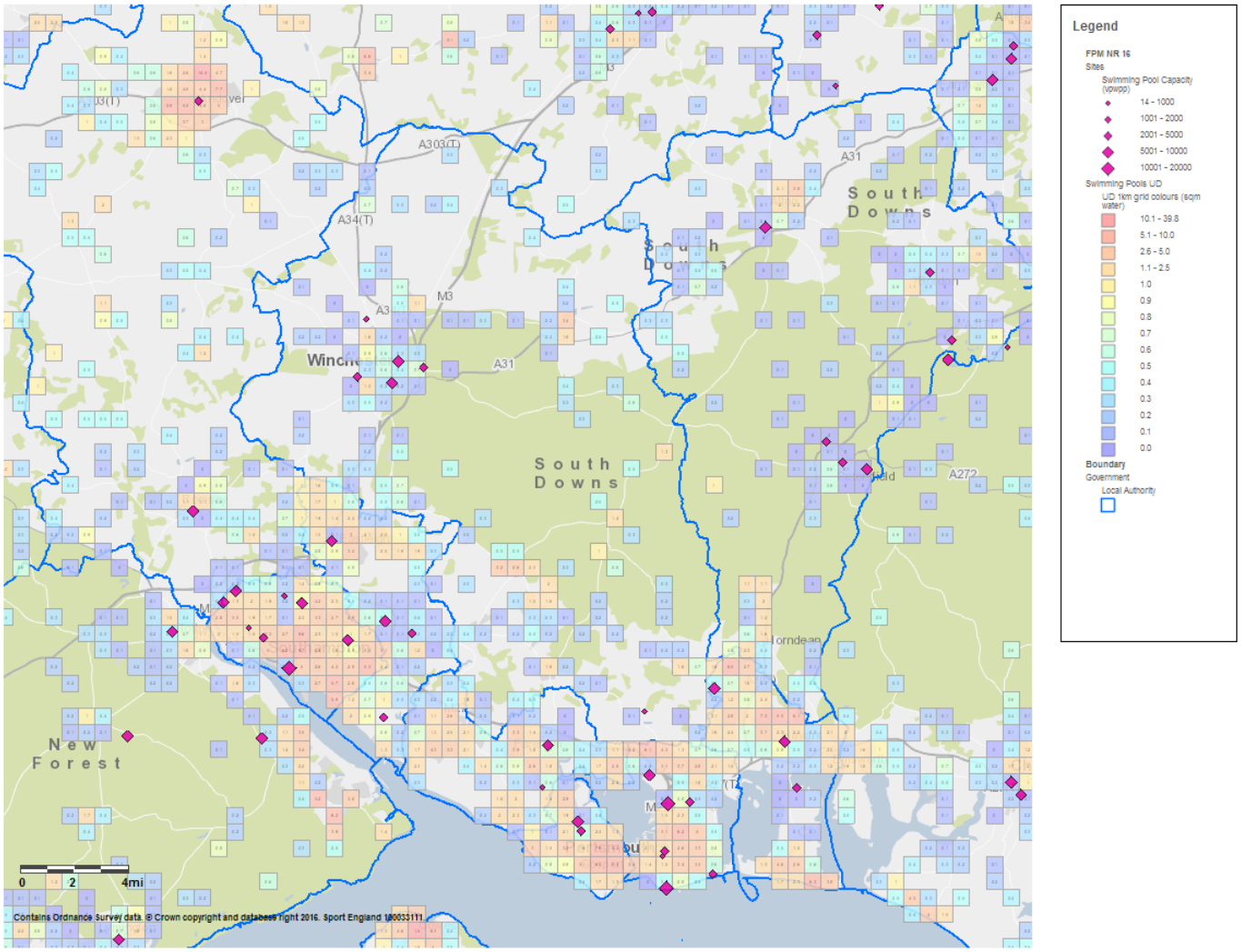
6.3. The data suggests that 91.7% of this unmet demand is caused by people living outside of the catchment of an existing swimming pool facility – this is perhaps understandable when you consider the limited spread of current facilities across the authority area.

6.4. The model forecasts that 8.3% of the unmet demand is due to a lack of capacity at current facilities.

6.5. The following map shows Unmet Demand within Winchester. The 1km grid areas with the highest comparable levels of unmet demand can be seen spread across the district – some found within and around Winchester itself, others in central and southern parts of the district too.

Facilities Planning Model - National Runs - Swimming Pools 2016 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).



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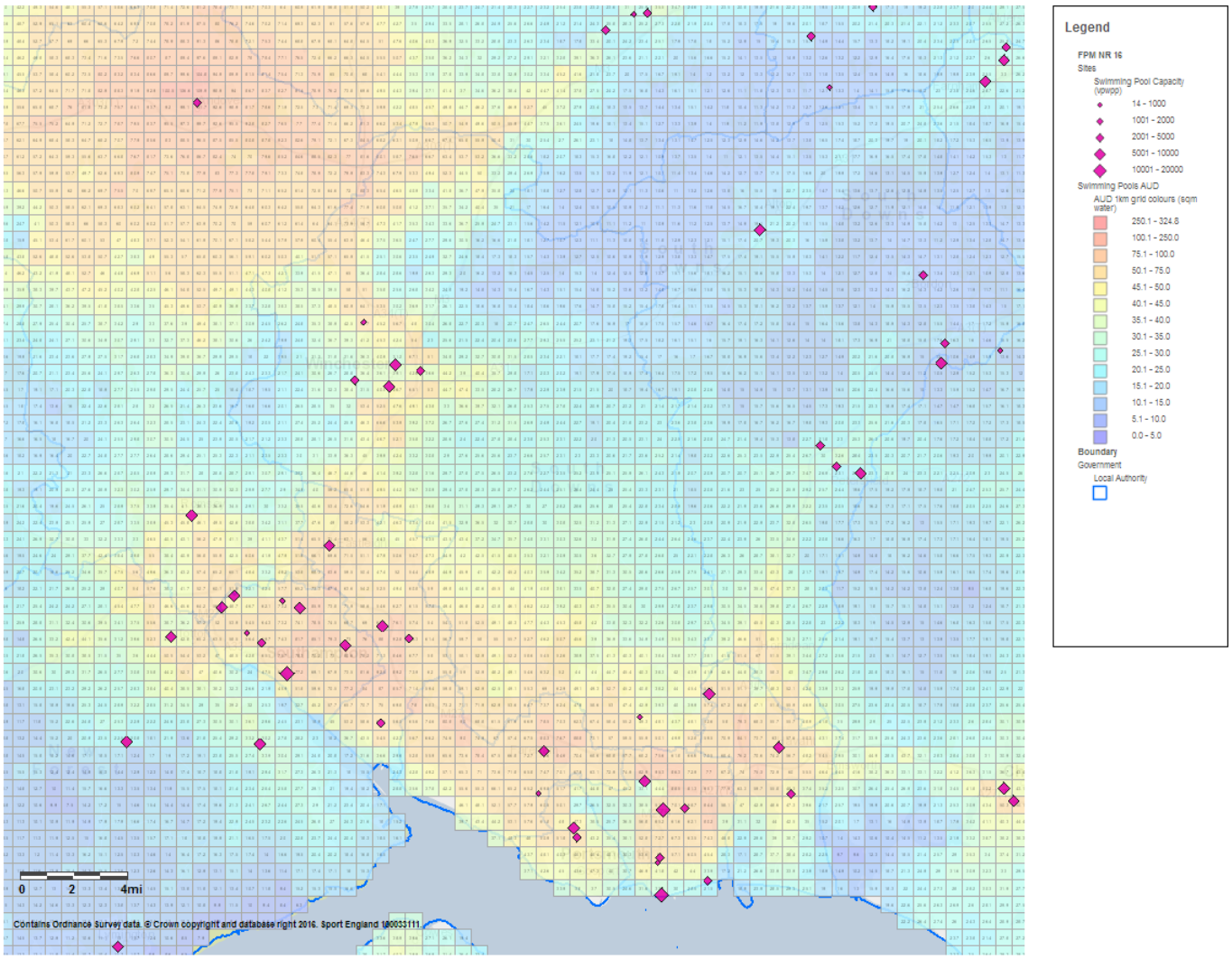
6.6. The following map shows Aggregated Unmet Demand (AUD) within the district and highlights high levels of AUD in and around Winchester itself reaching up to the northern boundary with Test Valley. There are also higher levels of AUD along the west of the authority area down into Eastleigh and along the M27 corridor too.

Facilities Planning Model - National Runs - Swimming Pools 2016 Aggregated Unmet Demand

Aggregated Unmet Demand expressed as square metres of water (rounded to two decimal places). Data outputs shown thematically (colours) at 1km square (figure labels).



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

Table 6 - Used Capacity	Winchester	England	South East	B'stoke & Deane	East Hants	Eastleigh	Test Valley
Total number of visits used of current capacity	6,028	3,264,520	543,353	10,344	5,229	8,202	4,331
% of overall capacity of pools used	56.80	65.70	62.60	67.20	41.40	100	79.30
% of visits made to pools by walkers	10.80	15.60	10.90	11.40	7.90	6.40	7.60
% of visits made to pools by road	89.20	84.40	89.10	88.60	92.10	93.60	92.40

Table 6 - Used Capacity	Winchester	England	South East	B'stoke & Deane	East Hants	Eastleigh	Test Valley
Visits Imported:							
Number of visits imported	1,484	2,337	19,818	572	567	3,269	1,001
As a % of used capacity	24.60	0.10	3.60	5.50	10.80	39.90	23.10
Visits Retained:							
Number of Visits retained	4,544	3,262,183	523,535	9,772	4,662	4,933	3,330
As a % of used capacity	75.40	99.90	96.40	94.50	89.20	60.10	76.90

7.1. The model forecasts that the swimming pools in Winchester are being used at 56.8% capacity during the peak periods each week. This is lower than the national figure (65.7%) and the regional figure (62.6%). It is also lower than all but one of the neighbouring authorities included within this analysis.

7.2. As a guide, the FPM identifies that swimming pools with a used capacity of 70% and above are considered to be busy. Those that have a used capacity of 100% are considered to be theoretically full all the time in the peak periods.

7.3. Therefore, in general terms, the current supply of swimming pools within Winchester are considered to have scope for a higher level of community usage during the weekly peak periods.

7.4. Further detailed analysis highlights that the model has forecast the following used capacity figures for the respective sites within Winchester:

- Army Training Regiment Winchester – 65%
- Kings School Sports Centre – 72%
- MOD Southwick Park – 59%
- River Park Leisure Centre – 34%
- St. Swithuns School – 72%
- Winchester College PE Centre – 67%

7.5. This analysis suggests that two of the swimming pool facilities have a forecast used capacity of 70%+ and are therefore likely to be busy during the weekly peak periods with potentially limited capacity for further usage during these times. However, the data does suggest that there may well be capacity at the other sites for increased levels of community usage.

7.6. Interestingly, the model forecasts that River Park Leisure Centre has a low level of used capacity (34% and 1,268 vpwpp) with potential opportunity for higher levels of usage. This needs to be reviewed against local intelligence which may suggest that actual usage is higher than what is forecast by the model.

7.7. The model also forecasts that 24.6% of the overall current used capacity (1,484 vpwpp) is being imported from other neighbouring authority areas.

8. Summary and Conclusions

8.1. The simplistic analysis of 'supply vs demand' in relation to swimming pools within Winchester suggests that there is a small shortfall in supply – circa 53m².

8.2. Swimming Pool supply equates to 16.85m² of water space per 1,000 of population. This figure is above the comparable figures for England and the South East Region.

8.3. Of the 8 pools included within this analysis, 3 are located at Independent Schools, 2 are on MOD sites, 2 are found at a local authority site and the other is located on a community school site.

8.4. Levels of satisfied demand within Winchester are forecast to be at 92.9% - this is slightly higher than national figures and just below the regional figure. It must be noted that, the data suggests that circa 36% of this met demand is being exported into neighbouring authority areas.

8.5. Unmet demand is at 7.1%. The model suggests that 546 visits per week in the peak period are not being met by the current supply of water space. The model has converted this to an equivalent amount of water space – 91m².

8.6. There are areas with comparably higher levels of unmet demand and aggregated unmet demand spread across the authority area, with an identifiable area within and around Winchester city itself.

8.7. The swimming pools within the district are forecast to be operating at 56.8% used capacity during the weekly peak period - this is below national and regional levels. Whilst two of the sites are forecast as being busy the other 4 sites may well have further capacity for increased levels of usage – particularly the local authority one at River Park.

Appendix 1: Winchester Swimming Pools Included/Excluded

Facilities Included within the National Run FPM Analysis in Winchester:

Name of facility	Pool Size	Lanes	Year Built	Year Refurb	Weight Factor	Hours in Normal Peak Period	Community Hours Available	Facility Capacity - vpwpp	% of Capacity used
Army Training Regiment Winchester	25x13m – 325m²	6			40%	14.5	26	785	65%
Kings School Sports Centre	25x10.9m – 272.5m²	5	2000	2010	97%	41.5	52.5	1,881	72%
MOD Southwick Park	22x12m - 264m²	3	1991	2008	90%	10	14	440	59%
River Park Leisure Centre Main Pool and Teaching Pool	25x12.5m – 312.5m² 15x10.5m – 157.5m²	6 0	1974		38%	51 (MP) 39.5 (TP)	102 (MP) 72.25 (TP)	3,692	34%
St Swithuns School Main Pool and Teaching Pool	25x13m – 325m² 13x5m – 65m²	6 0	1996		84%	20.25 Both Pools	27.75 Both Pools	1,316	72%
Winchester College PE Centre	25x13m – 325m²	6	1968	2005	62%	46	89	2,492	67%

Facilities Excluded

The audit excludes facilities that are deemed to be either for private use, too small, if they are a lido pool, 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:

Facility Name	Reason for Exclusion
Bishops Waltham Junior School	Private Use
Brockwood Park School	Lido and Private Use
De Vere Venues (New Place)	Too Small
Marriott Leisure & Country Club	Too Small
Marwell Hotel Leisure Club	Too Small
Norton Park	Too Small
Skylark Country Club	Too Small
Solent Hotel Spa	Too Small
The Pilgrims School	Lido, Private Use and Temporarily Closed
The Winchester Hotel and Spa	Too Small
Westgate Secondary School	Lido and 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 pitches.

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 England[1].

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

[1] Award made in 2007/08 year.

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 population[2]. 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

[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.

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. Calculating capacity of Sports Hall – Hall Space in Courts(HSC)

6.1. The capacity of sports halls is calculated in the same way as described above with each sports hall site having a capacity in VPWPP. In order for this capacity to be meaningful, these visits are converted into the equivalent of main hall courts, and referred to as 'Hall Space in Courts' (HSC). This "court" figure is often mistakenly read as being the same as the number of 'marked courts' at the sports halls that are in the Active Places data, but it is not the same. There will usually be a difference between this figure and the number of 'marked courts' that is in Active Places.

6.2. The reason for this, is that the HSC is the 'court' equivalent of the all the main and ancillary halls capacities, this is calculated based on hall size (area), and whether it's the main hall, or a secondary (ancillary) hall. This gives a more accurate reflection of the overall capacity of the halls than simply using the 'marked court' figure. This is due to two reasons:

6.3. In calculating capacity of halls, the model uses a different 'At-One-Time' (AOT) parameter for main halls and for ancillary halls. Ancillary halls have a great AOT capacity than main halls - see below. Marked Courts can sometimes not properly reflect the size

of the actual main hall. For example, a hall may be marked out with 4 courts, when it has space for 5 courts. As the model uses the 'courts' as a unit of size, it is important that the hall's capacity is included as a 5 'court unit' rather than a 4 'court unit'

6.4. The model calculates the capacity of the sports hall as 'visits per week in the peak period' (VPWPP), it then uses this unit of capacity to compare with the demand, which is also calculated as VPWPP. It is often difficult to visualise how much hall space is when expressed as vpwpp. To make things more meaningful this capacity in VPWPP is converted back into 'main hall court equivalents', and is called in the output table '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 effects the way visits are distributed between facilities. Attractiveness however, is very subjective. Currently weightings are only used for hall and pool modelling, with a similar approach for AGPs is being developed.

7.2. Attractiveness weightings are based on the following:

7.2.1. 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.

7.2.2. 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.

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

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

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

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

8. Comfort Factor – halls

8.1. As part of the modelling process, each facility is given a maximum number of visits it can accommodate, based on its size, the number of hours it's available for community use and the 'at one time capacity' figure (pools =1 user /6m2 , halls = 6 users /court). This is gives each facility a "theoretical capacity".

8.2. If the facilities were full to their theoretical capacity then there would simply not be the space to undertake the activity comfortably. In addition, there is a need to take account of a range of activities taking place which have different numbers of users, for example, aqua aerobics will have significantly more participants, than lane swimming sessions. Additionally, there may be times and sessions that, whilst being within the peak period, are less busy and so will have fewer users.

8.3. 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.)

8.4. The comfort factor is used in two ways;

8.4.1. 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.

8.4.2. 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.

9. Utilised Capacity (used capacity)

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

9.2. 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.

9.3. 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

9.4. 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%.

9.5. 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'.

10. Travel times Catchments

10.1. The model uses travel times to define facility catchments in terms of driving and walking.

10.2. 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.

10.3. 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

10.4. 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.

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

Facility	Car	Walking	Public transport
Swimming Pool	76%	15%	9%
Sports Hall	77%	15%	8%
AGP			
Combined	83%	14%	3%
Football	79%	17%	3%
Hockey	96%	2%	2%

10.6. 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.

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

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

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

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

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 1975[5].

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	

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

Percentage Participation

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

Frequency per week

Age	*0 - 15*	*16 - 24*	*25 - 39*	*40 - 59*	*60-79*	*80+*
Male	1.11	1.06	0.96	1.03	1.26	1.49
Female	1.08	0.98	0.88	1.01	1.13	1.19

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%