Facilities Planning Model Assessment of Sports Halls Provision in South Norfolk

Standard Report 2020

20 December 2021

Disclaimer

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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 the majority of South Norfolk's demand can be met by the accessible supply of sports halls. Unmet demand is low, the public leisure centres sites are very busy although educational sites are not. There is an evidence case for a sports hall in Diss based on criteria of increasing access for residents.

Key Findings

ii. The key findings from the supply, demand and access assessment are set out below and are described in full under each assessment heading:

1. There are seven educational sports hall sites, two local authority leisure centres and one sports club.
2. The total supply is the equivalent of 56 badminton courts, of which 16 courts are unavailable for community use in the weekly peak period (mostly at the educational sites), which represents 28% of the total supply.
3. Excluding the two educational sports hall sites which opened before 1960, the average age of the sites is 35 years. The newest sports hall is at Hobart High School, which opened in 2006, and no new sports halls have opened since.
4. A total of 88% of demand for sports halls by South Norfolk residents is met.
5. Of the satisfied demand, 55% is retained within the District and 45% is exported.
6. Unmet demand is only 12% of total demand, which equates to 4.5 badminton courts. Of which, 86% is demand located outside a sports hall catchment and 14% is from lack of capacity.
7. Unmet demand is distributed across South Norfolk in very low values.
8. However, there is a potential location hot spot in Diss which would cover unmet demand of 2.5 badminton courts.
9. As a South Norfolk average, the estimated used capacity of the sports halls is low at 47% in the weekly peak period, however, it is 100% at the two local authority leisure centres.

Strategic Overview

iii. Only two of the 10 sports halls sites in South Norfolk, Long Stratton Leisure Centre and Wymondham Leisure Centre, provide full accessibility for residents, with full availability for sports clubs, community groups and recreational use.

iv. The access for community use at the seven educational sites is limited by the type of use, mainly for sports clubs and groups and hours of availability. The hours available varies from 15 hours in the weekly peak period, at Hobart High School, to 41 hours at Easton

and Otley College. The variable hours of access means that aggregated across the educational venues the equivalent of 16 badminton courts, out of the total supply of 56 courts, are unavailable for community use in the weekly peak period.

v. The 2020 evidence base findings are that the educational supply does not need to be increased to meet demand for community use because the available supply is meeting demand. However, there are two caveats; (1) the educational supply for community use could change and reduce and the District Council has no control over the type and hours of community use at the educational sites, which is 70% of the total supply, (2) the public leisure centres are estimated to be operating at 100% of capacity in the weekly peak period because of their availability.

vi. Unmet demand is low at 4.5 badminton courts across South Norfolk, and the vast majority is demand located outside a catchment and not due to lack sports hall capacity. Therefore, while the public leisure centres are estimated to be full, it is about managing the programme of use at the public leisure centres to accommodate demand.

vii. Of concern is the 35-year average age of the sports hall sites, but this excludes Langley School sports hall opened in 1946 and Hethersett Old Hall School sports hall, opened in 1955. Half of the sports hall sites have been modernised, including the two public leisure centre sites.

viii. A finding which appears to contradict these findings, is the evidence base for a sports hall located in Diss. There is no sports hall site in Diss, and the evidence case is based on increasing access to sports halls for residents, not the overall supply and demand balance.

ix. When the unmet demand is aggregated into a potential catchment, the 'hot spot' is located in Diss and equates to 2.5 badminton courts.

Next Steps

x. In looking to the future there are three recommendations, (1) the need to modernise the educational sports hall sites, (2) the evidence case for a sports hall in Diss, and (3) the projected population growth and the impact on increasing demand for sports halls.

xi. Taking each finding in turn, the Council, if it does not already have community use agreements, may wish to secure these agreements through a partnership of investment in return for secure community access. The FPM indicates that the most important educational site is Framingham Earl High School, due to its location and because it is the largest educational site in the District, with three individual sports halls.

xii. The evidence base for a new sports hall in Diss is for a three-court hall. Ideally located at an educational site with a community use agreement to secure maximum use. To provide for the full range of indoor hall sports it should be a four-court hall, however, this scale is not supported by the FPM findings.

xiii. It is acknowledged this is an increase in provision when the current supply can meet the demand for sports halls. The justification is on criteria of increasing access for residents in an area where there is no sports hall and unmet demand is the highest in the District.

xiv. In terms of population growth, the Council through its strategic planning may wish to identify the impact the increase in population and new residential sites have on the future demand for sports halls. The current supply is extensive: less than half the capacity is used across the District and there is also the equivalent of 16 badminton courts which are currently unavailable for community use. Therefore, it should be possible to accommodate growth, but this is based on a one-year set of findings.

xv. If however, there are extensive new residential sites in the Long Stratton and Wymondham areas, this will increase demand at the two public leisure centres and these are estimated to be working at capacity. The scale of population growth in these areas and its impact on increased demand at the two leisure centres should be considered. The Council has already invested in modernising these two centres.

xvi. South Norfolk District Council may wish to consider reviewing the findings of this report and applying the evidence base to ensure that the benefits from the strategic direction being set by Sport England are realised.

xvii. 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.

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

Contents

1. Introduction

1.1 The 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 provision of sports halls in South Norfolk 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, the data outputs for the neighbouring local authorities, along 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 the 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 scale

1.9 The purpose being to identify how these changes impact on access to sports halls for residents in future years and if the changes in supply 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, to find out:

- Supply - how many facilities are there and what is their capacity?
- Demand - who wants to use facilities?
- Satisfied Demand - how many people are using facilities? Where do people use facilities (inside and outside the authority) and how do they get there?
- Unmet Demand - who can't use facilities and why? Is there not enough capacity or are people too far away from facilities?
- Used Capacity - how full are the facilities and where are people coming from (inside and outside the authority)?
- Local Share - which areas have better or worse provision, considering the number of people who want to use them?

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 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 the 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, and local share of 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	South Norfolk	Breckland	Broadland	East Suffolk	Great Yarmouth	Mid Suffolk	Norwich	East Region	England
Number of halls	16	10	15	26	11	7	15	668	5,930
Number of hall sites	10	8	7	18	8	6	11	440	4,093
Supply of total hall space in courts	56	35	52	99	42	27	68	2,631	23,559
Supply of publicly available hall space in courts scaled with hours in the peak period	40.10	31.70	35.50	71.50	31.80	21.90	55	1,975.60	17,371
Supply of total hall space in visits per week peak period	14,612	11,521	12,932	26,022	11,582	7,988	20,016	719,132	6,323,045
Courts per 10,000	3.90	2.50	4	3.90	4.20	2.60	4.80	4.20	4.20

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.

Weekly peak period – This is when the majority of visits take place and when users have most flexibility to visit. The peak period for sports halls is one hour on weekday mornings, five hours on weekday evenings and eight hours on weekend days. This gives a total of 46 hours per week. The modelling and recommendations are based on the ability of the public to access facilities during this weekly peak period.

2.1. There are 16 individual sports halls located at 10 sites in South Norfolk in 2020. The total supply of sports halls is the equivalent of 56 badminton courts, of which 40 are available in the weekly peak period for community use (known as the effective supply).

2.2. **Key finding 1** is that there are seven educational sports hall sites, two local authority leisure centre sites and one sports club owned sports hall site. The public leisure centres account for 20% of the total supply, educational providers are 70% and the sports club is 10%.

2.3. The educational providers will determine the policy, hours of use and types of community use and they are the majority provider. Use is most likely by sports clubs and community groups, with little recreational pay and play. The two public leisure centres will provide for all types of use and have the widest availability in terms of hours and programme.

2.4. **Key finding 2** is that there are 16 badminton courts, out of the total supply of 56 badminton courts in South Norfolk, which are unavailable for community use. This is the aggregated total of badminton courts across the sports hall sites, it represents 28% of the total supply.

2.5. Details of the sports hall sites in South Norfolk are provided in Table **2.1**.

2.6. There are nine four-court halls, which are 56% of the total supply. This size of sports hall can accommodate all indoor hall sports at the community level of participation.

2.7. There are five sites which have both a main hall and activity hall, and this enables flexible programming and maximum use, with large space activities such as badminton programmed in the main hall, and lesser space activities such as martial arts taking place in the smaller activity hall.

2.8. Framingham Earl High School (opened in 1960) has a four-court sports hall and two activity halls with the area of one badminton court each. It is the largest sports hall site in the District and it is also the third oldest.

2.9. **Key finding 3** is that excluding the two sites which opened before 1960, the average age of the sport halls is 35 years. The oldest venue is the Langley School sports hall which opened in 1946. The most recent sports hall to open is at Hobart High School, opened in 2006. There have been no new sports halls built in the District since then.

2.10. Five of the 10 sports hall venues have been modernised, so there is a good track record of modernisation. Modernisation is defined as one or more of the sports hall floor being upgraded to a sprung timber floor, the sports hall lighting upgraded, or the changing accommodation modernised. However, with five unmodernised sports hall sites and the most recent sports hall now 15 years old, there is an increasing need for modernisation of the sports halls.

2.11. The locations of the sports hall sites in South Norfolk are shown in Map **2.1**, and Maps **2.2**-**2.5** provide the same information in more detail for areas of the District.

Table 2.1: Sports Hall Supply in South Norfolk (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
Easton and Otley College	Main	690	1998		43%	41	45	2,296
	Main	486				41	45	
Framingham Earl High School Sports Centre	Main	594	1960		23%	26	26	1,955
	Activity Hall	180				26	26	
	Activity Hall	180				26	26	
Hethersett Academy	Main	690	1975	2006	34%	34.5	34.5	1,849
	Activity Hall	180				34.5	34.5	
Hethersett Old Hall School	Main	594	1955		22%	36.5	48.5	1,956
	Activity Hall	180				36.5	48.5	
Hingham Sports and Social Club	Main	486	1990	2004	74%	44	91	1,056
Hobart High School	Main	690	2006		47%	15	15	480
Langley School	Main	594	1946		21%	34	46	1,088
Long Stratton Leisure Centre	Main	594	1983	2010	80%	40	54	1,280
Wymondham College	Main	594	1970	2001	27%	22	22	1,179
	Activity Hall	180				22	22	
Wymondham Leisure Centre	Main	690	1992	2015	92%	46	103	1,472

Map 2.1: Sports Halls in South Norfolk (2020)

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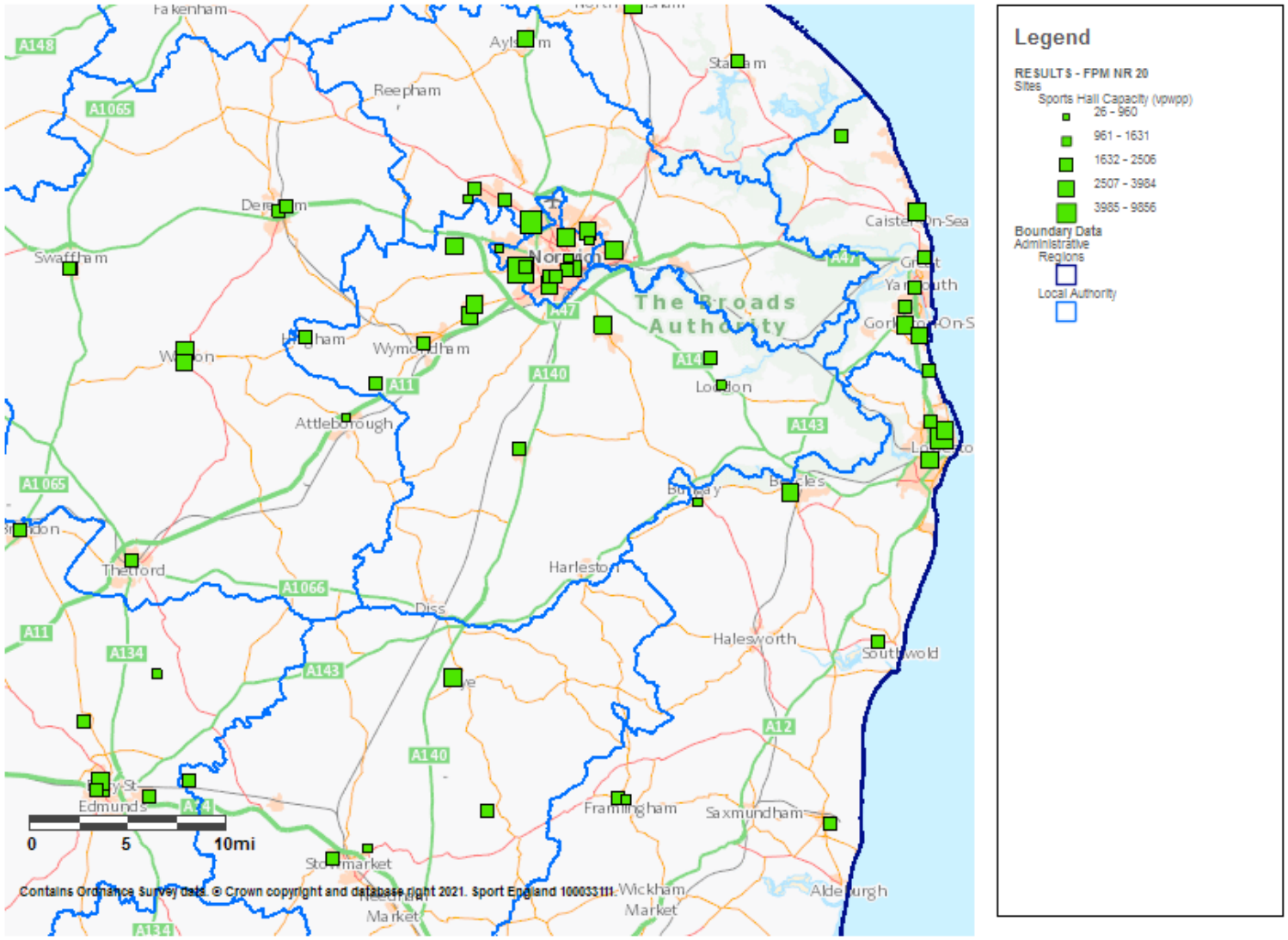

Map 2.2: Sports Halls in West South Norfolk (2020)

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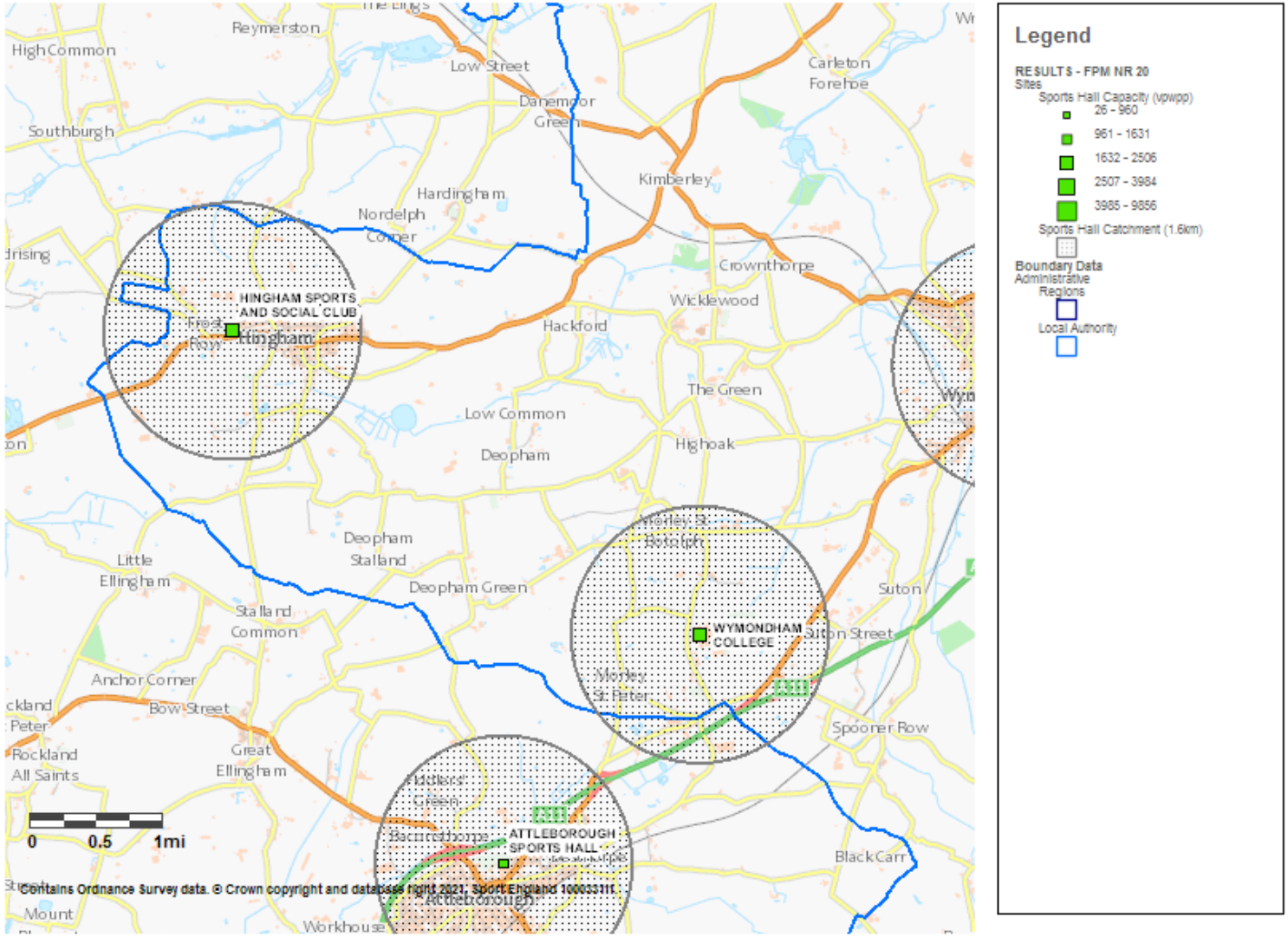

Map 2.3: Sports Halls in North South Norfolk (2020)

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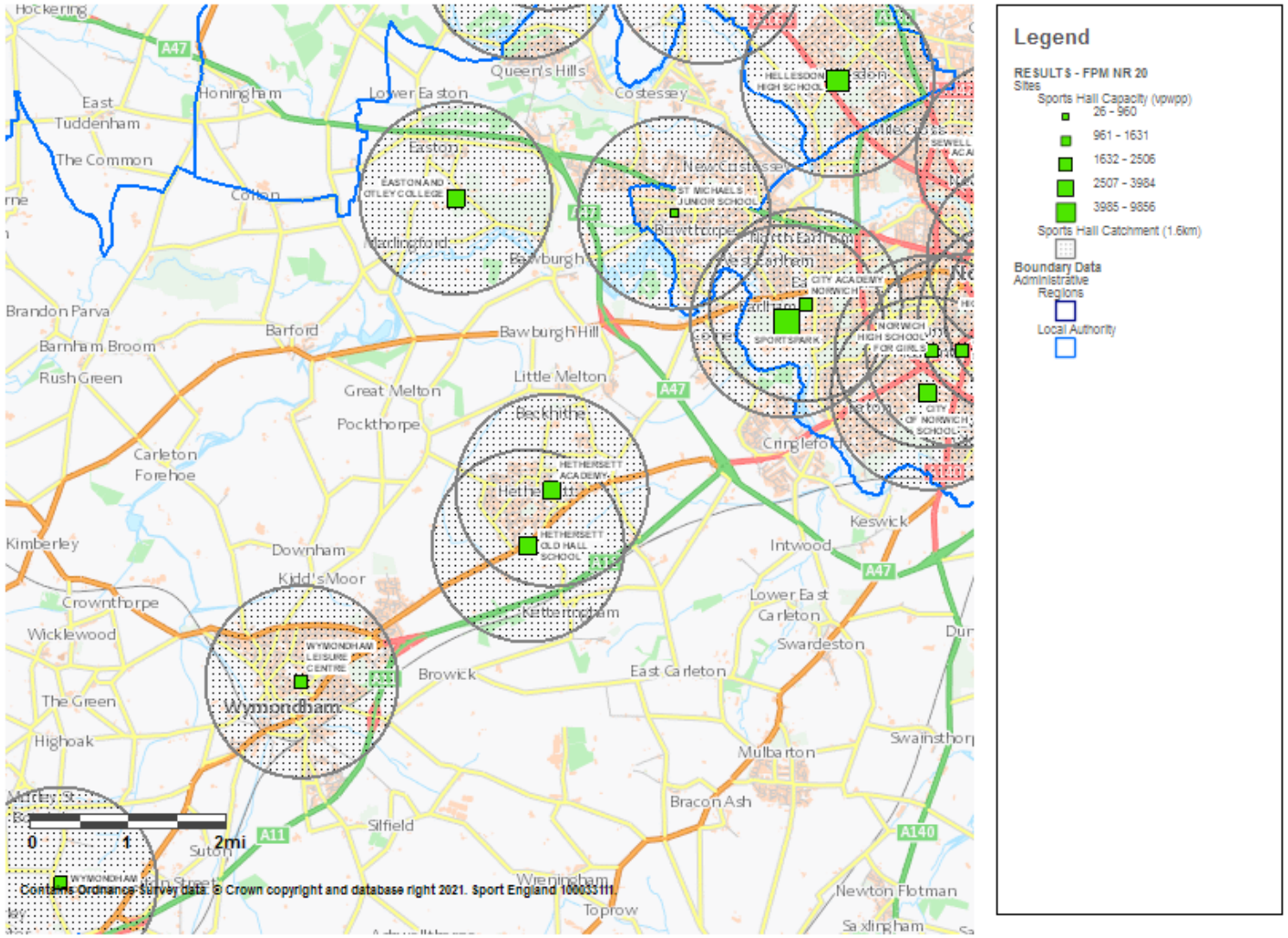

Map 2.4: Sports Halls in South South Norfolk (2020)

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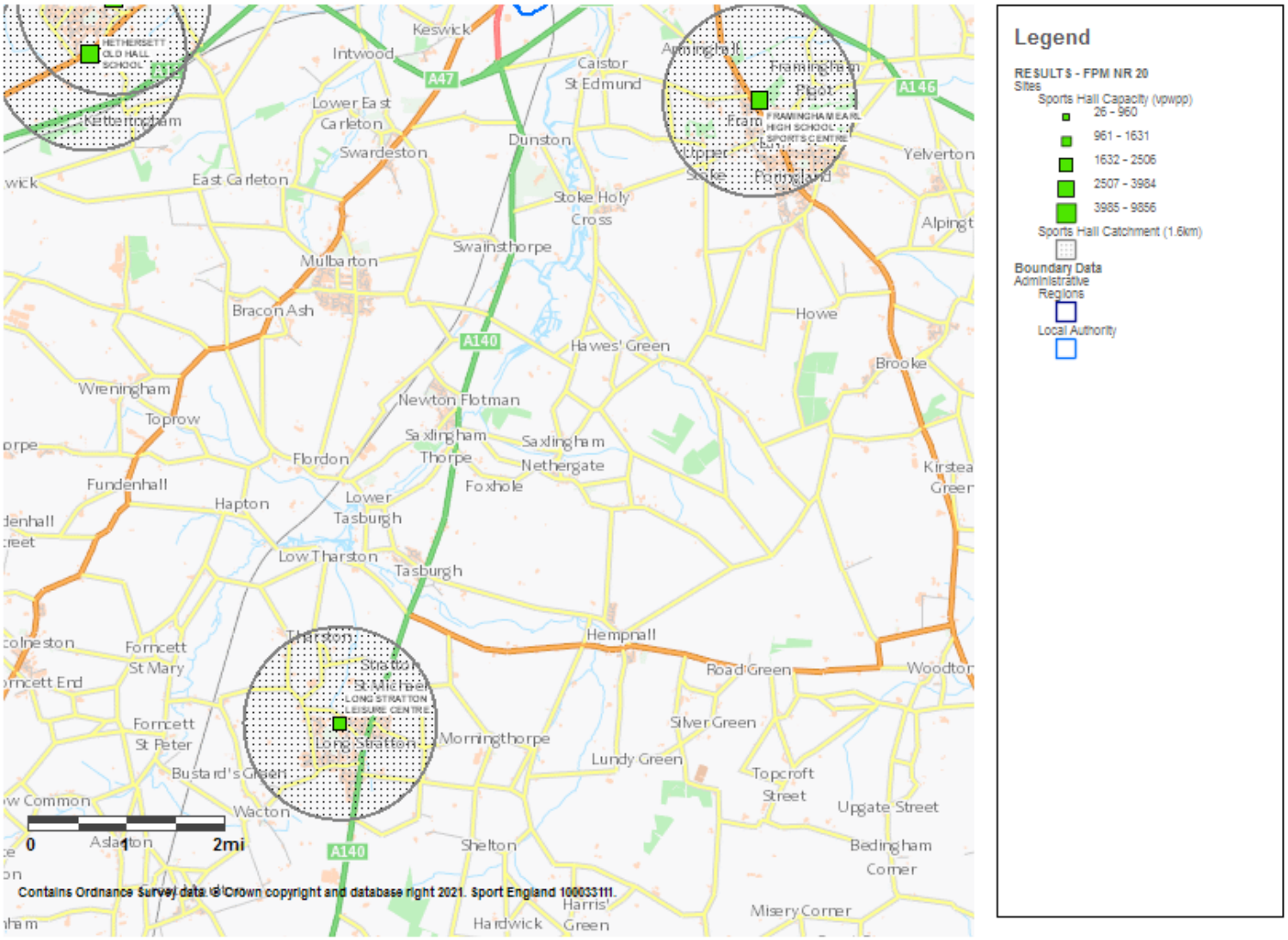

Map 2.5: Sports Halls in South-east South Norfolk (2020)

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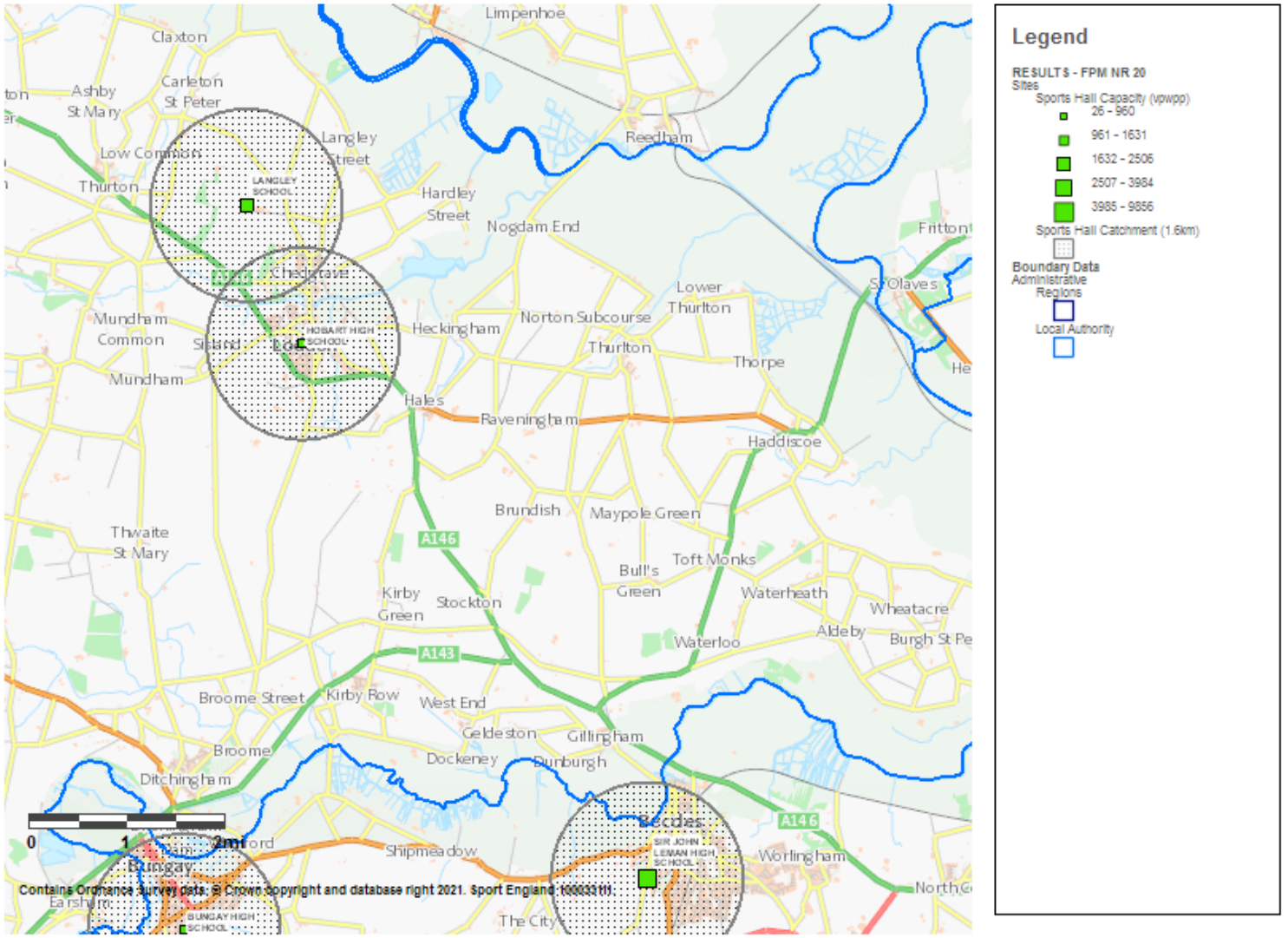


Legend

RESULTS - FPM NR 20
Sites
Sports Hall Capacity (vpwpp)
26 - 960
961 - 1631
1632 - 2506
2507 - 3984
3985 - 9856
Sports Hall Catchment (1.6km)
Boundary Data
Administrative Regions
Local Authority

3. Demand for Sports Halls

Demand	South Norfolk	Breckland	Broadland	East Suffolk	Great Yarmouth	Mid Suffolk	Norwich	East Region	England
Population	142,704	142,019	131,671	251,751	100,097	104,153	142,790	6,277,257	56,630,408
Visits demanded – visits per week peak period	11,168	10,973	10,161	19,225	7,843	8,095	12,090	504,805	4,606,246
Equivalent in courts – with comfort factor included	38.40	37.60	34.90	66	26.90	27.80	41.50	1,733.50	15,818.10
% of population without access to a car	11	15	10.90	16.90	26.60	10.70	32	17.70	24.90

Definition of total demand – This represents the total demand for sports halls 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 (see Section 2 for definition) and number of badminton courts. 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 South Norfolk in 2020 is 142,704, and this population generates a demand for 11,168 visits to sports halls in the weekly peak period.

3.2. This equates to demand for 38 badminton courts in the weekly peak period. For context, the available supply of sports halls in the District is 40 badminton courts.

4. Satisfied Demand

Demand from South Norfolk residents currently being met by supply

Satisfied Demand	South Norfolk	Breckland	Broadland	East Suffolk	Great Yarmouth	Mid Suffolk	Norwich	East Region	England
Total number of visits which are met	9,847	9,189	9,218	17,368	7,153	6,933	11,389	464,290	4,239,628
% of total demand satisfied	88.2	83.7	90.7	90.3	91.2	85.7	94.2	92.0	92.0
% of demand satisfied who travelled by:									
Car	92.2	90.30	89.80	84.20	73.60	93.50	64.70	81.40	74.10
Foot	5.1	6.50	6.90	10.40	15.20	4.30	22.50	12.20	16.60
Public Transport	2.7	3.20	3.30	5.40	11.20	2.20	12.80	6.40	9.20
Visits Retained:									
Number of Visits Retained	5,390	7,273	6,035	15,386	6,935	4,840	9,657	453,194	4,236,776
As a % of Satisfied Demand	54.7	79.2	65.5	88.6	97.0	69.8	84.8	97.6	99.9
Visits Exported:									
Number of visits Exported	4,457	1,916	3,183	1,983	218	2,093	1,732	11,122	2,868
As a % of Satisfied Demand	45.3	20.80	34.50	11.40	3	30.20	15.20	2.40	0.10

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

4.1. **Key finding 4** is that, in 2020, 88% of the total demand for sports halls by South Norfolk residents is met.

4.2. Satisfied demand in the study area ranges from 84% in Breckland to 94% in Norwich. The East Region and England-wide average for satisfied demand are both 92%.

Retained Demand

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

4.4. **Key finding 5** is that, of the total 88% South Norfolk satisfied demand for sports halls which is met, 55% is retained within the authority. Therefore, five out of ten visits to a sports hall by a South Norfolk resident is to a venue located in the District.

4.5. Retained demand in the neighbouring local authorities is higher, ranging from 65% in Broadland to 97% in Great Yarmouth (although this is perhaps not a surprise for Great Yarmouth considering it is on the coast). The finding for South Norfolk possibly reflects the settlement pattern of the District with many small settlements in quite a large rural area. This is a finding which also applies to Broadland.

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 South Norfolk given the age of the sports hall sites and that half of the sports hall sites have not been modernised.

Exported Demand

4.8. The residue of satisfied demand, after retained demand, is exported demand. The 2020 finding is that 45% of the South Norfolk satisfied demand for sports halls is met at a site outside South Norfolk. Again, this is based on catchment area of sports halls outside South Norfolk and residents located in South Norfolk.

4.9. South Norfolk's retained demand is 5,390 visits and the exported demand is 4,457 visits per week in the peak period.

4.10. The data from the National Run does not identify how much of the South Norfolk'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 **2.3** in Section 2 of this report, the cluster of sports hall sites in Norwich located close to the South Norfolk boundary, suggests that the majority of the exported demand goes to Norwich. The destination of exported demand could be identified in a bespoke run.

Travel Patterns to Sports Halls

4.11. The vast majority of visits from South Norfolk residents to sports halls are by car (92%), with only 8% by a combination of walking (5%) and public transport (3%).

5. Unmet Demand

Demand from South Norfolk residents not currently being met

Unmet Demand	South Norfolk	Breckland	Broadland	East Suffolk	Great Yarmouth	Mid Suffolk	Norwich	East Region	England
Total number of visits in the peak, not currently being met	1,321	1,784	943	1,856	690	1,161	702	40,515	366,618
Unmet demand as a % of total demand	11.8	16.30	9.30	9.70	8.80	14.30	5.80	8	8
Equivalent in Courts - with comfort factor	4.5	6.10	3.30	6.40	2.40	4	2.40	139.10	1,259
% of Unmet Demand due to:									
Outside Catchment:	86.0	67.50	95.70	96.0	100.0	87.50	88.50	86.7	77.9
Who do not have access to a car	52.0	45.60	54.50	69.40	93.50	44.10	86.60	69.3	69.2
Who have access to a car	34.0	21.80	41.20	26.70	6.50	43.40	1.90	17.4	8.7
Lack of Capacity:	14.0	32.50	4.30	4.0	0.0	12.50	11.50	13.3	22.1
Who do not have access to a car	1.4	11.50	1.80	1.50	0.0	3.60	11.20	5.8	19.8
Who have access to a car	12.5	21.0	2.50	2.40	0.0	9.0	0.30	7.5	2.3

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 South Norfolk's unmet demand is 11.8% of total demand, and this equates to 4.5 badminton courts.

5.2. Of this total unmet demand, 86% is from demand located outside the catchment area of a sports hall. This reflects the structure of the District, with a large land area and lots of small, dispersed settlements. The unmet demand from lack of sports hall capacity is 14%.

5.3. The balance between the unmet demand sources in South Norfolk is reflected in some of the other authorities and the findings for South Norfolk are the same as for East Region.

5.4. Unmet demand outside catchment will always exist because it is not possible to achieve complete spatial coverage, where all areas of an authority are inside a catchment for residents without access to a car. The total unmet demand outside a catchment is 1,136 visits per week in the peak period. This compares with the demand inside catchment which is being met of 9,847 visits in the weekly peak period.

5.5. 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.

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

5.7. Maps **5.2-5.5** provide more detail for the north, west, south and south-east of the District.

5.8. The 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).

5.9. **Key finding 7** is unmet demand is distributed in very low values (between 0.0–0.6 of a badminton court) across the District.

Meeting Unmet Demand

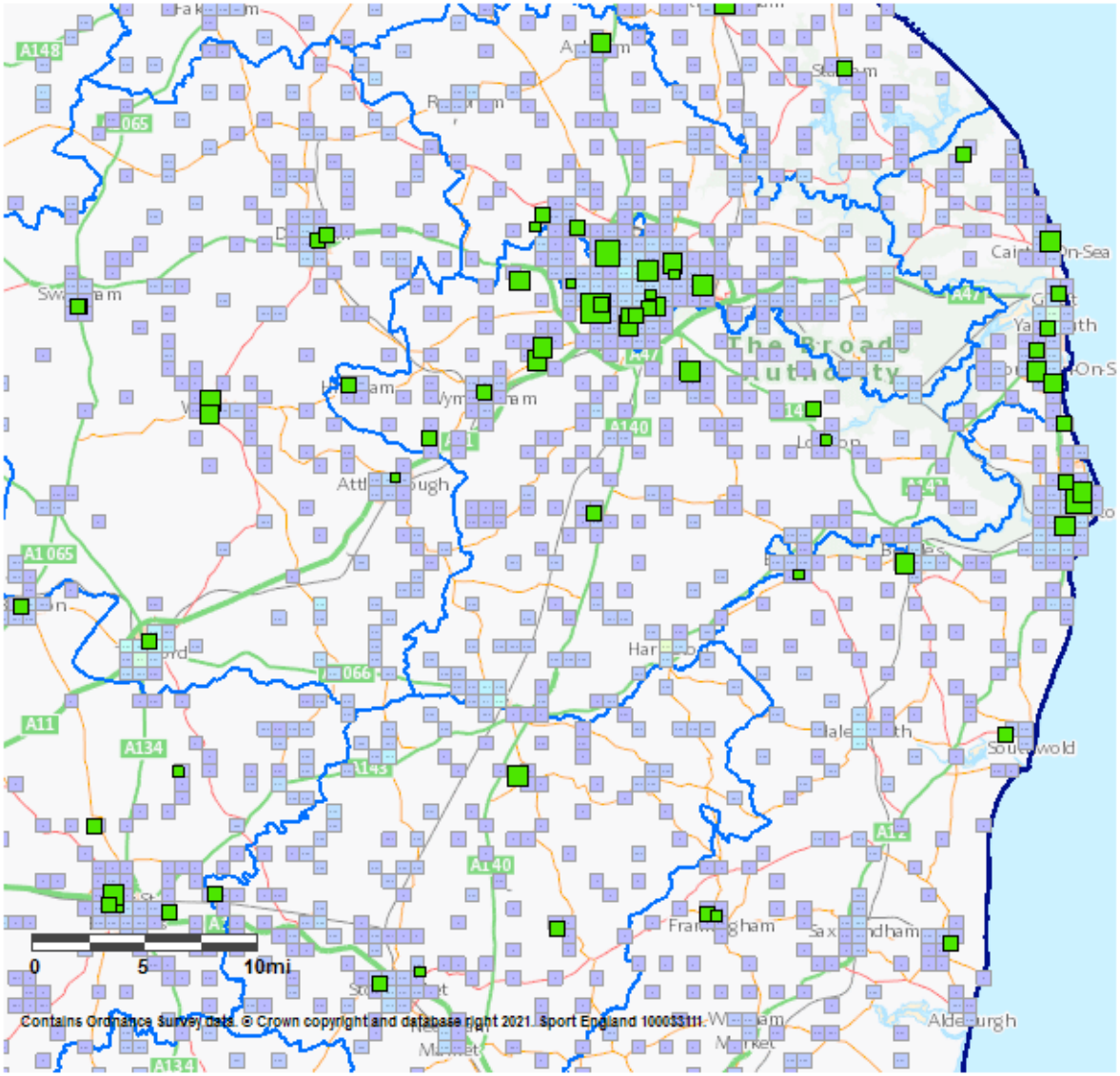
5.10. The spread of the unmet demand can by analysed to understand the amount of unmet demand that would be met by a potential new facility in any given location. This 'reachable unmet demand' is calculated for each 1km grid square across the region to understand the possibility of addressing unmet demand through increased sports hall provision.

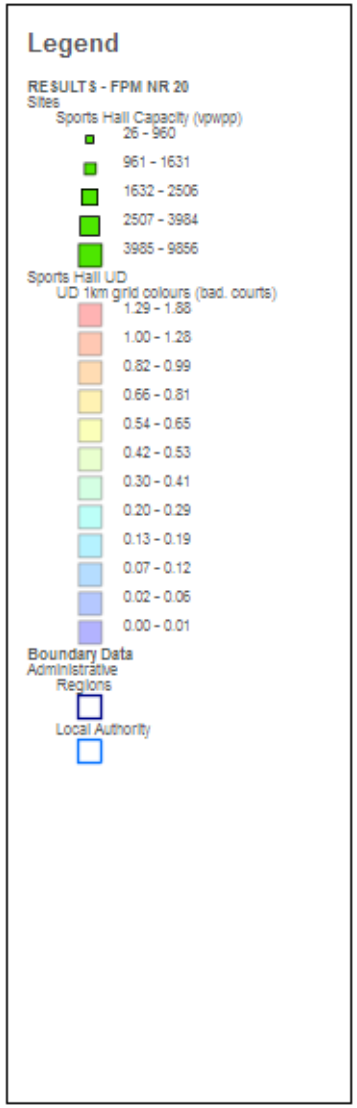
5.11. The location with the highest value of 'potential catchment unmet demand' is in the area of Diss with 2.5 badminton courts (see Map **5.6**). The figures in the map show the potential catchment unmet demand aggregated at one kilometre grid squares. Currently, there is no sports hall in Diss.

5.12. **Key finding 8** is that on criteria of increasing access to sports halls for residents there is an evidence case for providing a sports hall in Diss. Based on the FPM findings this would be a 3-court sports hall. A school site with committed access for community use would be the most beneficial option.

Map 5.1: Unmet Demand for Sports Halls South Norfolk District 2020

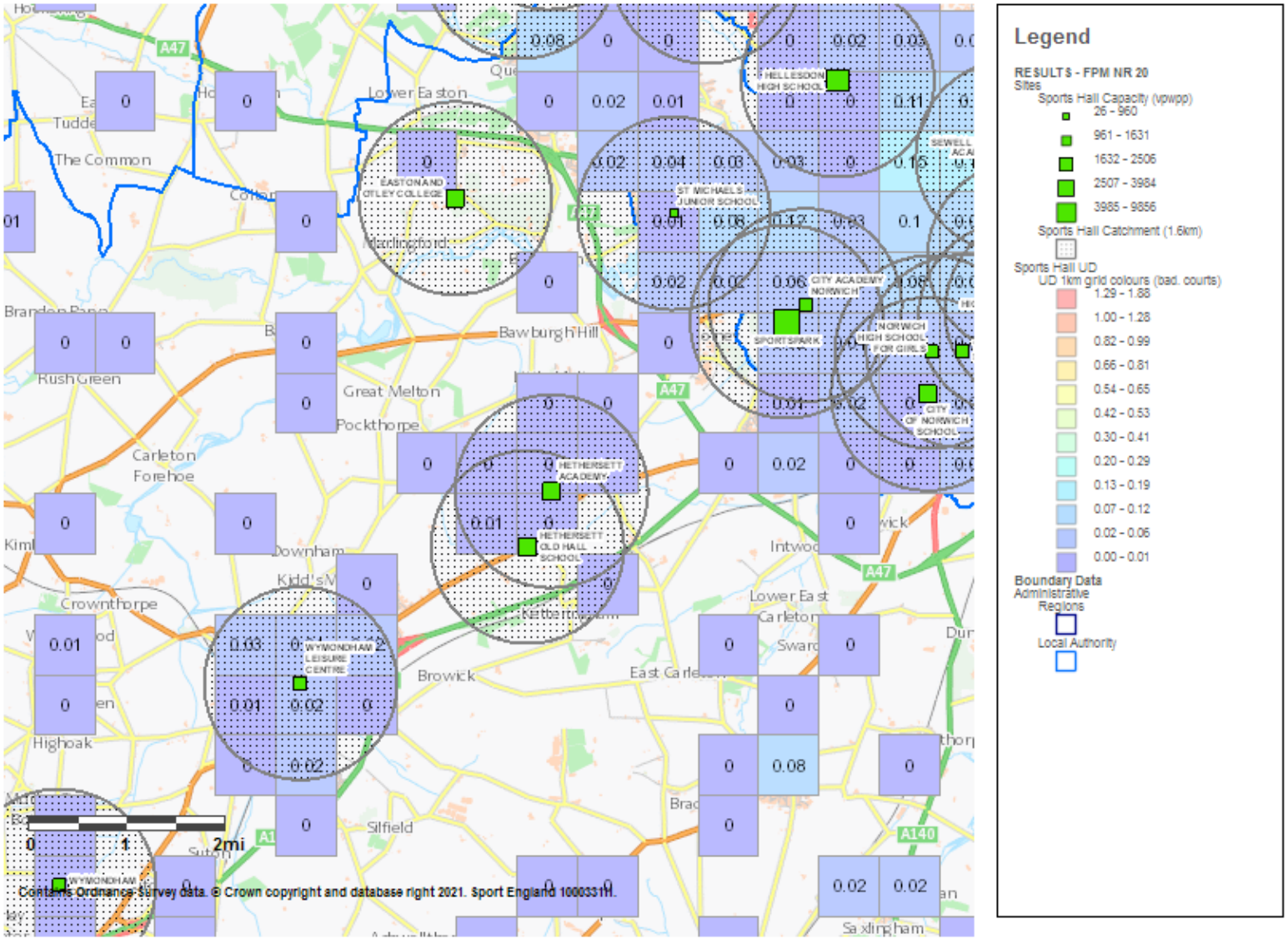
Facility Planning Model unmet demand aggregated at 1km square grid (figure labels) and shown thematically (colours). Unmet demand at 1km square grid level expressed as badminton courts.





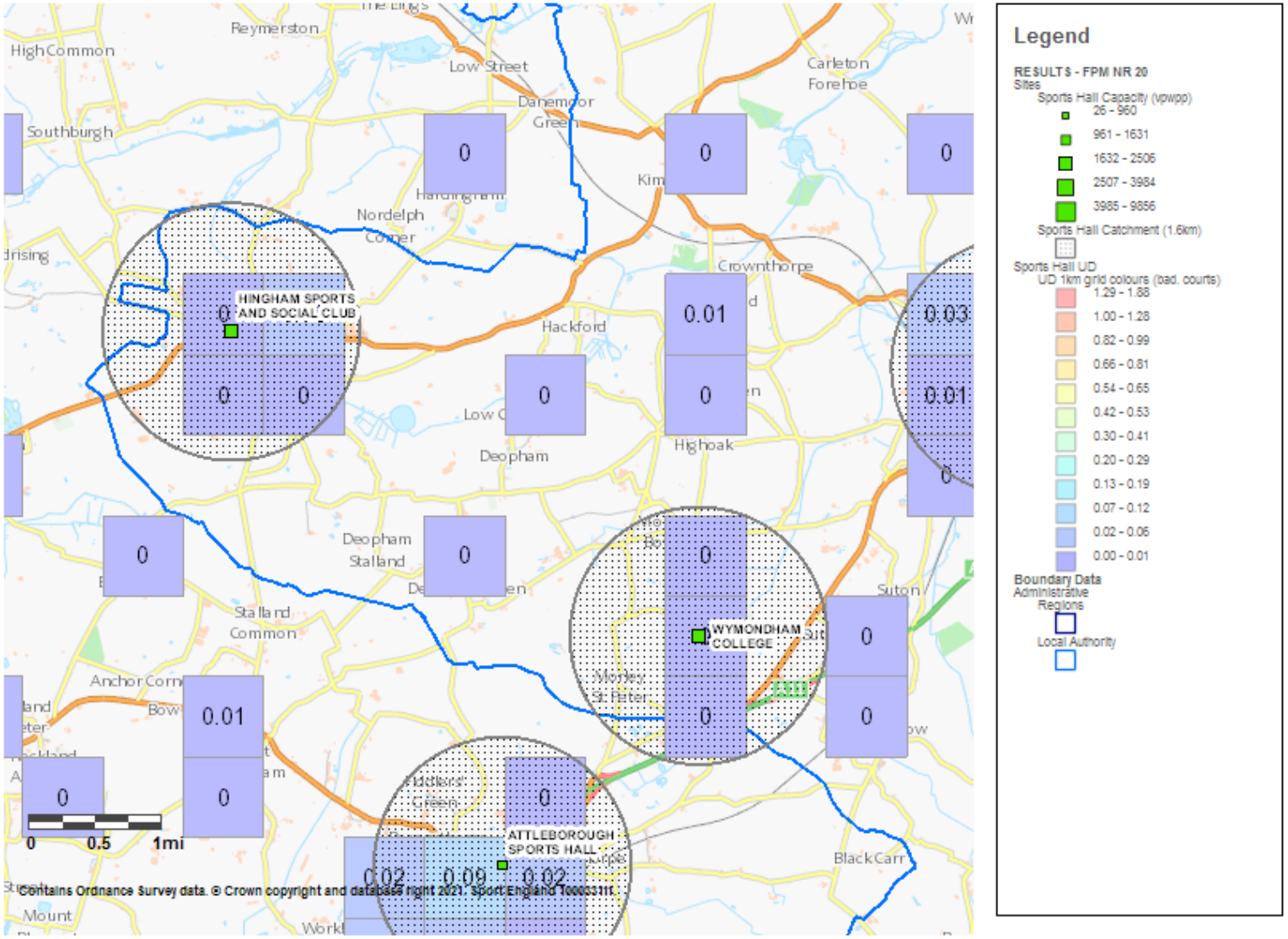
Map 5.2: Unmet Demand for Sports Halls North South Norfolk (2020)

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.



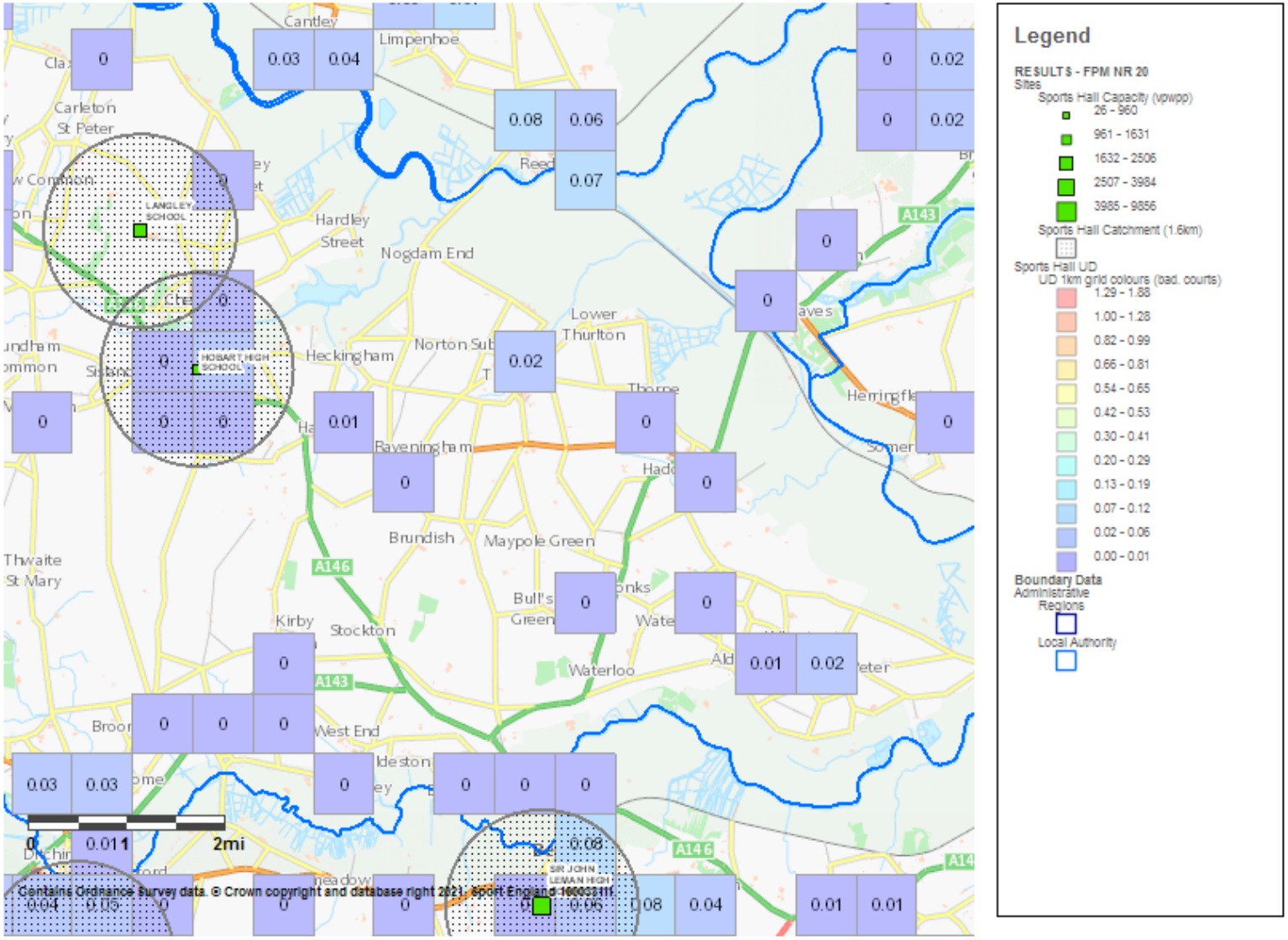
Map 5.3: Unmet Demand for Sports Halls in West South Norfolk (2020)

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.



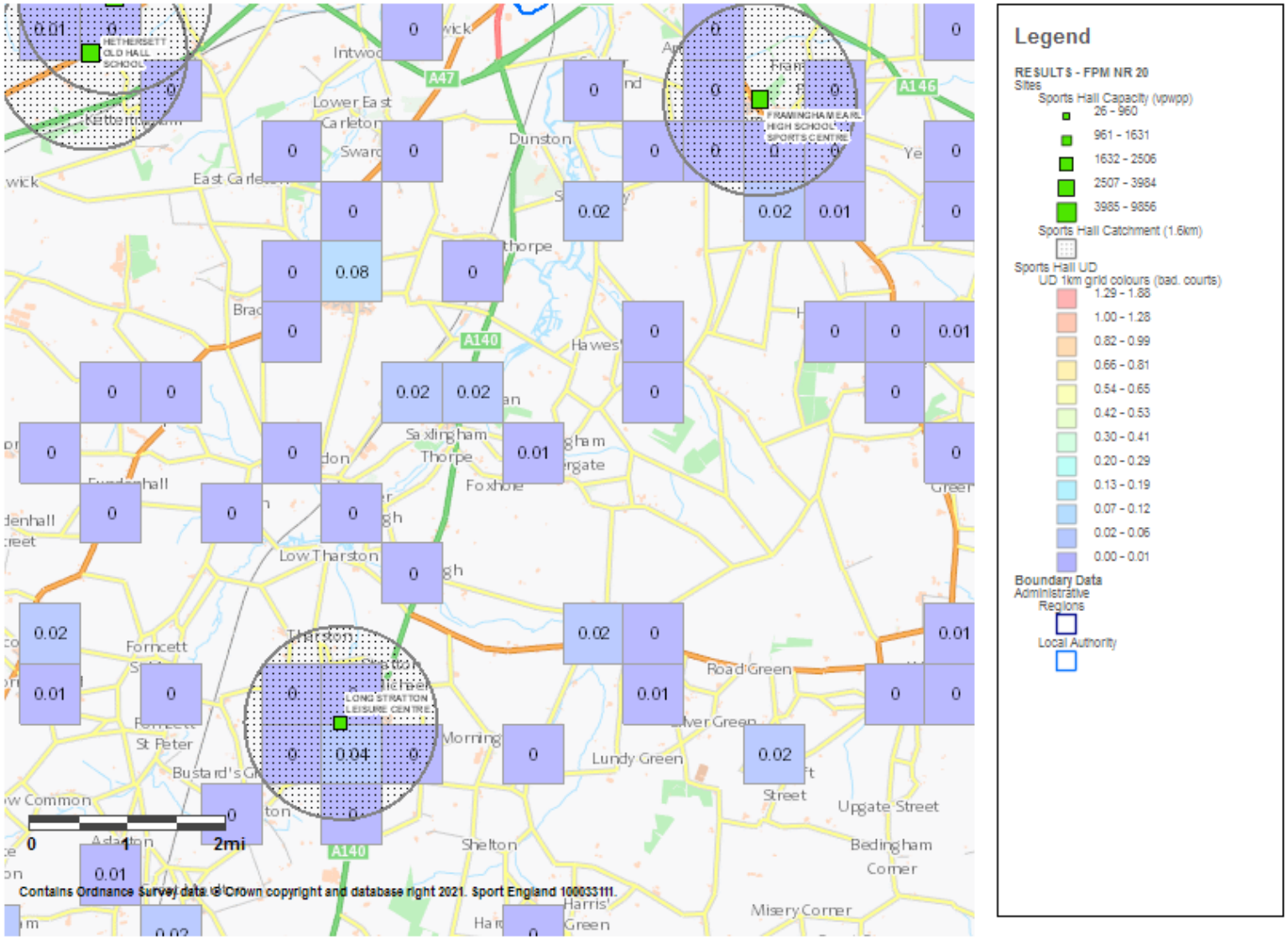
Map 5.4: Unmet Demand for Sports Halls in South South Norfolk (2020)

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.



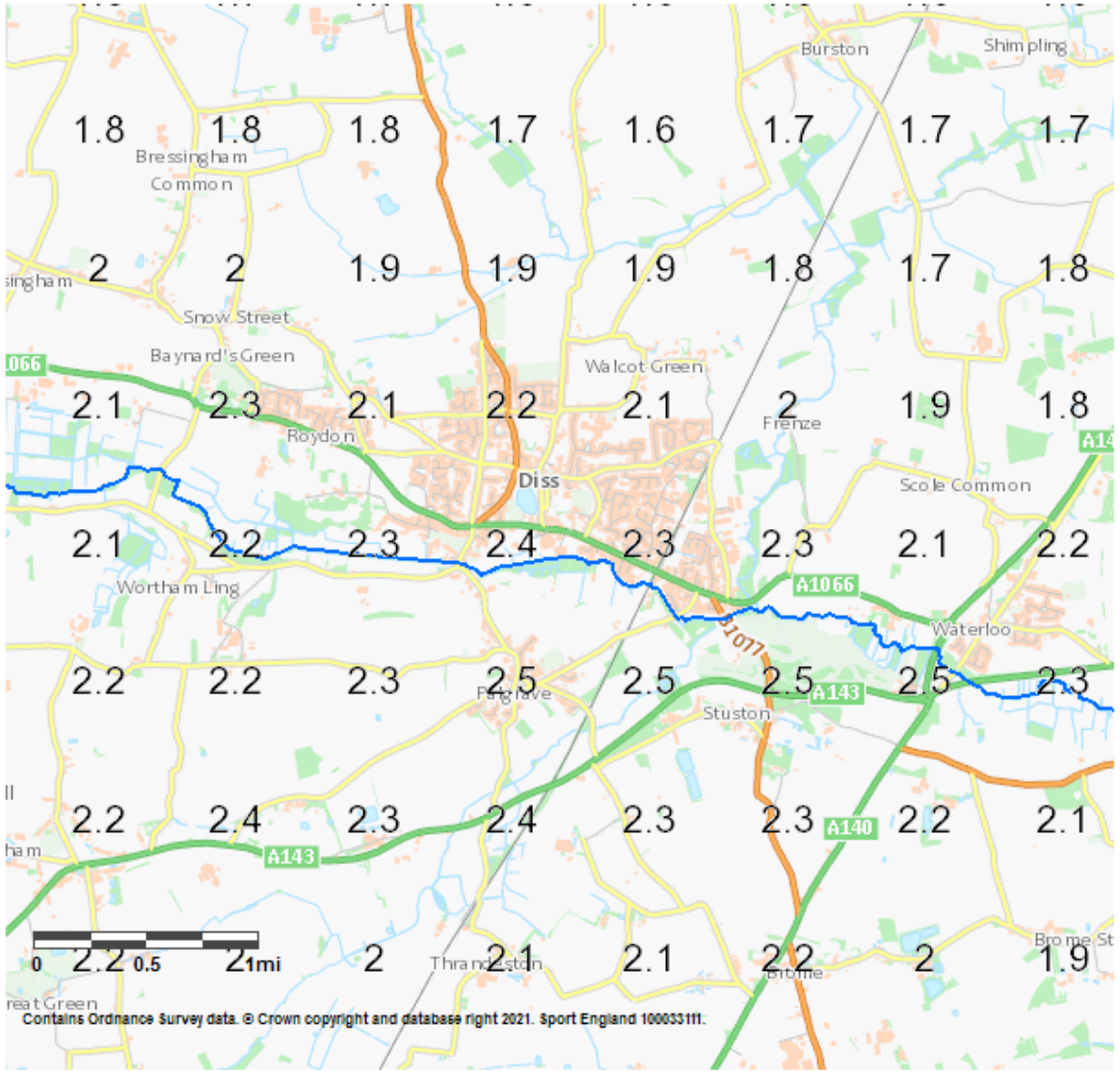
Map 5.5: Unmet Demand for Sports Halls in South-east South Norfolk (2020)

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 5.6: Meeting Unmet Demand Around Diss (2020)

Facility Planning Model reachable unmet demand aggregated at 1km square grid (figure labels) and expressed as badminton courts.



Population Without Access to a Car

Population No Car	South Norfolk	Breckland	Broadland	East Suffolk	Great Yarmouth	Mid Suffolk	Norwich	East Region	England
Population	142,704	142,019	131,671	251,751	100,097	104,153	142,790	6,277,257	56,630,408
% of population without access to a car	11.0	15.0	10.9	16.9	26.6	10.7	32.0	17.7	24.9

5.13. The percentage of the population without 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

5.14. The drive time catchment for a facility is 30 minutes travel time; however, the FPM uses a distance decay function, where the further a user is from a facility, the less likely they will travel (a description of the distance decay function is set out in Appendix **2**).

5.15. 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 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).

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

5.17. As expected given the very low percentage of the population with no access to a car, the findings for South Norfolk are that the vast majority of visits to sports halls are by car and only 9% by a combination of walking and public transport (see Satisfied Demand table).

6. Used Capacity

How well used are the facilities?

Used Capacity	South Norfolk	Breckland	Broadland	East Suffolk	Great Yarmouth	Mid Suffolk	Norwich	East Region	England
Total number of visits used of current capacity	6,808	7,704	8,624	16,694	7,444	6,447	14,717	465,746	4,239,907
% of overall capacity of halls used	46.6	66.9	66.7	64.2	64.3	80.7	73.5	64.8	67.1
% of visits made to halls by:									
Walkers	6.5	7.70	7.70	10.70	14.60	4.60	17.70	12.10	16.60
Road	93.5	92.30	92.30	89.30	85.40	95.40	82.30	87.90	83.40
Visits Imported:									
Number of visits Imported	1,418	431	2,588	1,309	509	1,607	5,061	12,552	3,132
As a % of used capacity	20.8	5.60	30	7.80	6.80	24.90	34.40	2.70	0.10
Visits Retained:									
Number of visits Retained	5,390	7,273	6,035	15,386	6,935	4,840	9,657	453,194	4,236,776
As a % of used capacity	79.2	94.40	70	92.20	93.20	75.10	65.60	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 9** is that the estimated used capacity of the sports halls as a South Norfolk average is 47% in the weekly peak period. The South Norfolk average is considerably below the findings for the other local authorities, ranging from 64% in East Suffolk and Great Yarmouth to 74% in Norwich. The East Region average 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 the findings are set out in Table **6.1**. The variation is caused by the interaction of:

- The management of a site.
- The level of demand in the catchment area and the extent to which catchment areas overlap.
- The hours available for community use.
- The scale of the sports hall.
- The age of the hall and its 'attractiveness' weighting.
- The policy towards community use by each school or college and pricing.

6.3. These factors are expanded upon in the following paragraphs.

6.4. Public leisure centres have (1) the highest accessibility for sports club and public use, (2) they are available for daytime use, which is not possible at educational venues during term time, and (3) the operators actively promote hall sports and physical activity participation, with a programme of use which reflects the activities and times that customers want to participate. For all these reasons, the public leisure centres have a 'draw effect', and the used capacity findings are higher than the South Norfolk average, with both Long Stratton Leisure Centre and Wymondham Leisure Centre at 100%.

6.5. In the North of the authority there are the two Hethersett sports halls sites and the Easton and Otley College which are located quite close to each other where catchments overlap. There are also several sports halls located in Norwich, close to the South Norfolk boundary (Map **2.3**), and the Langley School and Hobart High School sports halls located in Loddon that are close to each other (Map **2.5**) and demand will be shared between the sites.

6.6. The hours available for community use at educational sites vary from 15 hours in the weekly peak period at Hobart High School to 41 hours at Easton and Otley College. None of the educational sites have the maximum 46 hours for community use in the weekly peak period. The peak period hours for the public leisure centres range from 40 hours at Long Stratton Leisure Centre to the maximum 46 hours at Wymondham Leisure Centre.

6.7. The largest sports hall site in South Norfolk is Framingham Earl High School, which has a four -court hall and two small activity halls. It has an estimated used capacity of 49% for the 26 hours all three of the halls are available for community use. Hobart High School has one four-court hall and an estimated used capacity of 87% for the 15 hours the sports hall is available for community use in the weekly peak period. Hobart High School has a higher percentage than Framingham Earl High School, but the latter can accommodate more use because it has the three individual sports halls. It is important to consider the scale of a sports hall site when looking at the estimated used capacity and not just consider the percentage figure alone.

6.8. All the sports hall sites in the model are weighted to reflect their age, condition and if they have been modernised so as to assess their comparative attraction to customers. Five of the 10 sports hall sites have been modernised. Three of these sites have the highest estimated used capacity; the two public leisure centre sites both at 100% of estimated used capacity and the Hingham Sports and Social Club (57%). The high percentages are more likely a reflection of the accessibility of these sites for all types of activity, more than the fact they have been modernised.

6.9. Some schools/colleges will actively promote community use of their sports facilities for community use. 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.

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

Imported Demand

6.11. Imported demand is set out under Used Capacity because, if residents in neighbouring local authorities participate at a centre in South Norfolk, their usage becomes part of the used capacity of South Norfolk's sports halls.

6.12. The used capacity of the South Norfolk sports halls which is imported is 1,418 visits per week in the peak period, this represents 21% of the used capacity.

6.13. For comparison, South Norfolk is exporting 4,457 visits in the weekly peak period which is met at sports halls in neighbouring local authorities. Therefore, South Norfolk is a net exporter of 3,039 visits per week in the peak period.

Table 6.1: Percentage Used Capacity of South Norfolk 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
Easton and Otley College	Main	690	1998		43%	41	45	2,296	25
	Main	486				41	45		
Framingham Earl High School Sports Centre	Main	594	1960		23%	26	26	1,955	49
	Activity	180				26	26		
	Activity	180				26	26		
Hethersett Academy	Main	690	1975	2006	34%	34.5	34.5	1,849	28
	Activity	180				34.5	34.5		
Hethersett Old Hall School	Main	594	1955		22%	36.5	48.5	1,956	18
	Activity	180				36.5	48.5		
Hingham Sports and Social Club	Main	486	1990	2004	74%	44	91	1,056	56
Hobart High School	Main	690	2006		47%	15	15	480	87
Langley School	Main	594	1946		21%	34	46	1,088	17
Long Stratton Leisure Centre	Main	594	1983	2010	80%	40	54	1,280	100
Wymondham College	Main	594	1970	2001	27%	22	22	1,179	39
	Activity	180				22	22		
Wymondham Leisure Centre	Main	690	1992	2015	92%	46	103	1,472	100

7. Local Share

Equity share of facilities

Local Share	South Norfolk	Breckland	Broadland	East Suffolk	Great Yarmouth	Mid Suffolk	Norwich	East Region	England
Local Share: <1 supply less than demand, 1> supply greater than demand	0.7	0.7	0.6	0.7	0.6	0.6	0.6	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 at looking at 'equity' of provision and to show how access and share of sports halls differs across the authority.

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

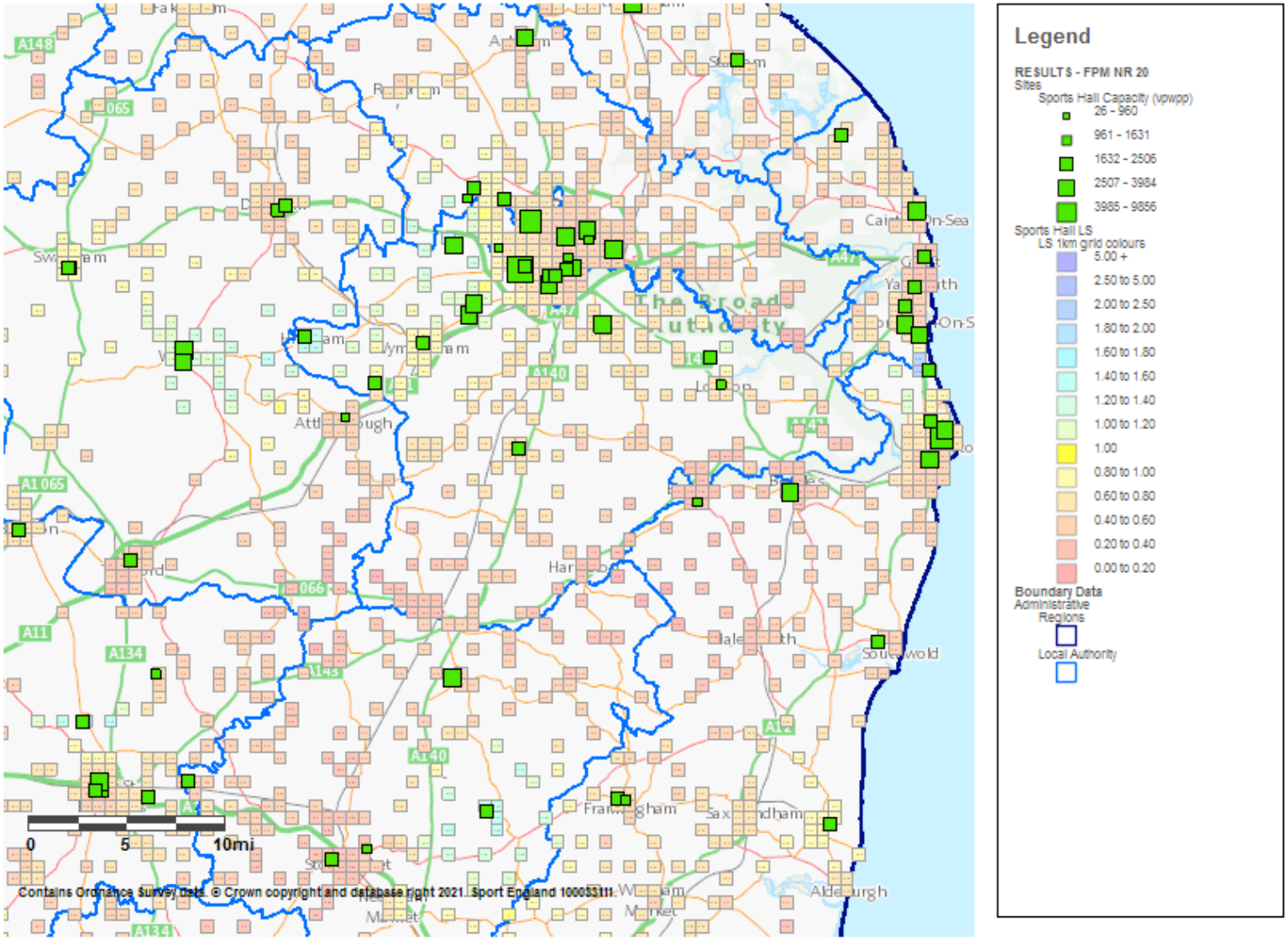
7.3. South Norfolk has an average local share of 0.7 in 2020, and so demand is greater than supply in terms of local share. Local share is below 1 in all the neighbouring local authorities (0.6 in four of the authorities and 0.7 in Breckland and East Suffolk), in the East Region (0.7) and England-wide (0.8).

7.4. Within South Norfolk local share varies considerably and these findings are shown in Maps **7.2** to **7.5**. Local share is best in the west and north of the District, where it varies between 1.4 and 1.6 in the turquoise squares (Map **7.2** and **7.3**). In these areas, supply is greater than demand in terms of local share.

7.5. Local share is worst in the south-east of the District in the pale red squares with values of 0.2 to 0.4 (Map **7.5**).

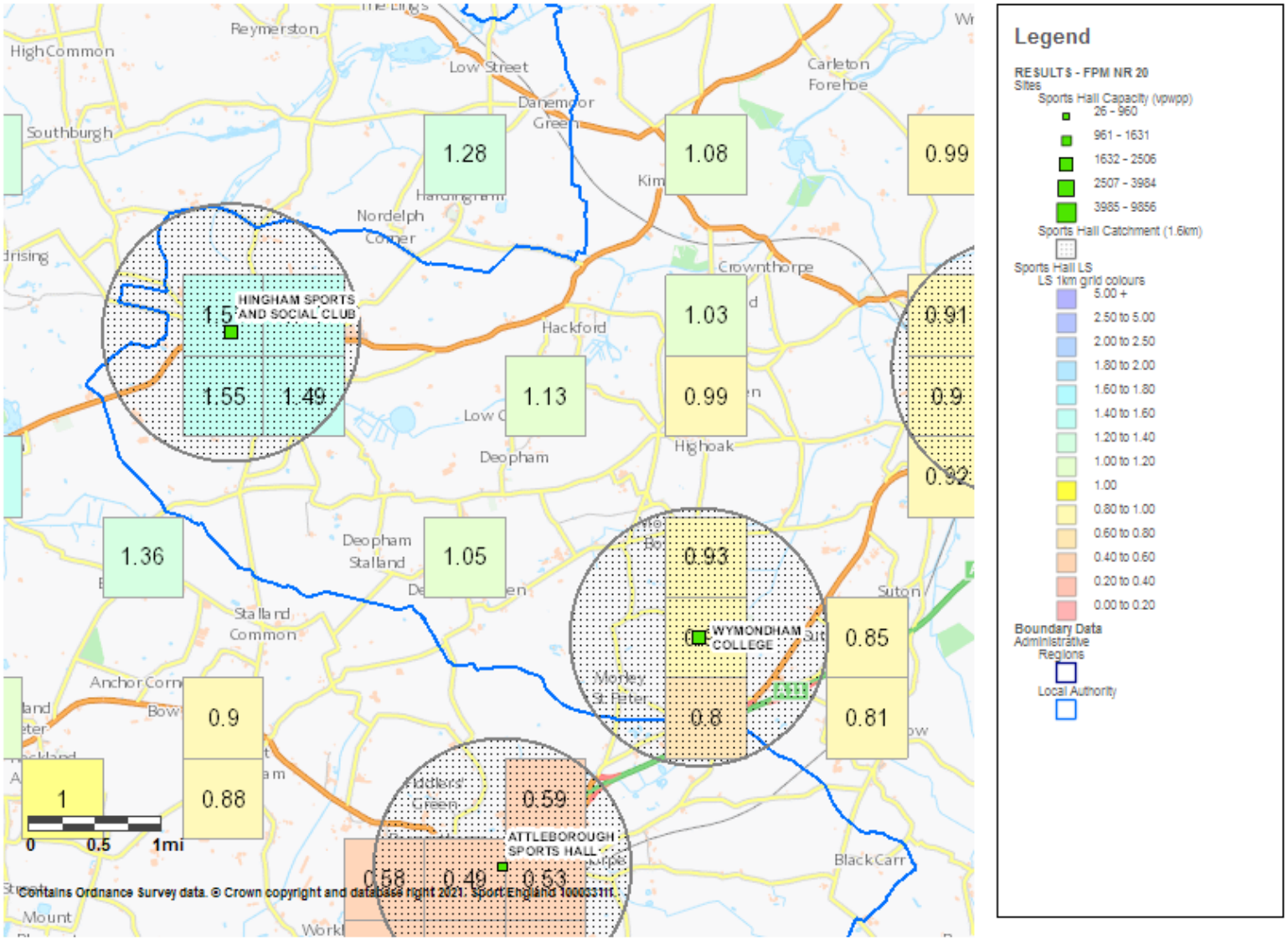
Map 7.1: Local Share in South Norfolk (2020)

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



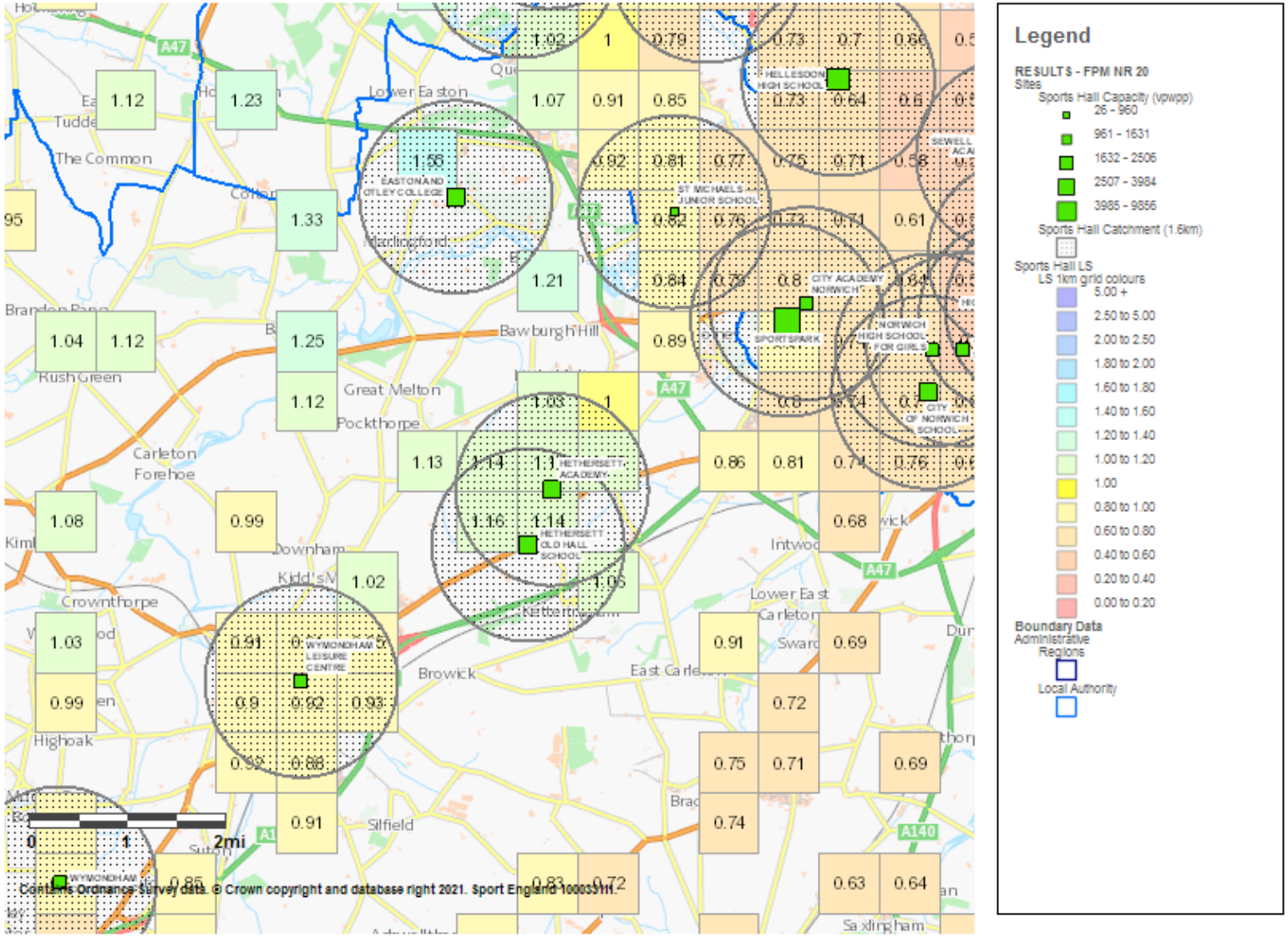
Map 7.2: Local Share in West South Norfolk (2020)

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



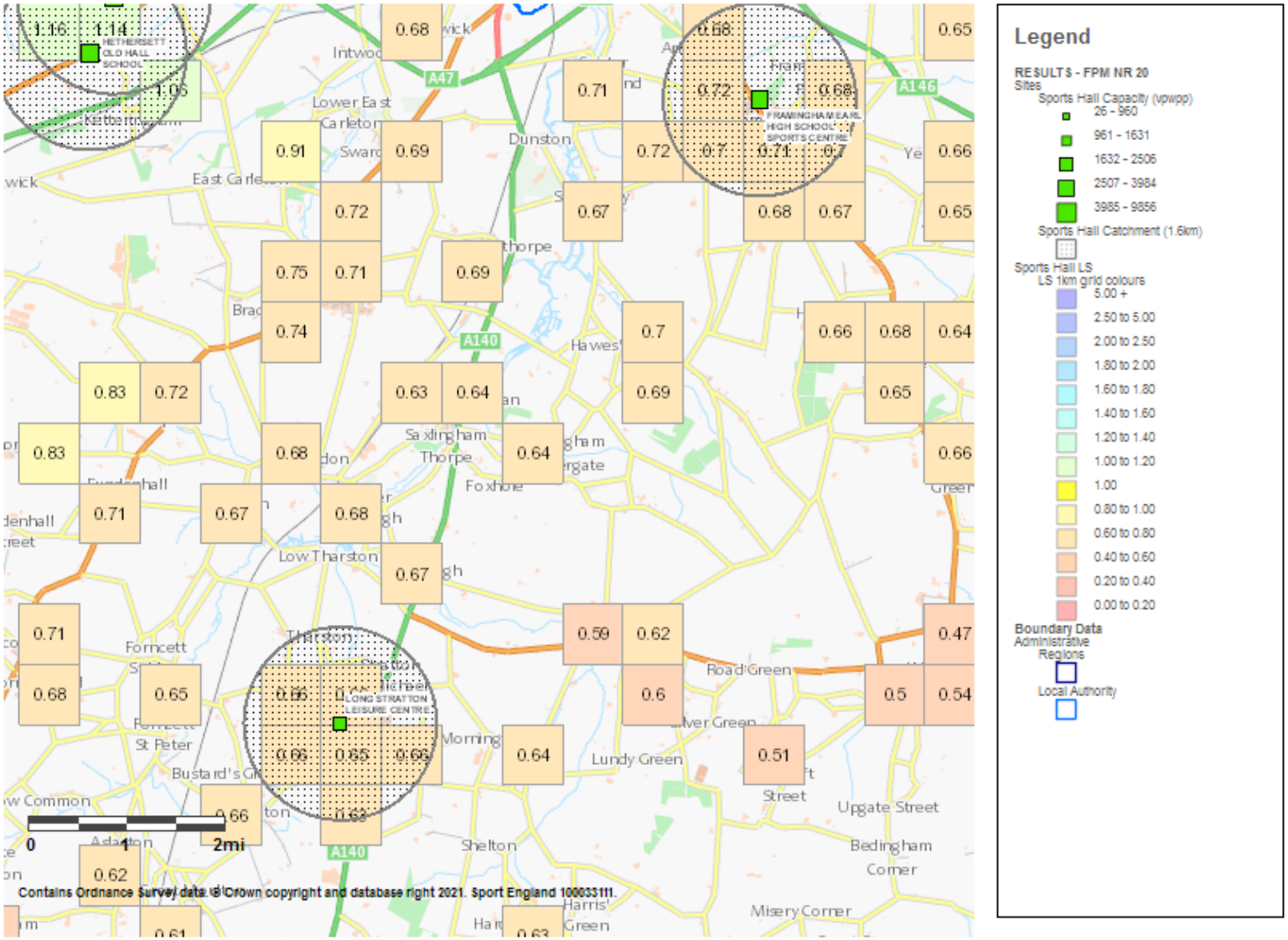
Map 7.3: Local Share in North South Norfolk (2020)

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



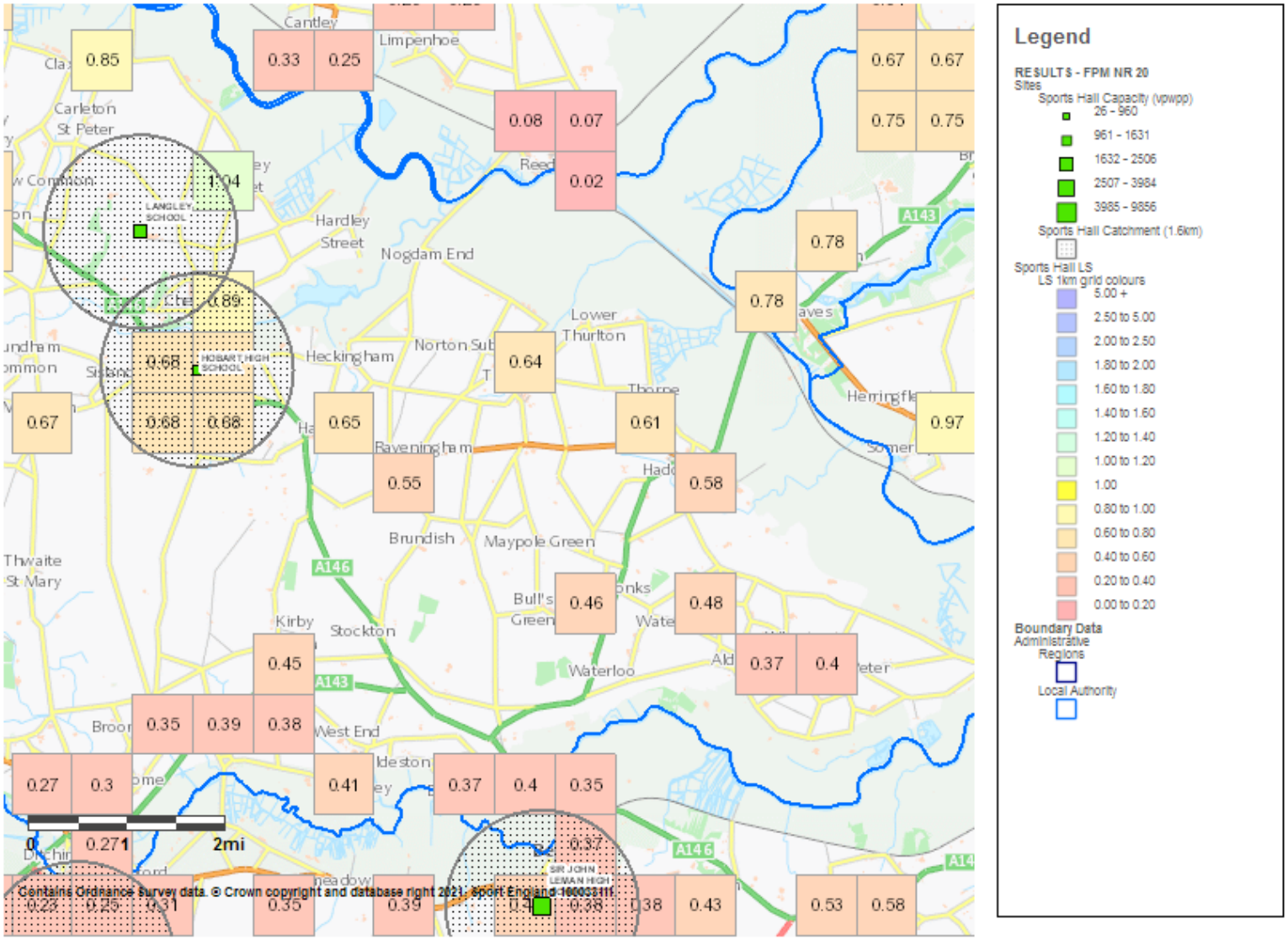
Map 7.4: Local Share in East South Norfolk (2020)

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



Map 7.5: Local Share in South-east South Norfolk (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

Supply	South Norfolk	Breckland	Broadland	East Suffolk	Great Yarmouth	Mid Suffolk	Norwich	East Region	England
Supply of total hall space in courts	56	35	52	99	42	27	68	2,631	23,559
Population	142,704	142,019	131,671	251,751	100,097	104,153	142,790	6,277,257	56,630,408
Courts per 10,000 population	3.9	2.5	4.0	3.9	4.2	2.6	4.8	4.2	4.2

7.6. Based on a measure of badminton courts per 10,000 population, the South Norfolk supply is 3.9 courts per 10,000 population in 2020. Breckland (2.5 courts) and Mid Suffolk, (2.6 courts) have a lower supply, while East Suffolk has the same supply. The highest supply is in Great Yarmouth (4.2 courts) and Norwich (4.8 courts). The East Region and England-wide average are both 4.2 courts per 10,000 population in 2020.

7.7. The provision in South Norfolk is mid-way in comparison with its neighbours and slightly below the East Region and England averages. The overall level of provision for South Norfolk is based on all the supply and demand findings, and not just supply. This is simply a measure which compares South Norfolk'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, 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
Archbishop Sancroft High School	Activity Hall	No Main on site
Bunwell Sports Hall (Closed)	Activity Hall	Closed
Diss Church of England Junior School	Main Hall	Does not meet APP criteria
Diss High School	Activity Hall	No Main on site
Hales Village Hall	Activity Hall	Does not meet APP criteria
Harleston Community Leisure Facility	Activity Hall	Closed
Hethersett Social Club	Activity Hall	No Main on site
Hobart High School	Activity Hall	Closed
Jubilee Hall Playing Fields	Activity Hall	No Main on site
Little Melton Village Hall	Activity Hall	No Main on site
Long Stratton High School	Activity Hall	Does not meet APP criteria
Morley Village Hall	Activity Hall	No Main on site
Newton Flotman Village Centre & Alan King Playing Fields	Activity Hall	Does not meet APP criteria
Ormiston Victory Academy	Main Hall	Private Use
Ormiston Victory Academy (Closed)	Main/Activity	Closed
Pulham Market Methodist Church	Activity Hall	Does not meet APP criteria
Robert Kett Primary School	Activity Hall	Private Use
Roydon Village Hall	Activity Hall	No Main on site
St Mary's Church of England Junior School	Activity Hall	Private Use
St Peter's Primary Academy	Activity Hall	Private Use
The Costessey Centre	Activity Hall	Closed
Woodlands Sports & Social Club	Activity Hall	Does not meet APP criteria
Wymondham High Academy	Activity Hall	No Main on site
Ymca (Trowse) (Closed)	Main Hall	Closed

Appendix 2: Model Description, Inclusion Criteria and Model Parameters

Included within this Appendix are the following:

- Model Description
- Facility Inclusion Criteria
- Model Parameters

Model Description

1. Background

1.1 The Facilities Planning Model (FPM) is a computer-based supply/demand model, which has been developed by Edinburgh University in conjunction with **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.

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

[2] Census Output Areas (OAs) are the smallest grouping of census population data and provide the population information on which the FPM's and 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. Calculating Supply Capacity

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

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

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

[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.

is not the same. There will usually be a difference between this figure and the number of 'marked courts' in Active Places.

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>