East Sussex County Council

Libraries Strategic Commissioning Strategy

Technical Appendix 5

Accessibility Analysis

Prepared in conjunction with Peter Brett Associates LLP

Contents

1 Purpose of the Technical Appendix

Background

1.1 This Accessibility Analysis is a key element of the Strategic Commissioning Strategy. The Library and Information Service comprises both the physical infrastructure that people can use (e.g. library buildings and the services available within them) and the digital services that people can access online without having to visit the library (e.g. eBooks and eMagazines, and online reference material)**.** The prime purpose of the analysis is three-fold:

a. To determine reasonable travel time parameters for the majority of residents to access library services and analyse the proportion of the population within the county who have access to a library within these parameters

b. To understand how residents currently travel to/access the Library and Information Service.

c. To determine the accessibility of the East Sussex Library and Information Service in terms of the ability of residents to access its digital services.

1.2 This is one of a number of documents, Technical Appendices (TA), which form the evidence base that supports the draft Libraries Strategic Commissioning Strategy. These documents are as follows:

<table>
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1.3 The Accessibility Analysis is part of a body of evidence that has been developed to enable the Council to draft and implement its Strategic Commissioning Strategy for the Library and Information Service.

Methodology

1.4 The County Council commissioned Peter Brett Associates to develop the methodology and undertake the analysis which forms this Accessibility Study. This Technical Appendix has therefore been produced in conjunction with Peter Brett Associates.

1.5 The methodology adopted for the analysis has been first to calculate current travel times to access library services in East Sussex by car, public transport and walking. These have been calculated using accessibility and GIS software, and the results are shown in chapter 2. This provides a picture of the current accessibility of libraries in the county. Chapter 2 also examines car ownership across East Sussex.

1.6 Research has also been undertaken using published national data to establish how far people are willing to travel to access library services and other comparable types of service. The results are set out in chapter 3.

1.7 In chapter 4, the travel times identified in chapter 3 have been applied to the libraries within East Sussex and then accessibility and GIS mapping software have been used to map accessibility according to these travel times to all libraries within the county as well as the mobile library stops. As the opening hours of East Sussex libraries and the mobile library are generally within the daytime period of 10am to 5pm (apart from those libraries which open until 6pm on a Thursday), the travel times presented show average car journey times during off-peak hours, calculated using accessibility and GIS software. To validate the accuracy of these calculated journey times by car, a sample of routes have been driven. Thirty mapped routes between libraries and varied locations across the county were driven to verify the mapped journey time for the route. Each of these 30 routes was tested at least 3 times in each direction, at varying times throughout the off-peak period of the day.

1.8 For public transport the mapped journey times are derived from published bus and rail timetables as at April 2016 and are based on travel between 10:00 and 14:00 on a weekday.

1.9 Chapter 5 presents data held by the Council on the home locations of both registered and active users of the Library and Information Service and the libraries that they visit. This information shows the geographical spread of the libraries that people in the county use in relation to their home postcode.

1.10 Chapter 6 provides an analysis of a range of data which has been used to assess the accessibility of the Library and Information Service's digital services. This analysis has included the examination of a number of indicators of accessibility and affordability of broadband, including income, poverty levels, skills and access to infrastructure.

1.11 Finally, conclusions are presented in chapter 6.

2 Current Transport Accessibility

Introduction

2.1 In this chapter, the current accessibility of the East Sussex Library and Information Service by car, public transport and walking is presented. Accessibility software has been used to identify the areas within a 10, 20 and 30 minute travel time of each library by each mode[1].

2.2 The start point for journeys by public transport is a bus stop or railway station, and journey times include walking from the bus stop or railway station at the end of the journey to the library. The average journey times by car end at the library building.

2.3 Figures 2.1 to 2.3 show the travel time catchments for the 24 library buildings in East Sussex. The figures show, in turn, car, public transport and walking.

2.4 Figures 2.4 to 2.6 repeat this analysis to include the mobile library service. Again, the figures show, in turn, car, public transport and walking. The analysis demonstrates that the mobile service adds a greater level of accessibility although with less choice of visiting time, as the mobile library only visits each stop once every three weeks for a short period of time.

2.5 The figures for car travel times (Figures 2.1 and 2.4) include unshaded white areas in, for example, Birling Gap/Beachy Head, between Hastings and Fairlight and Rye Harbour. These are areas where either there is no road network or only single no-through roads. In the former case, no travel time can be calculated without a road network; in the latter case, travel times have been calculated along the individual roads, but the scale of the plans means that the shadings are not visible when presented at A4 or A3 pagination.

2.6 When reviewing car travel times to the Library and Information Service, it is important to acknowledge that this is of relevance only to residents who have access to a car. Figure 2.7 shows the levels of car ownership across the county, although it should be recognised that household car ownership is not the same as having access to a car. For example, the car may not be available to other householders if one person is using it for work commuting.

[1] For simplicity travel times are shown as 0-10, 10-20, 20-30. However the three catchments are non-overlapping, as follows: 0-10, 10.01-20, 20.01-30 minutes

2.7 Travel Time Catchments

Figure 2.1 Car Travel Times to Libraries in East Sussex

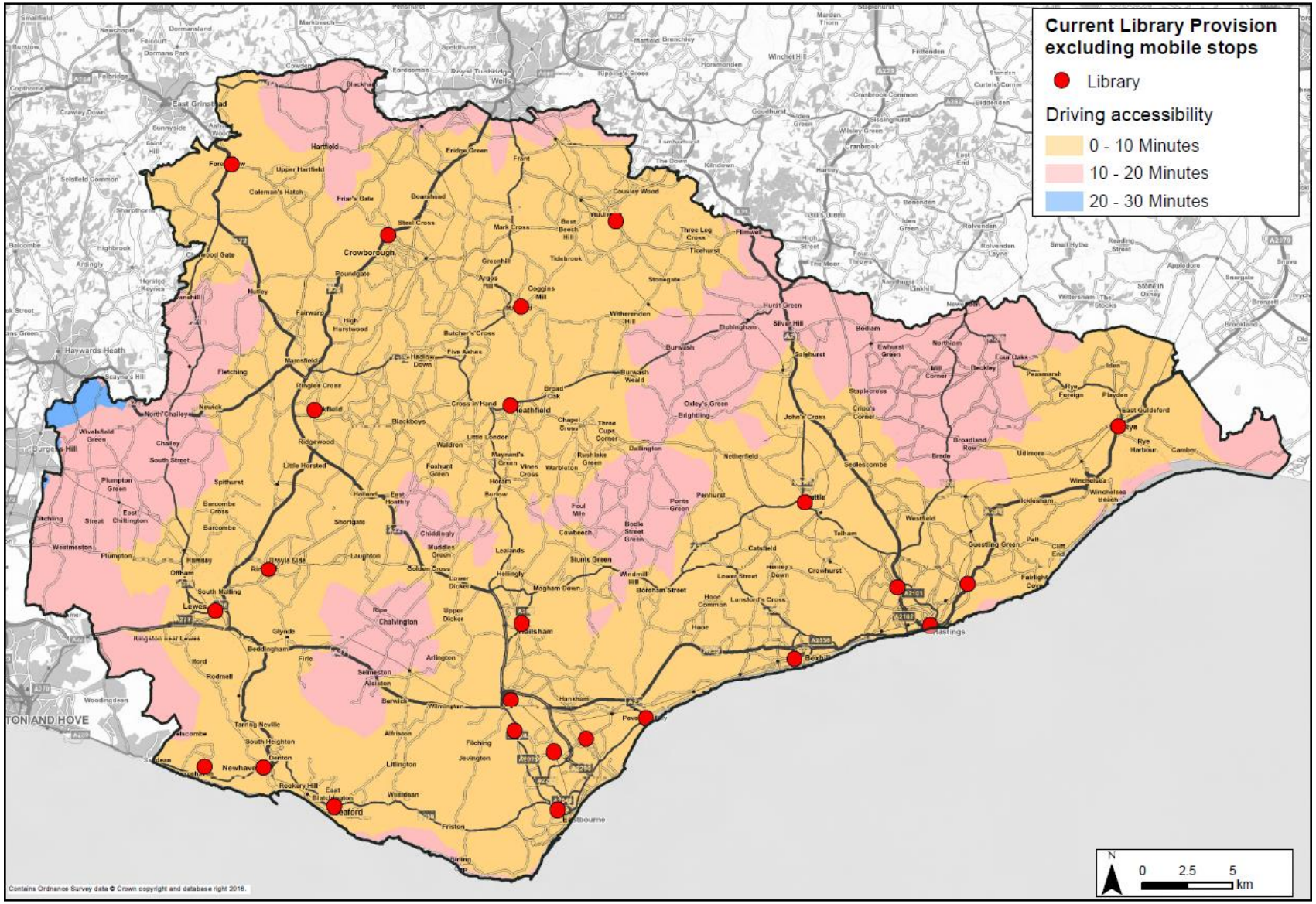


Figure 2.2 Public Transport Travel Times to Libraries in East Sussex

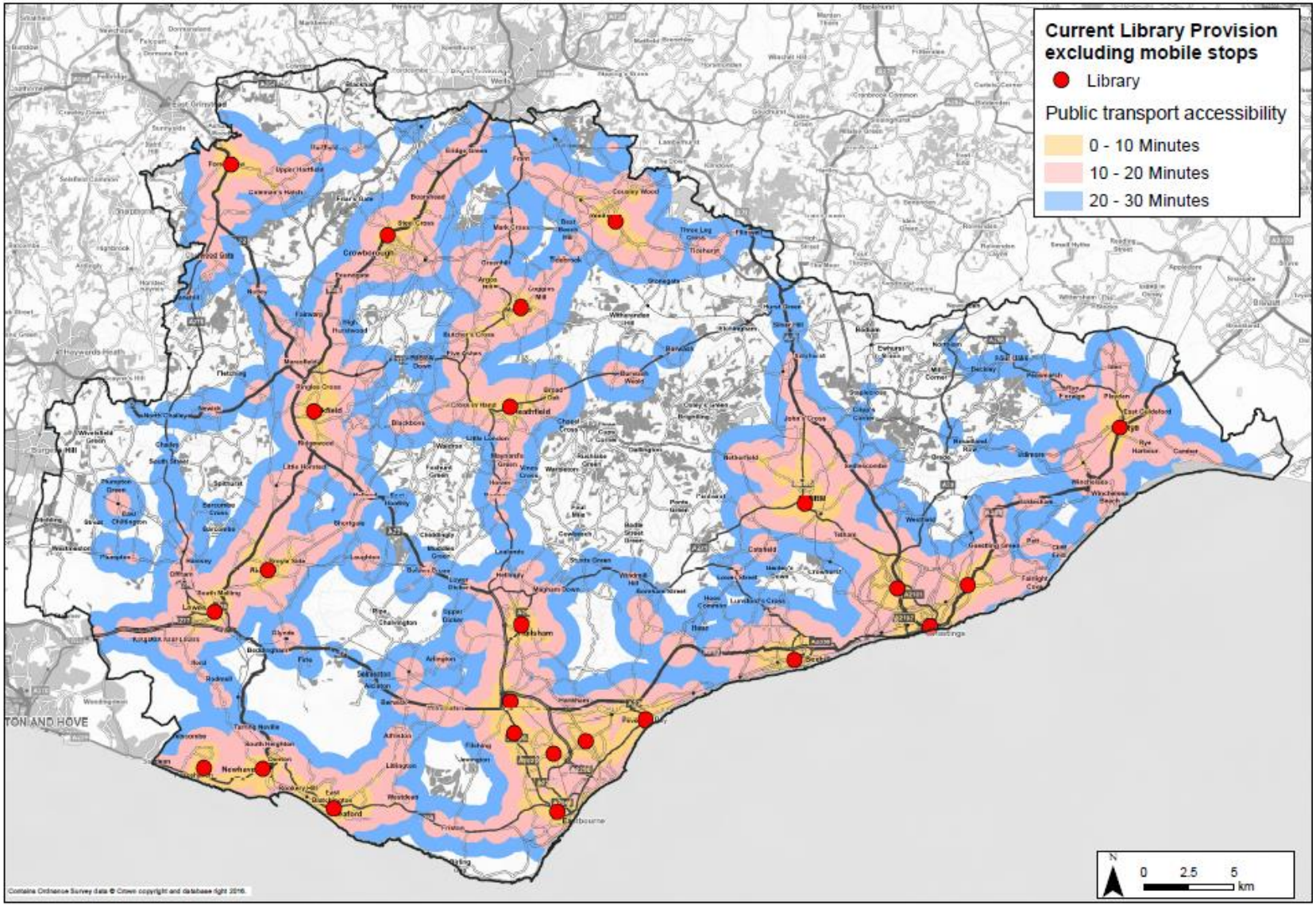


Figure 2.3 Walking Travel Times to Libraries in East Sussex

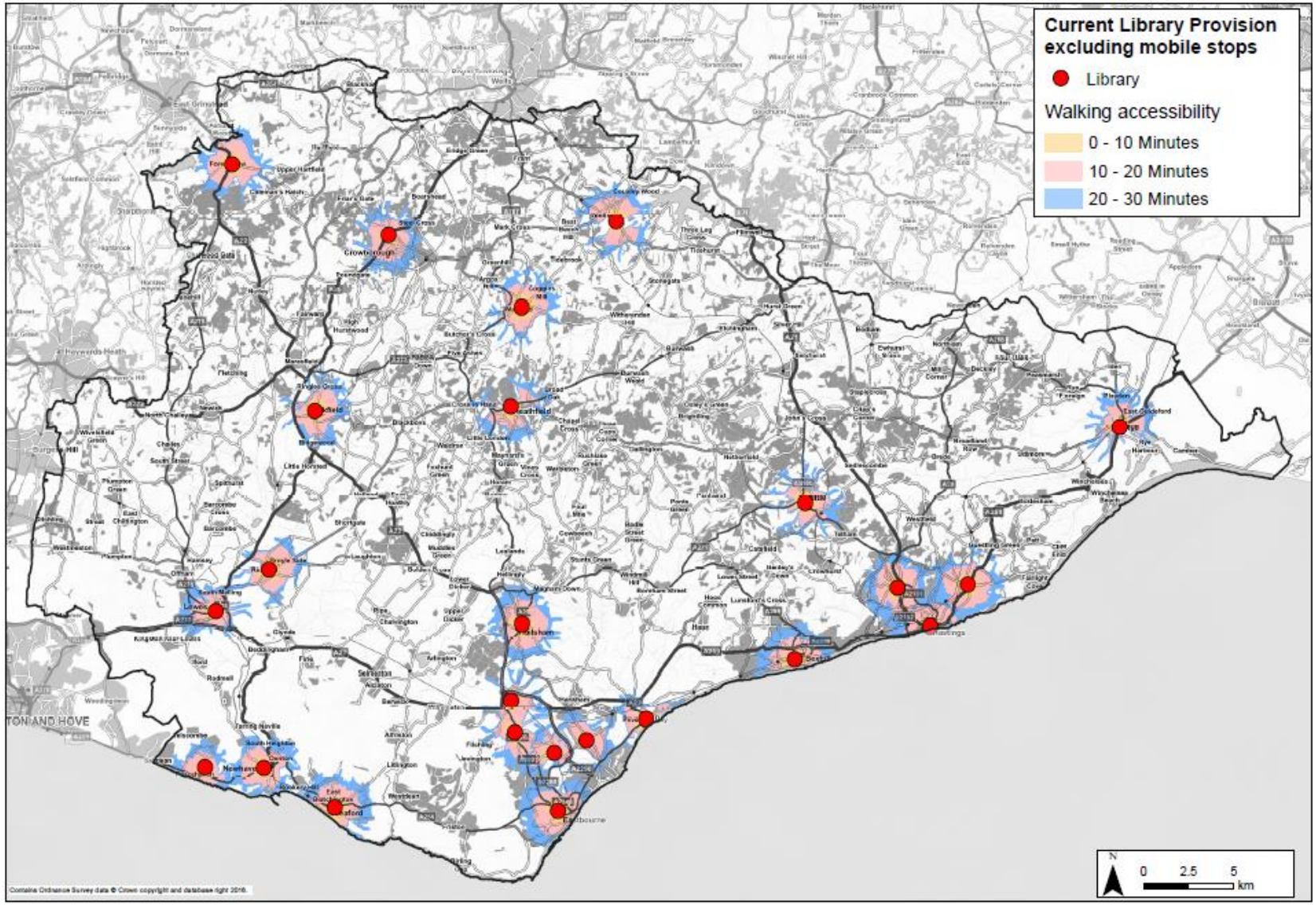


Figure 2.4 Car Travel Times to Libraries in East Sussex including Mobile Library Service

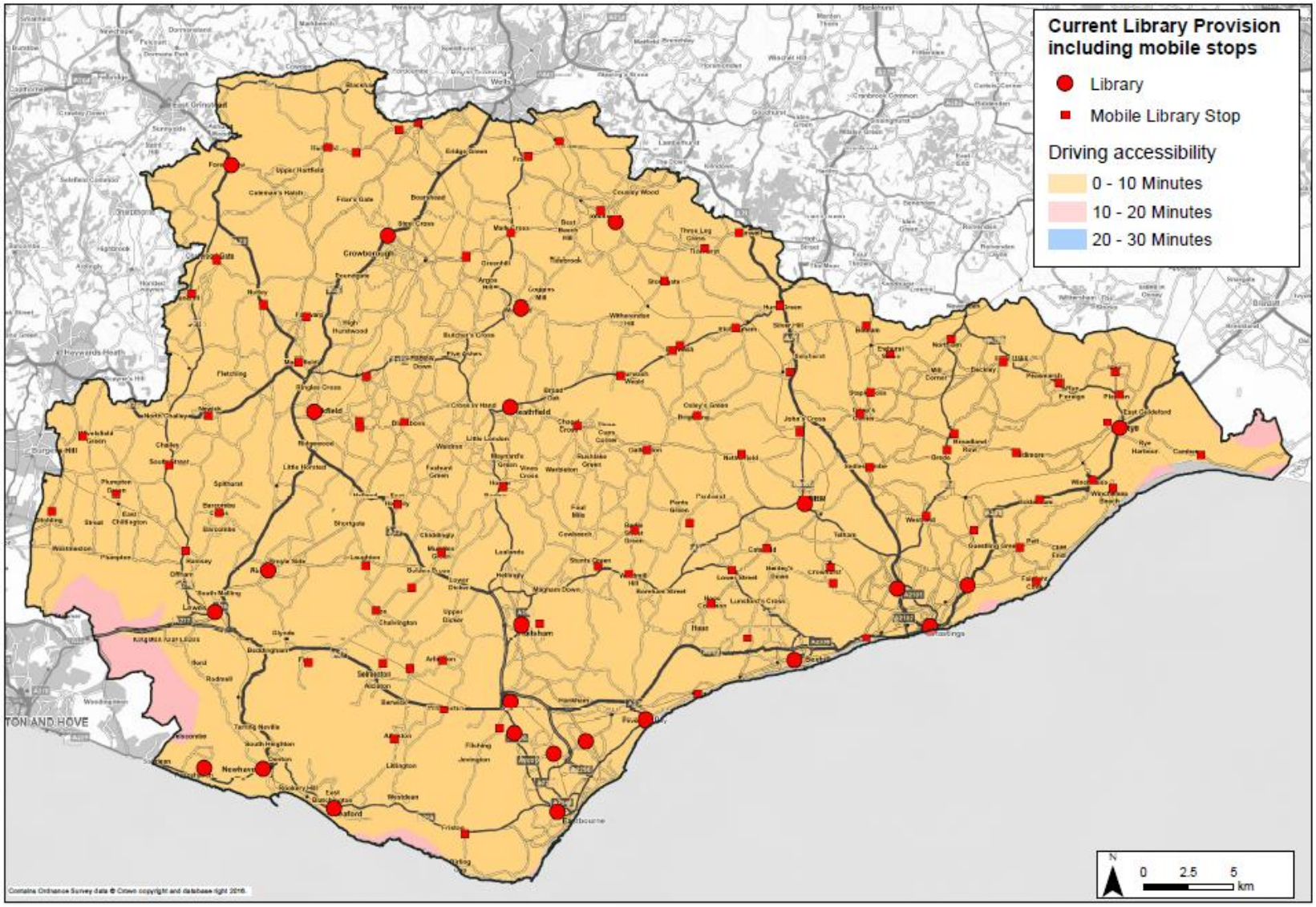


Figure 2.5 Public Transport Travel Times to Libraries in East Sussex inc Mobile Library Service

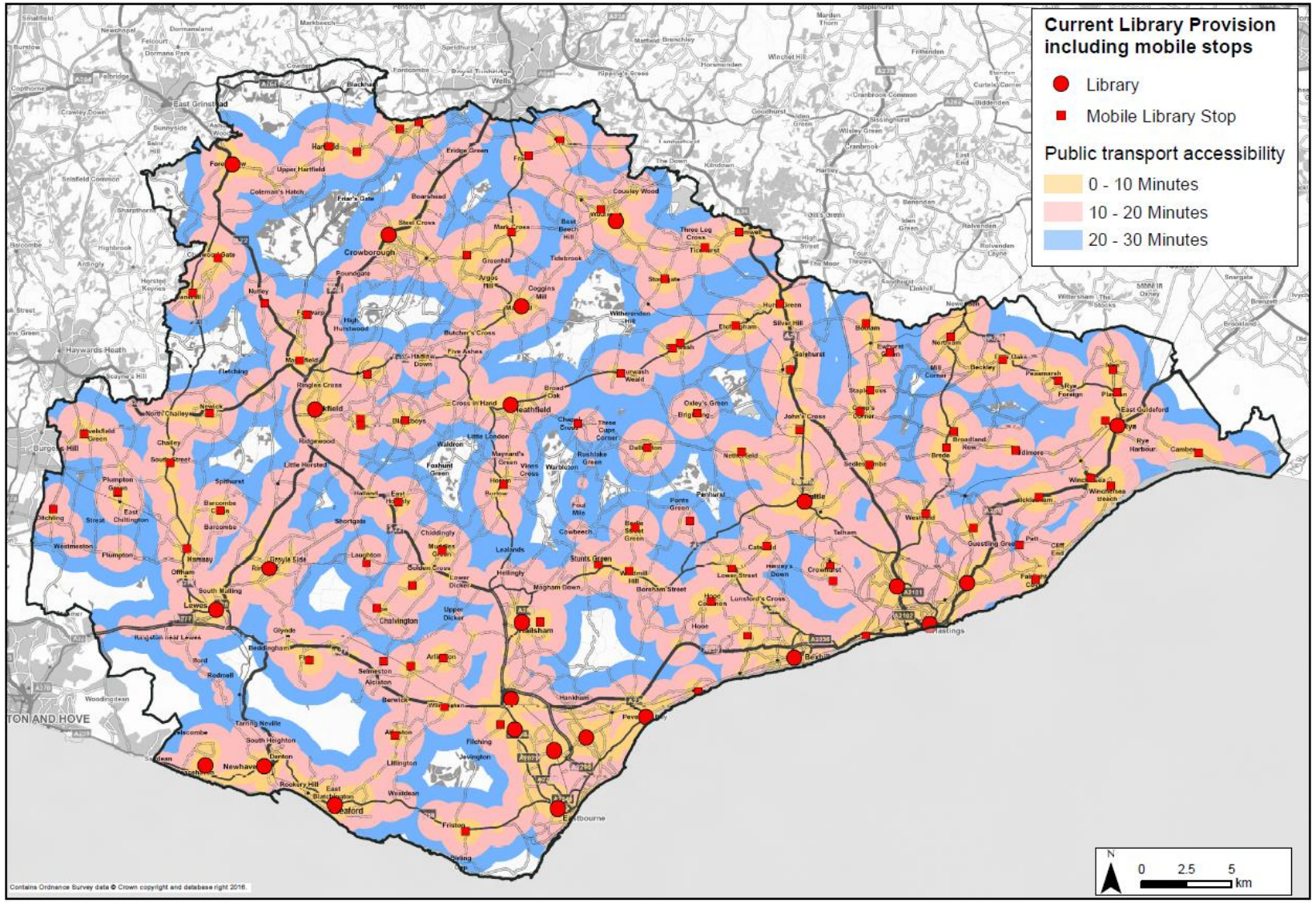
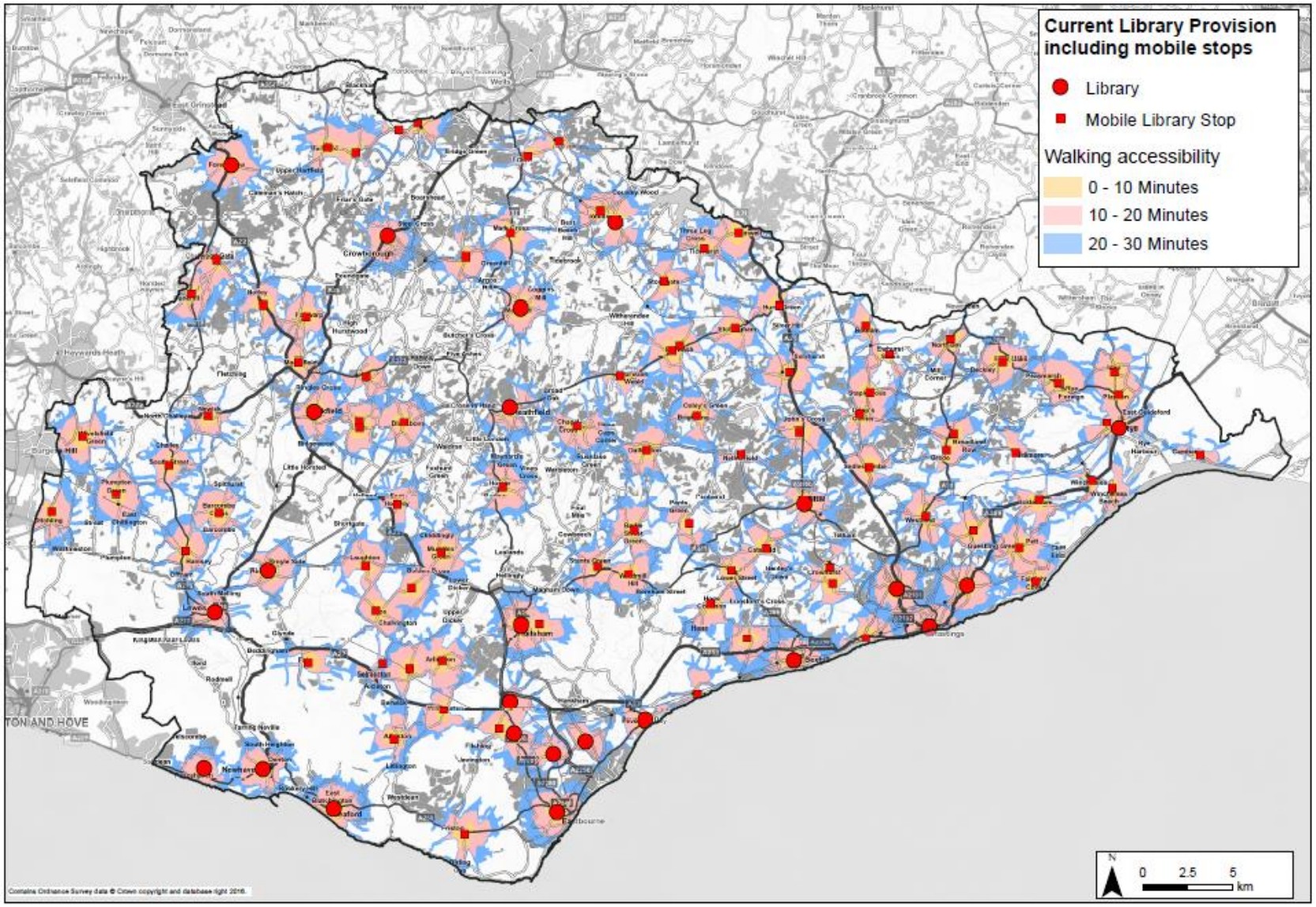
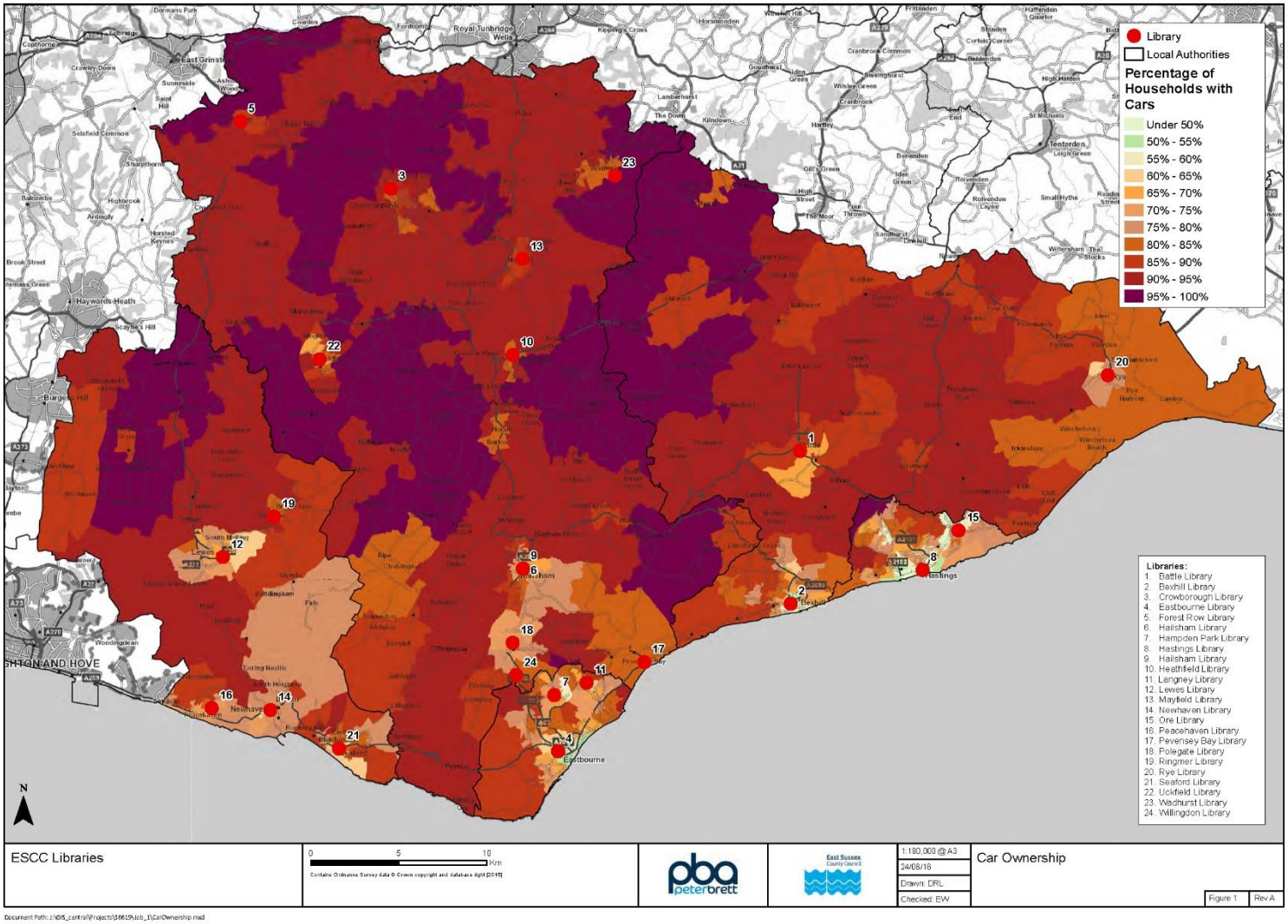


Figure 2.6 Walking Travel Times to Libraries in East Sussex including Mobile Library Service



2.8 Car Ownership

Figure 2.7 Car Ownership in East Sussex



2.9 As Figure 2.7 shows, car ownership is generally very high across East Sussex, with a county average of 78.1% of households owning one or more cars. This compares to 74.4% on average in England and Wales. There are considerable variations within the county, however, with high car ownership in rural areas; 87.6% of households own one or more cars in Wealden for example, as do 81.0% of households in Rother.

2.10 In contrast, car ownership is lower in coastal areas, at 71.3% in Eastbourne and 66.7% in Hastings. There are pockets in Hastings where fewer than half of households own a car (Castle ward, 47.6% and Central St Leonards, 44.1%). While Lewes district as a whole has above average car ownership (79.9%), this figure falls substantially in some of the housing estates of Lewes, Newhaven and Peacehaven, and in central Seaford.

2.11 In terms of access to libraries, the identified areas of low car ownership are compensated by having regular bus services and/or being in central locations where walking distances to local libraries are relatively short. Table 2.1 gives details of alternatives to the private car for all wards below the county average level of car ownership.

Table 2.1: Alternatives to Private Car in Areas with Relatively Low Car Ownership

Town	Ward	Car ownership	Comments
Eastbourne	Devonshire	57.2%	Frequent bus services on Seaside and Royal Parade while the west of the ward is within walking distance of the town centre and library
Eastbourne	Hampden Park	68.9%	Good bus service provision throughout the ward to/from the town centre and rail access to town centre
Eastbourne	Langney	75.8%	Good level of bus services to the town centre
Eastbourne	Meads	63.7%	Frequent bus services within the Meads Estate while the north of the ward is within walking distance of the town centre and library
Eastbourne	St Anthony's	74.7%	Good level of bus services to the town centre
Eastbourne	Upperton	62.6%	Frequent bus services on the Kings Drive and Willingdon Road corridors while the south of the ward is within walking distance of the town centre and library
Hastings	Baird	69.1%	Good level of bus service provision covering the ward.
Hastings	Braybrooke	64.5%	Parts of ward within walking distance of town centre and library, daytime bus service on Linton Road & Priory Avenue and good level of service on St Helens Road
Hastings	Castle	46.7%	Town centre ward within walking distance of library

Town	Ward	Car ownership	Comments
Hastings	Central St Leonards	44.1%	Good level of bus service provision on Grand Parade and rail access via Warrior Square station
Hastings	Gensing	59.7%	Very high bus service frequency on London Road and good service provision on Bohemia Road
Hastings	Hollington	69.0%	Very high bus service frequency throughout
Hastings	Old Hastings	69%	Good level of bus service in East Hill area and Old Town within walking distance of town centre and library
Hastings	Ore	69.8%	High bus service frequency throughout
Hastings	Silverhill	72.8%	Very high bus service frequency on London Road
Hastings	Tressell	62.8%	Good level of service on Mount Pleasant Road and Priory Road
Hastings	Wishing Tree	65.2%	Very high bus frequencies on Blackman Avenue and Battle Road
Lewes	Lewes Bridge	69.9%	Good daytime bus service in South Malling while the south of the ward is within walking distance of the library
Lewes	Lewes Castle	70.1%	Daytime bus service in Landport while the south of the ward is within walking distance of the library
Lewes	Lewes Priory	76.4%	Frequent bus service on Brighton Road/Western Road while eastern part of the ward is within walking distance of town centre and library
Newhaven	Denton & Meeching	77.2%	Much of ward is within walking distance of the library; outer areas served by two-hourly daytime bus service
Newhaven	Newhaven Valley	69.8%	Much of ward is within walking distance of the library; outer areas have access to frequent services on Brighton Road and two-hourly daytime bus service on Lewes Road
Peacehaven	Peacehaven West	72.8%	Good level of service on Brighton Road and Sutton Avenue
Seaford	Seaford Central	68.8%	Most of ward is within walking distance of the library
Seaford	Seaford South	75.8%	Daytime bus service on Sutton Avenue while western part of ward is within walking distance of the library
Bexhill	Central	56.6%	Most of ward is within walking distance of the library
Bexhill	Bexhill Old Town	76.7%	Good level of bus services to Bexhill town centre

Town	Ward	Car ownership	Comments
Bexhill	Sackville	64.9%	Western part of ward is within walking distance of the library; daytime bus services on key corridors
Bexhill	Sidley	71.8%	Daytime bus service on Ninfield Road
Rye	Rye	72.1%	Much of ward is within walking distance of the library; daytime bus services serve Tilling Green and Rye Road (Playden)
Hailsham	Hailsham East	71.7%	Most of ward is within walking distance of the library
Polegate	Polegate North	76.1%	Western part of ward is within walking distance of the library; good bus services on Pevensey Road/Dittons Road Rail access to Eastbourne
Polegate	Polegate South	74.9%	Most of ward is within walking distance of the library; frequent bus services to Hailsham and Eastbourne Rail access to Eastbourne

2.12 As Table 2.1 shows, the only wards in East Sussex where car ownership is below the county average are in urban areas where walking distances to local libraries are generally low and where alternative bus and train service provision exists, often at a high frequency.

3 Travel Time Research

Introduction

3.1 In this chapter, published research is reviewed to establish how long people typically spend travelling to access library services. There is limited data available that is specifically related to travel patterns associated with library visiting. However, the National Travel Survey (NTS) provides data on travel time by journey purpose.

Travel Time by Journey Purpose

3.2 Data from the National Travel Survey (NTS)[2] has been used to identify average journey times by different trip purposes and this data is summarised in Table 3.1. It should be noted that the data relates to average travel times, which means that a proportion of respondents will have trip durations in excess of the average.

Table 3.1: Average Travel Times (Minutes) by Journey Purpose in Great Britain

Purpose	Average Trip Duration (minutes)
Commuting	29
Business	42
Education	22
School run	14
Shopping	18
Other escorted trips	17
Personal business	**20**
Visiting friends at private home	27
Visiting friends at private elsewhere	23
Entertainment/public activity	24
Sport: participate	20
Day trip	33
Other, including just walk	24
All purposes	**24**
Unweighted sample size:	
Individuals	16,491
Trips (000s)	280

[2] National Travel Survey 2014, Table 0406, Average trip time by trip purpose: England, 1995/97 to 2014

3.3 Table 3.1 shows that average trip durations range from 14 minutes for school run to 42 minutes for business travel. The majority of trip purposes have travel times in the range 17 to 24 minutes and the overall all-purpose average is 24 minutes.

3.4 The category of personal business is of particular relevance as it specifically includes visits to libraries. Personal business is defined as[3]:

"visits to services, e.g. hairdressers, launderettes, dry-cleaners, betting shops, solicitors, banks, estate agents, libraries, churches; or for medical consultations or treatment; or for eating and drinking, unless the main purpose was entertainment or social."

3.5 The average trip duration for personal business is 20 minutes. Recognising that this is an average value and not a maximum, and that the all-purpose average is slightly higher at 24 minutes, this research suggests that it would appear reasonable to use a target of 20 to 25 minutes for the majority of people to access a library.

[3] National Travel Survey 2014: Notes and Definitions- Page 10

4 Travel Time Parameters in East Sussex

Introduction

4.1 In this chapter, the travel time parameters identified in the previous chapter are applied to the East Sussex library network, to build a picture of the catchment areas within a reasonable travel time of each library.

4.2 The results of the analysis for car travel time catchments for the current library network are shown in Figures 4.1a to 4.1f. Figures 4.2a to 4.2f show the equivalent public transport travel time catchments.

4.3 The methodology used to determine these plots is set out in the next section.

Methodology

Car

4.4 The car travel times shown in the figures are based on actual observed average car journey times between 10:00 and 16:00 on a weekday. The data source is “HERE” data, previously known as Navteq.

4.5 “HERE” travel times are based on billions of multiple-year vehicle speed observations, gathered using GPS and Bluetooth signals from in-vehicle sat-nav devices and mobile phones. Data is gathered for the time taken to travel across each link in the highway network and to pass through each junction; a link is a section of road between two junctions. Each analysis is based only on roads that are traversable by car and includes information on restricted junctions, overpasses and underpasses so that connections between roads are only made at viable junctions.

4.6 The data is then averaged for 15-minute time intervals throughout the day and a combined off-peak average, known as the “core road speed timing” is also produced. This is based on all observations between 10:00 and 16:00 on all weekdays over a five-year period and thus includes, for example, school days and school holidays, good weather and bad, light and heavy traffic conditions, and all other situations that can affect driving speeds. The core road speed timing has been used to prepare the plots in this chapter.

4.7 To calculate travel time between two points, HERE adds up the average times for each link and junction that would be involved in making the journey and then presents the total.

4.8 To derive the 10, 20 and 30-minute travel time contours shown in the figures the HERE data have been analysed using TRACC accessibility software to plot the distances that can be traversed. As stated above, this is based on the average of actual observed trips made between 10:00 and 16:00 on a weekday.

4.9 We believe that HERE data is the best and most appropriate analysis to derive average off-peak car travel times as it is based on a massive dataset of actual observations. HERE is owned by Audi, BMW and Daimler and is supported by Microsoft and Nokia who are both former owners of the company. The data is the standard used across the transport industry and is used within all ESRI, Citilab and Mapinfo inhouse isochronal analysis tools.

4.10 To validate the accuracy of these calculated journey times by car, a sample of routes have been driven. Thirty routes between libraries and varied locations across the county were tested of which 27 (90%) were within the mapped average journey times. Each of these 30 routes was tested at least 3 times in each direction, at varying times throughout the day. 86% of these individual trips were completed within the mapped average journey times.

Public Transport

4.11 The public transport travel times shown in the figures are derived from published bus and rail timetables as at April 2016 and are based on travel on a Wednesday between 10:00 and 14:00. Wednesday has been chosen to represent a typical weekday and the analysis gives a conservative picture of access via public transport on any weekday. Most services that run between these times will also be available at other times of the day and on other weekdays. A small number of less frequent services only run outside of these hours or on days other than Wednesdays. These services therefore will not be shown in the figures, and as a result the accessibility of libraries by public transport will be slightly greater than is shown in the analysis, although not significantly so.

4.12 Where a public transport journey involves changing buses or trains, or changing between bus and train, an interchange allowance of 5 minutes has been included.

4.13 To complete the total journey time, a walk speed of 5 km per hour has been applied away from each bus stop or rail station. The total distance that can be travelled by public transport and walking in a 30-minute time frame has then been plotted.

4.14 Library Catchment Areas

Figure 4.1a Actual Observed Average Off-Peak (1000-1600) Car Travel Time Catchment (Crowborough Area & NW)

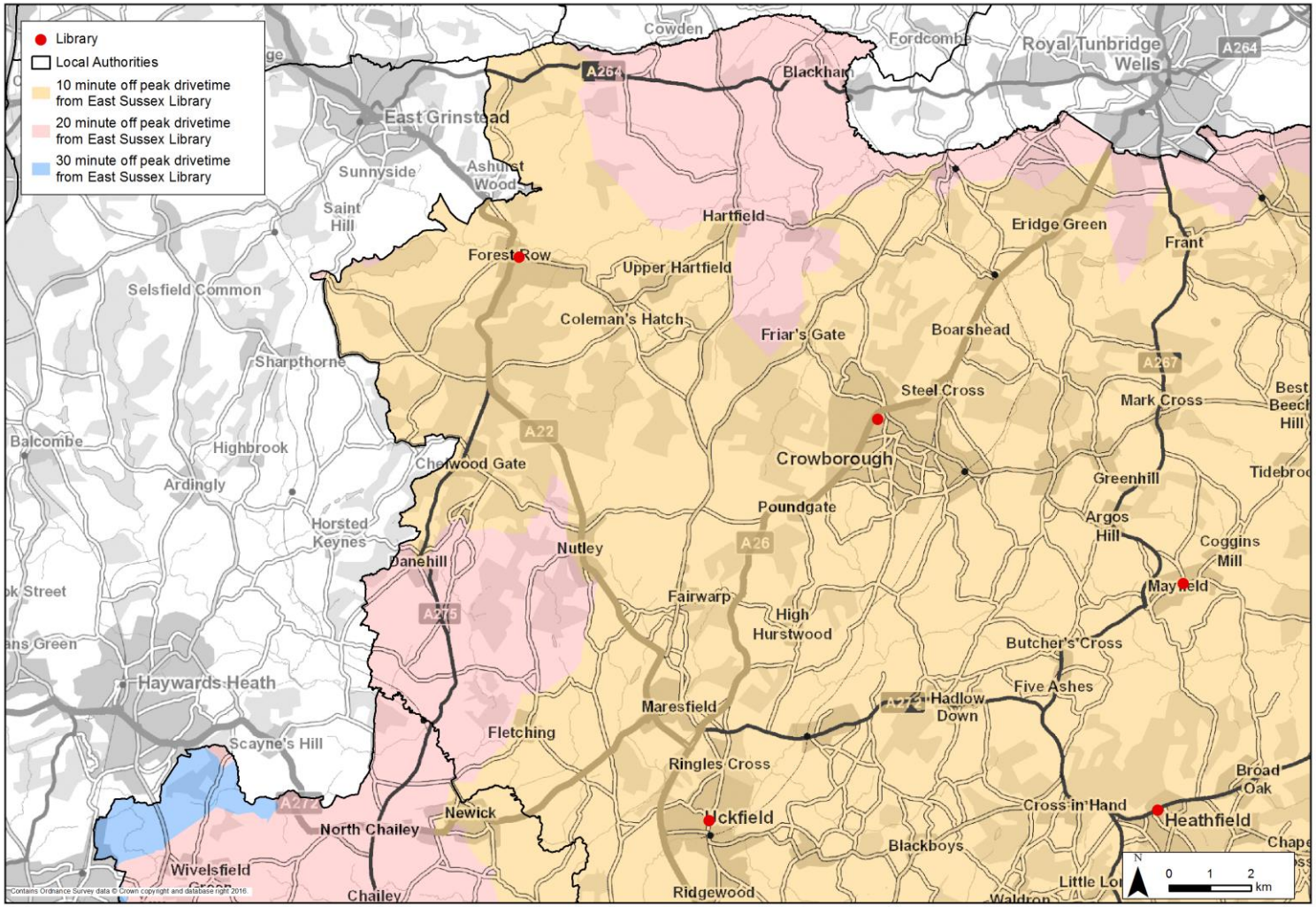


Figure 4.1b Actual Observed Average Off-Peak (1000-1600) Car Travel Time Catchment (Wadhurst Area & NE)

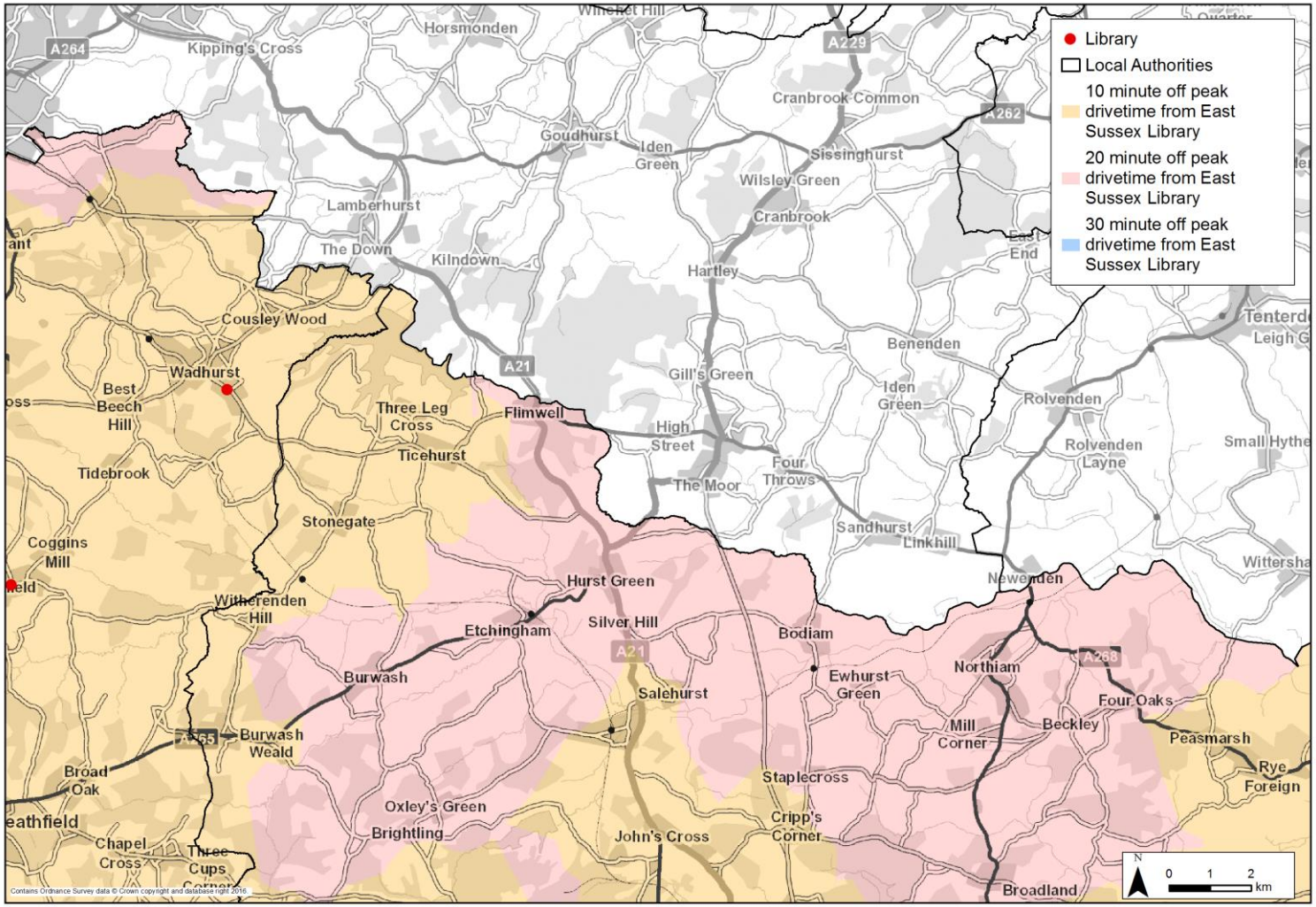


Figure 4.1c Actual Observed Average Off-Peak (1000-1600) Car Travel Time Catchment (Lewes Area & SW)

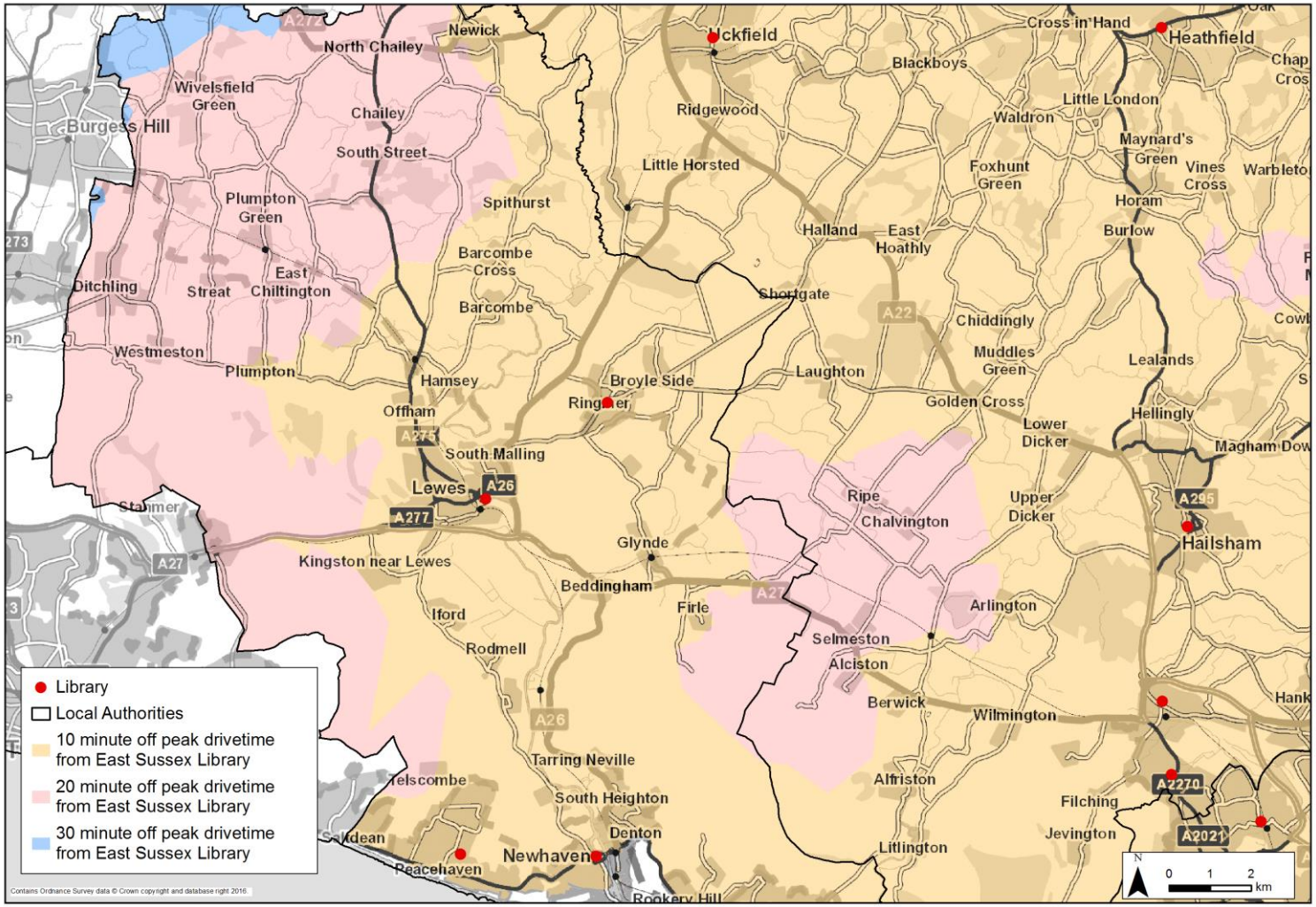


Figure 4.1d Actual Observed Average Off-Peak (1000-1600) Car Travel Time Catchment (Eastbourne Area & South)

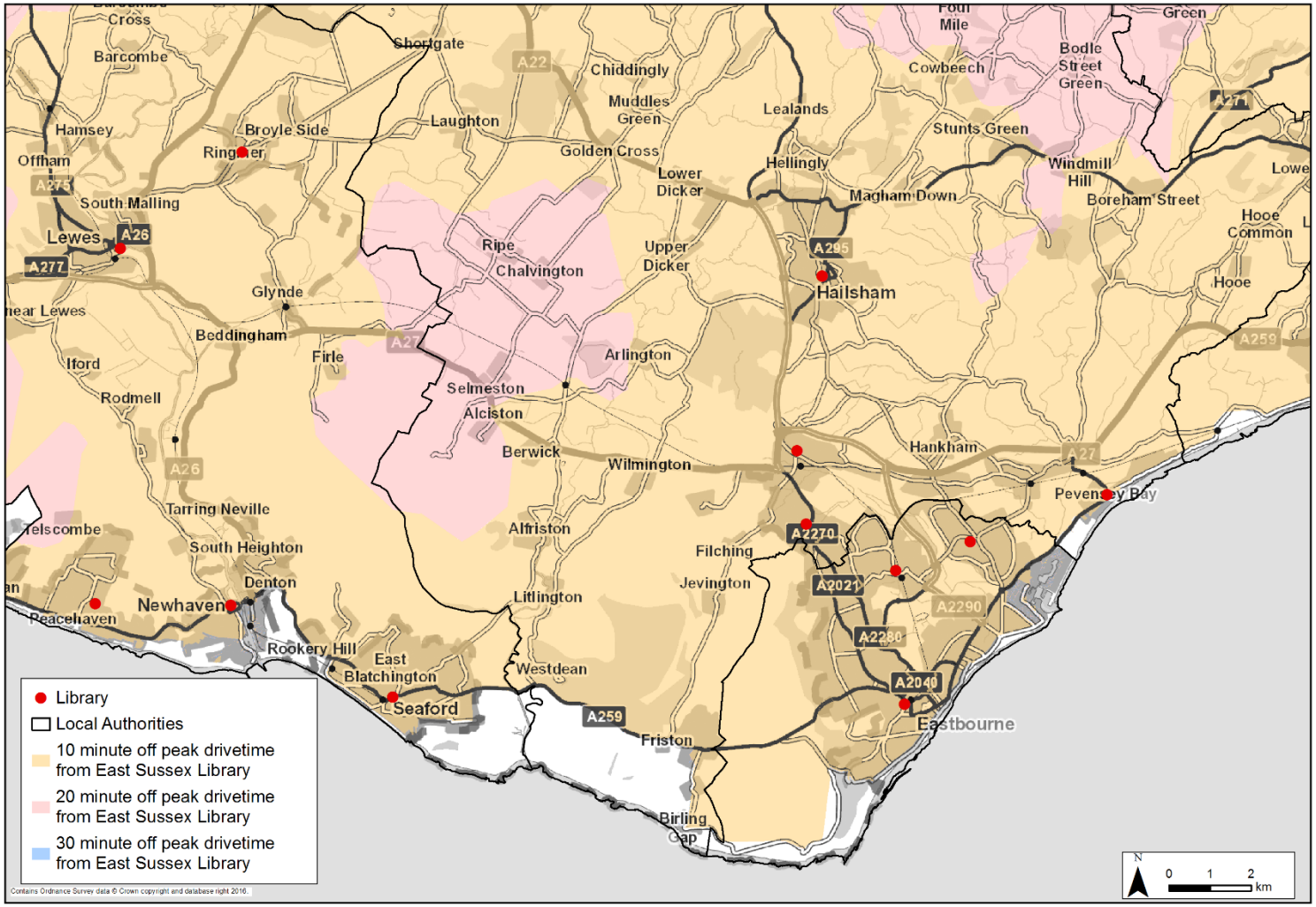


Figure 4.1e Actual Observed Average Off-Peak (1000-1600) Car Travel Time Catchment (Hastings, Bexhill Area & SE)

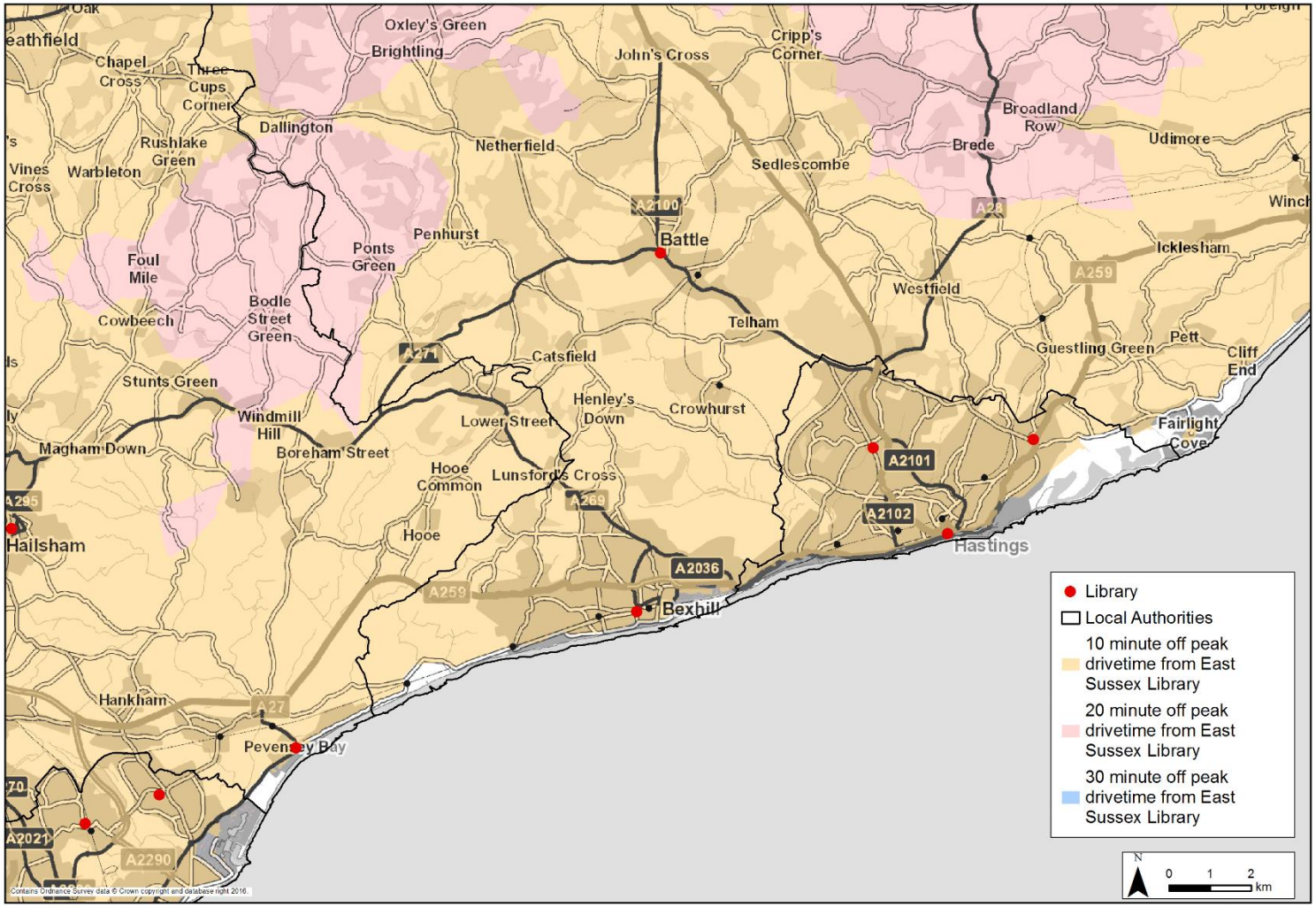


Figure 4.1f Actual Observed Average Off-Peak (1000-1600) Car Travel Time Catchment (Hastings, Rye & East)

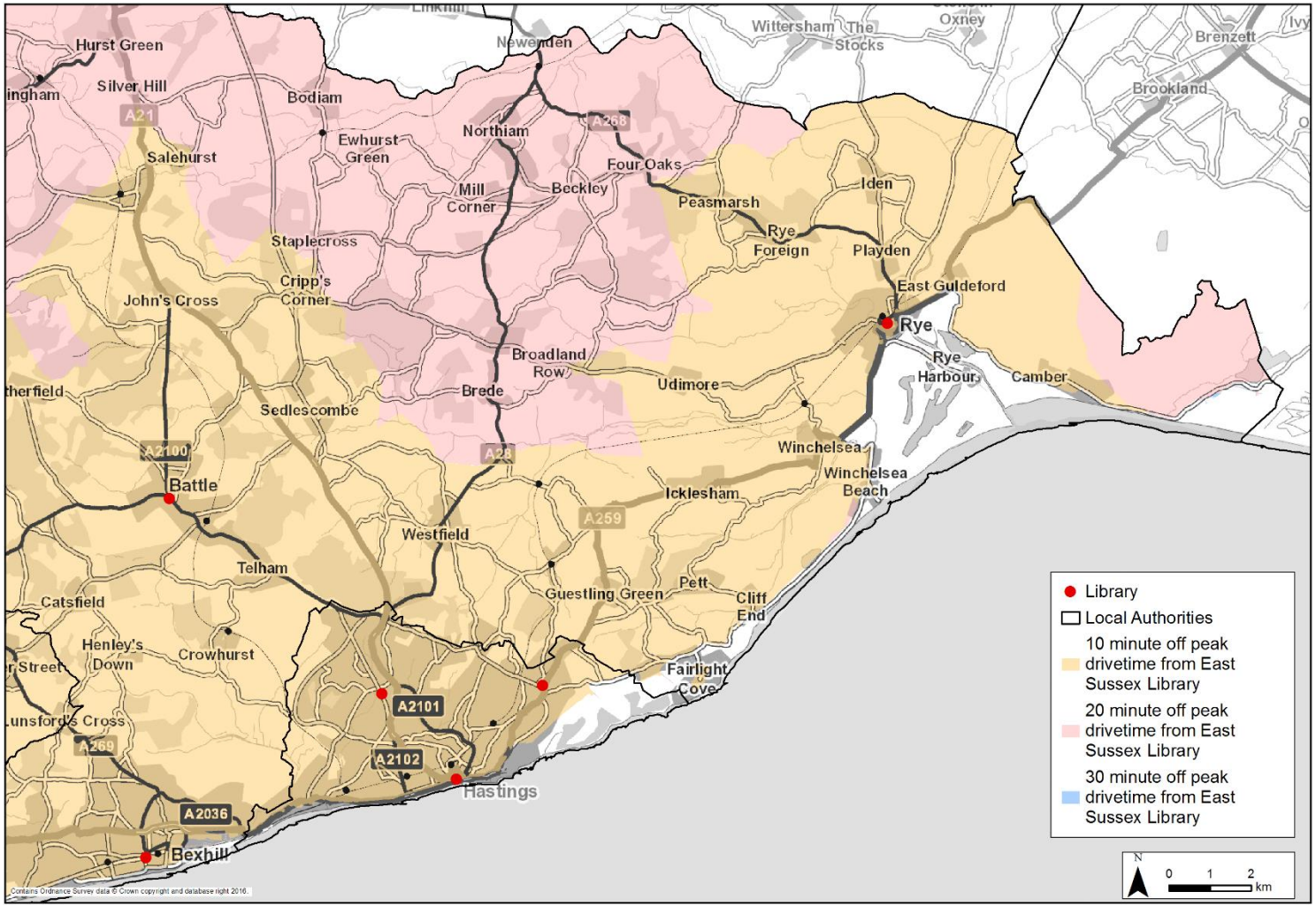


Figure 4.2a Off-Peak (1000-1600) Public Transport Travel Time Catchment (Crowborough Area & NW)

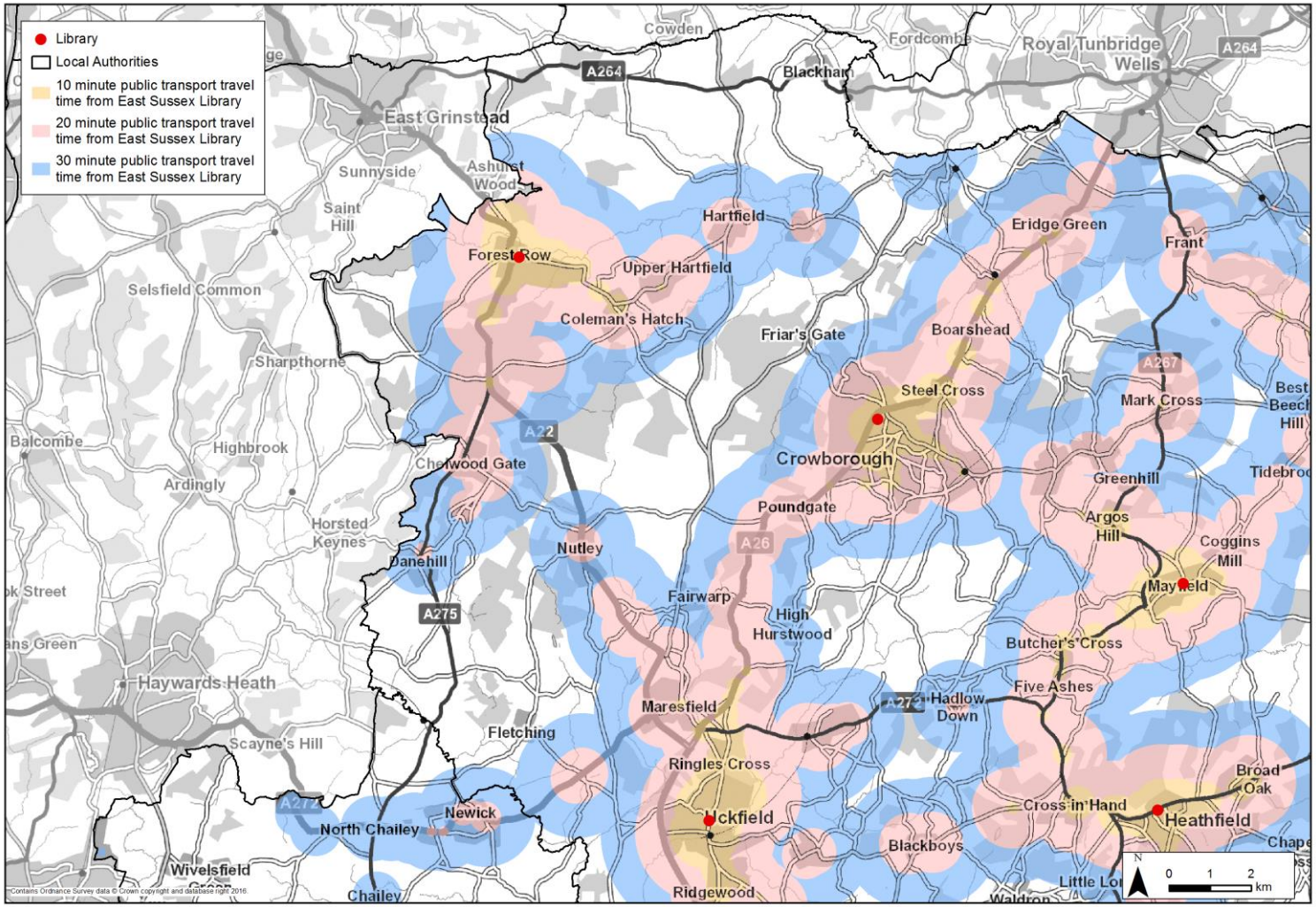


Figure 4.2b Off-Peak (1000-1600) Public Transport Travel Time Catchment (Wadhurst Area & NE)

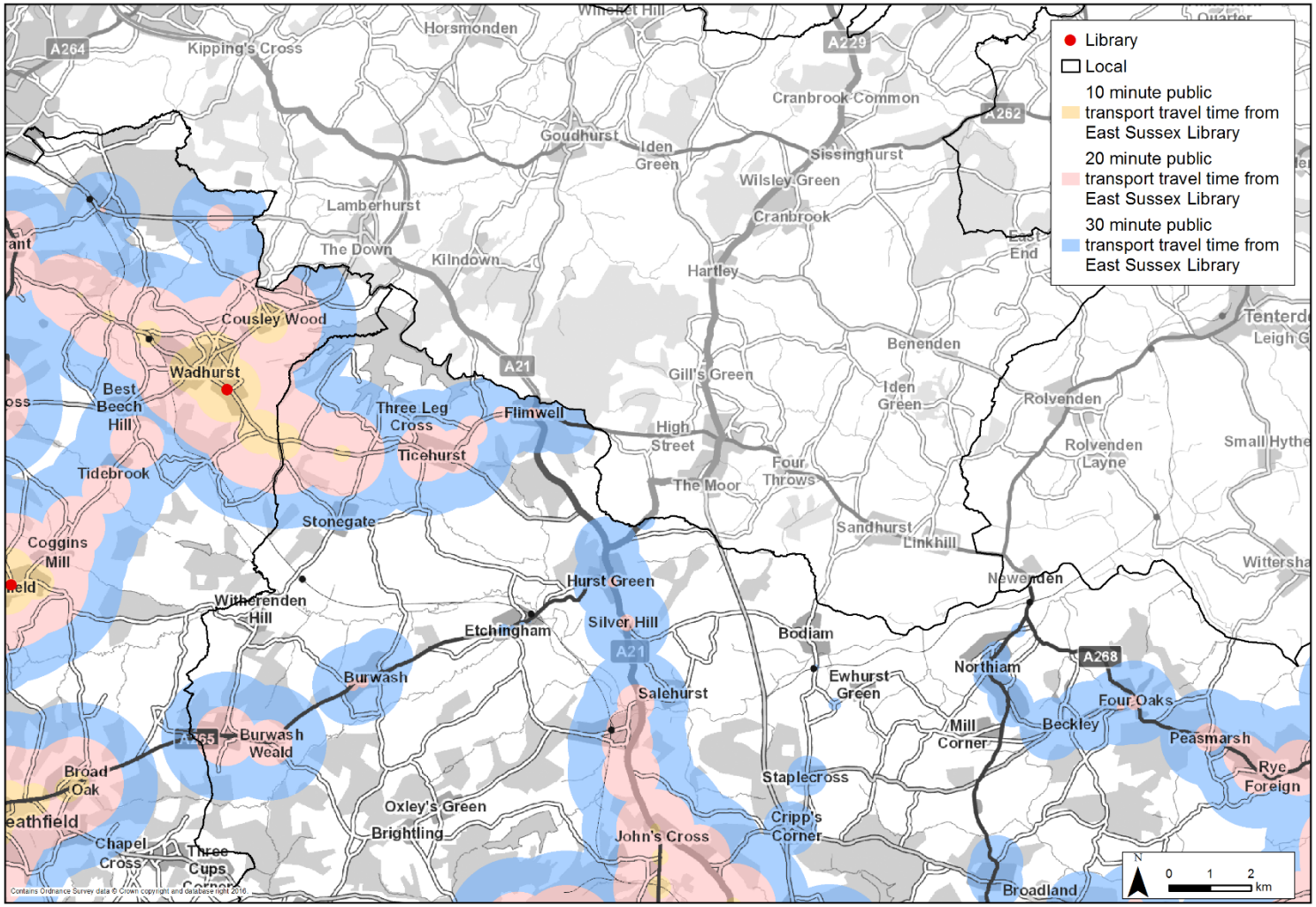


Figure 4.2c Off-Peak (1000-1600) Public Transport Travel Time Catchment (Lewes Area & SW)

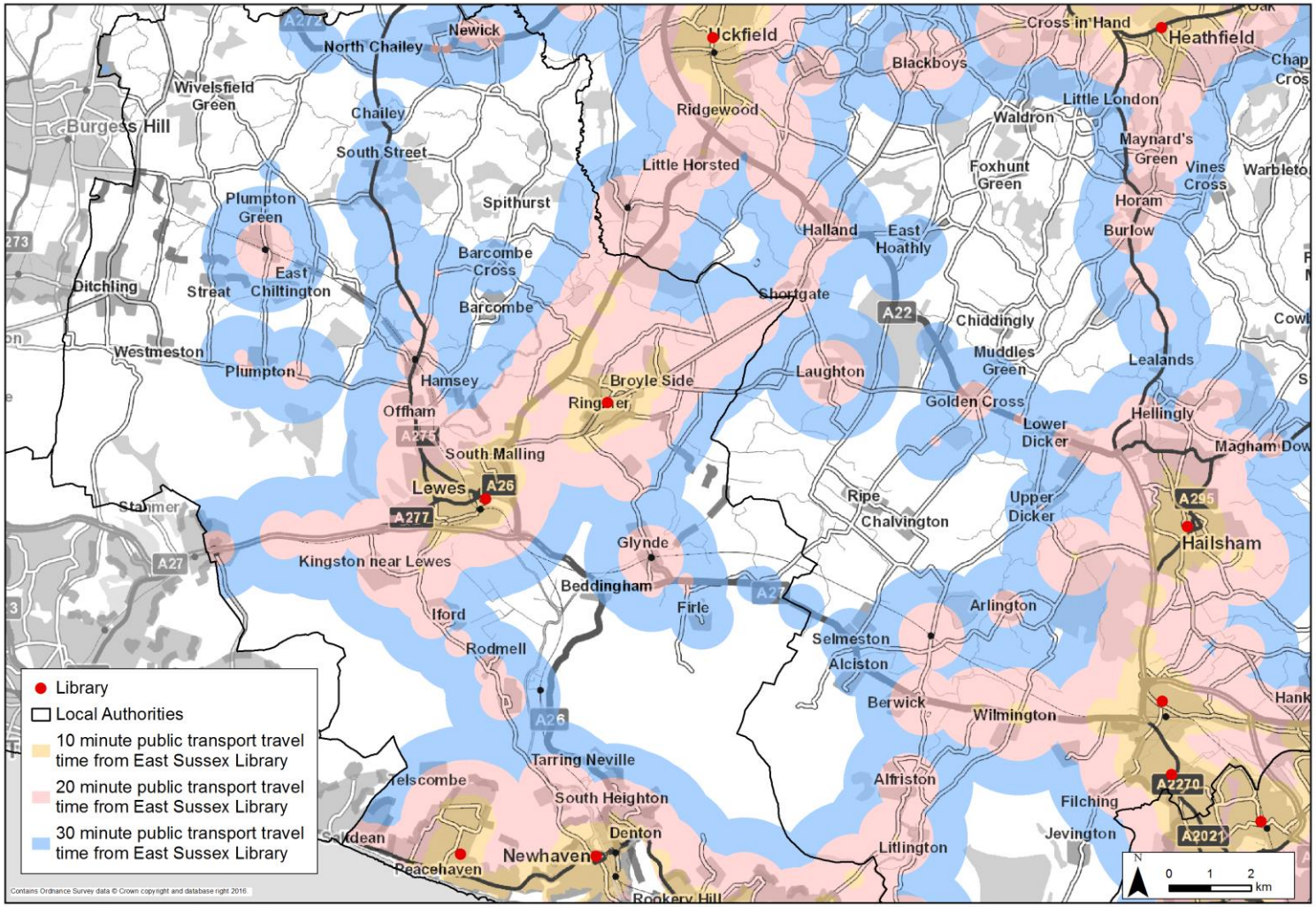


Figure 4.2d Off-Peak (1000-1600) Public Transport Travel Time Catchment (Eastbourne Area & South)

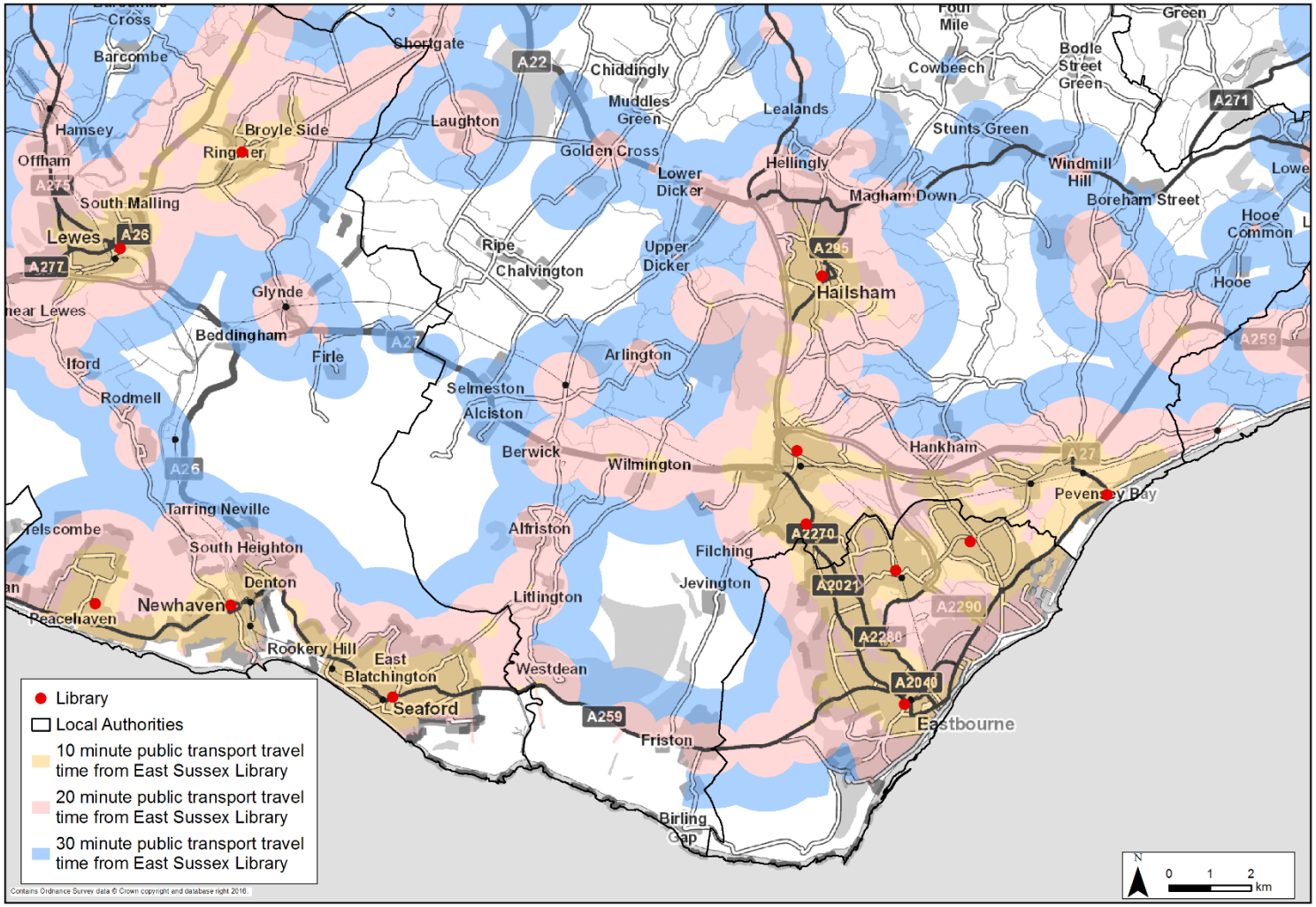


Figure 4.2e Off-Peak (1000-1600) Public Transport Travel Time Catchment (Hastings, Bexhill Area & SE)

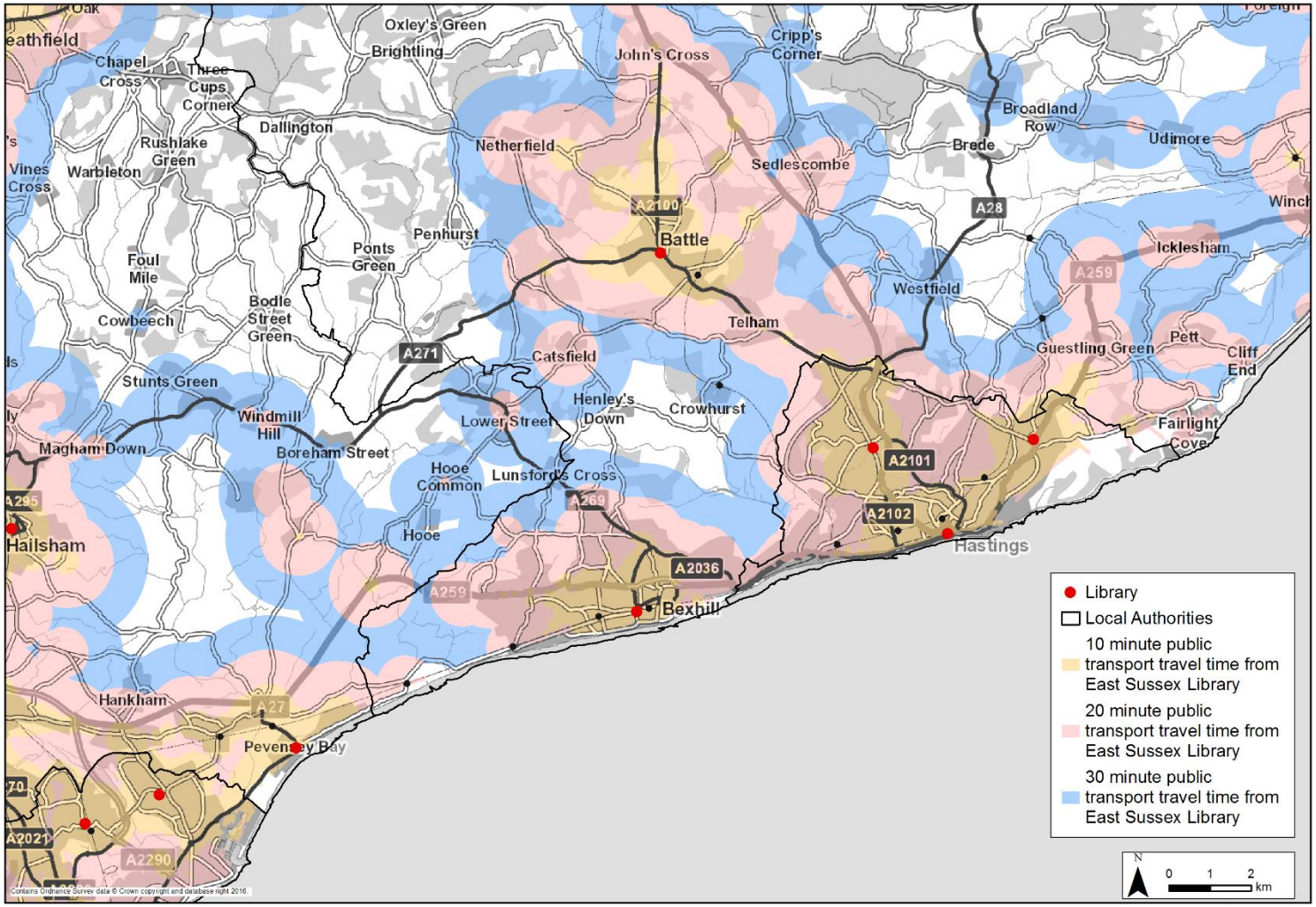
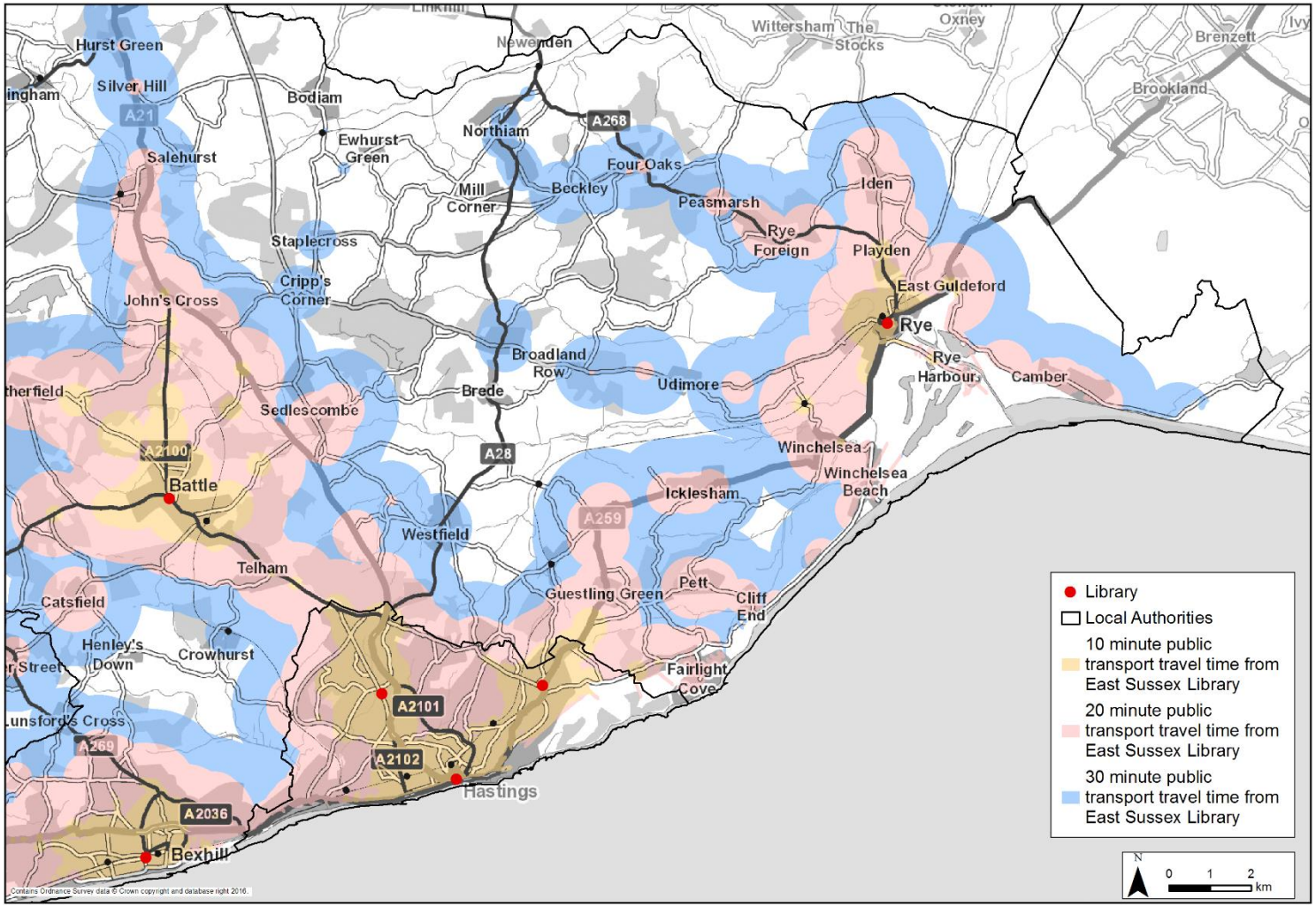


Figure 4.2f Off-Peak (1000-1600) Public Transport Travel Time Catchment (Hastings, Rye & East)



Population accessibility to East Sussex libraries

4.15 Using the accessibility data which have been mapped above, the percentage of the population of East Sussex within a 10, 20 and 30 minute drive of one of the 24 East Sussex libraries, and the percentage of the population within the same journey times of either an East Sussex library or a mobile library stop have been calculated. The same calculations have been undertaken for public transport journey time. The results are shown in Tables 4.1 and 4.2.

4.16 Table 4.1 shows that 94.2% of the population of East Sussex currently live within a 10 minute car journey time of one of the 24 East Sussex libraries. This increases to 99.9% of the population for car journey times up to 20 minutes. No-one in East Sussex, according to our calculations, currently has a journey time by car in excess of 30 minutes to get to one of the 24 East Sussex libraries.

4.17 For public transport, 58.4% of the population of the county lives within a 10 minute journey time of an East Sussex library. This figure rises to 89.1% for journey times up to 20 minutes, and just over 96% of the population of the county lives within a journey time of 30 minutes by public transport to one of the 24 East Sussex libraries.

4.18 Table 4.1 shows that 16.3% of the population of the county lives within a 10 minute walk of an East Sussex library. This figure rises to 48.6% for walking times up to 20 minutes and 75.3% within a 30 minutes' walk of a library. According to our calculations, 24.7% of the population of East Sussex has a journey time by foot of in excess of 30 minutes. Our calculations are based on a presumed walking speed of 5km per hour. It is acknowledged that speeds vary, especially for some older people and people with limited mobility.

Table 4.1 Percentage of East Sussex population within different journey times of an East Sussex library

	Car			Public Transport			Walking		
Journey time (minutes)	**0 – 10**	**10 – 20**	**20 – 30**	**0 – 10**	**10 – 20**	**20 – 30**	**0 – 10**	**10 – 20**	**20 – 30**
East Sussex population within journey time[4]	496,817	29,982	722	307,975	161,783	37,461	86,113	170,113	140,967
Percentage	94.2%	5.7%	0.1%	58.4%	30.7%	7.1%	16.3%	32.2%	26.7%
Cumulative East Sussex population within journey time	496,817	526,799	527,521	307,975	469,758	507,219	86,113	256,226	397,193
Cumulative percentage	94.2%	99.9%	100%	58.4%	89.1%	96.2%	16.3%	48.6%	75.3%

[4] 2011backcast from Micromarketer

Table 4.2 Percentage of East Sussex population within different journey times of an East Sussex library or a mobile library stop

	Car			Public Transport			Walking		
Journey time (minutes)	**0 – 10**	**10 – 20**	**20 – 30**	**0 – 10**	**10 - 20**	**20 – 30**	**0 – 10**	**10 – 20**	**20 – 30**
East Sussex population within journey time[5]	527,108	413	0	380,428	131,466	12,448	119,851	180,616	160,338
Percentage	99.9%	0.1%	0%	72.1%	24.9%	2.4%	22.7%	34.2%	30.4%
Cumulative East Sussex population within journey time	527,108	527,521	527,521	380,428	511,894	524,342	119,851	300,467	460,805
Cumulative percentage	99.9%	100%	100%	72.1%	97%	99.4%	22.7%	57%	87.4%

[5] 2011backcast from Micromarketer

4.19 Table 4.2 shows that 99.9% of the population of East Sussex currently live within a 10 minute car journey time of either an East Sussex library or a mobile library stop. This increases to 100% of the population for car journey times up to 20 minutes. No-one in East Sussex, according to our calculations, currently has a car journey time in excess of 20 minutes to get either to one of the 24 East Sussex libraries or a mobile library stop.

4.20 For public transport, 72.1% of the population of the county lives within a 10 minute journey time of an East Sussex library or a mobile library stop. This percentage rises to 97% for public transport journey times of up to 20 minutes, and rises again to 99.4% of the population who live within a 30 minute journey time of an East Sussex library or a mobile library stop.

4.21 Table 4.2 shows that 22.7% of the county is within a 10 minute walk of an East Sussex Library or a mobile library stop. This increases to 57% of the population for walking times up to 20 minutes and 87.4% within a 30 minutes' walk of a library. According to our calculations, 12.6% of the population of East Sussex has a journey time by foot of in excess of 30 minutes to an East Sussex library or a mobile library stop.

5 Current Travel to the Library Service

Introduction

5.1 The figures in the previous chapter show the theoretical catchment areas for the Library and Information Service, based on observed and actual journey times. It is interesting to note, however, that people's actual behaviour is more varied and that some users travel greater distances and access libraries that are not the nearest to their home address. This chapter therefore considers current actual use of the Library Service.

5.2 The analysis considers both "registered" and "active" users of the service. Registered users are those residents who either joined the Library and Information Service in the last two years or existing users who have re-registered with the Council to gain access to the service – currently library memberships expire after two years, but the County Council is in the process of changing this to make them permanent. Active users are a sub-set of registered users, consisting of those people who have borrowed an item at least once in the past twelve months.

5.3 The analysis is based on anonymised data.

Geographic Distribution of Users

5.4 Maps showing the home address distribution of registered users of each library are contained in Appendix A and of active users in Appendix B. Some of the notable results are:

- Main libraries have a not unexpectedly wide distribution of both registered and active users. Both Eastbourne and Hastings have active users resident in each other's towns, and Lewes has a catchment extending to the border with West Sussex as well as into Eastbourne and Hailsham.
- Suburban libraries in Eastbourne and Hastings attract active users from the other major coastal town, e.g. Hampden Park with users resident in Bexhill and Hastings, and Hollington with users in Eastbourne
- Considerable overlap in catchment of users in Newhaven, Peacehaven and Seaford including active users resident in Bexhill and Hailsham
- Hailsham and Heathfield libraries have a wide spread of users throughout much of the county and both have active users in the other town
- A number of other libraries have instances of users based some distance from the library, e.g. Battle library with registered users in Ticehurst and Wadhurst, Bexhill library with registered and active users in Hailsham and Seaford, and Uckfield library with active users in Lewes, Hailsham, Wadhurst.

5.5 This analysis shows that it is not simply distance and travel time that is the sole determinant of users' choice of library and clearly there are also other factors in play. While there is no definitive research that quantifies the impact of these other factors, some likely influences are:

- Work location – it may be more convenient for some people to visit a library near their place of work, rather than near their home
- Trip linking – some people may combine a visit to the library with a trip for another purpose, such as shopping or leisure activity
- The availability of a public transport route may make a library which is further away more accessible than a geographically closer one
- Family location – some people may spend time at a family member's home, visiting, child minding or caring and may prefer to visit a nearby library
- Personal preference – more modern, better appointed or larger libraries with more facilities may appeal to some people.

6 eLibrary Service Accessibility

Introduction

6.1 In addition to the physical libraries provided by the Council, including the mobile library service, the eLibrary service provides another means of accessing library services via the internet, 24 hours per day. The eLibrary offer includes the ability to access to the library catalogue, reserve items and renew loans, and download eBooks, eAudiobooks and an extensive range of eMagazines, as well as accessing online reference materials.

6.2 Part of the Library and Information Service's information offer is the ECSIS website, which is a news and information portal for East Sussex and Brighton and Hove residents, funded by both authorities. Over 7,500 organisations are listed and the information is easily navigable. It is a signposting service and is constantly updated, and also includes an events listing facility. The eLibrary and ESCIS can be accessed at home via a broadband connection, or 'on the go' via a mobile device.

6.3 Use of the internet has grown rapidly in recent years. Paragraph 4.3.2 of the Needs Assessment describes the increase in household internet access in Great Britain. In 2016, the internet was used daily or almost daily by 82% of adults (41.8 million), compared with 78% (39.3 million) in 2015 and 35% (16.2 million) in 2006[6]. In a statistically significant survey of East Sussex residents carried out in 2017, 90% of residents use the internet[7].

6.4 Despite the high proportion of residents who are now online, it is recognised that barriers do still exist for some residents, including a combination of the affordability of devices and broadband or mobile data packages to access these digital services, as well as a lack of skills or confidence to use devices and navigate around the internet, doing things like downloading apps and electronic content. To a limited extent, access to broadband infrastructure also plays a part, though this is much less of an issue now that all of the county has broadband coverage. This analysis has considered these three factors and builds on the findings of the Needs Assessment.

6.5 Information on internet access at a household or individual level is not publicly available. For the purposes of this assessment of understanding how accessible the eLibrary's digital services are to residents of East Sussex, we have selected a number of indicators that are likely to most closely represent people's ability to afford a home broadband connection or a mobile data package and the necessary device to connect to the internet. We have also selected indicators of adult skills levels and the age of the population, as both of these are likely to be factors which have a bearing on whether people know how to use the internet and the technology to access it.

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6 https://www.ons.gov.uk/peoplepopulationandcommunity/householdcharacteristics/homeinternetandsocialmediausage/bulletins/internetaccesshouseholdsandindividuals/2016

7 East Sussex Annual Resident's Survey, East Sussex County Council, 2017

Affordability

6.6 Figure 6.1 shows the most deprived areas of East Sussex, based on a measure of the proportion of the working-age population in an area involuntarily excluded from the labour market. Those areas highlighted on the map are ranked within the 25% most deprived areas of England and Wales.

6.7 The areas of highest deprivation highlighted in Figure 6.1 suggest where residents may be less able to access our digital services due to affordability. They are located in proximity to the main towns of Rye, Hastings, Bexhill, Eastbourne, Newhaven, Peacehaven, Lewes and Hailsham, where residents have access to library buildings and People's Network computers.

Digital skills

6.8 This analysis has assessed those who may be less able to access our digital services due to a skills deficit, for example due to low levels of literacy. The data presented in Figure 6.2 show those areas of the county where education deprivation among adults is ranked within the 25% most deprived areas of England and Wales.

6.9 Many of these areas coincide with the areas of income and employment deprivation shown in Figure 6.1, namely areas around Rye, Hastings and Eastbourne. Some residents in these areas may lack the basic digital skills required to access our eLibrary services independently and may require access to a library building to use the resources available. Staff in libraries can help people access the resources they need, and both staff and computer buddies volunteers in libraries can help people who lack digital skills to get online.

6.10 Age is a factor in people's level of digital skills and therefore of use of the internet. According to the Office for National Statistics survey *Internet users in the UK: 2016*[8] 74% of people aged 65-74 had used the internet in the past three months. This figure was only 39% for people aged 75 and over. Two thirds of women over 75 have still never used the internet.

6.11 However, the percentage of recent internet users (i.e. used in the previous three months) among 65-74 year olds increased by 69% since 2011. Among those aged 75 and over it has nearly doubled since 2011. Women aged 75 and over had seen the largest rise in recent internet use, up 169% from 2011, although this still accounts for only one third of all women over 75. The proportion of adults aged 75 years and over who had never used the internet decreased from 76% in 2011 to 57% in 2016.

6.12 Figure 6.3 shows the distribution of the population of East Sussex aged over 65. This indicates areas of the county where people may be less able to

[8] https://www.ons.gov.uk/businessindustryandtrade/itandinternetindustry/bulletins/internetusers/2016#recent-internet-use-is-on-the-increase-for-those-aged-65-and-over

access our digital services because they do not use the internet. It can be seen that the highest density of population aged 65 and over is around the coastal towns of Hastings, Bexhill, Eastbourne, Seaford and Peacehaven. There are also higher concentrations of residents aged 65 and over in and around the towns of Crowborough, Heathfield, Uckfield, Hailsham and Lewes.

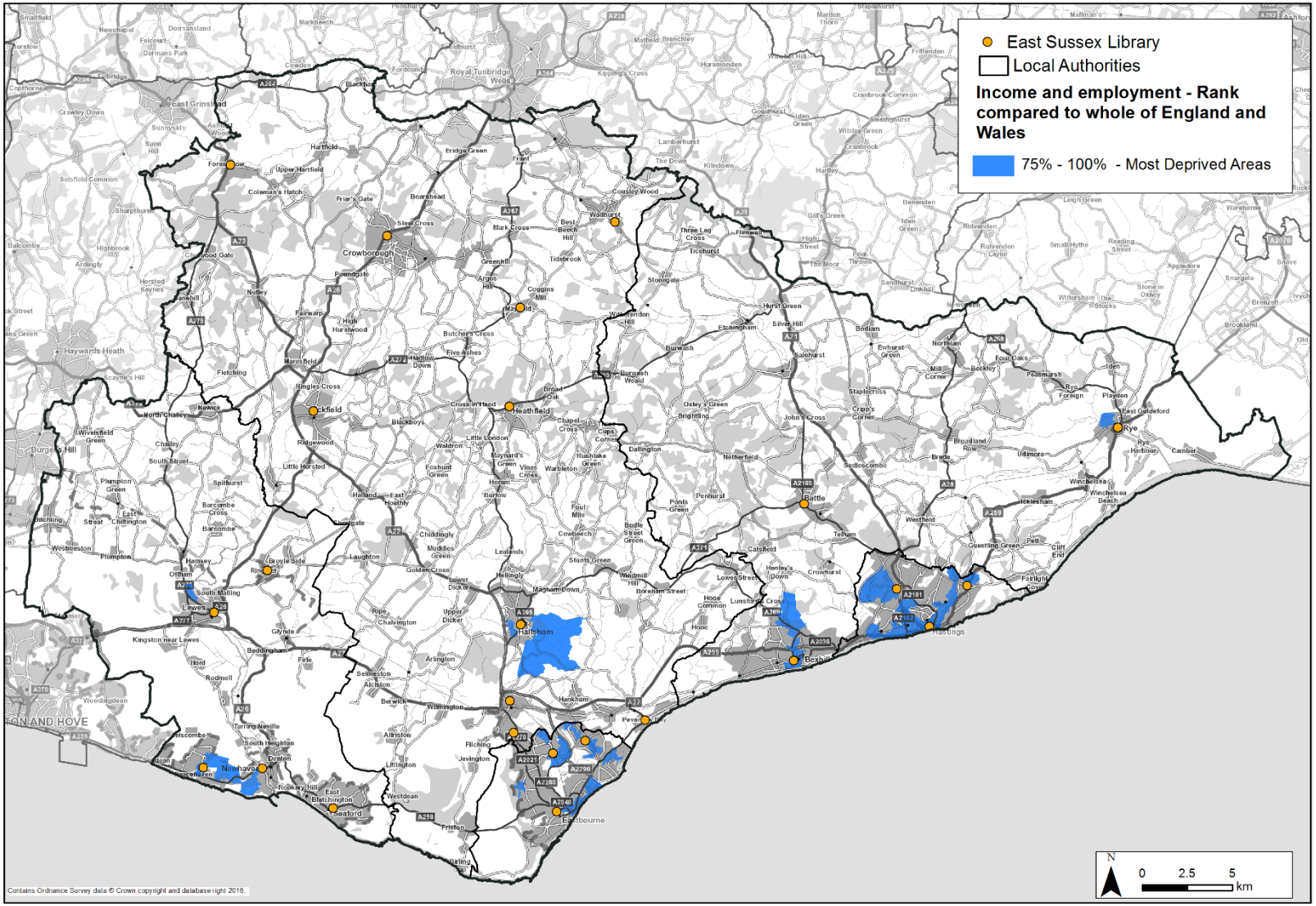
Digital infrastructure

6.13 The Government's subsidised better broadband scheme, launched in December 2015, has ensured residents and businesses nationally have access to at least 2mbps. Furthermore, government proposals for a broadband Universal Service Obligation will mean that, potentially, by 2020 households will have the right to request speeds of up to 10mbps. This, together with continuing private sector investment in both fixed and mobile broadband, suggests that digital exclusion due to lack of infrastructure will continue to decrease in the coming years.

6.14 The majority of digital transactions do not need high speeds and can be carried out via "first generation" broadband, however the Council's 'eSussex' project is currently funding the rollout of superfast broadband to improve connectivity to those who choose to use it in areas where it would not otherwise be commercially provided.

6.15 In a recent survey of East Sussex residents carried out between January and February 2017, 82% of internet users were reported to use mobile devices to get online, compared to 72% using tablets and 66% using desktops or laptops. The increased use of mobile devices has improved access to our digital services on the go.

Figure 6.1 Deprivation – Income and Employment



6.1 Deprivation – Income and Employment

Indicator
ID 2015, Income and employment domains – by super output area.

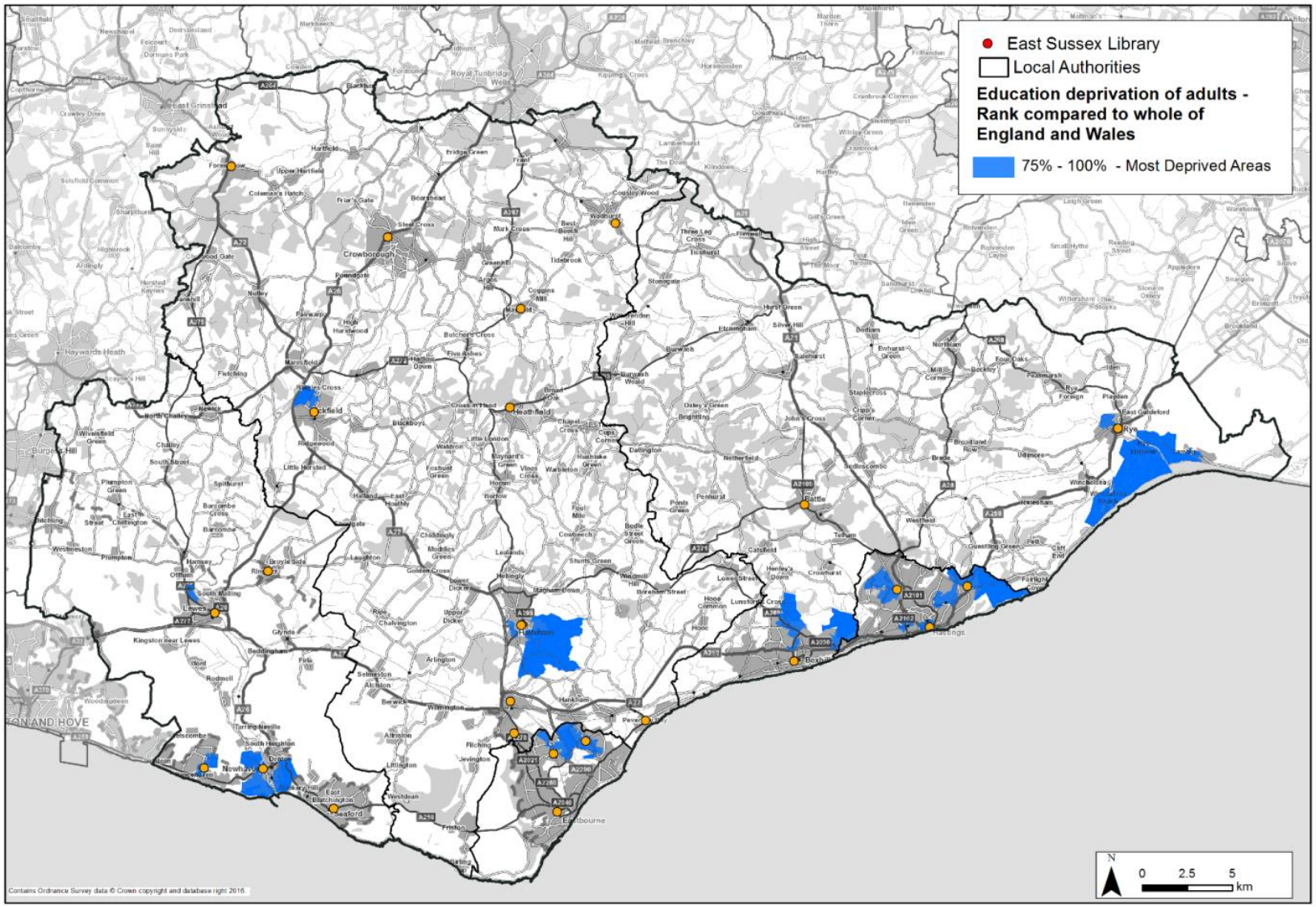
Data source
2015

Description/Definition

The Employment Deprivation Domain measures the proportion of the working-age population in an area involuntarily excluded from the labour market. This includes people who would like to work but are unable to do so due to unemployment, sickness or disability, or caring responsibilities. The indicators used are:
- Claimants of Jobseeker's Allowance (both contribution-based and income-based), women aged 18 to 59 and men aged 18 to 64
- Claimants of Employment and Support Allowance (both contribution-based and income-based) , women aged 18 to 59 and men aged 18 to 64
- Claimants of Incapacity Benefit, women aged 18 to 59 and men aged 18 to 64
- Claimants of Severe Disablement Allowance, women aged 18 to 59 and men aged 18 to 64
- Claimants of Carer's Allowance, women aged 18 to 59 and men aged 18 to 64.

Format
Data shows most deprived quartile.

Fig 6.2 Education deprivation of adults



6.2 Education deprivation of adults

Indicator
ID 2015, Education, skills and training domain – by super output area. Adult skills sub-domain

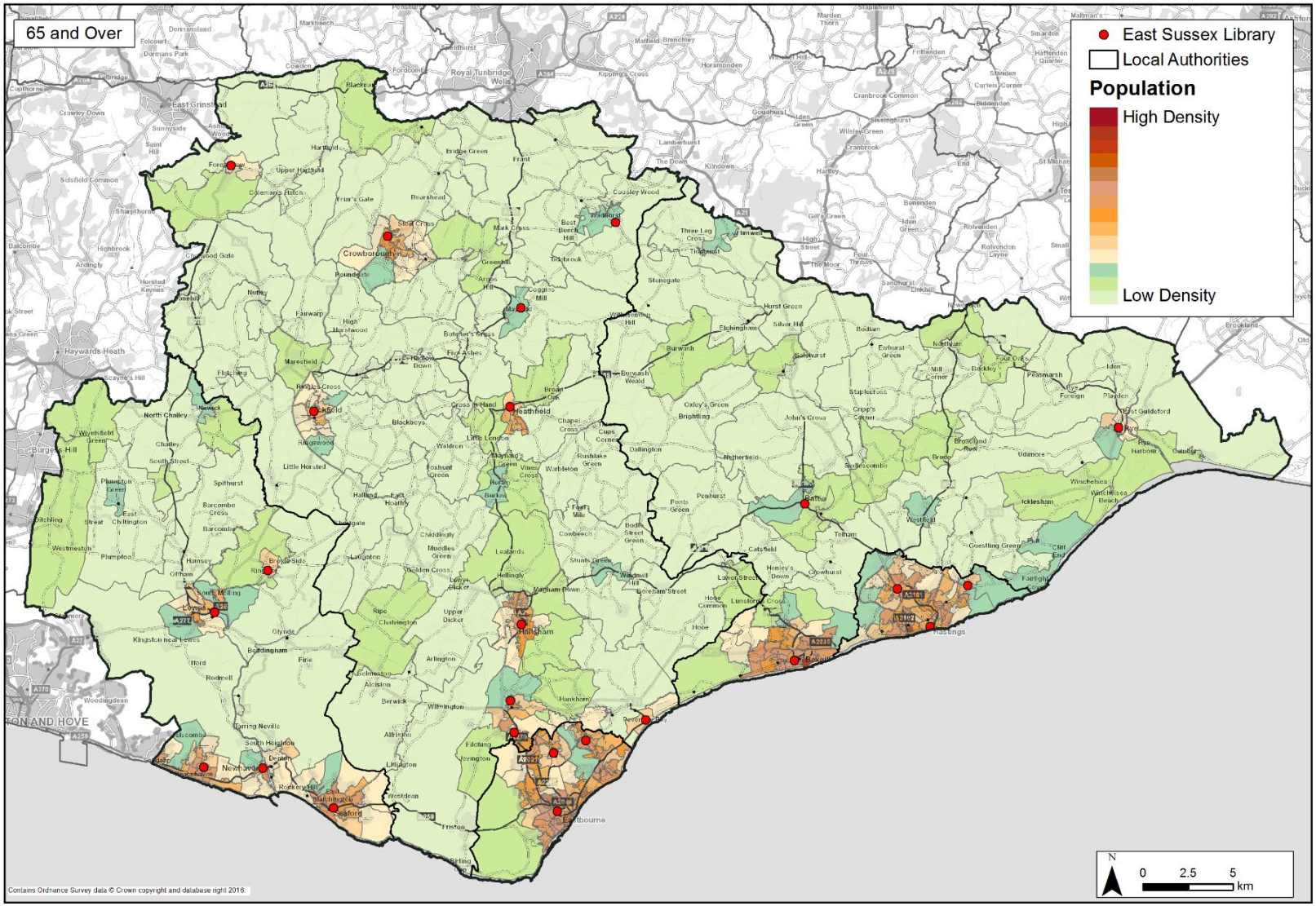
Data source
2015

Description/Definition
This dataset shows the results from the Indices of Deprivation 2015 (ID 2015) for the Education, skills and training domain. It is one of the seven separate domains that are brought together to form the Index of Multiple Deprivation 2015 (IMD 2015).
The 'Adult skills' sub-domain is based on two indicators:

- the proportion of women aged 25-59 and men aged 25-64 with no or low qualifications; and
- The proportions of these who cannot speak English well or at all.

Format
Shows information for the most deprived quartile, compared to the whole of England and Wales.

Fig 6.3 Distribution of population aged 65 and over



Population - 65 and Over

Indicator
Population estimates by age and gender by super-output area

Data source
ONS 2015

Description/Definition
Data are available by broad and detailed (mostly 5-year) age groups and single year of age for all geographies from 2012 onwards. The mid-year population estimates are produced by the Office for National Statistics (ONS) by ageing on the population of the previous year and by adjustments to reflect actual counts of births, deaths and migration during the year.

The population estimates for mid-2002 to mid-2010 have been revised by ONS to bring them into line with the official mid-2011 estimates, which are based on the 2011 Census estimates of the usually resident population, plus population change between Census Day (27 March) and 30 June 2011.

Format
Shows numerical information by super-output area.

7 Conclusions

7.1 The Library and Information Service comprises both the physical infrastructure that people can use (e.g. library buildings and the services available within them) and the digital services that people can access online without having to visit the library, such as reserving and renewing items, downloading eBooks and eMagazines, and accessing online reference materials and information resources).

7.2 The prime purpose of the Accessibility Analysis is three-fold:

a. To determine reasonable travel time parameters for the majority of residents to access library services and analyse the proportion of the population within the county who have access to a library within these parameters

b. To understand how residents currently travel to/access the Library and Information Service.

c. To determine the accessibility of the East Sussex Library and Information Service in terms of the ability of residents to access its digital services.

7.3 The findings of the Accessibility Analysis, combined with the findings of the Needs Assessment and Gap Analysis will enable the County Council to identify the needs-based library provision (both physical and digital) required to deliver the identified Strategic Outcomes and meet the Council's statutory duty to provide a "comprehensive and efficient" service.

Transport Access

7.4 For the current library service provision, accessibility software has been used to identify the areas within a 10, 20 and 30 minute travel time of each library by car, public transport and walking.

7.5 Published research has also been reviewed to establish how long people typically spend travelling to access library services. There is limited data available that is specifically related to travel patterns associated with library visiting. However, the National Travel Survey shows that the majority of trip purposes have travel times in the range 17 to 24 minutes and the overall all-purpose average is 24 minutes. The category of "personal business" specifically includes visits to libraries. The average trip duration for personal business is 20 minutes. This research suggests that reasonable travel time parameters for the majority of residents to access library services is 20 to 25 minutes by car or public transport.

7.6 Accessibility mapping software shows that, despite the fact that East Sussex is a rural county, the Library and Information Service has very high levels of

physical accessibility to libraries. Everyone in East Sussex lives within a 20 minute drive of either one of the 24 libraries or the 88 mobile library stops.

7.7 Car ownership is generally very high across the county, with a county average of 78% of households owning one or more cars. It is recognised however that car ownership varies considerably across the county, with high car ownership in rural areas (88% of households own one or more cars in Wealden for example, as do 81% of households in Rother) and lower levels of car ownership in coastal areas (71% in Eastbourne and 67% in Hastings). There are pockets in Hastings where fewer than half of households own a car (Castle ward, 47.6% and Central St Leonards, 44.1%).

7.8 In terms of access to libraries, the identified areas of low car ownership are compensated by having regular bus or train services and/or being in central locations where walking distances to local libraries are relatively short. Overall across the county 97% of the population lives within a 20 minute journey time by public transport of an East Sussex library or a mobile library stop. This figure rises to 99.4% of the population for journey times of up to 30 minutes.

7.9 Recognising that the majority of Library and Information Service customers use a library building rather than visiting the mobile library, the analysis has in addition considered physical accessibility just in terms of the 24 library buildings, and this also shows that the library buildings have very high levels of accessibility. 99.9% of the population of the county are within a 20 minute car drive time of one of the 24 East Sussex libraries. Nobody has a journey time by car in excess of 30 minutes. For public transport, 89% of the population of the county lives within a 20 minute journey time of an East Sussex library and 96% are within a 30 minute journey time.

7.10 An analysis of where East Sussex library users live and which libraries they use shows that users do not necessarily visit their nearest library. For example, the main libraries in both Eastbourne and Hastings have active users resident in the other town and the suburban libraries in the two towns attract active users from the other one such as Hampden Park with users resident in Bexhill and Hastings and Hollington with users in Eastbourne.

7.11 This shows that there are other factors apart from travel time that influence decisions on which library to visit, and there may be a range of reasons behind this. It may be more convenient for some people to visit a library near their place of work, rather than near their home, and some people may combine a visit to the library with a trip for another purpose, such as shopping or leisure activity. Other reasons may include personal preference – more modern, better appointed or larger libraries with more facilities may appeal to some people, and the availability of a public transport route may make a library which is further away more accessible than a geographically closer one.

7.12 Accessibility to the Library and Information Service's digital services is also very high. This provides another means of accessing library services away from our library buildings via the internet, 24 hours per day. Household internet access has grown rapidly in recent years, from 35% in 2006 to 89% in

2016. A 2017 survey of East Sussex residents showed that 90% of them use the internet. This is consistent with the national picture.

7.13 There is little evidence that digital infrastructure remains a barrier for getting online in East Sussex, as all of the county now has broadband access. However, barriers do still exist for some residents, including a combination of the affordability of devices and broadband or mobile data packages to access the digital services provided, as well as a lack of skills or confidence to use devices and navigate around the internet. Age is a key factor in people's level of digital skills and therefore use of the internet. Whilst 74% of people nationally aged 65-74 had used the internet in the past three months in a 2016 survey, this figure was only 39% for people aged 75 and over.

7.14 Based on income levels, the Accessibility Analysis shows that residents in a small number of areas of East Sussex, in proximity to the main towns of Rye, Hastings, Bexhill, Eastbourne, Newhaven, Peacehaven, Lewes and Hailsham, may be less able to access the Library and Information Service's digital services due to the affordability of broadband and mobile data packages and the costs of devices. Small geographical areas around Rye, Hastings and Eastbourne are also where residents are more likely not have the digital skills required to access the eLibrary services independently.

7.15 The areas of the county where people's age is likely to be a factor which creates a barrier to eLibrary accessibility because they are less likely to use the internet is geographically slightly wider, and is around the coastal towns of Hastings, Bexhill, Eastbourne, Seaford and Peacehaven. Areas around the towns of Crowborough, Heathfield, Uckfield, Hailsham and Lewes are also included.

7.16 In these areas people are more likely to rely on access to a library building to use the resources available. Staff in libraries can help people access the resources they needs, and both staff and computer buddies volunteers in libraries can help people who lack digital skills to get online and help narrow the digital divide.

Appendix A Home distribution of Registered Users

Figure A1: Home Distribution of Registered Users at Battle Library

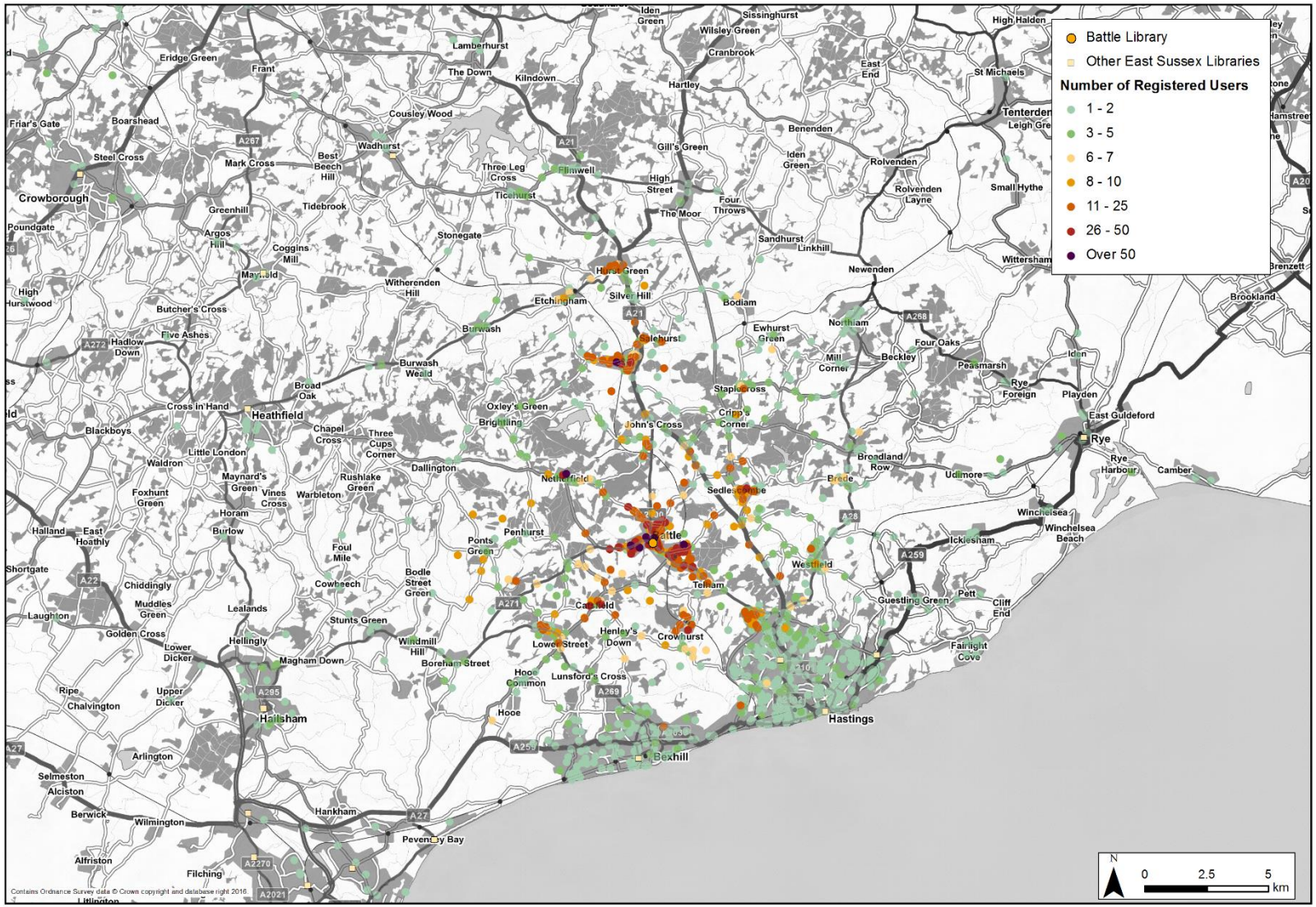


Figure A2: Home Distribution of Registered Users at Bexhill Library

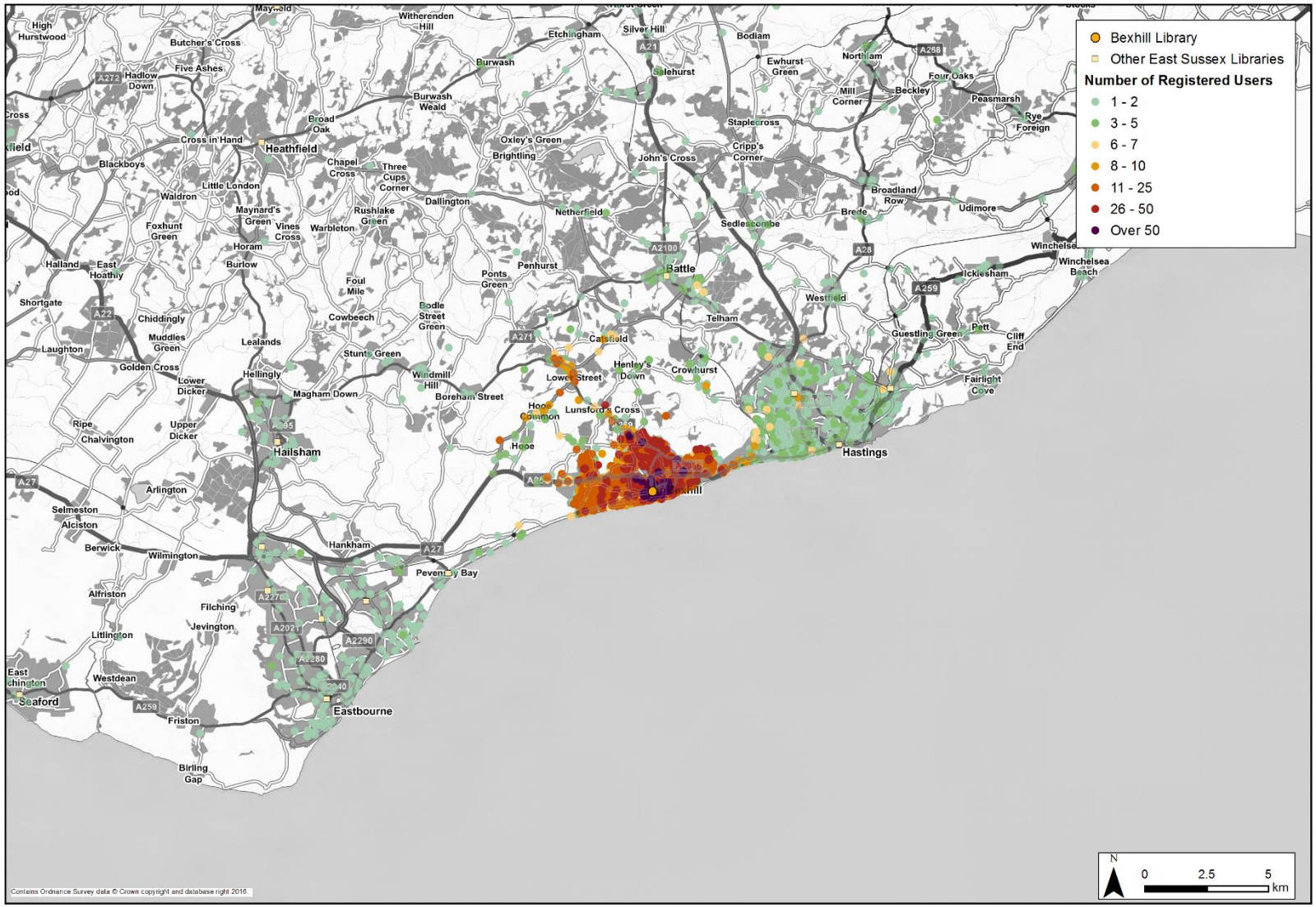


Figure A3: Home Distribution of Registered Users at Crowborough Library

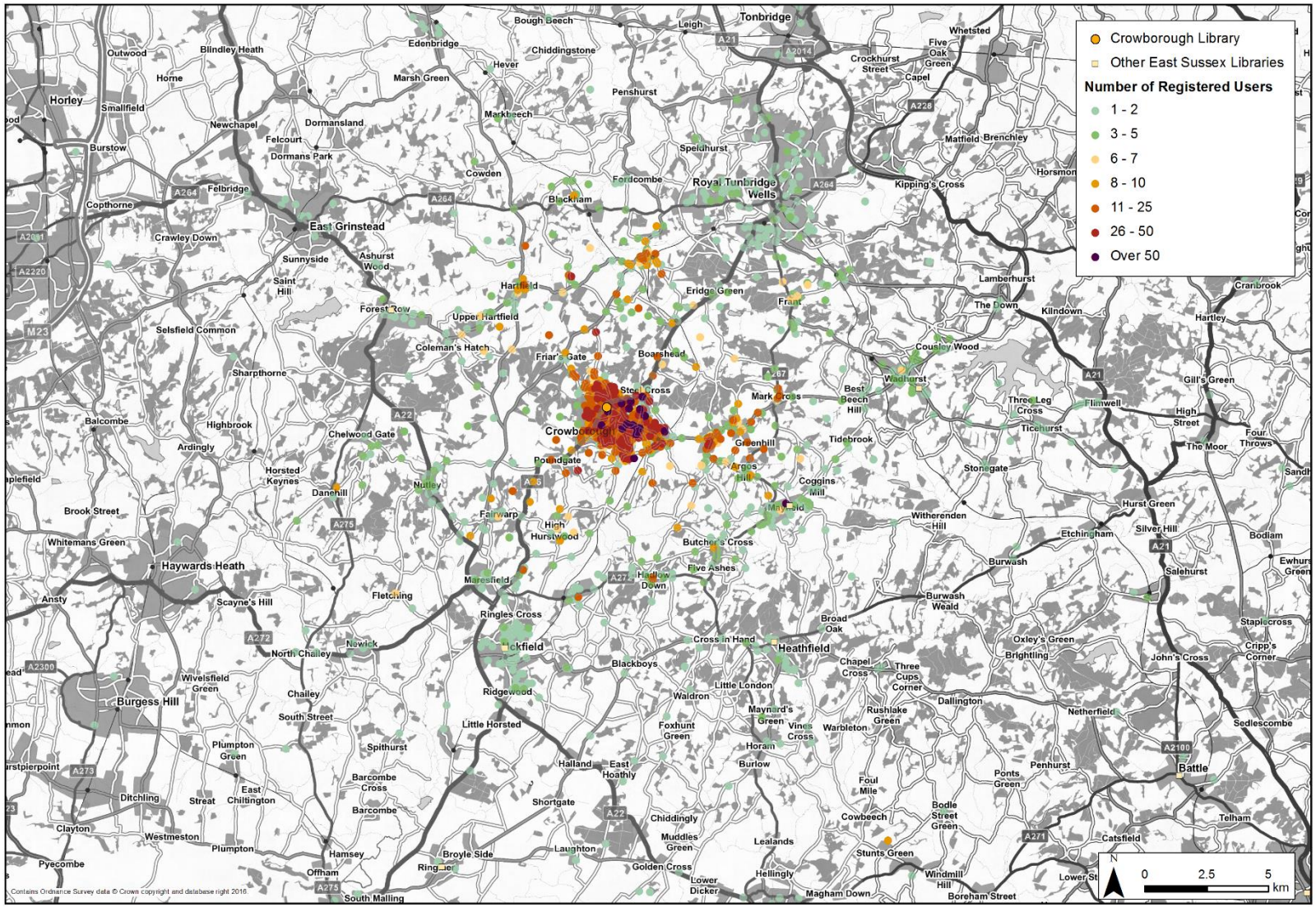


Figure A4: Home Distribution of Registered Users at Eastbourne Library

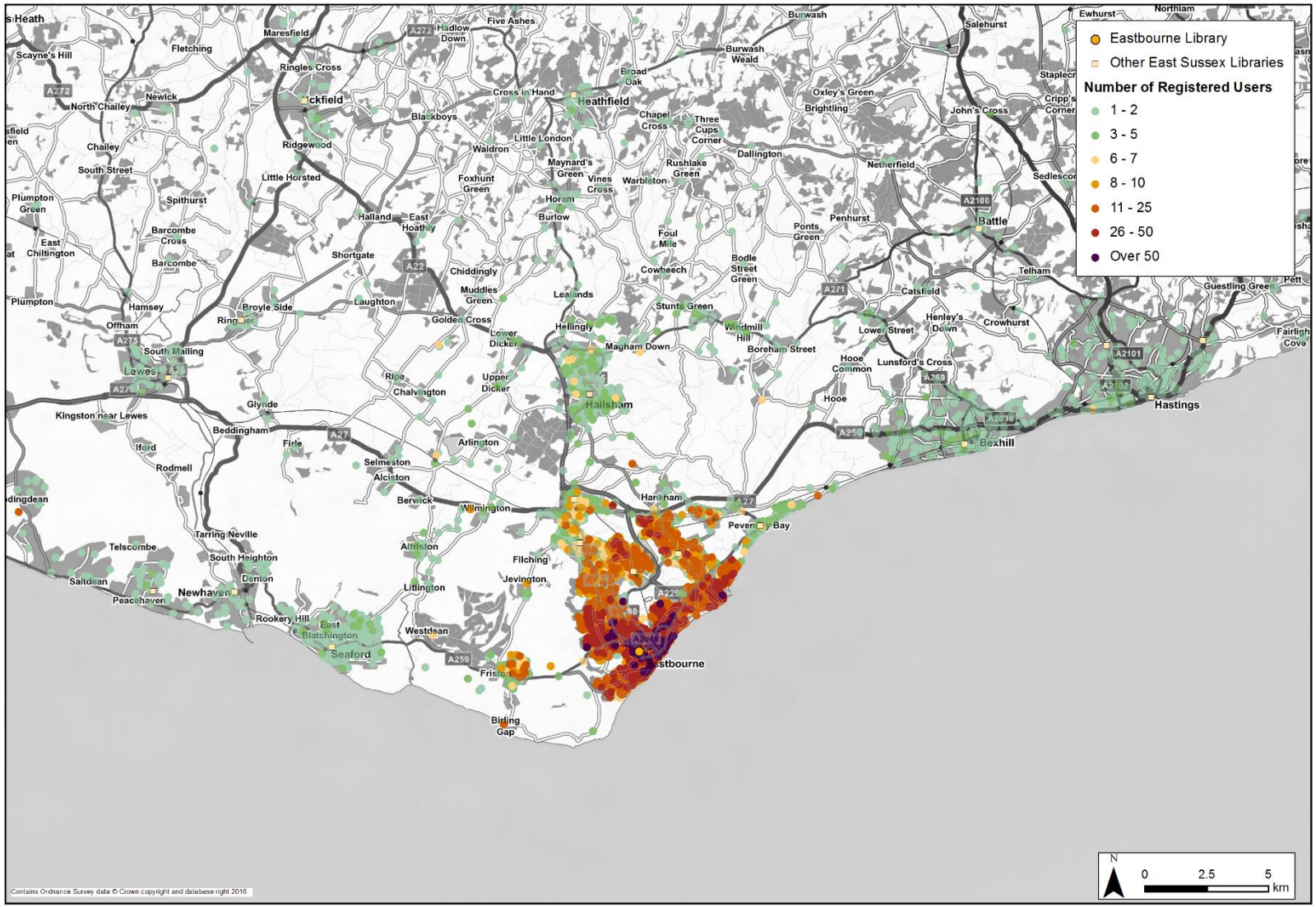


Figure A5: Home Distribution of Registered Users at Forest Row Library

Figure A6: Home Distribution of Registered Users at Hailsham Library

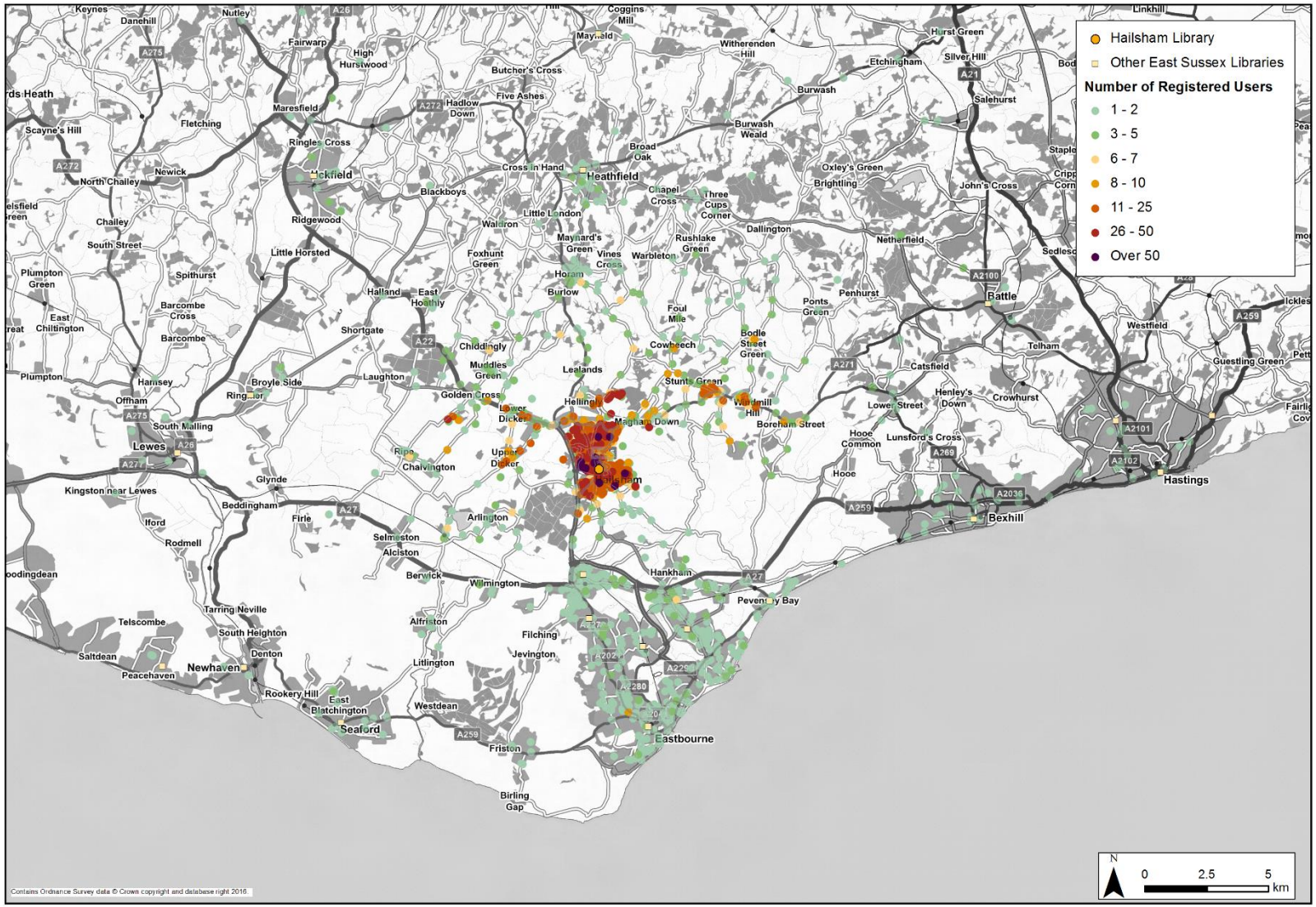


Figure A7: Home Distribution of Registered Users at Hampden Park Library

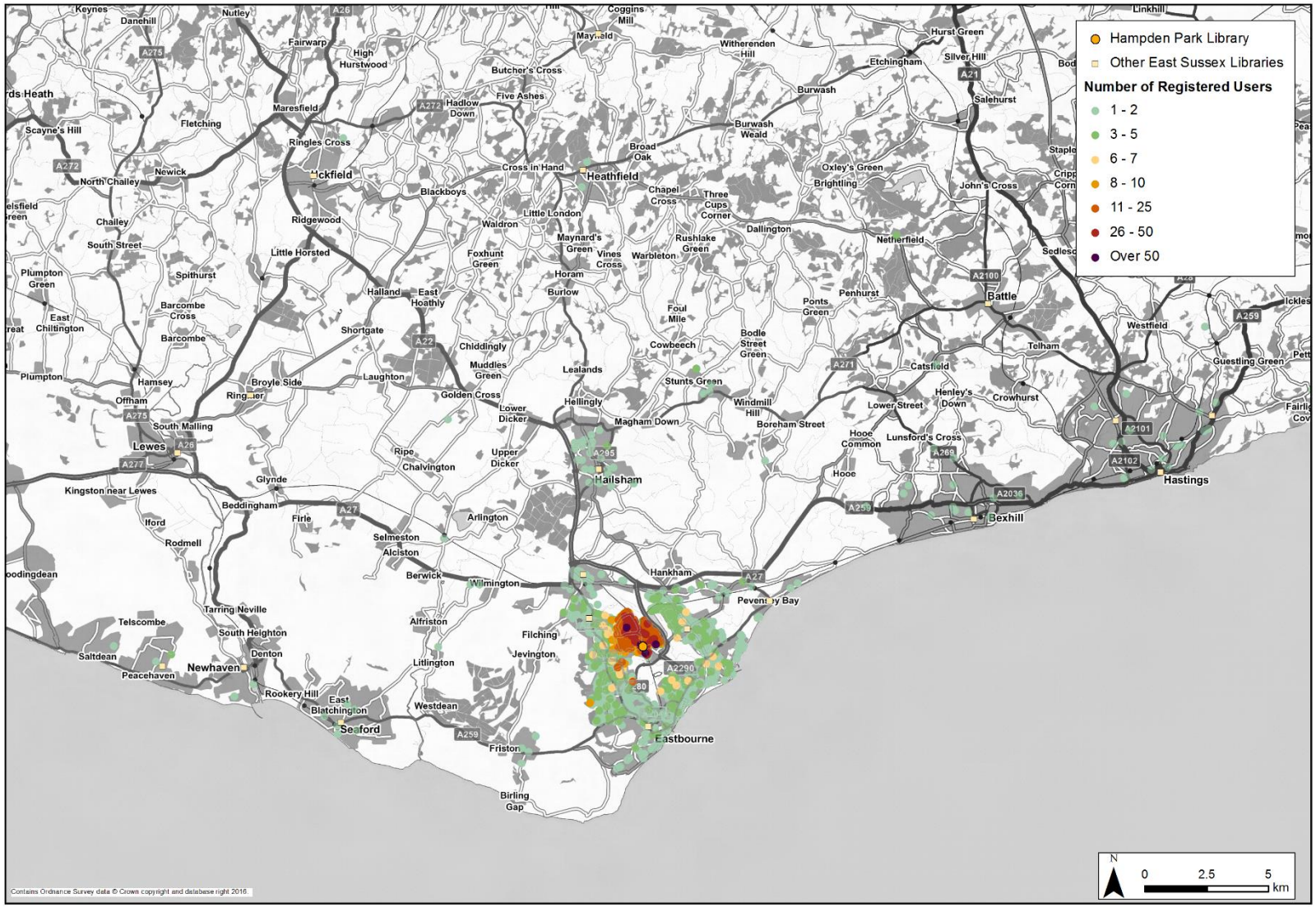


Figure A8: Home Distribution of Registered Users at Hastings Library

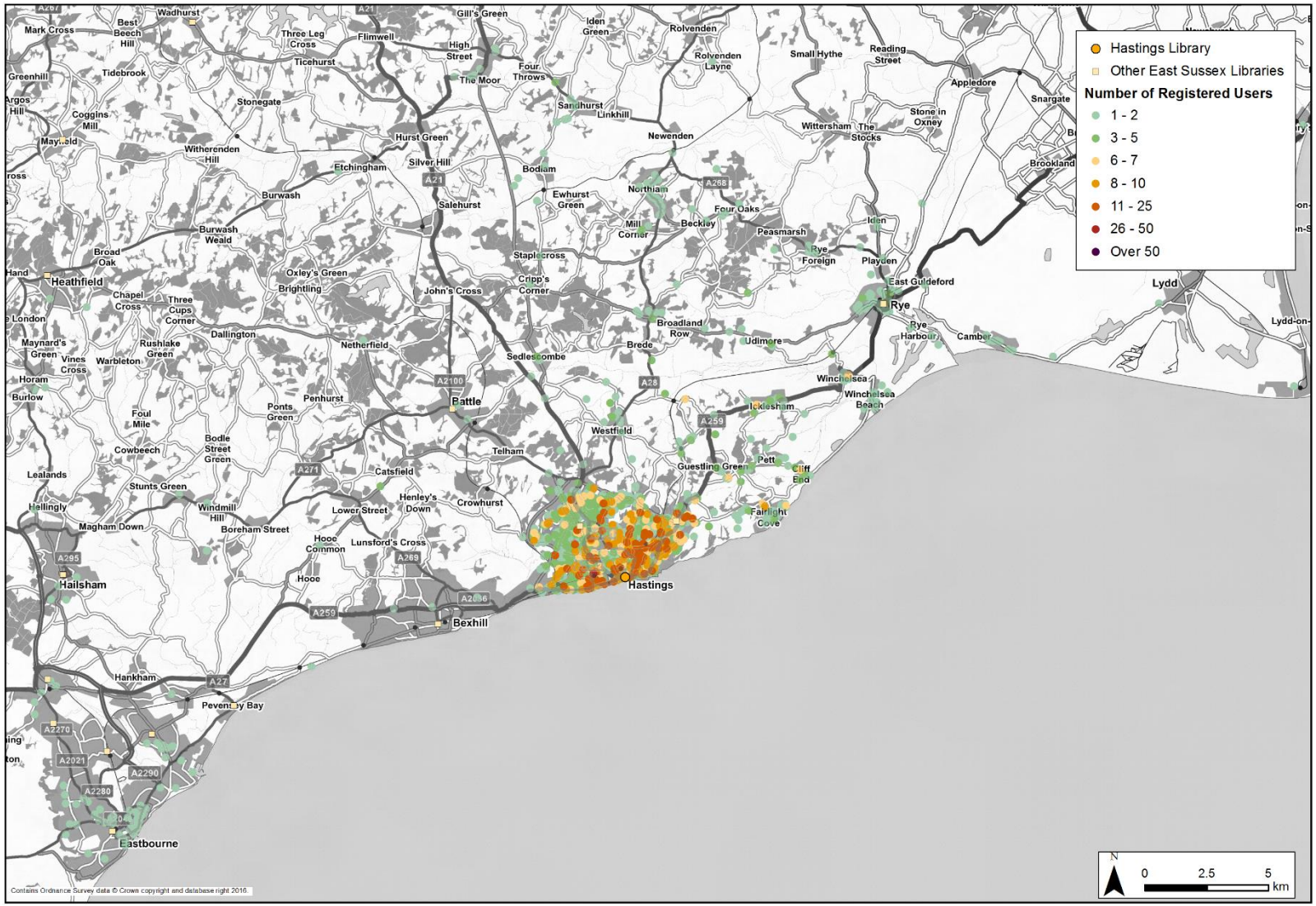


Figure A9: Home Distribution of Registered Users at Heathfield Library

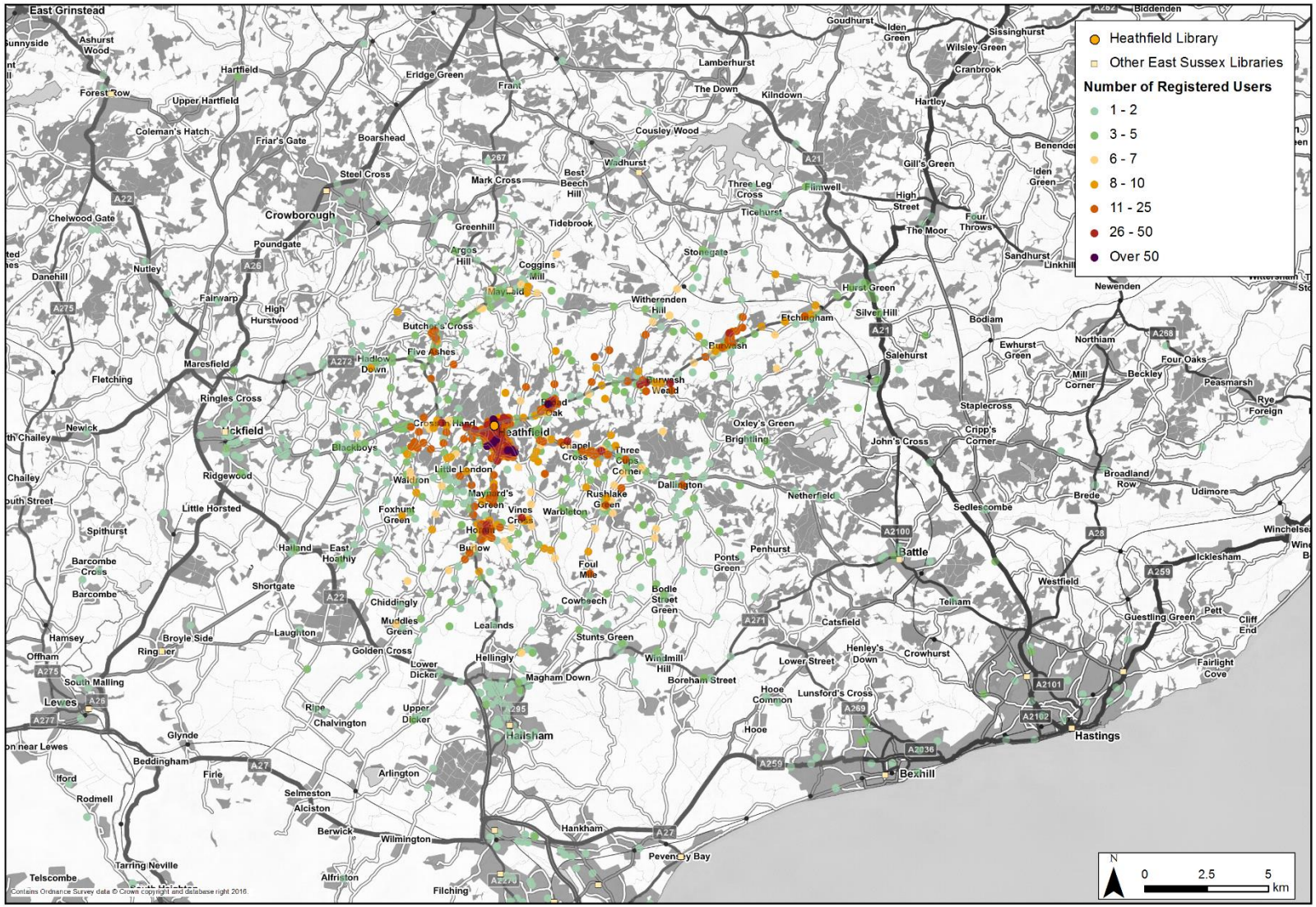


Figure A10: Home Distribution of Registered Users at Hollington Library

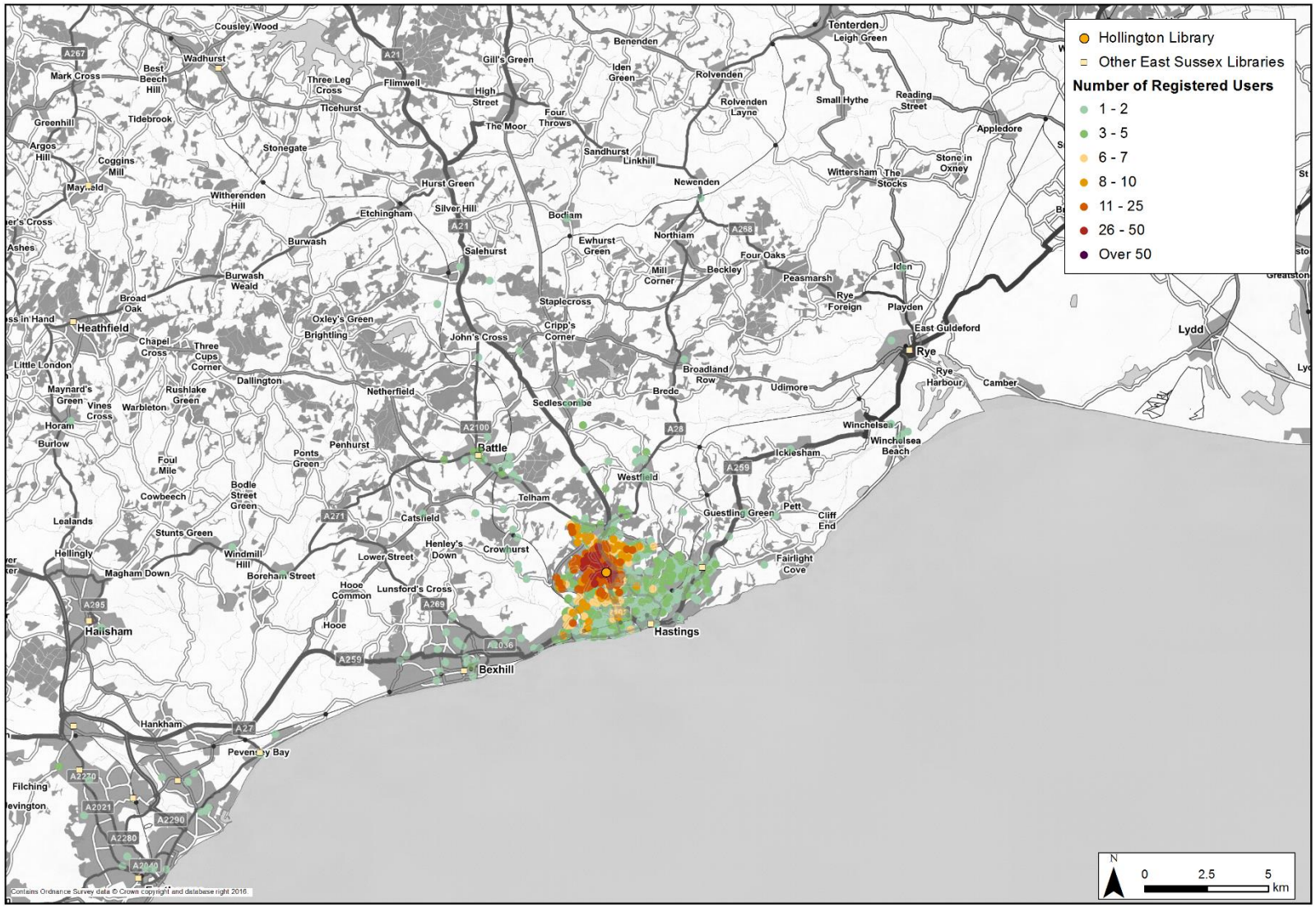


Figure A11: Home Distribution of Registered Users at Langney Library

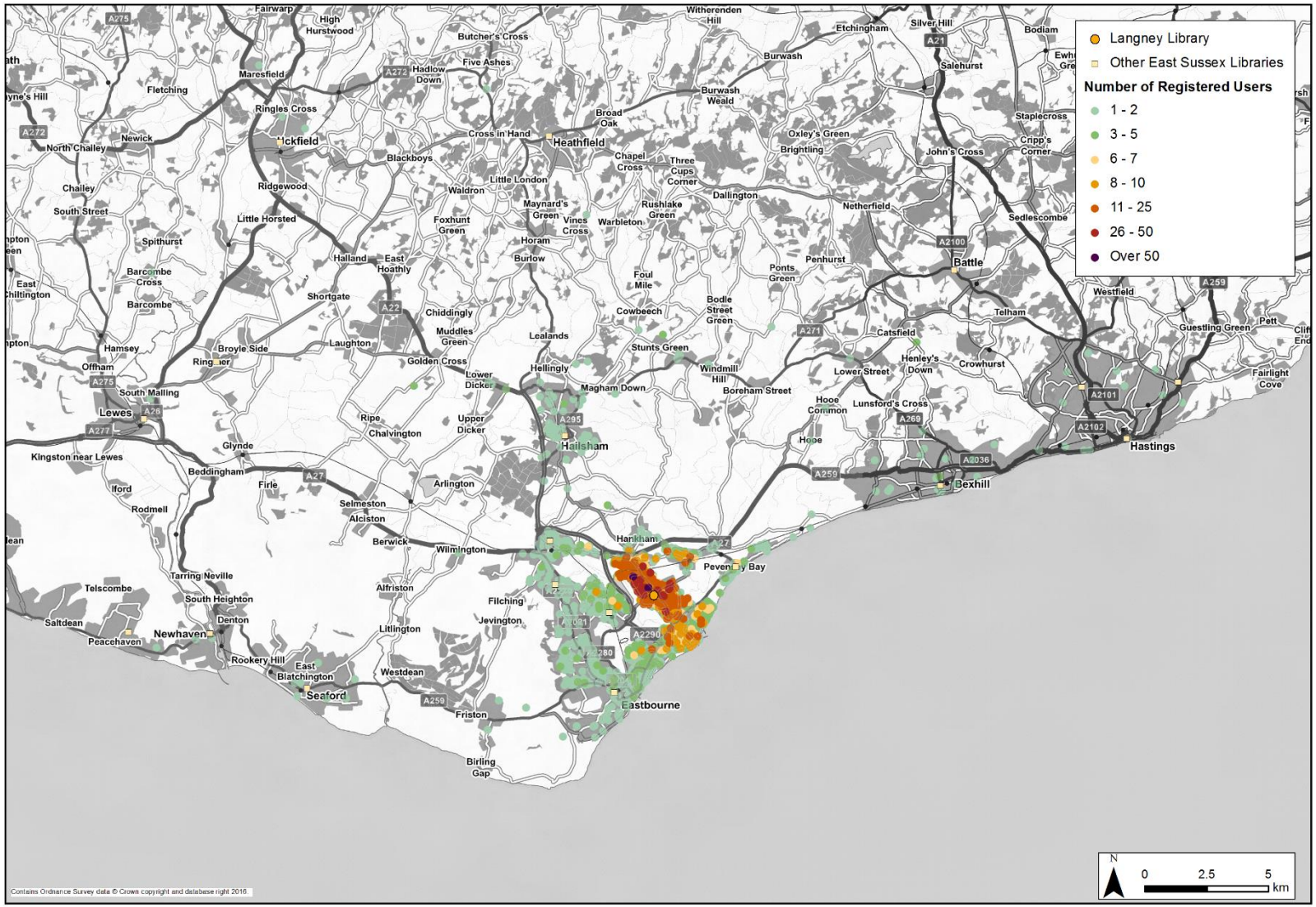


Figure A12: Home Distribution of Registered Users at Lewes Library

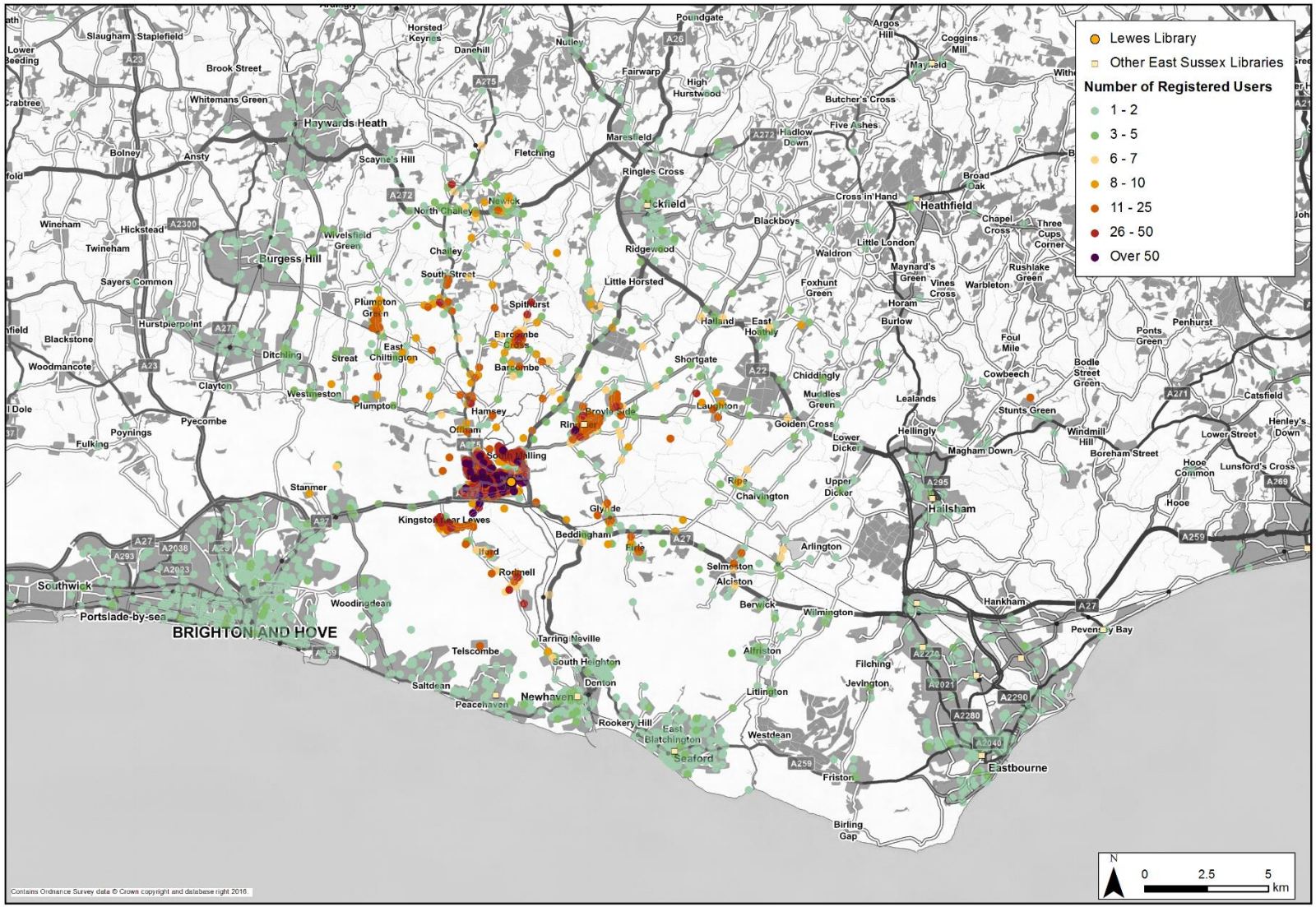


Figure A13: Home Distribution of Registered Users at Mayfield Library

Figure A14: Home Distribution of Registered Users at Newhaven Library

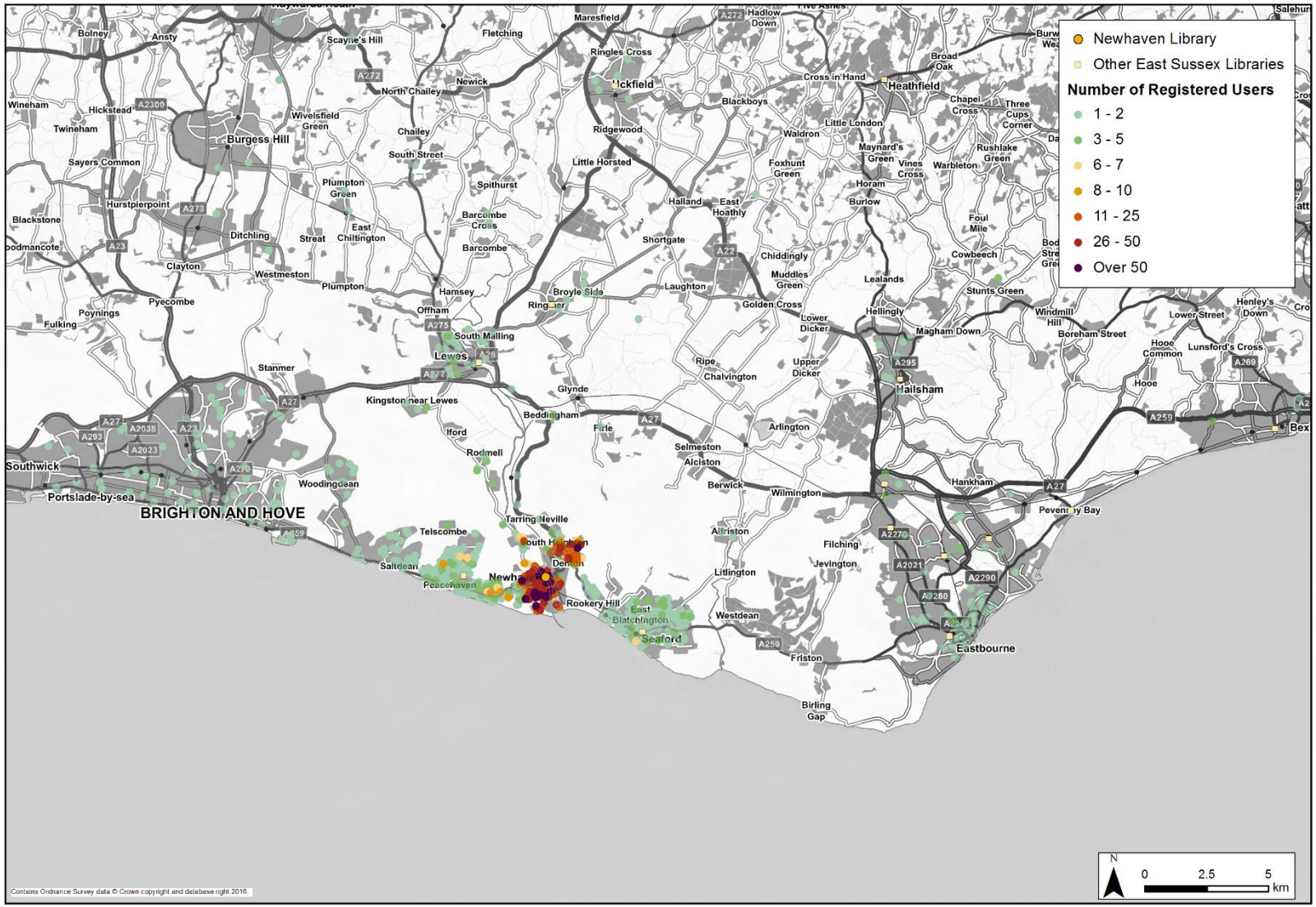


Figure A15: Home Distribution of Registered Users at Ore Library

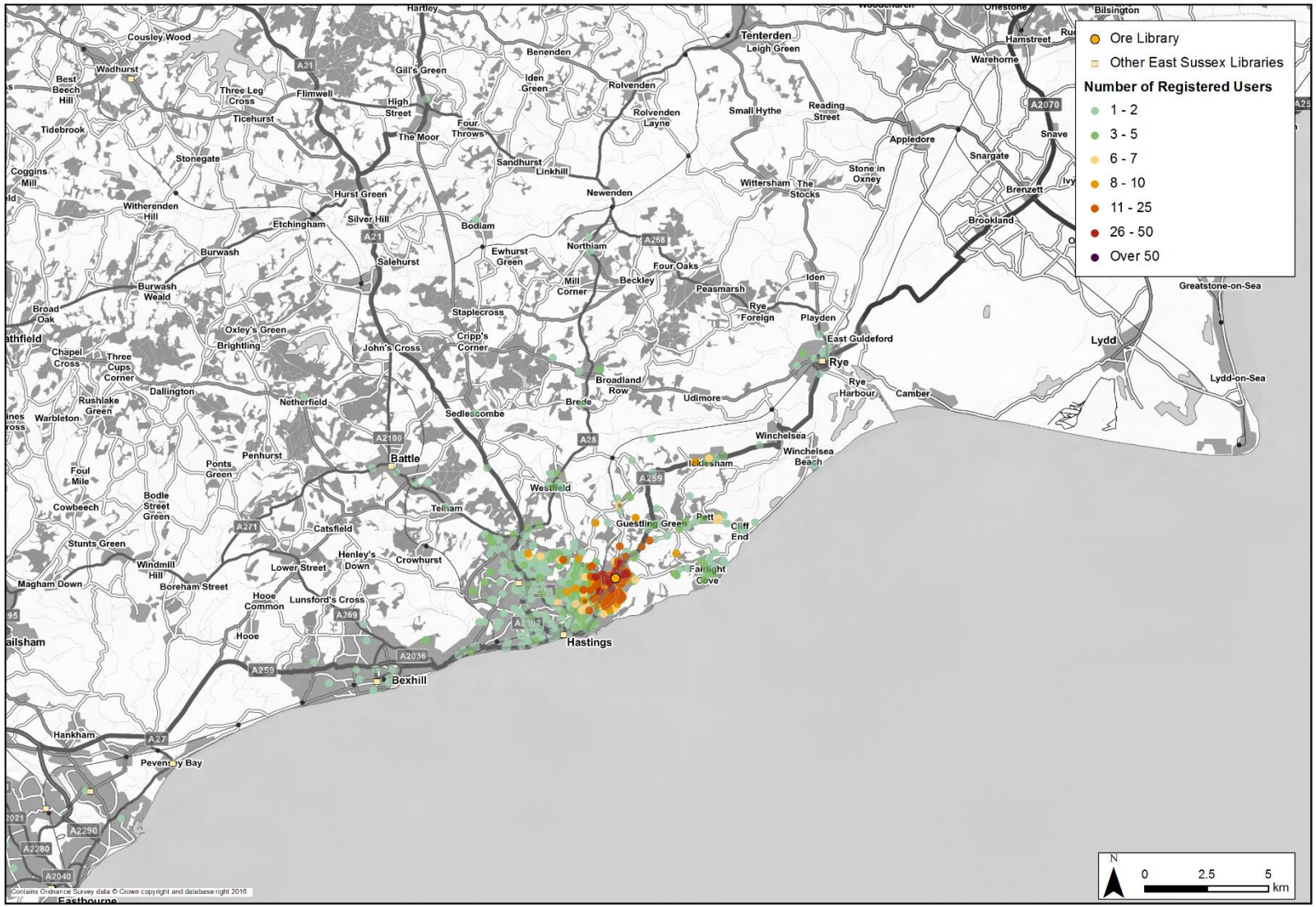


Figure A16: Home Distribution of Registered Users at Peacehaven Library

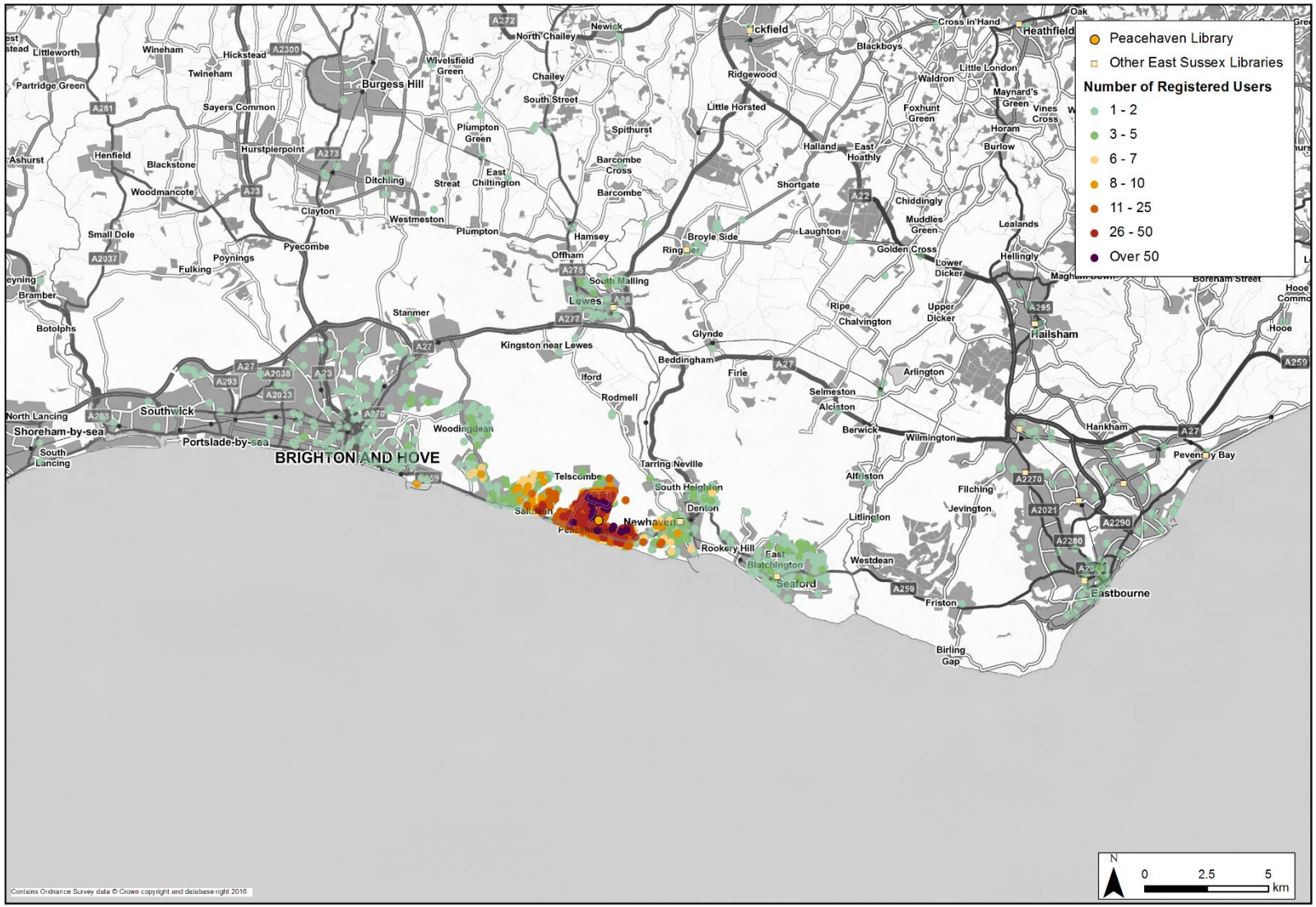


Figure A17: Home Distribution of Registered Users at Pevensey Bay Library

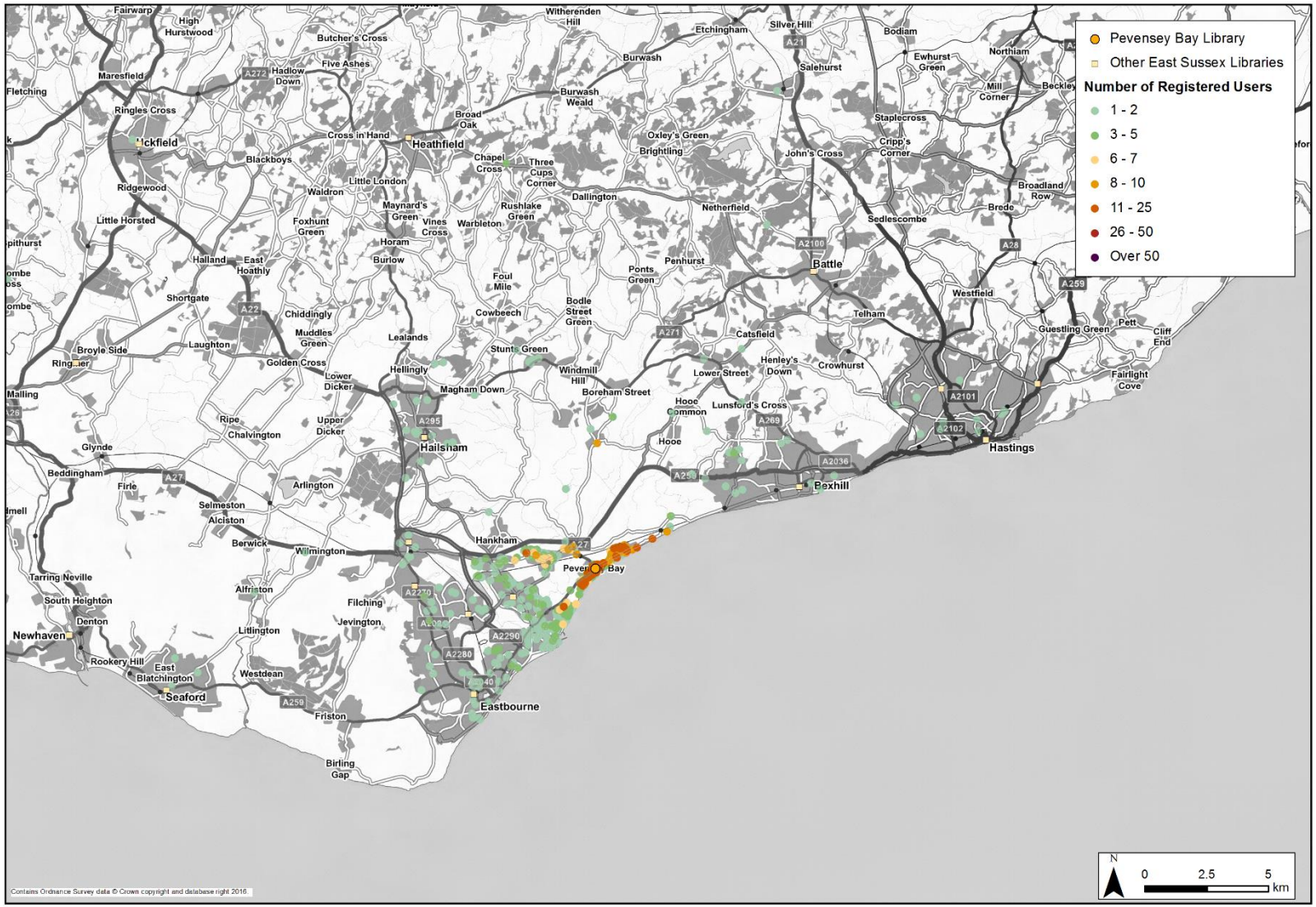


Figure A18: Home Distribution of Registered Users at Polegate Library

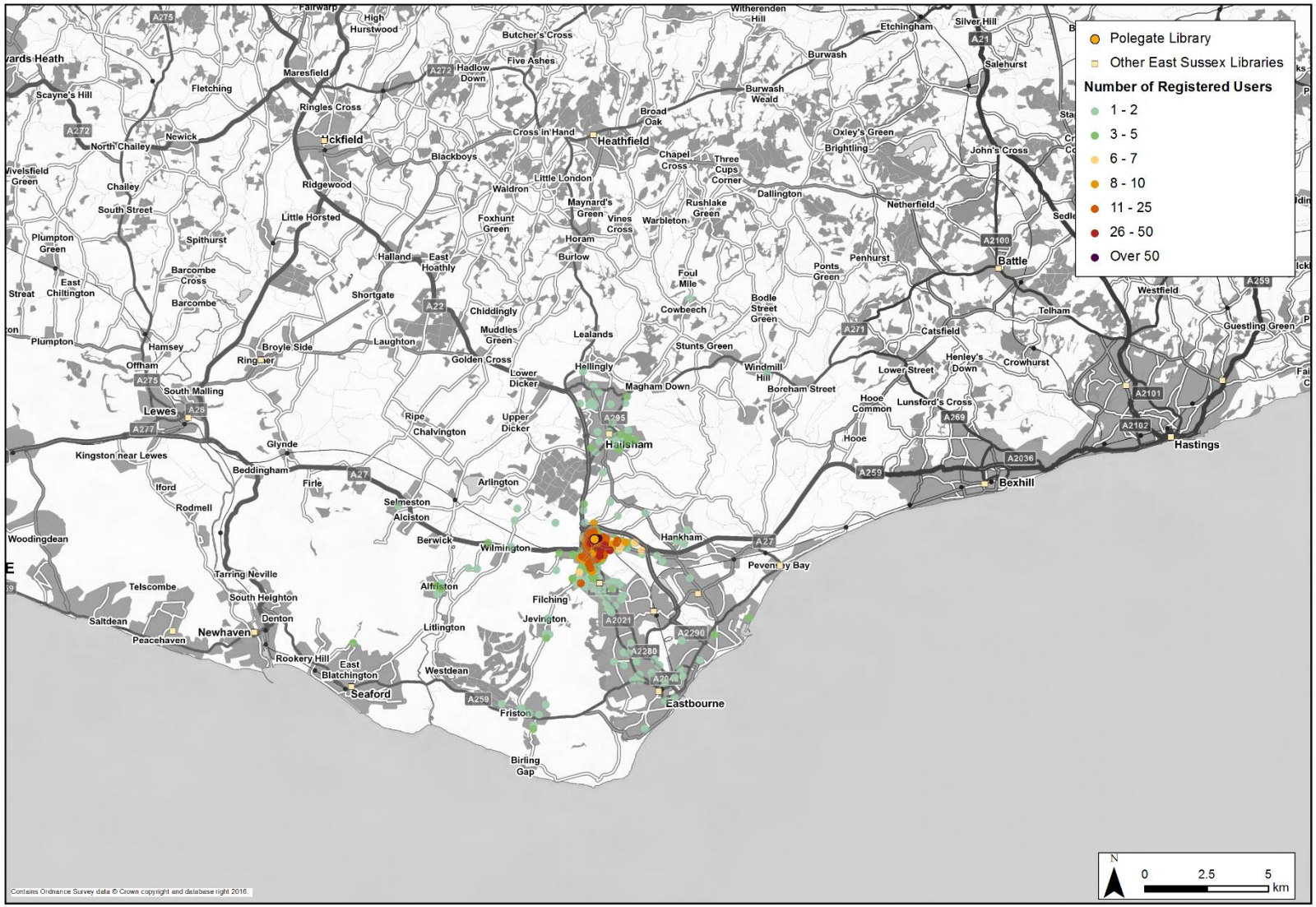


Figure A19: Home Distribution of Registered Users at Ringmer Library

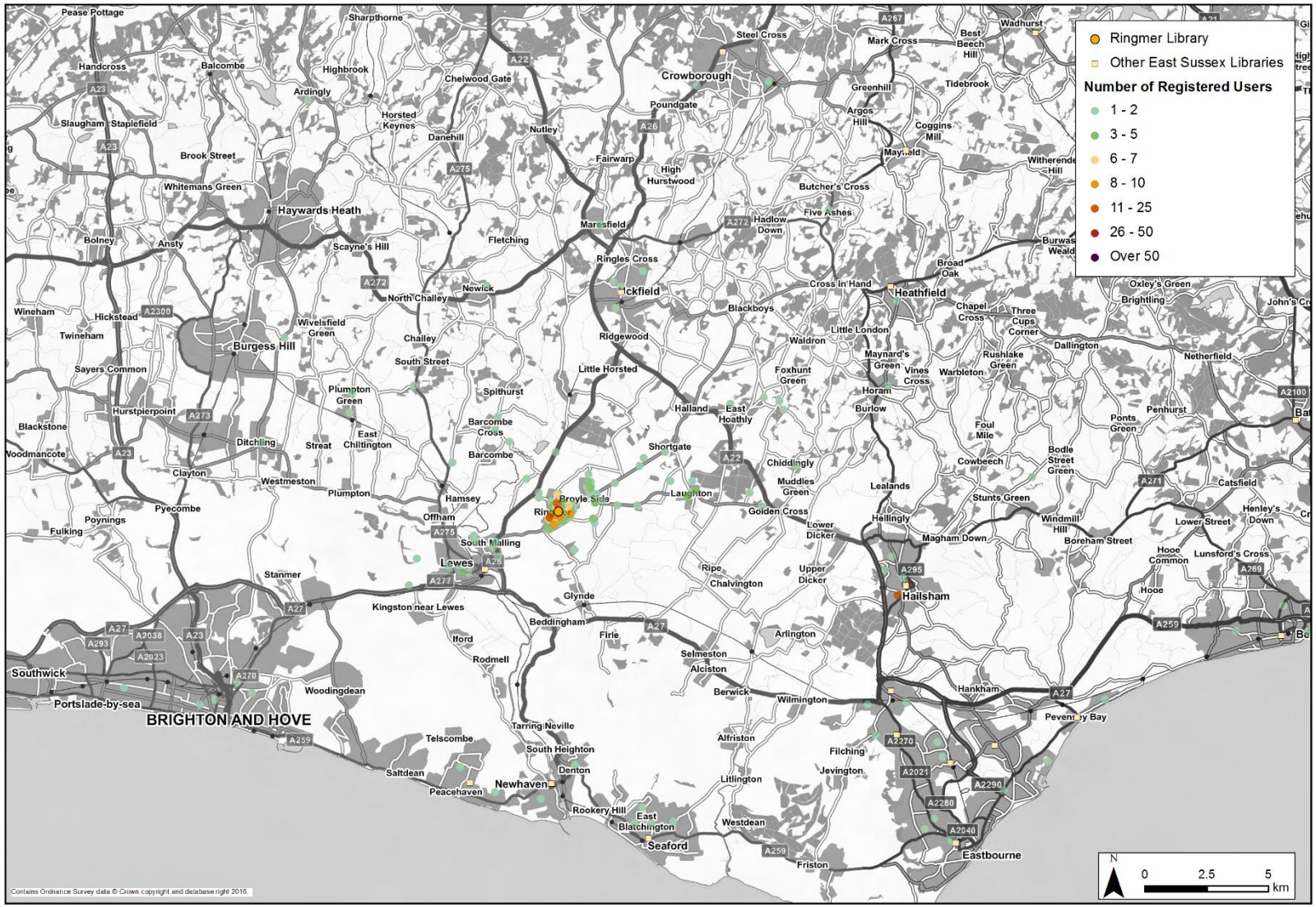


Figure A20: Home Distribution of Registered Users at Rye Library

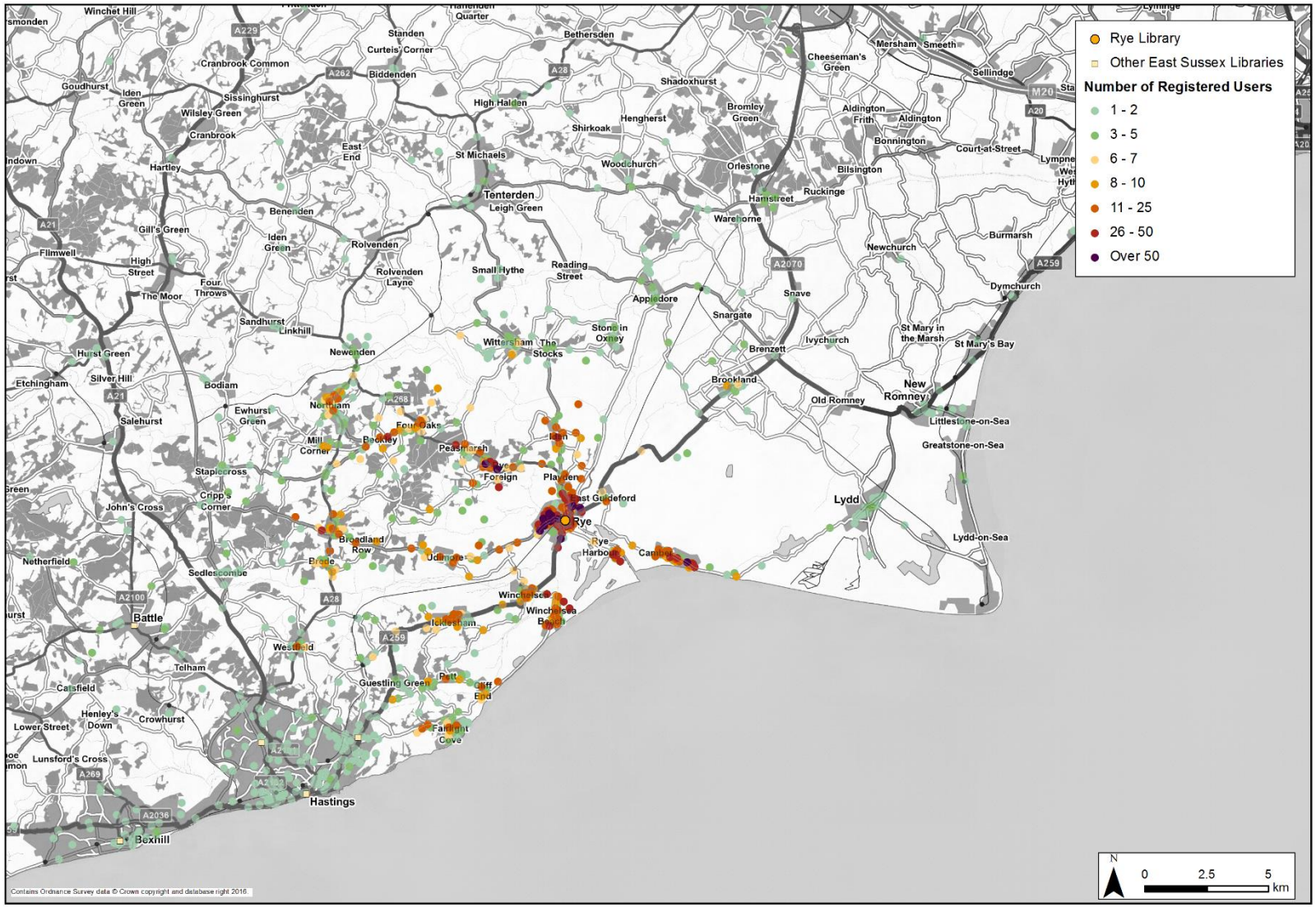


Figure A21: Home Distribution of Registered Users at Seaford Library

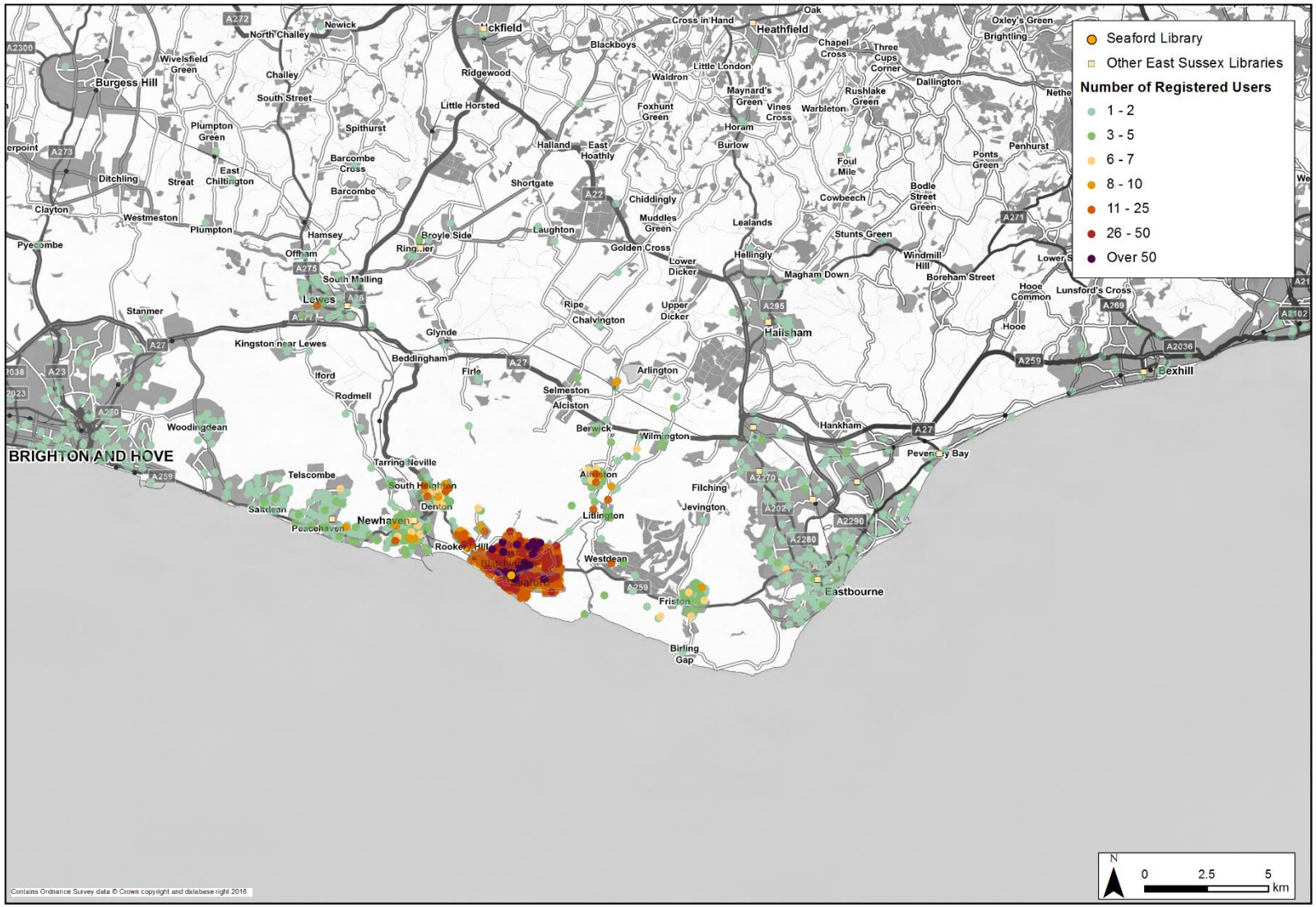


Figure A22: Home Distribution of Registered Users at Uckfield Library

Figure A23: Home Distribution of Registered Users at Wadhurst Library

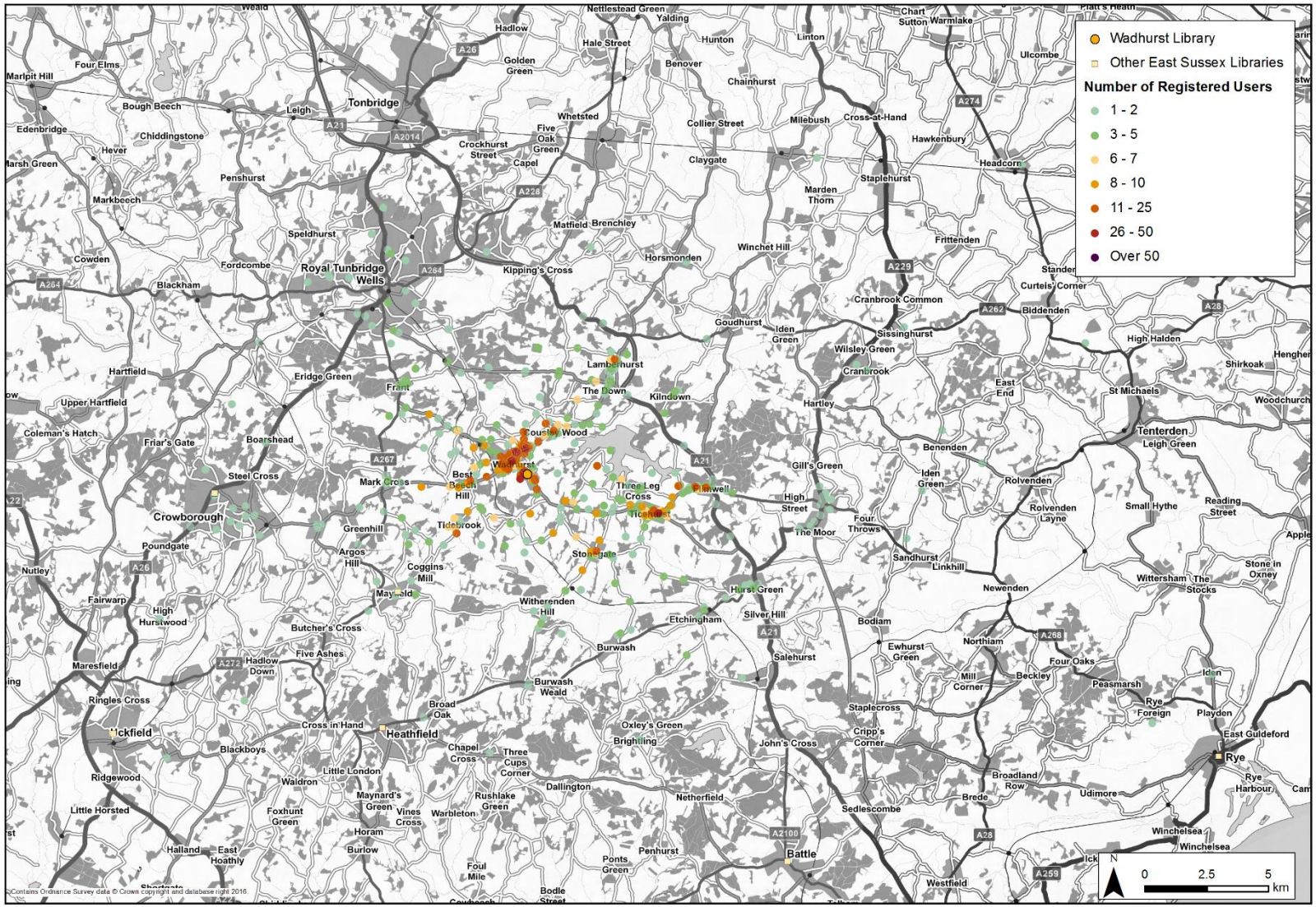
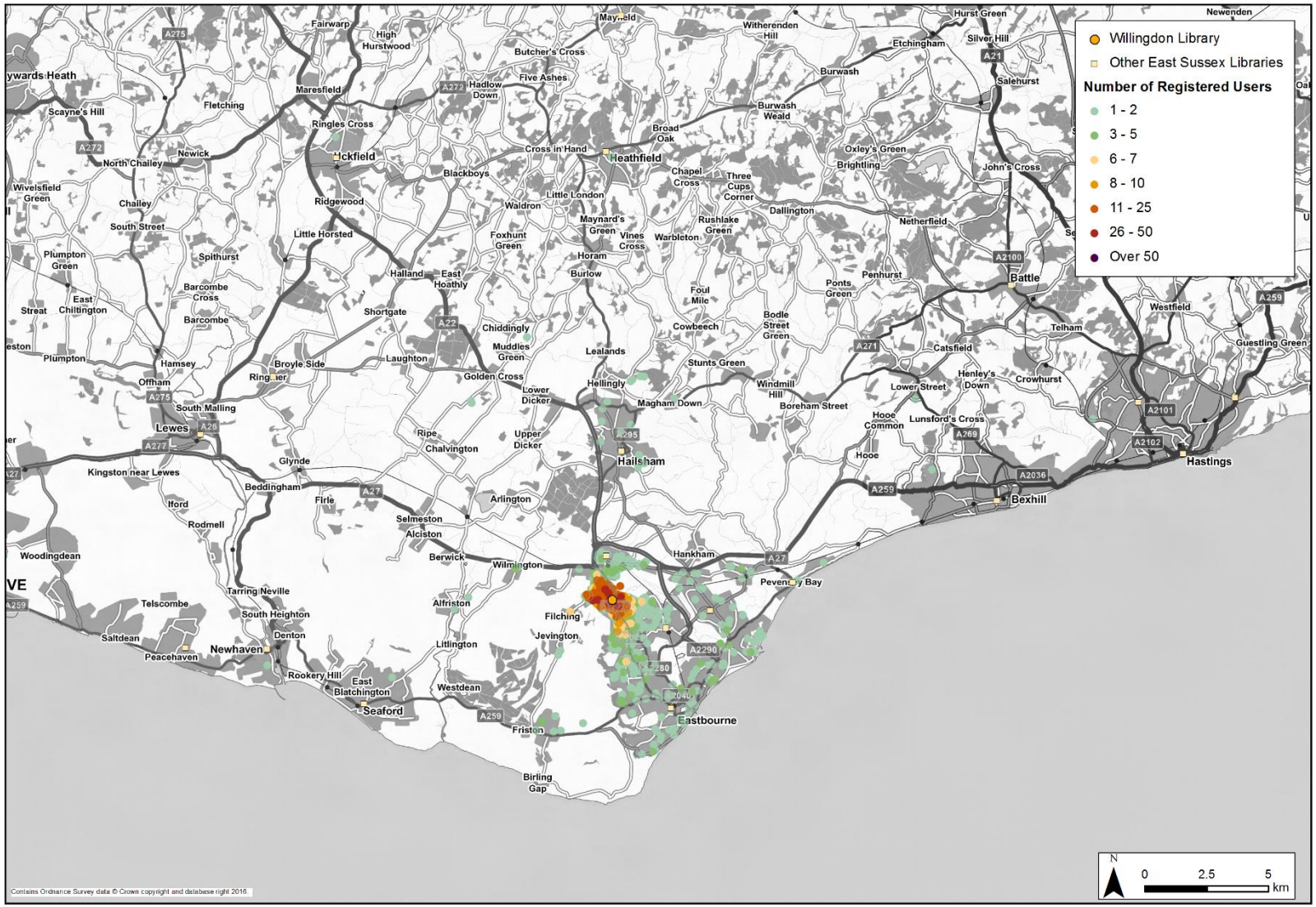


Figure A24: Home Distribution of Registered Users at Willingdon Library



Appendix B Home distribution of Active Users

Figure B1: Home Distribution of Active Users at Battle Library

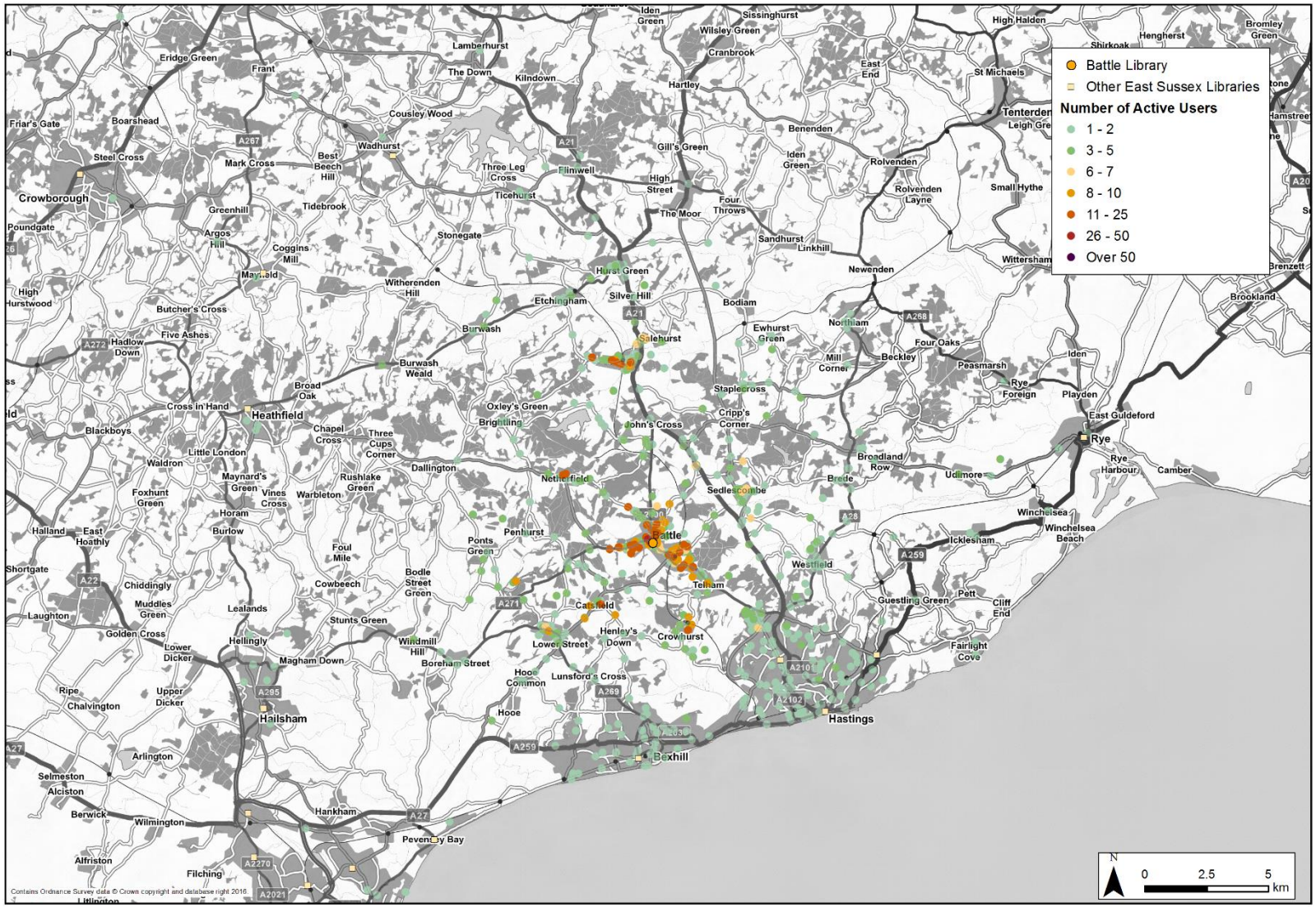


Figure B2: Home Distribution of Active Users at Bexhill Library

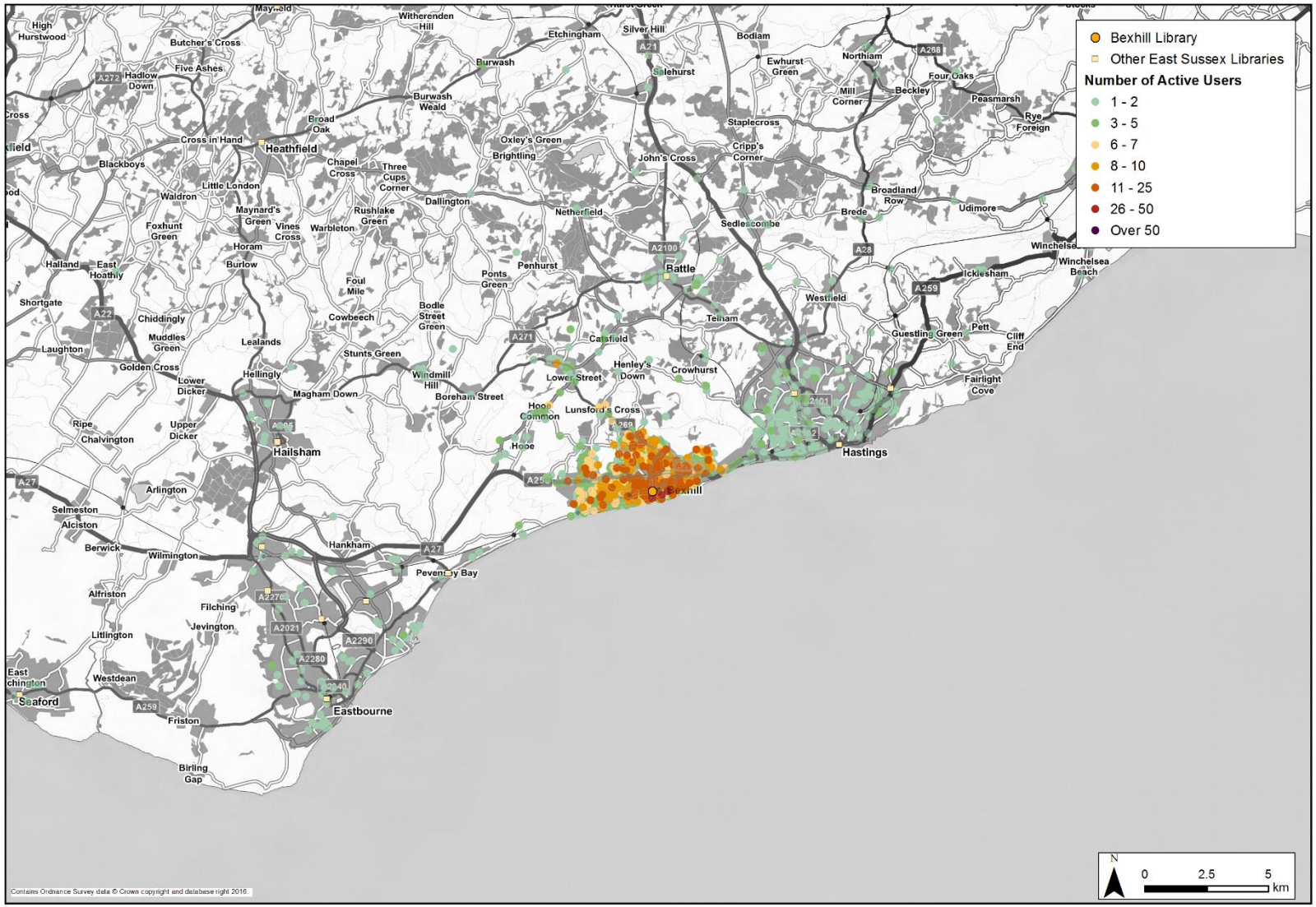


Figure B3: Home Distribution of Active Users at Crowborough Library

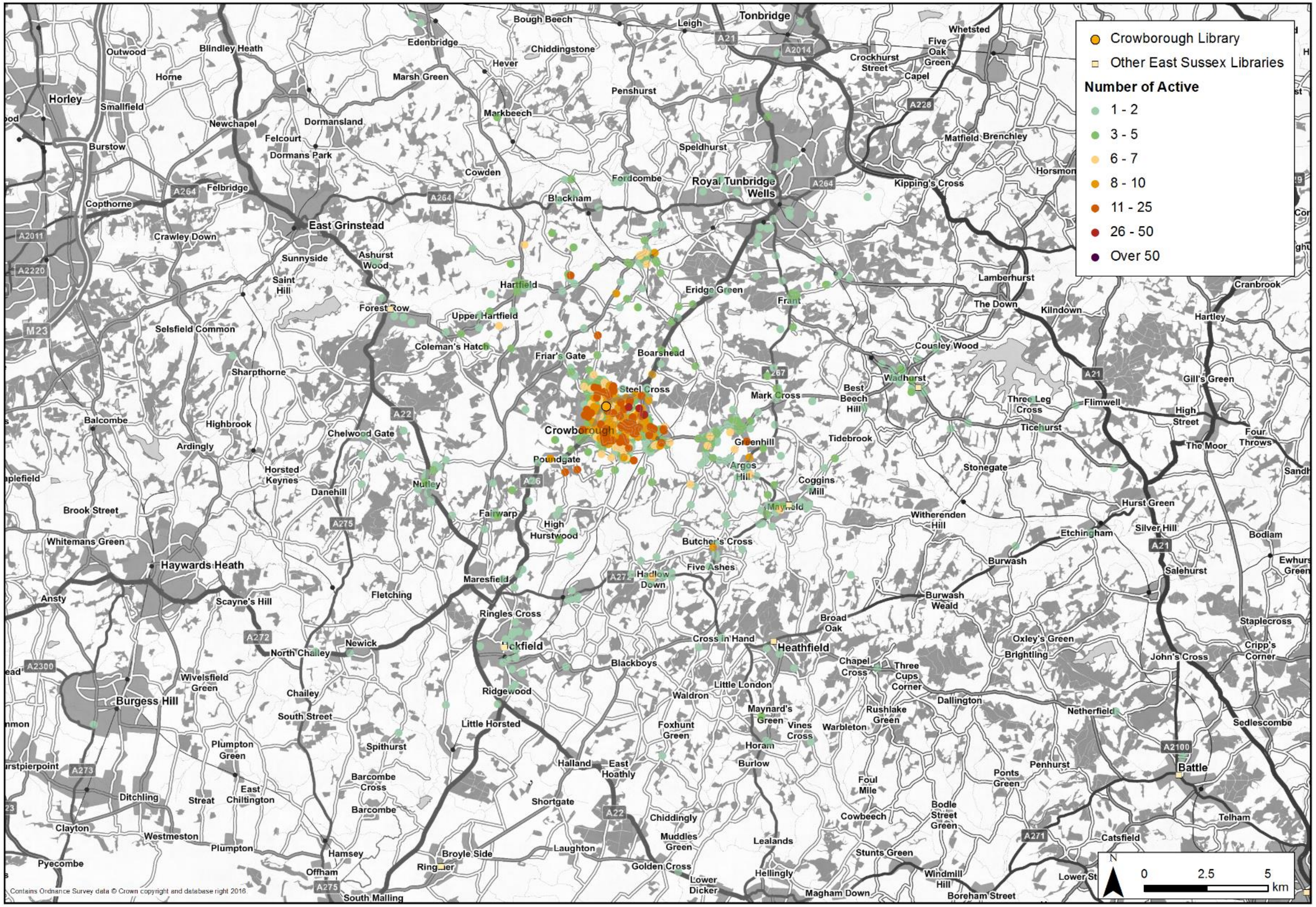


Figure B4: Home Distribution of Active Users at Eastbourne Library

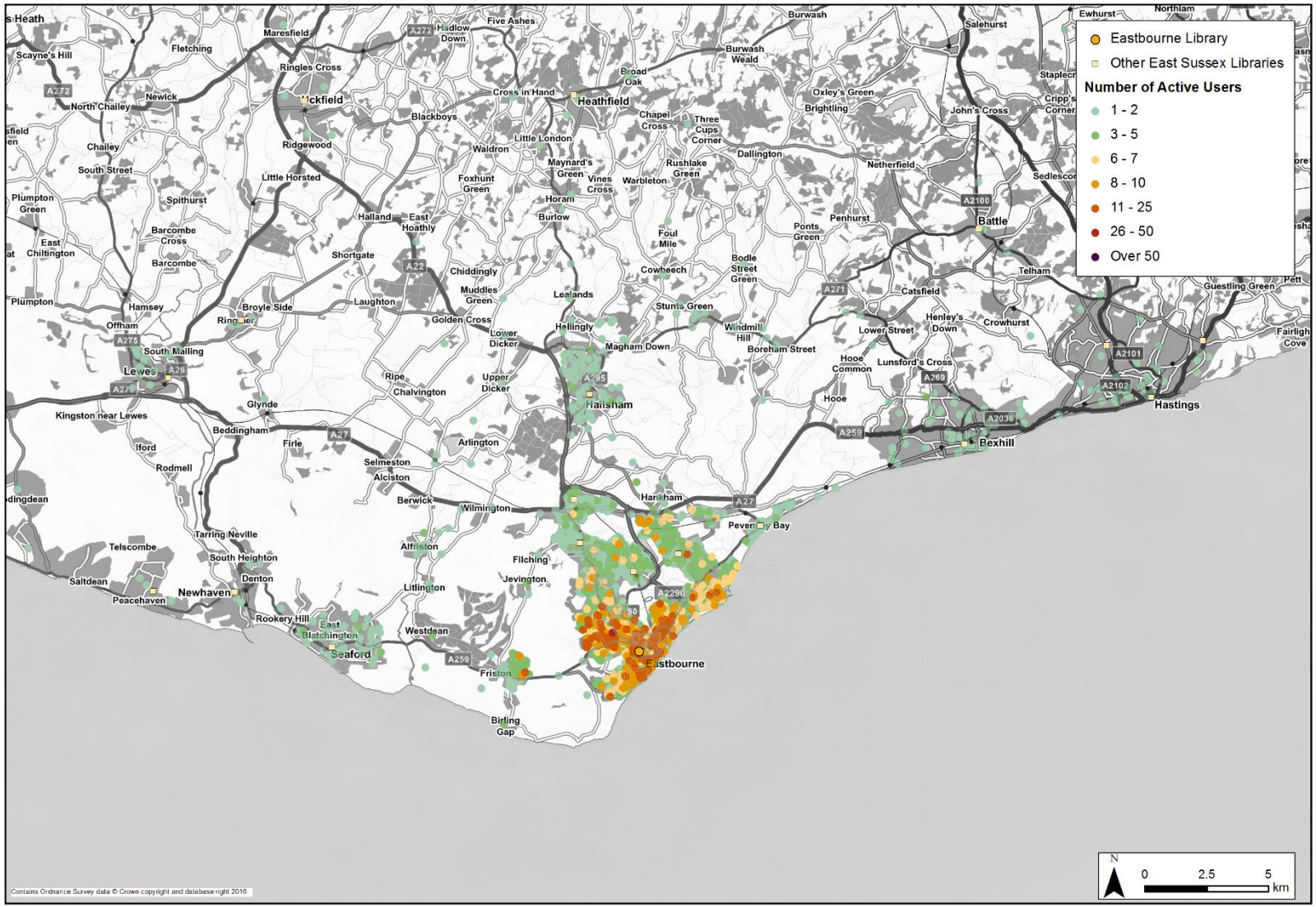


Figure B5: Home Distribution of Active Users at Forest Row Library

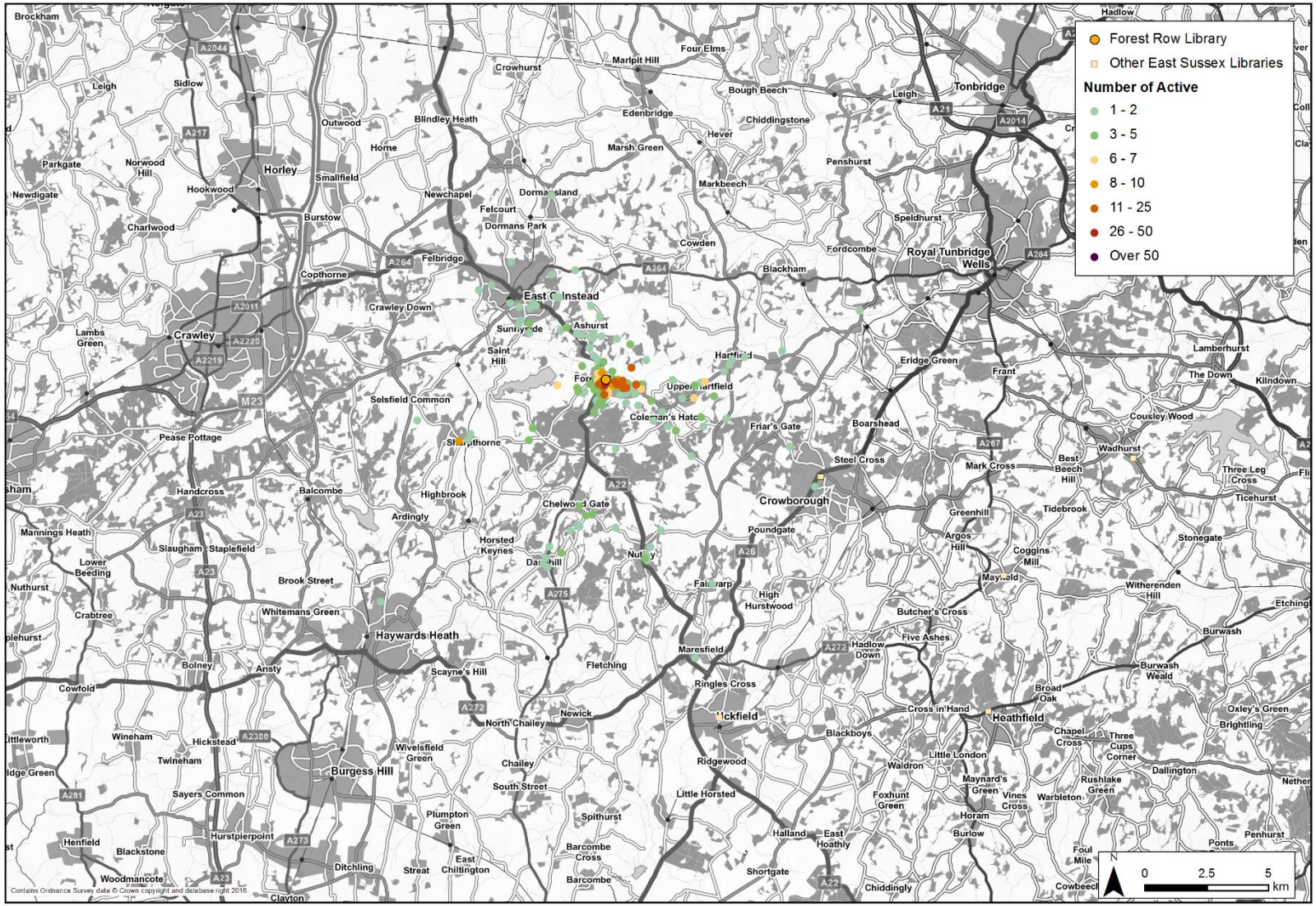


Figure B6: Home Distribution of Active Users at Hailsham Library

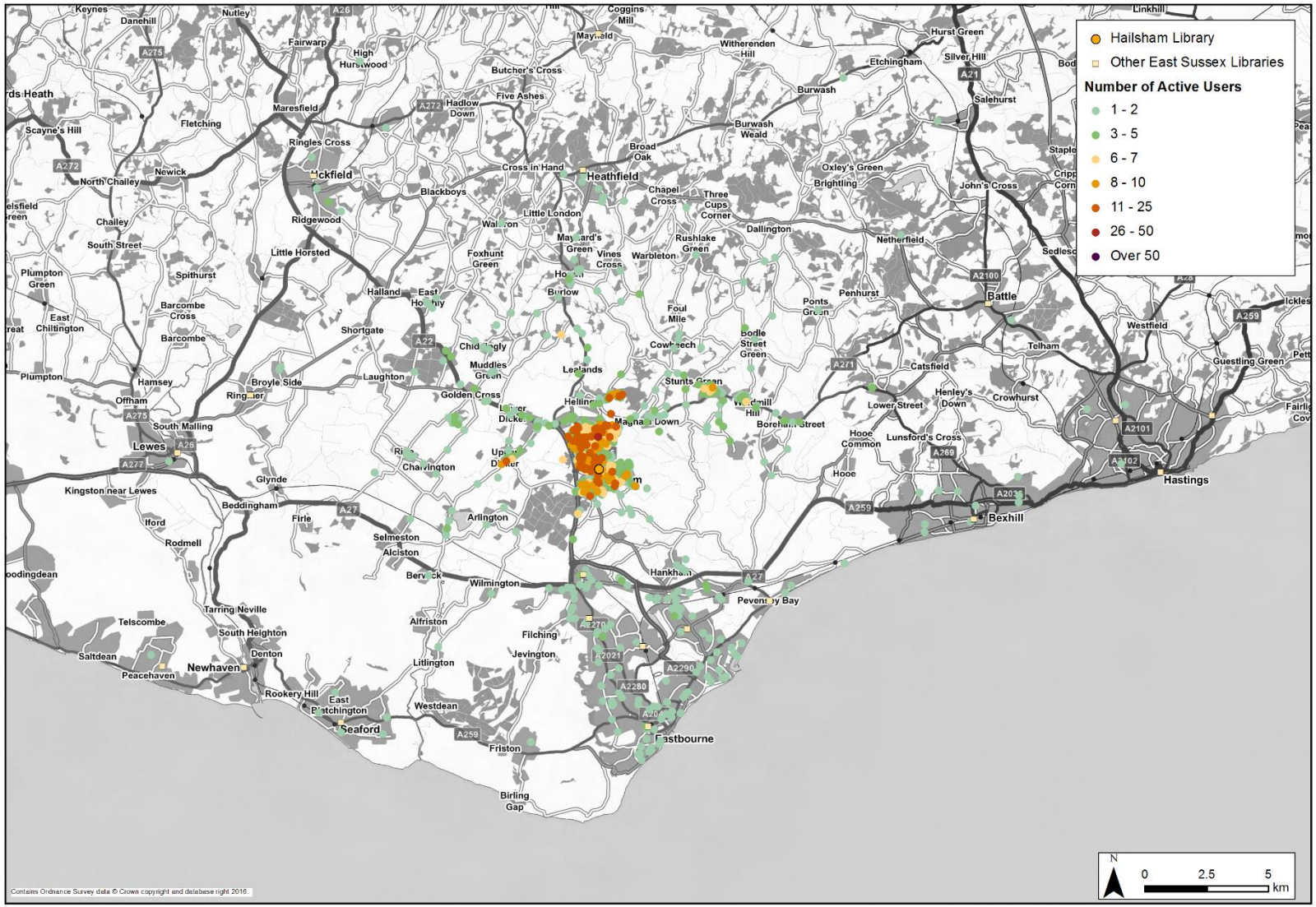


Figure B7: Home Distribution of Active Users at Hampden Park Library

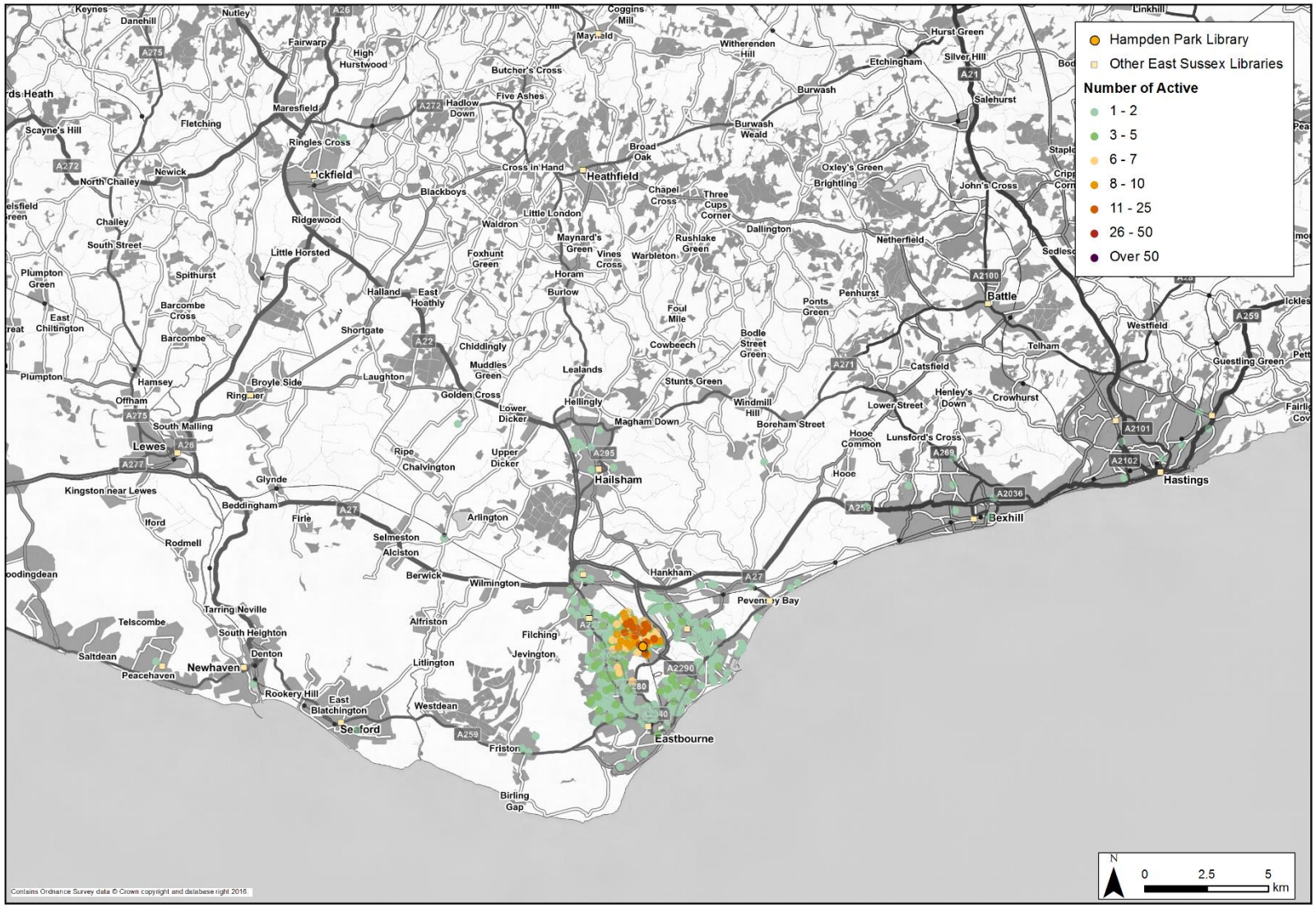


Figure B8: Home Distribution of Active Users at Hastings Library

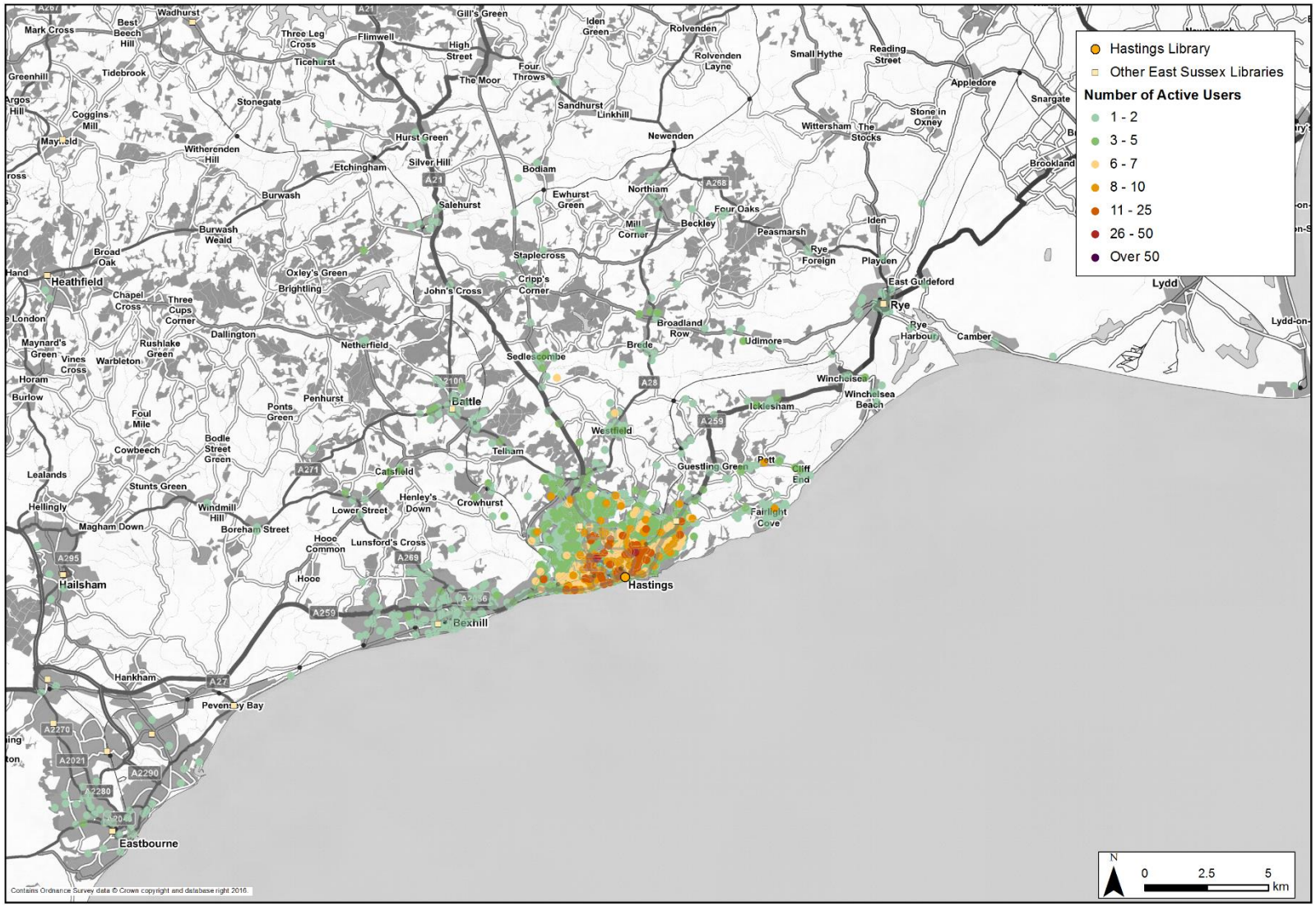


Figure B9: Home Distribution of Active Users at Heathfield Library

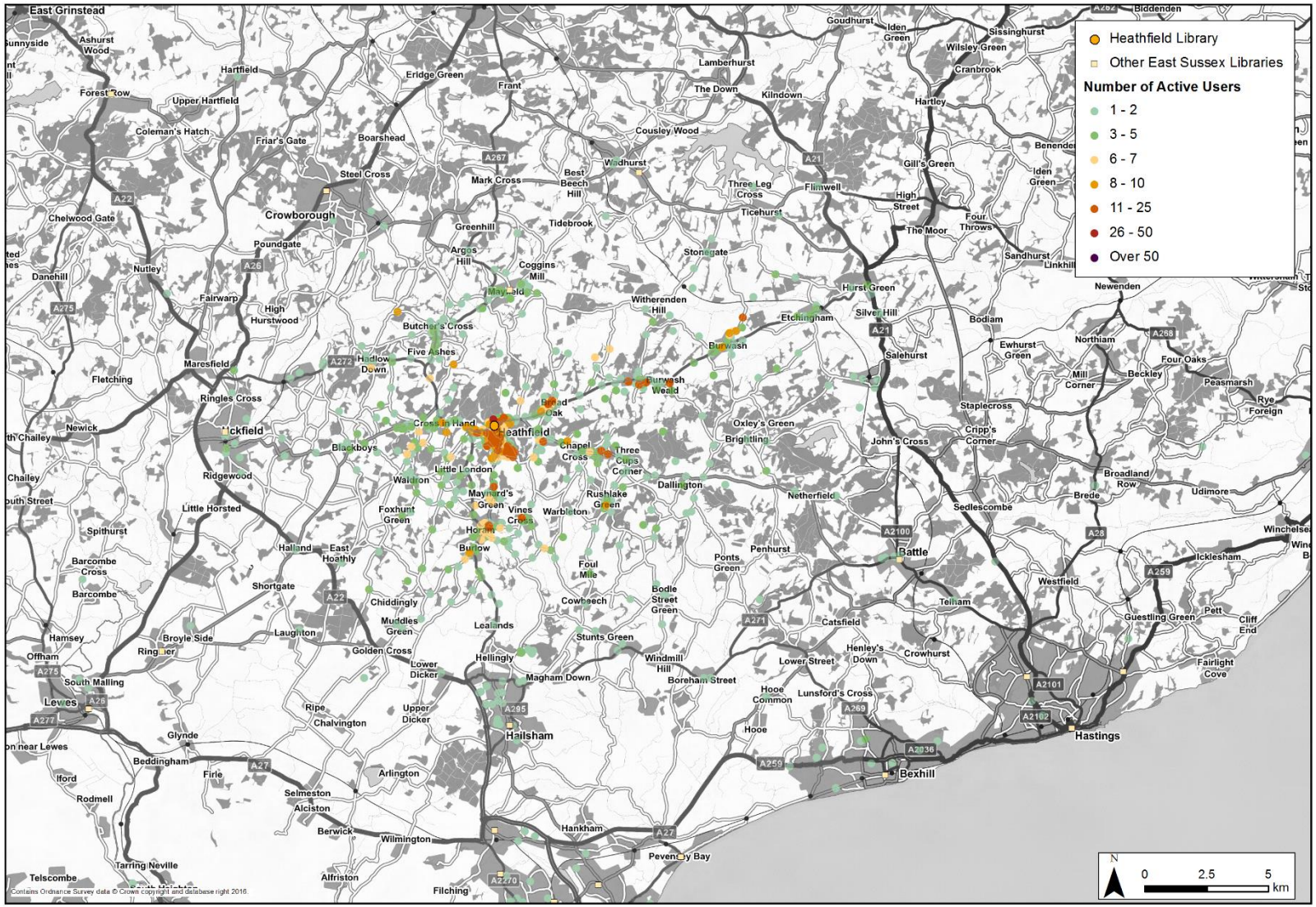


Figure B10: Home Distribution of Active Users at Hollington Library

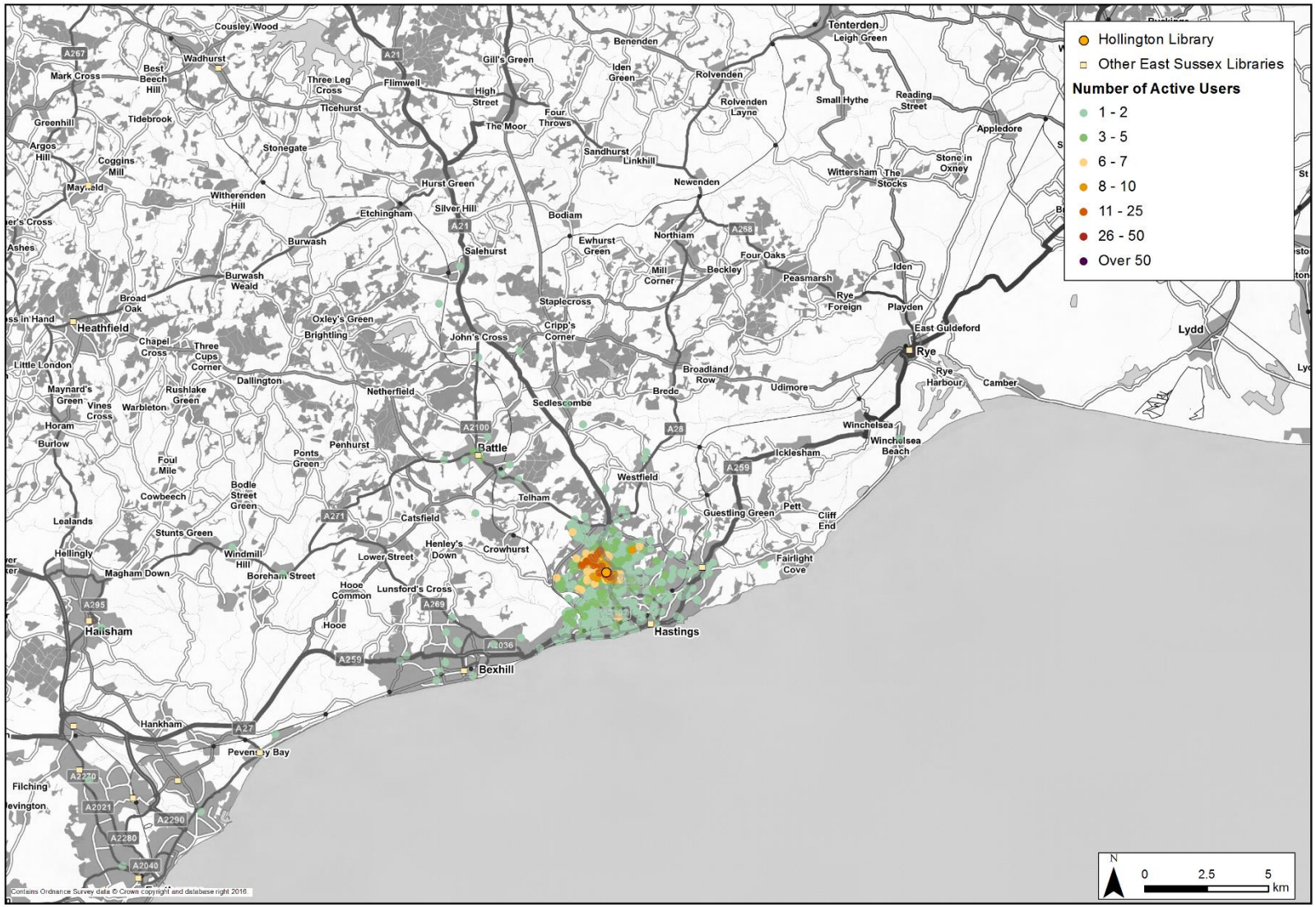


Figure B11: Home Distribution of Active Users at Langney Library

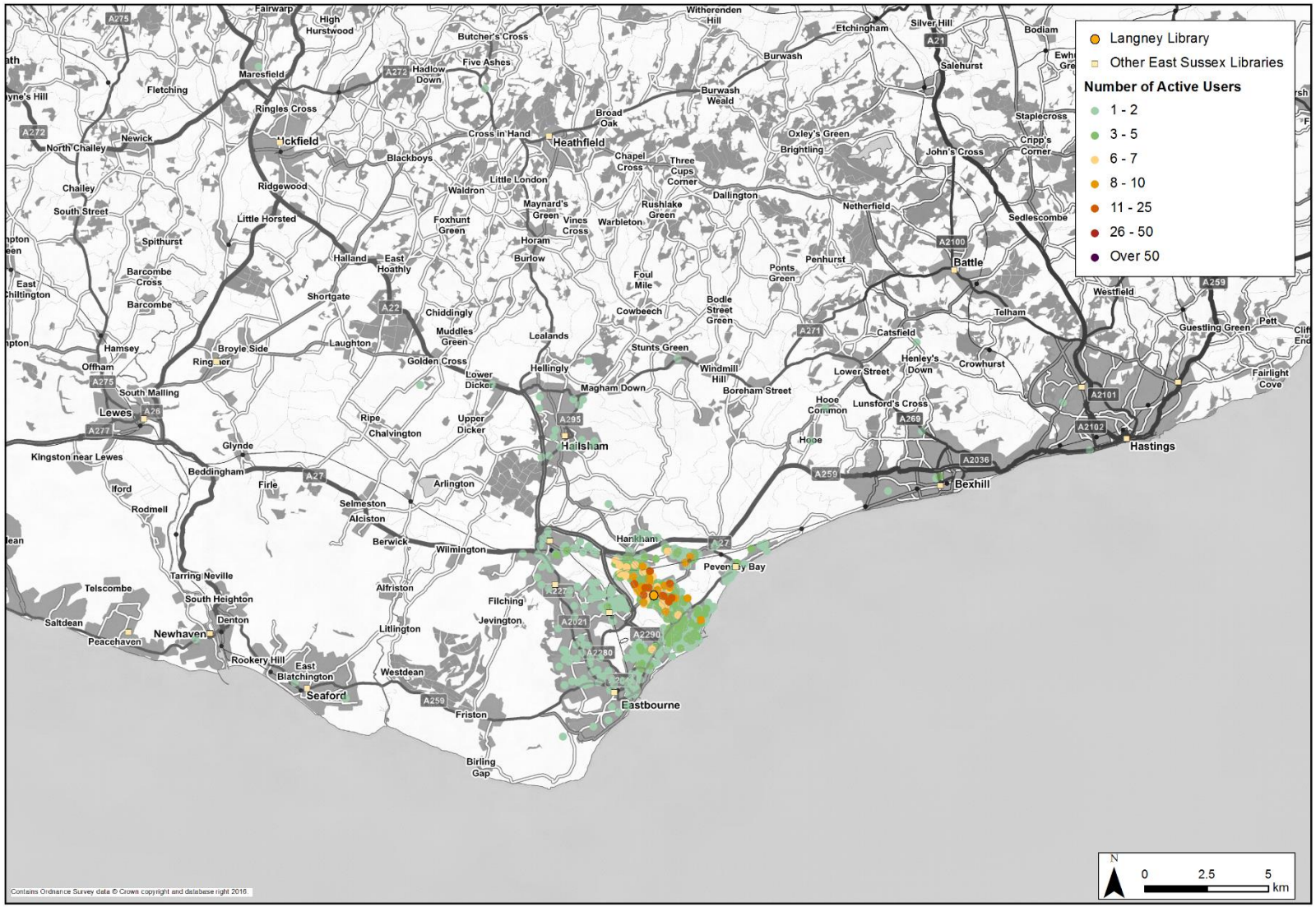


Figure B12: Home Distribution of Active Users at Lewes Library

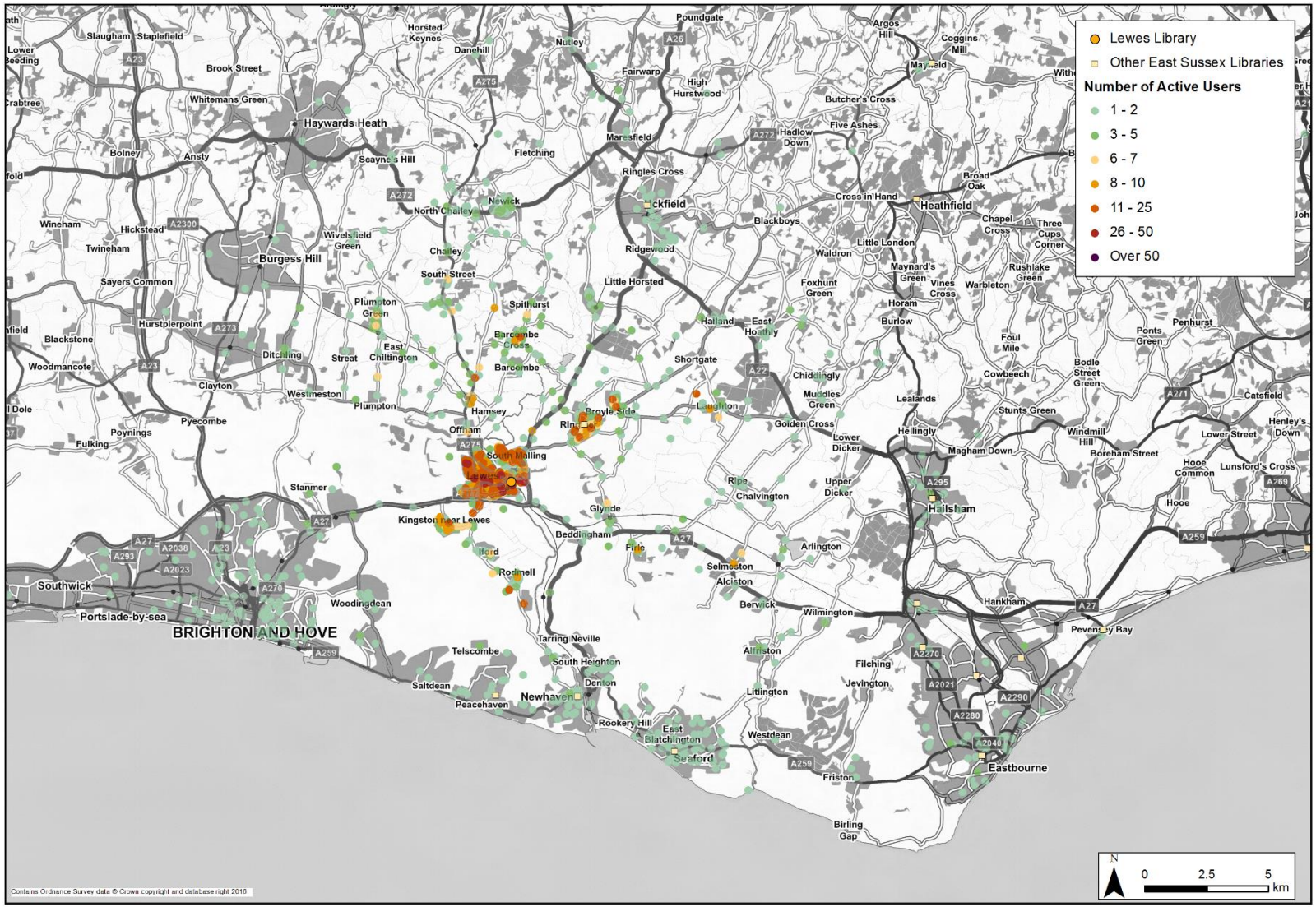


Figure B13: Home Distribution of Active Users at Mayfield Library

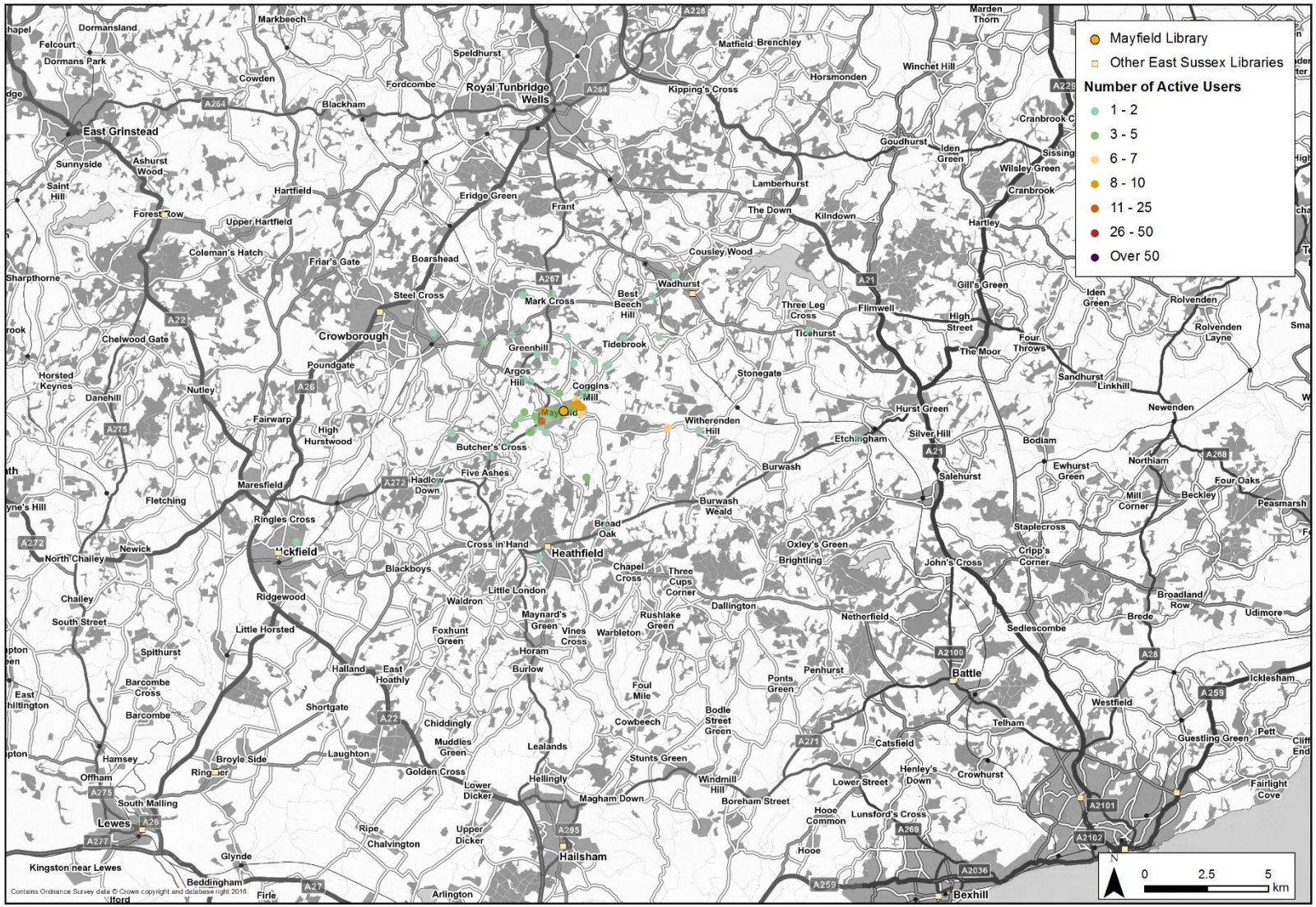


Figure B14: Home Distribution of Active Users at Newhaven Library

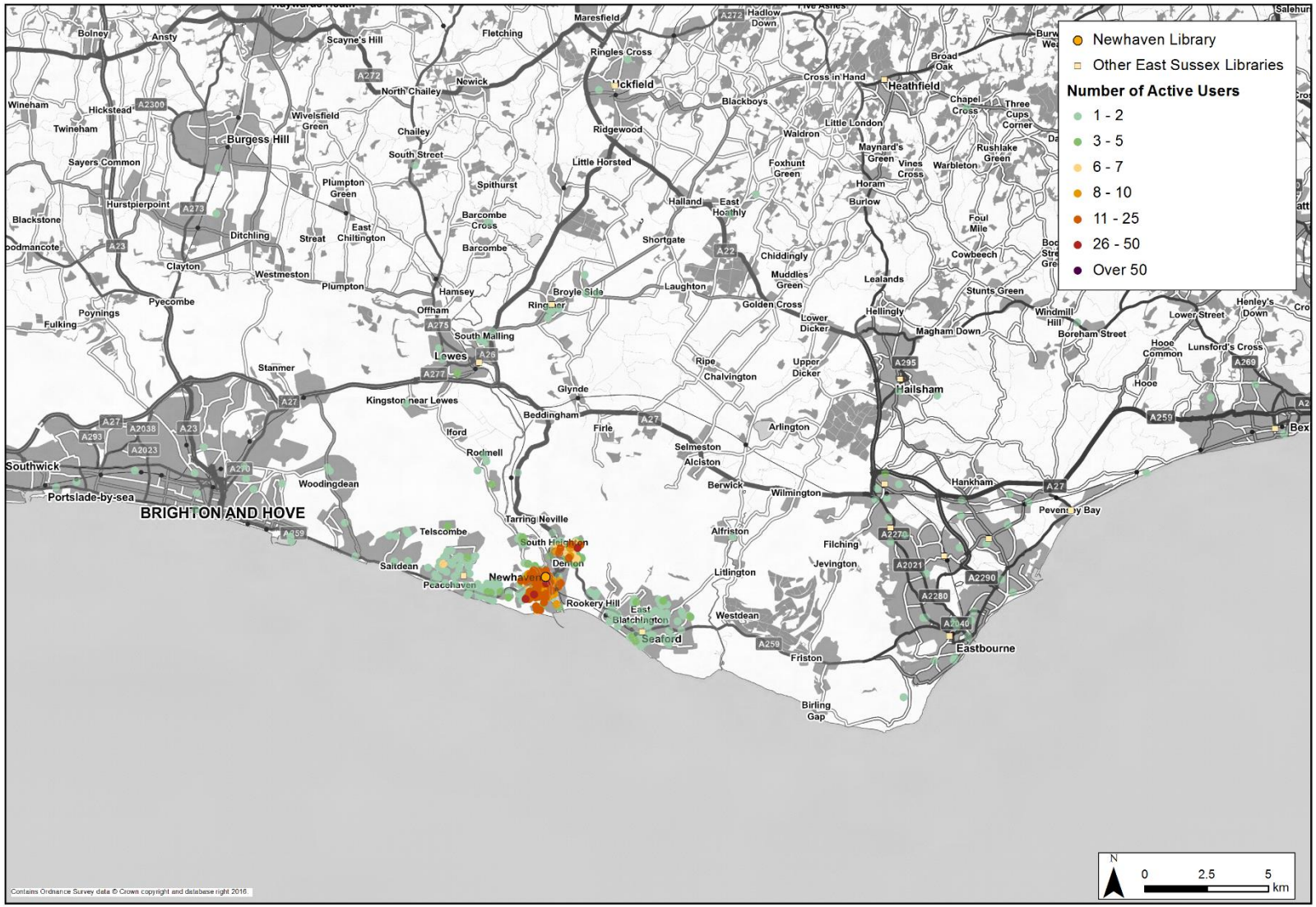


Figure B15: Home Distribution of Active Users at Ore Library

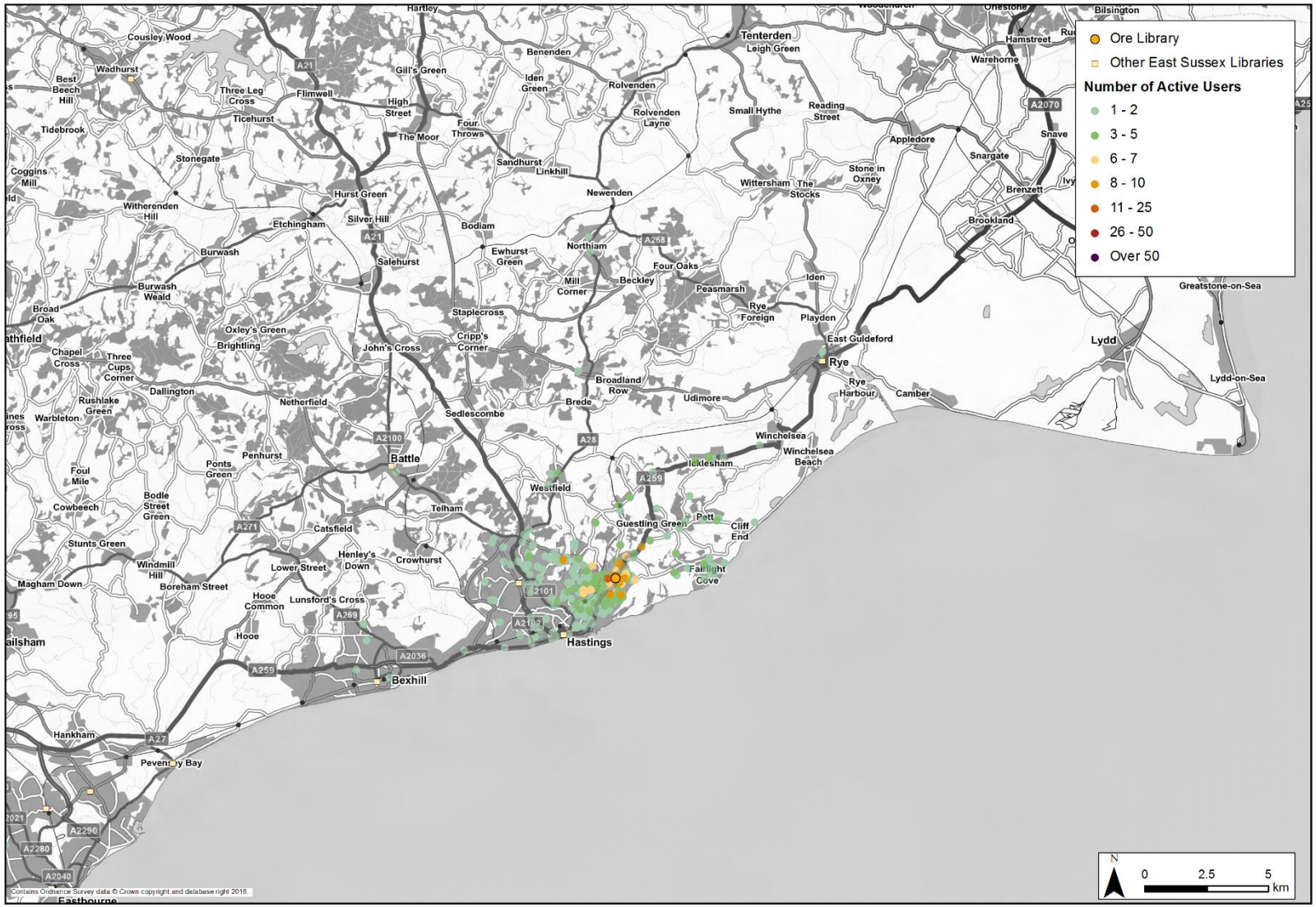


Figure B16: Home Distribution of Active Users at Peacehaven Library

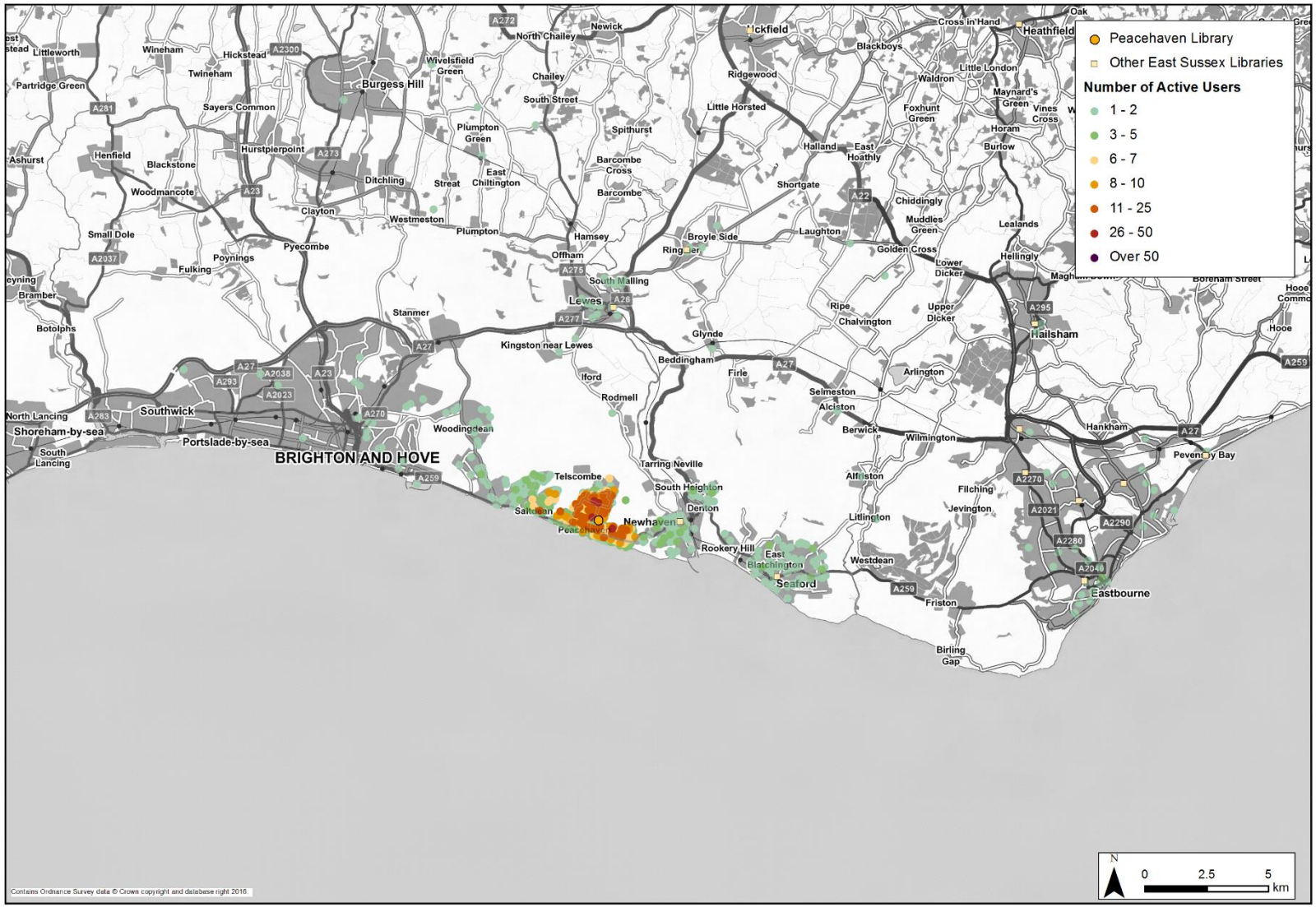


Figure B17: Home Distribution of Active Users at Pevensey Bay Library

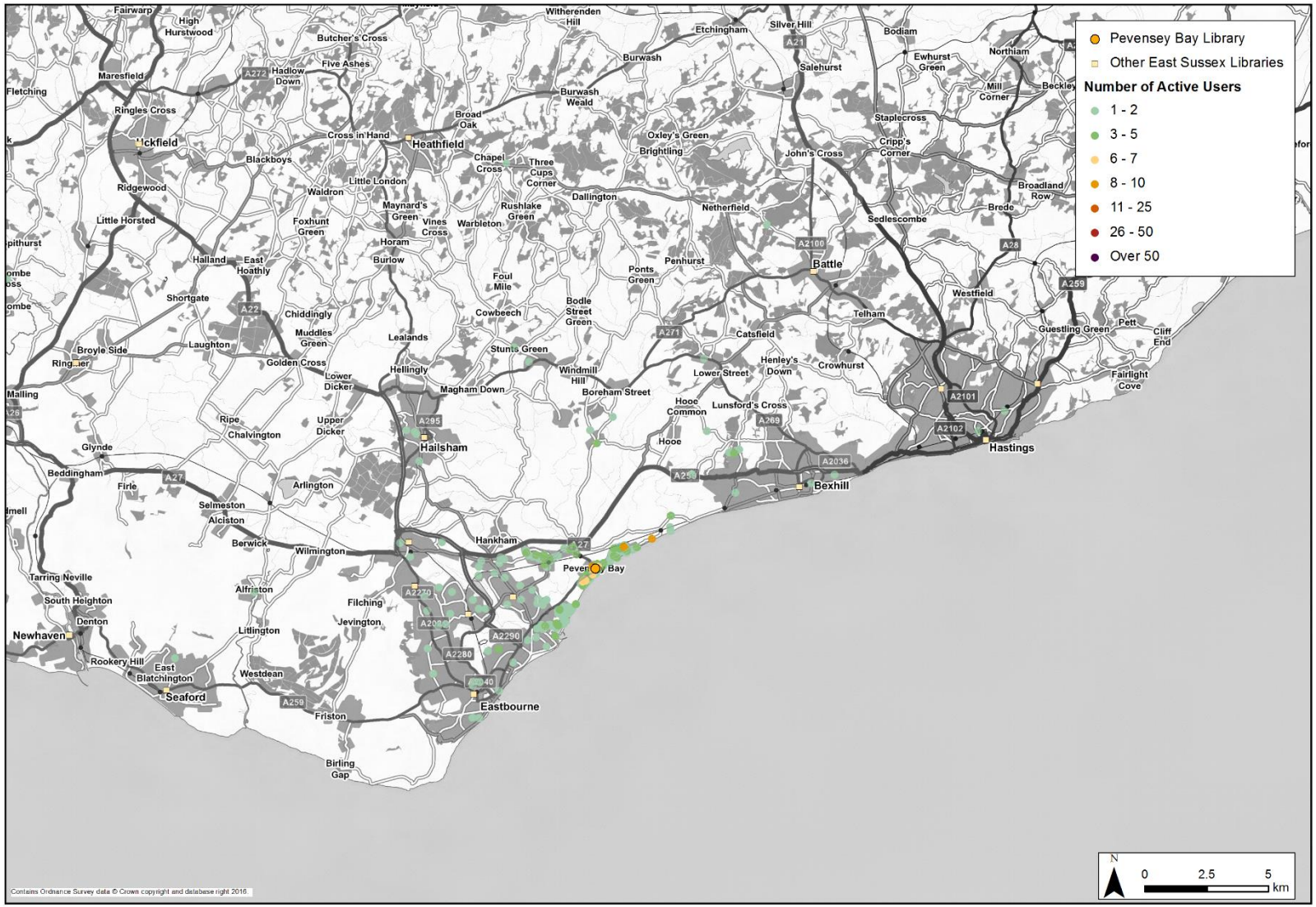


Figure B18: Home Distribution of Active Users at Polegate Library

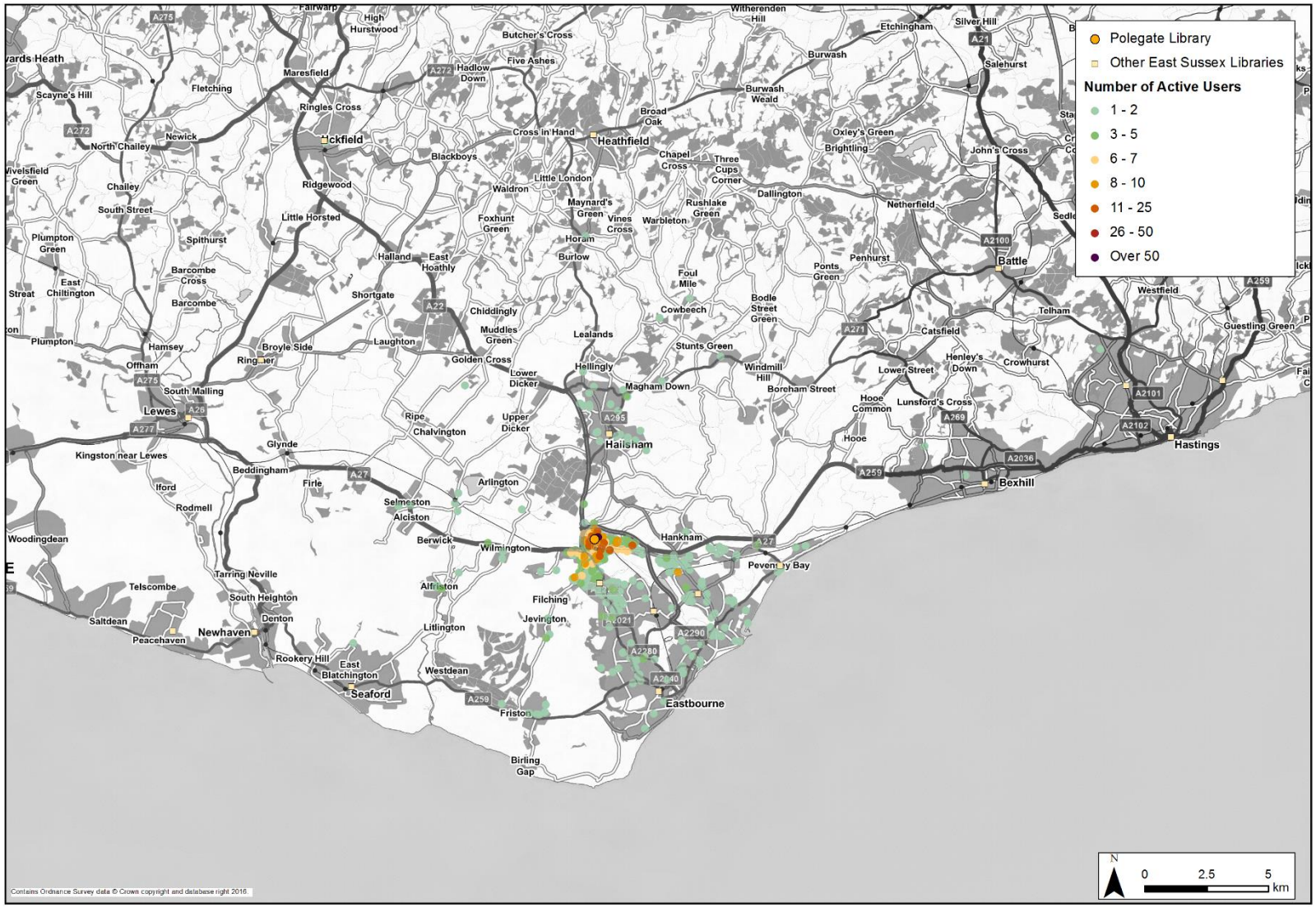


Figure B19: Home Distribution of Active Users at Ringmer Library

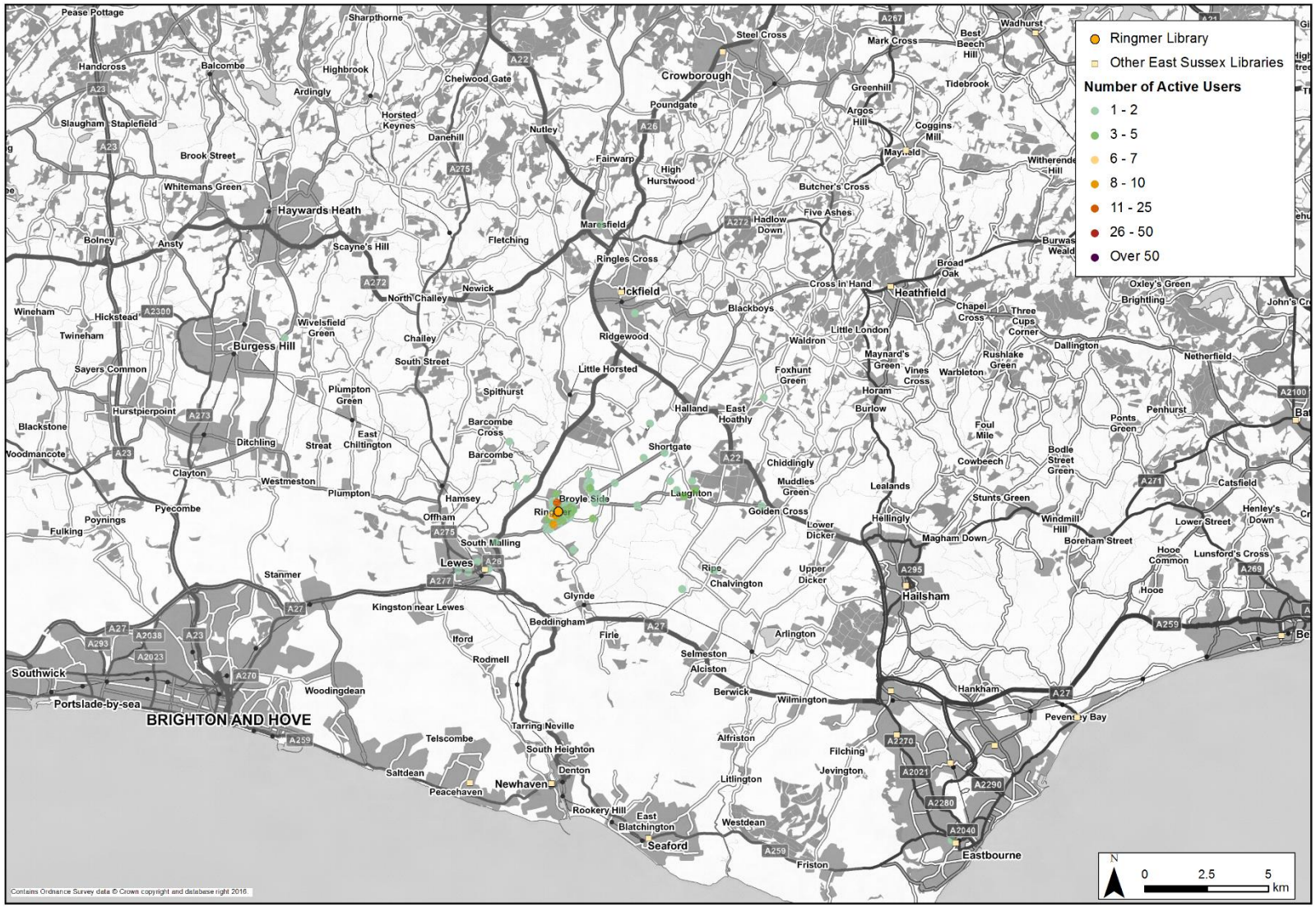


Figure B20: Home Distribution of Active Users at Rye Library

Figure B21: Home Distribution of Active Users at Seaford Library

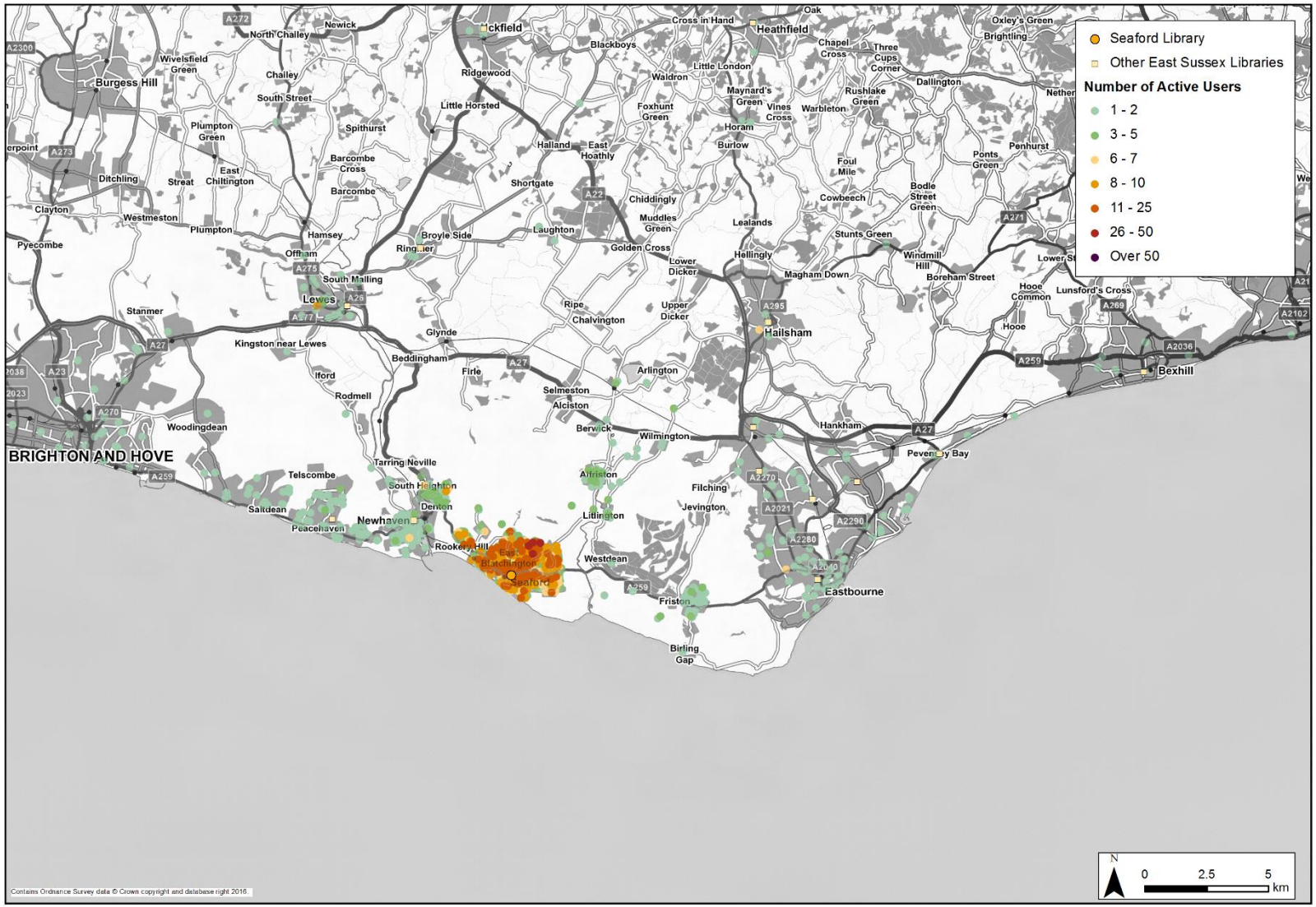


Figure B22: Home Distribution of Active Users at Uckfield Library

Figure B23: Home Distribution of Active Users at Wadhurst Library

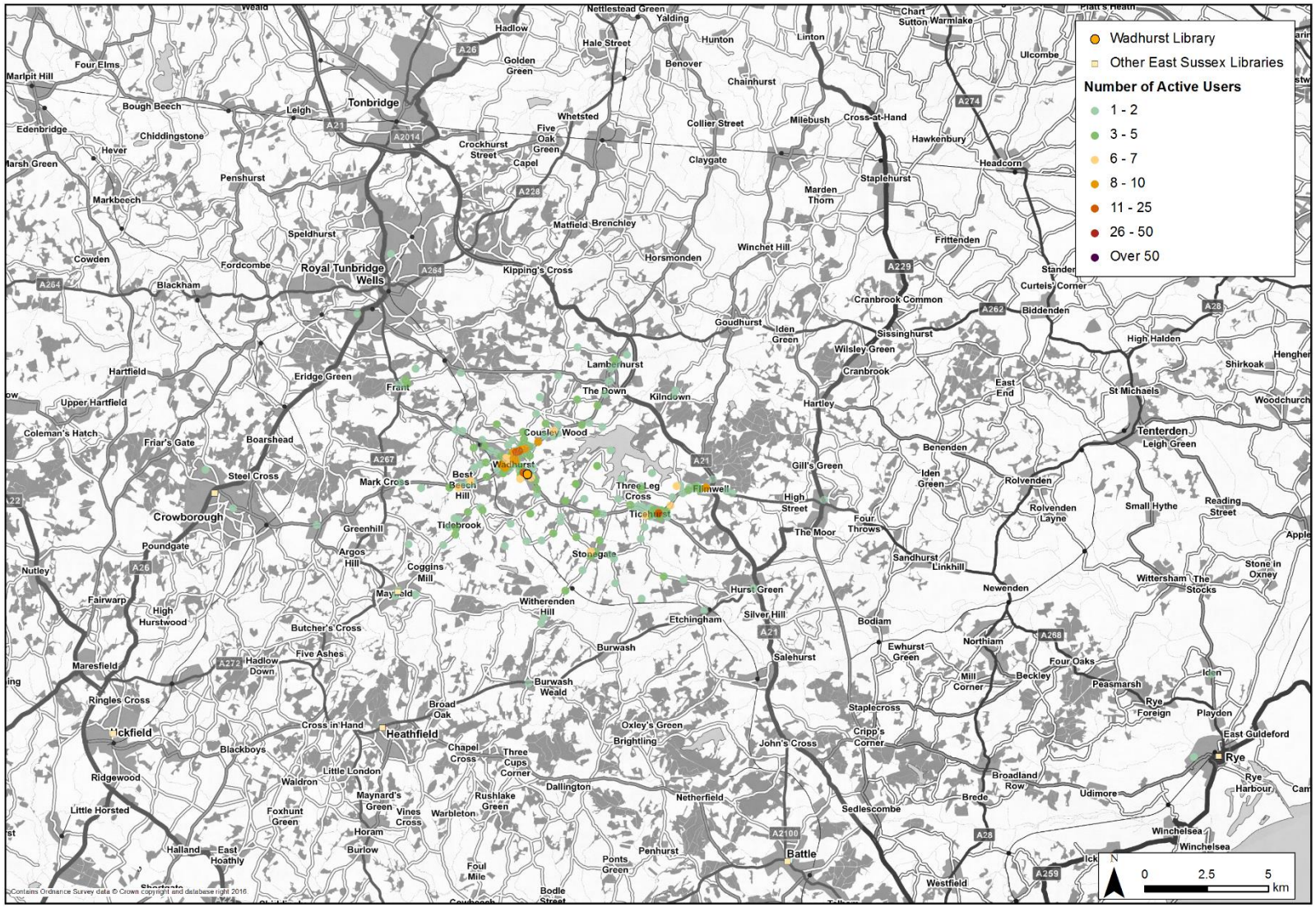


Figure B24: Home Distribution of Active Users at Willingdon Library