Facilities Planning Model Assessment of Sports Halls Provision in Broadland

Standard Report 2020

20 December 2021

Disclaimer

The information in this report is presented in good faith using the information available to Sport England at the time of preparation. It is provided on the basis that the authors of the report are not liable to any person or organisation for any damage or loss which may occur in relation to taking, or not taking, action in respect of any information or advice within the document.

Accreditations

Other than data provided by Sport England, this report also contains data from the following sources:

Executive Summary

i. The key element to be taken from this report is that Broadland District does not have any public leisure centre sports halls; there are six educational sports hall sites and one community owned sports hall site. The educational sports halls are limited in the hours available for community use. These seven sports hall providers determine the community use for indoor hall sports in Broadland District.

Key Findings

ii. The total supply of sports halls in Broadland equates to 52 badminton courts, of which 35.5 are available for community use. There is an aggregate total of 16.5 badminton courts at the seven sports hall sites which are unavailable, which represents 32% of the total supply.

iii. While supply is constrained, 91% of the total demand for sports halls by Broadland residents is met. However, this includes sports halls in neighbouring local authorities that are accessible to Broadland residents. Of the total satisfied demand, 65% is retained within the authority.

iv. Unmet demand is 9.5% of total demand and equates to 3.3 badminton courts. Only 4% of unmet demand is due to lack of capacity, and 96% is demand located outside the catchment area of a sports hall.

v. There is not a sufficient cluster of unmet demand in any one location to consider increasing sports halls provision to improve accessibility for residents. Unmet demand is highest in the Acle area, where it totals 1 badminton court.

vi. Broadland's average estimated used capacity of sports halls is 67% in the weekly peak period. This is 13 percentage points below the Sport England benchmark of sports halls being comfortably full at 80% of capacity used at peak times.

vii. The average age of the sport hall sites is 28 years, and the most recent sports hall opened in 2009 at Taverham Hall Preparatory School. Two of the seven sports sites have been modernised.

Strategic Overview

viii. The educational sports hall venues provide organised use by sports clubs and community groups, but without public access for pay and play use. Also, the venues are not available for community use during the day in term time.

ix. This supply can change dependent on the policy of each provider and, while most schools actively promote community use, others are responsive and make sports halls available for requests to let for a term or a shorter letting period. To participate, residents would have to join a club or community group as there would be no opportunities for recreational casual play. This could be limiting the opportunities for residents to participate.

x. While the sports halls are quite busy, with 67% of the available capacity being used during the weekday evening and weekend day peak period, usage at each site varies depending on (1) the hours available for community use, (2) the demand in the area and whether this is shared between sites or retained by an individual site, and (3) the age and condition of the sports hall and inherently its attractiveness. It is difficult to identify which of these factors is the main driver.

xi. For example, most of the demand and the sports halls are located in the area close to the boundary with Norwich, so the demand is shared between venues. The sports halls with the highest estimated used capacity are the Bob Carter Centre (43 hours available per week) and Taverham High School (16 hours available per week) with 100% of capacity used.

xii. Of concern is the age of the sports halls, with the oldest venue being Sprowston Community High School which opened in 1960. There have been no new sports halls in Broadland District since 2009.

xiii. The two sports halls which have been modernised are the Bob Carter Centre in 2008 and Thorpe St Andrew School in 2007.

Next Steps

xiv. The recommendation is to secure community access at the educational sports halls which provide the best offer for community use, and thereby protect that supply. Based on the FPM findings these are, in order: Taverham High School, Hellesdon High School and Sprowston Community High School.

xv. According to the data, none of these venues have been modernised, therefore a partnership of investment in return for secure community access could be a starting point.

xvi. This will secure sports club and community group access for hall sports, however wider recreational pay and play is not likely to be provided by schools. It may be considered that access to the public leisure centre sports halls in Norwich, and notably the UEA Sportspark, provides this access. It is not the closest sports hall to Broadland, but is a modern and extensive centre which actively promotes community use through membership.

xvii. However, it is recommended that Broadland District Council investigates through its strategic planning whether lack of access for recreational pay and play at sports halls in the District is a barrier to participation.

xviii. On a wider point, with five unmodernised sports hall sites and the most recent sports hall being 12 years old, there is an increasing need for modernisation of all the sports halls. It will be challenging for education budgets to meet this cost. Broadland District Council may wish to consider securing contributions towards the cost of modernisation from residential developers in the areas where these sports halls are located. Again, this would be in return for secured community access and a wide programme of activities.

xix. Broadland District Council will determine how it applies the outcomes of this report, however, it may wish to consider reviewing the findings and applying the evidence base to ensure that the benefits from the strategic direction being set by Sport England are realised.

xx. Finally, it is important to set out that this is a one-year assessment and provides the evidence base as of now. The findings should be consulted on to provide a rounded evidence base and address the recommendations set out.

xxi. Longer term local assessments can be undertaken and applied as an evidence base in Local Plan policy and for securing investment.

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1. Introduction

1.1 This assessment uses Sport England's Facilities Planning Model (FPM) and the data from the National Run using Active Places data as of 2020.

1.2 The supply assessment is based on sports halls sites being open and accessible for community use. If there are temporary closures of sports hall sites due to Covid-19 or for any other reasons, the local authority should inform Sport England Active Places Power by use of the 'contact us' link https://www.activeplacespower.com.

1.3 This standard run assessment provides an initial assessment of the current supply and demand for the provision of sports halls in Broadland District East Anglia. This assessment does not include future population growth projections; it is a baseline evidence base for sports hall provision.

1.4 To help with comparative analysis, data outputs for the neighbouring local authorities, together with regional and national findings, are included in the data tables.

Context

1.5 The report should form part of a wider assessment of provision at local level, which then provides a rounded assessment and evidence base report. This should include other available information and knowledge from (1) a sports perspective, such as national sports governing bodies and other sports organisations, and (2) a local perspective, from the local authority, the facility operator, and local sports clubs.

1.6 When reviewing the findings from this FPM standard report, the outcomes should be considered with reference to the evidence base benefits from the strategic direction being set by Sport England on:

- The policies, programmes and interventions proposed to increase sports participation and physical activity
- The application of the research applied by Sport England in determining the strategy and the evidence base
- The role sports facilities can play in increasing sports participation and physical activity

1.7 The strategy can be accessed at Uniting the Movement | Sport England.

Future Assessment

1.8 Longer term bespoke FPM local assessments for future provision can be undertaken based on:

- Review of these findings
- Projected population growth and inclusion of residential sites identified in the Local Plan

- Options for changes in supply – closure/new openings at same or different locations and different scales

1.9 The purpose is to identify how these changes will impact on access to sports halls for residents in future years and whether they will meet future demand.

1.10 These can be applied as an evidence base in Local Plan policy and for securing developer contributions based on growth. The future assessments also provide a long-term evidence base for securing inward investment – grant aid applications and prototype developments, for example, Sport England Leisure Local.

Report Structure, Content and Sequence

1.11 This report sets out the full findings under six assessment headings, which are Supply, Demand, Satisfied Demand, Unmet Demand, Used Capacity (how full the facilities are) and Local Share (an equity measure).

1.12 Each heading has a table of main findings followed by a definition of the assessment heading and the findings, with each key finding being numbered and in bold typeface. Each table includes the findings for all the neighbouring authorities, together with the regional and England-wide findings. This is because the assessments are based on catchment areas which may extend across local authority boundaries.

1.13 Where valid to do so, the findings for neighbouring local authorities are compared with the core authority, for example, badminton courts per 10,000 population.

1.14 Maps to support the findings on facility locations, satisfied demand, unmet demand, local share, and public transport access to facilities are also included.

1.15 Appendix **1** lists the facilities excluded from the study with explanations, and Appendix **2** describes the facility planning inclusion criteria and model parameters.

2. Supply of Sports Halls

Supply	Broadland	Breckland	Great Yarmouth	North Norfolk	Norwich	South Norfolk	EAST REGION	ENGLAND
Number of halls	15	10	11	7	15	16	668	5,930
Number of hall sites	7	8	8	6	11	10	440	4,093
Supply of total hall space in badminton courts	52	35	42	27	68	56	2,631	23,559
Supply of publicly available hall space in courts scaled with hours in the peak period	35.5	31.7	31.8	19.5	55.0	40.1	1,975.6	17,371.0
Supply of total hall space in visits per week in the peak period	12,932	11,521	11,582	7,080	20,016	14,612	719,132	6,323,045

Definition of supply – This is the supply or capacity of the sports halls which are available for community and club use in the weekly peak period. Supply is expressed in the number of visits that a sports hall can accommodate in the weekly peak period and in the number of badminton courts.

2.1. There are 15 individual sports halls located at seven sites within Broadland in 2020. The total supply of sports halls is the equivalent of 52 badminton courts, of which 35.5 are available in the weekly peak period for community use (known as the effective supply). The peak period is weekday mornings (1 hour per day), weekday evenings (5 hours per day) and weekend days (8 hours per day).

2.2. **Key finding 1** is that there are six educational sports hall sites and one community owned sports hall, but no public leisure centre sports hall sites. The policy, hours of use and types of community use will be determined by these providers and Broadland District Council has no control over access for community use. It is likely that most use is by sports clubs and community groups, with little recreational pay and play.

2.3. **Key finding 2** is that there are 16.5 badminton courts out of the total supply of 52 badminton courts in Broadland District which are unavailable for community use. This is the aggregated total of badminton courts across the educational and community sports hall sites which are unavailable, and represents 32% of the total supply.

2.4. There are six four-court sports halls, which are 40% of the total supply. This size of sports hall can accommodate all indoor hall sports at the community level of participation. There are four sites which have both a main hall and activity halls, and this enables flexible programming and maximum use, with large space activities such as badminton being programmed in the main hall, and lesser space activities such as martial arts taking place in the smaller activity halls.

2.5. There are three sports hall sites which have three individual sports halls:

- Taverham High School (sports halls opened in 2007) has two four-court main halls and an activity hall with the area of three badminton courts, and is the largest sports hall venue in Broadland District.
- Hellesdon High School (sports hall opened in 2007) has a four-court main hall and two activity halls with the area of one badminton court.
- Thorpe St Andrew School has a three-court main hall and two activity halls with the area of one badminton court.

2.6. There are double sports hall sites at:

- Aylsham High School (sports halls opened in 2005) with a four-court main hall and a second three-court main hall.
- Sprowston Community High School (sports halls opened in 1960) has a four-court main hall and an activity hall with the area of two badminton courts.

2.7. **Key finding 3** is that the average age of the sport hall sites in 2021 is 28 years, with the oldest venue being Sprowston Community High School which opened in 1960. The most recent sports hall is Taverham Hall Preparatory School which opened in 2009. There have been no new sports halls built in Broadland District since 2009.

2.8. Two of the seven sports hall venues have been modernised:

- The Bob Carter Centre opened in 1979 and modernised in 2008.
- Thorpe St Andrew School sports halls opened in 1987 and modernised in 2007.

2.9. Modernisation is defined as one or more of the sports hall floors being upgraded to a sprung timber floor, the sports hall lighting upgraded, or the changing accommodation modernised.

2.10. With five unmodernised sports hall sites and the most recent sports hall being 12 years old, there is an increasing need for modernisation of the sports halls.

2.11. Details of the sports hall sites in Broadland District are provided in Table **2.1**.

2.12. The locations of the sports hall sites in Broadland are shown in Map **2.1**, and Map **2.2** provides the same information in more detail for the central part of Broadland District. All the sports hall sites, apart from Aylsham High School, are located in this area. There are no sports hall sites to the east of the District and, in particular, Acle does not have a sports hall.

Table 2.1: Sports Hall Supply (Facilities Included)

Name of Facility	Type of Hall	Area sqm	Site Year Built	Site Year Refurbished	Weight Factor	Hours in Peak Period	Total Hours Available	Site Capacity - visits per week peak period
AYLSHAM HIGH SCHOOL	Main	690	2005		46%	32	36	1,792
	Main	486				32	36	
BOB CARTER CENTRE	Main	594	1979	2008	70%	43	96	1,376
HELLESDON HIGH SCHOOL	Main	594	2007		26%	37	41	2,782
	Activity Hall	180				37	41	
	Activity Hall	180				37	41	
SPROWSTON COMMUNITY HIGH SCHOOL	Main	576	1960		23%	33	33	2,084
	Activity Hall	252				34	34	
TAVERHAM HALL PREPARATORY SCHOOL	Main	594	2009		48%	29	31	928
TAVERHAM HIGH SCHOOL	Main	594	2007		93%	16	24	1,484
	Main	486				16	24	
	Activity Hall	306				16	24	
THORPE ST ANDREW SCHOOL	Main	486	1987	2007	36%	37	41	2,486
	Activity Hall	180				37	41	
	Activity Hall	180				37	41	

Map 2.1: Location of Sports Hall Sites in Broadland (2020)

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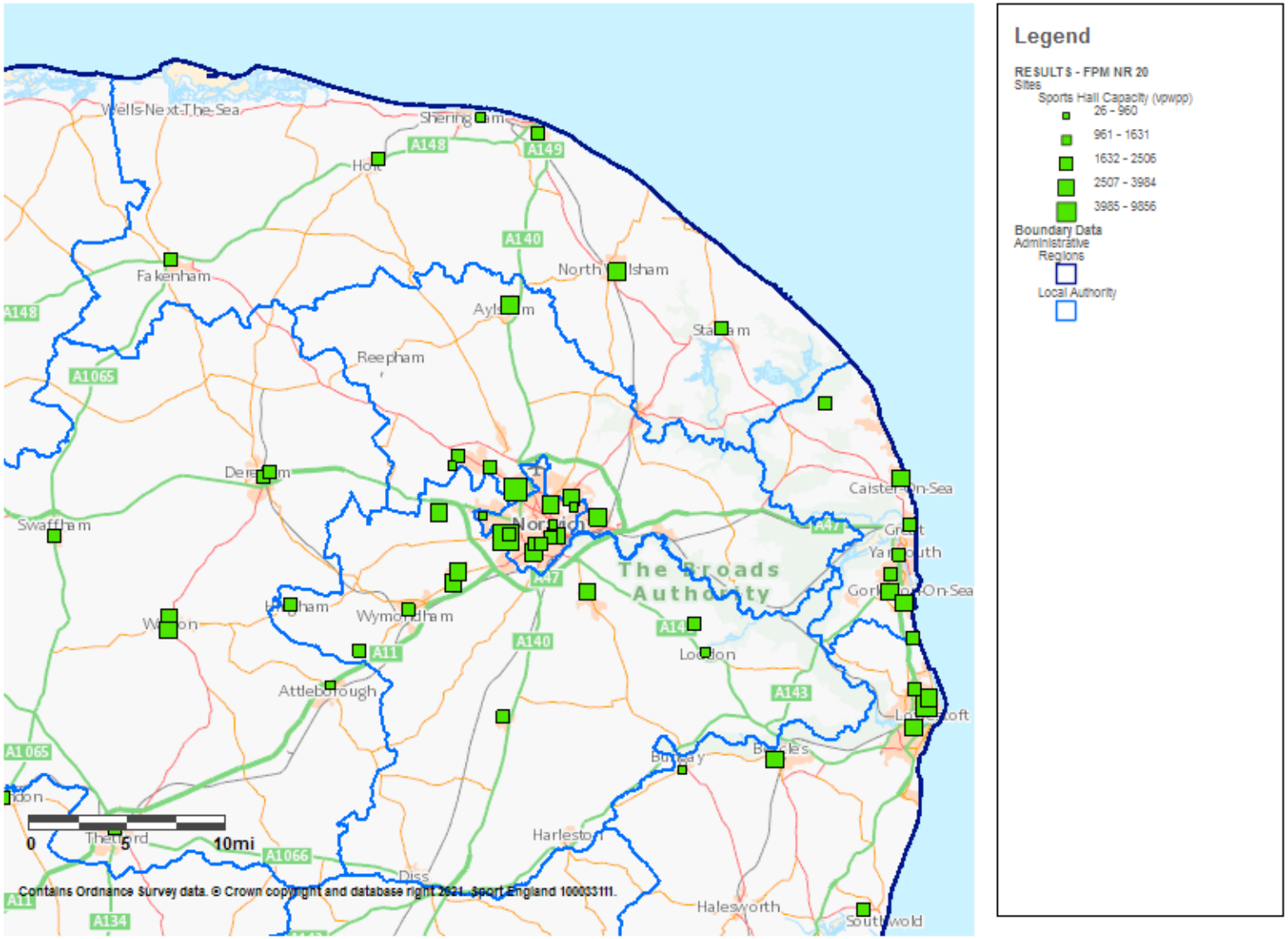

Map 2.2: Location of Sports Hall Sites in Central Broadland (2020)

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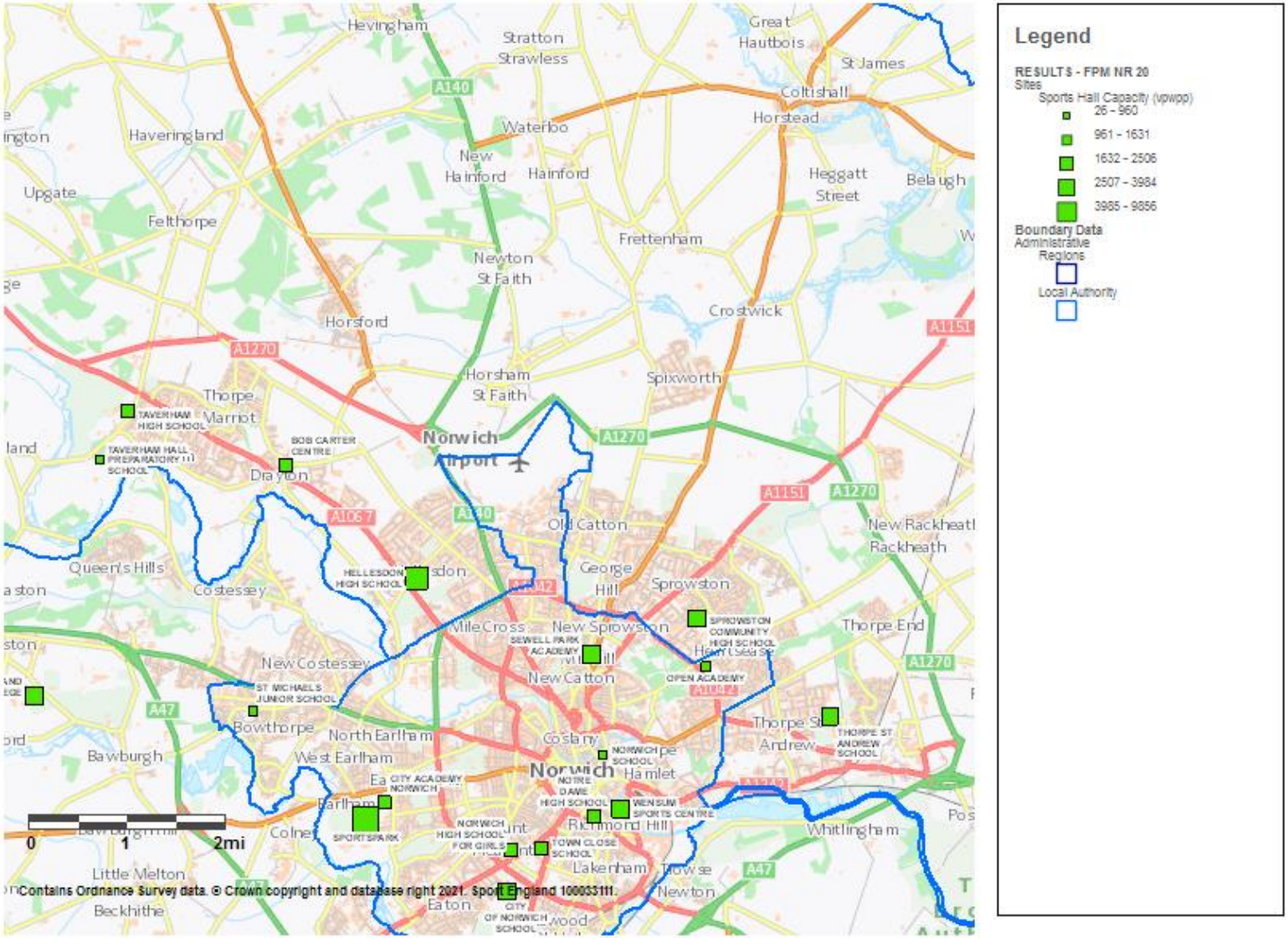


3. Demand for Sports Halls

Demand	Broadland	Breckland	Great Yarmouth	North Norfolk	Norwich	South Norfolk	EAST REGION	ENGLAND
Population	131,671	142,019	100,097	105,800	142,790	142,704	6,277,257	56,630,408
Visits demanded – visits per week in the peak period	10,161	10,973	7,843	7,713	12,090	11,168	504,805	4,606,246
Equivalent in courts – with comfort factor included	34.90	37.60	26.90	26.50	41.50	38.40	1,733.50	15,818.10

Definition of total demand – This represents the total demand for swimming by both genders and for seven five-year age bands from 0 to 65+ and is calculated as the percentage of each age band/gender that participates. This is added to the frequency of participation in each age band/gender to arrive at a total demand figure, which is expressed in visits in the weekly peak period and square metres of water. The FPM parameters for the percentage of participation and frequency of participation, for both genders and for different age bands, are set out in Appendix **2**.

3.1. The total population of Broadland District in 2020 is 131,671, and this population generates a demand for 10,161 visits to sports halls in the weekly peak period. This period consists of weekday mornings (1 hour), weekday evenings (5 hours per day) and weekend days (8 hours per day).

3.2. This equates to demand for 35 badminton courts in the weekly peak period. For context, the available supply of sports halls in the peak period in Broadland is 35.5 badminton courts.

4. Satisfied Demand

Demand from Broadland residents currently being met by supply

Satisfied Demand	Broadland	Breckland	Great Yarmouth	North Norfolk	Norwich	South Norfolk	EAST REGION	ENGLAND
Total number of visits which are met	9,218	9,189	7,153	6,528	11,389	9,847	464,290	4,239,628
% of total demand satisfied	90.7	83.7	91.2	84.6	94.2	88.2	92.0	92.0
% of demand satisfied who travelled by:								
Car	89.80	90.30	73.60	90.60	64.70	92.20	81.40	74.10
Foot	6.90	6.50	15.20	5.80	22.50	5.10	12.20	16.60
Public transport	3.30	3.20	11.20	3.60	12.80	2.70	6.40	9.20
Number of visits retained	6,035	7,273	6,935	6,090	9,657	5,390	453,194	4,236,776
Demand Retained - as a % of Satisfied Demand	65.5	79.2	97.0	93.3	84.8	54.7	97.6	99.9
Number of visits exported	3,183	1,916	218	438	1,732	4,457	11,122	2,868
Demand exported - as a % of satisfied demand	34.5	20.8	3.0	6.7	15.2	45.3	2.4	0.1

Definition of satisfied demand – This represents the proportion of total demand that is met by the capacity at the sports halls from Broadland residents who live within the driving, walking or public transport catchment area of a hall. This includes halls located both inside and outside Broadland.

4.1. **Key finding 4** is that, in 2020, 91% of the total demand for sports halls by Broadland residents is met.

4.2. Satisfied demand in Broadland is the second highest in the study area after Norwich with 94.2% satisfied demand; Great Yarmouth also has 91% satisfied demand. Broadland's satisfied demand is on a par with the East Region and England-wide averages which are both 92%.

Retained Demand

4.3. A subset of the satisfied demand findings shows that much of Broadland's demand for sports halls is retained at sports halls located in Broadland. This assessment is based on the catchment area of Broadland halls and residents located in Broadland, and is known as retained demand.

4.4. **Key finding 5** is that, of the total 91% Broadland demand for sports halls which is met, 65.5% is retained within the authority. This is quite a high level of retained demand and means that over six out of ten visits to a sports hall by a Broadland resident is to a venue located in the District.

4.5. However, retained demand in the neighbouring local authorities is higher, ranging from 79% in Breckland to 97% in Great Yarmouth; this is perhaps not a surprise for Great Yarmouth considering it is on the coast. Retained demand is lowest in South Norfolk at 55% of total satisfied demand.

4.6. The model iteratively allocates demand to facilities using a set of distance decay functions and choice parameters, and considers the quality of a site based on its age and management, as supported by Sport England's research. Increasingly there are other factors that influence which halls residents chose to use, such as ease of parking or other facilities being provided at the same site, for example, a gym or studio.

4.7. This is a significant point in Broadland given the age of the sports hall sites and that only two sites have been modernised.

Exported Demand

4.8. The residue of satisfied demand, after retained demand, is exported demand. The 2020 finding is that 34.5% of the Broadland satisfied demand for sports halls is met at a site outside Broadland. Again, this is based on the catchment area of sports halls outside Broadland and residents located in Broadland.

4.9. Broadland's retained demand is 6,035 visits per week in the peak period; its exported demand is 3,183 visits in the weekly peak period.

4.10. The data does not identify how much of Broadland's demand goes to which authority or sports hall site, but only provides the total figure for exported demand. However, based on Maps **2.1** and **2.2** in Section 2 of this report, the cluster of sports hall sites in Norwich located close to the Broadland boundary suggests that the majority of the exported demand goes to Norwich.

Travel Patterns to Sports Halls

4.11. The findings for Broadland are that 90% of all visits to sports halls are by car, with 7% of visits by walking and 3% by public transport. These findings are reported on in more detail in the section on Unmet Demand.

5. Unmet Demand

Demand from Broadland residents not currently being met

Unmet Demand	Broadland	Breckland	Great Yarmouth	North Norfolk	Norwich	South Norfolk	EAST REGION	ENGLAND
Total number of visits in the peak, not currently being met	943	1,784	690	1,185	702	1,321	40,515	366,618
Unmet demand as a % of total demand	9.3	16.30	8.80	15.40	5.80	11.80	8	8
Equivalent in courts - with comfort factor	3.3	6.10	2.40	4.10	2.40	4.50	139.10	1,259
% of unmet demand due to:								
Outside catchment:	95.70	67.50	100	90.60	88.50	86	86.70	77.90
With no access to a car	54.50	45.60	93.50	56.40	86.60	52	69.30	69.20
With access to a car	41.20	21.80	6.50	34.30	1.90	34	17.40	8.70
Lack of capacity:	4.30	32.50	0	9.40	11.50	14	13.30	22.10
With no access to a car	1.80	11.50	0	4.30	11.20	1.40	5.80	19.80
With access to a car	2.50	21	0	5.10	0.30	12.50	7.50	2.30

The **unmet demand definition** has two parts to it: demand for sports halls which cannot be met because (1) there is too much demand for any particular sports hall within its catchment area and there is a lack of capacity; or (2) the demand is located outside the catchment area of any sports hall and is then classified as unmet demand.

5.1. **Key finding 6** is that Broadland's unmet demand is 9.3% of total demand, and this equates to 3.3 badminton courts.

5.2. Of the total unmet demand, 96% is from demand located outside the catchment area of a sports hall and 4% is from lack of sports hall capacity. Unmet demand outside a catchment will always exist because it is not possible to achieve complete spatial coverage whereby all areas of an authority are inside a catchment for residents without access to a car.

5.3. Total unmet demand is 943 visits per week in the weekly peak period. This compares with the demand inside a catchment which is being met of 9,218 visits per week in the peak period.

5.4. The overall key point is not that unmet demand outside catchment exists, but the scale of the unmet demand. Also, if this unmet demand is clustered in one location, further sports hall provision should be considered in order to improve accessibility for residents.

5.5. Map **5.1** shows the location and scale of the total unmet demand for sports halls across Broadland, with the sports hall sites shown by the green squares.

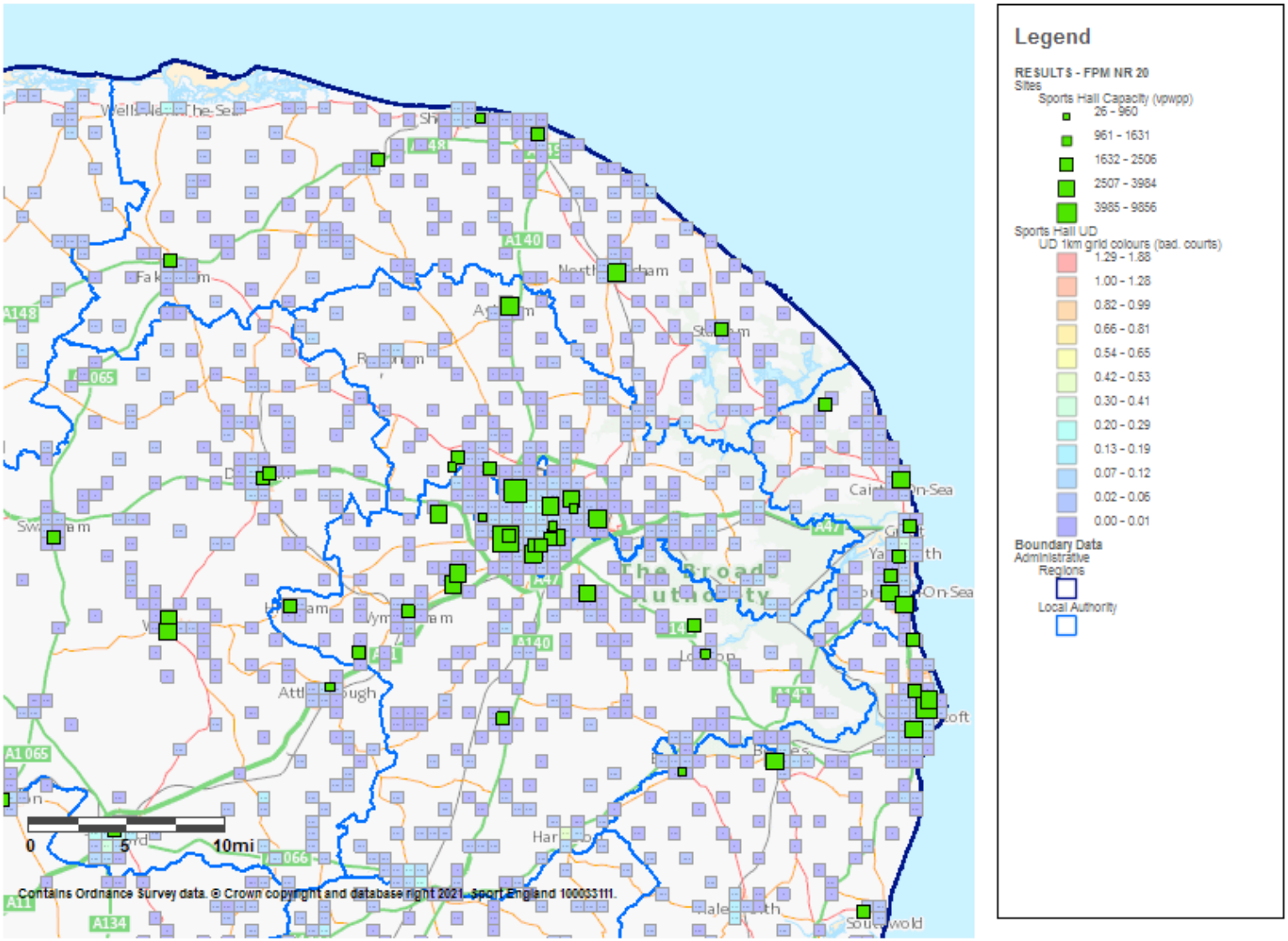
5.6. Map **5.2** provides more detail for the central area of the authority, and Map **5.3** for the Acle area where unmet demand for sports halls is the highest.

5.7. Unmet demand is set out in units of badminton courts within one-kilometre grid squares which are colour coded. All the unmet demand is in the two shades of purple: 0.0–0.1 of a badminton court (darker purple) and 0.1–0.6 of a badminton court (lighter purple).

5.8. **Key finding 7** is that unmet demand is distributed in very low values (between 0.0–0.6 of a badminton court) across the District. There is not a sufficient cluster of high unmet demand in any one location to consider increasing the supply of sports halls to improve accessibility for residents.

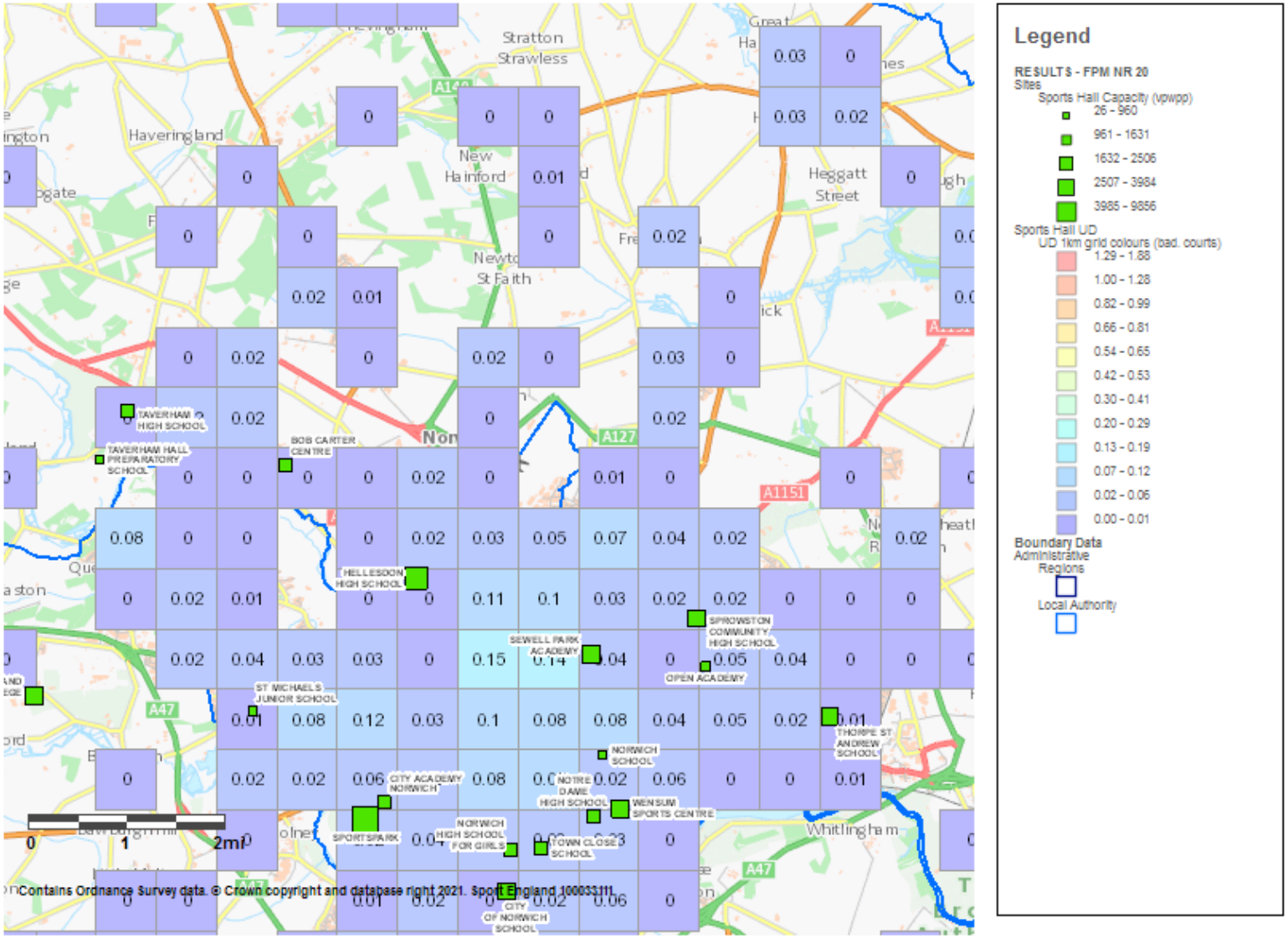
Map 5.1: Unmet Demand for Sports Halls in Broadland (2020)

Facility Planning Model unmet demand aggregated at 1km square grid (figure labels) and shown thematically (colours). Unmet demand at 1km square grid level expressed as badminton courts.



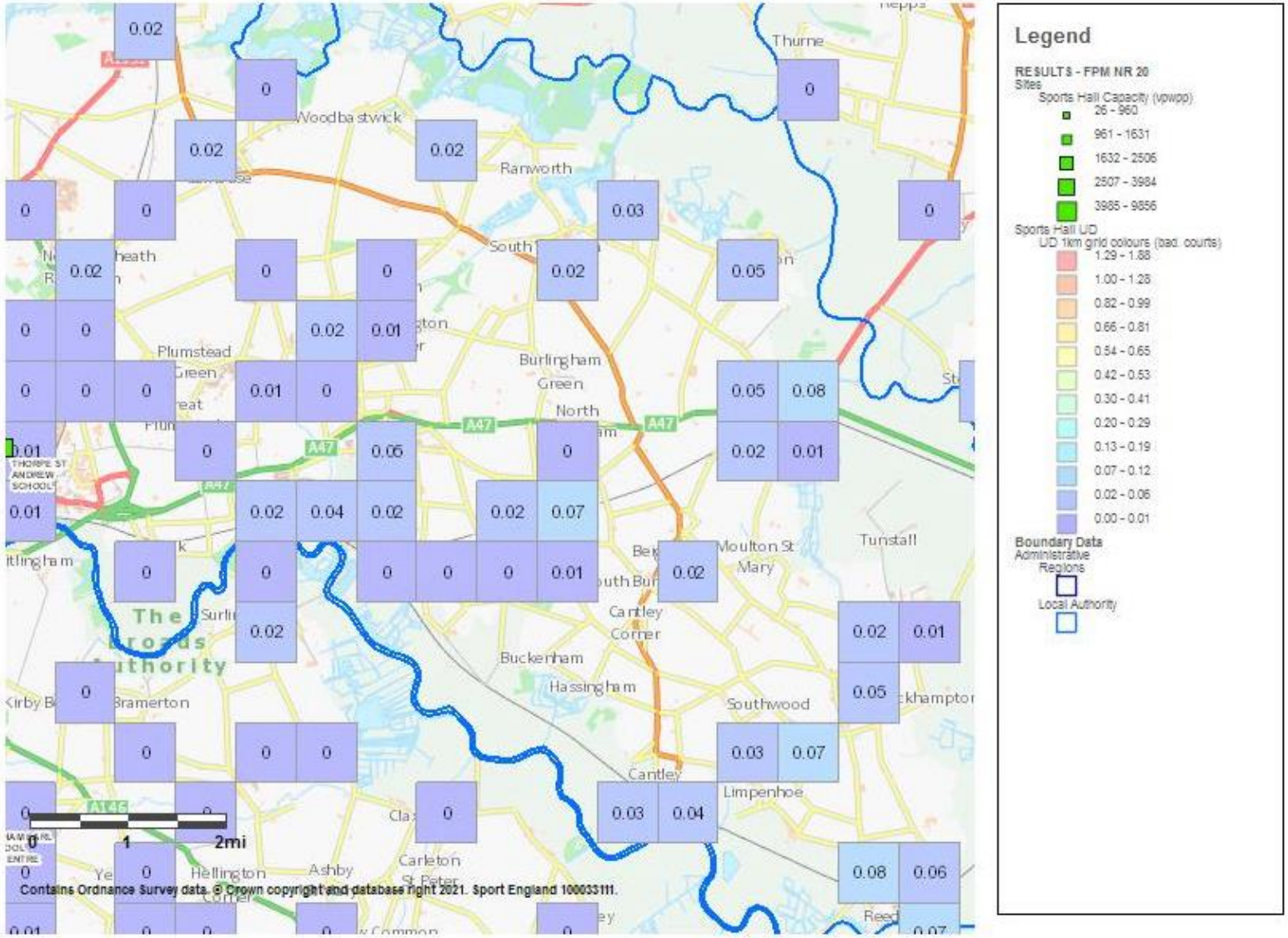
Map 5.2: Unmet Demand for Sports Halls in Central Broadland (2020)

Facility Planning Model unmet demand aggregated at 1km square grid (figure labels) and shown thematically (colours). Unmet demand at 1km square grid level expressed as badminton courts.



Map 5.3: Unmet Demand for Sports Halls in East Broadland (2020)

Facility Planning Model unmet demand aggregated at 1km square grid (figure labels) and shown thematically (colours). Unmet demand at 1km square grid level expressed as badminton courts.



Population Without Access to a Car

Population No Car	Broadland	Breckland	Great Yarmouth	North Norfolk	Norwich	South Norfolk	EAST REGION	ENGLAND
Population	131,671	142,019	100,097	105,800	142,790	142,704	6,277,257	56,630,408
% of population with no access to a car	10.90	15	26.60	15.60	32	11	17.70	24.90

5.9. The percentage of the population with no access to a car influences travel patterns to sports halls. A low percentage means there is likely to be a larger number of visits to sports halls by car. The drive time catchment is 30 minutes travel; however, the FPM uses a distance decay function whereby the further a user is from a facility, the less likely they will travel (a description of the distance decay function is provided in Appendix **2**).

5.10. If there is a high percentage of residents without access to a car, and who either walk or use public transport to access a sports hall, then a network of local sports hall sites becomes more important in order to maintain access and encourage participation. The public transport catchment area for sports halls is also 30 minutes' travel time (at half speed of car), and for walking it is 40 minutes/2 miles.

5.11. Based on the 2011 Census, 11% of Broadland's resident population do not have access to a car and, together with South Norfolk, this is the lowest percentage. East Region and England-wide averages for population with no access to a car are 18% and 25% respectively.

5.12. Therefore, not surprisingly and given the very low percentage of the population with no access to a car, the findings are that 90% of visits to sports halls are by car, with 7% of visits by walking and 3% of visits by public transport (see Satisfied Demand table).

5.13. To gain some understanding of how accessible the sports halls sites are by public transport, Map **5.4** for the central part of the authority shows the locations of the sports hall sites (green squares) and the areas of the authority within 0-5 minutes' walk of a bus stop (grey areas).

5.14. As might be anticipated in a largely rural authority, there is a limited area of Broadland that is within 0-5 minutes of a bus stop. However, for all the sports hall sites with the exception of Aylsham, there is an area around the site that has bus travel access.

Map 5.4: Areas of Central Broadland within 5 minutes' walk of a bus stop (2020)

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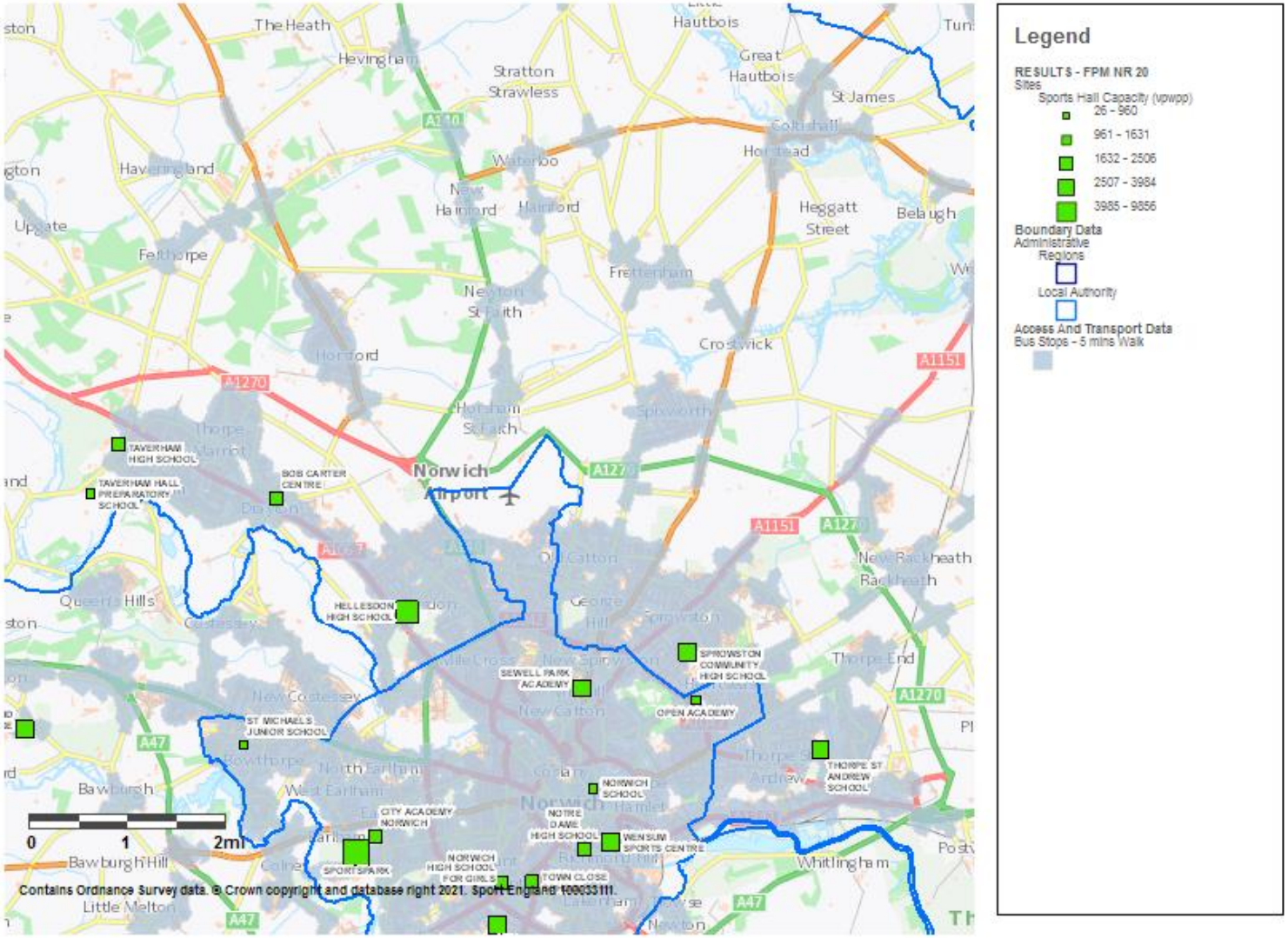


6. Used Capacity

How well used are the facilities?

Used Capacity	Broadland	Breckland	Great Yarmouth	North Norfolk	Norwich	South Norfolk	EAST REGION	ENGLAND
Total number of visits used of current capacity	8,624	7,704	7,444	6,536	14,717	6,808	465,746	4,239,907
% of overall capacity of halls used	66.70	66.90	64.30	92.30	73.50	46.60	64.80	67.10
% of visits made to halls by:								
Walkers	7.70	7.70	14.60	5.80	17.70	6.50	12.10	16.60
Road	92.30	92.30	85.40	94.20	82.30	93.50	87.90	83.40
Visits imported:								
Number of visits Imported	2,588	431	509	445	5,061	1,418	12,552	3,132
As a % of used capacity	30.0	5.60	6.80	6.80	34.40	20.80	2.70	0.10
Visits retained:								
Number of visits retained	6,035	7,273	6,935	6,090	9,657	5,390	453,194	4,236,776
As a % of used capacity	70.0	94.40	93.20	93.20	65.60	79.20	97.30	99.90

Definition of used capacity – This is a measure of usage at sports halls and estimates how well used or full facilities are. The FPM is designed to include a 'comfort factor', beyond which the venues are too full. The hall itself becomes too crowded to use comfortably, and the changing and circulation areas also become too congested. In the model Sport England assumes that usage over 80% of capacity is busy and that the hall is operating at an uncomfortable level above that percentage.

6.1. **Key finding 8** is that the estimated used capacity of the sports halls as a Broadland average, is 67% in the weekly peak period. This provides some working headroom before the Sport England benchmark of 80% of sports halls being comfortably full at peak times is reached. The Broadland average is just above the East Region average, which is 65% of sports hall capacity used in the weekly peak period.

6.2. The findings on used capacity for the individual sports hall sites does vary, and these are set out in Table **6.1**. The variation is caused by the interaction of:

- The **level of demand in the catchment area of the sports hall site** and whether or not sites overlap. Six of the seven sports hall sites are located in the central area of the District, close to the boundary with Norwich; the exception is Aylsham High School sports halls. Therefore, the demand in these overlapping catchment areas

will be shared between the sites. It will also be shared with the Norwich sports halls where their catchment areas extend into Broadland's resident population.

- The **hours available for community use**. As Table **6.1** shows, these vary from 16 hours in the weekly peak period at Taverham High School to 43 hours at the Bob Carter Centre. None of the sites have the maximum 46 hours for community use in the weekly peak period.
- The **scale of the sports halls site**. The largest sports hall site in Broadland is Taverham High School, opened in 2007 and the second most recent sports hall site. It has 16 hours of community use but, because it is the largest sports hall site, can accommodate more use than any other venue. It has an estimated 100% of capacity used for the 16 hours it is available. It is important to consider the scale of a sports hall site when assessing the estimated used capacity and to not just consider the percentage figure alone.
- The **age of the sports hall site and its weighting**. All the sports hall sites in the model are weighted to reflect their age, condition and whether they have been modernised in order to reflect their comparative attraction to customers. According to the data, only two sites have been modernised: the Bob Carter Centre opened in 1979 and modernised in 2008 (100% of used capacity for the 43 hours it is available) and Thorpe St Andrew School sports halls, opened in 1987 and modernised in 2007 (70% of capacity used for the 37 hours it is available).
- The **policy towards community use by each school or college and pricing**. This will vary and some schools/colleges will actively promote community use of their sports facilities. Other institutions will take a more responsive approach to requests and let their sports halls on a term or shorter lettings basis. The different approaches will be reflected in the estimated used capacity of each site.

6.3. The findings for each individual sports hall site vary from the Broadland average for all these inter-related reasons and should be reviewed with the facility operator.

6.4. There is scope to increase the peak hours/capacity at all the sports hall venues. As reported in the Supply section, the aggregated total of badminton courts unavailable for community use is 18.5 badminton courts out of the total supply of 52, equating to 35.5% of the total supply.

Imported Demand

6.5. Imported demand is set out under Used Capacity because, if residents in neighbouring authorities participate at a sports hall in Broadland, this becomes part of the used capacity of the Broadland sports halls.

6.6. The used capacity of the Broadland sports halls which is imported is 2,588 visits in the weekly peak period; this represents 30% of the used capacity of the Broadland sports halls. For comparison, Broadland exports 3,183 visits in the weekly peak period which is met at sports halls in neighbouring local authorities.

Table 6.1: Percentage of Used Capacity of Broadland Sports Halls (2020)

Name of Facility	Type of Hall	Area sqm	Site Year Built	Site Year Refurbished	Weight Factor	Hours in Peak Period	Total Hours Available	Site Capacity - visits per week peak period	% of Capacity Used
AYLSHAM HIGH SCHOOL	Main	690	2005		46%	32	36	1792	63
	Main	486				32	36		
BOB CARTER CENTRE	Main	594	1979	2008	70%	43	96	1376	100
HELLESDON HIGH SCHOOL	Main	594	2007		26%	37	41	2782	57
	Activity	180				37	41		
	Activity	180				37	41		
SPROWSTON COMMUNITY HIGH SCHOOL	Main	576	1960		23%	33	33	2084	50
	Activity	252				34	34		
TAVERHAM HALL PREPARATORY SCHOOL	Main	594	2009		48%	29	31	928	29
TAVERHAM HIGH SCHOOL	Main	594	2007		93%	16	24	1484	100
	Main	486				16	24		
	Activity	306				16	24		
THORPE ST ANDREW SCHOOL	Main	486	1987	2007	36%	37	41	2486	70
	Activity	180				37	41		
	Activity	180				37	41		

7. Local Share

Equity share of facilities

Local Share	Broadland	Breckland	Great Yarmouth	North Norfolk	Norwich	South Norfolk	EAST REGION	ENGLAND
Local share: <1 supply less than demand, 1> supply greater than demand	0.6	0.7	0.6	0.6	0.6	0.7	0.7	0.8

Definition of local share – This helps to show which areas have a better or worse share of facility provision. It considers the size, availability, and quality of facilities, as well as travel modes. Local share is the available capacity that people want to go to in an area, divided by the demand for that capacity in the area.

7.1. A value of 1 means that the level of supply just matches demand, while a value of less than 1 indicates a shortage of supply, and a value greater than 1 indicates a surplus. Local share is useful for assessing 'equity' of provision and in showing how access and share of sports halls differ across the authority.

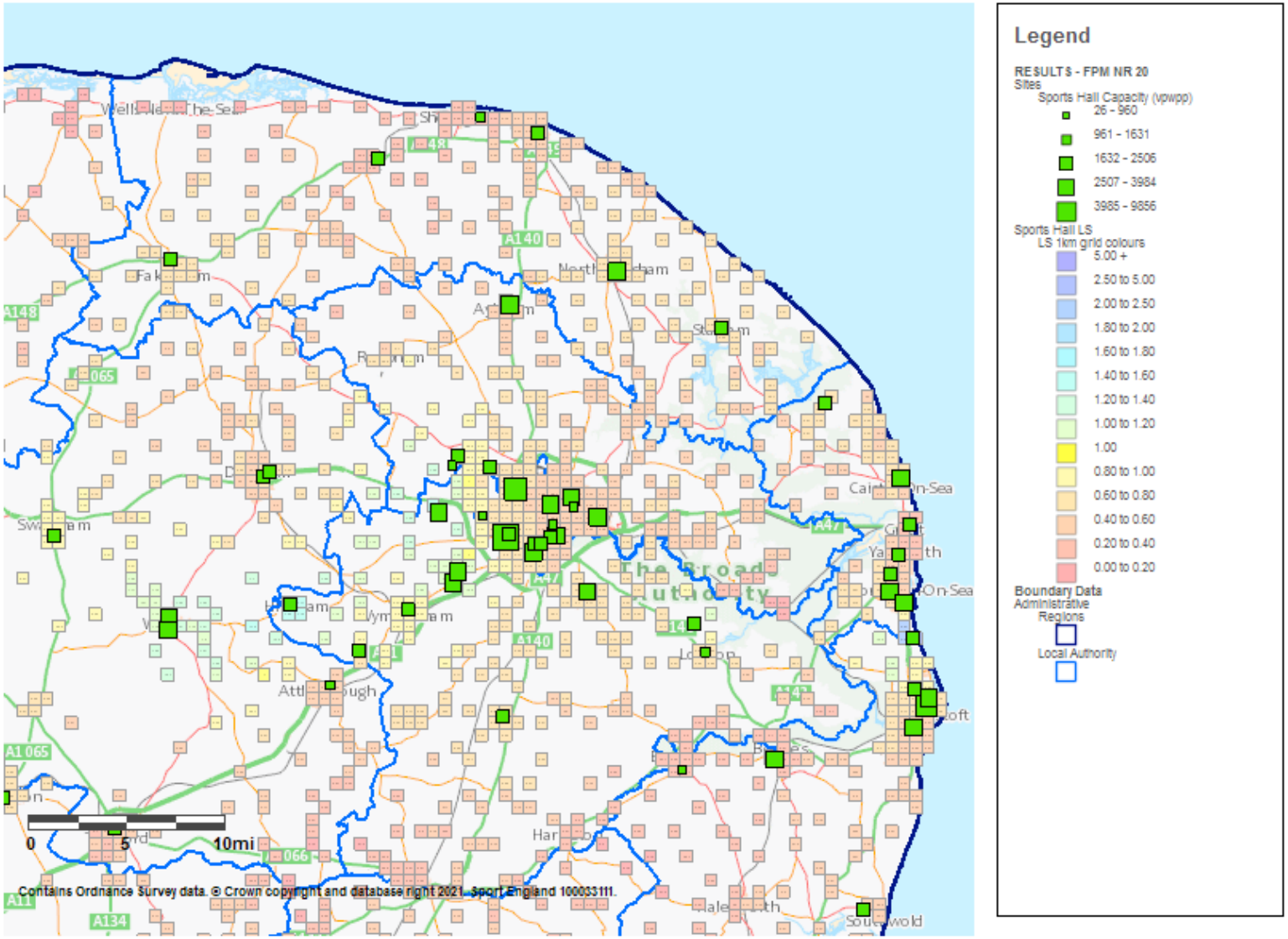
7.2. The interventions are to try and increase access to sports halls where residents have the lowest share of sports halls.

7.3. Broadland has a local share of 0.6 in 2020, and so demand is greater than supply in terms of local share. Local share is below 1 in all the neighbouring local authorities, in the East Region and England-wide.

7.4. Within Broadland local share varies from the District-wide average, and these findings are shown in Map **7.1** for Broadland, Map **7.2** for the central area of the District, and Map **7.3** for the south-east of the District (in Southwood and Reedham) where it is lowest. The green squares show the locations of the sports hall sites.

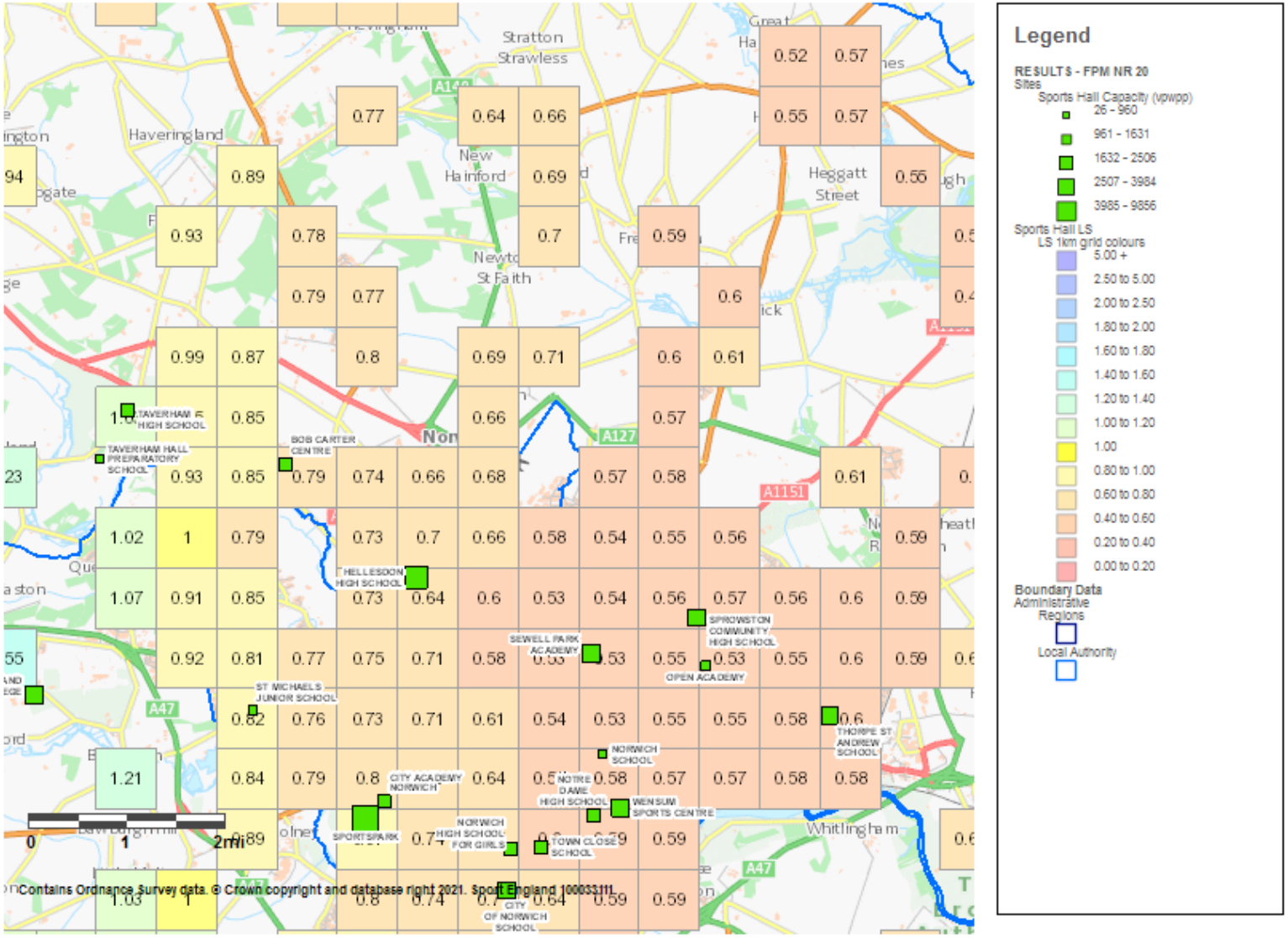
Map 7.1: Local Share of Sports Halls in Broadland (2020)

Facility Planning Model share of badminton courts divided by demand. Data outputs shown thematically (colours) and aggregated at 1km square (figure labels).



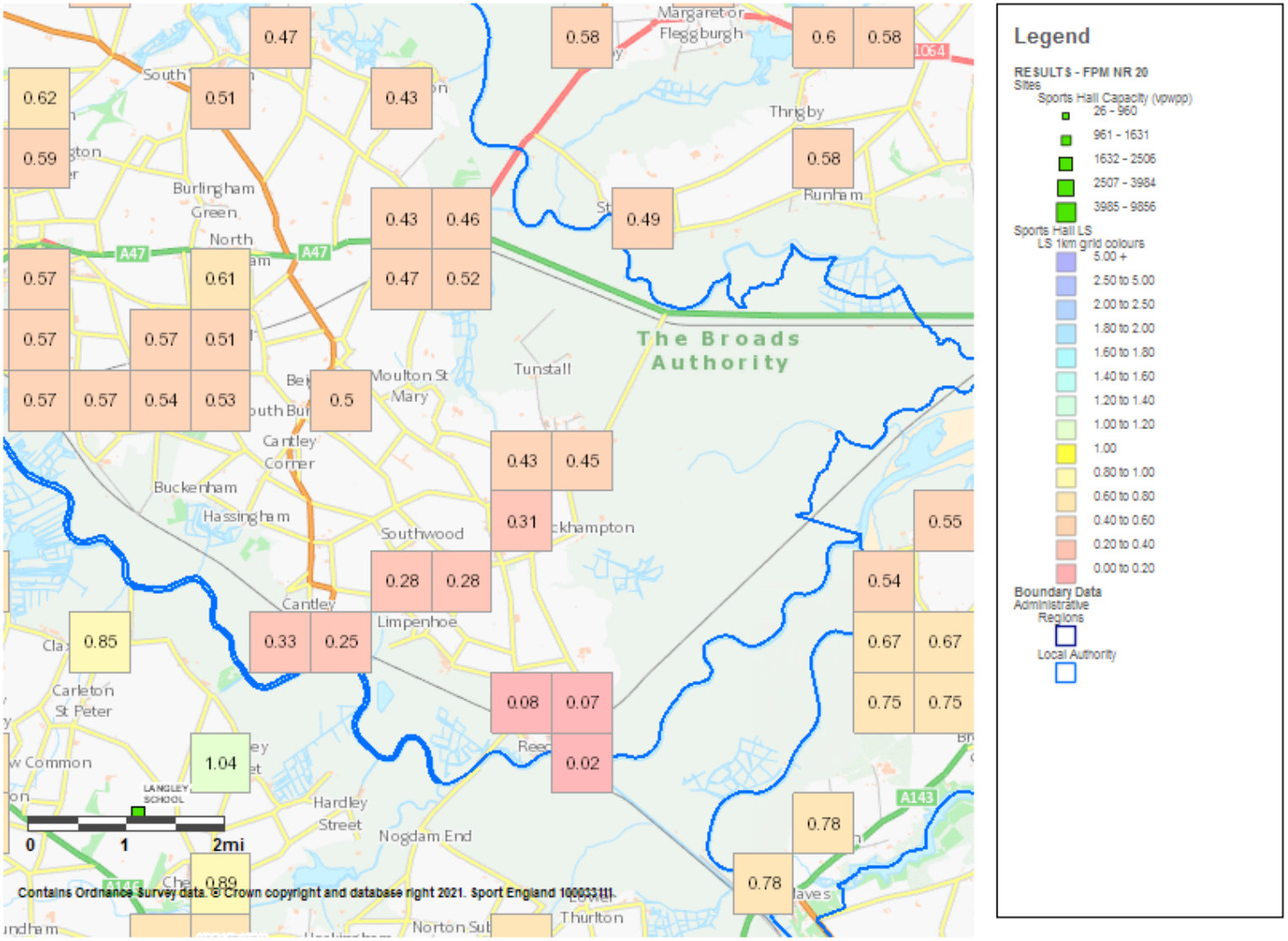
Map 7.2: Local Share of Sports Halls in Central Broadland (2020)

Facility Planning Model share of badminton courts divided by demand. Data outputs shown thematically (colours) and aggregated at 1km square (figure labels).



Map 7.3: Local Share of Sports Halls in South-east Broadland (2020)

Facility Planning Model share of badminton courts divided by demand. Data outputs shown thematically (colours) and aggregated at 1km square (figure labels).



Badminton Courts per 10,000 Population 2020

Share	Broadland	Breckland	Great Yarmouth	North Norfolk	Norwich	South Norfolk	EAST REGION	ENGLAND
Supply of total hall space in courts	52	35	42	27	68	56	2,631	23,559
Population	131,671	142,019	100,097	105,800	142,790	142,704	6,277,257	56,630,408
Courts per 10,000 population	4.0	2.5	4.2	2.6	4.8	3.9	4.2	4.2

7.5. Based on a measure of badminton courts per 10,000 population, the Broadland supply is 4 courts per 10,000 population in 2020. Breckland (2.5 courts), North Norfolk (2.6 courts) and South Norfolk (3.9 courts) have a smaller supply, while Great Yarmouth (4.2 courts) and Norwich (4.8 courts) have a larger supply. The East Region and England-wide averages are both 4.2 courts per 10,000 population in 2020.

7.6. The provision in Broadland is mid-way in comparison with its neighbours and slightly below the East Region and England-wide averages. The overall level of provision for Broadland is based on all the supply and demand findings, and not just on supply. This is simply a measure which compares Broadland's supply with that of its neighbouring local authorities, and regional and national averages. It is reported because some local authorities like to understand how their provision compares with other authorities.

Appendix 1: Sports Halls Excluded

The audit excludes facilities that are deemed to be either for private use, too small (below 3 badminton courts and do not have a main hall on site), closed or there is a lack of information, particularly relating to hours of use. The following facilities were deemed to fall under one or more of these categories and therefore excluded from the modelling:

Site Name	Facility Sub Type	Reason for Exclusion
ACLE ACADEMY	Activity Hall	No Main on site
ACLE ACADEMY	Activity Hall	No Main on site
ACLE WAR MEMORIAL RECREATION CENTRE	Activity Hall	No Main on site
BLOFIELD PRIMARY SCHOOL	Activity Hall	Private Use
BURE VALLEY JUNIOR SCHOOL	Activity Hall	No Main on site
FALCON JUNIOR SCHOOL	Activity Hall	Private Use
FELTHORPE RECREATION GROUND	Activity Hall	No Main on site
FIRSIDE JUNIOR SCHOOL	Activity Hall	No Main on site
HEATHLANDS COMMUNITY CENTRE	Activity Hall	No Main on site
HELLESDON RECREATION GROUND	Activity Hall	Does not meet APP criteria
HORSFORD CE PRIMARY SCHOOL	Activity Hall	Private Use
LANGLEY PREPARATORY SCHOOL (CLOSED)	Main	Closed
LANGLEY PREPARATORY SCHOOL (CLOSED)	Activity Hall	Closed
LINGWOOD VILLAGE HALL & PLAYING FIELD	Activity Hall	No Main on site
PINEBANKS SPORTS AND LEISURE (CLOSED)	Activity Hall	Closed
PINEBANKS SPORTS AND LEISURE (CLOSED)	Activity Hall	Closed
REEPHAM HIGH SCHOOL AND COLLEGE	Activity Hall	No Main on site
REEPHAM HIGH SCHOOL AND COLLEGE	Activity Hall	No Main on site
ST FAITH'S CENTRE (NORWICH)	Activity Hall	No Main on site

Appendix 2: Model Description, Inclusion Criteria and Model Parameters

Included within this Appendix are the following:

- Model Description
- Facility Inclusion Criteria
- Model Parameters

Model Description

1. **Background**

1.1. The Facilities Planning Model (FPM) is a computer-based supply/demand model, which has been developed by Edinburgh University in conjunction with **sport**scotland and Sport England since the 1980s.

1.2. The model is a tool for helping to assess the strategic provision of community sports facilities in an area. It is currently applicable for use in assessing the provision of sports halls, swimming pools, indoor bowls centres and artificial grass pitches.

2. **Use of FPM**

2.1. Sport England uses the FPM as one of its principal tools in helping to assess the strategic need for certain community sports facilities. The FPM has been developed as a means of:

- Assessing requirements for different types of community sports facilities on a local, regional, or national scale.
- Helping local authorities to determine an adequate level of sports facility provision to meet their local needs.
- Helping to identify strategic gaps in the provision of sports facilities.
- Comparing alternative options for planned provision, taking account of changes in demand and supply. This includes testing the impact of opening, relocating, and closing facilities, and the likely impact of population changes on the needs for sports facilities.

2.2. Its current use is limited to those sports facility types for which Sport England holds substantial demand data, i.e., swimming pools, sports halls, indoor bowls, and artificial grass pitches (AGPs).

2.3. The FPM has been used in the assessment of Lottery funding bids for community facilities, and as a principal planning tool to assist local authorities in planning for the provision of community sports facilities.

3. How the Model Works

3.1. In its simplest form, the model seeks to assess whether the capacity of existing facilities for a particular sport is capable of meeting local demand for that sport, considering how far people are prepared to travel to such a facility.

3.2. In order to do this, the model compares the number of facilities (supply) within an area against the demand for that facility (demand) that the local population will produce, similar to other social gravity models.

3.3. To do this, the FPM works by converting both demand (in terms of people) and supply (facilities) into a single comparable unit. This unit is 'visits per week in the peak period' (VPWPP). Once converted, demand and supply can be compared.

3.4. The FPM uses a set of parameters to define how facilities are used and by whom. These parameters are primarily derived from a combination of data including actual user surveys from a range of sites across the country in areas of good supply, together with participation survey data. These surveys provide core information on the profile of users, such as, the age and gender of users, how often they visit, the distance travelled, duration of stay, and on the facilities themselves, such as, programming, peak times of use, and capacity of facilities.

3.5. This survey information is combined with other sources of data to provide a set of model parameters for each facility type. The original core user data for halls and pools comes from the National Halls and Pools survey undertaken in 1996. This data formed the basis for the National Benchmarking Service (NBS). For AGPs, the core data used comes from the user survey of AGPs carried out in 2005/06 jointly with sportscotland.

3.6. User survey data from the NBS and other appropriate sources are used to update the model's parameters on a regular basis. The parameters are set out at the end of the document, and the main data sources analysed are:

- Active Lives
    - For the adult survey, this data is collected by an online survey or paper questionnaire on behalf of Sport England. Each annual sample includes on the order of 175,000 people and covers the full age/gender range. Detailed questions are asked about 439 sports in terms of participation and frequency.
    - For the children and young people survey, this data is collected through schools with up to three mixed ability classes in up to three randomly chosen year groups completing an online survey.
- National Benchmarking Service

- This is a centre-based survey whose primary purpose is to enable centres to benchmark themselves against other centres. Sample interviews are conducted on site. The number of people surveyed varies by year depending on how many centres take part. Approximately 10,000 swimmers and 3,500 sports hall users are surveyed per year. This data is used for journey times, establishing proportions of particular activities in different hall types, the duration of activities and the time of activity (peak period).

- Scottish Health
  - The annual survey is of about 6,600 people (just under 5,000 adults). This data is primarily used to assess participation, frequency, and activity duration.

Other data is used where available. For example, the following data sources are among those which have been used to cross-check results:

- Children's Participation in Culture and Sport, Scottish Government, 2008
- Young People's Participation in Sport, Sports Council for Wales, 2009
- Health & Social Care Information Centre, Lifestyle Statistics, 2012
- Young People and Sport, Sport England, 2002
- Data from Angus Council, 2013/14
- National Pools & Halls Survey, 1996
  - This survey has been used to obtain capacities per sports hall for differing sport types for programming data.

4. Calculating Demand

4.1. Demand is calculated by applying the user information from the parameters, as referred to above, to the population[1]. This produces the number of visits for that facility that will be demanded by the population.

4.2. Depending on the age and gender make-up of the population, this will affect the number of visits an area will generate. In order to reflect the different population make-up of the country, the FPM calculates demand based on the smallest census groupings. These are Output Areas (OAs)[2].

4.3. The use of OAs in the calculation of demand ensures that the FPM is able to reflect and portray differences in demand in areas at the most sensitive level based on available census information. Each OA used is given a demand value in VPWPP by the FPM.

5. Calculating Supply Capacity

[1] example, it is estimated that 7.72% of 16–24-year-old males will demand to use an AGP 1.67 times a week. This calculation is done ·ately for the 12 age/gender groupings.

[2] Census Output Areas (OAs) are the smallest grouping of census population data and provide the population information on which the FPM's demand parameters are applied. A demand figure can then be calculated for each OA based on the population profile. There are over 171,300 OAs in England. An OA has a target value of 125 households per OA.

5.1. A facility's capacity varies depending on its size (i.e., size of pool, hall, pitch number), and how many hours the facility is available for use by the community.

5.2. The FPM calculates a facility's capacity by applying each of the capacity factors taken from the model parameters, such as the assumptions made as to how many 'visits' can be accommodated by the particular facility at any one time. Each facility is then given a capacity figure in VPWPP.

5.3. Based on travel time information[3] taken from the user survey, the FPM then calculates how much demand would be met by the particular facility, having regard to its capacity and how much demand is within the facility's catchment. The FPM includes an important feature of spatial interaction. This feature takes account of the location and capacity of all the facilities, having regard to their location and the size of demand, and assesses whether the facilities are in the right place to meet the demand.

5.4. It is important to note that the FPM does not simply add up the total demand within an area and compare that to the total supply within the same area. This approach would not take account of the spatial aspect of supply against demand in a particular area. For example, if an area had a total demand for 5 facilities, and there were currently 6 facilities within the area, it would be too simplistic to conclude that there was an oversupply of 1 facility as this approach would not take account of whether the 5 facilities are in the correct location for local people to use them within that area. It might be that all the facilities were in one part of the borough, leaving other areas under-provided. An assessment of this kind would not reflect the true picture of provision. The FPM is able to assess supply and demand within an area based on the needs of the population within that area.

5.5. In making calculations as to supply and demand, visits made to sports facilities are not artificially restricted or calculated by reference to administrative boundaries, such as local authority areas. Users are generally expected to use their closest facility. The FPM reflects this through analysing the location of demand against the location of facilities, allowing for cross-boundary movement of visits. For example, if a facility is on the boundary of a local authority, users will generally be expected to come from the population living close to the facility, but who may be in an adjoining authority.

6. Calculating the Capacity of Sports Halls – Hall Space in Courts (HSC)

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

[3] 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.

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

- In calculating the capacity of halls, the model uses a different 'At-One-Time' (AOT) parameter for main halls and for activity halls. Activity halls have a greater AOT capacity than main halls – see below. Marked courts can sometimes not properly reflect the size of the actual main hall. For example, a hall may be marked out with 4 courts, when it has space for 5 courts. As the model uses the 'courts' as a unit of size, it is important that the hall's capacity is included as a 5 'court unit' rather than a 4 'court unit'.
- The model calculates the capacity of the sports hall as 'visits per week in the peak period' (VPWPP), and then uses this unit of capacity to compare with demand, which is also calculated as VPWPP. It is often difficult to visualise how much hall space there is when expressed as VPWPP. To make things more meaningful, this capacity in VPWPP is converted back into 'main hall court equivalents' and is noted in the output table as 'Hall Space in Courts'.

7. Facility Attractiveness – for Halls and Pools Only

7.1. Not all facilities are the same, and users will find certain facilities more attractive to use than others. The model attempts to reflect this by introducing an attractiveness weighting factor, which affects the way visits are distributed between facilities. Attractiveness, however, is very subjective. Currently weightings are only used for hall and pool modelling, and a similar approach for AGPs is being developed.

7.2. Attractiveness weightings are based on the following:

- Age/refurbishment weighting – pools and halls: The older a facility is, the less attractive it will be to users. It is recognised that this is a general assumption and that there may be examples where older facilities are more attractive than newly built ones due to excellent local management, programming, and sports development. Additionally, the date of any significant refurbishment is also included within the weighting factor; however, 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 facility's attractiveness. The information on year built/refurbished is taken from Active Places. A graduated curve is used to allocate the attractiveness weighting by year. This curve levels off at around 1920 with a 20% weighting. The refurbishment weighting is slightly lower than the new built year equivalent.
- Management and ownership weighting – halls only: Due to the large number of halls being provided by the education sector, an assumption is made that, in general, these halls will not provide as balanced a programme than halls run by local authorities, trusts, etc, with school halls more likely to be used by teams and groups through block booking. A less balanced programme is assumed to be less attractive

to a general pay & play user than a standard local authority leisure centre sports hall with a wider range of activities on offer.

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

- High weighted curve – includes non-educational management and a better balanced programme, more attractive.
- Lower weighted curve – includes educational owned and managed halls, less attractive.

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

8. Comfort Factor – Halls and Pools

8.1. As part of the modelling process, each facility is given a maximum number of visits it can accommodate based on its size, the number of hours it is available for community use, and the 'at one time capacity' figure (pools = 1 user/6m^2, halls = 6 users/court). This gives each facility a 'theoretical capacity'.

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

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

8.4. The comfort factor is used in two ways:

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

- Adequately meeting unmet demand – the comfort factor is also used to increase the number of facilities needed to comfortably meet unmet demand. If this comfort factor is not applied, then any facilities provided will be operating at their maximum theoretical capacity, which is not desirable as noted previously.

9. Utilised Capacity (Used Capacity)

9.1. Following on from the comfort factor section, here is more guidance on utilised capacity.

9.2. Utilised capacity refers to how much of a facility's theoretical capacity is being used. This can, at first, appear to be unrealistically low, with area figures being in the 50-60% region. Without any further explanation, it would appear that facilities are half empty. The key point is not to see a facility's theoretical maximum capacity (100%) as being an optimum position. This, in practice, would mean that a facility would need to be completely full every hour it was open during the peak period. This would be both unrealistic from an operational perspective and undesirable from a user's perspective, as the facility would be completely full.

9.3. For example, a 25m, four-lane pool has a theoretical capacity of 2,260 per week, during a 52.5-hour peak period.

9.4. As set out in the table below, usage of a pool will vary throughout the evening, with some sessions being busier than others through programming, such as an aqua-aerobics session between 7pm and 8pm and lane swimming between 8 and 9pm. Other sessions will be quieter, such as between 9 and 10pm. This pattern of use would mean a total of 143 swims taking place. However, the pool's maximum theoretical capacity is 264 visits throughout the evening. In this instance the pool's utilised capacity for the evening would be 54%.

Visits per hour	4-5pm	5-6pm	6-7pm	7-8pm	8-9pm	9-10pm	Total visits for the evening
Theoretical maximum capacity	44	44	44	44	44	44	264
Actual usage	8	30	35	50	15	5	143

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

10. Travel Times Catchments

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

10.2. The Ordnance Survey (OS) MasterMap Highways Network Roads has been used to calculate the off-peak drive times between facilities and the population, observing any one-way and turn restrictions which apply and taking account of delays at junctions and car parking. Each street in the network is assigned a speed for car travel based on the attributes of the road, such as the width of the road, the geographical location of the road, and the density of properties along the street. These travel times have been derived through national survey work, and so are based on actual travel patterns of users. The road speeds used for inner and outer London boroughs have been further enhanced by data from the Department of Transport.

10.3. The walking catchment uses the OS MasterMap Highways Network Paths to calculate travel times along paths and roads, excluding motorways and trunk roads. A standard walking speed of 3 mph is used for all journeys.

10.4. The model includes three different modes of travel – car, public transport, and walking. Car access is also considered in areas of lower access to a car, where the model reduces the number of visits made by car and increases those made on foot.

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

Facility	Car	Walking	Public Transport
Swimming Pool	72%	18%	10%
Sports Hall	74%	17%	9%
AGP			
Combined	79%	18%	3%
Football	74%	22%	4%
Hockey	97%	2%	1%

10.6. The model includes a distance decay function, where the further a user is from a facility, the less likely they will travel. Set out below is the survey data with the percentage of visits made within each of the travel times. This shows that almost 90% of all visits, both by car and on foot, are made within 20 minutes. Hence, 20 minutes is often used as a rule of thumb for the catchments for sports halls and pools.

Minutes	Swimming Pools		Sport Halls	
	Car	Walk	Car	Walk
0-10	56%	53%	54%	55%
11-20	35%	34%	36%	32%
21-30	7%	10%	7%	10%
31-45	2%	2%	2%	3%

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

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

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

Facility Inclusion Criteria

Sports Halls

The following inclusion criteria were used for this analysis.

- Include all operational sports halls available for community use i.e. pay and play, membership, sports club/community association.
- Exclude all halls not available for community use i.e. private use.
- Exclude all halls where the main hall is less than 3 Courts in size.
- Include all 'planned', 'under construction', and 'temporarily closed' facilities only where all data is available for inclusion.
- Where opening times are missing, availability has been included based on similar facility types.
- Where the year built is missing assume date 1975[4].

Facilities over the border in Wales and Scotland included, as supplied by **sport**scotland and Sport Wales.

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

Model Parameters

Halls Parameters

<table>
<tr><td>At One Time Capacity</td><td></td><td>32 users per 4-court hall

15 users per 144 square meters of activity hall</td><td></td></tr>
<tr><td>Catchment Maps</td><td></td><td>Car: 20 minutes
Walking: 1.6 km
Public transport: 20 minutes at about half the speed of a car

NOTE: Catchment times are indicative, within the context of a distance decay function of the model.</td><td></td></tr>
<tr><td>Duration</td><td></td><td>60 minutes</td><td></td></tr>
<tr><td>Percentage Participation

Frequency per Week</td><td></td><td>
<table>
<tr><th>Age</th><th>0-15</th><th>16-24</th><th>25-34</th><th>35-44</th><th>45-59</th><th>60-79</th></tr>
<tr><td>Male</td><td>17.0</td><td>16.5</td><td>14.1</td><td>11.7</td><td>10.3</td><td>7.3</td></tr>
<tr><td>Female</td><td>18.3</td><td>18.2</td><td>16.7</td><td>15.3</td><td>15.2</td><td>12.0</td></tr>
</table>
<table>
<tr><th>Age</th><th>0-15</th><th>16-24</th><th>25-34</th><th>35-44</th><th>45-59</th><th>60-79</th></tr>
<tr><td>Male</td><td>0.86</td><td>0.92</td><td>0.64</td><td>0.84</td><td>0.97</td><td>1.12</td></tr>
<tr><td>Female</td><td>0.95</td><td>1.16</td><td>1.16</td><td>1.02</td><td>1.13</td><td>0.99</td></tr>
</table>
</td><td></td></tr>
<tr><td>Peak Period

Proportion in Peak Period</td><td></td><td>Weekday: 9:00 to 10:00, 17:00 to 22:00
Weekend: 08:00 to 16:00
Total: 46 hours

62%</td><td></td></tr>
</table>