

Sport and Recreation Facilities Improvement Plan 2014 to 2021



Appendix 1
Provision for Swimming



**Creating sporting opportunities in
every community**

Appendix 1

Sport England's Facilities Planning Model

Newark and Sherwood Council

Provision for Swimming

**Review of the 2009 Report on Swimming Pool
Provision updated to 2013**

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1. Introduction

- 1.1 Newark and Sherwood Council wish to update their 2009 Provision for swimming report to 2013. The purpose being to identify the extent of change in the intervening years and to have an updated evidence base on the supply and demand for swimming pool provision.
- 1.2 This report presents the findings from:
 - a review of the 2009 Newark and Sherwood Sport England Facilities Planning Model (fpm) analysis and report on the supply and demand in the Newark and Sherwood Council area and across a wider study area including the neighbouring authorities to Newark and Sherwood; and
 - an updated assessment of supply, demand and access to swimming pools across Newark and Sherwood based on the Sport England National Facility Assessment (NFA). The NFA reports produced each year by Sport England and are an annual assessment of the supply, demand and accessibility for swimming pools and sports halls for every local authority in England. The NFA assessment is based on the same Sport England facility information, participation data and applies exactly the same modelling analysis as for the fpm. The difference between NFA data outputs and fpm data outputs which are used to prepare reports is in the amount of detail that is provided in the NFA reports.
- 1.3 The reasons for comparing and updating the 2009 fpm report based on the NFA data is because it does allow a reasoned and consistent assessment of what has changed and the extent of change. In essence, do the changes mean the 2009 report and update still provide the Council with an up to date and robust evidence base for swimming pools or not?
- 1.4 If it does then this negates the need to undertake the much more time and cost consuming exercise of doing a further and full fpm analysis. Also to undertake a full fpm analysis would not be possible until the summer of 2014 based on Sport England's forward fpm analysis commitments.
- 1.5 The sequence of the review and update analysis and which forms the basis of this report is:
 - the context for the update study and description of the facilities planning model;
 - a review the 2009 fpm data for swimming pools under the headings of: total supply; total demand; satisfied demand; unmet demand; and used capacity (how full the facilities are);
 - a comparison of the data and findings from the 2009 fpm report with the data from the 2013 NFA report for swimming pools under the same headings of total supply, total demand, satisfied demand, and unmet demand used capacity and also relative share of access to swimming pools. This also includes a spatial assessment of the accessibility to swimming pools by different travel modes; and

- to provide a commentary on the impact of the changes between the findings from the two data sets and then set out how these changes impact on the continuing validity of the 2009 fpm report as an evidence base for the supply and demand for swimming pools.
- 1.6 An executive summary of the key findings and overall assessment precedes the detailed analysis of the data sets.
- 1.7 Finally on the scope of the study and report, both the facility planning model and the national facility assessments data do provide an evidence base of the supply and demand for swimming provision which complies with the requirements of the National Planning Policy Framework, especially paragraphs 73 – 74.

Facility Planning Model and National Facility Assessments

- 1.8 The Sport England facility planning model (fpm) is the industry benchmark standard for undertaking needs assessment for swimming pools. The fpm is a computer-based supply/demand model, which has been developed by the University of Edinburgh in conjunction with sportscotland and Sport England since the 1980s. 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 full artificial grass pitches.
- 1.9 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 the likely impact of population changes on the needs for sports facilities.
- 1.10 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.
- 1.11 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.
- 1.12 The National Facility Assessment (NFA) reports are produced each year by Sport England and are an annual assessment of the supply, demand and accessibility for swimming pools and sports halls for every local authority in England. The NFA assessment

is based on the same Sport England facility information, participation data and applies exactly the same modelling analysis as is applied in the fpm. The difference between NFA data outputs and fpm data outputs which are used to prepare reports is in the amount of detail that is provided in the NFA reports.

- 1.13 As the NFA reports are annual assessments for every local authority in England, they do not develop the same level of detailed output as in a bespoke fpm project for an individual local authority. For example, the NFA assessment will provide information on how much of a local authority's total satisfied demand for sports halls is exported to other authorities. The fpm assessment will also provide this information and also set out how much exported demand goes to which neighbouring authority.

The Study Area

- 1.14 Describing the study area provides some points of explanation and a context for the report's findings. Both sets of analysis are based on the catchment area of swimming pools and the location of demand for swimming across a study area.
- 1.15 Customers of swimming pools do not reflect local authority boundaries and whilst there are management and pricing incentives (and possibly disincentives) for customers to use sports facilities located in the area in which they live, there are some big determinants as to which swimming pools people will choose to use.
- 1.16 These are based on: how close the swimming pool is to where people live; the age and condition of the facility and inherently its attractiveness; other facilities within/on the site such as a fitness suite; personal and family choice; and reasons for using a particular facility, such as a particular activity going on.
- 1.17 Consequently, in determining the position for Newark and Sherwood it is important to take full account of the swimming pools in all the neighbouring local authorities to Newark and Sherwood. In particular, to assess the impact of overlapping catchment areas of facilities located in Newark and Sherwood and those located outside the authority. The nearest facility for some Newark and Sherwood residents may be located outside the authority (known as exported demand) and for some residents of neighbouring authorities their nearest swimming pool is inside Newark and Sherwood (known as imported demand).
- 1.18 Taking account of all these import and export effects is done by establishing a study area which places Newark and Sherwood at the centre of the study and assesses the import and export of demand into and out of the authority and reflects the location, age, condition and content of all the swimming pools.
- 1.19 In addition, this approach does embrace the National Planning Policy Framework approach of taking account of neighbouring authorities when assessing locally derived needs and development of a local evidence base for provision of services and facilities.
- 1.20 The fpm assessment identifies how much demand for swimming is exported from Newark and Sherwood and how much is imported. It also analyses where this demand goes to/comes from. The NFA assessment works on the same basis of catchment areas of pools and a wider study area. However it provides the total amount of swimming demand exported and imported and not the breakdown. The impact of this difference in detailed data is commented under satisfied demand (for export findings) and used capacity (for imported demand).

- 1.21 The study area map is set out below as Map 1.1.

Map 1.1: Study area for Newark and Sherwood and the bordering local authorities



Definition and listing of pools in the assessment

- 1.22 The assessment incorporates all operational indoor pools available for community use. This does include the Wellow House school pool which is only 120 sq metres of water. The Wellow House School pool was excluded from the 2009 fpm assessment but it is included in the Sport England National assessment data set for 2013. The report author queried with Sport England why a pool of this size was excluded in 2009 but is included in 2013? The response from Sport England was it is included in 2013 on the basis of there being 12.5 hours per week in the weekly peak period of community use. On reflection the consideration by Sport England that the pool should have been excluded from the 2013 assessment on the basis of the pool size and it being below the 160 sq metres of water (20m x 4 lanes) which is the usual minimum water area for a pool to be included. Given it was in the data set then the author has had to include the pool in the overall assessment. However it is considered by Sport England and the report author that a pool of this size and with the limited amount of community use that its impact is not significant in changing the overall supply and demand findings.
- 1.23 The demand for and capacity/supply of pools is measured in visits per week in the peak period (vpwpp). (Note: now referred to as either visits or visits per week). Where highlighted, an annual figure for throughputs refers to a modified total derived from these weekly visits.
- 1.24 The population data for the whole study area for the 2009 fpm report is based on the 2001 Census and updated to 2009 based on ONS projected changes in population. The 2013 NFA assessment is based on the 2011 Census population updated to 2013 based on the ONS population projections.
- 1.25 The rates and frequencies for swimming participation and calculation of the amount of demand which is met in the peak period are all based on Sport England research. Appendix 2 to the report describes all these parameters and how they are applied in the fpm.

Executive Summary

- 2.1 The executive summary of the main report describes the key findings under the 2009 provision for swimming report updated to 2013. This is set out with first with a summary of the overall findings and is followed by the key findings on each of the supply, demand and accessibility headings analysed.

Overall summary of key findings

- 2.2 The 2009 fpm report on provision for swimming remains valid. The updating of the data and the findings to 2013 based on Sport England's data from its 2013 National Facilities Assessment (NFA) identifies that the degree of change in the data and findings are small scale.
- 2.3 The two big drivers of change between 2009 – 2013 are changes in swimming pool supply and increases in population which, in turn, impacts on the rate and frequency of swimming participation and swimming demand.
- 2.4 In terms of supply, the Rainworth Leisure Centre pool 20m x 10m pool (total 200 sq metres of water) was included in the 2009 supply but is now closed. As reported the 2013 NFA assessment lists the Wellow House School 12m x 10m pool (total 120 sq metres of water) in the 2013 assessment and the supply is assessed on the basis of 12.5 hours of community use
- 2.5 In 2009 Newark and Sherwood has a total swimming pool supply in terms of visits of 9,444 visits in the weekly peak period. In 2013 total supply has decreased to 8,688 visits, resulting from the closure of the Rainworth Leisure Centre.
- 2.6 In terms of population change, the total population in Newark and Sherwood in 2009 was 115,700 people. By 2013 this is projected to have increased to 116,751 people, an increase of 1,051 people or a 0.9% increase in population. These figures are based on the Sport England total applied in the assessments and taken from the 2001 Census for the 2009 assessment with the 2001 population figures updated to 2009 based on ONS projections. For the 2013 population the figure is based on the 2011 Census with the ONS projected update to 2013.
- 2.7 In 2009 Newark and Sherwood has a total demand for swimming of 6,296 visits and this has increased to 7,300 visits in 2013. The increase in visits is greater than would be created by the small increase in total population. The most likely reason is that aging of the core resident population between 2009 – 2013 may mean that in 2013 there are more people in the age bands who swim more often than in 2009. In short a greater swimming population in 2013 than in 2009.
- 2.8 Overall total supply for swimming exceeds total demand in both 2009 and 2013 in Newark and Sherwood. This finding is reflected in the data on used capacity which is defined as estimating how full the pools are.
- 2.9 In 2009 the estimate is that 60.4% of the total swimming pool capacity of the Newark and Sherwood pools is used. In 2013 this has decreased to 54.5% of the pool capacity used. Both percentages are well within the Sport England pools full comfort level of 70% of pools capacity used.

- 2.10 The reason for the decrease in pool capacity used even whilst supply has decreased slightly and demand has increased slightly is probably most likely because of changes in the swimming pool supply. This could be either new or modernised pools in the local authorities which border Newark and Sherwood but where the drive time catchment area of these pools extends into Newark and Sherwood. This would create a draw effect and Newark and Sherwood exporting more of its own demand to neighbouring authorities. The data does show an increase in exported demand from Newark and Sherwood between 2009 and 2013.
- 2.11 The most significant finding from the updating of the 2009 fpm report is in this used capacity heading. The authority wide average used capacity is 54.5% of total capacity. However this authority wide average does mask variations at each pool site. There are two pool sites above the Sport England pools full comfort level of 70% and these are Dukeries Leisure Centre at 74% of capacity used and Grove Leisure Centre, estimated to be at 100% of pool capacity used.
- 2.12 So whilst overall there is enough swimming pool capacity to meet demand across the authority, this demand is distributed unevenly and two pool sites Dukeries and Grove are attracting most of the demand, leading to the estimate that these pools are very full. If possible some re-distribution of demand from Dukeries and Grove by managing programming changes across the pool sites could "even up" the pool capacity used and ease the pressure on Dukeries and Grove.
- 2.13 The Grove Leisure Centre was opened in 1970 and the Dukeries Leisure Centre in 1981 and so both pools are now quite old. The age of the pools underlines the desirability of trying to reduce the used capacity of these pools.
- 2.14 It is understood that the Council has given notice to Nottinghamshire County Council to vacate the Grove Leisure Centre site and construct a new swimming pool (and sports hall) on an adjacent site and less than half a mile away. The proposed new swimming pool complex is a main pool of 312 sq metres of water and is a 25m x 6 lane pool. It will also have a learner/teaching pool of 20m x 8.5. So the new pools will have a total of 482 sq metres of water.
- 2.15 The existing Grove Leisure Centre has a main pool of 312 sq metres of water and a learner/teaching pool of 88 sq metres of water, so a total of 400 sq metres of water. The new Grove leisure Centre will create a net increase of 82 sq metres of water.
- 2.16 The scale of the proposed New Grove Leisure Centre will do a significant amount to meet/reduce the high used capacity of the existing pool – in effect there is more water space and a bigger second pool to accommodate more flexible use of the overall centre. Whilst the estimate is that in 2013 Newark and Sherwood does have enough overall waterspace to meet demand, it is the distribution of this demand across the pool sites which is the issue. Increasing the scale of the Grove Pool site to create more capacity and accommodate more demand directly addresses this issue.
- 2.17 With more waterspace it provides more flexibility in use because of a bigger pool site overall. This opportunity and managed within an overall review of the programming and management of the use of the Dukeries and Southwell Leisure Centres should allow for more re-distribution of swimming demand across the three sites and allow the usage and demand across all pool sites to be "evened out".
- 2.18 In terms of access to the swimming pool sites the finding in both 2009 and 2013 is that there is very good access to pools. So changing the programming of the pools to

accommodate demand across all the sites should not be an issue in terms of residents accessing pools. The 2009 estimate was that 85% of all visits to pools were by car. The 2013 estimate is that this has increased to 89% of all visits.

- 2.19 Furthermore the spatial analysis of the pools which are accessible to the Newark and Sherwood population based on a 20 minute drive time catchment for the pool locations showed that all Newark and Sherwood residents have access to 2 pools based on the car catchment area of pools. In the majority of the Newark and Sherwood land area residents have access to between 3 – 5 pools. Finally in some areas residents have access to between 5 – 10 pools. (Map 3.2 page 20 in the main findings part of the report)
- 2.20 Closure of the Rainworth swimming pool does reduce accessibility to pools in the NW side of the authority close to the Mansfield boundary. As map 3.2 shows this is however, the area of the authority where there residents have access to the highest number of pools, of between 3 – 5 pools or 5 – 10 pools (obviously some in other authorities). So closure of the Rainworth Pool is unlikely to have reduced access to pools by much at all.
- 2.21 The key findings under the review of the data and updating under each of the headings now follows.

Total supply

- 2.22 In both the 2009 fpm assessment and the 2013 NFA data there are 7 individual swimming pools at 5 swimming pool sites in Newark and Sherwood – so no change in the number of pools and sites. However there is one change in actual pools. The Rainworth Leisure Centre pool 20m x 10m pool (total 200 sq metres of water) was included in the 2009 supply but is now closed. However the 2013 NFA assessment lists the Wellow House School 12m x 10m pool (total 120 sq metres of water) in the 2013 assessment.
- 2.23 Overall the total number of pools at 7 pools at 5 pool sites in Newark and Sherwood remains unchanged between 2009 – 2013. There is a reduction of 80 sq metres of total water area, which is 5.2% of the total water area of swimming pools in Newark and Sherwood in 2013 with closure of the Rainworth Leisure Centre and inclusion of the Wellow House School pool.
- 2.24 Based on the small scale of these changes between 2009 – 2013 the assessment is that in the findings on the total supply of swimming pools in the 2009 report and evidence base remains robust when updated to 2013.

Total demand

- 2.25 Total demand is based on the number of people in the total population who participate in swimming activities and how frequently they swim. The Sport England rates and frequencies of swimming participation are applied in both data sets and they have not changed between the two years.
- 2.26 The total population in Newark and Sherwood in 2009 is 115,700 people. By 2013 this is projected to have increased to 116,751 people, an increase of 1,051 people. So between 2009 – 2013 there is a projected increase of 1,051 people, or, put another way a 0.9% increase in the total population.
- 2.27 Total demand for swimming in 2009 is 6,296 visits and by 2013 this has increased to 7,330 visits in the weekly peak period, an increase of 1,034 visits.

- 2.28 As the population change/growth is small and there are no changes in the rates and frequencies of swimming participation between the two years, then the slight increase in total demand for swimming is created by there being more people in the total population in 2013 who swim. Sometimes the aging of the core resident population between years can mean that in (say) 2013 there are more people in the age bands who swim more frequently than in previous years (say) 2009.
- 2.29 The scale of changes in satisfied demand, unmet demand and used capacity of pools between 2009 – 2013 will be determined by this increase of 1,034 visits in total demand.
- 2.30 Based on the scale of changes between 2009 – 2013 in total population and total demand for swimming, the assessment is that in terms of total demand for swimming pools, the 2009 report and evidence base updated to 2013 is robust.

Supply and Demand Balance

- 2.31 It is important to be clear about what supply and demand balance actually measures. It provides a ‘global’ view of provision – it compares total demand generated within Newark and Sherwood for swimming with the total supply of pools within Newark and Sherwood. It therefore represents an assumption that ALL the demand for swimming in Newark and Sherwood is met by ALL the supply of swimming pools in Newark and Sherwood.
- 2.32 In short, supply and demand balance is NOT based on where the pools are located and their catchment area extending into other authorities. Nor, the catchment areas of pools in neighbouring authorities extending into Newark and Sherwood. 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 swimming pools is set out under Satisfied Demand, Unmet Demand and Used Capacity.
- 2.33 The reason for presenting the supply and demand balance is because some local authorities like to see how THEIR total supply of swimming pools compares with THEIR total demand for swimming. So supply and demand balance presents this comparison.
- 2.34 A second note is that the data for 2009 does not allow a comparison of supply and demand balance and so only the 2013 supply and demand data and findings are presented.
- 2.35 The total supply of water space based on the pools in Newark and Sherwood availability for community use in 2013 is 956 sq metres of water. The total demand for swimming from Newark and Sherwood residents, allowing for the pools to be operating at 70% full comfort factor is for 1,208 sq metres of water. So there is negative supply balance of 251 sq metres of water.
- 2.36 This finding does appear to contradict the findings under total supply and total demand whereby supply in terms of visits is greater than total demand in terms of visits. However it is important to reiterate that supply and demand balance is based on this assumption that ALL demand for swimming by Newark and Sherwood residents is met by ALL the swimming pool supply in Newark and Sherwood. It is NOT based as the demand headings are on the catchment area of pools and these overlapping local authority boundaries and demand being distributed to the nearest pool to where residents live, IRRESPECTIVE of which local authority that pool is located in.

- 2.37 It is not possible to update the supply and demand balance findings from 2009 to 2013 and so the commentary is only on the 2013 data.

Satisfied Demand

- 2.38 Satisfied 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 pool.
- 2.39 The findings under satisfied demand show little change between 2009 and 2013. The total amount of Newark and Sherwood demand which is satisfied in 2009 is a very high 86.7% of the total demand in 2009 and in 2013 it is 86.5% of total demand.

Access to swimming pools and travel modes

- 2.40 Accessibility to swimming pools and travel modes are measured under satisfied demand. Travel patterns are dominated by car travel and in 2009 car travel represents 86.6% of all visits to swimming pools by Newark and Sherwood residents. By 2013 this has increased slightly to 89.4%, an increase of 2.8%.
- 2.41 Travel to swimming pools by foot represented 10.7% of all visits in 2009 and by 2013 this has decreased by 6% to 4.7%.
- 2.42 Travel to pools by public transport is 2.7% of all visits in 2009 and in 2013 it has increased to 5.8%.
- 2.43 In 2009 residents in around 20% of the land area of Newark and Sherwood have access to 1 pool based on the 20 minute drive time catchment area of pools. With a further 20% of the land area of the authority being within the 20 minute drive time catchment area of 2 pools. Around 30% of the Newark and Sherwood land area has access to between 3 – 5 pools. Finally another 30% of the land area has access to between 5 – 10 pools. (illustrated in Map 2.2 in the main report).
- 2.44 So overall there is good access to pools for residents of Newark and Sherwood. Based on the dominate travel mode of car and this changes very little between 2009 – 2013.
- 2.45 By 2013 there is closure of the Rainworth Leisure Centre pool, located in the NW corner of the authority, close to the Mansfield boundary. It is this area where residents have access to the highest number of pools, of between 3 – 5 or between 5 – 10. Closure of the Rainworth Pool has not reduced access to pools (map 2.2 in the main report).
- 2.46 This finding is reinforced by satisfied demand only decreasing by 0.2% from 86.7% in 2009 to 86.5% of total demand for swimming in 2013. So closure of the Rainworth Leisure Centre pool is not reducing accessibility to swimming pools.

Retained Demand

- 2.47 Retained demand, is how much of the Newark and Sherwood demand is met at the pools located in Newark and Sherwood based on the catchment area of the pools. This changes very little between the two years.
- 2.48 In 2009 Newark and Sherwood is retaining 68.1% of its own demand for swimming pools at its own pool sites. In 2013 this is 65.8%, a decrease of 114 visits or 2.3%.

Exported demand

- 2.49 Exported demand is where the nearest pool to where Newark and Sherwood residents live is located in another authority and that demand is met/exported to that authority. Exported demand also changes very little between the two years. There is an increase of 2.6% of the total Newark and Sherwood demand for swimming to 34.2% of the total Newark and Sherwood demand which is being met outside the authority.
- 2.50 At 34.2% of the total Newark and Sherwood satisfied demand this is a high level of exported demand. It does illustrate that whilst the residents do enjoy a high level of access to pools based on car travel there are areas of the authority, notably the NE close to the North Kesteven and West Lindsey boundaries, where residents do have much lower levels of access to pools (shown in map 2.2) and it is most likely in these areas where the Newark and Sherwood demand is being exported to.
- 2.51 Overall and based on the small scale changes for all the headings under satisfied demand, the assessment is that in terms of satisfied demand for swimming pools, the 2009 report and evidence base updated to 2013 is robust.

Unmet Demand

- 2.52 Unmet demand is defined in two ways: demand for swimming which cannot be met because (1) there is too much demand for any particular 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.
- 2.53 It could be (under definition 1) there are individual pools where demand is greater than the capacity of that pool and creating unmet demand. Also under the satisfied demand heading it was identified that there are large areas of Newark and Sherwood which are outside the walking catchment area of a pool and (under definition 2) demand located in these areas would be determined as unmet demand. This is however only the unmet demand which CHOOSES to walk to pools and this will be small.
- 2.54 In summary, the findings on unmet demand show little change between 2009 and 2013. Total unmet demand in 2009 is 836 visits, which is 13.3% of total demand and which represents 147 sq metres of water.
- 2.55 In 2013 total unmet demand is 988 visits, which is 13.5% of total demand and this represents 162 sq metres of water. Put simply unmet demand has increased by 15 sq metres of water between 2009 and 2013. (Note: a 25 metres x 4 lane pool is 212 sq metres of water).
- 2.56 Unmet demand due to lack of swimming pool capacity is 4.2% of the total in 2009 which represents 6 sq metres of water. In 2013 it is 4% of the total and this is 6.5 sq metres of water, so again virtually unchanged.
- 2.57 There are two pool sites which are estimated to be working above the Sport England pools full comfort level of 70% of pool capacity used. These being the Grove Leisure Centre which is estimated to be at 100% of pool capacity used in 2013 and Dukeries Leisure Centre which is estimated to be working at 74% of its capacity (more comments on these findings under used capacity).

- 2.58 Unmet demand due to it being located outside the walk to catchment area of a pool is concentrated around Newark and this totals around 50 sq metres of water in both 2009 and 2013 (illustrated in Maps 2.4 and 2.5 in the main report).
- 2.59 Overall there are very small scale changes in the level of unmet demand and the distribution of the unmet demand between 2009 – 2013. The assessment is that in terms of unmet demand, the 2009 report and evidence base updated to 2013 is robust.

Used Capacity

- 2.60 Used capacity is a measure of usage and throughput at swimming pools and estimates how well used/how full facilities are. The Sport England facilities planning model is designed to include a 'comfort factor', beyond which, in the case of swimming pools, the pools are too full. The model assumes that usage over 70% of capacity is busy and the pool is operating at an uncomfortable level above that percentage.
- 2.61 In summary between 2009 - 2013 total used capacity across the 5 swimming pool sites in Newark and Sherwood decreases from 60.4% in 2009 to 54.5% of pool capacity used in 2013. So a decrease in pool capacity used of 5.9% between the two years. Both percentages are well within the Sport England pools full comfort level of 70% of pool capacity used.
- 2.62 The decrease could be explained by the opening of new pools or the refurbishment of existing pools in some of the eight authorities which border Newark and Sherwood and whose catchment area extends into Newark and Sherwood. This would result in these pools being more attractive to users resulting in demand being drawn out of the authority and a decrease in pool capacity used of the Newark and Sherwood pools. As noted under the satisfied demand findings, Newark and Sherwood is exporting more demand in 2013 than in 2009.
- 2.63 The authority wide average for used capacity of 54.5% in 2013 does mask variations at each pool site. Based on the 2013 NFA data the lowest pool capacity used is South Forest Leisure Centre with 17% of pool capacity used. There are two pool sites above the Sport England pools full comfort level, Dukeries Leisure Centre at 74% of capacity used and Grove Leisure Centre estimated to be at 100% of pool capacity used.
- 2.64 Data from the 2009 fpm assessment is not available but it is unlikely to show much variation from the 2013 assessment. If anything the 2013 used capacity findings for each pool are better than they would be in 2009 because overall used capacity of pools across the authority has decreased from 60.4% in 2009 to 54.5% in 2013.
- 2.65 A key finding from this overall updating study is that there are two public pool sites which are above the Sport England fpm assessment is estimating to have used swimming pool capacity which above the 70% Sport England pools full comfort level. In the case of Grove Leisure centre it is at 100% of pool capacity used.
- 2.66 So whilst overall across Newark and Sherwood there is enough pool capacity to meet demand, this demand is distributed unevenly and two pool sites Dukeries and Grove are attracting most of the demand, leading these pools to being very full. Whilst the other public pool, Southwell Leisure Centre has an estimated used capacity of 54%, some 16% below the pools full comfort level of 70% of pool capacity used.

- 2.67 If possible some re-distribution of demand from Dukeries and Grove by managing programming changes across the pool sites could even up the pool capacity used and ease the pressure on the very full pools.

Relative Share

- 2.68 In addition to the supply and demand assessment above, the FPM also analyses the relative share of swimming pools – i.e. it takes into account the location of the population with the size and availability of facilities. It then assesses whether residents in one area have a greater or lesser share of provision than other areas, when compared against a national average (100).
- 2.69 A simple analogy is to consider swimming pool provision as a cake, its size being proportional to the facility's catchment and its slices divided among the users within the catchment.
- 2.70 The information on relative share is only available from the 2013 NFA assessment. Newark and Sherwood has a positive relative share of access to swimming pools at a value of 106. This means residents have 6% more access to swimming pools when compared to the England wide average set at 100%. In Nottingham County there is a positive relative share of 14% and for East Midlands Region a positive 4% better access to pools when compared to the England wide average.

3. Analysis of swimming pool provision based on the 2009 fpm report and updated to 2013 based on the Sport Engand National Facility Assessment data.

- 3.1 This analysis sets out the findings under each of the headings for both sets of data and then comments on the changes in the findings between 2009 and 2013.
- 3.2 The presentation of the data has been changed between the 2009 fpm report and the 2013 National Facility Assessment. To set the data out in a comparable way the simplest approach is to take the 2013 NFA data layout and re-construct the 2009 fpm data into the same/as close as is possible layout.
- 3.3 This is done for each of the headings starting with total supply. **The 2009 fpm tables are headed in green** and the **2013 NFA tables are headed in turquoise**. In the 2013 data the findings for Nottingham County and East Midlands Region have been included to provide some comparative context for the Newark and Sherwood findings

Total Supply

Table 3.1: Total Supply Findings from 2009 FPM Data

Total Supply	Newark & Sherwood
Number of pools	7
Number of pool sites	5
Supply of total water space in sqm	1,518 sq m
Supply of total water space in VPWPP	9,444
Water space per 1000 pop'n	12.5

Table 3.2: Total Supply Findings from 2013 NFA data

Total Supply	Newark & Sherwood	Nottinghamshire County	EAST MIDLANDS REGION
Number of pools	7	52	276
Number of pool sites	5	35	192
Supply of total water space in sqm	1438	10261	59491.4
Supply of publicly available water space in sqm (scaled with hrs avail in pp)	956.4	8808.2	50431.7
Supply of total water space in VPWPP	8288	76338	437075
Water space per 1,000 population	12.32	12.87	12.88

Table 3.3: Swimming pools listing from 2009 FPM

Name of facility	Type	Dimensions	Area	Year built	Year refurb
DUKERIES LEISURE CENTRE	Main/General	20 x 9	180	1981	
GROVE LEISURE CENTRE (NEWARK)	Main/General	25 x 13	313	1970	
GROVE LEISURE CENTRE (NEWARK)	Learner/Teaching/Training	13 x 7	88		
RAINWORTH LEISURE CENTRE	Main/General	20 x 10	200	1971	
SOUTH FOREST LEISURE COMPLEX	Main/General	25 x 16	400	1991	2007
SOUTHWELL LEISURE CENTRE	Main/General	25 x 10	250	1998	2004
SOUTHWELL LEISURE CENTRE	Learner/Teaching/Training	11 x 8	88		

Table 3.4: Swimming pools supply listing from 2013 NFA

Name of facility	Type	Dimensions	Area	Year built	Year refurbished
DUKERIES LEISURE CENTRE	Main/General	20 x 9	180	1981	
GROVE LEISURE CENTRE (NEWARK)	Main/General	25 x 13	313	1970	
GROVE LEISURE CENTRE (NEWARK)	Learner/Teaching/Training	13 x 7	88		
SOUTH FOREST LEISURE COMPLEX	Main/General	25 x 16	400	1991	2007
SOUTHWELL LEISURE CENTRE	Main/General	25 x 10	250	1998	2004
SOUTHWELL LEISURE CENTRE	Learner/Teaching/Training	11 x 8	88		
WELLOW HOUSE SCHOOL	Main/General	15 x 8	120	1971	2008

- 3.4 In both the 2009 report (Table 3.1) and the 2013 NFA data (Table 3.2) there are in Newark and Sherwood 7 actual swimming pools at five sites. So there is no change between the two years in the total number of pools and sites.
- 3.5 There is however one change in the actual pools. In the 2009 report the Rainworth Leisure Centre pool which is 20m x 10 metres pool is included (Table 3.3). In the 2013 list of swimming pool supply this pool is excluded but the Wellow House School pool is included (Table 3.4). This is a 15m x 8 metre pool.
- 3.6 This one change in swimming pool supply means that the total water area from the 7 pools and 5 pool sites in 2009 is 1,518 sq metres of water and in 2013 it is 1,438 sq metres of water. This is a reduction of 80 sq metres of water, or a 5.2% reduction in total water

area between the two years. The Sport England entry for the Wellow House School pool lists it as having 12.5 hours of community use per week.

- 3.7 The standard measure of water space per 1,000 population is 12.5 sq metres of water per 1,000 population in 2009. In 2013 it is 12.3 sq metres of water per 1,000 population, so virtually no change. These findings compare with a Nottinghamshire County and England wide average of 12.8 sq metres of water per 1,000 population in 2013, so a bit below these wider geographical averages.
- 3.8 In terms of the total number of swimming pools and sites in Newark and Sherwood, there is one change between 2009 and 2013. The Rainworth Leisure Centre pool (200 sq metres of water) is closed but the Wellow House School (120 sq metres of water) is included in the 2013 assessment.
- 3.9 This means the total number of pools at 7 pools and pool sites at 5 sites in Newark and Sherwood remains unchanged between 2009 – 2013. There is a reduction of 80 sq metres of total water area which is 5.2% of the total water area of swimming pools in Newark and Sherwood.
- 3.10 Based on the small scale of these changes between 2009 – 2013 the assessment is that in terms of total supply of swimming pools the 2009 report and evidence base remains robust when updated to 2013.

Total Demand

Table 3.5: Total Population and Total Demand from 2009 FPM Data

Total Demand	Newark & Sherwood
Population	115,700
Swims demanded –visits per week in the peak period	6,296
% of population without access to a car	15.8 %

Table 3.6: Total Population and Total Demand from 2013 NFA Data

Total Demand	Newark & Sherwood	Nottinghamshire County	EAST MIDLANDS REGION
Population	116751	797235	4620650
Swims demanded –vpwpp	7330	50564	296129
% of population without access to a car	17.8	20	21.3

- 3.11 In 2009 the total population of Newark and Sherwood was 115,700 people (Table 3.5). This is based on the 2001 Census and with ONS population projections updating that data to 2009. In 2013 the total population of Newark and Sherwood is 116,751 people (Table 3.6). This is based on the 2011 Census and with ONS population projections then updates to 2013.
- 3.12 So between 2009 – 2013 there is a projected increase of 1,051 people, or, put another way a 0.9% increase in the total population – in effect no percentage change.

- 3.13 In terms of total demand for swimming from the resident population, in 2009 this is 6,296 visits in the weekly peak period. In 2013 total demand for swimming is 7,330 visits, so an increase of 1,034 visits.
- 3.14 The increase in total demand for swimming mirrors the total population increase. It might be reasonable to expect there to be some variation. The explanation as to why there is not is because of aging of the resident population. It would seem that the 4 year aging of the resident population when there are NO changes in the rates and frequencies of swimming participation (set out in Appendix 2 to this report) means there is the same profile of swimming participation in 2009 – 2013. In short, there are not more or less people in 2013 that swim more or less frequently than in 2009.
- 3.15 In summary, total population change in Newark and Sherwood between 2009 – 2013 is an increase of 1,051 people to a total of 116,751 people in 2013. Total demand for swimming between 2009 – 2013 increases by 1,034 visits to a total of 7,330 visits in the weekly peak period in 2013.
- 3.16 As the population change/growth is so small and there are no changes in the rates and frequencies of swimming participation between the two years, then the slight increase in total demand for swimming is created by there being more people in the total population in 2013. The aging of the core resident population between 2009 – 2013 is not influencing the total demand for swimming.
- 3.17 Based on the small scale of these changes between 2009 – 2013 in total population and total demand for swimming, the assessment is that in terms of total demand for swimming pools, the 2009 report and evidence base remains robust.

Supply and Demand Balance

- 3.18 Note: the supply and demand balance section of the report only provides a 'global' view of provision – it compares total demand generated **within Newark and Sherwood for** swimming with the total supply of pools **within Newark and Sherwood**. It therefore represents an assumption that ALL the demand for swimming in Newark and Sherwood is met by ALL the supply of swimming pools in Newark and Sherwood.
- 3.19 In short, supply and demand balance is NOT based on where the pools are located and their catchment area extension into other authorities. Nor, the catchment areas of pools in neighbouring authorities extending into Newark and Sherwood. 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 swimming pools is set out under Satisfied Demand, Unmet Demand and Used Capacity.
- 3.20 The reason for presenting the supply and demand balance is because some local authorities like to see how THEIR total supply of swimming pools compares with THEIR total demand for swimming. So supply and demand balance presents this comparison.
- 3.21 A second note is that the data for 2009 does not allow a comparison of supply and demand balance, the data for 2009 is not available in the same form as for 2013 and so only the 2013 supply and demand data is presented.

Table 3.7: Supply/Demand Balance from 2013 NFA data

Supply/Demand Balance	Newark & Sherwood	Nottinghamshire County	EAST MIDLANDS REGION
Supply - Swimming pool provision (sqm) scaled to take account of hours available for community use	956.4	8808.2	50431.7
Demand - Swimming pool provision (sqm) taking into account a 'comfort' factor	1208.3	8334.7	48812.5
Supply / Demand balance - Variation in sqm of provision available compared to the minimum required to meet demand.	-251.92	473.56	1619.2

- 3.22 Table 3.7 shows that the total supply of water space based on the pools in Newark and Sherwood availability for community us in 2013 is 956 sq metres of water. The total demand for swimming from Newark and Sherwood residents, allowing for the pools to be operating at 70% full comfort factor is for 1,208 sq metres of water. So there is negative supply balance of 251 sq metres of water.
- 3.23 This finding does appear to contradict the findings under total supply and total demand whereby supply in terms of visits is greater than total demand. However it is important to reiterate that supply and demand balance is based on this assumption that ALL demand for swimming by Newark and Sherwood residents is met by ALL the swimming pool supply in Newark and Sherwood. It is NOT based on the catchment area of pools overlapping the boundaries of local authorities and demand being distributed to the nearest pool to where residents live, IRRESPECTIVE of which local authority that pool is located in.
- 3.24 The findings on satisfied demand, unmet demand and used capacity of pools are based on the catchment area of pools and distribution of demand to the nearest pool to where demand/residents live. It is the consistency of these findings with total supply and total demand mend which is important because they are all based on the same basis of the catchment area of swimming pools.

Satisfied Demand

Table 3.8: Satisfied Demand from 2009 FPM Data

Satisfied Demand	Newark & Sherwood
Total number of visits which are met	5,459
% of total demand satisfied	86.7%
% of demand satisfied who travelled by car	86.6%
% of demand satisfied who travelled by foot	10.7%
% of demand satisfied who travelled by public transport	2.7%
Demand Retained	4,288
Demand Retained -as a % of Satisfied Demand	68.1%
Demand Exported	1,173
Demand Exported as a % of Satisfied Demand	31.9%

Table 3.9: Satisfied Demand from 2013 NFA Data

Satisfied Demand	Newark & Sherwood	Nottinghamshire County	EAST MIDLANDS REGION
Total number of visits which are met	6343	46482	268294
% of total demand satisfied	86.5	91.9	90.6
% of demand satisfied who travelled by car	89.4	81.8	79.7
% of demand satisfied who travelled by foot	4.7	10.6	12.4
% of demand satisfied who travelled by public transport	5.8	7.7	8
Demand Retained	4174	37196	260264
Demand Retained -as a % of Satisfied Demand	65.8%	80	97
Demand Exported	2169	9286	8029
Demand Exported -as a % of Satisfied Demand	34.2%	20	3

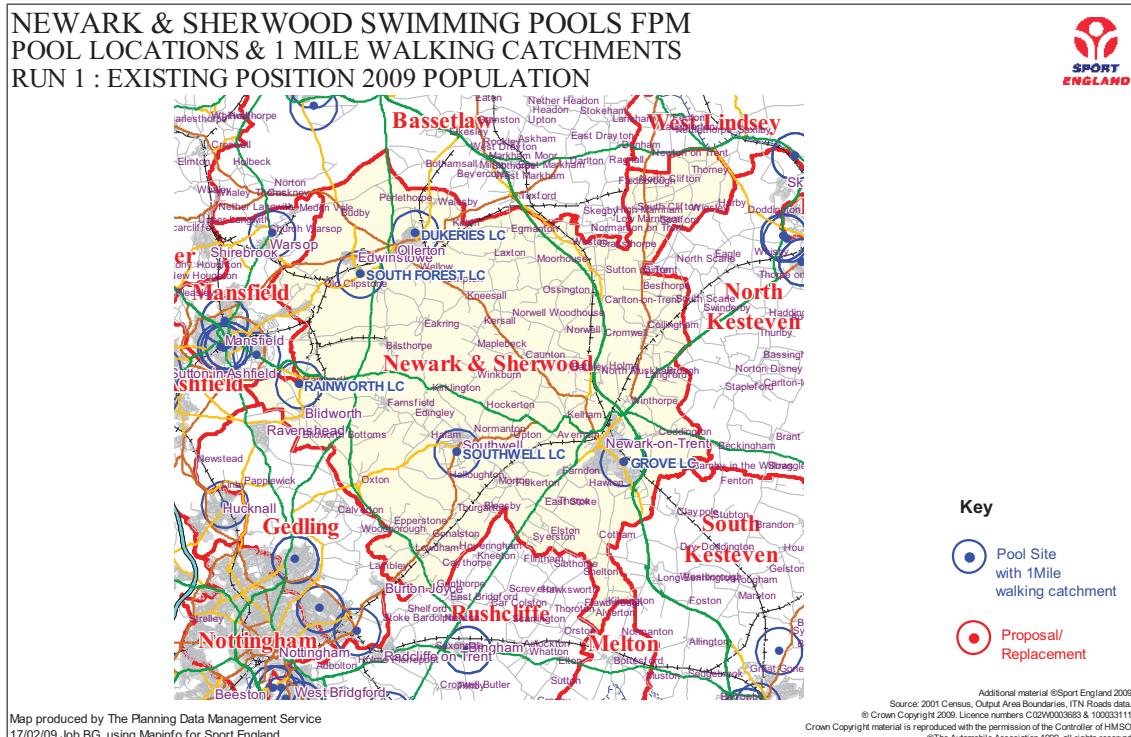
- 3.25 Satisfied demand represents the proportion of total demand that is met by the capacity at the swimming pools from residents who live within the driving, walking or public transport catchment area of a pool. In 2009 satisfied demand represented 86.7% of total demand. In 2013 this is virtually unchanged at 86.5% of the 2013 total demand for swimming from Newark and Sherwood residents.
- 3.26 This is a high level of satisfied demand and it means that in 2013 some 86.5% of the total demand for swimming is located inside the catchment area of a swimming pool, plus there is enough capacity at the pools to absorb this level of total demand. This puts into context when basing supply and demand on the catchment areas of pools (and not applying the supply and demand balance fixed boundaries) the overall level of demand than can be met by the supply.
- 3.27 The Newark and Sherwood levels of satisfied demand are however lower than the Nottinghamshire County level at 91.9% of total demand and the East Midlands Region figure of 90.6% of total demand.
- 3.28 There are some small changes in the travel patterns to swimming pools but car is by far the dominate choice of travel mode in both years.
- 3.29 The figures are in 2009 some 86.6% of all visits to swimming pools by Newark and Sherwood residents are by car. In 2013 this has increased slightly to 89.4%, an increase of 2.8%.
- 3.30 Travel to swimming pools by foot represented 10.7% of all visits in 2009 and by 2013 this has decreased by 6% to 4.7%.
- 3.31 Travel to pools by public transport was 2.7% of all visits in 2009 and in 2013 it has increased to 5.8%.

Accessibility to swimming pools based on car and walk to travel modes

- 3.32 It is important to consider the accessibility to swimming pools based on the different travel modes.

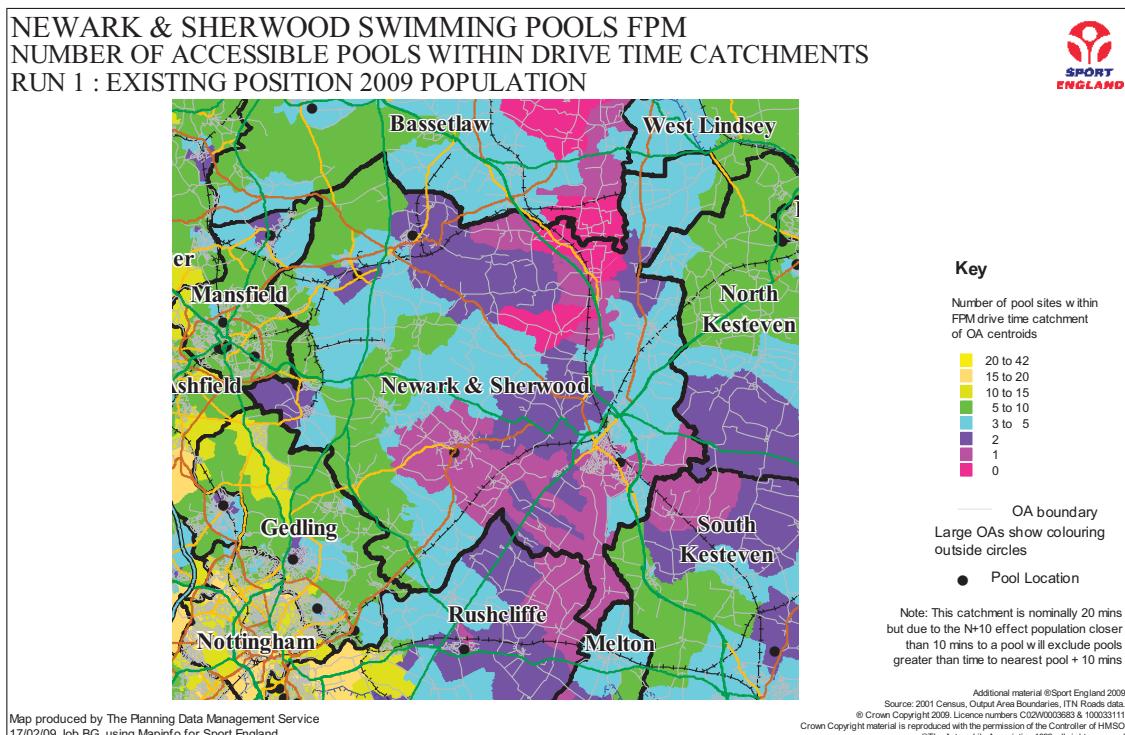
- 3.33 First off Map 3.1 below shows the location of the 5 swimming pools sites in Newark and Sherwood in 2009 and this includes the Rainworth Leisure Centre site. The circles round each site are the nominal one mile/20 minutes walk to catchment area for each site.

Map 3.1: Location of the swimming pool sites in Newark and Sherwood 2009 FPM Data



- 3.34 Based on these pool locations and the location of pools in neighbouring authorities whose catchments extend into Newark and Sherwood Map 3.2 overleaf shows the number of pools which are accessible to Newark and Sherwood residents based on the 20 minute drive time catchment area of each pool.

**Map 3.2: Access to swimming pools based on the 20 minute drive time catchment area.
2009 FPM Data**



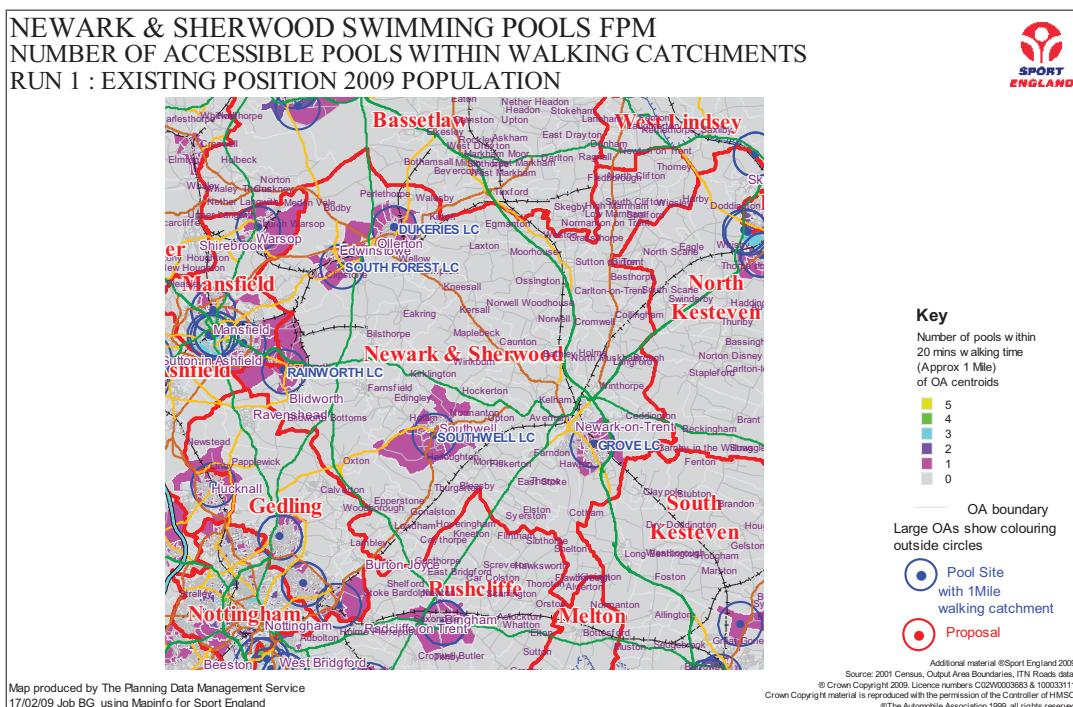
- 3.35 The colour code is on the left hand side of the map. For areas shaded pink residents in these area areas have access to 1 pool based on the 20 minute drive time catchment. In areas shaded purple residents have access to 2 pools based on the car catchment area of pools. In areas shaded turquoise, which is the majority of the Newark and Sherwood land area residents in these areas have access to between 3 – 5 pools. Finally in areas shaded green access is to between 5 – 10 pools.
- 3.36 Overall there is good access to pools for residents of Newark and Sherwood. Furthermore as the satisfied demand finding already described showed there is enough capacity at the pools to absorb 86.9% of the total demand for swimming pools.
- 3.37 By 2013 there is closure of the Rainworth swimming pool and this will reduce accessibility to pools in this NW corner of the authority close to the Mansfield boundary. As Map 3.2 shows this is the area of the authority where there residents have access to the highest number of pools, of between 3 – 5 (shaded turquoise) or between 5 – 10 (shaded green). So closure of the Rainworth Pool is unlikely to have reduced access to pools.
- 3.38 This finding is reinforced by the satisfied demand finding that in 2013 there is only a 0.2 decrease in satisfied demand to 86.5% of total demand for swimming which can be met. Also in 2013 total demand has increased by 1,034 visits. So more demand to be met and satisfied demand only decreases by 0.2%. Finally the closure of the Wellow House School pool in 2013 and the estimated 12.5 hours of community use per week in the weekly peak period.

- 3.39 The 2013 NFA dataset does not have a comparable map of access to swimming pools based on drive time catchment areas. However as the preceding paragraphs demonstrate this is very unlikely to be any different from Map 3.2.

Accessibility to swimming pools based on walk to

- 3.40 The 2009 mapped information for access to swimming pools based on walking is set out below as Map 3.3. The walking catchment area is 20 minutes or 1 mile.

Map 3.3: Access to swimming pools based on the 20 minutes/1 mile walk to catchment area. 2009 FPM Data



- 3.41 Again the colour code key for the map is on the left hand side. Not surprisingly given the walk to catchment area is only 1 mile this shows the majority of the Newark and Sherwood area is shaded grey, which means residents in these areas do not have walking access to any swimming pool. In the pink shaded areas residents have access to 1 pool.
- 3.42 These findings have to be tempered by the estimate that in 2009 the estimate was that 10.7% of all visits to pools were on foot and by 2013 this had decreased to only 4.7% of all visits.
- 3.43 So a small land area where residents have access to one pool based on walking but a very very low percentage of all visits to pools on foot, which had decreased by 6% to a totals of 4.7% of all visits in 2013.

- 3.44 Again, a comparable walking catchment area map for 2013 is not produced as part of the NFA data.

Retained demand

- 3.45 A sub set of findings for satisfied demand is establishing how much of the total Newark and Sherwood satisfied demand is met by pools located in Newark and Sherwood and which is BASED ON THE CATCHMENT AREA of the Newark and Sherwood pools. In short, how much of the Newark and Sherwood total demand for swimming is met by the 7 pools located in the authority and which are available for public use at peak times? This is known as retained demand.
- 3.46 Once we know how much of the Newark and Sherwood demand is retained at Newark and Sherwood's pools then it is possible to identify how much of the Newark and Sherwood demand is met outside the authority. This is known as exported demand.
- 3.47 In 2009 Newark and Sherwood was retaining some 4,288 visits, or, 68.1% of the Newark and Sherwood demand for swimming pools at its own pool sites. In 2013 the figures are 4,174 visits, or 65.8%. So a decrease of 114 visits or a decrease of 2.3% of the 2013 Newark and Sherwood 2013 population. So, in effect very little change in retained demand between the two years.
- 3.48 The summary is that the 7 pools and 5 sites are in good locations in relation to the population and demand contained within their catchment areas. So much so that for 68.1% of the total satisfied demand for swimming from residents in 2009 and 65.8% of the total satisfied demand in 2013, the nearest pool to where residents live is located in Newark and Sherwood. Plus there is enough capacity at these pools to meet this level of Newark and Sherwood demand for swimming.

Exported demand

- 3.49 The residual of the total satisfied demand, after retained demand has been accounted for is exported demand. In 2009 Newark and Sherwood was exporting some 1,173 visits, or 31.6% of the total satisfied demand for swimming was being exported and being met/satisfied at pools in the other local authorities.
- 3.50 In 2013 the figures are 2,169 visits, or 34.2% of the total Newark and Sherwood satisfied demand for swimming being exported. So between the two years there is an increase of 2.6% of the total Newark and Sherwood demand for swimming which is being met outside the authority.
- 3.51 At a total of 34.2% of the total Newark and Sherwood satisfied demand this is a high level of exported demand. It does illustrate that whilst the residents do enjoy a quite high level of access to pools based on car travel there are areas of the authority, notably the NE close to the North Kesteven and West Lindsey boundaries where residents do have much lower levels of access to pools (shown in Map 3.2) and it is most likely in these areas where the Newark and Sherwood demand is being exported.
- 3.52 In summary the findings under satisfied demand are changed little between 2009 and 2013. The total amount of Newark and Sherwood demand which is satisfied in 2009 is a very high 86.7% of the total Newark and Sherwood demand in 2009 and 86.5% in 2013.
- 3.53 Travel patterns to swimming pools are dominated by car travel and again virtually unchanged. Car travel is dominated at 86.6% of all visits to swimming pools by Newark

and Sherwood residents in 2009. By 2013 this has increased slightly to 89.4%, an increase of 2.8%.

- 3.54 Travel to swimming pools by foot represented 10.7% of all visits in 2009 and by 2013 this has decreased by 6% to 4.7%.
- 3.55 Travel to pools by public transport was 2.7% of all visits in 2009 and in 2013 it has increased to 5.8%.
- 3.56 In 2009 residents in around 20% of the land area of Newark and Sherwood have access to 1 pool based on the 20 minute drive time catchment area of pools. With a further 20% of the land area of the authority being within the 20 minute drive time catchment area of 2 pools. Around 30% of the Newark and Sherwood land area has access to between 3 – 5 pools. Finally another 30% of the land area has access to between 5 – 10 pools. (illustrated in Map 3.2)
- 3.57 So overall there is good access to pools for residents of Newark and Sherwood. Furthermore as the satisfied demand finding already described sets out there is enough capacity at the pools to absorb 86.7% of the total Newark and Sherwood demand for swimming pools.
- 3.58 By 2013 there is closure of the Rainworth swimming pool. In this NW corner of the authority, close to the Mansfield boundary it is the area where residents have access to the highest number of pools, of between 3 – 5 or between 5 – 10. So closure of the Rainworth Pool is unlikely to have reduced access to pools.
- 3.59 This finding is reinforced by the satisfied demand finding that in 2013 there is only a 0.2 decrease in satisfied demand to 86.5% of total demand for swimming which can be met. Also in 2013 total demand has increased by 1,034 visits. So there is more demand to be met and satisfied demand only decreases by 0.2%.
- 3.60 Finally the closure of the Rainworth Leisure Centre is offset by the inclusion of the Wellow House School pool in 2013 and the estimated 12.5 hours of community use per week in the weekly peak period.
- 3.61 Retained demand, which is how much of the Newark and Sherwood demand is met at the pools located in Newark and Sherwood changes very little between the two years. In 2009 Newark and Sherwood is retaining 68.1% of its own demand for swimming pools at its own pool sites. In 2013 this is 65.8%, so a decrease of 114 visits or a decrease of 2.3% of the 2013 Newark and Sherwood 2013 population. So, in effect very little change in retained demand between the two years.
- 3.62 Exported demand also changes very little between the two years. There is an increase of 2.6% of the total Newark and Sherwood demand for swimming to 34.2% of the total which is being met outside the authority.
- 3.63 At 34.2% of the total Newark and Sherwood satisfied demand this is a high level of exported demand. It does illustrate that whilst the residents do enjoy a quite high level of access to pools based on car travel there are areas of the authority, notably the NE close to the North Kesteven and West Lindsey boundaries where residents do have much lower levels of access to pools (shown in Map 3.2) and it is most likely in these areas where the Newark and Sherwood demand is being exported.

- 3.64 Overall and based on the small scale of these changes between 2009 – 2013 the assessment is that in terms of satisfied demand for swimming pools, the 2009 report and evidence base remains robust.

Unmet Demand

- 3.65 Unmet demand is defined in two ways: demand for swimming which cannot be met because (1) there is too much demand for any particular 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.
- 3.66 It could be (under definition 1) there are individual pools where demand is greater than the capacity of that pool and creating unmet demand. Also under the satisfied demand heading it was identified that there are large areas of Newark and Sherwood which are outside the walking catchment area of a pool and (under definition 2) demand located in these areas would be determined as unmet demand. This is however only the unmet demand which CHOOSES to walk to pools and this will be small.

Table 3.10: Unmet Demand from 2009 FPM Data

Unmet Demand	Newark & Sherwood
Total number of visits in the peak, not currently being met	836
Unmet demand as a % of total demand	13.3%
Equivalent in Water space m ² - with comfort factor	147
% of Unmet Demand due to ;	
Lack of Capacity -	4.2%
Outside Catchment -	95.8%

Table 3.11: Unmet Demand from 2013 NFA Data

Unmet Demand	Newark & Sherwood	Nottinghamshire County	EAST MIDLANDS REGION
Total number of visits in the peak, not currently being met	988	4082	27836
Unmet demand as a % of total demand	13.5	8.1	9.4
Equivalent in Water space m ² - with comfort factor	162.8	672.81	4588.3
% of Unmet Demand due to ;			
Lack of Capacity -	4.0	2.0	3.9
Outside Catchment -	96.0	98.0	96.1

- 3.67 Table 3.10 shows that the total unmet demand for pools in Newark and Sherwood is 836 visits in the 2009 fpm report. This is 13.3% of the total demand for swimming and equates to 147 sq metres of water. (Note: for context a 25m x 4 lane swimming pool is 212 sq metres of water).

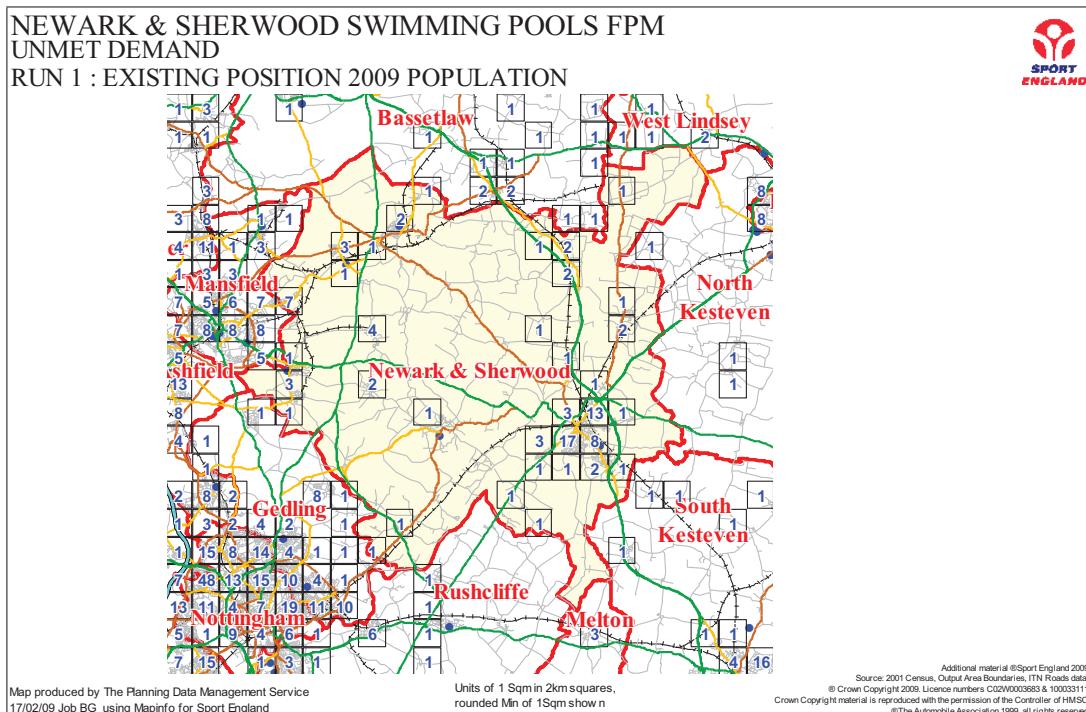
- 3.68 Unmet demand changes very little between 2009 – 2013 and when assessed on the 2013 NFA report it shows unmet demand to have increased to 988 visits, some 13.5% of total demand for swimming in 2013 and which is 162 sq metres of water. This is set out in Table 3.11.
- 3.69 So unmet demand for swimming increases from 147 sq metres of water to a total of 162 sq metres of water between 2009 and 2013 – very little change.
- 3.70 There is also very little change in the amount of unmet demand under each definition. Unmet demand due to lack of swimming pool capacity is 4.2% of total unmet demand in 2009 and by 2013 this has hardly changed but is now 4% of total unmet demand.
- 3.71 The Newark and Sherwood distribution of unmet demand being dominated by demand located outside the catchment area of a pool (96% of the total) is consistent with the findings for Nottingham County and for East Midlands region. 98% and 96% respectively of the total unmet demand is located outside a pool catchment area.
- 3.72 Dealing first with the amount of unmet demand due to lack of pool capacity. It is the Grove Leisure Centre which is the pool site which has a lack of capacity. Table 3.12 overleaf sets out the used capacity of each of the Newark and Sherwood pools in 2013 (this data is not available for 2009). As the blue row shows the average used capacity for the five swimming pool sites across Newark and Sherwood is 55%. This authority wide average varies from 17% of capacity used at South Forest Leisure Complex to 100% at the Grove Centre. So it is the Grove Centre which is creating the 4% of unmet demand due to lack of swimming pool capacity. This 4% equates to 6 sq metres of water.

**Table 3.12: Level of used capacity for each swimming pool site in Newark and Sherwood.
2013 NFA data**

Name of facility	Type	AREA	SITE YEAR BUILT	SITE YEAR REFURB	PUBLIC / COMMERCIAL	COMMNTY HRS AVAIL	Facility Capacity - vpwpp	% of Capacity used	% of capacity not used
Newark and Sherwood							8,288	55%	45%
DUKERIES LEISURE CENTRE	Main/General	180	1981		P	33	810	74%	26%
GROVE LEISURE CENTRE (NEWARK)	Main/General	313	1970		P	55	2,324	100%	0%
GROVE LEISURE CENTRE (NEWARK)	Learner/Teaching/Training	88				25			
SOUTH FOREST LEISURE COMPLEX	Main/General	400	1991	2007	C	85	3,333	17%	83%
SOUTHWELL LEISURE CENTRE	Main/General	250	1998	2004	P	53	1,571	54%	46%
SOUTHWELL LEISURE CENTRE	Learner/Teaching/Training	88				21			
WELLOW HOUSE SCHOOL	Main/General	120	1971	2008	P	13	250	76%	24%

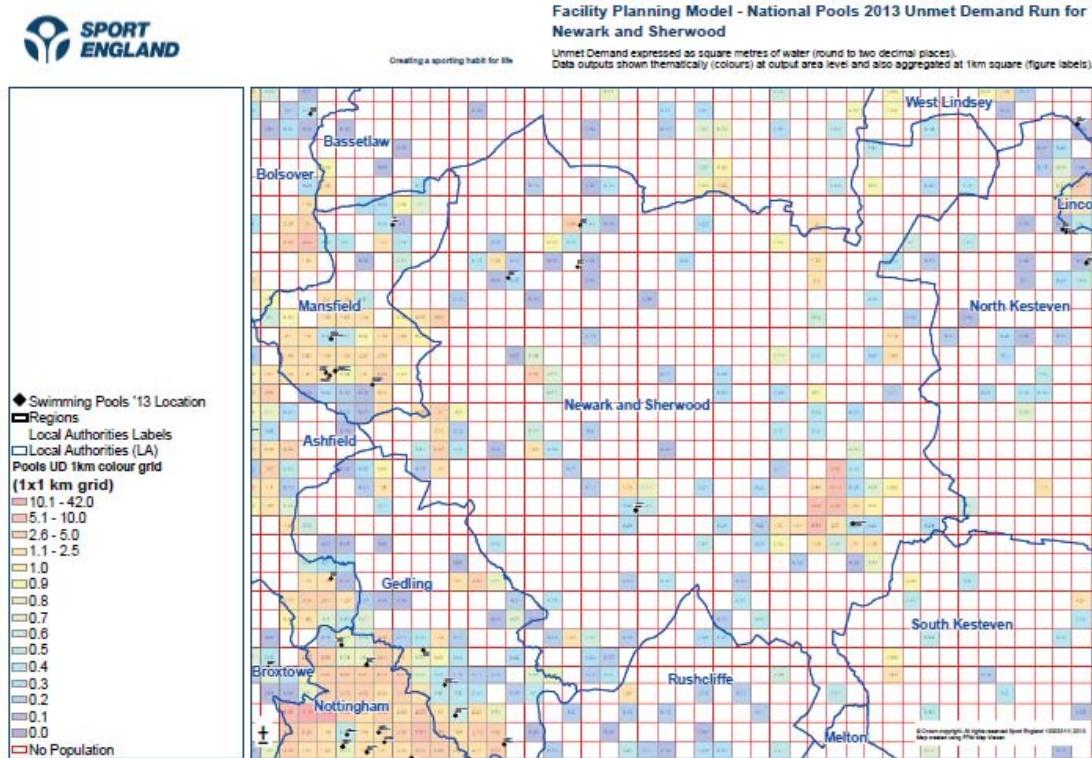
- 3.73 Turning to the second definition of unmet demand, which is demand located outside the catchment area of a swimming pool, this represents 96% of the total unmet demand in both 2009 and 2013. In 2009 this is 141 sq metres of water and in 2013 it is 155 sq metres of water.
- 3.74 It is important to reiterate that this unmet demand is locational and there is enough swimming pool supply to meet the unmet demand – it is just that it is located outside the walk to catchment area of any swimming pool. These locations for 2009 are set out in Map 3.3.
- 3.75 In terms of the scale of unmet demand in these locations this is illustrated overleaf in Map 3.4 for 2009 and Map 3.5 for 2013. The information is presented in a slightly different format in each map. However the findings are consistent for each map. In Map 3.4 there are a cluster of grid squares in the Newark area which have values for the amount of unmet demand, expressed in sq metres of water, located in the one kilometre grid square. The lowest value is 1 and the highest is 17. There are around 15 other squares with values of between 1 and 4 located in the authority and these are the other areas of unmet demand.

Map 3.4: Scale and location of unmet demand outside the walk to catchment area of a swimming pool. 2009 FPM Data



- 3.76 Map 3.5 shows the same cluster of unmet demand around the Newark area the 1 kilometre grid squares are shaded according to the value of unmet demand. The blue, green and yellow squares have very low values of between 0 – 1 sq metre of water. The light pink squares have values of up to 10 sq metres of water and the darker pink squares of which there are 2 have values of between 10 – 42 sq metres of water. (Note the maps do not present easy read to findings when reproduced in the report. A hard copy set of the maps which are easy to read will be provided).
- 3.77 Map 3.5 also shows a cluster of squares in the north east of the authority. These are very low value squares shaded blue, green and yellow, with 2 pink squares. The total value of these squares is around 25 sq metres of water. It is the second highest area of the authority for unmet demand located outside the walk to catchment area of a swimming pool.

Map 3.5: Scale and location of unmet demand outside the walk to catchment area of a swimming pool. 2013 NFA Data



- 3.78 In summary the findings on unmet demand show little change between 2009 and 2013. Total unmet demand in 2009 is 836 visits, which is 13.3% of total demand and which represents 147 sq metres of water. In 2013 total unmet demand is 988 visits, which is 13.5% of total demand and this represents 162 sq metres of water. Put simply unmet demand has increased by 15 sq metres of water between 2009 and 2013. (Note: a 25 metres x 4 lane pool is 212 sq metres of water).
- 3.79 Unmet demand due to lack of swimming pool capacity is 4.2% of the total in 2009 which represents 6 sq metres of water. In 2013 it is 4% of the total and this is 6.5 sq metres of water, so again virtually unchanged.
- 3.80 The one pool site which is estimated to be working above the Sport England pools full comfort level of 70% of pool capacity used is the Grove Leisure Centre which is estimated to be at 100% of pool capacity used in 2013.
- 3.81 Unmet demand due to it being located outside the walk to catchment area is concentrated around Newark and this totals around 50 sq metres of water in both 2009 and 2013 (illustrated in Maps 3.4 and 3.5).
- 3.82 Overall there are virtually no changes in the total unmet demand and the distribution of the unmet demand between 2009 – 2013. The assessment is that in terms of unmet demand, the 2009 report and evidence base remains robust.

Used Capacity

- 3.83 Used capacity is a measure of usage and throughput at swimming pools and estimates how well used/how full facilities are. The Sport England facilities planning model is designed to include a 'comfort factor', beyond which, in the case of swimming pools, the pools are too full. The model assumes that usage over 70% of capacity is busy and the pool is operating at an uncomfortable level above that percentage.

Table 3.13: Used capacity 2009 FPM Data

Used Capacity	Newark & Sherwood
Total number of visits used of current capacity	5,709
% of overall capacity of pools used	60.4%
% of visits made to pools by walkers	8.2%
% of visits made to pools by road	91.8%
Visits Imported:	
Number of visits imported	1,421
As a % of used capacity	24.9%
Visits Retained:	
Number of Visits retained	4,288
As a % of used capacity	75.1%

Table 3.14: Used capacity 2013 NFA Data

Used Capacity	Newark & Sherwood	Nottinghamshire County	EAST MIDLANDS REGION
Total number of visits used of current capacity	4518	45829	267145
% of overall capacity of pools used	54.5	60	61.1
% of visits made to pools by walkers	6.7	10.8	12.4
% of visits made to pools by road	93.3	89.2	87.6
Visits Imported:			
Number of visits imported	344	8633	6880
As a % of used capacity	7.6	18.8	2.6
Visits Retained:			
Number of Visits retained	4174	37196	260264
As a % of used capacity	92.4	81.2	97.4

- 3.84 The total used capacity as an average across the 5 swimming pool sites in Newark and Sherwood in 2009 is 60.4% of total pool capacity used. In 2013 this has decreased to 54.5% of pool capacity used, so a decrease in pool capacity of 5.9% between the two years. Both percentages are well within the Sport England pools full comfort level of 70% of pool capacity used.
- 3.85 The decrease could be explained by the opening of new pools or the refurbishment of existing pools in some of the eight authorities which border Newark and Sherwood and whose catchment area extends into Newark and Sherwood. This could result in these

pools being more attractive to users resulting in demand being drawn out of the authority and a decrease in pool capacity used of the Newark and Sherwood pools.

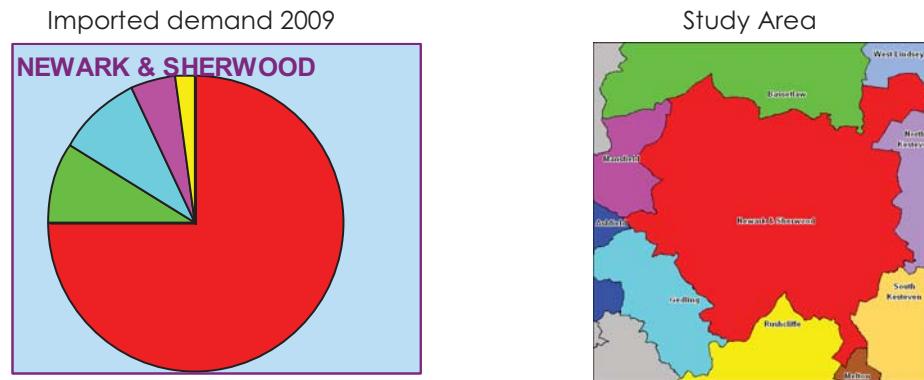
- 3.86 The authority wide average used capacity of 54.5% does mask variations at each pool site. Table 3.15 overleaf sets out the used capacity for each pool site based on the 2013 NFA data. This shows the lowest pool capacity used is at South Forest Leisure Centre with 17% of pool capacity used. There are two pool sites above the Sport England pools full comfort level and these are Dukeries Leisure Centre at 74% of capacity used and Grove Leisure Centre estimated to be at 100% of pool capacity used.
- 3.87 The final column of this table (in grey) shows where there is demand which would like to access a pool but it cannot – this is represented by a minus figure. For the Grove Leisure centre it is estimated there are 115 visits in the weekly peak period which would like to access the centre but cannot because it is full. This is the 4% of unmet demand which is due to lack of swimming pool capacity.
- 3.88 Data from the 2009 fpm assessment is not available but it is unlikely to show much variation from the 2013 assessment. If anything the 2013 used capacity findings for each pool are better than they would be in 2009 because overall used capacity of pools across the authority has decreased from 60.4% in 2009 to 54.5%.
- 3.89 A key finding from this overall updating study is that there are two public pool sites which the Sport England fpm assessment is estimating to have used swimming pool capacity which is above the 70% Sport England pools full comfort level. In the case of Grove Leisure centre it is at 100% of pool capacity used.
- 3.90 So whilst overall there is enough pool capacity to meet demand across the authority, this demand is distributed unevenly and two pool sites Dukeries and Grove are attracting most of the demand, leading these pools to be very full. Whilst the other public pool, Southwell Leisure Centre has an estimated used capacity of 54%, some 16% below the pools full comfort level of 70% of pool capacity used. If possible some re-distribution of demand form Dukeries and Grove by managing programming changes across the pool sites could even up the pool capacity used and ease the pressure on the very full pools.

Table 3.15: Used Capacity of each swimming pool site in Newark and Sherwood. 2013 NFA data

Name of facility	Type	AREA	SITE YEAR BUILT	SITE YEAR REFURB	PUBLIC / COMMERCIAL	% of Capacity used	% of cap not used	Facility cap used in Peak Period	Demand redistributed
Newark and Sherwood						55%	45%	4,518	
DUKERIES LEISURE CENTRE	Main/General	180	1981		P	74%	26%	601	2
GROVE LEISURE CENTRE (NEWARK)	Main/General	313	1970		P	100%	0%	2,324	-115
GROVE LEISURE CENTRE (NEWARK)	Learner / Teaching/ Training	88							
SOUTH FOREST LEISURE COMPLEX	Main / General	400	1991	2007	C	17%	83%	552	3
SOUTHWELL LEISURE CENTRE	Main / General	250	1998	2004	P	54%	46%	851	12
SOUTHWELL LEISURE CENTRE	Learner / Teaching / Training	88							
WELLOW HOUSE SCHOOL	Main / General	120	1971	2008	P	76%	24%	190	2

Imported demand for swimming

- 3.91 The level of demand for swimming which is imported into Newark and Sherwood is reported in the used capacity category of findings. This is because it is based on residents who live outside of Newark and Sherwood but the nearest pool to where they live is located inside the authority. In this instance the model distributes this demand to the Newark and Sherwood pools and so it becomes part of the used capacity of the Newark and Sherwood pools.
- 3.92 In 2009 Newark and Sherwood a very high 24.9% of the total used capacity of the Newark and Sherwood pools is imported. So one in four visits is imported. It is possible to identify how much and where this imported demand is coming from. This is set out in Chart 3.1 overleaf.
- 3.93 The turquoise part of the pie chart is Gedling and the green part is Bassetlaw. Some 9% of the 25% of demand imported into Newark and Sherwood is imported from each of these two authorities. After that 5% is imported from Mansfield (purple) and 2% from Rushcliffe (yellow).

Chart 3.1: Imported demand for swimming. 20089 FPM data


- 3.94 In 2013 the level of imported demand which is met at Newark and Sherwood's pools has decreased considerably and is 344 visits, or 7.6% of the total used capacity of the Newark and Sherwood pools. So a decrease of 1,077 visits, or 17.3%. This finding does reinforce the explanation as to why the used capacity of the Newark and Sherwood pools falls between 2009 and 2013.
- 3.95 Put simply there is considerably less demand being imported into Newark and Sherwood in 2013. Again this also reinforces the view that there have been changes in the number and age off pools in neighbouring authorities, either new provision or modernisation of some existing pools. So the pools are now more attractive through modernisation or there are more pools so demand is being retained that were previously exported.
- 3.96 In summary between 2009 and 2013 total used capacity across the 5 swimming pool sites in Newark and Sherwood decreases from 60.4% in 2009 to 54.5% of pool capacity used in 2013. So a decrease in pool capacity used of 5.9% between the two years. Both percentages are well within the Sport England pools full comfort level of 70% of pool capacity used.
- 3.97 The decrease could be explained by the opening of new pools or the refurbishment of existing pools in some of the eight authorities which border Newark and Sherwood and whose catchment area extends into Newark and Sherwood. This could result in these pools being more attractive to users resulting in demand being drawn out of the authority and a decrease in pool capacity used of the Newark and Sherwood pools.
- 3.98 The authority wide average of 54.5% in 2013 does mask variations at each pool site. Based on the 2013 NFA data the lowest pool capacity used is South Forest Leisure Centre with 17% of pool capacity used. There are two pool sites above the Sport England pools full comfort level Dukeries Leisure Centre at 74% of capacity used and Grove Leisure Centre estimated to be at 100% of pool capacity used.
- 3.99 Data from the 2009 fpm assessment is not available but it is unlikely to show much variation from the 2013 assessment. If anything the 2013 used capacity findings for each pool are better than they would be in 2009 because overall used capacity of pools across the authority has decreased from 60.4% in 2009 to 54.5%.
- 3.100 A key finding from this overall updating study is that there are two public pool sites which are above the Sport England fpm assessment is estimating to have used swimming pool

capacity which above the 70% Sport England pools full comfort level. In the case of Grove Leisure centre it is at 100% of pool capacity used.

3.101 So whilst overall across Newark and Sherwood there is enough pool capacity to meet demand, this demand is distributed unevenly and two pool sites Dukeries and Grove are attracting most of the demand, leading these pools to being very full. Whilst the other public pool, Southwell Leisure Centre has an estimated used capacity of 54%, some 16% below the pools full comfort level of 70% of pool capacity used.

3.102 If possible some re-distribution of demand from Dukeries and Grove by managing programming changes across the pool sites could even up the pool capacity used and ease the pressure on the very full pools.

Relative Share

3.103 In addition to the supply and demand assessment above, the FPM also analyses the relative share of swimming pools – i.e. it takes into account the location of the population with the size and availability of facilities. It then assesses establish whether residents in one area have a greater or lesser share of provision than other areas, when compared against a national average (100).

3.104 A simple analogy is to consider swimming pool provision as a cake, its size being proportional to the facility's catchment and its slices divided among the users within the catchment.

Table 3.16: Relative Share of access to swimming pools. 2013 NFA Data

Relative Share	Newark & Sherwood	Nottinghamshire County	EAST MIDLANDS REGION
Score - with 100 = FPM Total (England and also including adjoining LAs in Scotland and Wales)	106	114	104
+/- from FPM Total (England and also including adjoining LAs in Scotland and Wales)	6	14	4

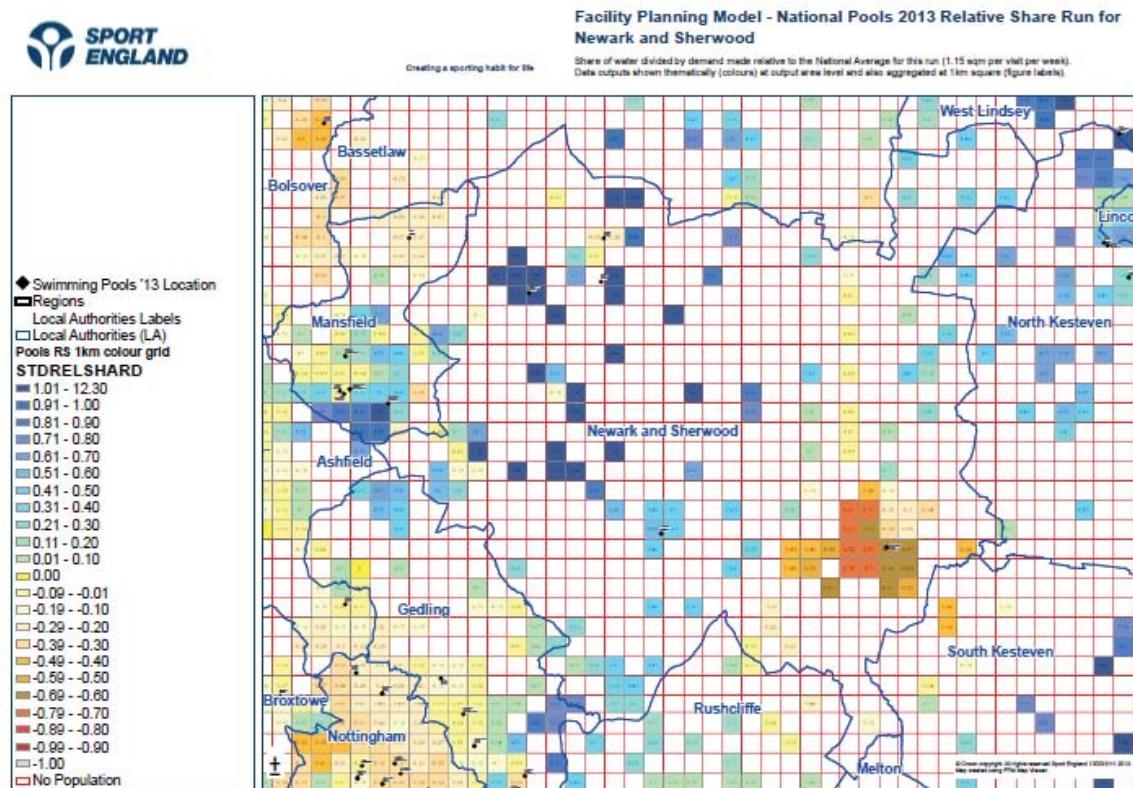
3.105 The information on relative share is only available from the 2013 NFA assessment. Table 3.16 above shows that Newark and Sherwood has a positive relative share of access to swimming pools at a value of 106. This means residents have 6% more access to swimming pools when compared to the England wide average set at 100%. In Nottingham County there is a positive relative share of 14% and for East Midlands Region a positive 4% better access to pools when compared to the England wide average.

3.106 Relative share does vary across the authority and in some areas it is above the 6% average and in some areas lower. The distribution of relative share in 2013 across Newark and Sherwood is set out in Map 3.6 overleaf. The one kilometre grid squares shaded green and blue have a positive relative share of access to pools (above 100% of the England wide average) and the map shows that residents in the NW corner of the authority have the highest relative share of access to pools. The dark blue squares have a relative share value which is up to 12% above the England wide average.

3.107 By contrast areas shaded yellow, brown and orange are areas where the residents have a lower than the England wide average of access to pools. This is in the Newark area and the lowest values are the squares shaded brown and in these areas relative share is

between 60% - 70% of the England wide average at 100%. The reason for this area having this low value is based on the concentration of population in this area and so more people to share access to pools. In other areas there is less population and so residents enjoy a higher relative share of access to pools (Note: again the maps do not reproduce clearly in the report but a full set of maps will be made available separately to the Council).

Map 3.6: Relative share of access to swimming pools. 2013 NFA data



- 3.108 This ends the reporting of the main and detailed findings on reviewing and updating the 2009 fpm report on provision for swimming pools with the 2013 NFA assessment of swimming pools in Newark and Sherwood.

Appendix 1: List of the data applied and used in this analysis and report
2009 fpm data on provision for swimming in Newark and Sherwood

Total Supply	Newark & Sherwood
Number of pools	7
Number of pool sites	5
Supply of total water space in sq m	1,518 sq m
Supply of total water space in visits per week in the weekly peak period	9,444
Water space per 1000 pop'n	12.5
Total Demand	Newark & Sherwood
Population	115,700
Swims demanded –visits per week in the weekly peak period	9,444
% of population without access to a car	15.8 %
Satisfied Demand	Newark & Sherwood
Total number of visits which are met	5,459
% of total demand satisfied	86.7%
% of demand satisfied who travelled by car	86.6%
% of demand satisfied who travelled by foot	10.7%
% of demand satisfied who travelled by public transport	2.7%
Demand Retained	4,288
Demand Retained -as a % of Satisfied Demand	78.5%
Demand Exported	1,173
Demand Exported -as a % of Satisfied Demand	21.5%
Unmet Demand	Newark & Sherwood
Total number of visits in the peak, not currently being met	836
Unmet demand as a % of total demand	13.3%
Equivalent in Water space m ² - with comfort factor	147
% of Unmet Demand due to ;	
Lack of Capacity -	4.2%
Outside Catchment -	95.8%
Used Capacity	Newark & Sherwood
Total number of visits used of current capacity	5,709
% of overall capacity of pools used	60.4%
Visits Imported;	1,421
Number of visits imported	1,421
As a % of used capacity	24.9%
Visits Retained:	
Number of Visits retained	4,288
As a % of used capacity	75.1%

2013 NFA assessment swimming pools data for Newark and Sherwood

Total Supply	Newark & Sherwood	Nottinghamshire County	EAST MIDLANDS REGION
Number of pools	7	52	276
Number of pool sites	5	35	192
Supply of total water space in sq m	1438	10261	59491.4
Supply of publicly available water space in sq m (scaled with hrs avail in pp)	956.4	8808.2	50431.7
Supply of total water space in VPWPP	8288	76338	437075
Water space per 1000	12.32	12.87	12.88
Total Demand	Newark & Sherwood	Nottinghamshire County	EAST MIDLANDS REGION
Population	116751	797235	4620650
Swims demanded -vpwpp	7330	50564	296129
Equivalent in water space – with comfort factor included	1208.3	8334.7	48812.5
% of population without access to a car	17.8	20	21.3
Supply/Demand Balance	Newark & Sherwood	Nottinghamshire County	EAST MIDLANDS REGION
Supply - Swimming pool provision (sq m) scaled to take account of hours available for community use	956.4	8808.2	50431.7
Demand - Swimming pool provision (sq m) taking into account a 'comfort' factor	1208.3	8334.7	48812.5
Supply / Demand balance - Variation in sq m of provision available compared to the minimum required to meet demand.	-251.92	473.56	1619.2
Satisfied Demand	Newark & Sherwood	Nottinghamshire County	EAST MIDLANDS REGION
Total number of visits which are met	6343	46482	268294
% of total demand satisfied	86.5	91.9	90.6
% of demand satisfied who travelled by car	89.4	81.8	79.7
% of demand satisfied who travelled by foot	4.7	10.6	12.4
% of demand satisfied who travelled by public transport	5.8	7.7	8
Demand Retained	4174	37196	260264
Demand Retained -as a % of Satisfied Demand	65.8	80	97
Demand Exported	2169	9286	8029
Demand Exported -as a % of Satisfied Demand	34.2	20	3
Unmet Demand	Newark & Sherwood	Nottinghamshire County	EAST MIDLANDS REGION
Total number of visits in the peak, not currently being met	988	4082	27836
Unmet demand as a % of total demand	13.5	8.1	9.4
Equivalent in Water space m ² - with comfort factor	162.8	672.81	4588.3
% of Unmet Demand due to :			

Lack of Capacity -	4.0	2.0	3.9
Outside Catchment -	96.0	98.0	96.1
Used Capacity	Newark & Sherwood	Nottinghamshire County	EAST MIDLANDS REGION
Total number of visits used of current capacity	4518	45829	267145
% of overall capacity of pools used	54.5	60	61.1
% of visits made to pools by walkers	6.7	10.8	12.4
% of visits made to pools by road	93.3	89.2	87.6
Visits Imported:			
Number of visits imported	344	8633	6880
As a % of used capacity	7.6	18.8	2.6
Relative Share	Newark & Sherwood	Nottinghamshire County	EAST MIDLANDS REGION
Score - with 100 = FPM Total (England and also including adjoining LAs in Scotland and Wales)	106	114	104
+/- from FPM Total (England and also including adjoining LAs in Scotland and Wales)	6	14	4

Appendix 2: Model Description, Inclusion Criteria and Model Parameters

Included within this appendix are the following:

- A. Model description
- B. Facility Inclusion Criteria
- C. Model Parameters

A. Model Description**Background**

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. 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.

Use of FPM

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.

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.

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.

How the model works

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.

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.

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.

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.

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.

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

Calculating Demand

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. 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. The use of OA's 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.

Calculating Supply Capacity

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. 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).

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.

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 over supply 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.

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.

² For example, it is estimated that 10.45% of 16-24 year old males will demand to use an AGP, 1.69 times a week. This calculation is done separately for the 12 age/gender groupings.

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 175,400 OA's across England & Wales. An OA has a target value of 125 households (300 people) 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.

Facility Attractiveness – for halls and pools only

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.

Attractiveness weightings are based on the following:

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.
2. 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.
3. 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 programme 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.

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

- High weighted curve - includes Non education management - better balanced programme, more attractive.
 - Lower weighted curve - includes Educational owned & managed halls, less attractive.
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.

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 =1 user /6m² , halls = 5 users /court). This is gives each facility a "theoretical capacity".

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.

Facility	Car	Walking	Public transport
Swimming Pool	70.0%	18.8%	11.2%
Sports Hall	74.6%	15.5%	10.0%
AGP			
Combined	89.0%	9.0%	2.0%
Football	87.1%	10.7%	2.1%
Hockey	95.4%	2.6%	1.9%

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.)

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 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.
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.

Utilised Capacity (used capacity)

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 user's perspective, as the facility would completely full.

For example:

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%.

As a guide, 70% utilised capacity is used to indicate that pools are becoming busy, and 80% for sports halls.

Travel times Catchments

The model uses 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, sports halls and AGPs are made by car, with a significant minority of visits to pools and sports halls being made on foot.

The model includes a distance decay function; where the further a user is from a facility, the less likely they will travel. The survey data show 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	57%	55%	58%	56%
10-20	33%	30%	34%	30%
20 -40	9%	12%	7%	11%

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