Southend Borough Council

Rochford District Council

SETTLEMENT ROLE AND HIERARCHY STUDY

Final Report

Troy Planning + Design

November 2020

Southend Borough Council

Rochford District Council

Settlement Role and Hierarchy Study

Complete Communities

On behalf of:

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Final Report

November 2020

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Purpose of the study

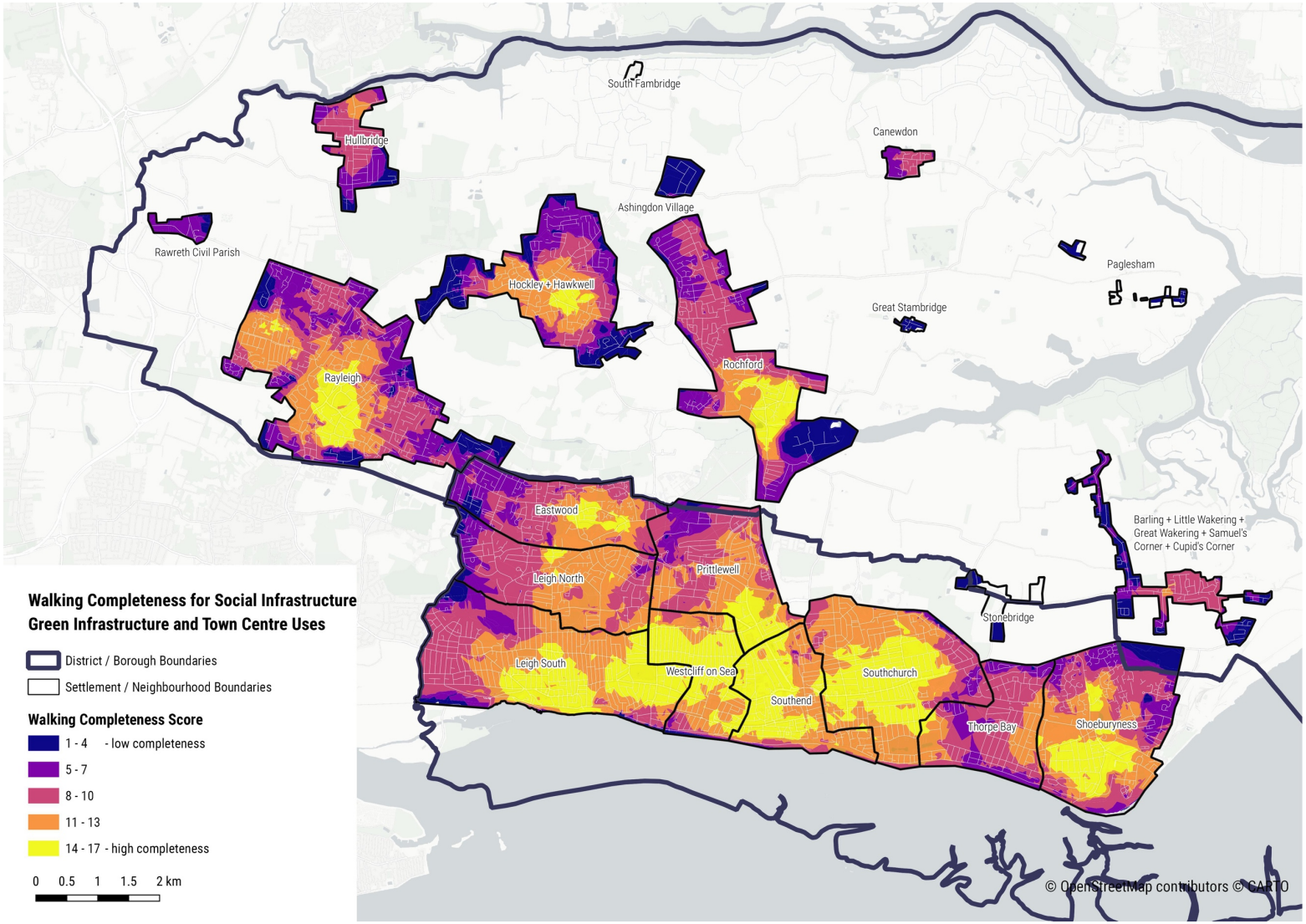
This report presents recommendations as to the settlement role and hierarchy across Rochford District and Southend Borough. It will be used to help inform decisions in the new Local Plans for both authorities, particularly around potential directions of growth and intensification. The study assesses the network of towns and smaller settlements in Rochford but, in Southend, rather than treating the urban area as one, breaks this down into a series of neighbourhoods.

Approach to assessing 'completeness'

The study has taken an approach to assessing the 'completeness' of settlements and neighbourhoods. It maps the provision of services and facilities, and accessibility to these, and suggests that where there is good provision and accessibility, then a place is more 'complete'. This reflects emerging thinking in cities across the world which are embedding concepts such as the 'twenty-minute neighbourhood' into their planning strategies for the future. Such a concept implies that the services and facilities you need for everyday life should be no more than a ten minute journey from your home, and ten minutes back (a twenty minute return journey). The emphasis is on walking and cycling, supported by an efficient public transport network. This has been reflected in this study through the calculation and mapping of walking catchment distances around facilities.

The assessment has taken place at three levels. First, the provision of day-to-day facilities and walking catchment areas around these has been mapped. This includes, for example, primary schools, local parks and shops. Heat-mapping of this assessment, in ES Figure a, overlays the catchments of different facilities. Where multiple catchments overlap these are the hotter or most complete areas, benefiting from provision of and access to a greater number of day-to-day facilities. This is supported by a summary, in ES Table a, showing how much of each settlement or neighbourhood is within the walking catchment of different services and facilities.

Second, the public transport network has been mapped, with catchment areas around train stations and frequent bus routes indicated. Third, those facilities of a city or region wide importance, such as hospitals, universities and cultural venues, have been mapped alongside their proximity to public transport.



ES Figure a: Heat mapping of completeness based on everyday services for all settlements and neighbourhoods within the study area

Place	Education	Health	Civic	Sport & Leisure	Green Infrastructure	Town Centre Uses	Aggregated Completeness Score
	% of each place within walking catchment of everyday services						
Rochford District							
Canewdon	33	0	48	100	55	14	42
Gt. Stambridge	0	0	21	0	0	0	4
Gt. Wakering	41	22	48	82	3	10	34
Hockley	42	60	37	60	26	26	42
Hullbridge	22	61	77	57	5	14	40
Paglesham	0	0	6	0	4	0	2
Rawreth	31	0	41	71	23	24	32
Rayleigh	60	56	38	70	18	48	48
Rochford	46	56	45	59	8	44	45
South Fambridge	0	0	0	0	0	0	0
Stonebridge	6	0	0	0	0	9	3
Southend Borough							
Southend urban area	73	*77*	50	69	21	57	58
Eastwood	*54*	*74*	*38*	*63*	*23*	*49*	*50*
Leigh (entire area)	*73*	*80*	*48*	*69*	*24*	*50*	*57*
Leigh (north)	*70*	*68*	*34*	*78*	*23*	*50*	*54*
Leigh (south)	*75*	*87*	*57*	*63*	*24*	*50*	*59*
Prittlewell	*77*	*51*	*41*	*86*	*18*	*62*	*56*
Shoeburyness	*59*	*66*	*46*	*80*	*24*	*46*	*53*
Southchurch	*86*	*86*	*54*	*78*	*23*	*68*	*66*
Southend (central)	*86*	*90*	*78*	*51*	*18*	*82*	*68*
Thorpe Bay	*71*	*91*	*33*	*28*	*13*	*45*	*47*
Westcliff-on-Sea	*88*	*84*	*82*	*69*	*18*	*75*	*70*

ES Table a: Completeness score of all settlements and neighbourhoods for everyday services

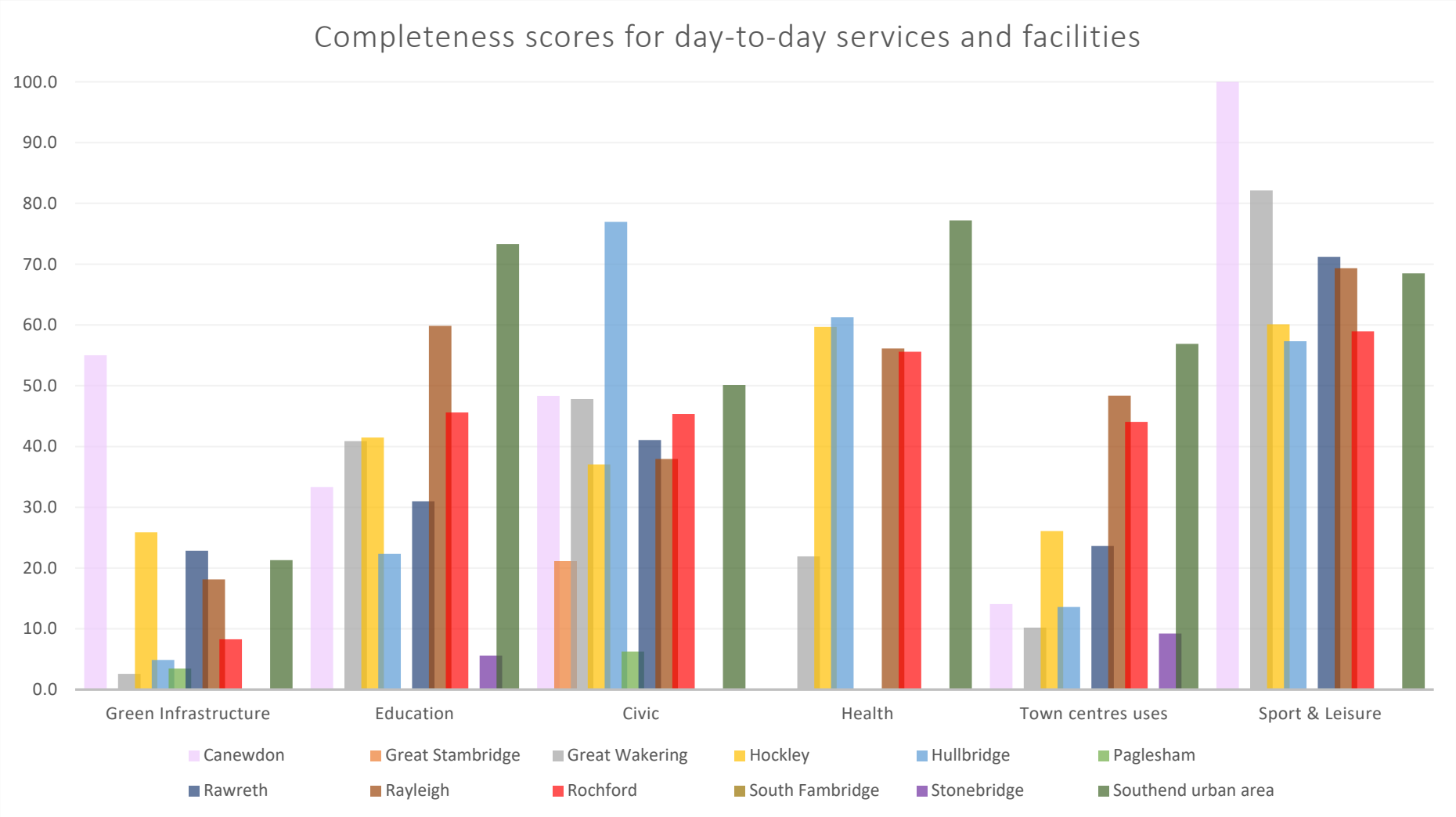
Colour coding indicates level of completeness:

- *Higher levels of completeness: >75%*
- *Mid-high levels of completeness: 51-75%*
- *Mid-low levels of completeness: 26-50%*
- *Lower levels of completeness: Up to 25%*

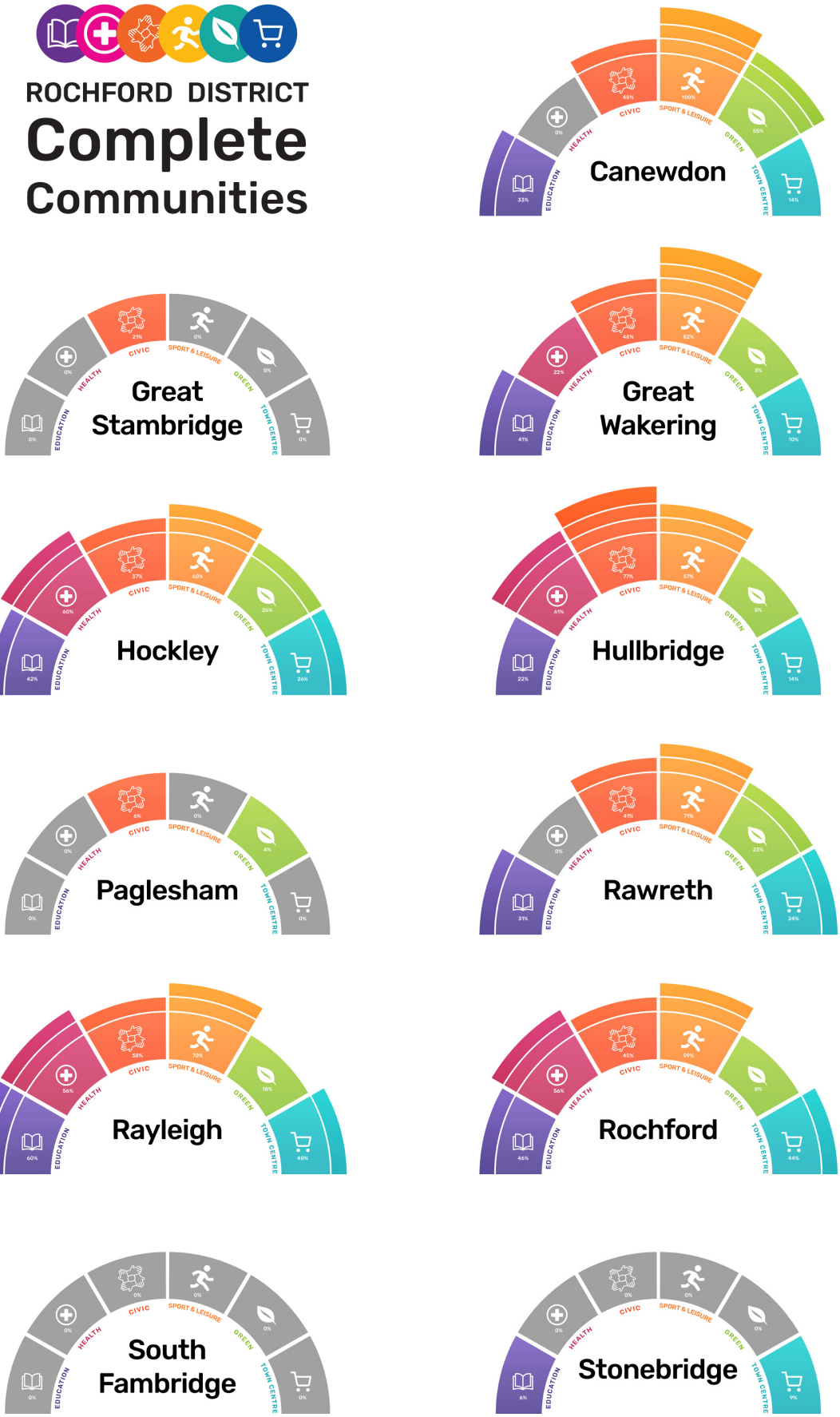
The report presents a summary profile for each settlement and neighbourhood assessed, with more detailed profiles presented in free-standing reports available alongside this. For comparison purposes, ES Table b shows the completeness of each settlement broken down by provision of and access to everyday services. A series of separate 'rainbow charts' for settlements in Rochford and neighbourhoods in Southend are presented in ES Figure b and ES Figure c respectively. Given the population and area covered by the Leigh neighbourhood in Southend it has been split into 'Leigh (north)' and 'Leigh (south)', though the report considers Leigh as a whole as well as the further subdivision of the neighbourhood.

The assessment indicates that, at the day-to-day level:

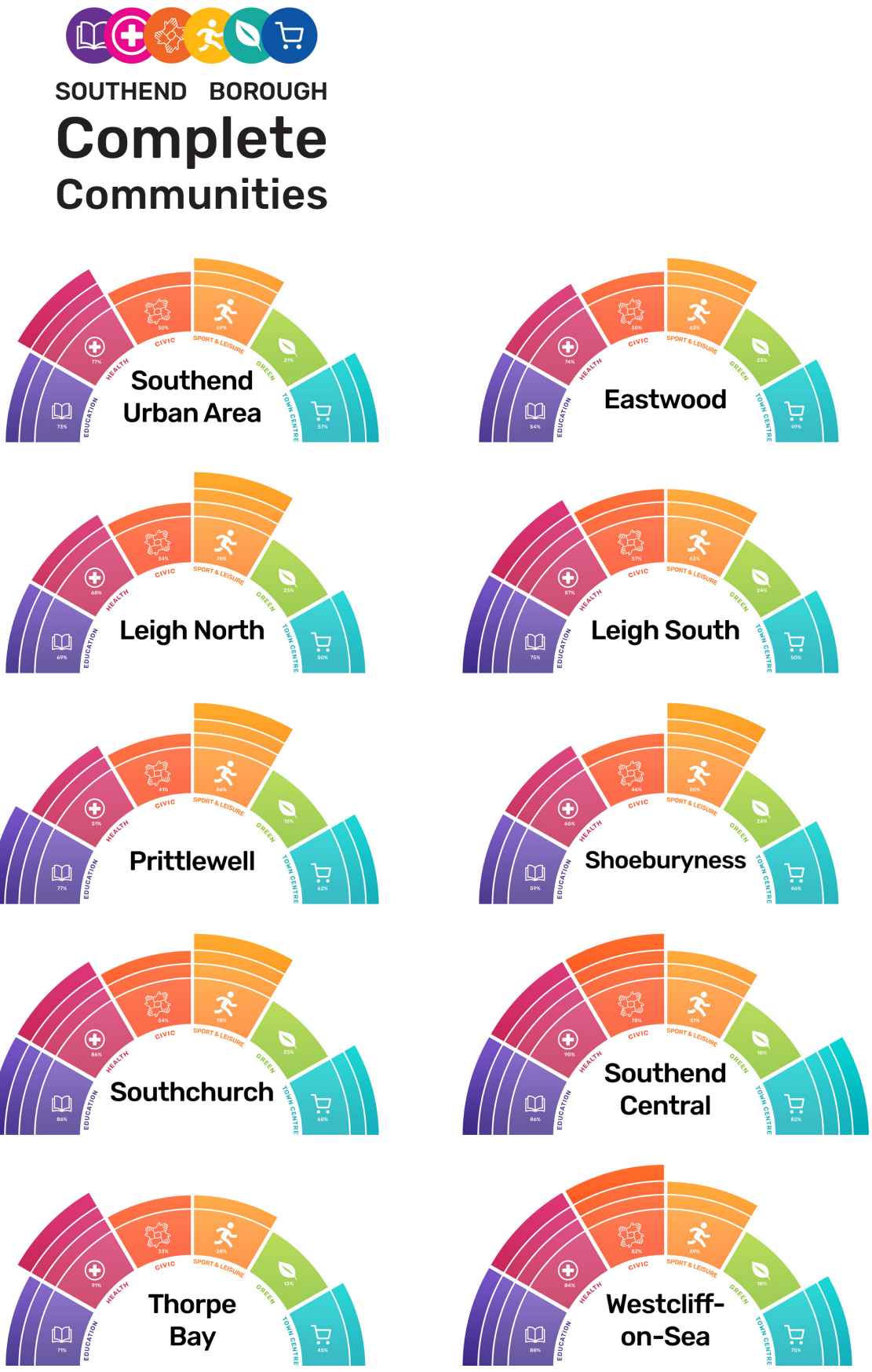
- High degrees of completeness are found in central areas, where services and facilities are typically concentrated. These areas include Southend (central), Westclifff-on-Sea, parts of Prittlewell and Leigh. This central area scores well across all infrastructure types, with the exception of green infrastructure. Soutchurch and Shoeburyness also rank as having a high completeness score, though with variation. Thorpe Bay, parts of Prittlewell and Eastwood are ranked as being less complete.
- As a whole, the Southend urban area and its constituent neighbourhoods are more complete than settlements within Rochford District. However, Southend as a whole scores relatively low in respect of green infrastructure and access to this. This reflects the highly urbanised nature of Southend, particularly in relation to settlements in Rochford District. In reality, many areas benefit from access to the waterfront, though further away from this, physical infrastructure, including main roads and railway lines, act as barriers to movement and thus access to the waterfront as an amenity.
- Within Rochford District the most complete areas are the centres of Rayleigh, Rochford and Hockley. Towards the edges of these towns the completeness score drops.
- Great Wakering, Hullbridge and Canewdon sit below Rayleigh, Rochford and Hockley in terms of population. They have mid-levels of completeness, though benefit from good provision of some day-to-day services and facilities, including sports, leisure and civic uses.
- The outlying towns and villages have mid-to low completeness scores, with Paglesham, South Fambridge and Great Stambridge all achieving very low scores, meaning there is a lack of day-to-day facilities within these areas for the local community. Stonebridge, which straddles the administrative boundary between Rochford District and Southend Borough, also has very low levels of completeness, despite its proximity to the main urban area of Southend.



ES Table b: Completeness scores for day-to-day services and facilities for all settlements (including total combined completeness for Southend urban area)



ES Figure b: Summary of completeness scores for Rochford settlements



ES Figure c: Summary of completeness scores for Southend neighbourhoods

Settlement hierarchy

The layering approach followed in this study recognises that those services and facilities needed for day-to-day life should ideally be provided close to home, but that, because of economies of scale, provision of facilities of city or region-wide importance will be more limited, and people will be willing to travel further to use such facilities.

This approach has helped to inform those settlements that perform well at the neighbourhood level, for day-to-day purposes, but also which are of a higher-order in the settlement hierarchy because of the role they play in terms of wider regional services and facilities.

This assessment has been considered against socio-demographic factors to determine whether there is any correlation between the provision (or not) of services, population densities, housing mix and type, and Indices of Multiple Deprivation (IMD).

The study concludes by recommending a settlement hierarchy for Southend and Rochford, suggesting what this might mean for future growth. Wider recommendations for consideration in the new Local Plans are also presented that might help the respective authorities plan for positive change across the study area.

A settlement hierarchy for Southend

The suggested settlement hierarchy in Southend is based upon the consideration of individual neighbourhoods across the urban area and the potential for change within these. The suggested hierarchy of places in Southend is:

Tier 1: Southend (central)

Tier 2: Leigh (entire neighbourhood)

Tier 3: Prittlewell, Southchurch, Westcliff-on-Sea,

Tier 4: Eastwood, Shoeburyness, Thorpe Bay

The study recognises that Leigh is a large area, both in terms of population and geography, and that the provision of facilities and thus completeness varies across this. It explores a potential sub-division into Leigh (north) and Leigh (south). Both remain relatively complete, particularly in comparison to other places across the study area. Should the neighbourhood be sub-divided, then it is recommended that Leigh (south) fall within Tier 2 and Leigh (north) in Tier 3.

A settlement hierarchy for Rochford

The separate settlement hierarchy for Rochford is:

Tier 1: Rayleigh

Tier 2: Hockley and Rochford

Tier 3: Canewdon, Great Wakering and Hullbridge

Tier 4: Great Stambridge, Paglesham, Rawreth, South Fambridge, Stonebridge

A combined settlement hierarchy

A combined settlement hierarchy is also presented, with Southend represented as the entire urban area (as opposed to individual neighbourhoods) and which comprises the primary settlement in the study area, below which other tiers reflect the Rochford settlement hierarchy. The combined settlement hierarchy suggested in the study is:

Tier 1: Southend

Tier 2: Rayleigh

Tier 3: Hockley, Rochford

Tier 4: Canewdon, Great Wakering, Hullbridge

Tier 5: Great Stambridge, Paglesham, Rawreth, South Fambridge, Stonebridge

1. Introduction

Purpose of the study

1.1 This Settlement Role and Hierarchy study has been prepared on behalf of Southend Borough Council and Rochford District Council to inform the Local Plan reviews being undertaken by the respective Councils.

1.2 The purpose of the study is to provide an indication of the role, function and relative sustainability of each settlement within the administrative areas of Southend and Rochford, particularly in relation to provision of infrastructure, services and facilities in each place. Leading from this, the study aims to recommend a settlement hierarchy that can be used to inform the potential direction of growth in the emerging Local Plans.

Context for the study

1.3 The study is set in the context of significant growth pressures across both administrative areas. Emerging evidence prepared jointly by the Councils suggests a need to provide 32,000 new homes and approximately 13,000 new jobs across both administrative areas over the next twenty years. The majority of this need (24,000 homes and 11,000 jobs) comes from Southend Borough.

1.4 However, both authority areas are geographically constrained by the Thames Estuary and North Sea, and fall within the eastern extent of the Metropolitan Green Belt. These factors mean there is limited land available to accommodate new growth, with the Borough boundary of Southend drawn particularly tightly around its urban area.

1.5 Although opportunities for urban intensification are being explored in both areas, through the production of Urban Capacity Studies for example, the scale of growth means that opportunities to accommodate growth outside the urban area need exploring. Both Councils, whom are at a similar stage in the plan-making process, are therefore working in partnership with both each other, and other local authorities across South Essex, to critically evaluate their own spatial opportunities for growth. Assessing the role and function of the network of settlements will help inform the most sustainable options for growth, expansion and intensification.

1.6 This study is though about more than housing numbers, though that is of course important. Section 8 of the NPPF outlines the approach to planning for healthy, safe and inclusive places, providing the social, recreational and cultural

facilities and services that communities need. This study thus reviews the provision of a range of services and facilities at the settlement or neighbourhood level, and what this might mean for possible future growth.

Approach to the study

1.7 The study responds to national planning guidance and the emerging Local Plans for Rochford and Southend that are underpinned by an approach to sustainable development and which seek to encourage provision of services and facilities close to the home, with walking and cycling being the main modes of travel.

1.8 This study has sought to assess the 'completeness' of each place: the more services a place has and the more accessible those services are to residents, then the more complete a place is considered. This is an approach reflected in numerous plans and strategies now emerging around the world, recognising the important links to health and social well-being, community cohesion and inclusion.

1.9 This approach to planning at the very local level also reflects the climate change emergency that has been declared by the Councils as well as new thinking that has begun to emerge as a result of the COVID-19 pandemic and what this means for the planning of towns and cities.

1.10 The approach has been used to identify the completeness of different places and, combined with demographic data, has enabled recommendations to be drawn as to potential options for future growth and development.

1.11 It is important to note however that this study does not represent a statement of policy and is just one of a suite of studies prepared by Rochford and Southend to inform the new Local Plans; the findings and recommendations within it need to be considered alongside all other technical studies before choices can be made.

1.12 The study has been informed by responses from community representatives and service providers in Rochford and Southend, and the findings of this engagement can be read in the free-standing summary document sitting alongside this report[1].

[1] It should though be noted that the timing of the consultation coincided with the outbreak of COVID19 in the UK and the social distancing precautions that were put in place. Workshops were held in Southend the week before the precautions were put in place but those in Rochford were cancelled as a result of this. Despite attempts to engage through use of electronic surveys the responses in Rochford were limited.

Content and structure of this report

1.13 This report is presented across ten further sections. These are:

- **Section 2**, which provides an overview of the study area and headline socio-demographic information.
- **Section 3**, which presents the approach to the study, set in the context of policy guidance at the international and national levels, as well as examples of new approaches to planning for compact and inclusive neighbourhoods, towns and cities.
- **Section 4**, which introduces the infrastructure, services and facilities mapped and assessed through the study, and the geographical levels at which this has been undertaken.
- **Section 5**, which establishes catchment distances to services and facilities, and the rationale for these.
- **Section 6**, which presents profiles of each settlement and neighbourhood assessed as part of the study, summarising the 'completeness' of each place in relation to provision of and access to day-to-day services and facilities. This section is supported by a separate free-standing report providing more detail on each of the places assessed.
- **Section 7**, which looks at public transport provision across the study area, and levels of provision within each settlement and neighbourhood.
- **Section 8**, which maps the distribution of region-wide facilities across the study area and their accessibility by public transport.
- **Section 9**, which brings the assessment together to make recommendations as to settlement roles and hierarchies in Southend and Rochford.
- **Section 10**, which considers the relationship with surrounding settlements.
- **Section 11**, which brings together findings and recommendations for the new Local Plans, including discussion of potential directions of growth and wider strategies that might be used by Rochford District and Southend Borough to help shape 'complete neighbourhoods'.

2. The study area

Settlements and Neighbourhoods

2.1 The settlements assessed for the purposes of this study are set out in Table 1 and Table 2 for Rochford District and Southend Borough respectively. This is based upon (a) the main settlements in Rochford, reflecting the hierarchy outlined in the current Core Strategy (adopted 2011), and (b) the neighbourhoods in Southend as defined through work on the Southend borough-wide Character Study[2], and which form the basis for area-based policies in the emerging Local Plan.

Rochford District

2.2 Within Rochford District there are a number of separate settlement areas and neighbourhoods that come together and function as one place. This, in part, reflects parish boundaries which 'divide' settlements (sometimes arbitrarily). For example, Hockley and Hawkwell are contiguous though separated by a parish boundary, but share a main centre and thus, for the purposes of this assessment, are treated as 'one place', where infrastructure and services are shared and used by the community as a whole.

2.3 The list of settlements assessed in the study are listed in Table 1 and illustrated in Figure 1. The settlements selected for inclusion in the study represent the main settlements or clusters of settlements in the District according to the settlement hierarchy presented in the adopted Core Strategy. Some of the lower-order settlements in Rochford District have been purposely excluded from the study, the reasons being:

- Churchend, Courtsend and Foulness are all located within MoD land where access is restricted, there is an absence of facilities and a highly dispersed settlement pattern.
- Battlesbridge falls only partially in Rochford, with the majority of the settlement and its facilities being located in the neighbouring authority area of Chelmsford City Council.
- Shopland and Sutton were excluded as they do not benefit from many facilities and they have a dispersed settlement pattern.

[2] Urban Practitioners for Southend Borough Council, 2011, Southend Borough-wide Character Study

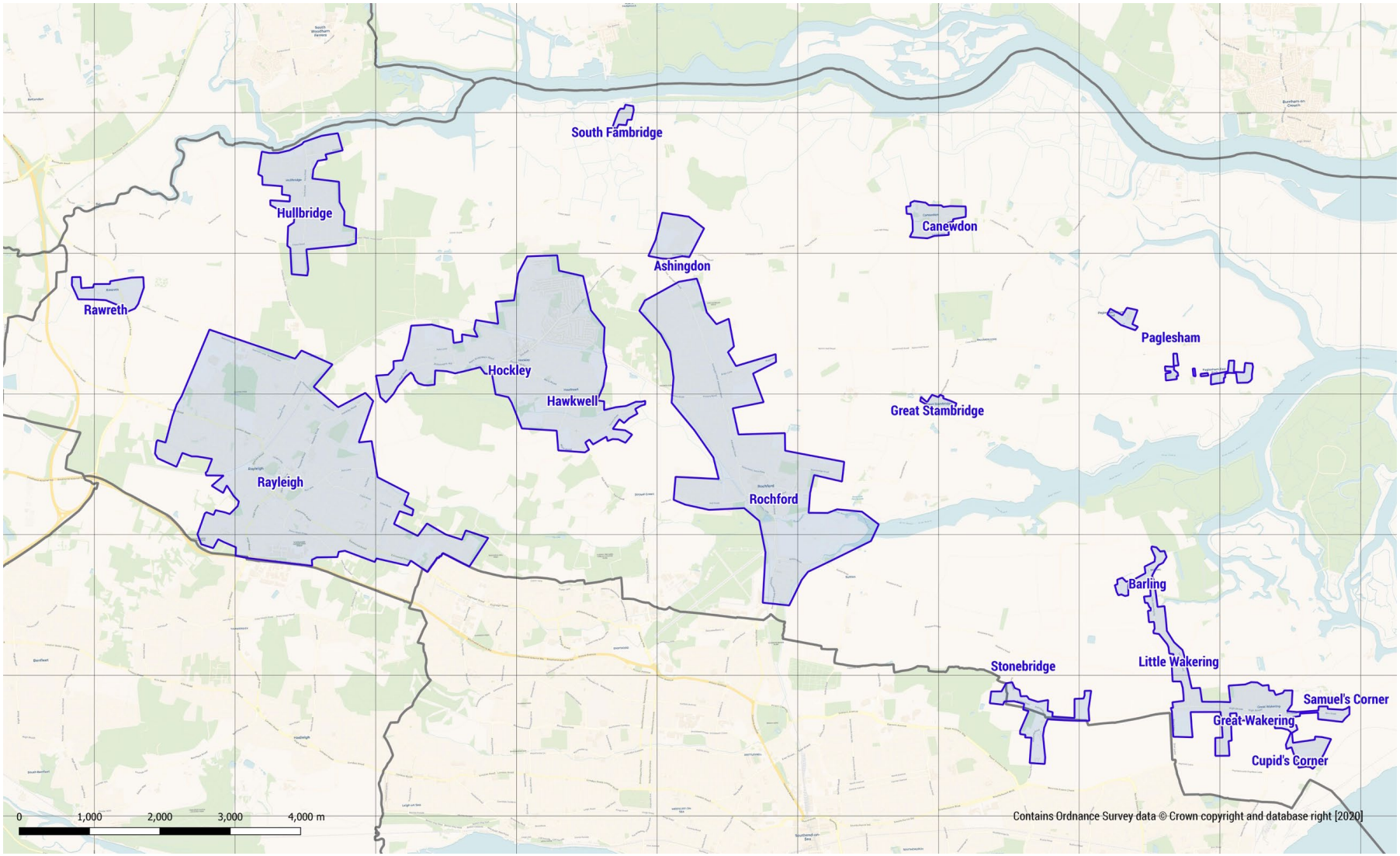


Figure 1: Rochford study area, indicating settlements being considered within the study (Note: Stonebridge straddles the boundary of Rochford and Southend)

Settlement	Separate settlements and villages clustered within the defined area for assessment	Existing Settlement Hierarchy identified in Core Strategy
Canewdon	n/a	Tier 3
Great Stambridge	n/a	Tier 4
Great Wakering	Great and Little Wakering, Barling, Cupid's Corner and Samuel's Corner	Tier 2 (Great Wakering only)
Hockley	Hockley and Hawkwell	Tier 1
Hullbridge	n/a	Tier 2
Paglesham	n/a	Tier 4
Rawreth	n/a	Tier 4
Rayleigh	n/a	Tier 1
Rochford	Rochford and Ashingdon	Tier 1
South Fambridge	n/a	Tier 4
Stonebridge	n/a	Tier 4

Table 1: Settlements within Rochford assessed as part of this study (note: Stonebridge straddles the boundary of Rochford and Southend)

Southend Borough

2.4 Within Southend the neighbourhoods defined through the Character Study (Figure 2) are used for the 'unit of analysis' in this Settlement Role and Hierarchy study. The identification of these areas was based predominantly on heritage and design characteristics rather than any assessment of services provided within each area. Southend benefits from the presence of a network of centres providing a range of facilities, with the network of centres 'ranked' in the Southend Core Strategy (2007). Table 2 below lists the neighbourhoods within Southend and, where appropriate, lists the name of the centre(s) serving the neighbourhood, and its position in the retail hierarchy. The adopted Core Strategy does not include a settlement hierarchy however.

Figure 2: Defined neighbourhood areas in Southend for assessment (source: Emerging Southend Local Plan). Note: This map shows the entirety of the Leigh neighbourhood. Through the course of this study it was divided into Leigh (north) and Leigh (south), as shown in Figure 37 and Figure 47, and to which references to Leigh (north) and (south) in this report are made.

Neighbourhood	Central areas located within the Neighbourhood	Retail hierarchy
Eastwood	Eastwood (Western Approaches)	Local
Leigh	Leigh West Leigh	District Local
Prittlewell		
Shoeburyness	Shoeburyness (West Road) North Shoebury	Local Local
Southchurch		
Southend (central)	Southend	Regional
Thorpe Bay	Thorpe Bay	Local
Westcliff-on-Sea	Westcliff-on-Sea	District

Table 2: Neighbourhood areas in Southend subject to assessment (note: centre hierarchy based on Southend Core Strategy: there are other important retail frontages indicated on the proposals map though these do not form part of the centre hierarchy).

2.5 During consultation workshops with community representatives during the study it was suggested that the defined neighbourhoods do not, in all cases, reflect the way in which each area functions and is recognised as a neighbourhood by residents. In particular, questions were raised about the extent of the boundary around Leigh and whether this could or should be subdivided further. This is considered in the area-based profiles presented later in this report.

Social-demographic information

2.6 The following sections present a social-demographic portrait of the study area. Further information for each settlement and neighbourhood is presented in the free-standing area profiles prepared alongside this report.

Population

2.7 The population of the study area is presented in Table 3, broken down by settlement and neighbourhood. This is based upon the 2018 mid-year population estimates[3].

2.8 Although the information is available at Output Area (OA) level, and thus fine-grained, the geography of the OAs do not always neatly match settlement and neighbourhood boundaries. Where this occurs, an estimate has been made

[3] Source: ONS, Mid-2018 population Estimates for Census Output Areas in the East of England Region. Table SAPE21DT10h

based on the proportion of the OA (and residential units in that OA) falling within the settlement or neighbourhood boundary.

2.9 Southend, as a whole, is the main centre of population. Indeed, some of the neighbourhoods (Leigh and Southchurch) have larger populations than Rayleigh, which is the largest settlement in Rochford District. The population of the Southend (central) neighbourhood is similar to that for the town of Rochford.

Population density

2.10 Variation in population density across the study area is illustrated in Figure 3. This is based upon the total population in an OA divided by the area covered by that OA. Population density is a useful indicator as it may highlight the areas where demand for services is likely to be most concentrated, and where making services accessible via sustainable means is likely to have the greatest impact for the greatest number of people.

2.11 The mapping indicates that population densities are highest in the area immediately surrounding Southend (central), in Southchurch and Westcliff-on-Sea. This reflects the housing types illustrated in Figure 4 and Figure 5, with the presence of flats and terraced development leading to higher development densities. The population density of Southend (central) itself, other than for the fringes of the neighbourhood, are lower than might be expected, though this correlates with provision of a wide variety of other uses, including retail and office floorspace. However, Southend Borough Council has adopted an Area Action Plan for the central area within which one of the strategic objectives is to increase the number and diversity of people living in the central area and its associated neighbourhoods through delivery of more homes.

2.12 There are also pockets of higher density in Leigh and Shoeburyness and, to a lesser extent, in Rochford and isolated parts of Rayleigh and Hockley. In the main though, population density is relatively low outside of these areas and across Rochford District as a whole. Within Southend Borough, the Thorpe Bay neighbourhood stands out as a lower density area, which reflects the greater prevalence of detached and semi-detached homes, as well as bungalows, in the area.

Settlement / Neighbourhood	Population
Rochford District	
Total population of Rochford District	*86,891*
Canewdon	1,101
Great Stambridge	372
Great Wakering	6,225
Hockley	14,343
Hullbridge	5,870
Paglesham	233
Rawreth	563
Rayleigh	33,663
Rochford	18,420
South Fambridge	265
Stonebridge	520
Population of rest of District	5,316
Southend Borough	
Total population of Southend Borough	*183,488*
Eastwood	13,485
Leigh	48,782
Prittlewell	13,927
Shoeburyness	22,275
Southchurch	34,237
Southend (central)	19,040
Thorpe Bay	7,944
Westcliff-on-Sea	23,798
[Leigh (north)]	[16,262]
[Leigh (south)]	[32,520]

Table 3: Breakdown of population by settlement / neighbourhood within the study area. Data is based on 2018 mid-year population estimates (source: ONS). Population figures for the subdivision of Leigh into Leigh (north) and Leigh (south) also shown.

Housing composition

2.14 The main housing typology found in different parts of the study area is illustrated in Figure 4, with more granularity then illustrated in Figure 5. This is based on Council Tax released by the Valuation Office Agency (VOA)[4] and mapped at the Lower-layer Super Output Area (LSOA). As might be expected, this shows higher density development types in central areas, with lower density semi-detached and detached properties towards the edges of settlements.

2.15 Across the area as a whole there are many more houses than flats, though different housing types result in variety and differences between areas. Central neighbourhoods along the waterfront in Southend are characterised mainly by flats and apartments, although this isn't true for the entire waterfront area. Further from the centre the predominant house type changes, including more semi-detached and detached properties. Thorpe Bay stands out as an area dominated by detached properties and bungalows. It is also important to note that although the data indicates a high proportion of flats, particularly within central parts of Southend, many of these take the form of conversion and sub-division of housing as opposed to purpose-built flats. This is reflected in the built form with many of the predominantly flatter areas also comprising two and three storey dwellings.

2.16 There are small pockets of flats and maisonettes in Rochford district, though semi-detached and detached properties dominate. There are also many areas, particularly in more rural locations, where bungalows comprise the main house type.

[4] The most recent version of this data is available in Table CTSOP1.1 at https://www.gov.uk/government/statistics/council-tax-stock-of-properties-2020

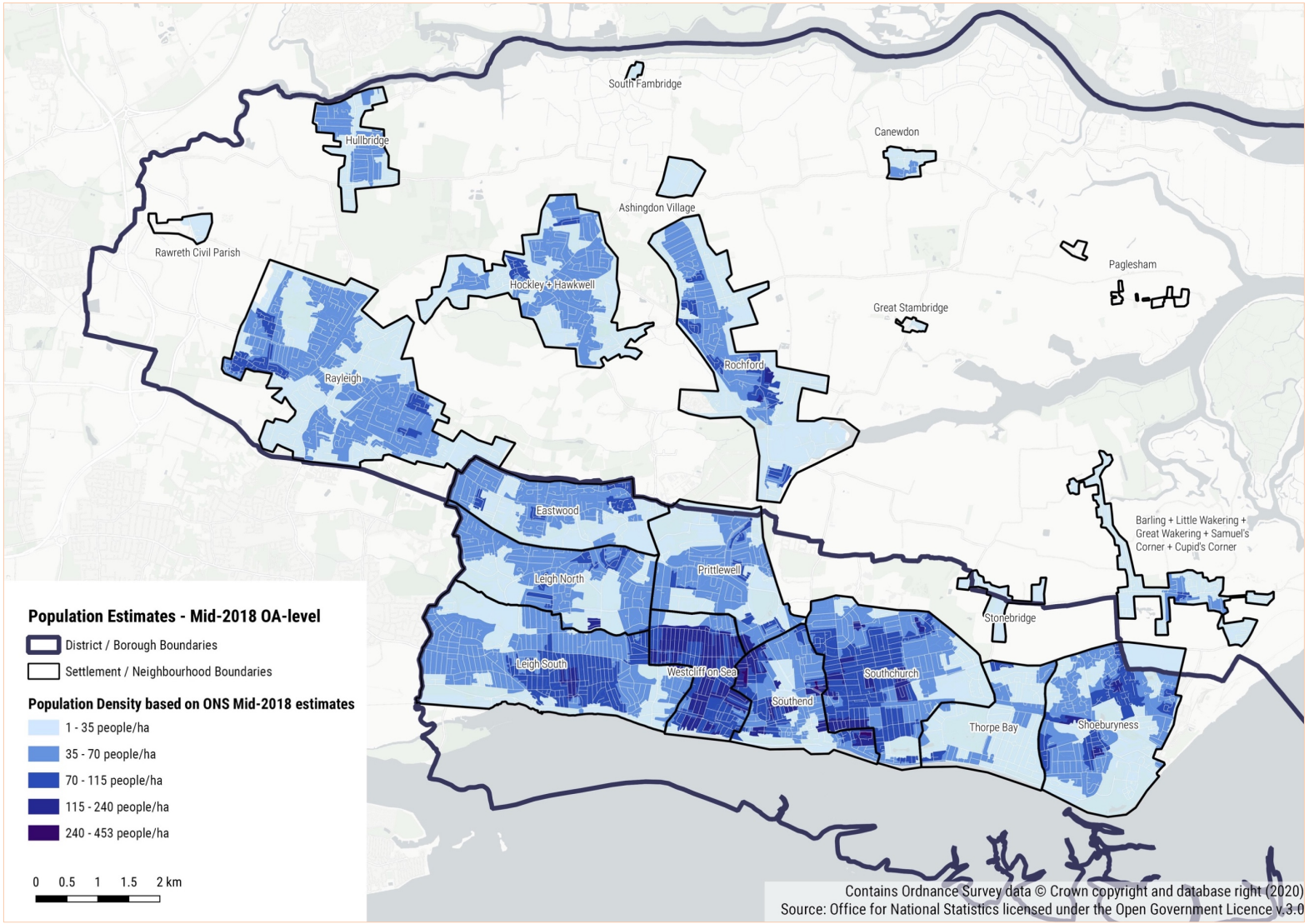


Figure 3: Population densities across the study area

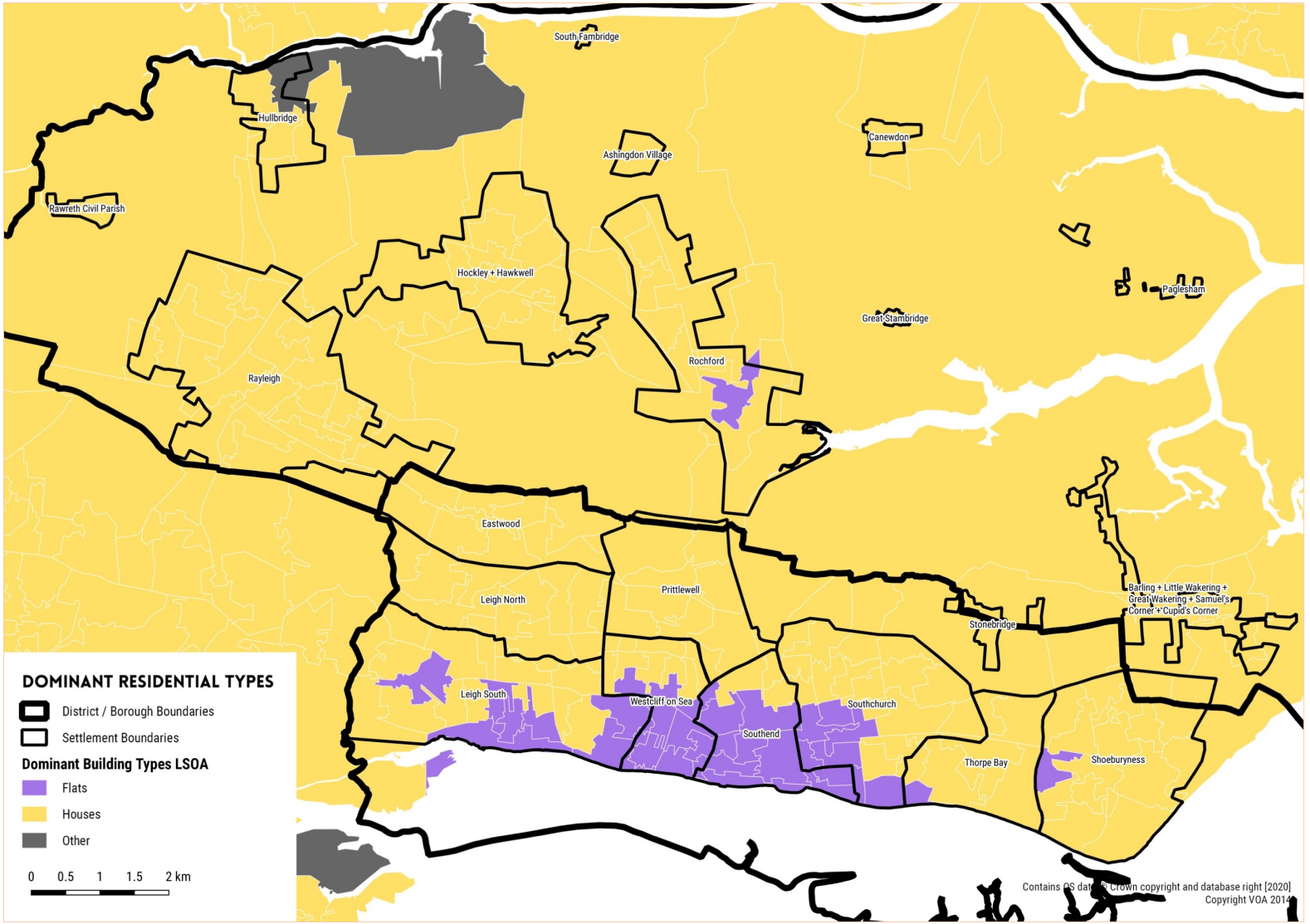


Figure 4: Dominant housing typologies across the study area, split by house or flat, broken down by Lower-Layer Super Output Area

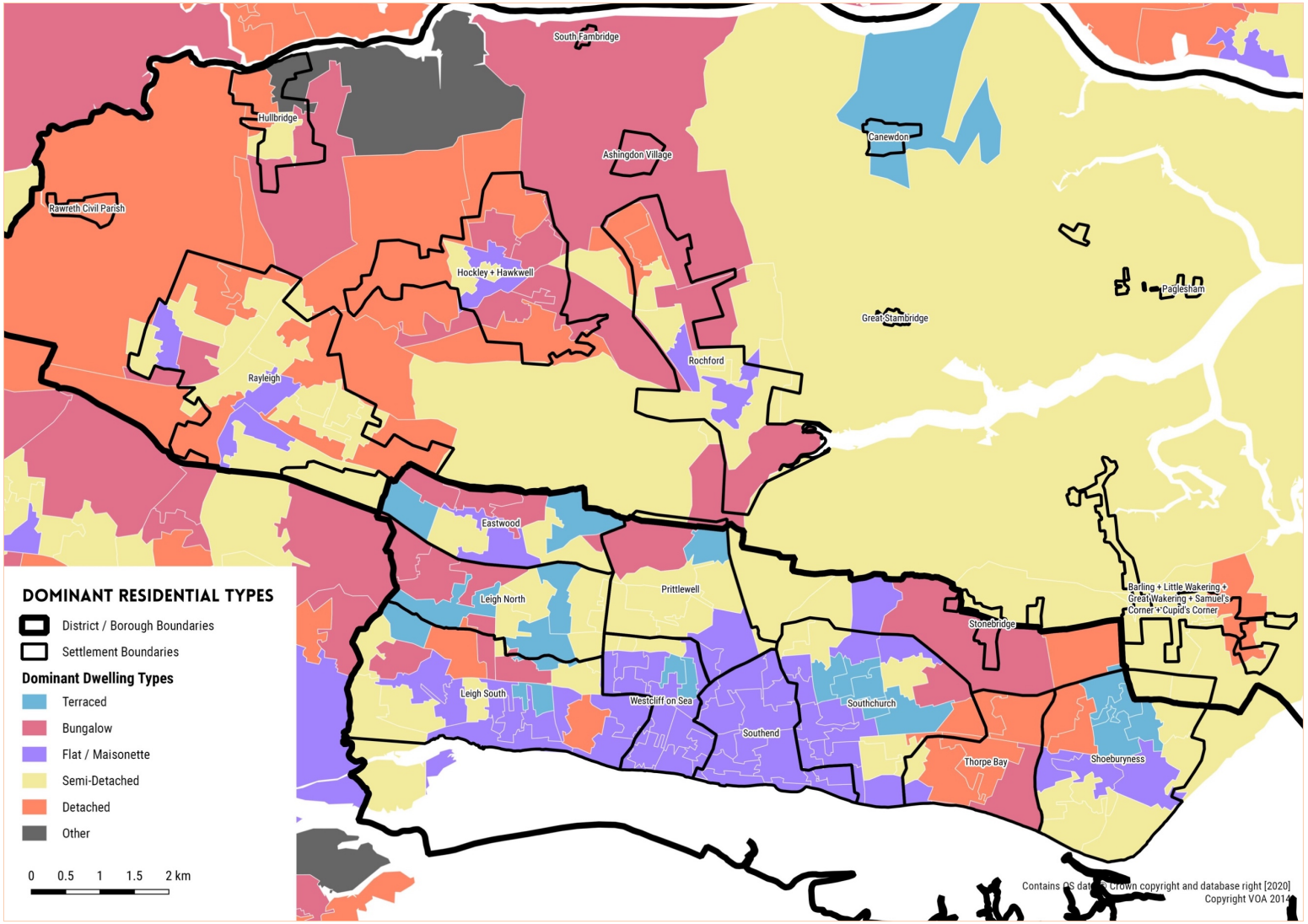


Figure 5: Main housing typology across the study area, broken down by Lower-Layer Super Output Area

House prices

2.17 Information on house prices has been mapped and considered as a potential indicator of completeness, with those areas achieving lower prices potentially being those where there are fewer services or access to these. Data on house prices has been retrieved from HM Land Registry (Paid Price Data) and illustrated in Figure 6 based on postcode sectors. Highest house prices are achieved in the Thorpe Bay neighbourhood (with an average of around £450,000 - £460,000), with parts of Leigh, Hockley and the outlying settlements in the north east of Rochford District also achieving high prices. The lowest prices are found in the central part of the Southend urban area, straddling Southend (central), Southchurch, parts of Prittlewell and Westcliff-on-Sea (with an average around £196,000 - £244.000). There is some correlation here between house types and Indices of Multiple Deprivation (see next section): Thorpe Bay for example has relatively low density housing types and low levels of deprivation. Conversely, the central areas have higher density housing types and are amongst the most deprived neighbourhoods in the study area.

2.18 The average house price achieved across Essex over the time period shown in Figure 5 is approx. £335,000. This is on a par with the average price range across the study area, albeit that places such as Thorpe Bay, parts of Leigh and Rayleigh exceed this. Much of central Southend, Eastwood, Shoeburyness and Rochford have prices below this average. The collation of data at postcode level does mask differences however and there will be variation in each location.

Indices of Multiple Deprivation

2.19 The English Indices of Deprivation 2019 measures relative levels of deprivation at Lower-layer Super Output Areas[5] (LSOA). The data is based on seven different domains of deprivation, or indicators, as shown in Table 4. These indicators are weighted and combined to produce an overall relative measure of deprivation known as the Indices of Multiple Deprivation (IMD). IMD is considered a useful indicator as there is likely to be an inverse correlation between areas of deprivation and provision of or access to services.

2.20 The IMD ranks every LSOA in England from 1 (most deprived area) to 32,844 (least deprived area). Deciles are then calculated by ranking the 32,844 small areas in England from most deprived to least deprived and dividing them into ten equal groups. These range from the most deprived 10 per cent of small areas nationally to the least deprived 10 per cent of small areas nationally. The local deprivation profile for the study area as a whole is illustrated in Figure 7.

[5] This is a statistical unit used by the Office of National Statistics to help facilitate the measuring and reporting of social economic and other information at a small area. The mean population for a LSOA is 1,500 people.

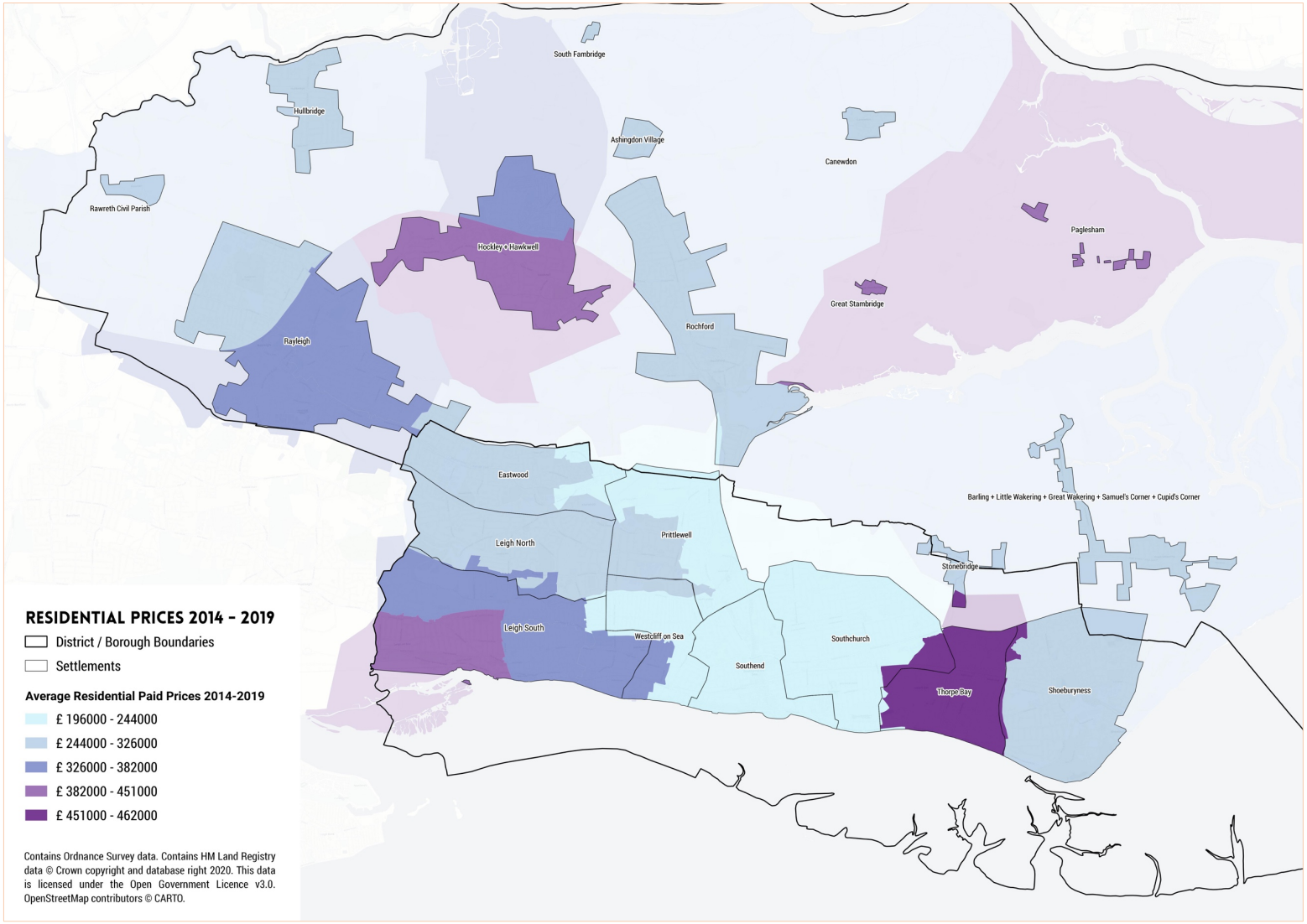


Figure 6: Average residential sales prices across the study area for the period 2014 – 2019, based on postcode sector (Source: HM Land Registry)

Deprivation Domain	Domain Weighting (%)
1. Income deprivation	22.5
2. Employment deprivation	22.5
3. Education, Skills and Training deprivation	13.5
4. Health deprivation and Disability	13.5
5. Crime	9.3
6. Barriers to Housing and Services	9.3
7. Living Environment Deprivation	9.3

Table 4: Indices of Multiple Deprivation and weightings (Source: MHCLG)

2.21 The average ranking of all LSOAs within Rochford District Council is 8,122 out of the 32,844 LSOAs, which translates into a ranking of 286 out of the 317 Local Authorities[6], that is, it is the 286th least deprived local authority area.

2.22 As shown in Figure 7 there is a clear geographical split in deprivation across the district, with those LSOAs to the east being ranked amongst the most deprived in the area. This includes land at Foulness in the ownership of the MoD as well as those areas located between the River Crouch and Roach, including settlements such as Canewdon and Paglesham. To the west the picture changes and areas are ranked amongst the least deprived. This includes much of Rayleigh and Hockley. The town of Rochford sits at the intersection between areas of different ranking, including some of the most deprived parts of the district but also some of the least deprived.

2.23 The average ranking of all LSOAs within Southend Borough Council is 16,812 out of the 32,844 LSOAs. This translates into a ranking of 129 out of the 317 Local Authorities[7]. Southend as a whole ranks below Rochford, meaning a larger proportion of the Borough's residents are considered to be suffering from higher levels of deprivation: 8.4% of the Southend's LSOAs are within the bottom decile ranking of multiple deprivation, whereas only 12.1% of LSOAs are in the top decile of the least deprived.

2.24 There is though real variation and contrast across Southend. As shown in Figure 7, highest areas of deprivation are found around the central areas of Southend, including the Prittlewell, Southend (central), Southchurch and Westcliff-on-Sea neighbourhoods. Further clusters of deprivation are also found within Shoeburyness and the north eastern parts of Leigh. However, areas of high deprivation are found in close proximity to less deprived areas,

[6] See: File 10, https://www.gov.uk/government/statistics/english-indices-of-deprivation-2019, accessed April 2020
[7] ibid

with much of Leigh and Thorpe Bay ranking amongst the least deprived neighbourhoods in Southend. This correlates with house price data outlined above, with Thorpe Bay and Leigh achieving the highest house prices across the study area.

Broadband

2.25 The economic, social and environmental benefits of reliable and fast broadband are well recognised. Studies undertaken on behalf of the Government[8] have indicated the contribution that fast broadband makes to the UK's annual Gross Value Added (GVA), the importance to social inclusion and, through the potential to cut business travel through an increased ability to work from home, environmental benefits arising from reduced carbon emissions.

2.26 The importance of reliable and fast broadband services was highlighted during the COVID19 pandemic with many people required to work from home and undertake homeschooling. And, with people unable to leave home other than for essential trips, the need for broadband has become ever more importance, being a means for people to stay connected with friends and family, to access information and arrange home deliveries.

2.27 Mapping of average broadband speeds across the study area (Figure 8) shows significant variations. Download speeds are generally much faster across the Southend urban area than they are across Rochford District, and particularly so the smaller outlying settlements in rural areas, where speeds are very slow[9]. The highest speeds are associated with the MoD site to the east of Shoeburyness, with high speed also achieved across Southchurch, Prittlewell and Westcliff-on-sea. Speeds across Rayleigh, Rochford, Hockley, Eastwood, Leigh and Thorpe Bay vary around the average mark. Although there are highest speeds where there are the highest concentrations of population, and thus potentially more pressure on the network, slower speeds in rural areas may increase the isolation of these communities. To address matters of connectivity a CityFibre project is currently underway in Southend. which will bring superfast ('Gigafast') broadband services to the town by 2022[10].

[8] See, for example, SQW for DCMS, November 2013, UK Broadband Impact Study: Impact Report
[9] Good download internet speeds are considered to be around 25 Mbit/s, allowing most online activity. Internet download speeds of 100 Mbit/s are considered fast and allow use of multiple online devices and activities at the same time
[10] https://www.southend.gov.uk/southend-2050-7/miker

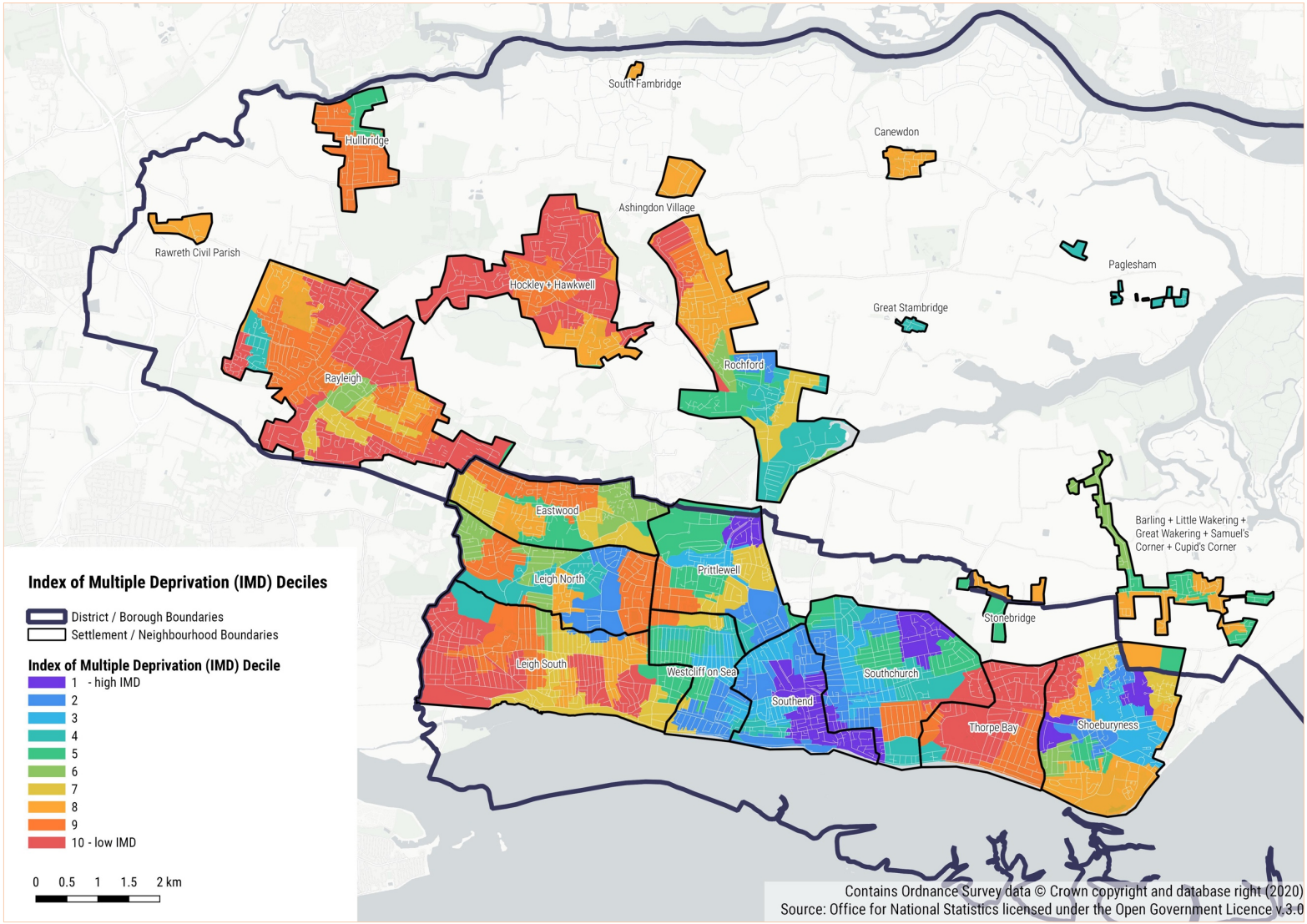


Figure 7: Local deprivation profile for the settlements and neighbourhoods assessed in the study (Source: MHCLG)

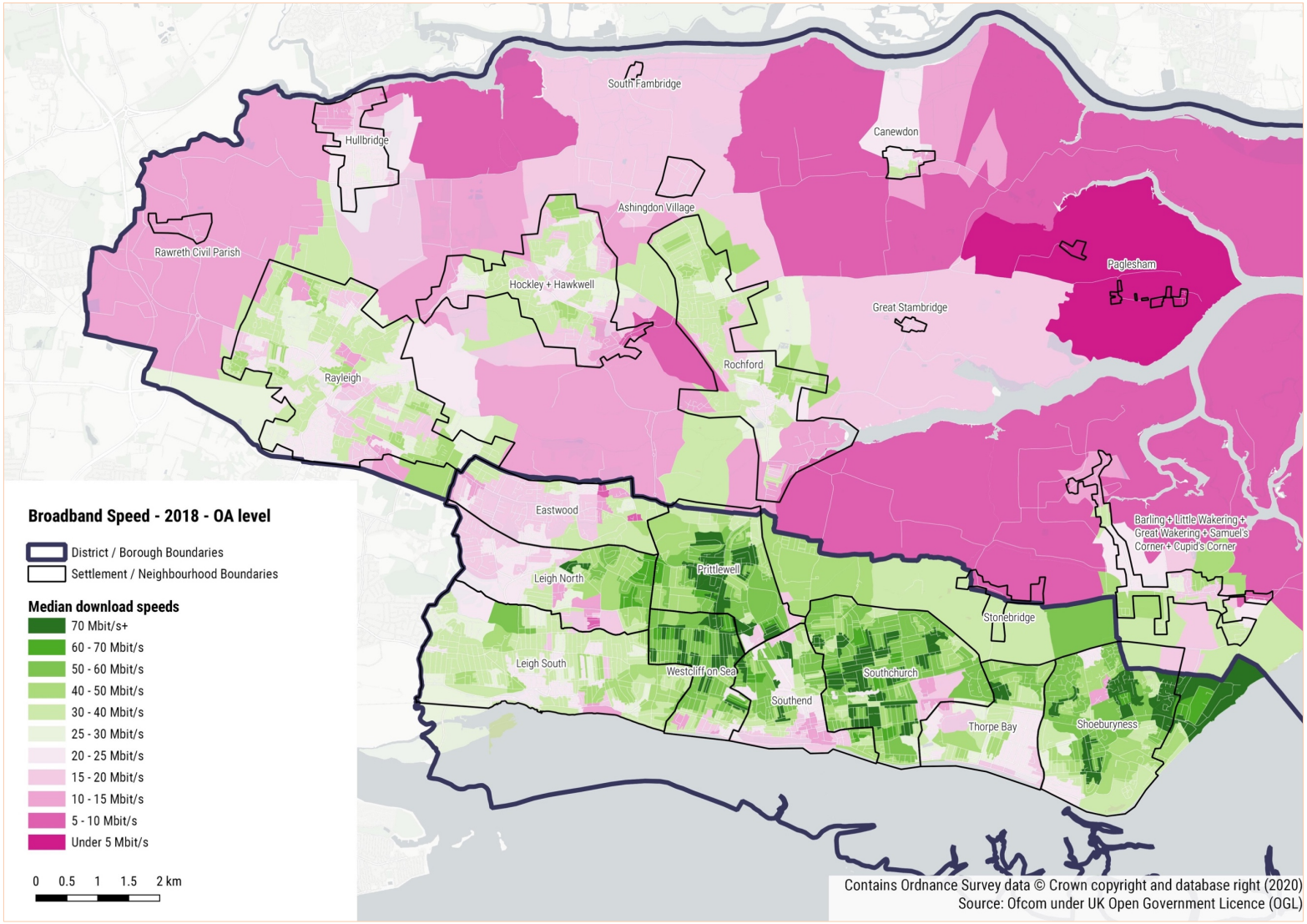


Figure 8: Average broadband download speed, as of 2018, across the study area (source: Ofcom)

3. Approach to the study

Policy framework

National policy and guidance

3.1 Although there is no prescribed format or standard methodology for production of a settlement role and hierarchy study, the National Planning Policy Framework (NPPF) and associated Planning Practice Guidance provides an important steer.

3.2 At the heart of the NPPF is the presumption in favour of sustainable development. Local Plans should be prepared with the objective of contributing the achievement of sustainable development. Where local authorities are planning for major growth the NPPF suggests that this might best be accommodated by way of new settlements or extensions to existing settlements. In such instances, the NPPF notes that local authorities should *'ensure that their size* (by which it means the new settlement of extension) *and location will support a sustainable community, with sufficient access to services and employment opportunities within the development itself, or in larger towns to which there is good access'*.[11]

3.3 In rural areas, the NPPF notes that sustainable development should be promoted by locating housing where *'it will enhance or maintain the vitality of rural communities. Planning policies should identify opportunities for villages to grow and thrive, especially where this will support local services. Where there are groups of smaller settlements, development in one village may support services in a village nearby'.*[12] The NPPF goes on to state that in rural areas, planning policies and decisions should enable *'the retention and development of accessible local services and community facilities, such as local shops, meeting places, sports venues, open space, cultural buildings, public houses and places of worship'*[13].

3.4 These extracts are important in the context of the study area, which varies between being highly urbanised, particularly in the centre of Southend, and very rural, in parts of Rochford.

3.5 The extracts also clarify the importance of providing services and facilities to support and sustain local communities. Indeed, and in relation to rural areas, the NPPF notes that where some development is required to meet local needs

[11] Para 72 (b), MHCLG, February 2019, NPPF
[12] Para 78, MHCLG, February 2019, NPPF
[13] Para 83 (d), ibid.

this may take place outside of existing settlement boundaries, but that where it does, opportunities should be exploited that make the location more sustainable, *'by improving the scope for access on foot, by cycling or by public transport'*[14].

3.6 This is expanded further in section 8 of the NPPF which requires local authorities to plan positively for the provision of *'community facilities and other local services to enhance the sustainability of communities and residential environments'*.[15] Alongside this, access to services and facilities is important, with the NPPF requiring planning policies to support a mix of uses that minimise the number and length of journeys. Services and facilities that support day-to-day needs should thus be located close to or within easy access of the home. The NPPF establishes a hierarchy of movement which gives priority to pedestrian and cycle movements, followed by public transport. The focus is thus on active and sustainable travel. This is set out in section 9 of the NPPF, requiring opportunities that promote walking, cycling and public transport use to be identified and pursued during the early stages of the plan-making process, stating that *'significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes'*[16].

3.7 The framework outlined above is developed further in Planning Practice Guidance in respect of Healthy and Safe Communities[17]. Places which promote healthy behaviours and environments, and which reduce health inequalities are supported. These are places with good access to green space, local services and facilities, including healthcare and education, and which are safe and easy for people to move around. Furthermore, the National Design Guide states that good places are those that '*function well, accommodating businesses, homes and a range of other uses and activities that support our everyday lives'*.[18]

3.8 Linked to this the Government's Garden Communities prospectus is helpful in setting out the expectations for sustainable development. Whilst delivery of a new garden community in the study area may, or may not be appropriate, the prospectus provides useful clues as to what should be looked for in a sustainable place. It, for example, states that these communities should be of a scale that can support '*the necessary infrastructure to allow the community to function self-sufficiently on a day to day basis*',[19] and that they should be *'vibrant*

[14] Para 84, ibid.
[15] Para 92 (a), ibid.
[16] Para 103, ibid.
[17] MHCLG, March 2014, updated November 2019, Guidance on promoting healthy and safe communities
[18] Para 2, MHCLG, October 2019, National Design Guide: Planning practice guidance for beautiful, enduring and successful places
[19] Para 13 (b), MHCLG, August 2018, Garden Communities

mixed use communities that support a range of local employment types and premises, retail opportunities, recreational and community facilities'.[20]

3.9 The Garden Communities toolkit[21] outlines the range of infrastructure that might be needed to support a sustainable garden community. The inference is that a sustainable place, whether a garden community or not, should include a wide range of infrastructure. This includes:

- Physical components, like streets, cycle paths, utilities and public realm.
- Green and blue infrastructure, like open space and green corridors, water bodies and natural habitat creation.
- Social/ community infrastructure like education, healthcare, community, retail, play for all ages, and sports/ leisure facilities.
- Strategic infrastructure needed to support delivery of the whole community, like major transport infrastructure, a secondary school or a country park.
- Local infrastructure needed to serve a neighbourhood, for example, a primary school.

Local Plans

3.10 In Rochford, the Local Plan Issues and Options document was consulted on between December 2017 and March 2018. The draft vision for the District is that it will be '*a green and pleasant place with a focus on businesses and high quality homes supported by accessible and responsive services and facilities, creating healthy and sustainable communities*'. This builds upon the evidence prepared for the Plan but also responds to community workshops and Parish Plans prepared across the district, with common concerns and ideas including the need to improve services and utilities, develop sustainable transport options, and sustaining local schools.

3.11 In Southend, consultation on the Local Plan Issues and Options document took place between February and April 2019. This establishes three spatial options for growth and has a focus on providing a network of vibrant and attractive town centres, a sustainable transport system, the creation of healthy places, and provision of social and community infrastructure.

3.12 The Local Plans for Rochford and Southend are set in the context of the Joint South Essex Plan, setting out a strategic framework for development in the area[22] up to 2038. It is anticipated that an options document will be published

[20] Para 13 (c), ibid.
[21] Homes England, September 2019, Garden Communities Toolkit (https://www.gov.uk/guidance/garden-communities)
[22] The South Essex Plan covers the administrative areas of Basildon, Brentwood, Castle Point, Rochford, Southend and Thurrock Councils.

for consultation later in 2020, establishing high level policies on topics such as housing, employment and environmental protection.

Overarching principles

3.13 The UN Sustainable Development Goals[23] were adopted by all UN Member States in 2015, forming part of the 2030 Agenda for Sustainable Development[24]. All seventeen goals are relevant to the way we plan for and think about the future of our towns and cities. In the context of this study, sustainable development goal eleven is particularly pertinent. The stated aim of this goal is to *'make cities and human settlements inclusive, safe, resilient and sustainable'*. The targets linked to this goal include, amongst others:

- Ensuring access for all to adequate, safe and affordable housing, as well as basic services.
- Providing access to safe, affordable, accessible and sustainable transport systems for all.
- Provide universal access to safe, inclusive and accessible, green and public spaces.

3.14 The publication of the New Urban Agenda[25] builds upon the Sustainable Development Goals and establishes a list of 'transformative commitments for sustainable development'. These include the promotion of social cohesion and equality, access to infrastructure and services, safe, healthy and inclusive places that are easy to move around it also encourages the production of:

'spatial development strategies that take into account, as appropriate, the need to guide urban extension, prioritising urban renewal by planning for the provision of accessible and well-connected infrastructure and services, sustainable population densities and compact design and integration of new neighbourhoods into the urban fabric, preventing urban sprawl and marginalisation'.[26]

Wider initiatives

3.15 Work on the review of the Local Plans in Southend and Rochford is taking place at a time when many authorities across the country have been declaring a climate change emergency. In Rochford a Climate Change and Sustainability Strategy, and associated action plan (the Climate CO_2de), has been adopted. In Southend, the declaration of a Climate Emergency in September 2019 set out six actions, including the proactive use of 'local planning powers to accelerate

[23] See: https://sustainabledevelopment.un.org/
[24] United Nations, 2015, Transforming our World: The 2030 Agenda for Sustainable Development – A/RES/70/1
[25] United Nations Habitat III, 2017, New Urban Agenda
[26] Para 52, ibid.

the delivery of net [zero] carbon new developments and communities'. At county level, Essex County Council has established a Climate Change Commission. At the time of writing the details of this are to be announced, though it aims to support environmental initiatives that look to reduce carbon dioxide emissions, reduce waste and promote sustainable transport.

3.16 Other events have also begun to have profound impacts on the way we use our towns and cities, and how we might plan for these in the future. During the production of this study the spread of COVID-19 and the social distancing measures put in place have resulted in far reaching consequences for day-to-day habits, lifestyles and working environments.

3.17 With social isolation and homeworking measures put in place the need to travel quite so extensively on a daily basis for many people reduced. This resulted in improvements to air quality as well as quieter and safer streets for walking and cycling. At the same time, it increased awareness of the importance of local shops and essential services, and the ability of people to be able to access those, with matters such as resilience in regard to food supplies, for example, recognised. The measures also highlighted the importance of good quality broadband provision and communication networks[27], the need for parks and spaces for people to exercise in, and the importance of well-designed homes and living spaces. Moreover, the importance of social networks and community cohesion was recognised, providing support to neighbours and those in need.

3.18 A series of temporary measures were put in place in many cities to create safe space for people to travel and exercise in. In Brighton, for example, the Council closed Madeira Drive (along the seafront) to vehicular traffic, providing people with space to walk and cycle outside for the purposes of daily exercise. This followed the lead of many cities across the world, including Bogota, Milan, Vancouver and Berlin, where road space was been reallocated to pedestrians and cyclists, providing safe environments for people to use.

3.19 One of the questions raised by the temporary measures is how long they will last. The Department for Transport has made clear that, if the UK is to meet its target of achieving net zero greenhouse gas emissions by 2050, then walking, cycling and public transport must replace the car as the first choice for daily activities[28]. The Government is committed to establishing a new Cycling Infrastructure Fund and aims to increase the percentage of children aged 5 to 10 that usually walk to school to 55% by 2025[29]. Furthermore, revisions to the

[27] The importance of Broadband during the COVID-19 lockdown was recognised by the Government as a utility that people 'need-to-have', with providers agreeing to lift data caps for the most vulnerable.
[28] Department for Transport, March 2020, Decarbonising Transport: Setting the Challenge
[29] Para 2.61, ibid.

Traffic Management Act 2004 published in May 2020[30] set out a response to COVID-19 and expects local authorities to implement a series of measures that will see road space reallocated, providing more space for people to walk and cycle safely.

3.20 The move away from private vehicles as the first choice is championed by Sustrans whose 2019 manifesto[31] included the promotion of '20-minute neighbourhoods', with the key principle being that everyone in towns and cities can walk and cycle for everyday services and needs.' It is envisaged that this concept would support[32]:

- Vibrant, healthy and prosperous communities that engage citizens.
- More journeys by foot, cycle and public transport because they are the most obvious and convenient option.
- People living close to their place of work, shops and recreation; and children within walking, cycling or scooting distance of their school.
- The most vulnerable members of society are easily accessible to vital services, medical care and social sports.

Planning for 'great places'

3.21 The discussion outlined above points to the importance of planning for and creating mixed, compact and accessible places, for all; the benefits of which are illustrated in Figure 9. It is clear that accessibility (for all people, of all ages, incomes and abilities), provision of a wide range of services and activities, and proximity to these and other people, as well as good design and a mix of uses, is central to the creation of successful places.

3.22 The sustainability credentials established through LEED[33], particularly those within the Neighbourhood Pattern and Design section of the 'Neighbourhood Development' (ND) reference guide[34], are also helpful. The guide is intended to help inform well planned development and approaches to the design and layout of new places as well as the regeneration of existing areas. Although originating in the US, LEED is recognised globally as the standard to adhere to when seeking to demonstrate resource efficient development and the creation of sustainable places. The ND reference guide emphasises, amongst other items, the importance of walking and cycling friendly places, good public

[30] Department for Transport, 9 May 2020, Traffic Management Act 2004: network management in response to COVID-19
[31] Sustrans, 2019, Sustrans' Manifesto for UK Government
[32] Page 14, ibid.
[33] LEED, standing for Leadership in Environmental and Energy Design, is a certification programme developed by the US Green Building Council (USGBC). The Neighbourhood Development rating system was developed in conjunction with The Congress for New Urbanism and Natural Resources Defense Council
[34] USGBC et al, October 2010, LEED for neighbourhood development with global alternative compliance paths

transport provision and mixed-use development with the provision of community facilities which integrate well within neighbourhoods.

Figure 9: The benefits of great places[35]

Assessing 'completeness'

Overview

3.23 This study has taken an approach to assessing the 'completeness' of settlements and neighbourhoods to help inform their position within the settlement hierarchy. By completeness we mean how many of the services required for day-to-day life are found within each place. The more services that are found in a particular place, then the more complete that place is.

3.24 This is an approach that was first developed in Portland, in the US, where the development plan (The Portland Plan) is focused on the ability for people to live in healthy communities with safe and easy access to the full range of services and goods required for daily living. The Portland Plan defines a complete neighbourhood as one that:

[35] Graphic sourced and adapted from the PPS Group. See https://www.pps.org/article/a-thriving-future-of-places-placemaking-as-the-new-urban-agenda

'includes a variety of housing options, grocery stores and other commercial services, quality public schools, public open spaces and recreational facilities, affordable active transportation options and civic amenities. An important element of a complete neighbo(u)rhood is that it is built at a walkable and bikeable human scale, and meets the needs of people of all ages and abilities'.[36]

3.25 The Portland Plan takes the view that the creation of complete neighbourhoods will support healthier lifestyles, strengthen the network of local centres, lead to a reduction in carbon emissions, reduce housing and transport costs, and promote more equitable investment in public services.

3.26 Although going by different names, this is an approach that has been developed and informing planning strategies elsewhere too. In the City of Melbourne, Australia, the concept of the '20-minute neighbourhood' (see Figure 10) is the guiding principle for the City Plan. The concept is all about 'living locally', where people have the ability to meet most of their daily needs within a twenty minute walk of the home, by bicycle or public transport.

Figure 10: The features of a '20-minute Neighbourhood' (source: Victoria State Government)

[36] Page 76, Portland City Council, Portland Plan, April 2012

3.27 This approach has been taken as the City recognises that the quality of the built environment has a direct impact on our health. Through creation of well-designed neighbourhoods that comprise a mix of uses, housing types and access to good quality public transport, it is considered that we can shape healthy communities. The City explains that '20-minute neighbourhoods' are:

'Connected and walkable places… where people can live, work and play. Places where people can spend their free time and access local services including community hubs that encourage social interaction. These are places where people want to be'.[37]

3.28 In Melbourne the reference to twenty minutes means a ten minute journey to your destination and ten minutes back. The emphasis is on walking and, based on comfortable walking distances, notes this means that all facilities required for day-to-day life should be within an 800m catchment of the home. The hallmarks of a '20-minute neighbourhood' are that they must:

- Be safe, accessible and well connected for pedestrians and cyclists to optimise active transport.
- Offer high-quality public realm and open spaces.
- Provide services and destinations that support local living.
- Facilitate access to quality public transport that connects people to jobs and higher-order services.
- Deliver housing / population at densities that make local services and transport viable.
- Facilitate thriving local economies.

3.29 Similar to the approach to Complete Neighbourhoods in Portland, the '20-Minute Neighbourhood' is considered to bring a range of social, economic and environmental benefits, including:

- Enhancing the sense of community and social cohesion.
- Supports health, infrastructure and environmental savings to the local economy.
- Can halve household transport costs.
- Improved health and wellbeing.
- Supports passive surveillance increasing safety.

[37] See: https://www.planning.vic.gov.au/policy-and-strategy/planning-for-melbourne/plan-melbourne/20-minute-neighbourhoods, accessed April 2020

- Increases retail trading.
- Alleviates pressure on the transport network.
- Helps reduce pollution and carbon dioxide emissions.

3.30 In a similar fashion the Mayor of Paris Anne Hidalgo has recently published plans to transform the French capital into the '*ville du quart d'heure*': the 'quarter-hour city' (Figure 11). The idea behind this is that[38]:

"It's a city of neighbourhoods where you can find everything you need within fifteen minutes from homes."

"Cities should be redesigned so that people can access the basic social functions of a city within their own neighbourhoods"

"It's a response to climate change and pollution. But it's equally about quality of life"

3.31 This concept is based around the idea of the walkable, hyperlocal city, with priority given to people walking and cycling, reallocating space currently used by private cars. Public spaces would be multi-functional, allowing them to be utilised for different uses and activities throughout the day. Local retail and essential services are promoted, and the roll-out of 'citizen kiosks' encouraged as places offering community services, including the sharing and borrowing of goods.

3.32 The examples above are not the first to explore such ideas. In Copenhagen we find the concept of 'the city of short-distances' for example, and in Barcelona, the 'superblock' is seeking to make areas safer and more attractive for people to walk in, and where housing is supported by provision of everyday services.

3.33 Although these examples all go by different names they follow the same basic idea: that everyone should benefit from being in close proximity to services by foot or by bike, and that good access to infrastructure is supported by a successful public transport network. The various initiatives are all seeking to improve the quality of life for all inhabitants, irrespective of age, gender or ability, to strengthen community cohesion and the quality of environment.

[38] See: https://www.thealternative.org.uk/dailyalternative/2020/3/7/the-fifteen-minute-city-paris, accessed April 2020

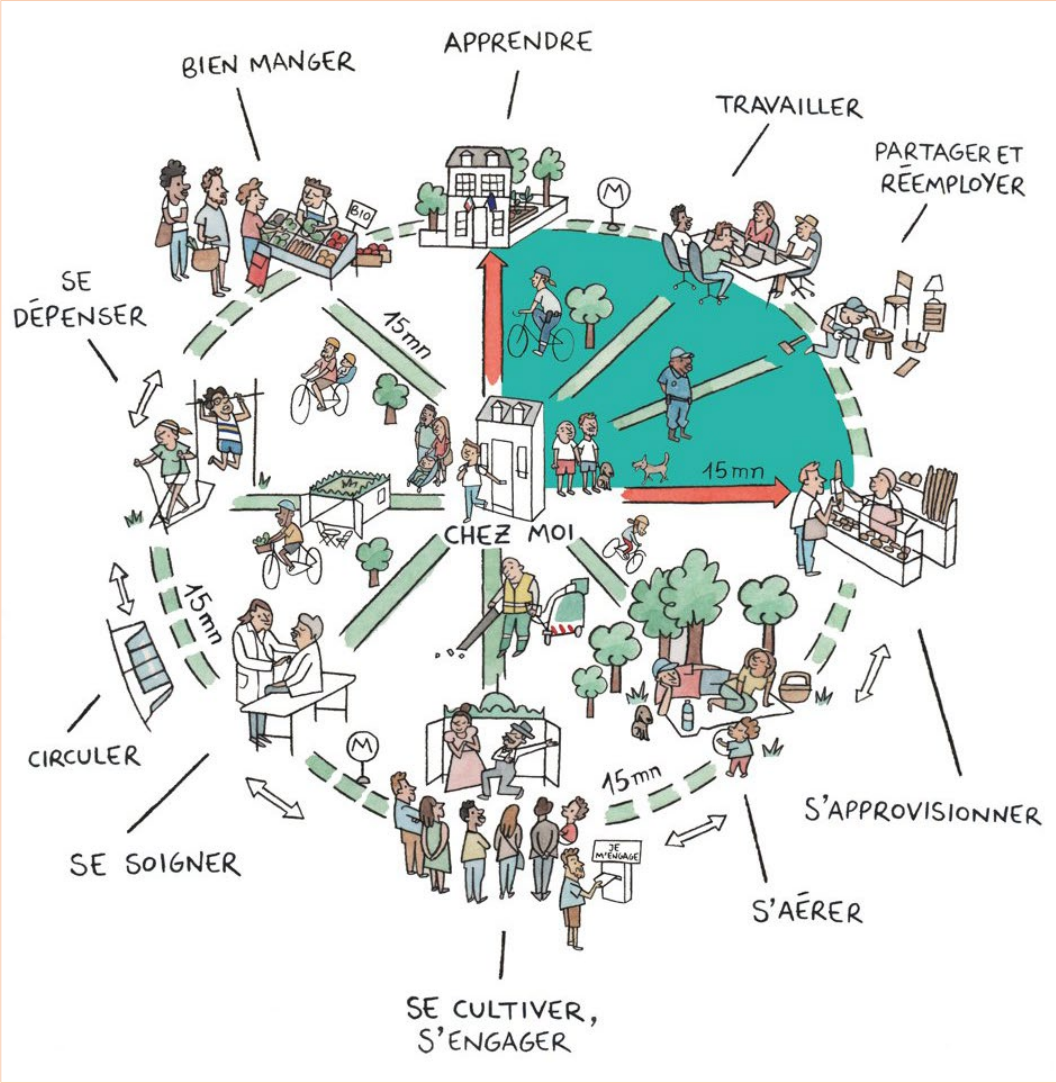


Figure 11: Graphic illustrating the 'quarter-hour city', where basic services and facilities are within a fifteen minute walk or cycle of the home - 'chez moi' in this image. (source: Paris en Commun)

Applying the concept of the complete neighbourhood in the study area

3.34 Following the policy framework and examples of initiatives being developed elsewhere as outlined above an approach to assessing completeness has been developed for application in Southend and Rochford. This has taken place at three levels, comprising: (a) location and distribution of services and facilities that provide for day-to-day needs, and the distance that people might reasonably travel, by foot or by bike, to use these; (b) the location and provision of good public transport services, recognising that not all people can walk or cycle, and that some longer-distances will be required, for employment and cultural activities, for example; and (c) the location of those region-wide facilities that people will travel further afield to, and their proximity to public transport services. Combining these informs us how complete a particular

place is and the role it plays within the settlement hierarchy. This approach is explained further below:

(a) Day-to-day services and facilities

3.35 Those services and facilities commonly required for day-to-day life have been mapped across the study area. The services are explored further in the next section of this report but include, for example, schools, doctors surgeries, local parks and shops.

3.36 The distance that the average person might be willing to walk or cycle to each of these facilities has been researched and these catchment areas mapped around each of the facilities in the area. The distances are based on well-established standards that assume the average person can walk a distance of 800 metres in ten minutes and cycle a distance of 2,300 metres in the same time. This is explored further in later sections of the report.

3.37 Heat-mapping is prepared for each place, overlapping the catchments around each of the facilities in that area. Hotter colours indicate the provision of multiple facilities and areas within a reasonable catchment of these, and which might be considered 'more complete'. Cooler colours indicate a lack of facilities and access to these, and are those places that might be considered 'less complete'.

3.38 This exercise is undertaken separately for walking and cycling networks, as well as for different categories of infrastructure. This helps inform the characteristics of a particular place, and whether there are differences in the level of infrastructure provision by type. This is then useful for comparing against social-demographic data, for example, population densities, to understand whether there are any relationships between these.

(b) Public transport provision

3.39 Consideration is then given to provision of public transport and the acknowledgement that for some services with a larger catchment area people will need (and be willing) to travel further afield by bus and rail. Mapping of bus routes and the frequency of services as well as railway stations and catchment areas around these shows those places where access to a wider range of facilities might be gained, providing wider opportunities for the local population. This is discussed further in subsequent sections of this report.

(c) Region-wide services and facilities

3.40 The third step in the process is to map the location of and associated locational criteria for those services and facilities of a city / region wide importance and which are commonly found in larger settlements. This includes, for example, higher education (universities), hospitals, and cultural activities (theatres). The location of these is mapped to understand where they are distributed, and thus help inform which settlements might be of a higher order. This mapping exercise also relates the location of these services and facilities to public transport provision to help understand how accessible they are to the wider community. This then informs findings and recommendations with regard to access and potential interventions that might be required. As above, this is discussed further in later sections of the report.

4. Infrastructure & Facilities

Introduction

4.1 This section presents the range of services and facilities mapped for assessment purposes in this study. It is broken down as per the three levels outlined in the previous section, comprising (a) day-to-day services and facilities, (b) public transport provision, and (c) region-wide services and facilities.

4.2 The services, facilities and infrastructure that has been mapped is based upon GIS data supplied by Rochford District and Southend Borough Councils. Other data sources used are referenced where appropriate in the report.

4.3 Within each section, and where appropriate, a series of sub-categories of infrastructure and service types has been created. This allows for similar types of service to be grouped together for assessment purposes. For example, nurseries, primary and secondary schools are grouped under 'education'.

4.4 In addition to the facilities listed we have also mapped the movement network. This is for the purposes of mapping accurate catchment areas around each service or facility (see the next Section for more information).

Day-to-day services and facilities

4.5 Services and facilities mapped for this level of assessment are listed in Table 5. It should be noted that there are several exclusions to the list, including:

- Automated Teller Machines (ATMs) are not mapped. The changing nature of the banking industry and associated rise in contactless card payments and electronic money transfers has seen the number of ATMs on the High Street decline in recent years. This is a pattern that is anticipated to continue, particularly given the costs of maintaining such a service. Mapping of ATMs would provide a snapshot at a very particular time, but the picture could rapidly change and thus impact on the analysis. Despite the reduction in ATMs they are recognised as an important service, particularly in rural areas.[39]
- Electric Vehicle charging points are not mapped. Currently the presence of these is limited and so mapping provision would provide a time-limited picture that will rapidly change over the coming years with the roll out of

[39] See, for example, House of Commons Library, 30 November 2018, Debate Pack Number CDP-0269: Impact of ATM closures on towns and communities

charging points in public spaces and at home, as well as at combined mobility hubs. Furthermore, rapid changes in technology and the impact on the transport sector, particularly in relation to new concepts such as Mobility as a Service could have a profound impact on the way we travel, own and use vehicles.

- Post Offices have not been mapped. Whilst these provide an important service and social function, which has been recognised by Government, the use of the Post Office has changed and many have closed, with total numbers in the UK having halved in the last 30 years. With changes to the ways that society is making use of the Post Office, coupled with high costs and low wages, many more Post Offices are at risk of closure. Furthermore, many of those that do currently operate are often located within other stores. As above, mapping provision now could provide a time-limited picture. The study has instead mapped town centres uses and has made use of Experian data to comment on the type and mix of uses in the centre.

- Public Houses have not been mapped. Although these provide an important role for the community, particularly in rural areas where they can help combat social isolation, the number of pubs across the country has been in and continues to decline. In 2017 there were almost 1,000 pub closures across the country, and 850 the following year. Between 2002 and 2018 the number of small pubs across the country (those employing fewer than ten people) declined by some 18,000. The impact of COVID-19 may continue this trend, with a survey of British Beer and Pub Association members suggesting that around 40% of pubs may not be able to open again[40]. As with Post Offices, mapping provision of pubs is likely to result in a time-limited information.

- Some informal recreational spaces have not been mapped, including public rights of way through the countryside or along the coast. Whilst access to these spaces can be of benefit to settlements, particularly rural villages where formal recreation spaces may be absent, it must be recognised that the quality, safety and overall attractiveness of these spaces is very mixed and therefore they do not provide a reliable indicator of provision to the same extent as formally identified open spaces or green infrastructure.

[40] https://beerandpub.com/2020/05/07/40-of-britains-pubs-wont-survive-beyond-september-unless-government-helps-them/

Category	Sub-category	Use / Facility / Service
Social & community Infrastructure	Education	Nursery
		Primary School
		Secondary School
	Health	Doctors Surgery
		Dentists
		Pharmacy
	'Civic'	Community Centres and Halls
		Library
		Places of Worship
		Public Convenience
	Sport & Leisure	Playing Pitches
		Local Play / Equipped Play Areas
Green Infrastructure	-	Parks and Gardens
		Amenity Green Space
		Natural & Semi-Natural Green Space
		Allotments
'Town Centre' uses	-	Local Shop
		Local / Neighbourhood Centres
		District / Town Centres
		Superstore

Table 5: List of everyday services and facilities mapped for assessment in this study

Note to table:
Local shops are those outside of a designated centre

Public transport provision

4.6 All train stations in the study area have been mapped as well as all bus stops and routes.

4.7 For bus stops and services information from NaPTAN[41] has been utilised. This categorises bus routes into two categories: those with four or more buses per hour (i.e.: one bus every fifteen minutes or more), and those with less than four buses per hour.

4.8 Routes that operate four or more buses per hour are generally considered to be operating a good level of service. These have been mapped and the outcomes considered in following sections[42].

[41] NaPTAN, standing for National Public Transport Access Node, is the database of all public transport points (bus stops, rail stations, airports, ferry ports, tram/metro/underground stops) in Great Britain. It is managed by the Department for Transport and is updated by local authorities.
[42] Research has shown that people prefer a 'frequency minimum every 20 minutes in urban areas, with 10 minutes the target'. *See: Chartered Institution of Highways and Transportation, January 2018, Buses in Urban Developments.* A service with four buses per hour (i.e.: one every fifteen minutes) is the mid-point between this.

Region-wide services and facilities

4.9 The region-wide services and facilities mapped for this study comprise:

- Higher Education.
- Further Education.
- Hospitals.
- Theatres.
- Cinemas.
- Galleries.
- Museums.
- Indoor Sports Halls.
- Swimming Pools.
- Leisure Centres.
- Employment Areas.

4.10 Although employment areas have been mapped these relate to traditional land use planning definitions, reflecting the use classes order: offices, light industrial, storage and manufacturing. In reality, employment opportunities are generated by a far wider range of activities, including many of the services and facilities listed in this report, and so the assessment and relative importance of catchments around employment areas is difficult to discern, not least given (a) the commuting context of the study area and relationship with the employment offer in London, and (b) the car-based nature of many traditional employment uses which contrasts with the focus on walking, cycling and public transport use explored in this study.

5. Catchment distances

Introduction

5.1 The focus of the work is on understanding how 'complete' and 'sustainable' places are. In line with national policy and guidance, which emphasises the need to plan for sustainable patterns of development, the study assesses the provision of services and facilities that are in easy access of the home, preferably by foot, but also by bicycle, thus reducing the need for people to travel by car. This section of the report establishes comfortable walking and cycling distances to enable analysis of each settlement or neighbourhood to take place. These are based on research into catchment distances for different facilities and then converted into reasonable journey times based upon average walking and cycling speeds.

The benefits of walking and cycling

5.2 It is recognised that encouraging a mode shift from private vehicles to walking and cycling has many benefits, with research[43] showing this is good for the environment, for health (see Figure 12) and social well-being, and for the economy.

5.3 Work by Living Streets for example has shown that interventions to encourage walking can increase the number of people entering shops and trading by up to 40%.[44] This is reflected in numerous studies of cities across the world[45] which report that although people who walk or cycle to the shop spend less per visit than those who travel by car, they visit more often and, over the course of the week or month, will spend more in the centre. Equally, the act of walking or cycling means time spent at the shops or central area is not time limited by parking charges, meaning more time is spent there and where multiple activities take place in each visit. In addition, and particularly in an urban setting, research[46] has shown that it is quicker to travel short distances by bicycle than it is by car, with car drivers often underestimating the time spent waiting in traffic, searching for a parking spot and then walking to their final destination.

[43] See, for example, the Health Economic Assessment Tool (HEAT) developed by the World Health Organisation (Europe) which is designed to help conduct economic assessments of the health benefits of walking or cycling by estimating the value of reduced mortality that results from specified amounts of walking or cycling (https://www.heatwalkingcycling.org/#homepage). Also, see, London School of Economics, 2011, The British Cycling Economy: Gross Cycling Product (http://eprints.lse.ac.uk/38063/), and Arup for Victoria Walks, 2018, The economic case for investment in walking
[44] Living Streets and Just Economics, 2013, The Pedestrian Pound: The Business Case for Better Streets & Places.
[45] See: https://www.citylab.com/solutions/2015/03/the-complete-business-case-for-converting-street-parking-into-bike-lanes/387595/
[46] See, for example, https://dailyhive.com/vancouver/cycling-in-major-cities-convenience

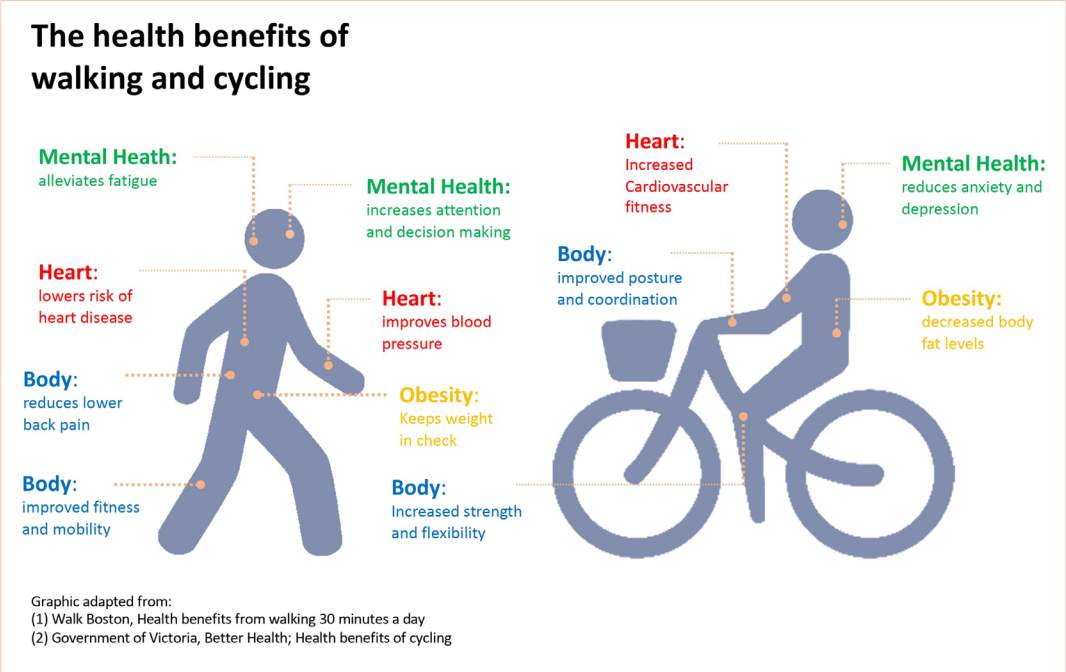


Figure 12: The health benefits of walking and cycling

5.4 Furthermore, mobility, over short distances to everyday services, is about space as much as time and distance. More people are able to move through a standard road lane by foot or by bicycle in an hour than they can by car[47]. So, because walking and cycling is so space efficient, a mode shift to these means of travel will also help reduce congestion[48] and the associated environmental benefits through reduction in carbon emissions.

5.5 The creation of walkable places is also set in the context of the Climate Change Emergency (announced by both Southend Borough Council and Essex County Council in 2019) and the Government's Healthy Places initiative. This seeks to change the way in which investment in transport has traditionally been targeted and instead gives highest priority to walking then cycling, then public transport and last, private vehicles (see Figure 13). As noted earlier in this report, this movement hierarchy is reflected in national and local planning guidance.

[47] Research by Botma & Papendrecht in 1991 investigated the number of people a standard 3.5m wide traffic lane can convey with different modes of transport in one hour. This showed that the private car transports about 2,000 people per hour through this space. This compares to cycling and walking, which can convey 14,000 and 19,000 people per hour respectively through this same space.
[48] See research by Civitas for the European Union: https://civitas.eu/news/civitas-flow-quick-facts-show-how-walking-and-cycling-help-reduce-traffic-congestion

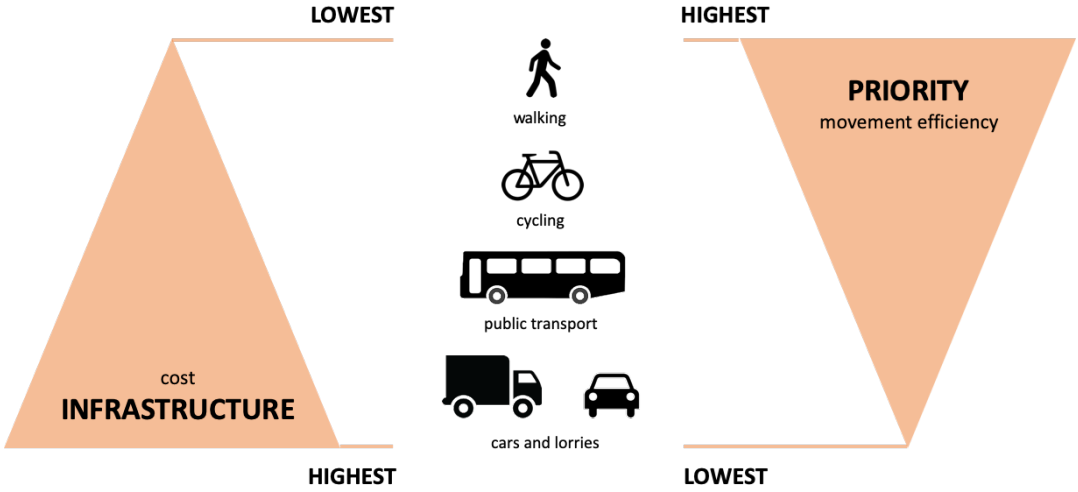


Figure 13: Reprioritising the hierarchy of movement and investment (source: graphic adapted from that prepared by Slow Ottawa)

Comfortable walking distances

5.6 It is generally acknowledged that able-bodied people are happy to walk between five or ten minutes to access different facilities. This equates to a distance of around 400m – 800m from the home[49]. However, distances vary depending on the type of facility and how far people are willing to travel by foot to these. This is well illustrated in Figure 14. As distances increase, so people are less inclined to walk.

Comfortable cycling distances

5.7 Based on average cycle journey times used elsewhere (e.g.: by the GLA), it is assumed that the average distance that an able-bodied person might comfortably cycle in five minutes is 1,150m and, in ten minutes, 2,300m (at a speed of approximately 13.8km/h or 8.5mph). This is of course dependent upon the provision of good cycling infrastructure that makes this an attractive enough proposition for people to use. These distances are also based on the use of standard pedal-cycles: with the growth in 'e-bikes' so the distance that might be travelled may increase. Equally, this may also help open up cycling to groups who might not otherwise cycle because of age or health reasons. But, as noted above, the use of the bicycle, whether it is electronic or not, is still dependent on the quality of the infrastructure that exists: if it is not considered safe to cycle in an area, because of traffic speeds and volume for example, then this will reduce the numbers cycling.

[49] This draws on research undertaken in different countries, including The Institution of Highways & Transportation, 2000, Guidelines for Providing for Journeys on Foot

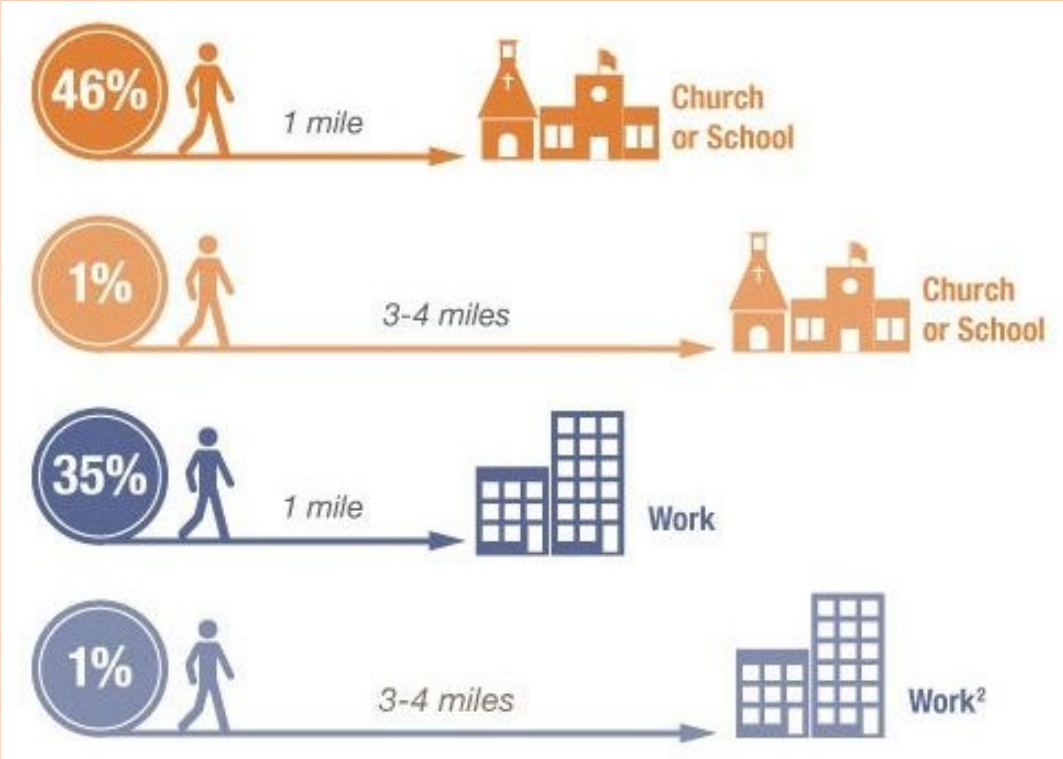


Figure 14: Diagram showing how far people might walk to different facilities (source: The Robert Wood Johnson Foundation)

Conditions impacting on walking and cycling distances

5.8 The distances outlined above in relation to walking and cycling are an average and allow for a variety of factors, including age, climatic conditions and topography. Indeed, research suggests that although climate and topography do impact on the propensity to walk and cycle, and the distance that might be covered, it is only in very wet or snowy conditions, or where there are very steep gradients, that climate and topography cause a significant decrease in walking and cycling distances[50]. Conversely, areas characterised by their flat topography can also be difficult to cycle in at times, given the lack of protection from strong winds. Rather, it is the provision of good quality and safe infrastructure that is most important, making walking and cycling an attractive proposition for people. Equally, and particularly for cycling, the stop start nature of the journey requires considerable effort. Eradicating this effort,

[50] See, for example, European Commission, 1999, Cycling: the way ahead for towns and cities, which cites Bern, in Switzerland, where many roads have a gradient of 7% or more, but where the cycling mode share is 15% of all journeys. It also gives the example of Trondheim in Norway, which has installed a series of bicycle lifts to help people overcome the steepest of slopes, and which has a cycling mode share of 8%. This is also addressed in Colville-Anderson, M. 2018, Copenhagenize: The definitive guide to global bicycle urbanism

coupled with provision of more direct routes, can help extend the distance that people may be willing to cycle.

5.9 Connected with this is risk, both perceived and actual, with people less likely to walk or cycle where the conditions to do not favour this. Where risks and hazards are removed, so the propensity to walk and cycle is likely to increase. However, mapping of the cycle network across Rochford and Southend shows that the network is limited. This was borne out in discussions at workshops with community representatives and infrastructure service providers, who also made the point that barriers to walking exist, particularly in Southend, where the presence of main roads within the urban area can reduce the ability to access certain areas.

5.10 Our work has measured catchment areas based upon the average journey distance and converted these into travel times for walking and cycling, reflecting the current street and route network. However, for this to be reflected in reality, there needs to be further investment in measures that improve walking and cycling conditions, including, where appropriate, wider pavements, segregated cycle lanes, and safer crossing points.

Establishing catchment distances

5.11 To establish appropriate distances to services for this study extensive research has been undertaken, drawing on, for example, the Portland and Melbourne Plans outlined in previous sections of this report, Government guidance, good practice and other research (See appendix for list of research and associated catchment distances within these documents). These are broken down in the following sections, relating to catchment areas around everyday services, those associated with public transport provision, and those associated with region-wide services and facilities. Where the research has indicated a range of distances, an average or mid-point has been taken.

Catchment distances to everyday services and facilities

5.12 In Table 6 below we set out the catchment distances used in this study to map and assess the provision of and access to everyday services. For clarity, all journey times are based upon the following averages for able bodied people:

- For walking: 400m equates to five minutes.
- For cycling: 1,150m equates to five minutes.

5.13 The purpose of the catchment approach is one that aims to identify the distance within which the average person could reasonably walk or cycle to these facilities. It is recognised that some people in the population would be inclined to walk or cycle much further distances. Falling beyond a catchment should therefore not in itself be interpreted as inaccessibility, rather that the average person would be inclined to use the private car for that journey. Furthermore, and as previously stated, these catchment distances are based on research into a range of distances used elsewhere, with the average taken to arrive at appropriate distances for this study. In some instances, people may be willing to travel further, and others not as far, but the average allows for this. As additional studies emerge overtime this may allow for refinement of the catchments.

5.14 The table of catchment times and distances (which is also illustrated in Table 7 for comparison purposes) should be read alongside the following notes:

- The conversion of distance into travel time has been rounded for ease of use.
- Each distance is an average based on research of different standards applied by different organisations and in different places. This is summarised in the Appendix.
- The entry for Local Play / Equipped Play groups together LAPs, LEAPs and NEAPs[51], and takes an average of these for the catchment distance.
- For town centre uses, the identification of Town and District Centres, Local and Neighbourhood Centres is based upon the retail hierarchy set out in the Local Plans and on the proposals maps for Rochford and Southend. Any retail uses outside of these are then mapped as either a local shop or as a superstore, depending upon the size of unit. The Planning Portal defines a superstore as 'a self-service store selling mainly food, or food and non-food goods, usually of more than 2,500 square metres of trading floor space, with a large car park'.[52] Experian data has been used to identify retail unit size and type.

[51] LAP: Local Area of Play / LEAP: Locally Equipped Area of Play / NEAP: Neighbourhood Equipped Area of Play
[52] Planning Portal Glossary: https://www.planningportal.co.uk/directory_record/536/superstore, accessed April 2020

Use / Facility / Service	Catchment distance (metres)	Walk time (mins) (rounded)	Cycle time (mins) (rounded)
Social & Community Education			
Nursery	1,000	12.5	4.75
Primary School	800	10	3
Secondary School	1,200	15	5
Social & Community: Health			
Doctors Surgery	800	10	3
Dentists	800	10	3
Pharmacy	1,200	15	5
Social & Community: Civic			
Community Centres and Halls	800	10	3
Library	800	10	3
Places of Worship	1,000	12.5	4.75
Public Convenience	800	10	3
Social & Community: Sport & Leisure			
Playing pitches	1,200	15	5
Local Play / Equipped Play Areas	650	8	2.5
Green Infrastructure			
Parks and Gardens	710	8.75	3.5
Amenity green space	480	5.75	2
Natural & semi-natural green space	720	9	3.75
Allotments	200	2.5	0.5
Town centre uses			
Local shop	450	5.5	2
Local / Neighbourhood Centres	600	7.5	2.5
Superstore	2,000	25	9
District / Town Centres	1,750	21.75	7.5

Table 6: Walking and cycling catchment times and distances for everyday services and facilities

Note to Table:
Local shops are those found outside of a designated centre

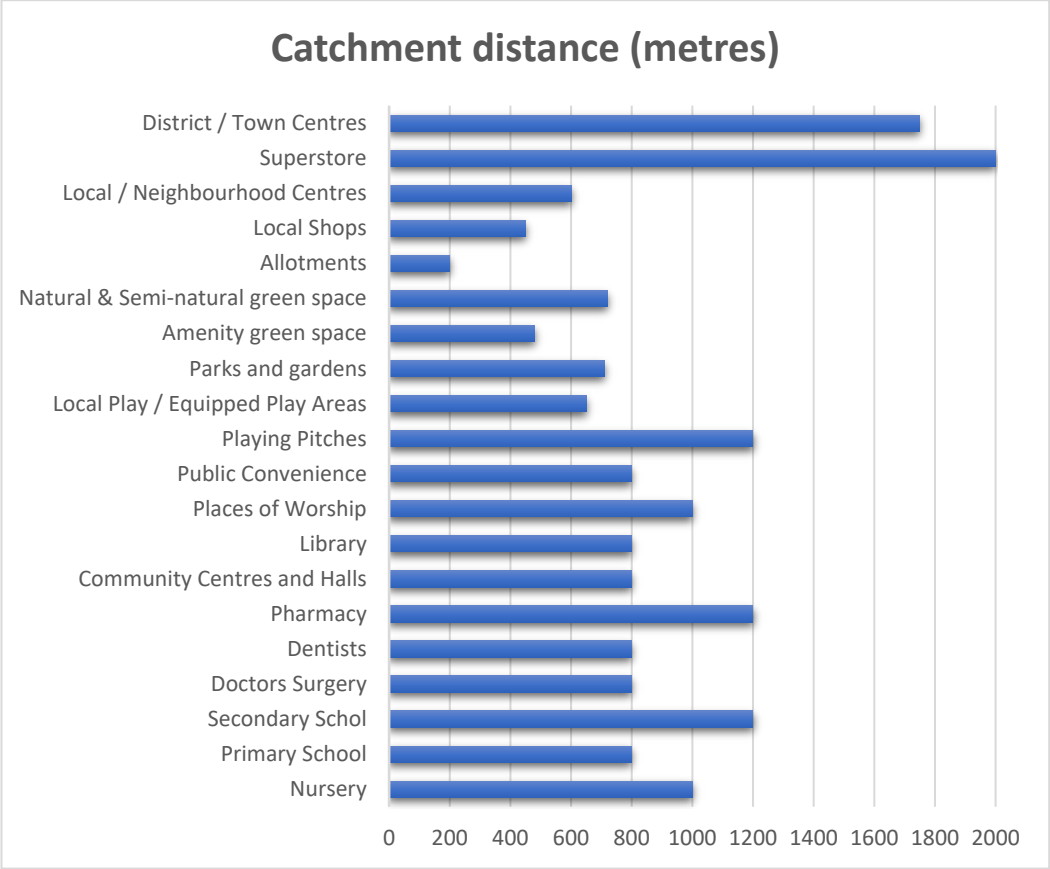


Table 7: Catchment distances to day-to-day services and facilities

Catchment distances to public transport provision

5.15 Beyond everyday services people will need to travel for other purposes, including, for example, work. This will inevitably take people out of their residential neighbourhood. Following the transport hierarchy outlined above a good public transport network should support walking and cycling infrastructure, expanding the distance people are able to travel without needing to rely on a car.

5.16 As above, research has been undertaken to inform appropriate catchment distances around train and bus stations, which are then converted into walking and cycling journey times (Table 8). For the purposes of this study a bus services with four or more buses per hour is considered to have a good level of service.

Use / Facility / Service	Catchment distance (metres)	Walk time (mins) (rounded)	Cycle time (mins) (rounded)
Train stations	800	10	3
Bus stops on frequent routes	400	5	n/a

Table 8: Catchment distances applied around train stations and bus stops in this study

Catchment distances for region-wide facilities

5.17 It is also important to recognise that some facilities are only provided once a critical mass of population has been reached and are thus found in large settlements. These are facilities that people may travel to less often but are prepared to travel further for. Such facilities include hospitals and cultural uses, such as theatres. Research undertaken elsewhere, for example, by Barton et al and reflecting good practice principles used in The Netherlands, links the location of such facilities with access to public transport services. Catchment distances and locational criteria associated with these are presented in Table 9.

5.18 For the locational criteria outlined in Table 9 a 'public transport hub' is taken to mean a bus stop or similar served by a high frequency service.

Use / Facility / Service	Location Criteria
Social & Community: Education	
Further Education	Within 400m / 5 minute walk of a public transport hub
Higher Education	Within 800m / 10 minute walk of a railway station
Social & Community: Health	
Hospital (District)	Within 400m / 5 minute walk of a public transport hub
Hospital (Regional)	Within 800m / 10 minute walk of a railway station
Social & Community: Culture	
Theatre	Within 800m / 10 minute walk of a railway station
Cinema	Within 800m / 10 minute walk of a railway station
Gallery	Within 800m / 10 minute walk of a railway station
Museum	Within 800m / 10 minute walk of a railway station
Social & Community: Sport & Leisure	
Indoor Sports Hall	Within 400m / 5 minute walk of a public transport hub
Swimming Pool	Within 400m / 5 minute walk of a public transport hub
Leisure Centre	Within 400m / 5 minute walk of a public transport hub

Table 9: Catchment distances and locational criteria associated with region-wide services and facilities

Mapping catchment areas

5.19 Catchment distances around services and facilities have been mapped in GIS. The catchments are based upon the street network, providing a more realistic understanding of how far the catchment extends than would be possible using an 'as the crow flies' technique. It draws the catchment around property boundaries and factors in physical barriers to movement, such as the presence of railway lines. An example of this approach is illustrated in Figure 15, with the catchment area around the facility in question shaded in. For comparison purposes the 'as the crow flies distance' is indicated with the dotted line. This shows how the 'as the crow flies' approach can quite significantly exaggerate the catchment area covered by any facility.

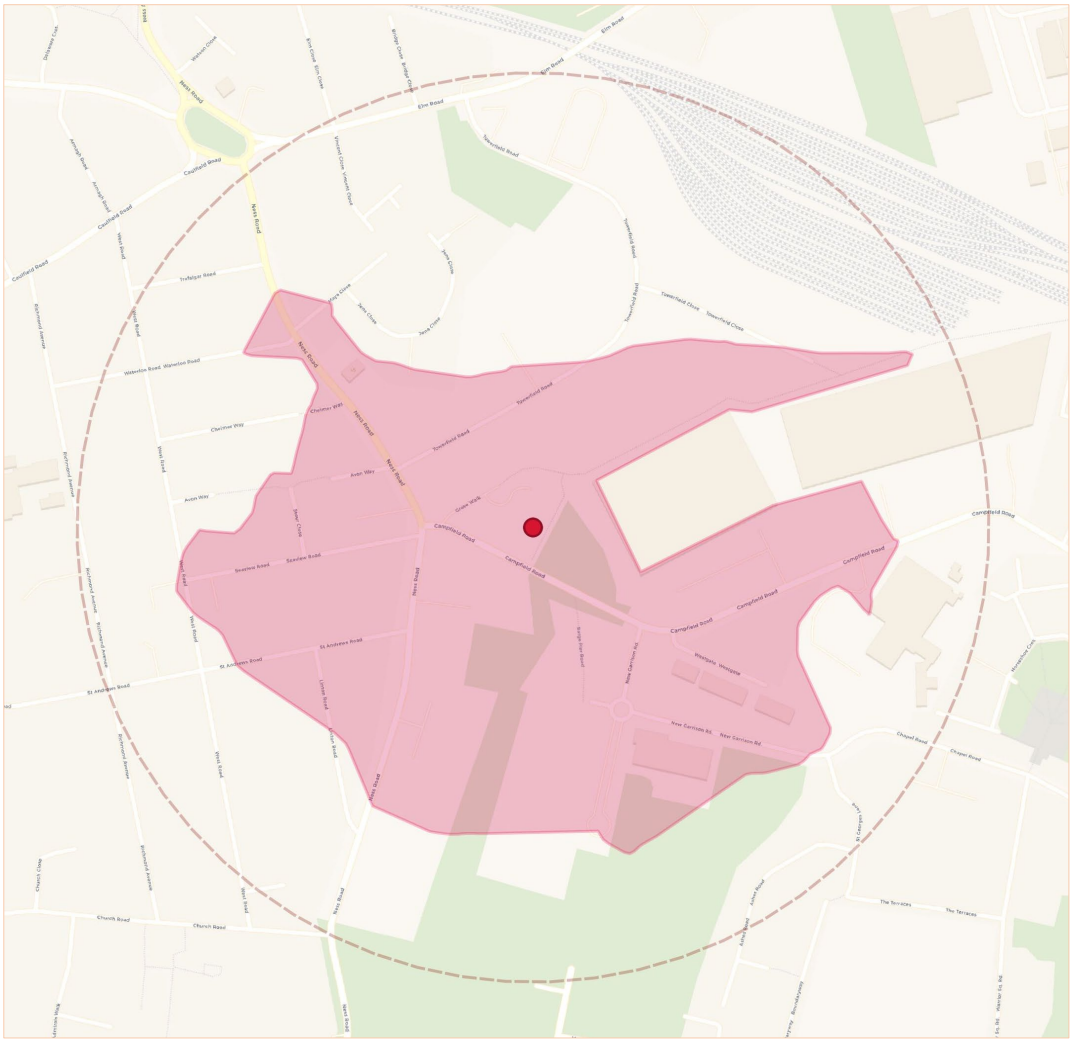


Figure 15: Example of catchment area drawn based on the street network (shaded) in comparison to an 'as the crow flies' approach (dotted circular line)

6. Place-based profiles

Introduction

6.1 This section of the report presents an overview of the 'completeness' of each settlement or neighbourhood in the study area in respect of everyday services and facilities. It is supported by a suite of free-standing profiles for each area which provide more information, broken down by infrastructure type and access by foot. A summary table of completeness for each place is also included in Appendix 3.

6.2 A 'heat-map' of overall completeness and associated commentary is presented, with an overall figure of 'completeness' calculated for each place. The process for this has been to:

- Break the services and facilities down into sub-categories (as presented in Table 5) and to map the catchment areas for each infrastructure item within that category. So, for education, separate maps have been prepared for nurseries, primary and secondary education.
- For each infrastructure item, the percent of the built-up area of that settlement or neighbourhood falling within the catchment area is calculated. This is then aggregated up for each sub-category of infrastructure. So, we calculate the percentage coverage separately for nurseries, primary schools and secondary schools, and then aggregate these to tell us how much of the built-up area is within the walking catchment of all educational facilities. This is repeated for all infrastructure types and an overall score of completeness calculated based on these.
- The mapping prepared for each infrastructure type is then overlaid and heat maps prepared, showing those locations with the highest provision of services and facilities, and those areas which benefit from the greatest level of access to these. The mapping and calculation of completeness also includes the provision of facilities outside the neighbourhood or settlement, but whose catchment area extends into the neighbourhood or settlement, giving a greater depiction of 'completeness'.

6.3 The findings for each settlement or neighbourhood within the study area are summarised below, with plans of infrastructure in each place as well as heatmapping of completeness shown. The key to these images is presented overleaf (in Figure 16). Overall calculations of completeness and study area-wide heatmapping are then presented at the end of this section.

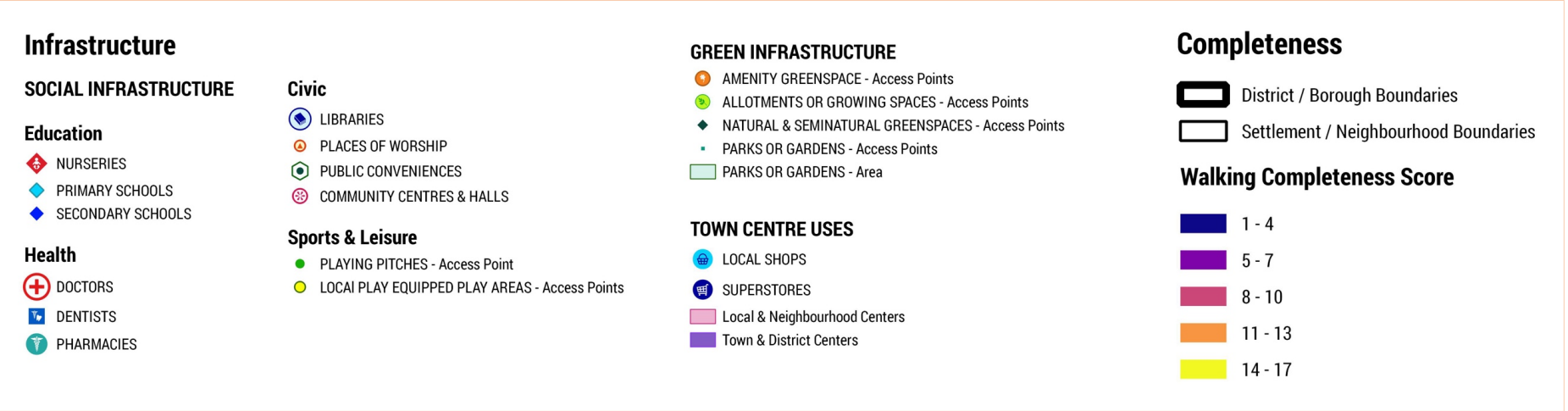


Figure 16: Key to infrastructure plans and heatmapping included within the area profiles. A completeness score of 1-4 is low, with 14-17 being high.

Hyperlinks back to mapping for individual places:			
Rochford District Settlements		*Southend Borough Neighbourhoods*	
Canewdon	Figure 17	Eastwood	Figure 28
Great Stambridge	Figure 18	Leigh (entire neighbourhood)	Figure 29
Great Wakering	Figure 19	Prittlewell	Figure 30
Hockley	Figure 20	Shoeburyness	Figure 31
Hullbridge	Figure 21	Southchurch	Figure 32
Paglesham	Figure 22	Southend (central)	Figure 33
Rawreth	Figure 23	Thorpe Bay	Figure 34
Rayleigh	Figure 24	Westcliff-on-Sea	Figure 35
Rochford	Figure 25		
South Fambridge	Figure 26	Leigh (north)	Figure 40
Stonebridge	Figure 27	Leigh (south)	Figure 41

Rochford District

6.4 The first set of summaries presented in this section are for the settlements assessed in Rochford District. They are presented in alphabetical order and comprise:

- Canewdon
- Great Stambridge
- Great Wakering (including Little Wakering, Barling, Cupid's Corner and Samuel's Corner)
- Hockley (including Hawkwell)
- Hullbridge
- Paglesham
- Rawreth
- Rayleigh
- Rochford (including Ashingdon)
- South Fambridge
- Stonebridge

6.5 The completeness of each place is summarised by way of a 'rainbow chart'. It is important to note that where a settlement has a completeness score of say 30% for a particular facility it does not mean that the remaining 70% of that area is unable to access or use that facility. Rather, it is to say that 70% of the area is outside of the comfortable walking catchment for that facility, but people in those areas might still be able to access the facility by other means. Indeed, the presence of a facility, even if the catchment to it is limited, will still be important for that community. The table overleaf summarises which facilities are present in the settlements. Appendix 3 of this report provides a breakdown of completeness scores for each of the day-to-day facilities or services, as well as a count of all facilities in each place. It is only where a score of 0% is calculated where a settlement does not benefit from presence of that facility. For clarity, catchment distances measures and presented in this sections are based on the walking network. All services and facilities mapped in this section are based on data provided by the Council or through other available sources, such as that published by Experian. It may be the case that, in some instances, not all facilities have been mapped, due to gaps in data or judgements being made as to what to include based on quality of services. This may mean that some very local services and shops are not exhaustively mapped.

	GREEN INFRASTRUCTURE				EDUCATION			CIVIC				HEALTH			TOWN CENTRE USES				SPORT & LEISURE	
	Allotments	Amenity green space	Natural / Semi-natural green space	Parks and Gardens	Nursery	Primary School	Secondary School	Community centres & hubs	Libraries	Places of Worship	Public Conveniences	Dentists	Doctors	Pharmacies	Local / Neighbourhood Centres	Local Shops	Superstores	District / Town Centres	Local Play / Equipped Play Areas	Areas of Playing Pitches
Rochford District																				
Canewdon	✓	✓				✓		✓		✓						✓			✓	
Great Stambridge																				
Great Wakering	✓	✓			✓	✓		✓	✓	✓			✓	✓		✓			✓	✓
Hockley		✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓		✓	✓	✓
Hullbridge	✓	✓				✓		✓	✓	✓	✓		✓	✓		✓			✓	✓
Paglesham	✓							✓		✓										
Rawreth				✓	✓			✓		✓									✓	✓
Rayleigh	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓
Rochford	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓
South Fambridge																				
Stonebridge																				

Table 10: Summary of facilities present in each settlement

Canewdon

Demographic profile

6.6 Canewdon ranks sixth out of the eleven settlements in terms of population size in Rochford District. The age structure is broadly aligned with the District average.

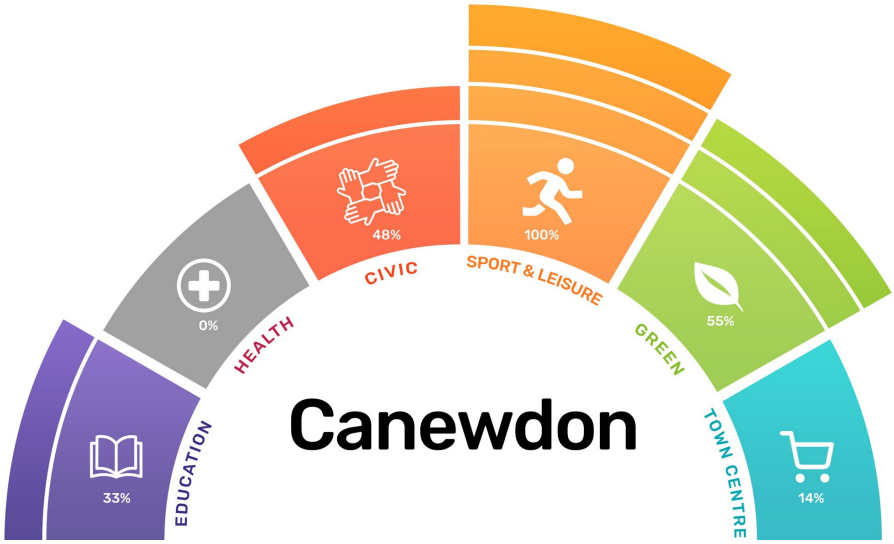
6.7 The settlement has a low population density, with the exception of a newer development in the south western corner which houses between 51-74 people per hectare (pph). The dominant housing typology is almost exclusively terraced housing.

Day-to-day services and facilities

6.8 For a settlement of its size, Canewdon provides a relatively good variety of infrastructure and service types (Figure 17). There are several local shops that provide for basic day-to-day needs which are co-located in the village centre with other civic services and a public house. Green and sports infrastructure is also well provided for, with the walking catchment of these extending across the entire settlement.

6.9 Canewdon is assessed as having a mid-level completeness score, though this falls off slightly within the area of newer development. However, this area does coincide with higher broadband speeds.

6.10 The completeness score for Canewdon, by infrastructure type, is summarised below:



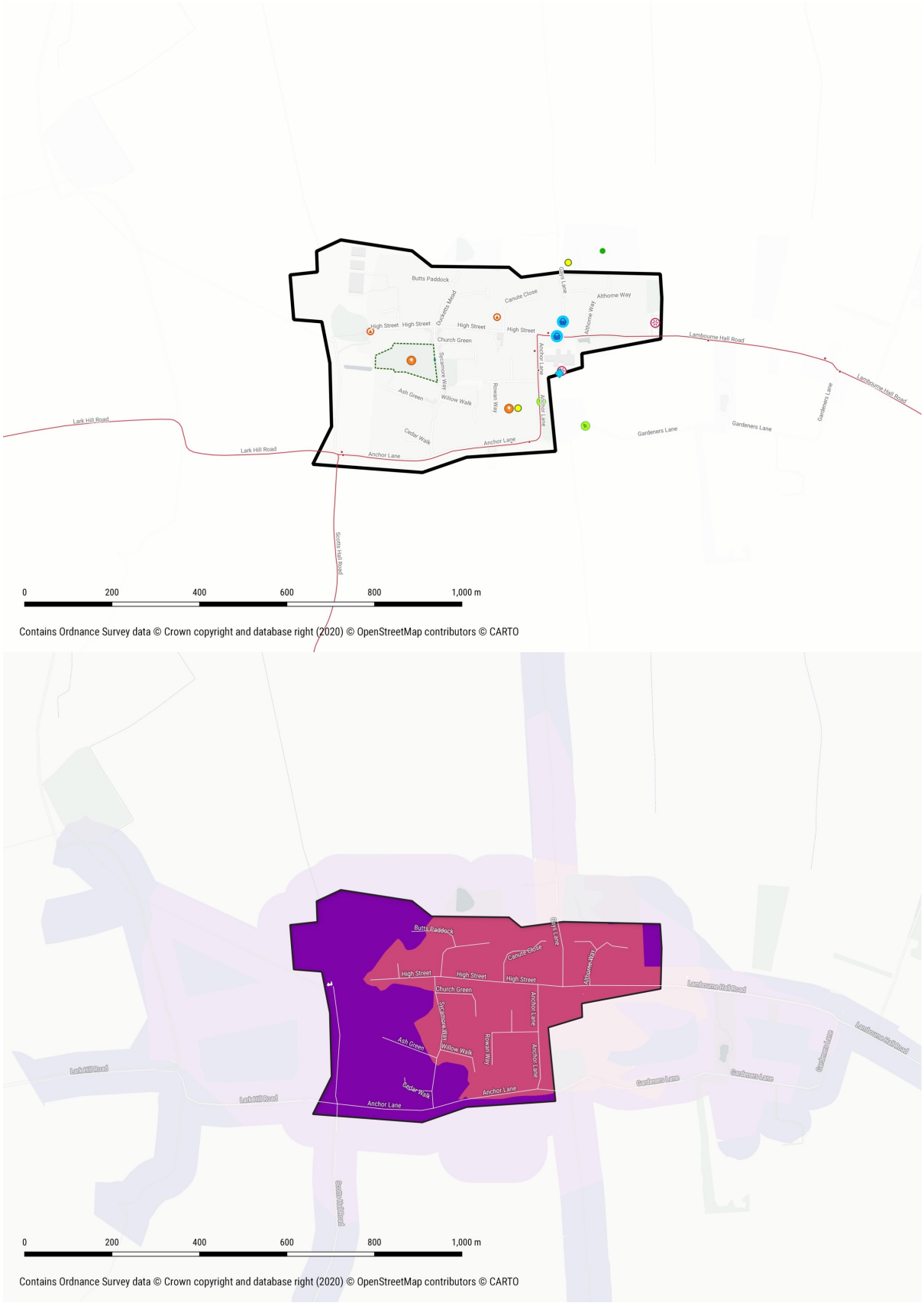


Figure 17: Day-to-day infrastructure and completeness heatmapping, Canewdon

[Hyperlink to key to mapping: Figure 15]

Great Stambridge

Demographic profile

6.11 With a population of just 372 people Great Stambridge is one of the smallest settlements in the study area, comprising just 0.45% of the total population of Rochford District. The age structure is broadly aligned with the district average.

6.12 The village has a low population density, of less than 10 people per hectare. This is reflected in the dominant housing typology which is primarily comprises semi-detached properties.

Day-to-day services and facilities

6.13 The completeness score for Great Stambridge is very low, with limited facilities present in the village (Figure 18). It benefits from a primary school, community hall and allotment but, otherwise, the need for day-to-day services is met elsewhere, requiring residents to travel further afield.

6.14 The completeness score for Great Stambridge, by infrastructure type, is summarised below:

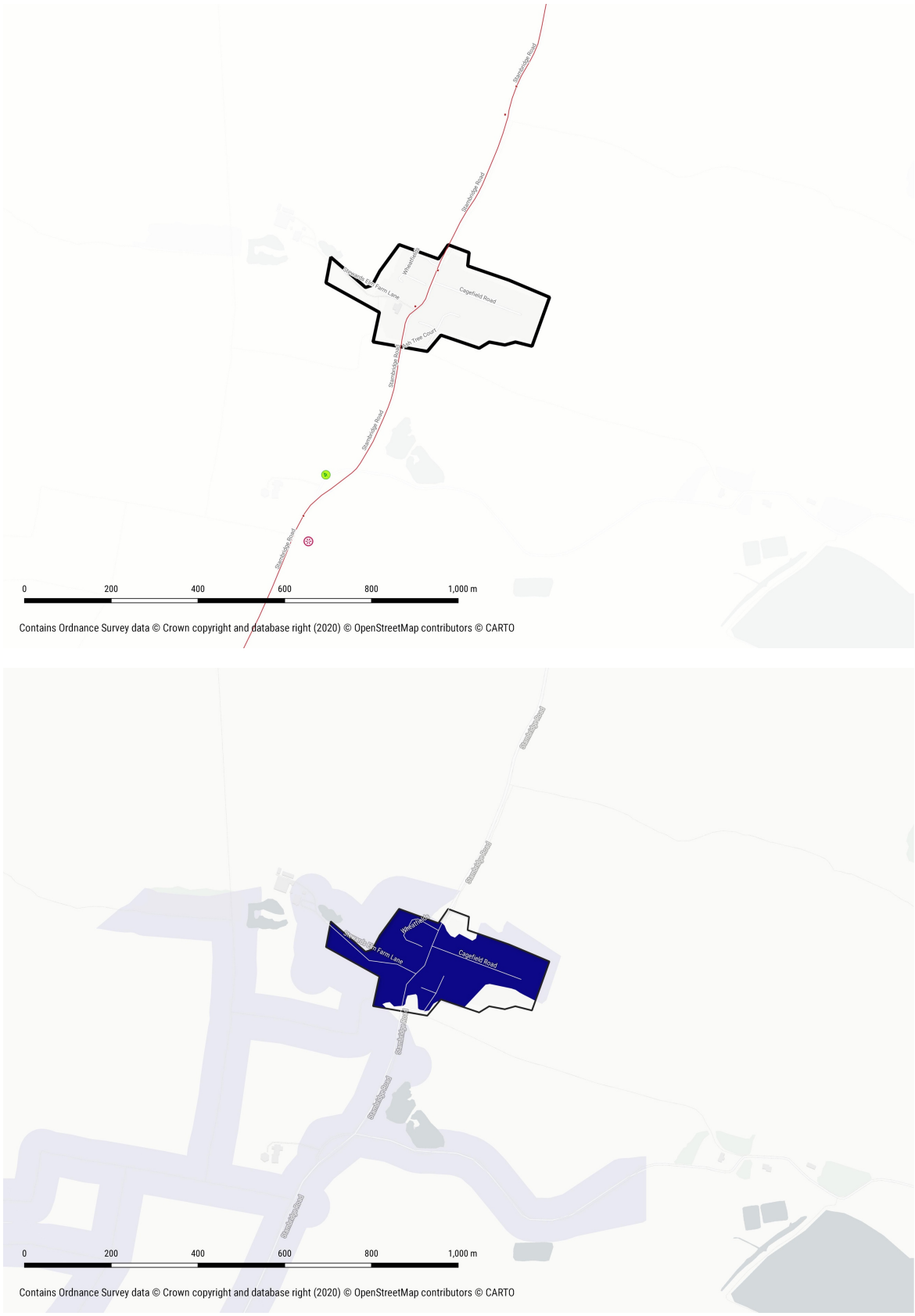


Figure 18: Day-to-day infrastructure and completeness heatmapping, Great Stambridge

[Hyperlink to key to mapping: Figure 15]

Great Wakering

Demographic profile

6.15 The cluster of settlements that comprise Great Wakering for the purposes of this study (including Great and Little Wakering, as well as Barling, Cupid's Corner and Samuel's Corner) have a combined population of 6,225, making up 7.2% of the total population of Rochford District.

6.16 The age structure of this area is slightly younger than for the District as a whole, with the proportion of people in the 65-84 age group being almost three percentage points lower than the district average.

6.17 There are a range of population densities across the area, though it is, in the main, low, with the highest recorded density being between 11-50 people per hectare in part of the cluster. The dominant housing typology is primarily semi-detached housing, with some detached houses in the western area of Great Wakering.

Day-to-day services and facilities

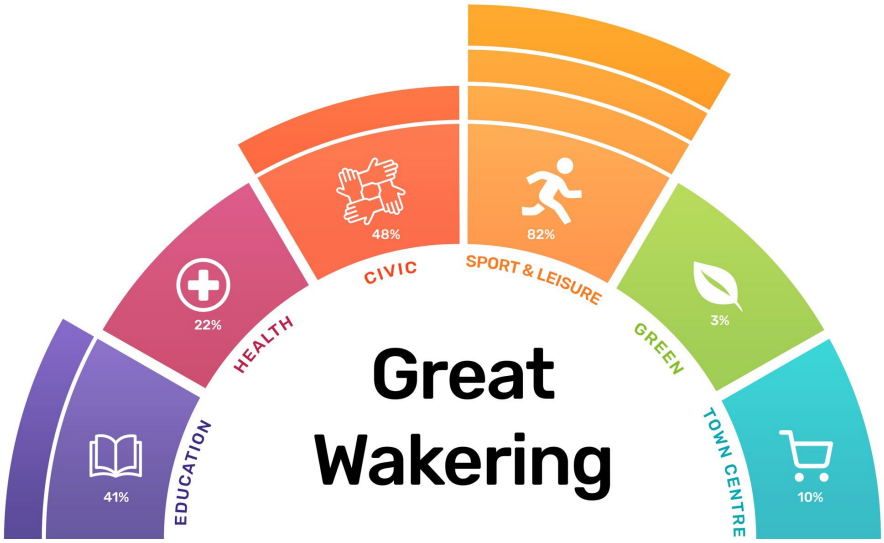
6.18 There are a relatively wide range of services and facilities spread across this settlement cluster (Figure 19), although it lacks secondary school provision. It benefits from two local shops that provide for basic day-to-day needs which are co-located in the village centre with other civic services and a public house.

6.19 Sports infrastructure is also well provided for, with the walking catchment area of these covering the entire settlement area. However, there is a notable lack of publicly accessible green space despite its semi-rural setting.

6.20 Great Wakering scores relatively well in terms of completeness, though there is variation across the settlement cluster, with provision of and access to services in Little Wakering and Barling more limited, and thus where the completeness score is lower.

6.21 Broadband speeds are varied across the settlement cluster.

6.22 The completeness score for Great Wakering, by infrastructure type, is summarised below:


Great
Wakering
EDUCATION
41%
HEALTH
22%
CIVIC
48%
SPORT & LEISURE
82%
GREEN
3%
TOWN CENTRE
10%

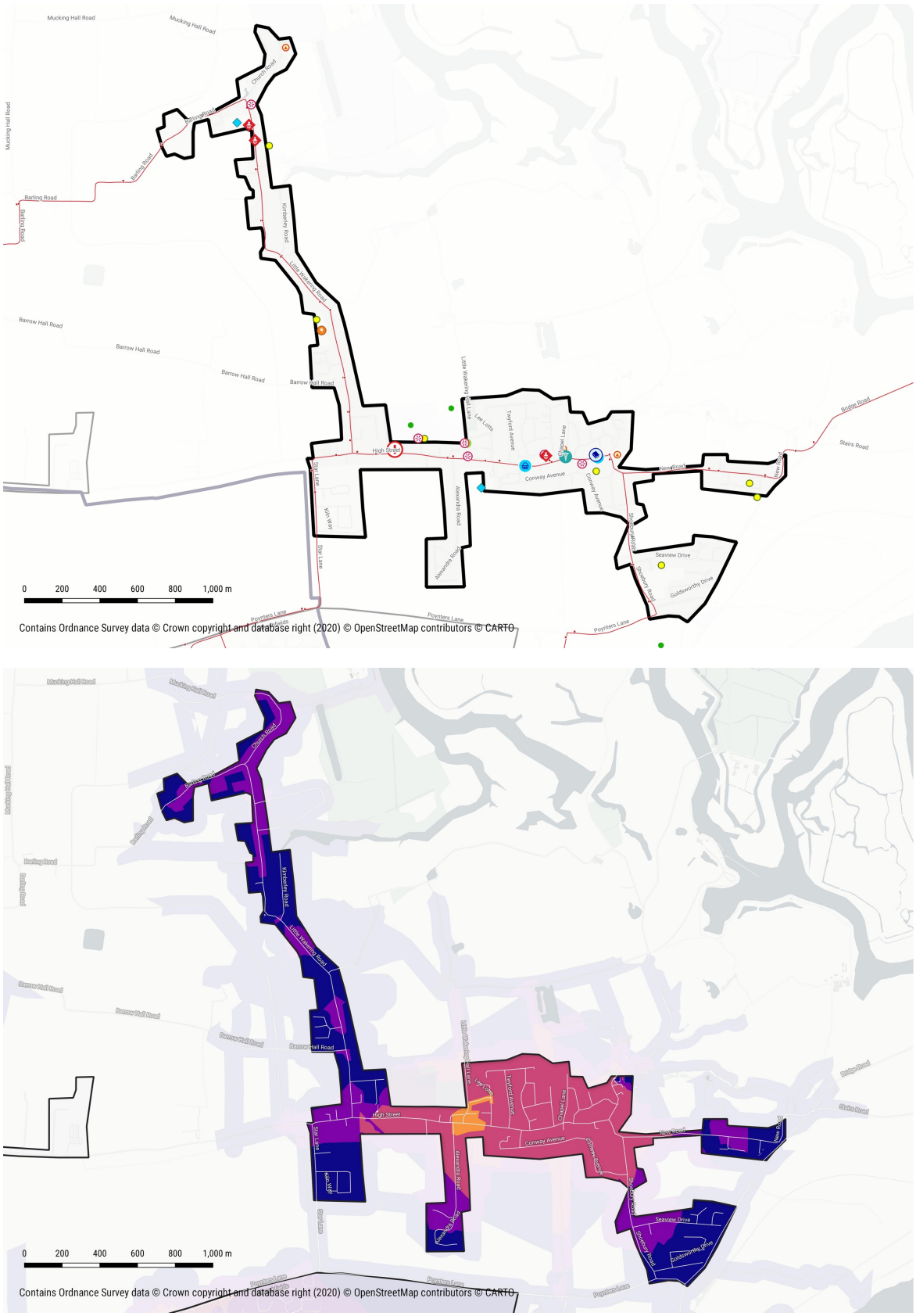


Figure 19: Day-to-day infrastructure and completeness heatmapping, Great Wakering

[Hyperlink to key to mapping: Figure 15]

Hockley

Demographic profile

6.23 For this study, Hockley and Hawkwell are combined and assessed as a single functioning settlement. Together they comprise the third largest settlement in the district, with a population of 14,343 people. This is around sixteen percent of the total population of the district. The age structure is aligned closely with that of the district as a whole.

6.24 Population densities vary across Hockley, though lower on the edges of town, where densities fall to below 10 people per hectare. There are some pockets where densities reach between 75 and 107 people per hectare.

6.25 Dominant housing types include semi-detached properties and, in the central area, flats and maisonettes. However, the presence of flats and maisonettes does not correlate with highest population densities: this is because of the presence of retail and commercial uses in the central location which reduces the area of residential development.

Day-to-day services and facilities

6.26 Most day-to-day services and facilities are found to the south of the railway line, close to the town centre (Figure 20). Most of the settlement is within the walking catchment of the centre.

6.27 Hockley benefits from nursery provision, primary and secondary schools, as well as good provision of sports and leisure related infrastructure, most of which is located towards the settlement boundary.

6.28 The central area of Hockley is a hot spot of completeness, achieving high scores given the combination of infrastructure provision and walking catchments to these. There is a ring of relatively moderate completeness around this and across much of the settlement, though there is a lack of access to some green infrastructure types in the north of the settlement.

6.29 The completeness score for Hockley, by infrastructure type, is summarised below:


Hockley
EDUCATION
42%
HEALTH
60%
CIVIC
37%
SPORT & LEISURE
60%
GREEN
26%
TOWN CENTRE
26%

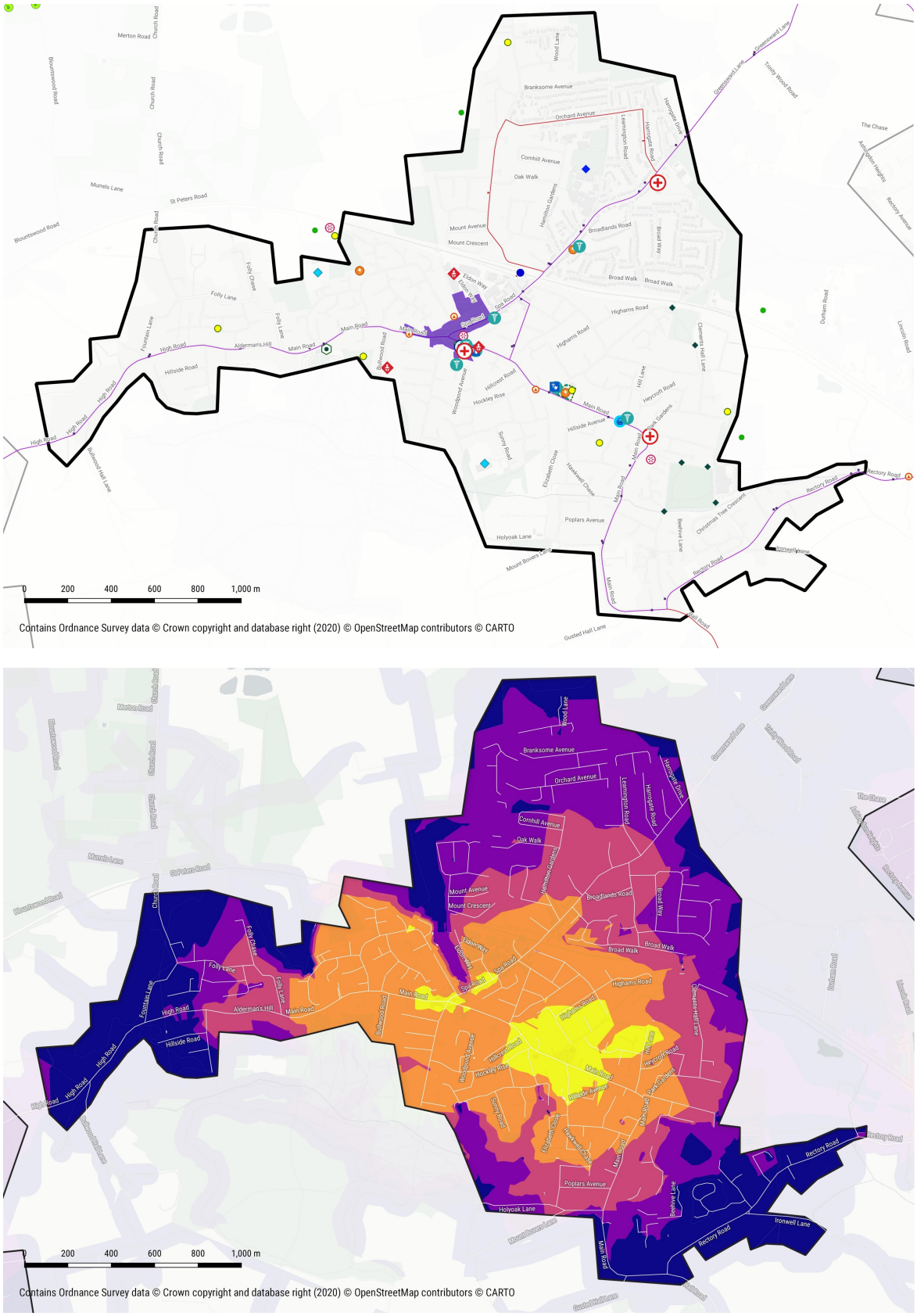


Figure 20: Day-to-day infrastructure and completeness heatmapping, Hockley

[Hyperlink to key to mapping: Figure 15]

Hullbridge

Demographic profile

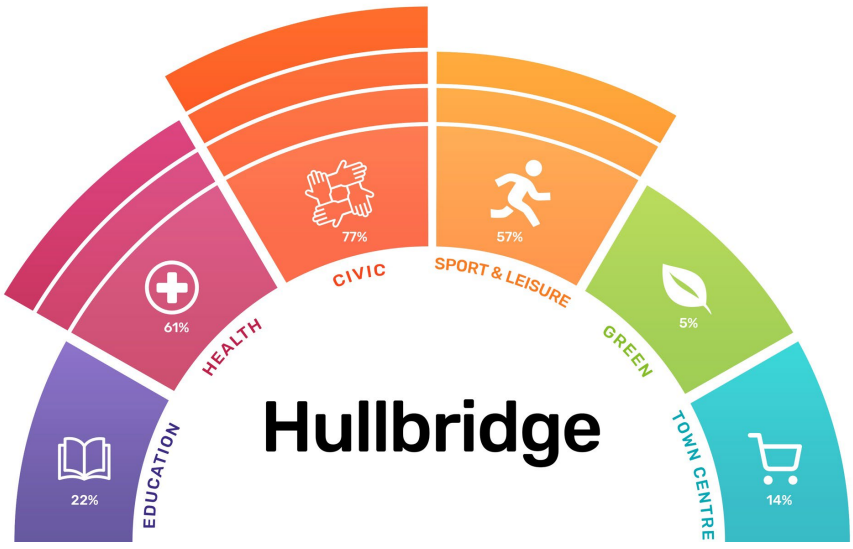
6.30 Hullbridge, with a population of 5,870, is the fifth largest settlement in Rochford District, though only accounts for around 7% of the total district population. Hullbridge has an older than average population, with those in the 65-85 age group being six percentage points higher than the district average. Reflecting this, the proportion of people who are economically active is also below the district average.

6.31 Most areas within Hullbridge have a population density ranging from 11-50pph, in line with the predominantly detached housing and bungalows across the neighbourhood. The centre of the settlement does though have a slightly higher population density, between 51-74pph.

Day-to-day services and facilities

6.32 Most services and facilities are located along the central spine in Hullbridge (Figure 21). The most complete areas in Hullbridge are found in the north of the village, with completeness then reducing as you move south. The completeness scores in the northern part of the village reflect the presence of and access to the primary school and local play areas. Although the village benefits from a dentist and community centre, the walking catchment of these does not extend across all of the village. There is no real correlation between the more complete areas and areas of high population density.

6.33 The completeness score for Hullbridge, by infrastructure type, is summarised below:



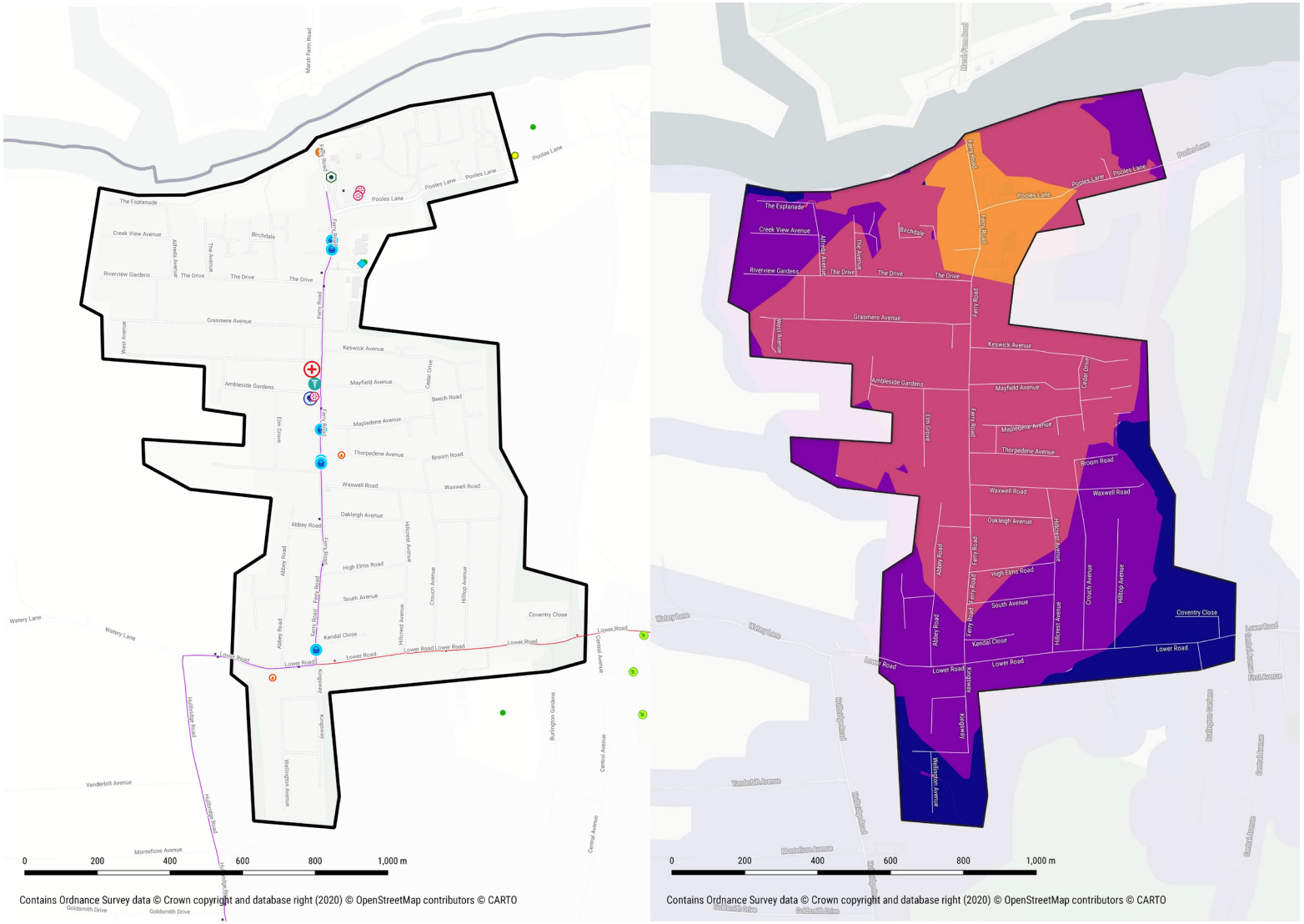


Figure 21: Day-to-day infrastructure and completeness heatmapping, Hullbridge [*Hyperlink to key to mapping: Figure 15]*

Paglesham

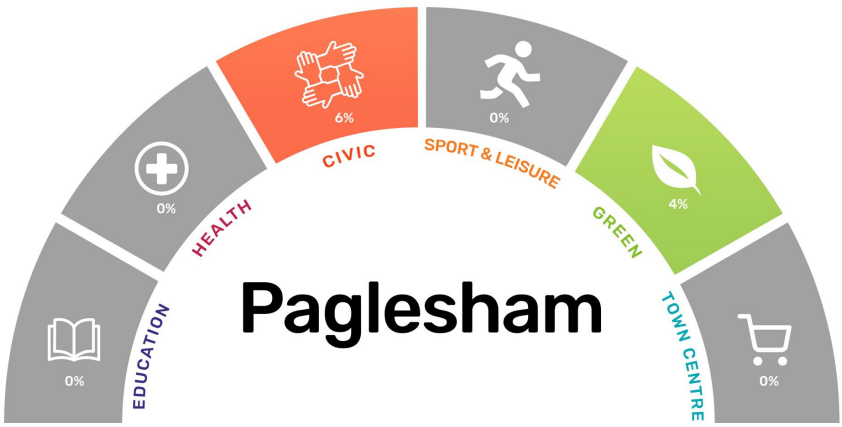
Demographic profile

6.34 The small cluster of hamlets that comprise Paglesham have a combined population of 233 people, which makes this the smallest area, by population, assessed in the study. The age structure is broadly in line with the district as a whole. The population density of this area is low (below 10pph) and the dominant housing type is semi-detached housing.

Day-to-day services and facilities

6.35 Beyond an area of allotments and place of worship there are no other services or facilities for day-to-day needs in Paglesham (Figure 22). Basic needs cannot therefore be met without having to travel elsewhere. The result is that completeness scores are very low. At the same time, broadband speeds are low too, increasing the reliance on services and facilities elsewhere.

6.36 The completeness score for Paglesham, by infrastructure type, is summarised below:



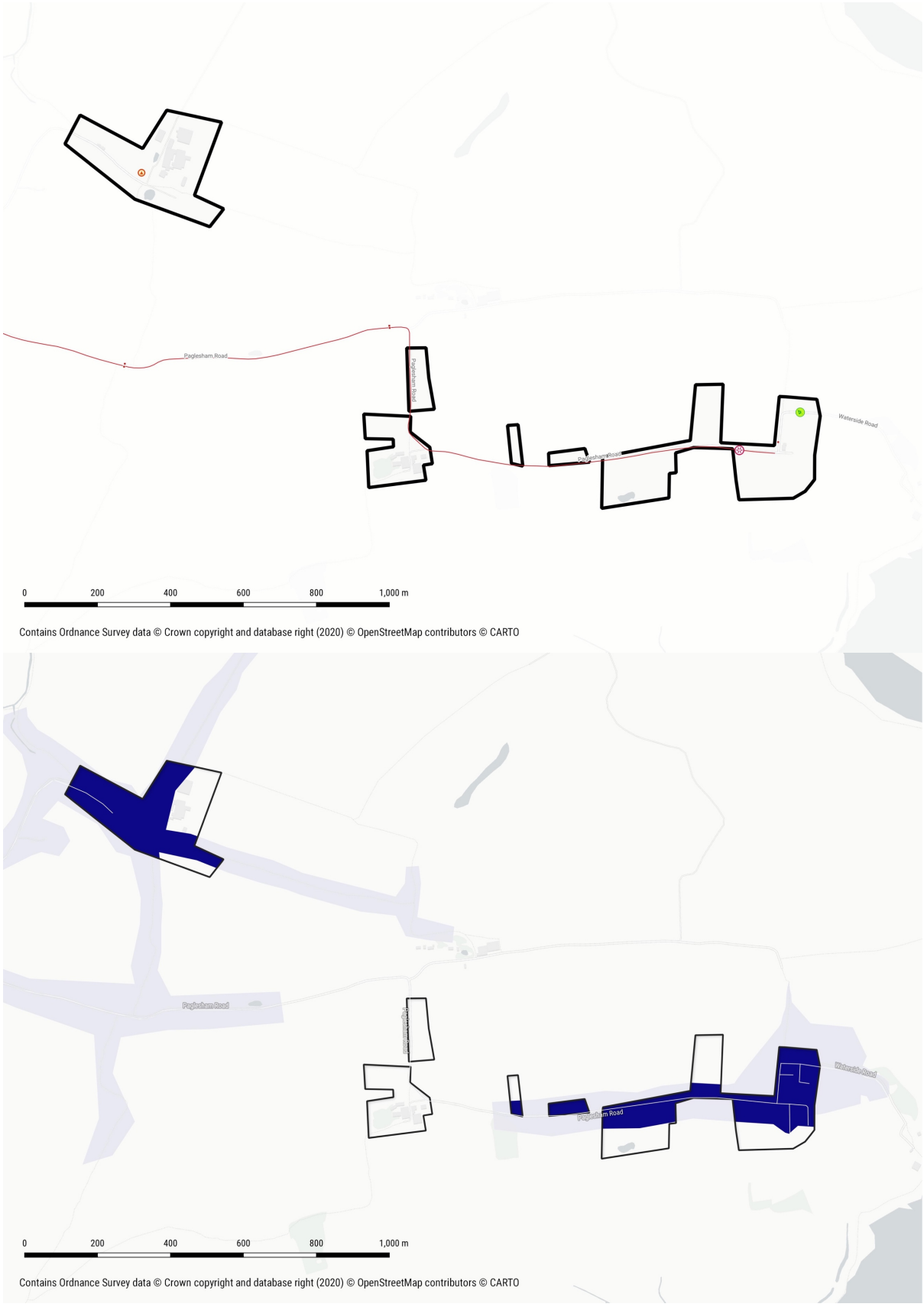


Figure 22: Day-to-day infrastructure and completeness heatmapping, Paglesham

[Hyperlink to key to mapping: Figure 15]

Rawreth

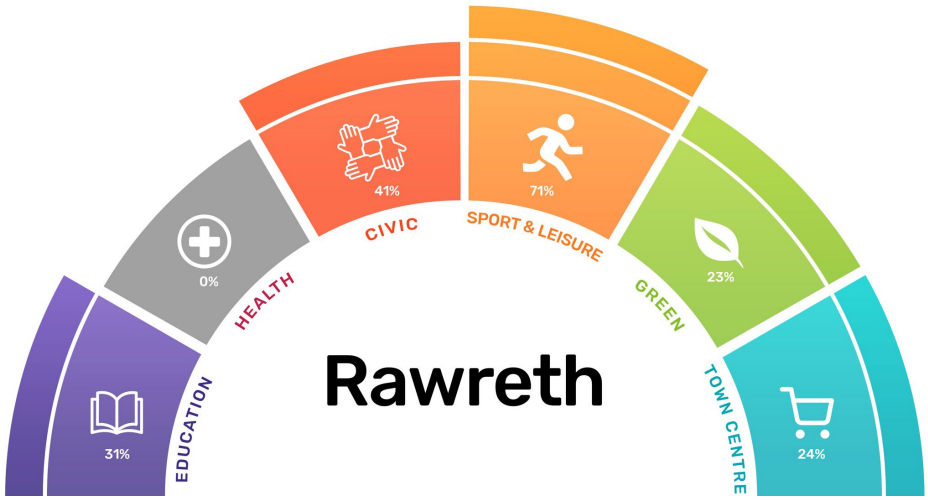
Demographic profile

6.37 Rawreth has a population of 563 people, which is less than 1% of the entire population of the district. Rawreth is located within the Downhall and Rawreth ward[53]. Although this covers a wider area, the age structure is broadly aligned with that for the district as a whole. The area has a low population density and the housing stock is predominantly semi-detached.

Day-to-day services and facilities

6.38 There is limited provision of services and facilities for day-to-day needs in Rawreth (Figure 23), giving it a low completeness score. It is though within the catchment area of a supermarket located on the edge of Rayleigh. Although theoretically within walking distance of this, the reality is that most will drive given the nature of the roads, volume and speed of traffic, and limited provision made for walking.

6.39 The completeness score for Rawreth, by infrastructure type, is summarised below:



[53] All references to wards within Rochford District in this report are based on those at 2011 and used for Census reporting. It is acknowledged that ward names and boundaries have changed in some instances since then.

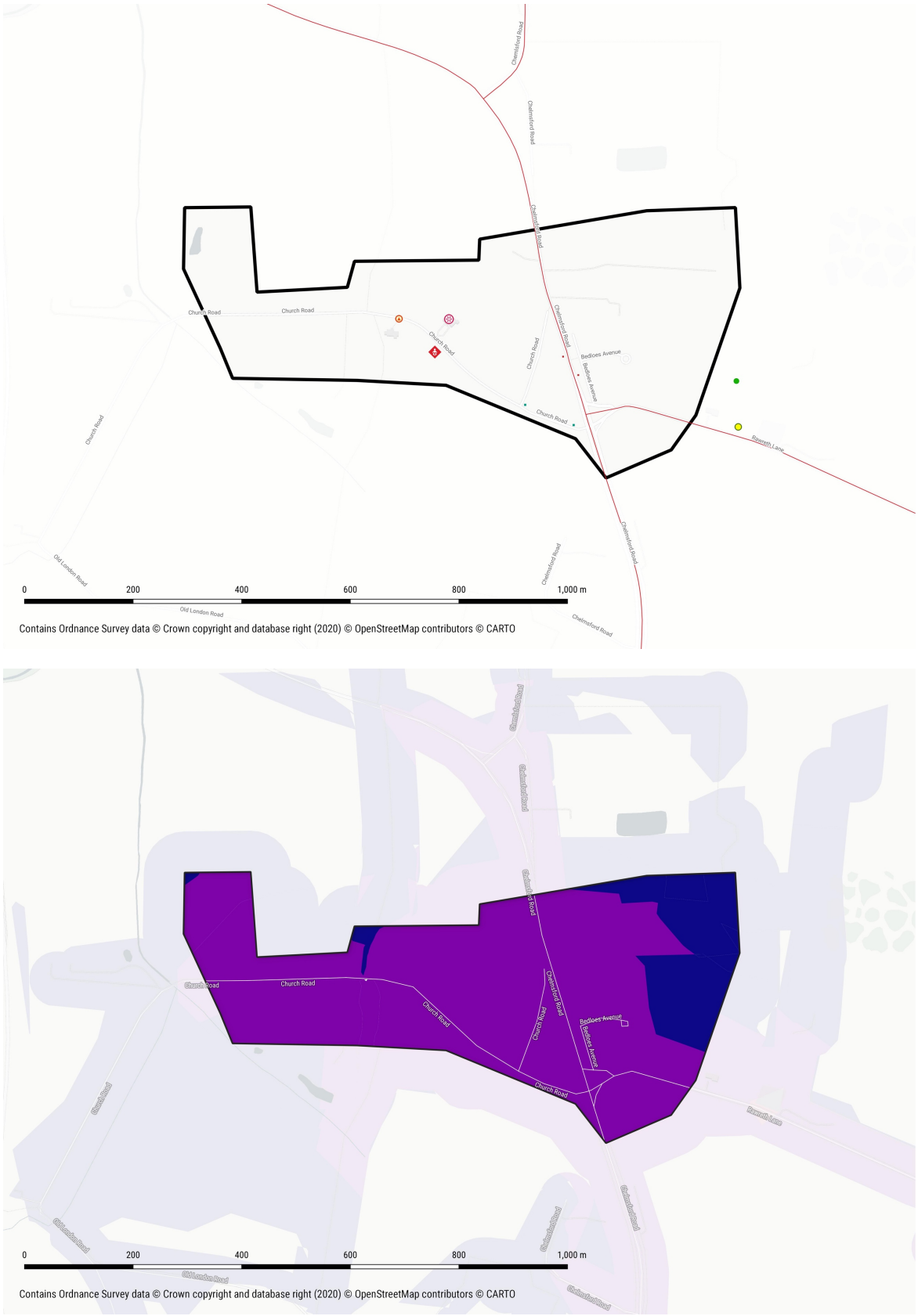


Figure 23: Day-to-day infrastructure and completeness heatmapping, Rawreth

[Hyperlink to key to mapping: Figure 15]

Rayleigh

Demographic profile

6.40 Rayleigh is the largest settlement in terms of population within Rochford District. It's population of 33,663 accounts for almost 40.% of the total population of the district. The age structure is broadly aligned with that for the district as a whole though, interestingly, more people consider themselves to be in good health than in other parts of the district.

6.41 Population densities across Rayleigh are generally between 11-50 people per hectare (pph), though with some pockets where this increases to 75-107pph.

6.42 Most of the lower density areas are dominated by semi-detached housing, however there is also a large amount of detached housing in Rayleigh. The town centre is dominated by flats and maisonette houses, although this has not resulted in a higher density due to the mixed/ commercial use of the area.

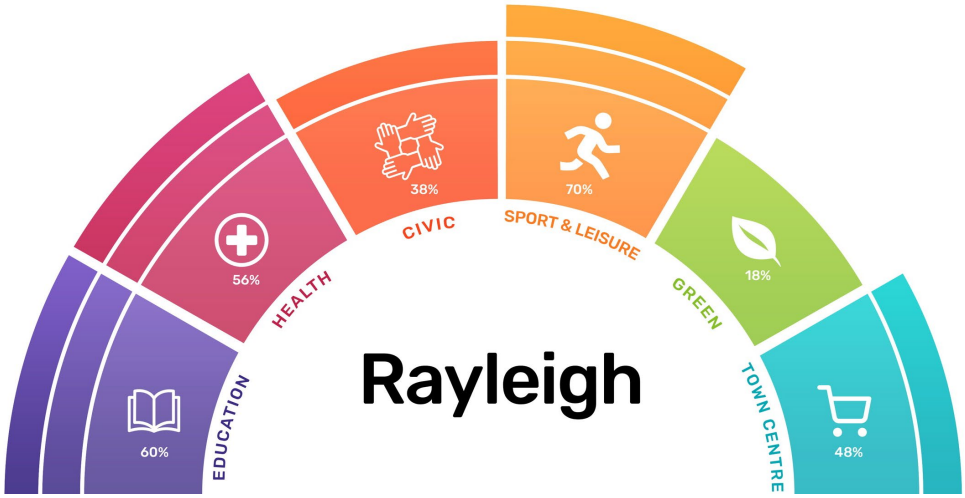
Day-to-day services and facilities

6.43 Most day-to-day infrastructure facilities are spread out across the settlement, with a larger cluster focussed in Rayleigh town centre (Figure 24). This area thus has a high completeness score.

6.44 Outside of the main town centre are a number of smaller local shops as well as a supermarket, providing good retail provision for the community. There are also several nurseries and primary schools in Rayleigh, with much of the area in walking catchment of one or more of these. Sports, leisure and green infrastructure is also well provided for.

6.45 The town centre is the hot spot of completeness in Rayleigh, with lower scores towards the edge of the town, correlating with lower population densities.

6.46 The completeness score for Rayleigh, by infrastructure type, is summarised below:


Rayleigh
EDUCATION
60%
HEALTH
56%
CIVIC
38%
SPORT & LEISURE
70%
GREEN
18%
TOWN CENTRE
48%

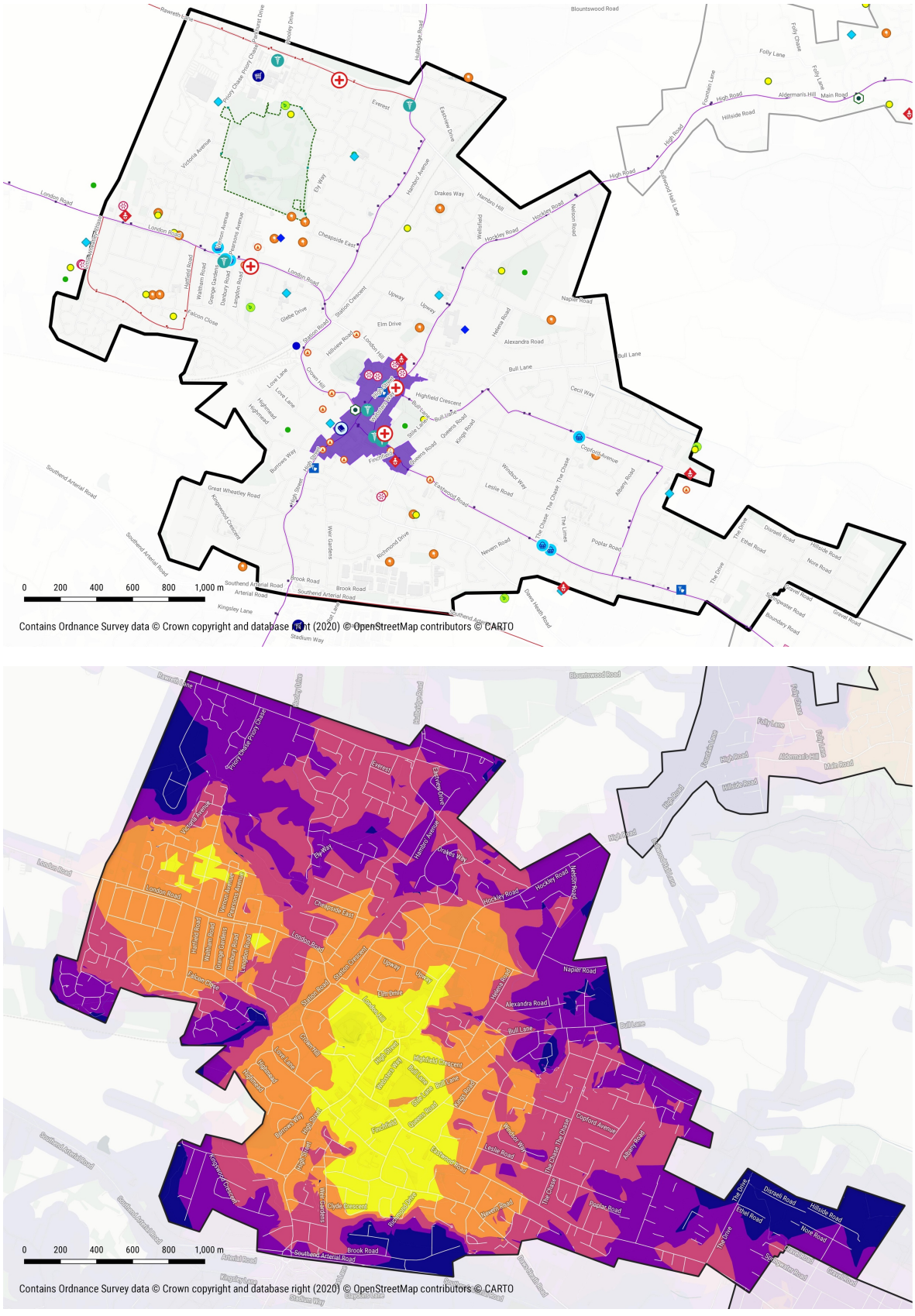


Figure 24: Day-to-day infrastructure and completeness heatmapping, Rayleigh

[Hyperlink to key to mapping: Figure 15]

Rochford

Demographic profile

6.47 For this study, Rochford and Ashingdon have been combined as one functioning place. Together they have a population of 18,420, making it the second largest settlement in the district. The age structure for the area is slightly younger than for the district, with the proportion of residents in the 65-84 age group being three percentage points below the district average.

6.48 The population density across the entirety of the settlement is quite low, with an average of 33 people per hectare (pph). However, density ranges vary, with Ashingdon having lower population densities than parts of Rochford. The highest population densities are within the town centre and around the railway station. This aligns with house types, with dominant typologies in the highest density areas being flats and maisonettes.

Day-to-day services and facilities

6.49 The most compete areas in Rochford are found around the town centre, where most services are located (Figure 25).

6.50 The least complete areas in Rochford fall within the southeast corner of the settlement, which coincides with the presence of the Purdeys Industrial Estate. Completeness scores are also lower in the north of the settlement towards Ashingdon, which is some distance from the town centre and thus outside of the catchment of many of the facilities found here.

6.51 There is a general correlation between the 'hot spot' complete areas, and the areas of high population density within Rochford. The town centre in particular, which is the area with the highest completeness score, also has a population density, in parts 248-253pph, while the area surrounding Purdeys Industrial estate has the lowest completion score and a population density below 10 pph.

6.52 There is also a strong correlation between Broadband speeds and population density in the area, with the central areas of Rochford having a greater average download speed than the rest of the settlement.

6.53 The completeness score for Rochford, by infrastructure type, is summarised below:

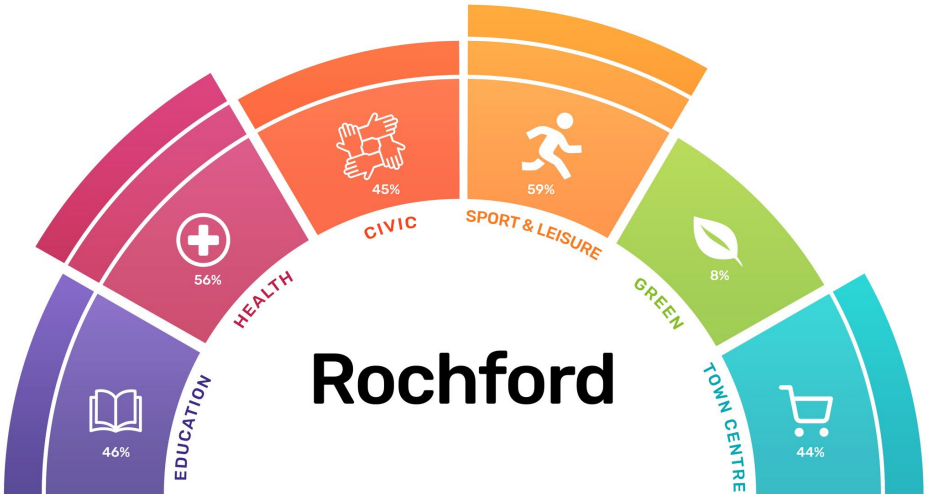

Rochford
EDUCATION
46%
HEALTH
56%
CIVIC
45%
SPORT & LEISURE
59%
GREEN
8%
TOWN CENTRE
44%

Figure 25: Day-to-day infrastructure and completeness heatmapping, Rochford [Hyperlink to key to mapping: Figure 15]

South Fambridge

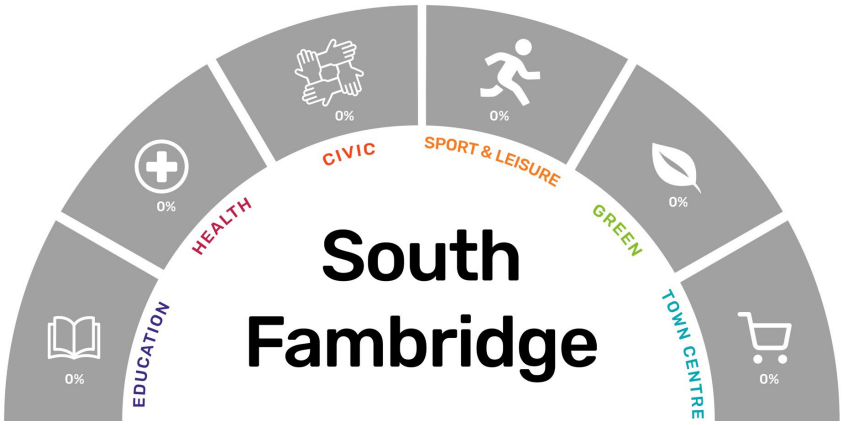
Demographic profile

6.54 With a population of 265 people South Fambridge is the second smallest settlement included within the study. The age structure is broadly aligned with the district as a whole. It has low population densities (below 10pph) and the housing stock is predominantly semi-detached.

Day-to-day services and facilities

6.55 There are no facilities or services within South Fambridge for day-to-day needs (Figure 26). It does not therefore score in terms of completeness, with residents reliant on services provided elsewhere for day-to-day needs. Equally, broadband speeds are moderate to low, increasing the reliance placed on other places to provide services.

6.56 The completeness score for South Fambridge, by infrastructure type, is summarised below:



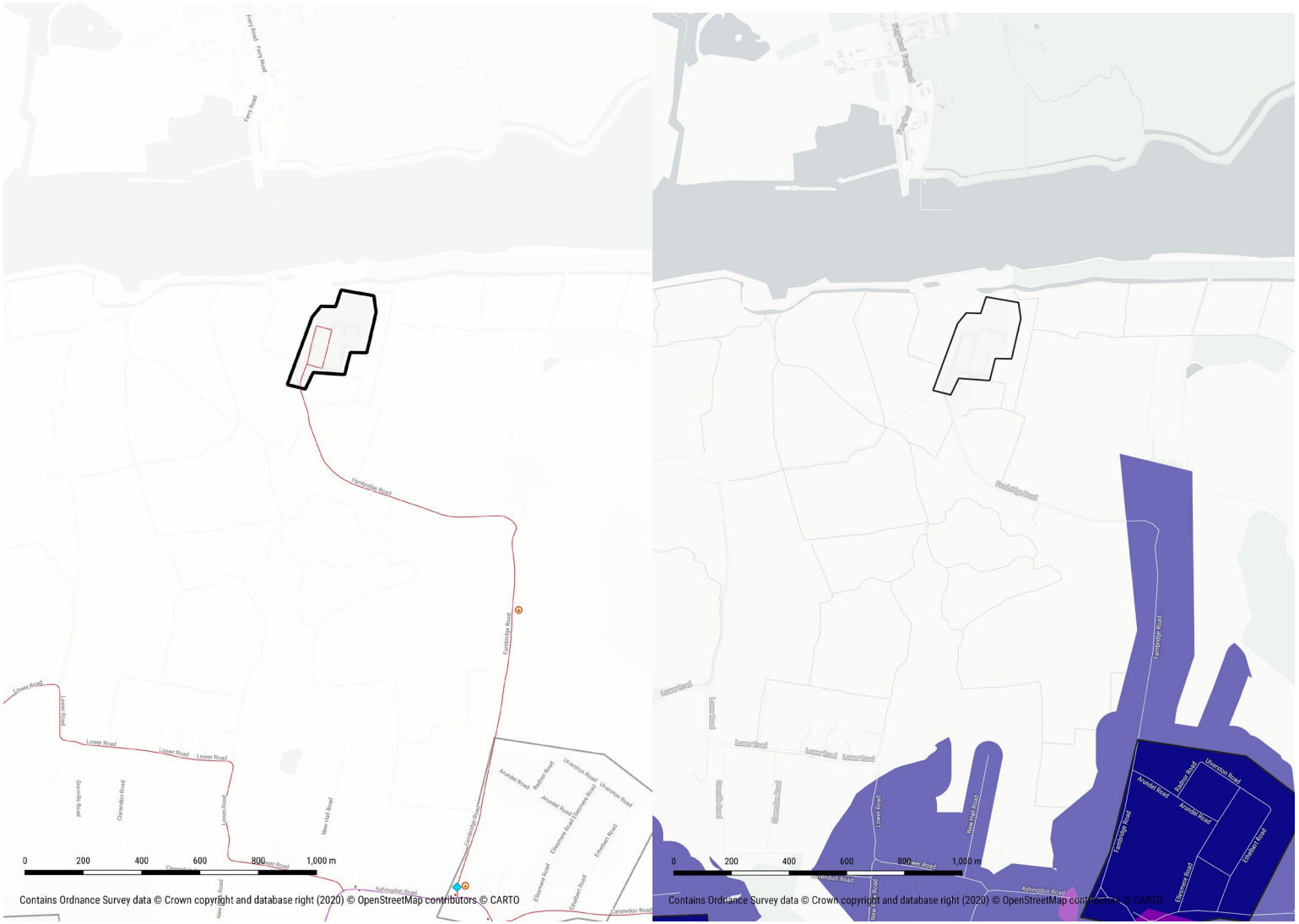


Figure 26: Day-to-day infrastructure and completeness heatmapping, South Fambridge [Hyperlink to key to mapping: Figure 15]

Stonebridge

Demographic profile

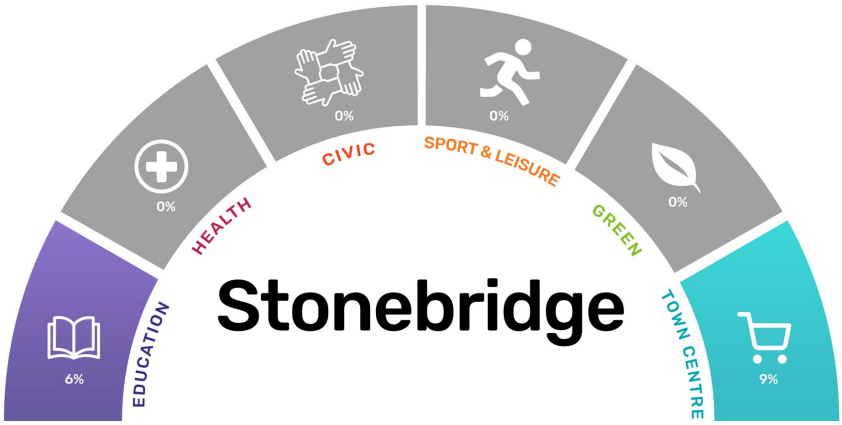
6.57 Stonebridge straddles the administrative boundary between Rochford and Southend, though is mainly within Rochford. It has a population of 520, with a slightly younger than average age structure than for the district as a whole: the proportion of people in the 65-84 age group is around three percentage points lower than the district average.

6.58 Stonebridge has a low population density of fewer than 10 people per hectare. Dominant housing types are bungalows and semi-detached housing. though some detached housing is also found in the area.

Day-to-day services and facilities

6.59 Stonebridge lacks day-to-day facilities and services (Figure 27), though is, theoretically, within the walking catchment of some facilities, including a secondary school, located in the main urban area of Southend. It is also partially within the walking catchment area of retail uses in Thorpe Bay and Southchurch. Walking routes between the two are though limited, placing emphasis on use of the car. As a result, the completeness score for Stonebridge is relatively low.

6.60 The completeness score for Stonebridge, by infrastructure type, is summarised below:



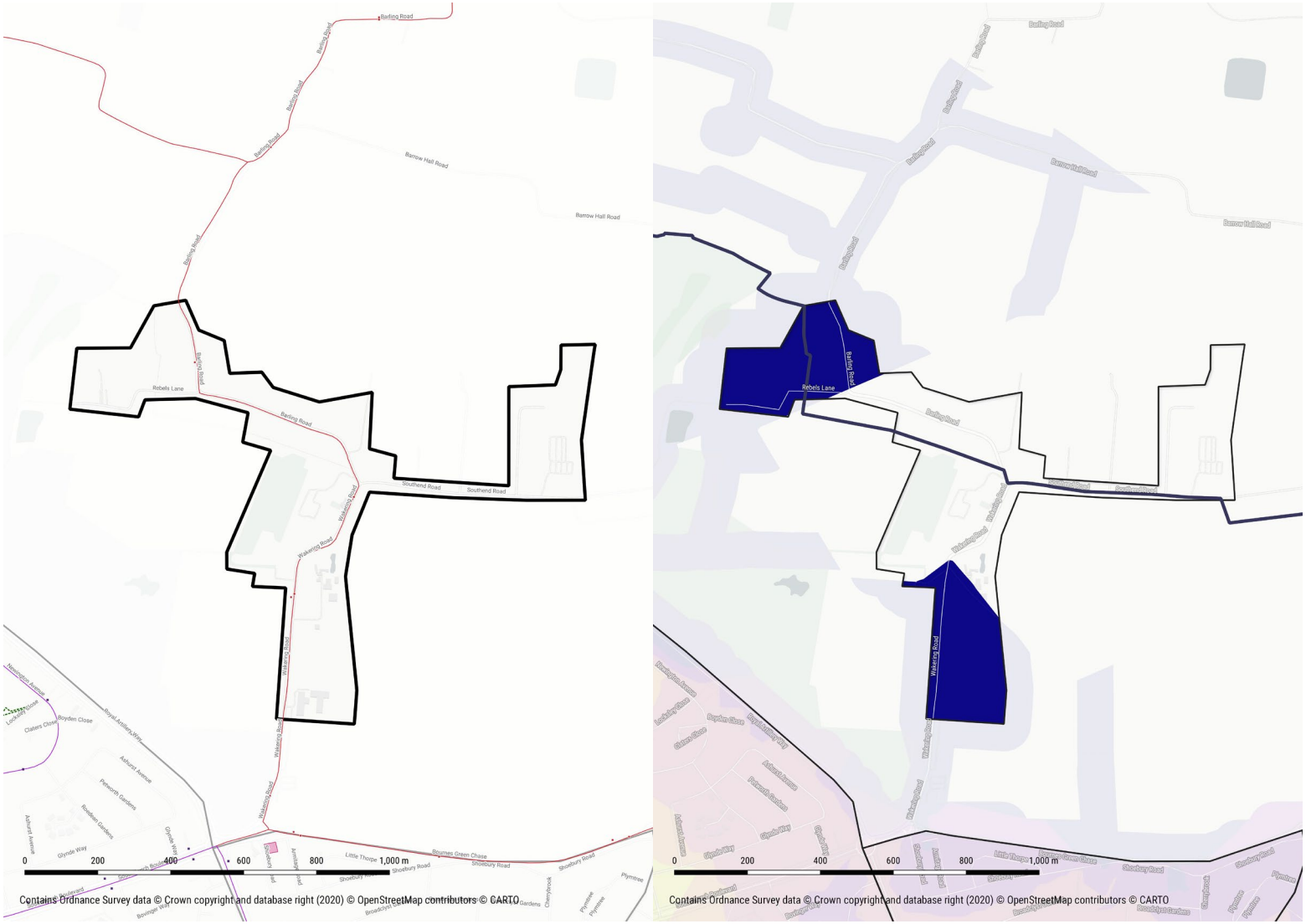


Figure 27: Day-to-day infrastructure and completeness heatmapping, Stonebridge [Hyperlink to key to mapping: Figure 15]

Southend Borough

6.61 The second set of summaries presented in this section are for the neighbourhoods assessed in Southend Borough. The section begins by summarising the picture for Southend as a whole and then turning to the individual neighbourhoods which are presented in alphabetical order and comprise:

- Eastwood
- Leigh
- Prittlewell
- Shoeburyness
- Southchurch
- Southend (central)
- Thorpe Bay
- Westcliff-on-Sea

6.62 The completeness of each place is summarised by way of a 'rainbow chart'. As set out at the start of the Rochford District summary profiles, and repeated here for comprehensiveness, it is important to note that where a neighbourhood has a completeness score of say 30% for a particular facility it does not mean that the remaining 70% of that area is unable to access or use that facility. Rather, it is to say that 70% of the area is outside of the comfortable walking catchment for that facility, but people in those areas might still be able to access the facility by other means. Indeed, the presence of a facility, even if the catchment to it is limited, will still be important for that community. The table overleaf summarises which facilities are present in the neighbourhoods. Appendix 3 of this report provides a breakdown of completeness scores for each of the day-to-day facilities or services, as well as a count of all facilities in each place. It is only where a score of 0% is calculated where a neighbourhood does not benefit from presence of that facility. For clarity, catchment distances measures and presented in this sections are based on the walking network. All services and facilities mapped in this section are based on data provided by the Council or through other available sources, such as that published by Experian. It may be the case that, in some instances, not all facilities have been mapped, due to gaps in data or judgements being made as to what to include based on quality of services. This may mean that some very local services and shops are not exhaustively mapped.

	GREEN INFRASTRUCTURE				EDUCATION			CIVIC				HEALTH			TOWN CENTRE USES				SPORT & LEISURE	
	Allotments	Amenity green space	Natural / Semi-natural green space	Parks and Gardens	Nursery	Primary School	Secondary School	Community centres & hubs	Libraries	Places of Worship	Public Conveniences	Dentists	Doctors	Pharmacies	Local / Neighbourhood Centres	Local Shops	Superstores	District / Town Centres	Local Play / Equipped Play Areas	Areas of Playing Pitches
Southend Borough																				
Southend urban area	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Eastwood		✓		✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓
Leigh (entire area)	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
Prittlewell	✓	✓		✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
Shoeburyness	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
Southchurch	✓	✓		✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓		✓		✓	✓
Southend (central)		✓		✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Thorpe Bay				✓	✓	✓		✓		✓		✓	✓	✓	✓					
Westcliff-on-Sea	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓		✓	✓	
Leigh (north)	✓			✓		✓	✓			✓			✓	✓	✓	✓			✓	✓
Leigh (south)	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓		✓	✓	✓	✓	✓

Table 11: Summary of facilities present in each neighbourhood

Southend urban area

Demographic profile

6.63 Southend, with a population of almost 183,500 people is the dominant settlement in the study area. Its population is more than five times greater than the second largest settlement in the study area (Rayleigh), and it is more than twice as large as the population of Rochford District as a whole.

6.64 As outlined earlier in this report (see Section 2), Southend is a place of variety, with a mix of housing types, population densities, house prices and deprivation. Averages for Southend mask this variation, with places such as Thorpe Bay contrasting with neighbouring Shoeburyness and Southchurch across all demographic measures.

Day-to-day services and facilities

6.65 Completeness heat-mapping for Southend is illustrated in the summary to this section of the report (Figure 36). This shows that Southend as a whole scores well across all day-to-day infrastructure categories, though there is of course variation which reflects the 'performance' of the individual neighbourhoods. The highest area of completeness, where most services are provided and where the catchment around these is focussed, is the central area and its immediate hinterland. This reflects the importance of the centre as the retail and civic core. This 'hot-spot' of completeness covers the central neighbourhood and much of Westcliff-on-Sea and Southchurch. It extends into Leigh, coinciding with the town centre, and the southern parts of Prittlewell.

6.66 Other hot-spots and areas of high completeness are found across Southend, including those in Shoeburyness and, to a more limited degree, in Eastwood. These tend to correlate with local centres and clustering of facilities.

6.67 Completeness scores fall away towards the periphery of the urban area, particularly so on the edges of Eastwood, leigh and Shoeburyness. Thorpe Bay stands out as an area of relatively low completeness and represents a gap between Southchurch and Shoeburyness in terms of infrastructure provision and thus the heatmapping.

6.68 The breakdown of completeness by infrastructure type indicates high completeness in terms of education and healthcare, but less so in terms of green infrastructure. This perhaps reflects the urban nature of the built environment, though its seafront position and access to this does off-set this to some extent.

6.69 The completeness score for the Southend urban area as a whole, by infrastructure type, is summarised below:

Eastwood

Demographic profile

6.70 Eastwood is the second smallest neighbourhood in terms of population within Southend borough, comprising only 5.3% of the total population. It is also one of the least densely populated neighbourhoods in Southend Borough, with population densities being, in the main, between 11-50 people per hectare.

6.71 The demographic make-up of Eastwood comprises a higher proportion of elderly people than in other parts of the borough: the proportion of people in the 65-84 age group is seven percentage points above average.

6.72 Broadly, the housing typology in Eastwood correlates with population densities, with higher density areas comprising predominantly terraced housing and lower density being semi-detached or bungalow housing.

Day-to-day services and facilities

6.73 Most day-to-day services and facilities are relatively spread out across the neighbourhood (Figure 28).

6.74 There are several local centres in both the east and the west of the neighbourhood which anchor other facilities, such as health care and civic services. Outside of these areas secondary shopping frontages, along Rayleigh Road for example, are important at the local level. There are few schools or nurseries in the area, though this correlates with higher proportions of elderly people. There is a good provision of sports and green infrastructure, however a general lack of, and therefore poor access to these services in the western part of the neighbourhood.

6.75 Whilst many infrastructure items are evenly spread around the neighbourhood, there is only one area of Eastwood that benefits from walking access to most or all of the day-to-day services and facilities considered in this study. This 'hot spot' is found in the mid-eastern portion of the boundary, centred around the junction of Rayleigh Road and Whitehouse Road.

6.76 The western area of the neighbourhood suffers from lower levels of completeness, primarily due to a lack of access to sports and green infrastructure. However, much of the neighbourhood is in relatively close proximity to Rayleigh town centre and thus benefits from access to services and facilities here, particularly for those travelling by bicycle or on public transport. It also benefits from access to green space to the north and good bus provision that provides access into both Rayleigh and Southend.

6.77 The completeness score for Eastwood, by infrastructure type, is summarised below:

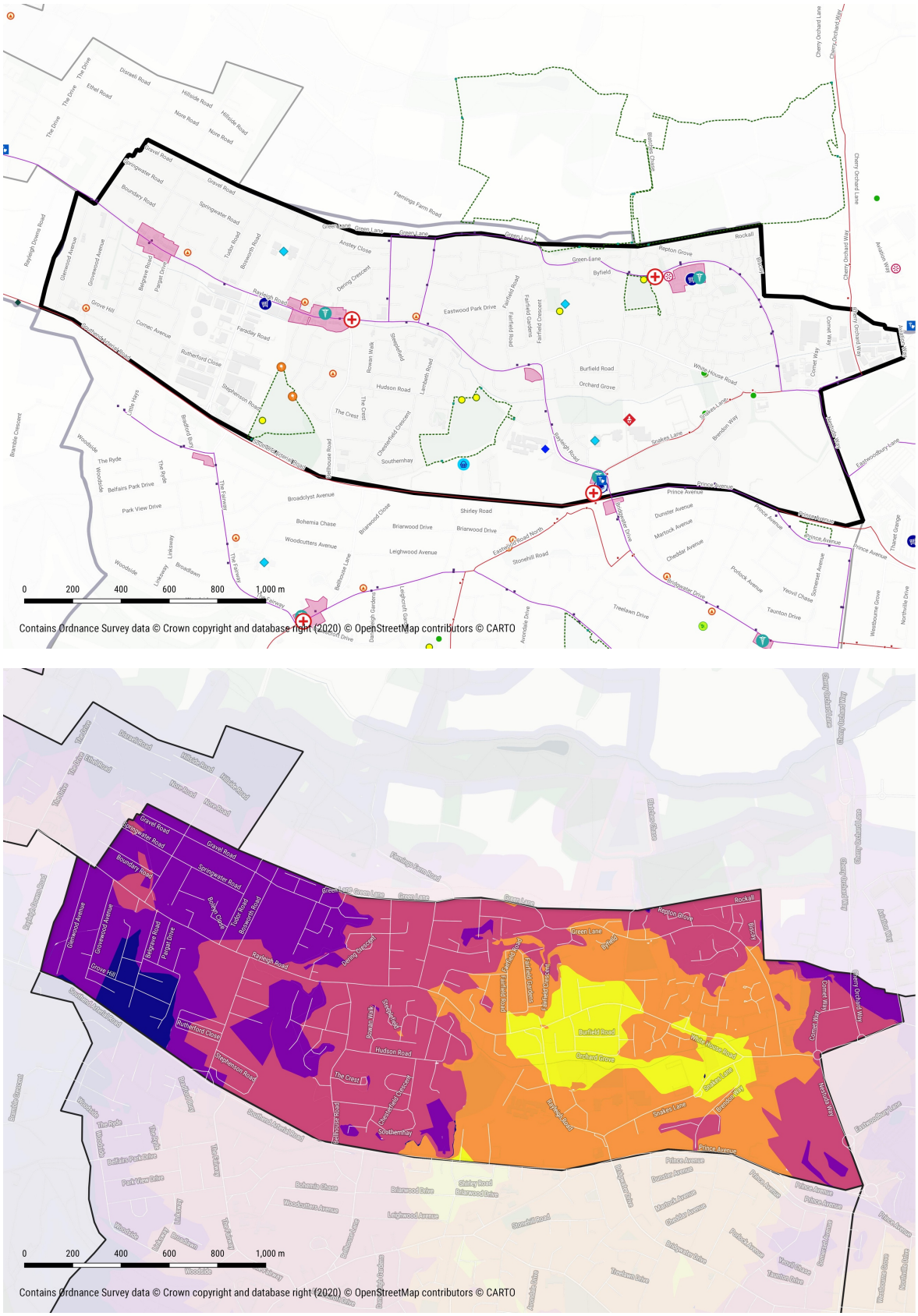


Figure 28: Day-to-day infrastructure and completeness heatmapping, Eastwood

[Hyperlink to key to mapping: Figure 15]

Leigh

Demographic profile

6.78 Leigh is the largest neighbourhood in terms of population within Southend borough, comprising 22.5% of the total population. It is also the largest neighbourhood by area, and thus means there is variation across it in terms of housing type, provision of services, accessibility and completeness.

6.79 Due to the large population sample, the demographic make-up of Leigh is closely aligned with the borough average. The most distinct feature of Leigh's population is the number of those in 'very good' health being three percentage points above the borough average.

6.80 Leigh has a wide range of population densities. There are some unpopulated areas which have below 10 people per hectare (pph), and some small pockets where densities reach up to 150pph. The most densely populated areas correlate with the dominant housing typologies of terraced houses and flats/maisonettes. Equally the less dense areas match those which comprise bungalows and semi-detached homes.

Day-to-day services and facilities

6.81 Day-to-day services and facilities are relatively spread out across the neighbourhood, but with health and civic facilities clustering around local centres (Figure 29). The main central area id designated as a District Centre and provides a range of retail and other services, including post offices, schools and emergency services. Other local parades also provide a good range of services, including that along London Road which includes the Highlands Surgery and nearby services. The neighbourhood is also home to St Christopher's School, a

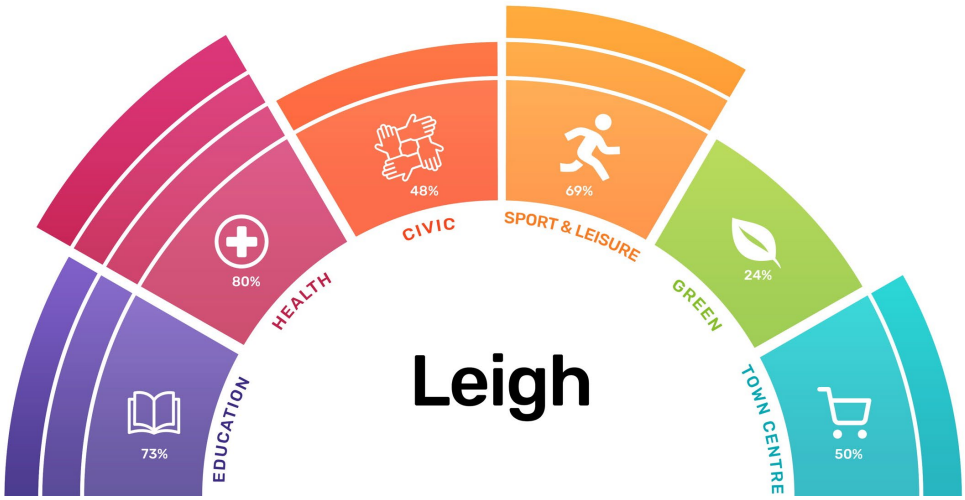
6.82 There is a good provision of sports and green infrastructure in the neighbourhood, with Belfairs Woods and Hadleigh Downs beyond providing good access to nature. The presence of green space at Marine Parade, the Belton Way Nature Reserve and connections to Two Tree Island mean there is good provision to green infrastructure across much of the neighbourhood.

6.83 Whilst many infrastructure items are evenly spread around the neighbourhood, the most complete 'hot spot' areas are located in the central south (correlating with the Broadway shopping frontages) and the eastern boundary with Westcliff. By comparison, completeness is more limited in the north western part of the neighbourhood, where access to some facilities, including sports and green infrastructure, is more limited. Furthermore, Leigh does not benefit from particularly fast broadband speeds. However, the roll out of the Southend CityFibre project will see broadband speeds in Leigh increase.

6.84 The area also benefits from good public transport provision, with two railway stations (at Leigh and Chalkwell), and good bus services along London Road, providing access to central Southend and further afield.

6.85 The area covered by the neighbourhood is extensive, with differences in completeness, population density and housing type present. The eastern part of the neighbourhood relates well to Westcliff and the wider central area of Southend, with high completeness scores. A second smaller hub of activity and completeness is found around the railway station and more historic part of Leigh, with more suburban areas to the north towards Eastwood. It may be that the neighbourhood boundary is redrawn to reflect smaller units of analysis based on this, and which bring the neighbourhood into line with others in Southend, particularly in terms of area and population.

6.86 The completeness score for Leigh, by infrastructure type, is summarised below:



6.87 Later sections of this report explore the subdivision of the neighbourhood into Leigh (north) and Leigh (south), such that the population and geographic size of the neighbourhood is more closely aligned with other neighbourhoods in Southend.

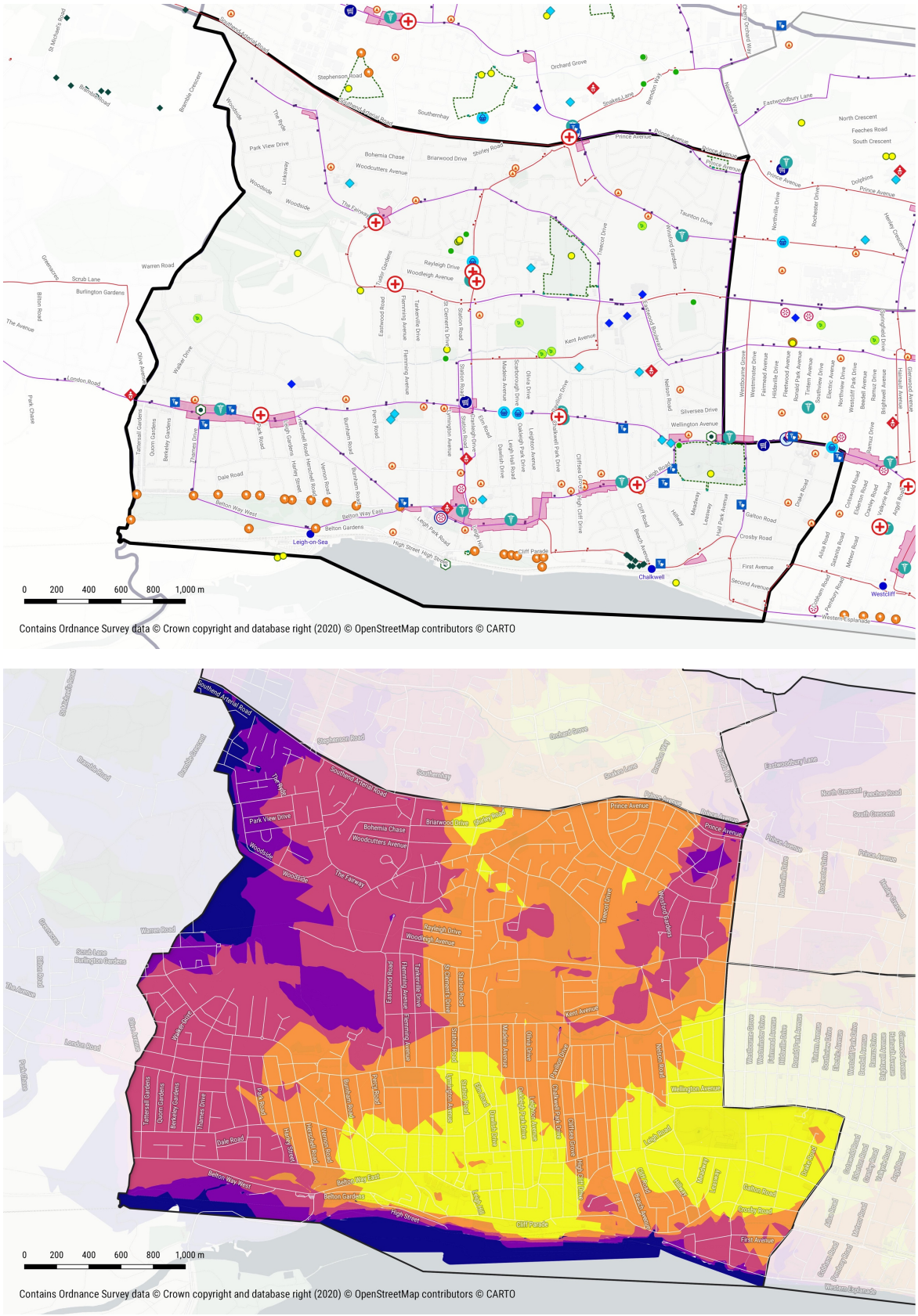


Figure 29: Day-to-day infrastructure and completeness heatmapping, Leigh

[Hyperlink to key to mapping: Figure 15]

Prittlewell

Demographic profile

6.88 Prittlewell is a medium sized neighbourhood in terms of population within Southend borough, comprising 11.3% of the total population.

6.89 The demographic make-up of Prittlewell largely aligns with the borough averages, with a marginally smaller cohort being of school age (below 16 years) and of working age (25-65 years), and a marginally larger proportion of people between 65-84 years.

6.90 Prittlewell has a predominantly low density population, ranging from areas with below 10 people per hectare (pph) and a small area comprising of 75-107pph. A large portion of the area is made up of bungalow and semi-detached housing. This does not directly link with the population densities however: the southern portion of the neighbourhood is primarily made-up of flats/maisonettes but does not have a particularly high population to reflect this.

Day-to-day services and facilities

6.91 Day-to-day infrastructure facilities are spread out across the neighbourhood, however the placement of services becomes more sparse as you move north through the neighbourhood (Figure 30).

6.92 There are several local centres across the neighbourhood, including West Road, which includes a small cluster of shops and services, school and access to Priory park. However, there is no obvious 'focal point' or local centre around which other social and community uses cluster.

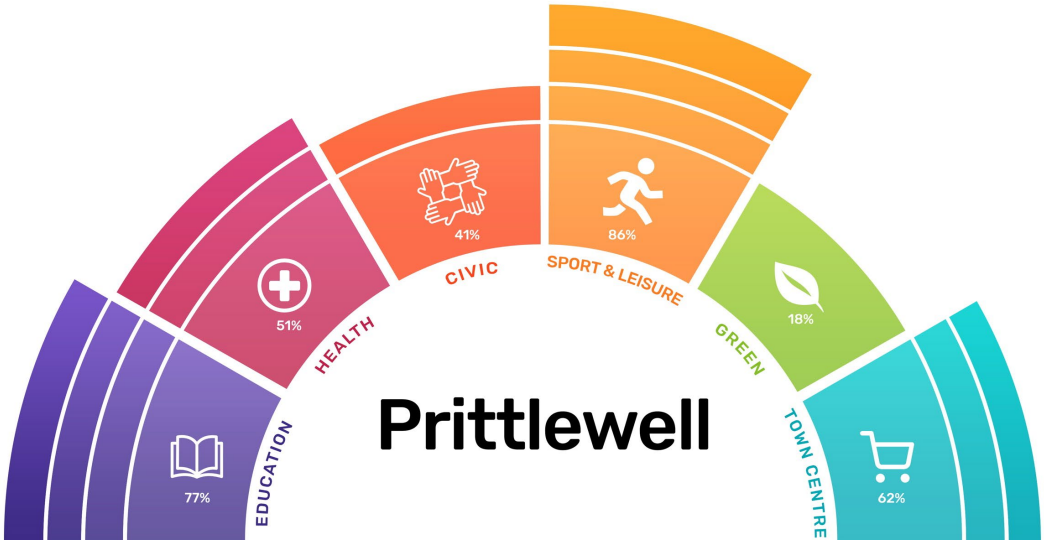
6.93 Priory Park offers a good provision of sports and green infrastructure, although there are no natural or semi-natural green spaces in the neighbourhood, meaning it scores poorly in relation to provision of green infrastructure. However, it does benefit from access to green space to the north, outside of the neighbourhood boundary.

6.94 The highest scoring area of completeness is in the south of the neighbourhood, close to Southend (central) and Westcliff, where there is somewhat of a civic cluster, which includes Southend Hospital and three schools (Chase High School, Lancaster School and Southend High School for Boys) all of which have large catchment areas. The Hospital also acts as a bus interchange, providing access to routes serving the borough and into Rochford, and there are a number of schools outside of the neighbourhood but within which parts of Prittlewell fall within the catchment of.

6.95 Elsewhere in the neighbourhood completeness scores are lower, with the A127 being a barrier to movement by foot and cycle. The neighbourhood is though in relatively close proximity to London Southend Airport, where there are a cluster of shops and services that can be utilised by residents. It also provides good bus connections into the centre of Southend as well as beyond into Rochford and Chelmsford, providing residents opportunities to access a wider range of services than exist within the neighbourhood.

6.96 The slowest broadband speeds correlate with the area with the lowest population density and completeness score. Likewise, the most complete and dense areas of Prittlewell benefit from the highest broadband speeds.

6.97 The completeness score for Prittlewell, by infrastructure type, is summarised below:



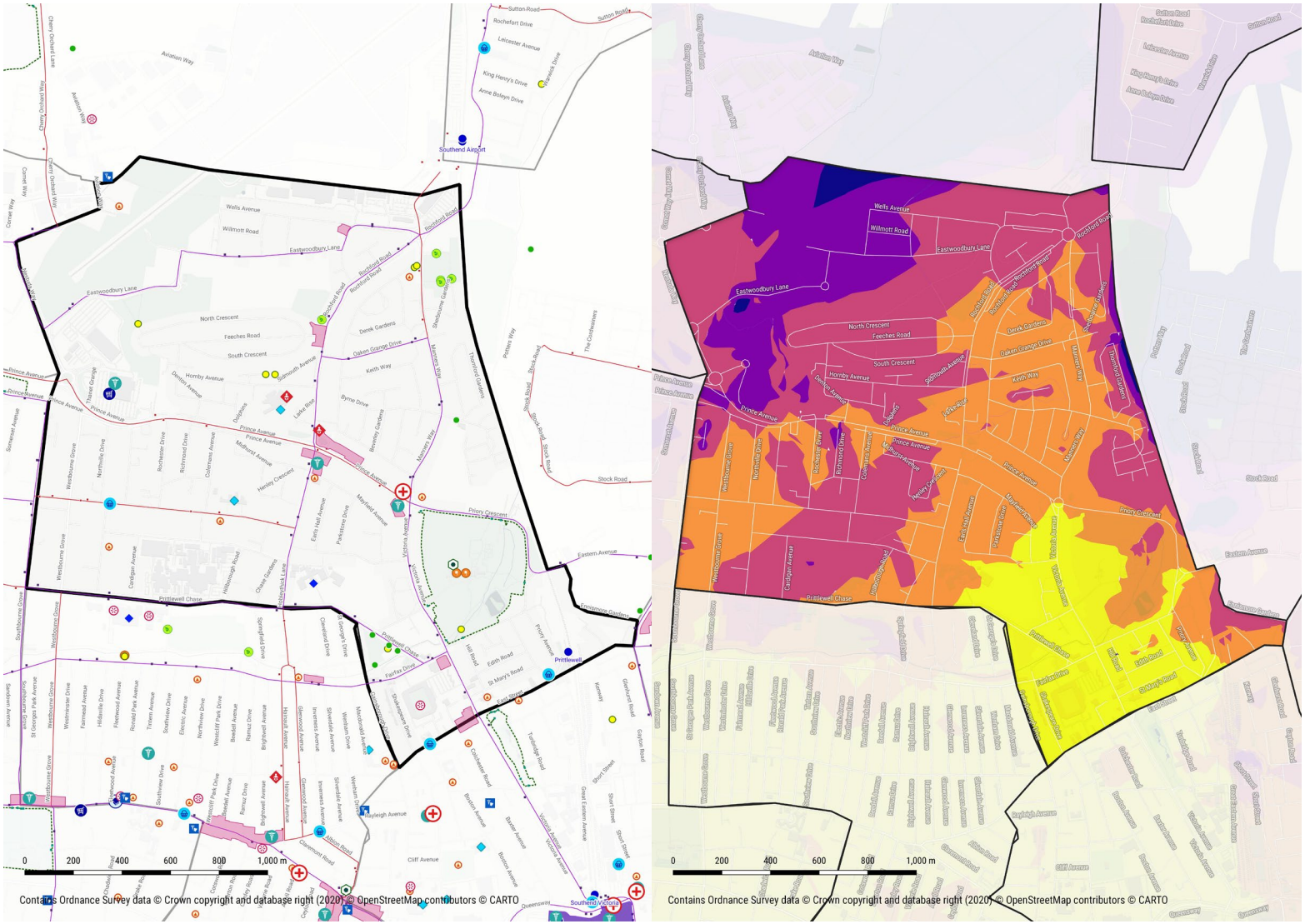


Figure 30: Day-to-day infrastructure and completeness heatmapping, Prittlewell [Hyperlink to key to mapping: Figure 15]

Shoeburyness

Demographic profile

6.98 Shoeburyness has the fourth largest population in Southend borough, with its 22,275 people representing 12.1% of Southend's total population. Half of the population falls within the 25-64 age band. The age structure is generally on a par with Southend as a whole.

6.99 Shoeburyness is the fourth least densely populated neighbourhood in Southend, with a total population density of 44 people per hectare (pph). The majority of the neighbourhood has a density of 11-50pph, though there are three areas with a density of 108-150pph.

6.100 The housing typology across Shoeburyness is mixed, with a variety of areas with different dominant residential types including terraced housing, detached housing, semi-detached housing, and flats/maisonettes.

Day-to-day services and facilities

6.101 Most day-to-day services and facilities are located south of the railway line (Figure 31), with a particular focus in the south-eastern part of the neighbourhood. The north western part of the neighbourhood lacks services and facilities but is within walking distance of some facilities in Thorpe Bay.

6.102 One superstore (Asda) is located north of the rail corridor and provides access to the majority of the neighbourhood. Other facilities in the area include the Renown, Shoebury High Street, Ness Road and retail stores on New Garrison Road. Gunners Park is also an important green space and access to the waterfront provides opportunities for leisure and recreation.

6.103 The rail corridor forms a significant barrier to those living north of it and needed to accessing the majority of services and facilities in the neighbourhood, particularly those travelling by foot for education and green space. Equally, the nature of the built form and layout of development creates barriers to movement, with large areas of cul-de-sac based development and the inward facing residential development west of Shoebury Road limiting accessibility to services by foot and by bicycle for residents. The presence of the railway station does though provide an opportunity for residents to access facilities and services across a wider area.

6.104 The completeness score for Shoeburyness, by infrastructure type, is summarised below:


Shoeburyness
EDUCATION
59%
HEALTH
66%
CIVIC
46%
SPORT & LEISURE
80%
GREEN
24%
TOWN CENTRE
46%

Figure 31: Day-to-day infrastructure and completeness heatmapping, Shoeburyness [Hyperlink to key to mapping: Figure 15]

Southchurch

Demographic profile

6.105 Southchurch is the second largest neighbourhood, after Leigh, in terms of population within Southend borough, comprising 18.4% of the total population. The demographic make-up of Southchurch is broadly in line with the borough average.

6.106 Southchurch has high variation in terms of its population density, though it is generally quite high. In some areas it is as low as 10 people per hectare (pph) but, close to the main central area of Southend, reaches densities of between 151-247pph.

6.107 The housing typology in the neighbourhood directly correlates with the population densities: the least dense area in the east is dominated by detached dwellings, whereas the denser areas in the west are dominated by flats and maisonettes.

Day-to-day services and facilities

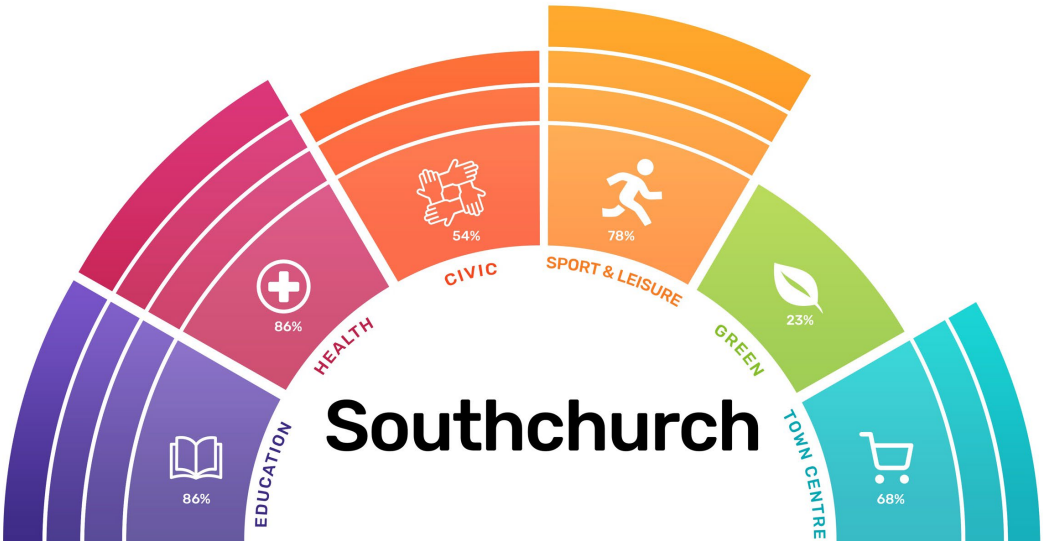
6.108 Most day-to-day infrastructure facilities are relatively spread out across the neighbourhood (Figure 32). There is high provision of local centre and town centre uses in the area, following the main road (Southchurch Road), and which anchor other facilities such as health care and civic services. Local centre and town centre uses are also found along Woodrange Drive.

6.109 There is a wide range of schools and nurseries in the area, all of which are located close to local retail uses. There is also good provision of sports and green infrastructure, but a lack of playing pitch facilities, natural or semi-natural green spaces. However, there are a number of pitches immediately to the north and west of the area within relatively close proximity, including those at Garon Park, the Jones Memorial and Victory Sports Ground. Equally, the area benefits from access to the seafront and opportunities this provides in terms of open space, leisure and recreation.

6.110 As a whole the neighbourhood scores well in terms of completeness for day-to-day services and facilities, with much of the area within the catchment of multiple facilities, with only a small part of the neighbourhood having more limited completeness.

6.111 The highest level of completeness directly correlates with the highest population densities, with the exception of the south western corner bordering central Southend. Broadband speeds are consistently good across the entire neighbourhood, especially in the more densely populated areas.

6.112 The completeness score for Southchurch, by infrastructure type, is summarised below:



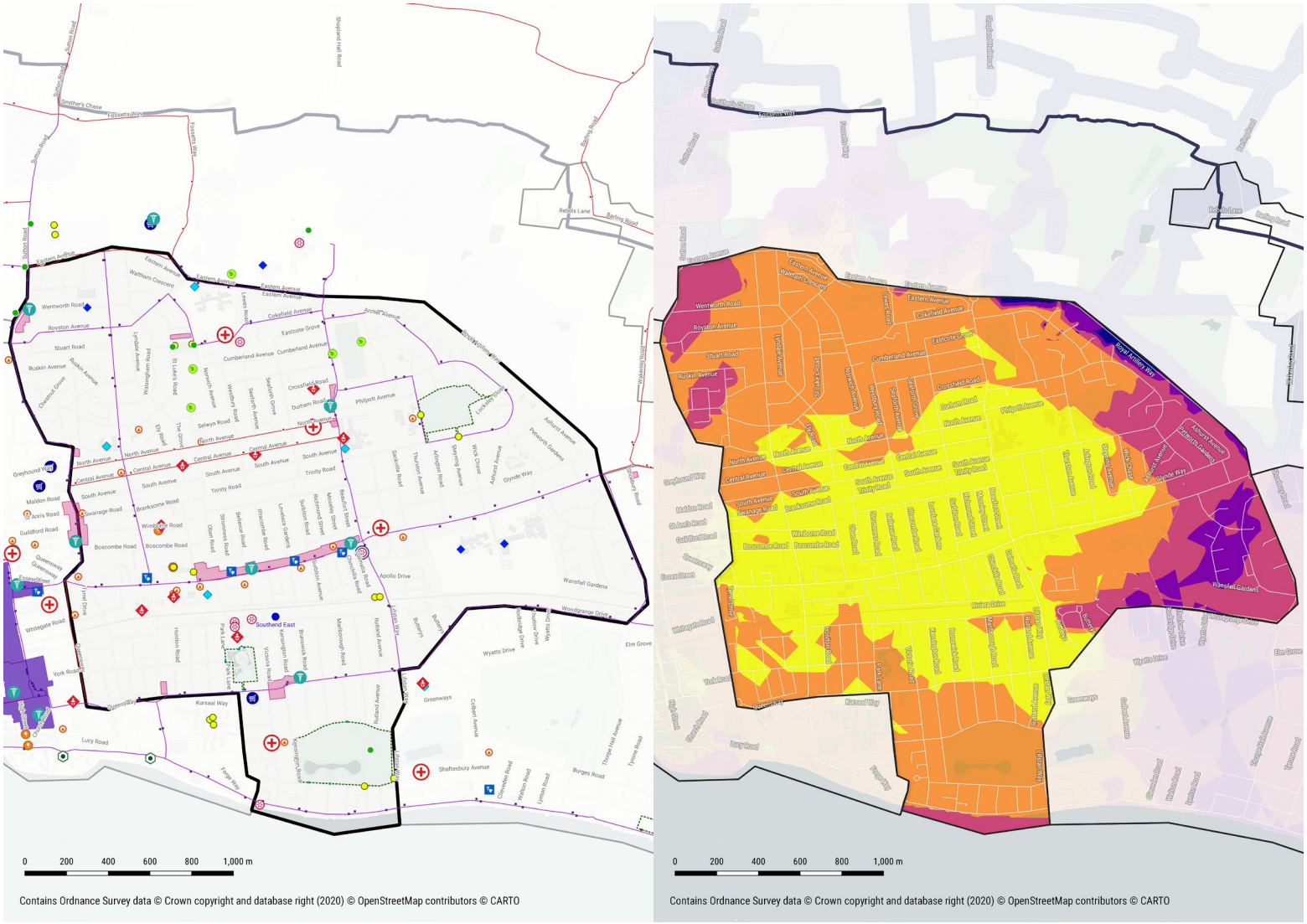


Figure 32: Day-to-day infrastructure and completeness heatmapping, Southchurch [Hyperlink to key to mapping: Figure 15]

Southend (central)

Demographic profile

6.113 Southend (central) has a moderate sized population, comprising 12.9% of the total population of Southend borough. It is also a slightly younger population than for the borough as whole, with fewer people in the 65-84 age bracket than other neighbourhoods.

6.114 The neighbourhood has a wide variation in population densities, from below 10 people per hectare (pph) on the foreshore, to 151-247 very close to this, in Kursaal. The heart of the neighbourhood, focused around the main shopping areas, has the relatively low population densities of between 10-50pph. This is directly related to the dominance of commercial activities in the area.

6.115 The dominant house typology is exclusively comprised of flats or maisonettes and is reflective of the mixed use and generally higher density nature of the area.

Day-to-day services and facilities

6.116 The central area of Southend is a sub-regional centre and an important focus for the town and wider area, providing shops, services and a range of leisure facilities, including access to the seafront. It also has very good public transport connections, with two railway stations and multiple bus routes.

6.117 The central area is highly complete, benefitting from a combination of services and facilities both within the neighbourhood (Figure 33) but also in adjacent neighbourhoods, such as schools and healthcare facilities, which are in walking distance.

6.118 The main high street area has a lower level of completeness than might be expected, though this reflects the commercial nature of the area. Despite this, the provision of numerous shops, civic services and facilities in and around the central area mean residents are well provided for. However, there is limited provision of and access to green infrastructure: provision includes Warrior Square Gardens and Churchill Gardens, as well as access to the seafront and green space along the Cliffs.

6.119 The slowest broadband speeds directly correlate with the area with the lowest population density on the foreshore. Areas with the highest broadband speeds are the most densely populated.

6.120 The completeness score for the Southend central area, by infrastructure type, is summarised below:

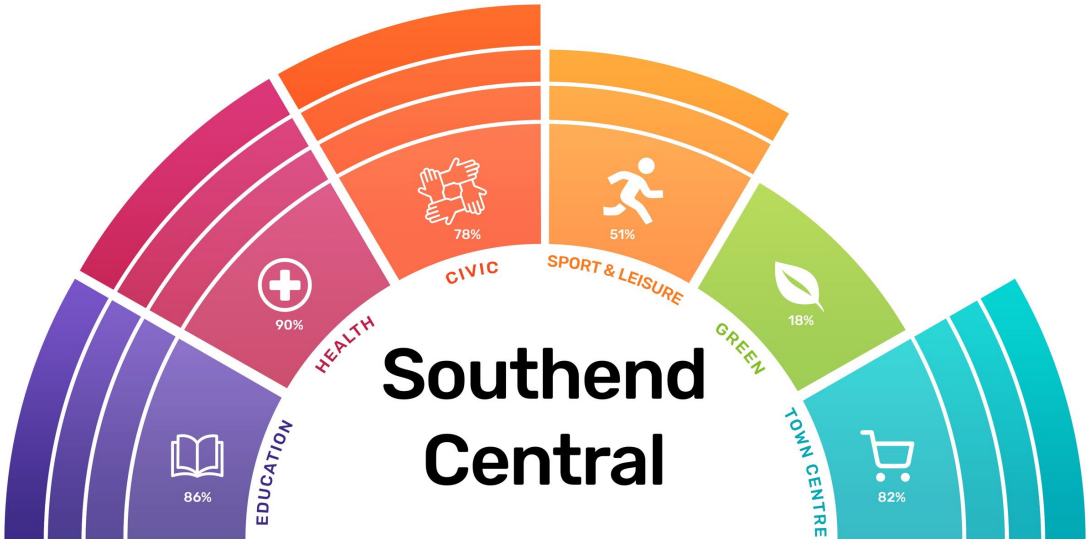

Southend Central
EDUCATION
86%
HEALTH
90%
CIVIC
78%
SPORT & LEISURE
51%
GREEN
18%
TOWN CENTRE
82%

Figure 33: Day-to-day infrastructure and completeness heatmapping, Southend (Central) [Hyperlink to key to mapping: Figure 15]

Thorpe Bay

Demographic profile

6.121 Thorpe Bay has the smallest population in Southend, comprising just 4.33% of the population in Southend Borough. The neighbourhood has the highest proportion of residents aged between 65 and 84 in the borough, being eight percentage points higher than the average. The population of school age residents is below the borough average. Combined, this reflects an elderly and aging population.

6.122 Given the age structure, the proportion of residents who are in active employment is lower than the Borough average, with high rates of retirement in the neighbourhood.

6.123 The population density of the neighbourhood is quite low, on average only 28.5 people per hectare (pph). Most areas within Thorpe Bay have a population density ranging from 11-50pph, in line with the predominantly detached or bungalow housing of the area. The neighbourhood is the most affluent within Southend, benefitting from high house prices and low indices of deprivation.

Day-to-day services and facilities

6.124 There are few services and facilities within Thorpe Bay (Figure 34) and, as a result, it has a low completeness score. This is particularly noticeable around the Golf Course, which acts as a barrier to movement and limits those catchment areas around facilities that are present.

6.125 The most complete areas in the neighbourhood are located towards the east and western boundaries, in part because of the catchments extending around facilities in adjacent neighbourhoods. Thorpe Bay itself lacks primary and secondary education, civic facilities and green infrastructure, though it is close to the waterfront which makes up for some of this.

6.126 The general low level of completeness is directly correlated with the low population densities seen across the neighbourhood.

6.127 The completeness score for Thorpe Bay, by infrastructure type, is summarised below:

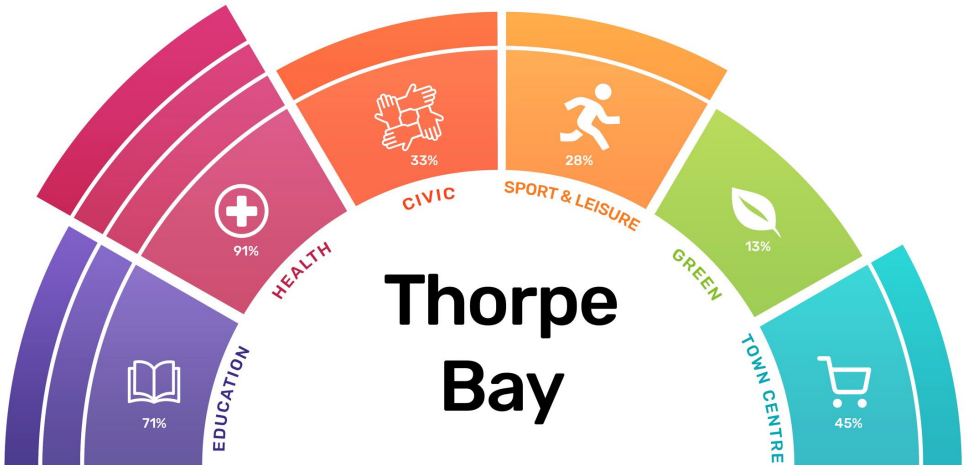

Thorpe Bay
EDUCATION
71%
HEALTH
91%
CIVIC
33%
SPORT & LEISURE
28%
GREEN
13%
TOWN CENTRE
45%

Figure 34: Day-to-day infrastructure and completeness heatmapping, Thorpe Bay [Hyperlink to key to mapping: Figure 15]

Westcliff-on-Sea

Demographic profile

6.128 Westcliff is smaller than many neighbourhoods in geographic size, however, holds a moderate, 11.9% share of Southend Borough's population.

6.129 The demographic make-up of Westcliff is younger than for Southend as a whole, with the proportion of residents in the 65-84 age group being four and a half percentage points lower than the Borough average.

6.130 Westcliff is also one of the most densely populated neighbourhoods, with much of the area housing between 75 and up to 247 people per hectare in some pockets. The housing typology relates to the population densities. This is evident in the dominant housing study which shows the most popular housing type in most of Westcliff is a flat or maisonette. These are laid out in a grid system making the most efficient use of space.

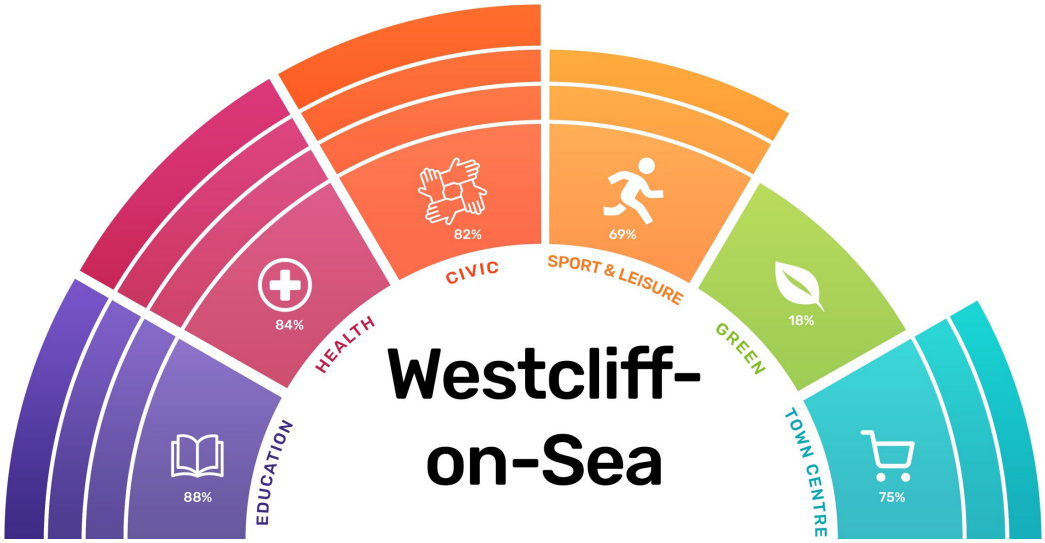
Day-to-day services and facilities

6.131 A high proportion of Westcliff is within walking access of most of the day-to-day services and facilities included in this study (Figure 35). It thus has a high completeness core. Facilities are spread out across the neighbourhood and, because of its more limited size, means that many of these are within walking distance for most residents.

6.132 There are two main local centres along London Road as well as two secondary schools, one primary school and a nursery. The Lancaster School, which provides education for those with special needs, is also located in this area. The southeast part of the neighbourhood lacks provision of green infrastructure, sports and leisure facilities, which reduces an otherwise high completeness score. However, the neighbourhood benefits from access to the seafront which could be considered to offset this. The railway line forms a barrier to movement and reduces walking catchments, particularly to the south.

6.133 The slowest broadband speeds directly correlate with the area with the lowest population density in the south. The fastest broadband speeds are provided in the most densely populated area.

6.134 The completeness score for Westcliff, by infrastructure type, is summarised below:


Westcliff-on-Sea
EDUCATION
88%
HEALTH
84%
CIVIC
82%
SPORT & LEISURE
69%
GREEN
18%
TOWN CENTRE
75%

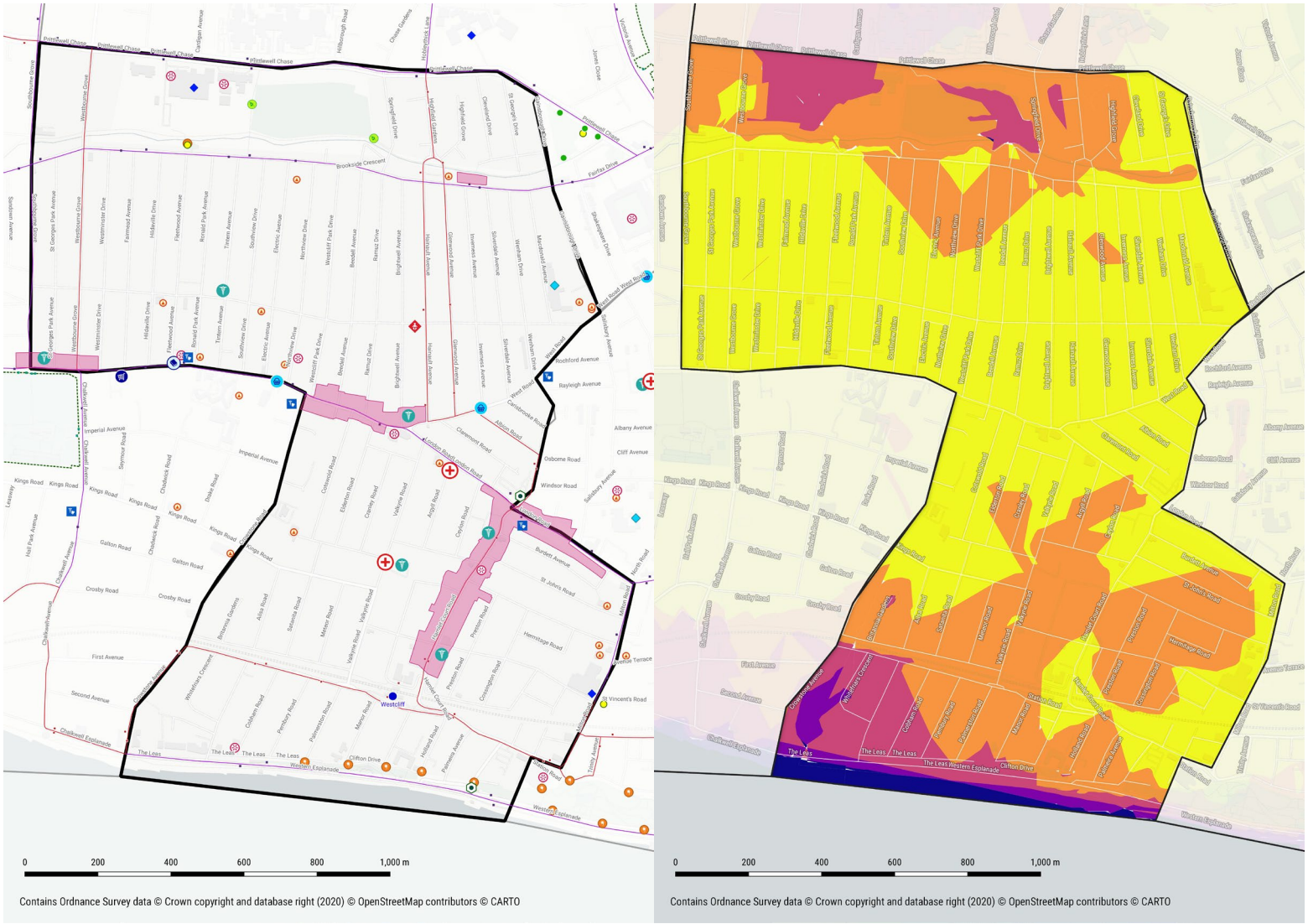


Figure 35: Day-to-day infrastructure and completeness heatmapping, Westcliff-on-Sea [Hyperlink to key to mapping :Figure 15]

Summary

Completeness scores for day-to-day services and facilities

6.135 The 'completeness score' for the settlements and neighbourhoods is illustrated by way of heat mapping in Figure 36, with separate heat maps for groupings of facilities (e.g.: education, health etc) presented in the Appendix.

6.136 The completeness scores are based on how many walking catchment areas for different facilities overlap with each other in each settlement or neighbourhood. At the day-to-day level nineteen different types of facilities have been assessed. There are no instances where the walking catchment areas of all nineteen overlap with each other. The highest occurrence of overlapping catchment areas is seventeen facilities. This thus represents the highest score achieved in the heat mapping.

6.137 Completeness is also presented in Table 12 based on the percentage of each settlement or neighbourhood within the walking catchment of multiple facilities. The higher the figure the greater the area within those catchment areas. Colour coding is used in the table to highlight the most complete areas. Alongside the neighbourhoods assessed in Southend a combined figure for the urban area as a whole is also presented. These are presented for comparison purposes in Table 13 and in the separate 'rainbow charts' for settlements in Rochford and neighbourhoods in Southend in Figure 42 and Figure 43 respectively.

6.138 The heat mapping of completeness indicates that:

- High degrees of completeness are found in central areas, where services and facilities are typically concentrated.
- The highest concentration of completeness is found within Southend (central), Westcliff-on-Sea, parts of Prittlewell and parts of Leigh. The central scores well across all infrastructure types, with the exception of green infrastructure, though this is reflective of the Southend urban area as a whole (see commentary below). Southchurch is also highly complete, although there are some gaps in provision between Southchurch and Southend (central) which stop this from being a contiguous area of the highest completeness score. It does though represent an extended central area with greatest provision of services and accessibility to these.
- Shoeburyness also ranks as having a high completeness score, though with variation: areas to the north, close to the New Ranges, are less complete and thus where access to the full range of facilities for day-to-day purposes is more limited.

- Thorpe Bay, parts of Prittlewell, Eastwood and Leigh are ranked as being less complete. In Prittlewell much of this is accounted for by the presence of Southend Airport and runway approaches, which limit development use and activity in its path. In Leigh, the western part of the neighbourhood is less complete. This reflects a combination of clustering of most activities within the local and town centre areas, but also presence of open space at Belfairs with limited access across this area. Elsewhere, settlement pattern, in terms of housing density and road layout plays a factor: in Eastwood, for example, the presence of culs-de-sac reduces walking and cycling catchment areas.
- As a whole, the Southend urban area and its constituent neighbourhoods are more complete than settlements within Rochford District. However, Southend as a whole scores relatively low in respect of green infrastructure and access to this. This reflects the highly urbanised nature of Southend, particularly in relation to settlements in Rochford District. In reality, many areas benefit from access to the waterfront, though further away from this, physical infrastructure, including main roads and railway lines, act as barriers to movement and thus access to the waterfront as an amenity.
- Within Rochford District the most complete areas are the centres of Rayleigh, Rochford and Hockley. Towards the edges of these towns the completeness score drops. In Rochford, this drop in completeness is particularly marked to the south of the town centre, though as above, this is potentially linked to the presence of Southend Airport and the impact of flight paths. This area is also occupied by employment uses.
- Great Wakering, Hullbridge and Canewdon site below Rayleigh, Rochford and Hockley in terms of population. They have mid-levels of completeness, though benefit from good provision of some day-to-day services and facilities, including sports, leisure and civic uses.
- The outlying towns and villages have mid-to low completeness scores, with Paglesham, South Fambridge and Great Stambridge all achieving very low scores, meaning there is a lack of day-to-day facilities within these areas for the local community.
- Stonebridge, which straddles the administrative boundary between Rochford District and Southend Borough, also has very low levels of completeness, despite its proximity to the main urban area of Southend.
- Walking catchment areas around some facilities extend beyond current settlement boundaries and some of these areas have just as good, if not better, levels of completeness and access to facilities than some of the smaller settlements. Land to the north of Southchurch and east of Prittlewell for example benefits from relatively high levels of completeness.

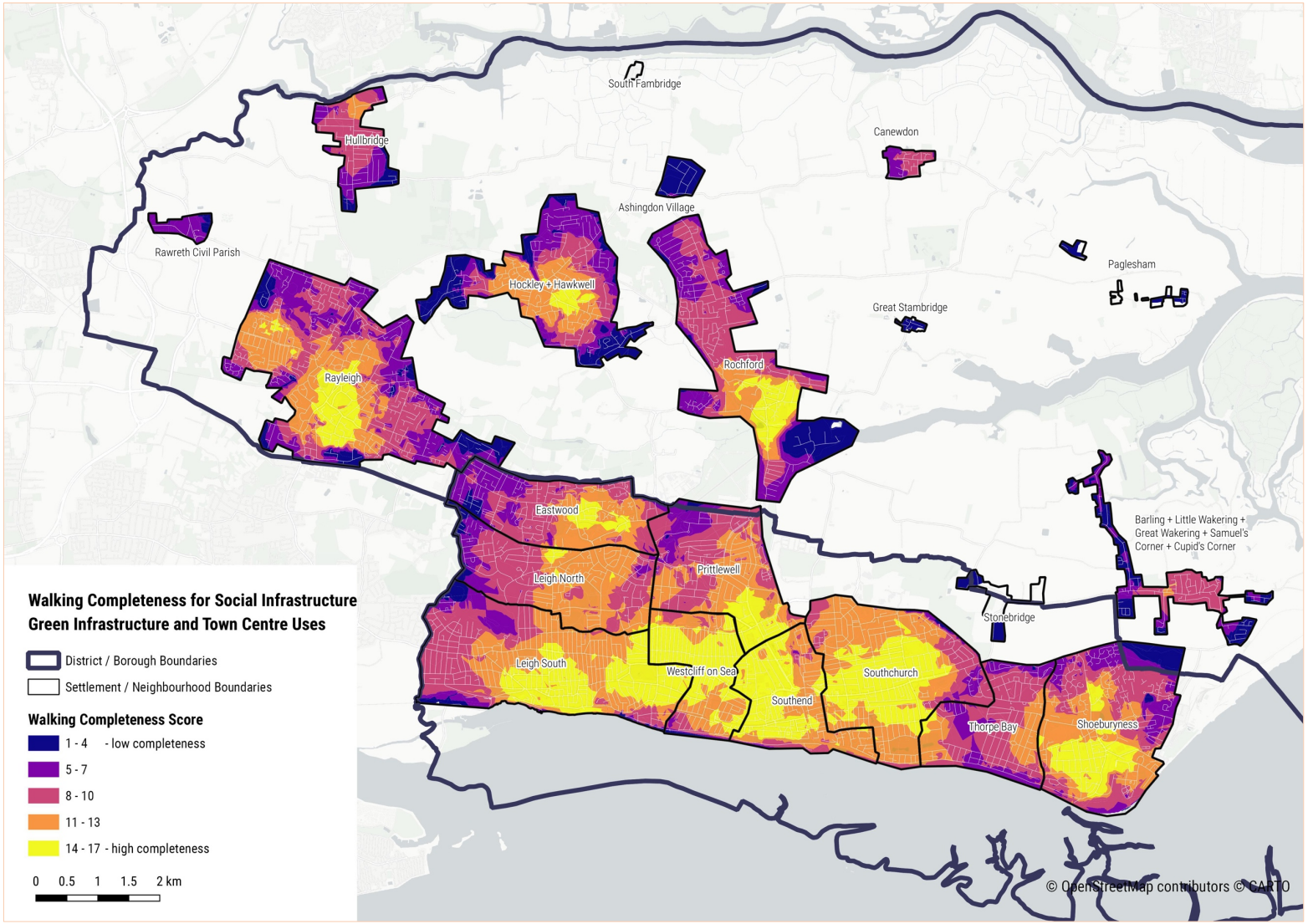


Figure 36: Completeness heat-mapping associated with day-to-day facilities for all settlements and neighbourhoods within the study area

Place	Education	Health	Civic	Sport & Leisure	Green Infrastructure	Town Centre Uses	Aggregated Completeness Score
	% of each place within walking catchment of everyday services						
Rochford District							
Canewdon	33	0	48	100	55	14	42
Gt. Stambridge	0	0	21	0	0	0	4
Gt. Wakering	41	22	48	82	3	10	34
Hockley	42	60	37	60	26	26	42
Hullbridge	22	61	77	57	5	14	40
Paglesham	0	0	6	0	4	0	2
Rawreth	31	0	41	71	23	24	32
Rayleigh	60	56	38	70	18	48	48
Rochford	46	56	45	59	8	44	45
South Fambridge	0	0	0	0	0	0	0
Stonebridge	6	0	0	0	0	9	3
Southend Borough							
Southend urban area	73	*77*	50	69	21	57	58
Eastwood	*54*	*74*	*38*	*63*	*23*	*49*	*50*
Leigh	*73*	*80*	*48*	*69*	*24*	*50*	*57*
Prittlewell	*77*	*51*	*41*	*86*	*18*	*62*	*56*
Shoeburyness	*59*	*66*	*46*	*80*	*24*	*46*	*53*
Southchurch	*86*	*86*	*54*	*78*	*23*	*68*	*66*
Southend (central)	*86*	*90*	*78*	*51*	*18*	*82*	*68*
Thorpe Bay	*71*	*91*	*33*	*28*	*13*	*45*	*47*
Westcliff-on-Sea	*88*	*84*	*82*	*69*	*18*	*75*	*70*

Table 12: Completeness score of all settlements and neighbourhoods based on walking catchment distances to everyday services. Neighbourhoods in Southend are shown in italics

Colour coding indicates level of completeness:

- *Higher levels of completeness: >75%*
- *Mid-high levels of completeness: 51-75%*
- *Mid-low levels of completeness: 26-50%*
- *Lower levels of completeness: Up to 25%*

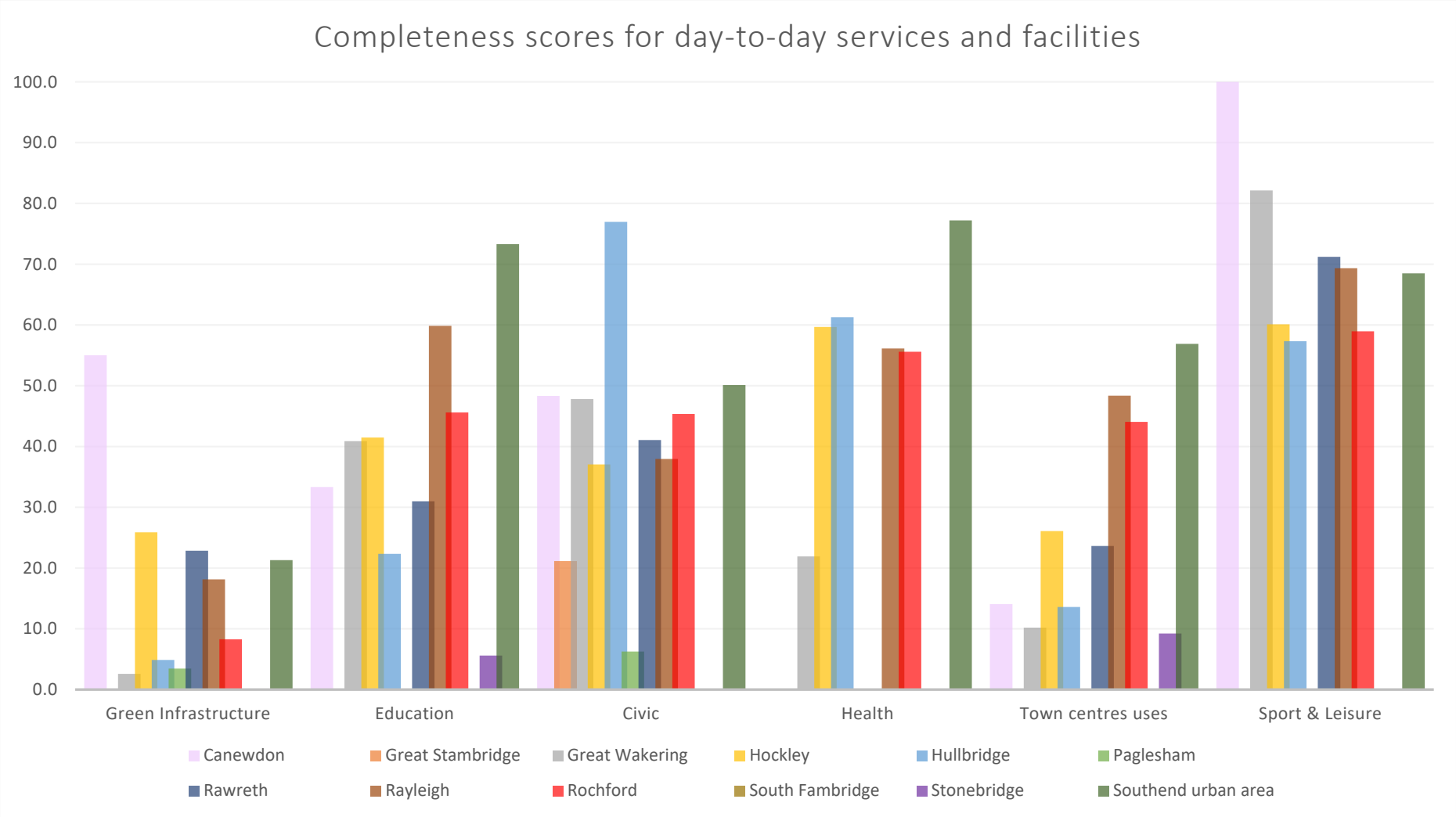


Table 13: Completeness scores for day-to-day services and facilities for all settlements

Population and 'completeness'

6.139 The completeness score for each of the settlements and neighbourhoods is plotted against population in Table 14, with a trend line indicated. This suggests that:

- Levels of completeness for most areas are broadly as might be expected given the population of those places.
- As a whole, the Southend urban area perhaps has a lower level of completeness than might be expected for a place with a population of its size.
- However, Westcliff-on-Sea, Southend (Central) and Southchurch stand out as places which score well in terms of completeness compared to population. This implies that these could be areas where further growth and intensification might be supported. Equally, investment and services and facilities elsewhere across the Southend urban area could improve levels of completeness for those communities.
- Within Rochford District, the main towns of Rayleigh, Rochford and Hockley all have lower completeness scores than might be anticipated given population. This implies that these might be areas where further investment in infrastructure provision is required to support the local communities.

6.140 It should be made clear that this study has counted and plotted services and facilities, and walking catchments around these. It has not reviewed the size nor quality of these. So, whilst this study has made judgements about provision, a further review by infrastructure providers through the Infrastructure Delivery Plans being prepared in support of the new Local Plans is required. These will indicate trigger points for delivery of infrastructure and population thresholds required to support this.

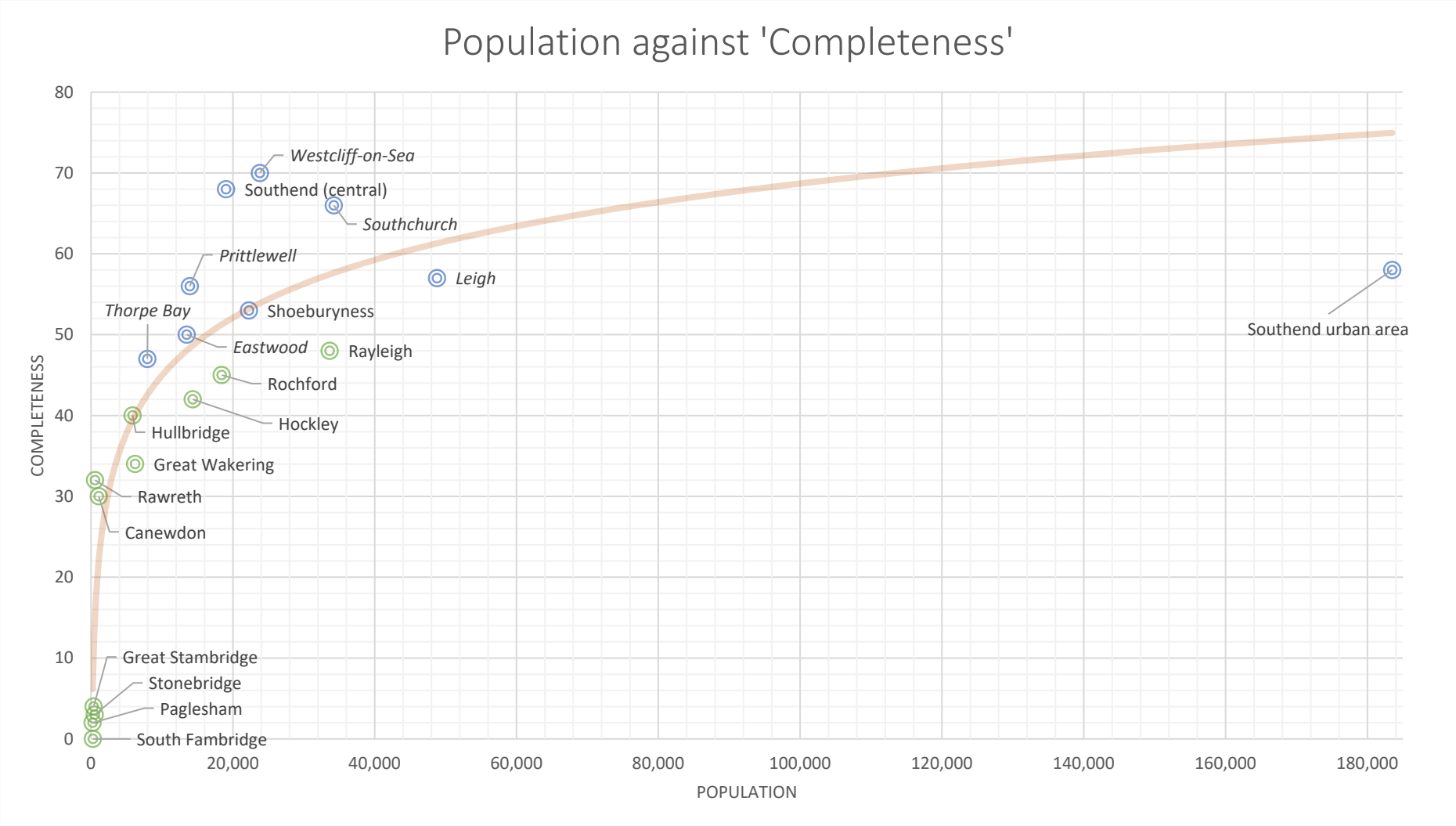


Table 14: Completeness of each area plotted against population. Neighbourhoods in Southend shown in italics and markers coloured blue. Rochford settlements coloured green.

Sub-division of the Leigh neighbourhood

6.141 As indicated in the profile for Leigh outlined in preceding sections there is some difference in completeness and associated heat-mapping across the neighbourhood and that, given its size in comparison to other neighbourhoods in Southend, some sub-division of the area may be warranted, allowing for more granular analysis. This reflects messages raised during the workshops held at the outset of the study process.

6.142 For the purposes of this assessment Leigh has been divided into north and south Leigh, with the boundary between the two formed by a combination of Fairfax Drive, Manchester Drive and Blenheim Chase, as indicated on Figure 37.

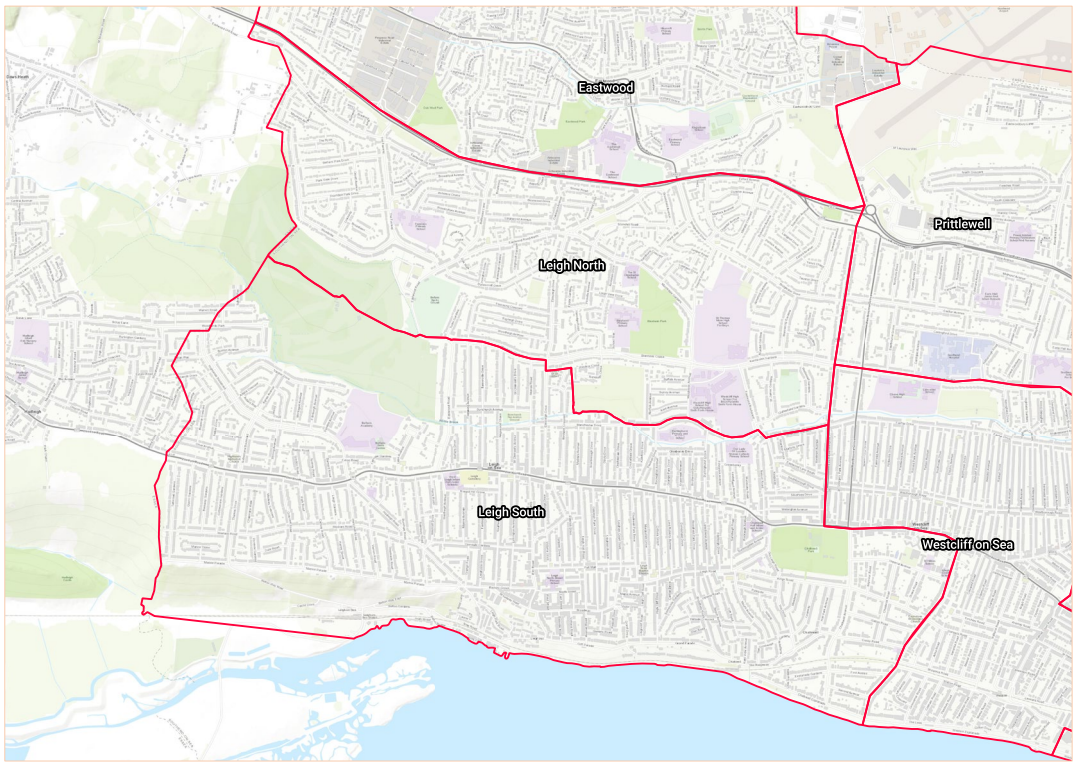


Figure 37: Sub-division of Leigh neighbourhood into Leigh (north) and Leigh (south)

6.143 Heat mapping for Leigh (north) and Leigh (south) is presented in Figure 38 and Figure 39 respectively. The mapping clearly indicates the difference in levels of completeness between the two: Leigh (south) benefits from more significant 'hot-spots', relating to the cluster of uses around the main centre but also in terms of proximity to Westcliff and the shared use of services and facilities on the border between the two neighbourhoods. Leigh (north) is 'less complete', with distance from centres and clusters of services being a factor. Both are less complete to the western edge but although access to services and facilities is more limited here, both benefit from access to sports and green infrastructure around Belfairs Park.

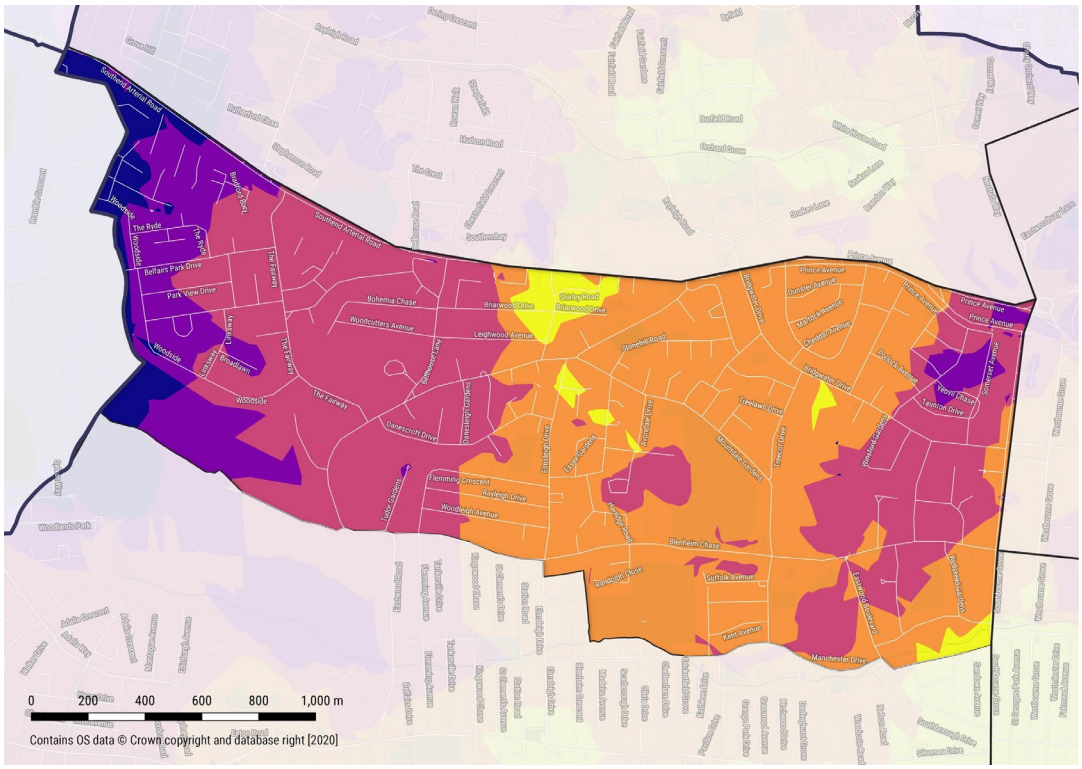


Figure 38: Completeness heat-mapping of day-to-day services and facilities in Leigh (north)

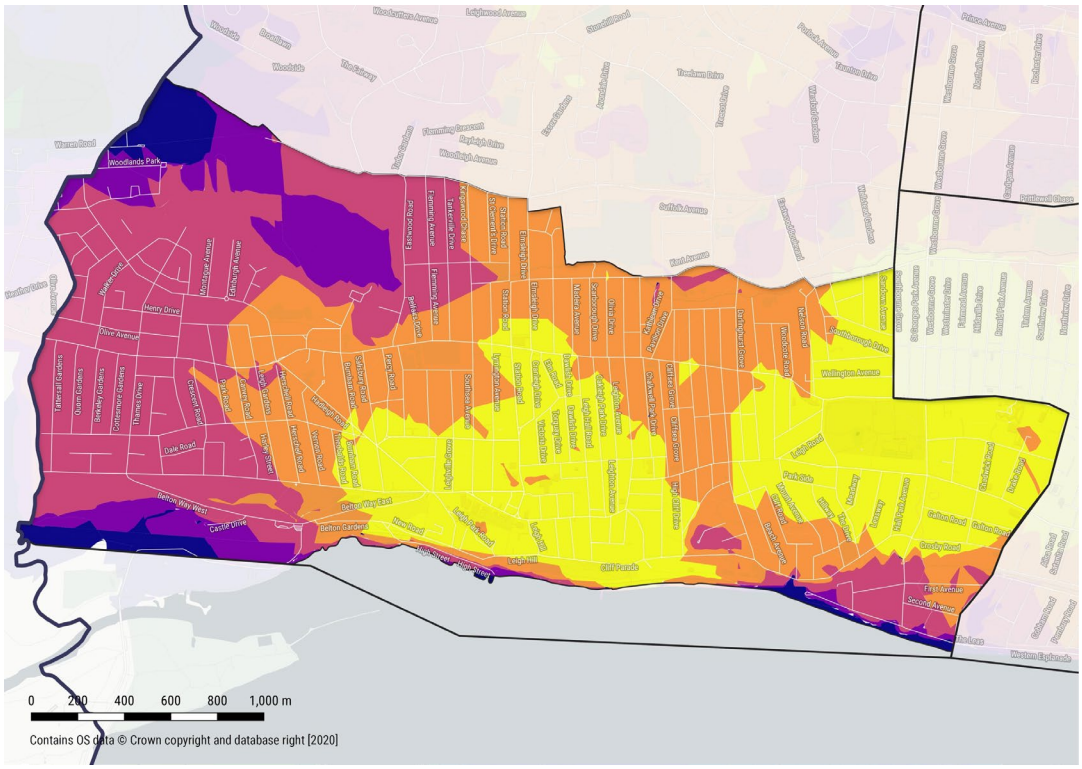


Figure 39: Completeness heat-mapping of day-to-day services and facilities in Leigh (south)

6.144 Both areas score relatively well in terms of completeness and in comparison with the urban area as a whole, though with differences highlighted through the calculation of completeness for all day-to-day services and facilities in Table 15. This indicates that across all infrastructure types, Leigh (south) is 'more complete' than Leigh (north), and significantly so in respect of health and civic facilities. It is also more complete in respect of education. The exception to this is sport and leisure, where Leigh (north) rates as being 'more complete'. This is reflected in the 'count' of services and facilities located within each neighbourhood as presented in Appendix 3. It is important to note the nuances in this. For example, although Leigh (south) is considered more 'complete' than Leigh (north) in terms of education, this is reflective of both the count of facilities and different catchment areas associated with this. There are more primary schools in Leigh (south) than there are Leigh (north), with the catchment of these only benefitting parts of Leigh (north). Conversely, Leigh (north) benefits from a greater number of secondary schools, but the larger catchment around these benefits residents of both Leigh (north) and Leigh (south).

Place	Education	Health	Civic	Sport & Leisure	Green Infrastructure	Town Centre Uses	Aggregated Completeness Score
	% of each place within walking catchment of everyday services						
Southend urban area	73	77	50	69	21	57	58
Leigh (entire area)	73	80	48	69	24	50	57
Leigh (north)	70	68	34	78	23	50	54
Leigh (south)	75	87	57	63	24	50	59

Table 15: Completeness score of Leigh (north) and Leigh (south)

Higher levels of completeness: >75%

Mid-high levels of completeness: 51-75%

Mid-low levels of completeness: 26-50%

Lower levels of completeness: Up to 25%

6.145 For comprehensiveness, summary profiles for Leigh (north) and Leigh (south) are presented on the following pages. Comparison charts indicating the completeness or otherwise for all settlements and neighbourhoods in the study area are then presented in Figure 42 and Figure 43 for Rochford District and Southend Borough respectively.

Leigh (north)

Demographic profile

6.146 The population of Leigh (north) accounts for around 9% of the total population of Southend. It's population is slightly less than half of that of Leigh as a whole. The demographic make-up of Leigh (north) includes a higher proportion of elderly people than for Southend as a whole.

6.147 Population densities across Leigh (north) are relatively low and are exacerbated by the presence of schools and parks which occupy a large area of land. Population densities are around 11-50 people per hectare in the main, though falling to less than ten where parks and school are located.

6.148 There is a variety of housing types, including bungalows, semi-detached homes and terraced housing. There is no real correlation between housing type and density, though areas of terraced housing do correlate with areas performing worst against the indices of multiple deprivation.

Day-to-day services and facilities

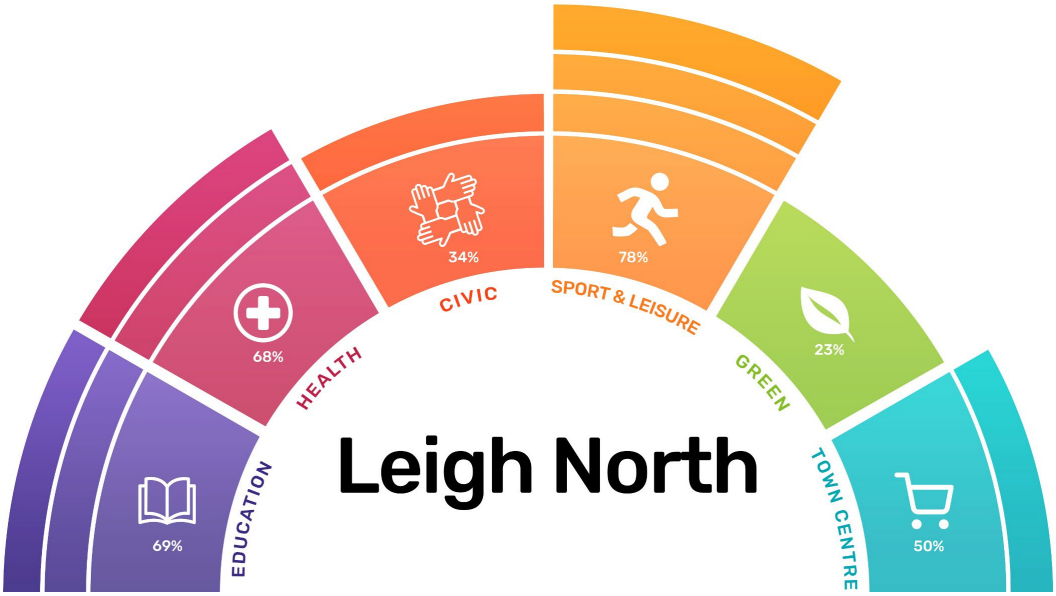
6.149 Most day-to-day infrastructure facilities are found in central and eastern parts of the neighbourhood. Some facilities are well provided for, with their catchments extending across much of the neighbourhood. This includes, for example, places of worship and small local centres.

6.150 By contrast, there is a lack of other facilities, including community centres and dentists. Although there are gaps in provision of services and facilities in Leigh (north) it benefits from being in the catchment of facilities located close by but in adjacent neighbourhoods, including those in Leigh (south) and Eastwood.

6.151 Other than a very small pocket of high completeness where residents benefit from being in the walking catchment of 14-17 day-to-day facilities (Figure 40), much of the eastern part of the neighbourhood has a completeness score of between 11-13. This falls away towards the western edge of the borough, and is as low as 1-4 in some places on the borough boundary.

6.152 Broadband speeds vary between the east and west of the area, with highest speeds close to the boundary with the Prittlewell neighbourhood. Speeds in the eastern part of the neighbourhood are relatively slow.

6.153 The completeness score for Leigh (north), by infrastructure type, is summarised below:



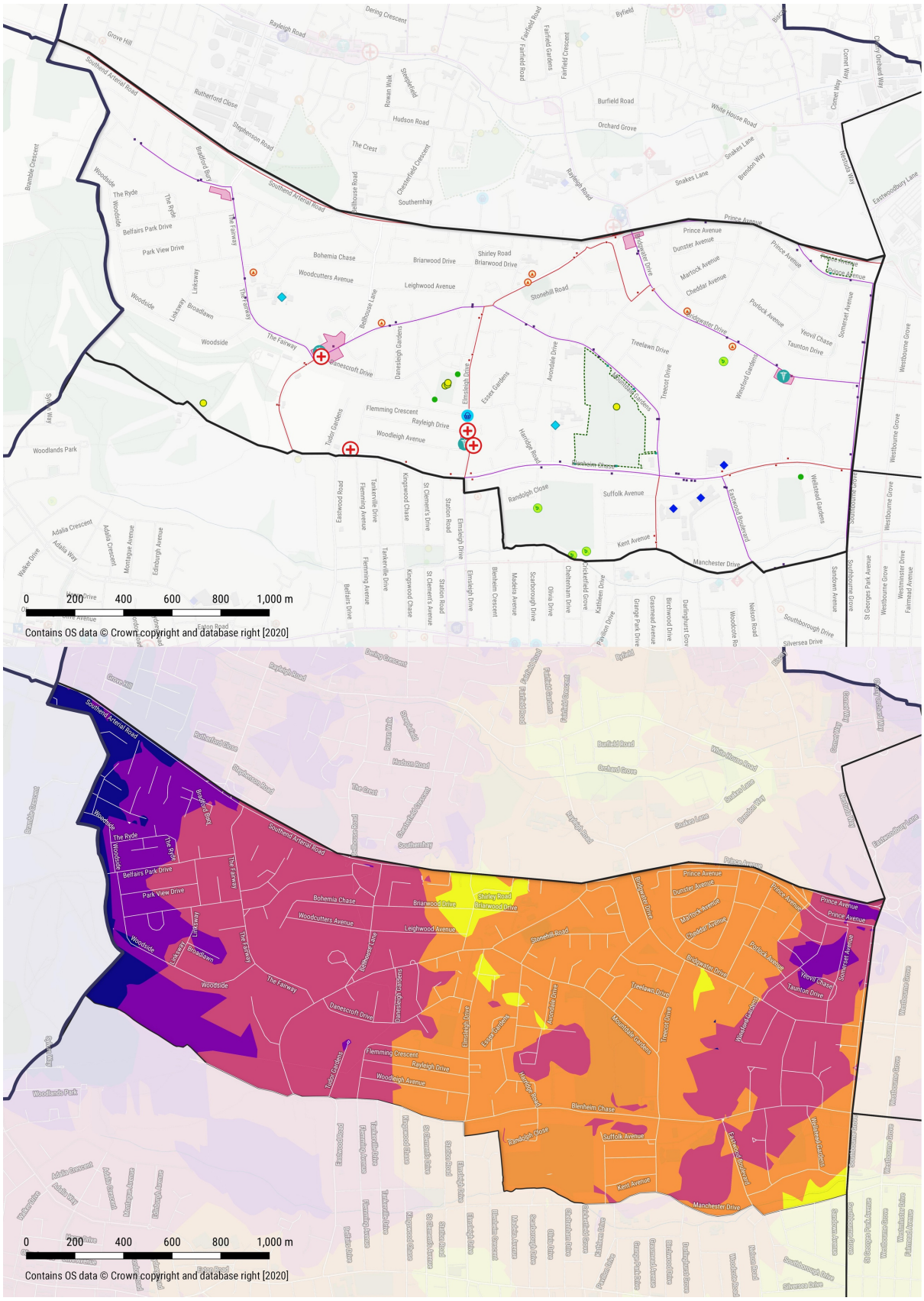


Figure 40: Day-to-day infrastructure and completeness heatmapping, Leigh (north) [Hyperlink to key to mapping :Figure 15]

Leigh (south)

Demographic profile

6.154 Leigh (south) has a population of 32,520 people, comprising almost 18% of the total population of Southend Borough. Despite the sub-division of Leigh into two areas, this puts it on a par with Southchurch as one of the largest neighbourhoods in Southend by population.

6.155 A large proportion of the neighbourhood is recorded as being in very good health, and more so than for Southend as a whole. This perhaps correlates with indices of multiple deprivation, with the neighbourhood performing well against all indices, including health. Indeed, parts of Leigh (south) are within the 10% least deprived areas in the entire country.

6.156 There are quite high population densities in the central area of the neighbourhood, where there are between 107-150 people per hectare in some isolated pockets. Radiating out from this central area densities fall, to a low of fewer than 10 people per hectare. The most densely populated areas correlate with flats and maisonettes, as well as being mixed use areas where local centres and a mix of social and community facilities are found.

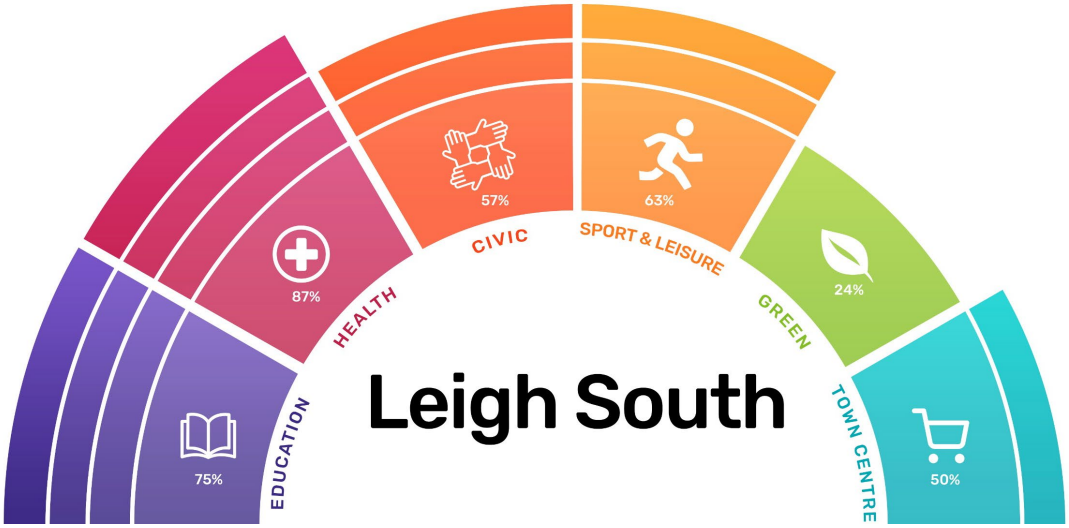
Day-to-day services and facilities

6.157 There is relatively good provision of all services and facilities for day-to-day needs in Leigh (south), with provision of and access to health care and education being particularly notable. Most day-to-day infrastructure facilities are relatively spread out across the neighbourhood (Figure 41).

6.158 Whilst many infrastructure items are evenly spread around the neighbourhood, the most complete 'hot spot' areas are located in the central south (correlating with the Broadway shopping frontages) and the western boundary with Westcliff. These retail areas also anchor other facilities such as health care and civic services.

6.159 Leigh (south) does not have particularly fast broadband speeds, with little correlation between this and areas of completeness, housing type or density.

6.160 The completeness score for Leigh (south), by infrastructure type, is summarised below:



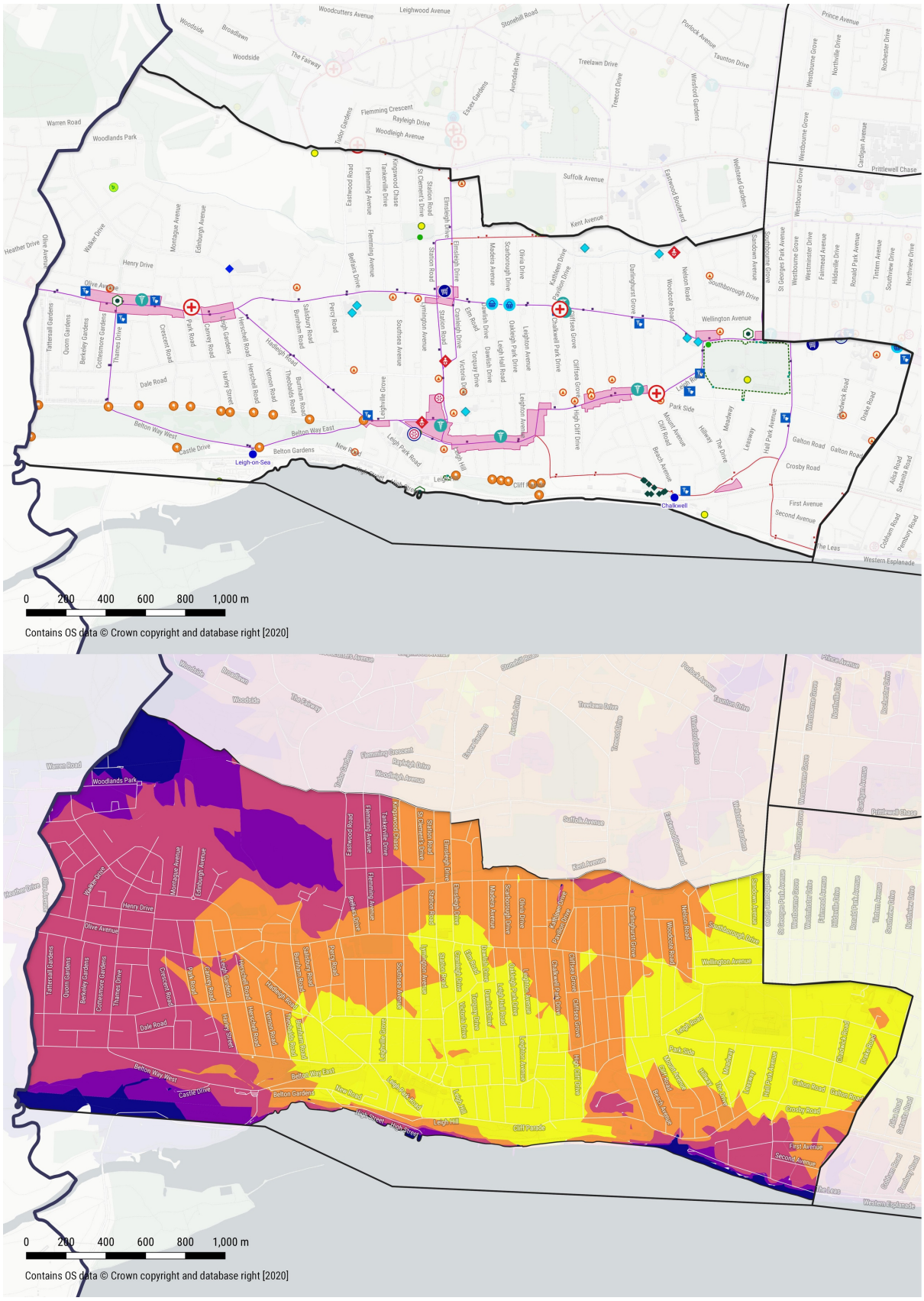


Figure 41: Day-to-day infrastructure and completeness heatmapping, Leigh (south) [Hyperlink to key to mapping :Figure 15]

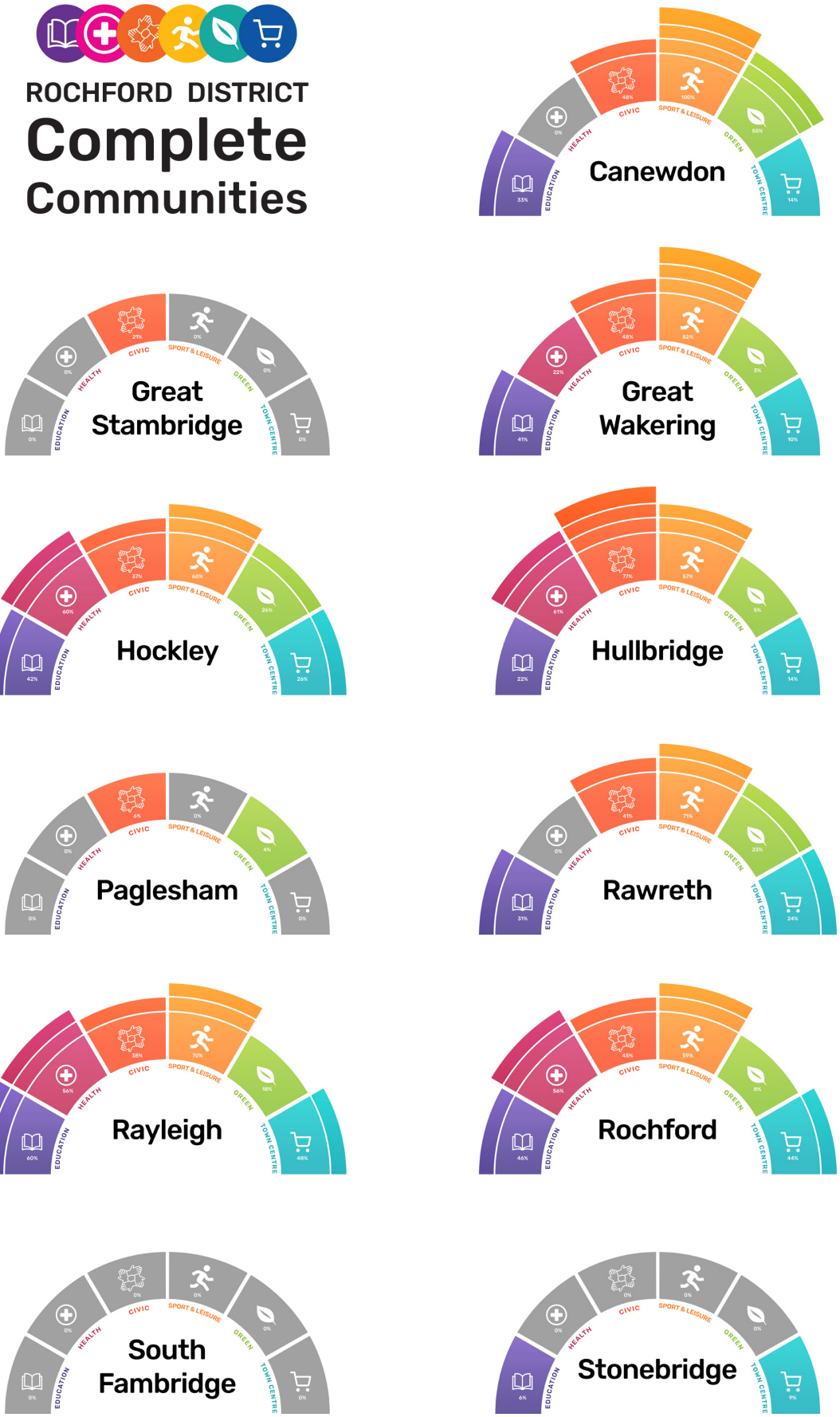


Figure 42: Summary of completeness scores for Rochford settlements, for comparison purposes

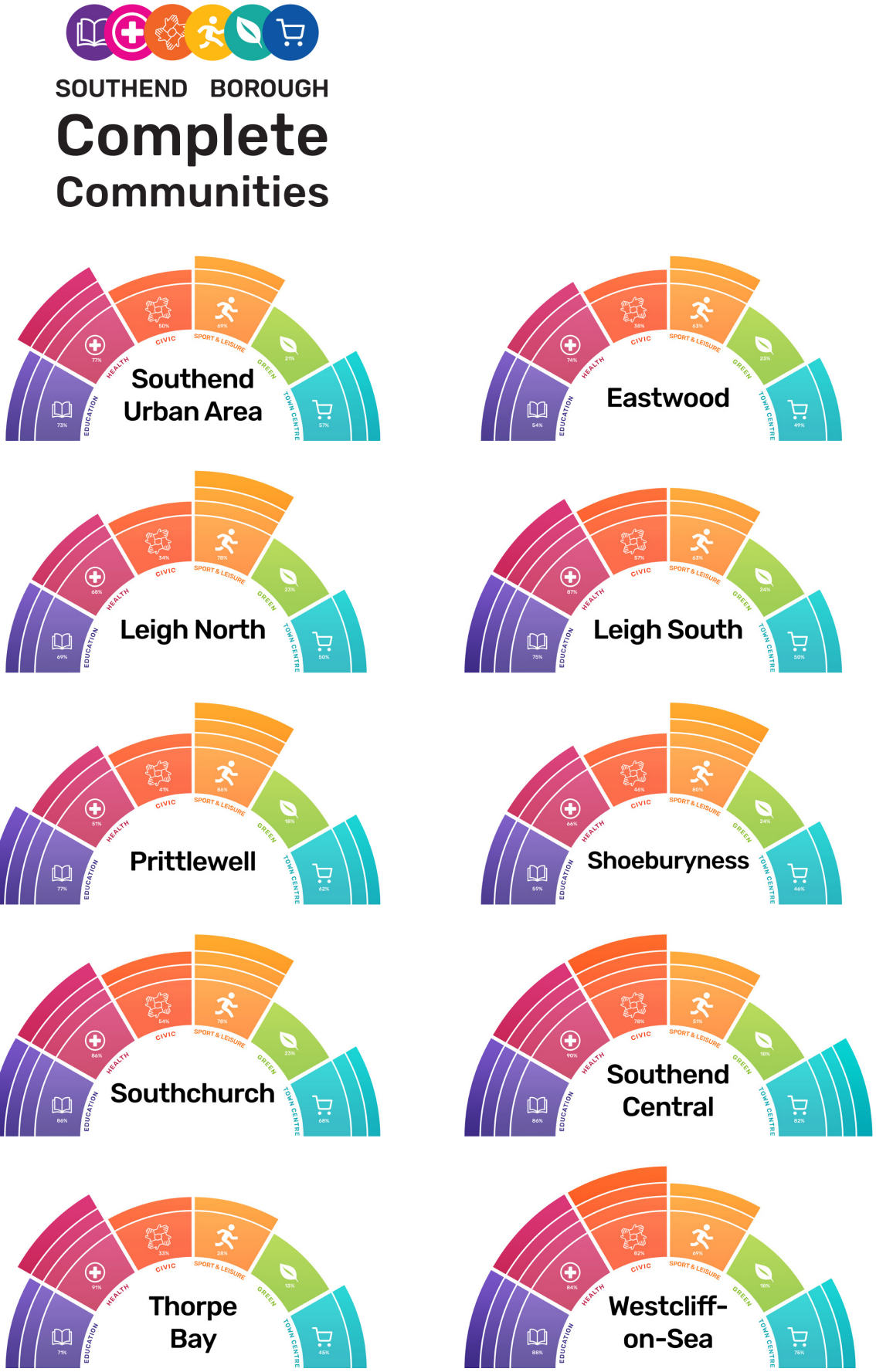


Figure 43: Summary of completeness scores for Southend neighbourhoods, for comparison purposes

7. Public transport

Introduction

7.1 It is recognised that not everybody will be able to walk or cycle, and that for some purposes, it will be necessary to travel beyond the settlement or neighbourhood area, particularly for work and other activities that have a region-wide function, including for example universities, hospitals and some cultural activities.

7.2 For this study we have mapped the location of (a) train stations and walking and catchments around these, and (b) the walking catchment around bus stops that are along bus routes with both a good service (four plus buses per hour) and those with a less frequent service (those with fewer than four buses per hour).

7.3 As with the previous place-based profiles, walking catchment distances to train stations and bus stops are based on research of standards and parameters used elsewhere. For the purposes of this study the catchments used are shown in Table 16. These distances are used to identify the catchment within which an able-bodied person could travel to the train station or bus stop without relying on a car to get there, though it is recognised that some people will drive to train stations from further afield and use these as a 'park and ride' style service, particularly for long-distance commuting.

Use / Facility / Service	Catchment distance (metres)	Walk time (mins) (rounded)	Cycle time (mins) (rounded)
Train stations	800	10	3
Bus stops	400	5	n/a

Table 16: Catchment distances applied around train stations and bus stops in this study

Findings

7.4 The mapping of walking catchments around train stations and bus stops with a good level of service is presented for the study area in Figure 44. The area of each settlement or neighbourhood covered by the walking catchment areas is then shown in Table 17, with a combined figure for the Southend urban area as a whole also presented. The findings are summarised below:

Train services

7.5 The study area benefits from two train lines, one which serves much of Southend Borough and operates on an east west alignment through the urban area, linking Shoeburyness in the east with London Fenchurch Street, via Southend Central and other nearby towns. The other runs from Southend Victoria, just to the north of the town centre, connecting with Southend Airport, Rochford, Hockley and Rayleigh. This then runs onto Shenfield and London Liverpool Street.

7.6 The mapping of train stations and associated catchments shows us that:

- With its two stations the focus of the train network is on the central area of Southend. The number of stations in Southend and the proximity of these means that a large part of the central area is within the walking catchment of one or more stations. Neighbourhoods benefitting from this level of access including Southend (central), parts of Westcliff-on-Sea, Prittlewell and Southchurch. These areas also coincide with the presence of frequent bus routes, making this the most accessible part of the study area.
- Outside of the central area, the train service in Southend Borough benefits more historic areas of growth and development, serving waterfront areas in Leigh (south) and Shoeburyness. These stations are well used but proximity to water reduces the overall catchment area of these. Although Eastwood (and Leigh (north)) lacks a station it is well served by bus routes.
- In Rochford District the train service is focused on the main towns of Rayleigh, Rochford and Hockley. These correlate well with provision of frequent bus services.
- Southend Airport also benefits from its own railway station and provides connections to surrounding towns and into London for passengers using the airport. The walking catchment area around this station is limited as a result of the local road network, and the presence of the airport itself, although small pockets of Prittlewell and Rochford are within the catchment of the station.
- Smaller settlements in more rural areas, as well as more recent development towards the edge of the Southend urban area are outside the walking catchment of a train station.

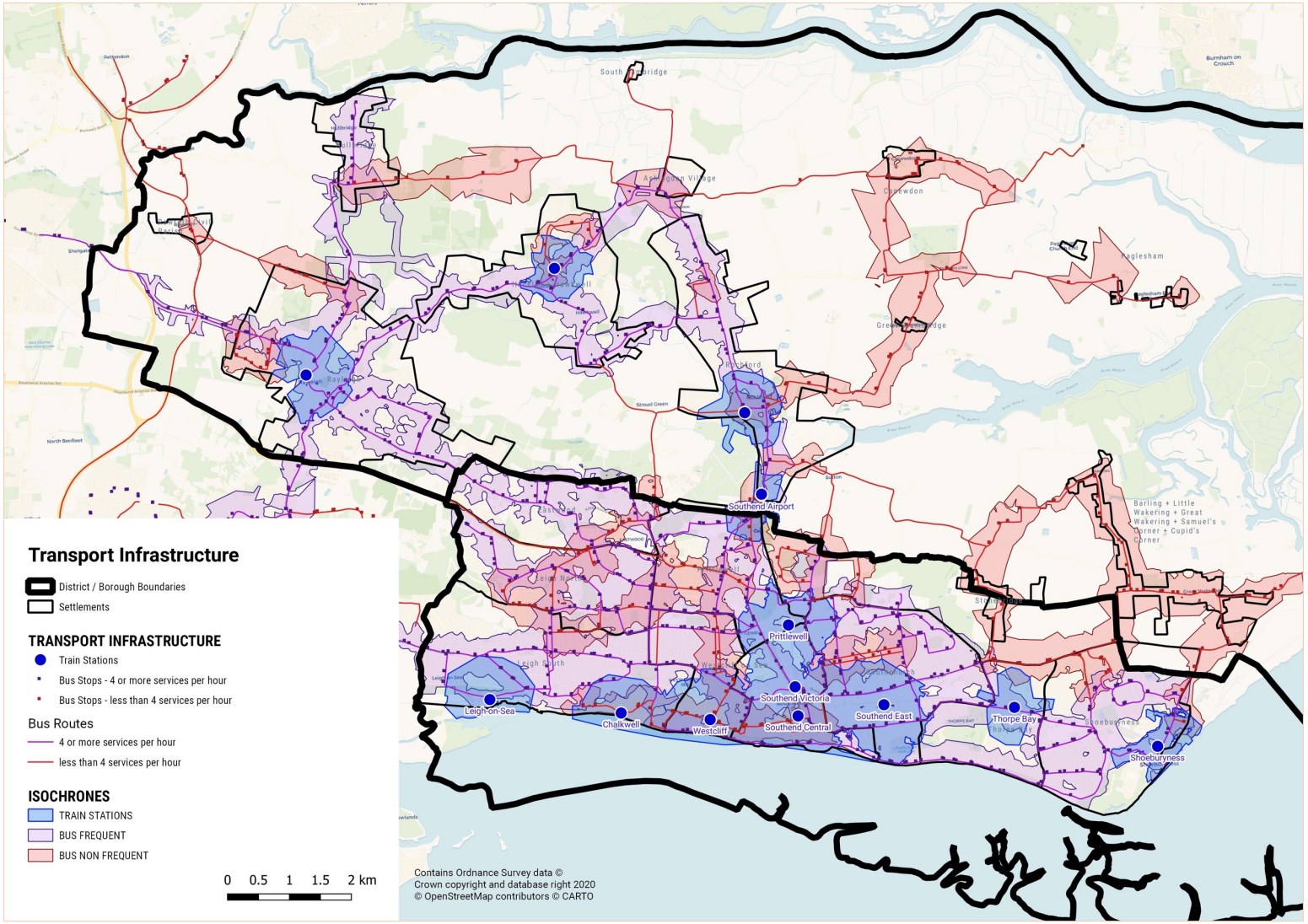


Figure 44: Catchment areas around train stations and bus routes

Place	% of each place in the walking catchment of a train station	% of each place in the walking catchment of a frequent bus service	% of each place in the walking catchment of a less frequent bus service
Rochford District			
Canewdon	0	0	84
Gt. Stambridge	0	0	100
Gt. Wakering	0	0	91
Hockley	17	53	13
Hullbridge	0	63	27
Paglesham	0	0	37
Rawreth	0	0	44
Rayleigh	16	56	13
Rochford	19	49	24
South Fambridge	0	0	0
Stonebridge	0	0	71
Southend Borough			
Southend urban area	28	74	28
Eastwood	*0*	*64*	*14*
Leigh	*19*	*73*	*32*
Prittlewell	*23*	*77*	*39*
Shoeburyness	*10*	*59*	*18*
Southchurch	*45*	*94*	*21*
Southend (central)	*90*	*84*	*36*
Thorpe Bay	*28*	*62*	*9*
Westcliff-on-Sea	*44*	*85*	*62*
(Leigh (north))	*0*	*80*	*49*
(Leigh (south))	*30*	*68*	*22*

Table 17: Proportion of each area within the catchment of public transport services. Neighbourhoods in Southend are shown in italics. Table also shows sub-division of Leigh into North and South.

Bus services

7.7 Frequent bus routes in the study area (those with four or more buses per hour) appear to follow the main road network. In Southend Borough the routes form a grid like pattern, which comes closer together in the central area and is more dispersed towards the edge of the urban area. The central area of Southend is the focal point for bus services, with main interchanges located in the centre and close to Southend Victoria station. In Rochford District, frequent bus routes follow the main road connecting Rayleigh, Rochford and Hockley, with a spur out towards Hullbridge.

7.8 The mapping and associated coverage of public transport shown in Table 17 indicates that, within Southend Borough, much of the urban area is within the walking catchment distance of a frequent bus service. There are those some gaps: in Prittlewell, the western parts of Leigh, parts of Eastwood and Shoeburyness. However, there are reasons for this: In Prittlewell these are formed by the presence of High Schools; in Leigh the gaps are explained by the presence of Belfairs Park, Golf Course and Sports Ground; in Eastwood the gaps are explained by a combination of parkland and employment land alongside the A127, which is crossed by bus routes but where they do not operate along; in Shoeburyness, gaps are around the old Garrison site. In short, the majority of all residential areas within the Southend Urban Area are within the walking catchment of a frequent bus route. Equally, many of these areas also benefit from less frequent routes (fewer than four buses per hour) but which supplement the main network and provide a wide range of choice for residents.

7.9 In Rochford District however, the picture is very different. The focus of the most frequent bus routes is on the three main towns, plus Hullbridge. In these places, around half of the total settlement area is within the walking catchment of a frequent bus route. However, the focus of services on these locations means more limited provision in the outlying rural settlements. Although they do have some level of service, this is infrequent. This is equally as important to note: research[54] has indicated that where there are limited bus services or worse, where these have been cut, then it can result in disconnected communities, reliance on the car (thus contributing to pollution and congestion), increased isolation and the cost of living. Perhaps most significantly the Campaign for Better Transport states that:

'The loss of good bus links can undermine whole communities, creating places where non-car households cannot easily live. Loss of bus services hinders people's access to work, learning, healthcare, choice of shops and social, cultural and sporting

[54] See, for example, Campaign for Better Transport, September 2019, The Future of the Bus: Policy and fiscal interventions as part of a National Bus Strategy

activities, and makes vital services, such as doctor's surgeries, more difficult to reach'.[55]

7.10 It is thus important to note that whilst decisions might be made about the spatial distribution of future growth based on factors which include accessibility, so investment is also required in existing places where access is not as good.

[55] Page 4, ibid.

8. Region-wide facilities

Introduction

8.1 As set out in Section 4 of this report a range of region-wide services and facilities have been mapped. These include:

- Higher Education[56].
- Further Education[57].
- Hospitals[58].
- Theatres.
- Cinemas.
- Galleries.
- Museums.
- Indoor Sports Halls.
- Swimming Pools.
- Leisure Centres.
- Employment Areas.

8.2 Catchments associated with these are related to provision of public transport, such that people from across the wider area might be able to access them by means other than the private car.

8.3 Mapping the location of these facilities helps inform the role and function of the settlements, with such facilities often being located in higher order settlements where the population is able to support their provision. The facilities have been mapped using a combination of GIS data received via Rochford District and Southend Borough, and from online databases, such as the Sport England Active Places Power Database[59]. This information has been supplemented where appropriate from other online and open source databases.

[56] Higher Education facilities are those which offer degree level education.
[57] Further Education facilities are those which offer post-secondary school education but not to degree level.
[58] For the purposes of this study, hospitals are classified as either a Regional or District hospital. Regional relates to major health-care facilities (e.g.: Southend University hospital), with District relating to those providing a more localised function or which operate as a private hospitals and thus where access is not open to all.
[59] https://www.activeplacespower.com/, accessed April 2020

Distribution of facilities

8.4 The distribution of region-wide facilities (other than employment) is illustrated in Figure 45 and broken down by type and count in Table 18. When reading this information note should be made of the following:

- Some of the facilities that have been mapped fall just outside of a settlement or neighbourhood boundary. In these instances they have been assigned to the 'count' for the closest settlement or neighbourhood presented in Table 18. This 'skews' the figures of provision for Southchurch where a wide range of facilities, including sports and leisure, are located along the A1159, which forms the northern boundary of the neighbourhood.
- The area covered by neighbourhoods in Southend is not equal and can thus distort levels of provision. Leigh is the largest neighbourhood by area and thus benefits from the greatest provision of region-wide facilities. However, if this area were to be subdivided and reduced in size to match other neighbourhoods then the figures of provision would likely come down. Indeed, and as expressed during workshops with community representatives, it was suggested that the boundary of Leigh should be redrawn to reflect more distinct neighbourhood areas.
- The mapping of sports and leisure uses, which is drawn from the Sport England database, includes a mix of public and private facilities, as well as those within schools where access is limited.

8.5 The mapping indicates that:

- Most region-wide facilities within the study area are found within Southend Borough, with particular concentrations within Leigh, Southchurch and Southend (central). This is particularly pronounced when considering education, health and cultural facilities.
- The provision of sports and leisure facilities is spread more evenly across the study area though, again, there are some key clusters: in Southend Borough, Leigh and Southchurch are particular 'hot spots'. In Rochford District, Rayleigh, Hockley and Rochford benefit from the greatest level of provision.
- Beyond sports and leisure uses, Rayleigh is the main focus of region-wide facilities within Rochford District. There are several settlements that do not benefit from provision of any region-wide facilities, including Canewdon, Great Stambridge, Rawreth and South Fambridge.

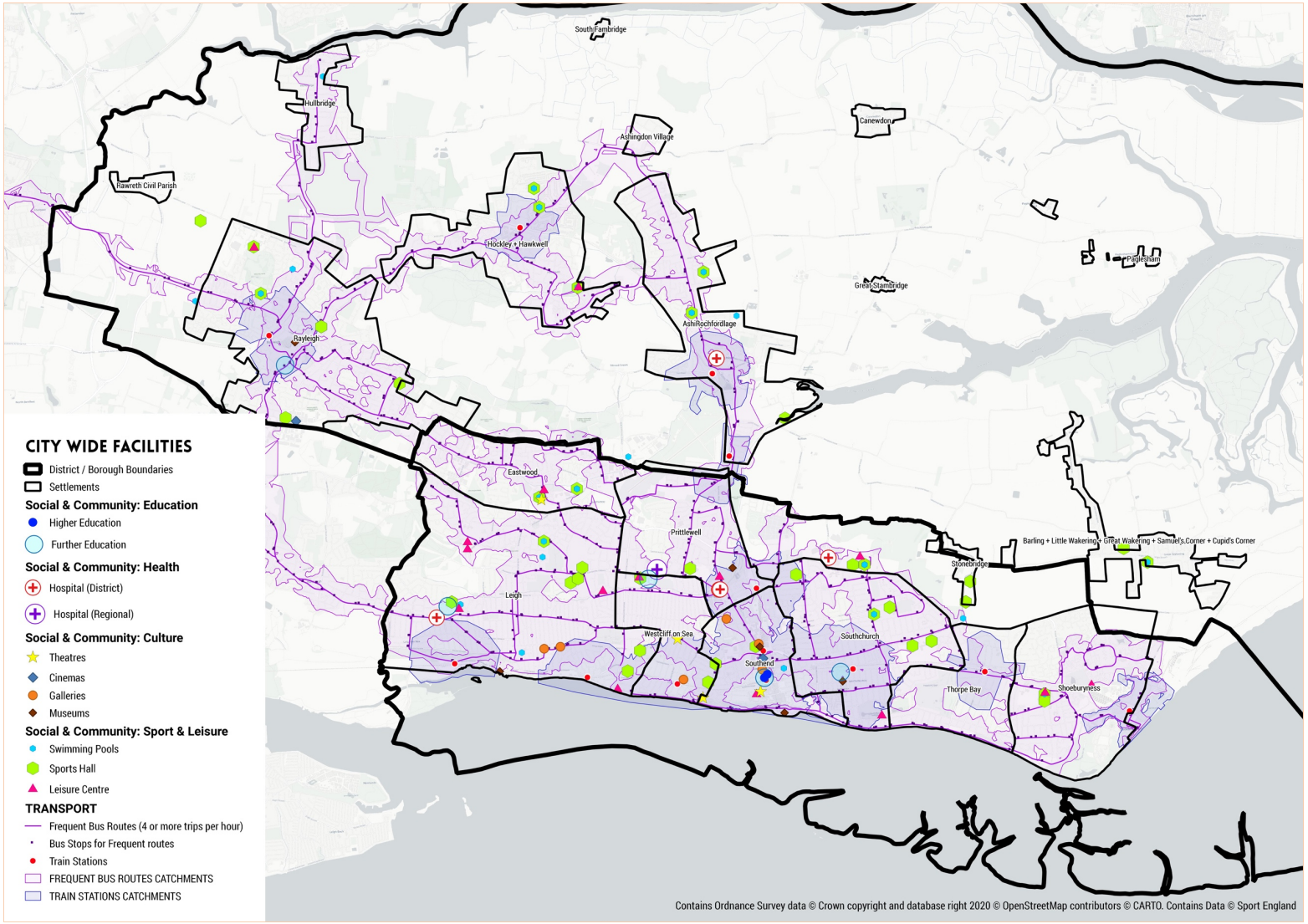


Figure 45: Location of region-wide facilities and proximity to public transport provision (train stations and frequent bus routes)

Place	Education		Health		Culture				Sport & Leisure			Total Count of all facilities	Facilities in each area as a % of total provision
	Further Education	Higher Education	District Hospital	Regional Hospital	Theatre	Cinema	Gallery	Museum	Indoor Sports Hall	Swimming Pool	Leisure Centre		
Rochford District													
Canewdon												0	0%
Great Stambridge												0	0%
Great Wakering									2	1		3	3%
Hockley									3	3	1	7	7%
Hullbridge										1		1	1%
Paglesham												0	0%
Rawreth												0	0%
Rayleigh	1					1		1	5	3	1	12	12%
Rochford			1						3	3		7	7%
South Fambridge												0	0%
Stonebridge									2			2	2%
Southend Borough													
Southend urban area	4	2	3	1	4	1	6	5	23	10	13	72	69%
Eastwood					*1*				*2*	*2*	*1*	*6*	*6%*
Leigh	*1*		*1*				*2*	*1*	*7*	*4*	*5*	*21*	*20%*
Prittlewell			*1*					*1*	*1*		*1*	*4*	*4%*
Shoeburyness									*2*	*1*	*2*	*5*	*5%*
Southchurch	*1*		*1*	*1*				*1*	*7*	*2*	*2*	*15*	*14%*
Southend (central)	*1*	*2*			*2*	*1*	*3*	*2*	*1*	*1*	*1*	*14*	*13%*
Thorpe Bay												*0*	*0%*
Westcliff-on-Sea	*1*				*1*		*1*		*3*		*1*	*7*	*7%*
Total	5	2	4	1	4	2	6	6	38	21	15	104	
Leigh North									*4*	*2*	*3*	*9*	*9%*
Leigh South	*1*		*1*				*2*	*1*	*3*	*2*	*2*	*12*	*12%*

Table 18: Count of region-wide facilities across the study area, broken down by settlement and neighbourhood, and including sub-division of Leigh into North and South. Neighbourhoods in Southend are shown in italics. Percentages are rounded.

- The location of region-wide facilities is reflective of geography and population: Rayleigh is the main centre in Rochford District based on these parameters. In Southend, the central neighbourhood, as well as Southchurch, which forms part of the hinterland of the central area, are the focus of facilities. Leigh, as a whole, is also a 'hot-spot' of provision. This may reflect its geography (as referenced above) but also its identity as a 'town' within the wider Southend conurbation and its history as one of the oldest parts of the wider conurbation, and thus where facilities will have located and grown over time. Breaking this down, there are more 'cultural' and educational uses in Leigh (south), but a fairly equal distribution of sports & leisure facilities between Leigh (north) and South.

Public transport accessibility

8.6 The distribution of region-wide facilities illustrated in Figure 45 also shows whether those facilities are within the walking catchment area of a train station or a frequent bus route. This reflects the locational criteria established for these facilities presented earlier in the report and repeated in Table 19 for ease of reference.

Use / Facility / Service	Location Criteria
Social & Community: Education	
Further Education	Within 400m / 5 minute walk of a public transport hub
Higher Education	Within 800m / 10 minute walk of a railway station
Social & Community: Health	
Hospital (District)	Within 400m / 5 minute walk of a public transport hub
Hospital (Regional)	Within 800m / 10 minute walk of a railway station
Social & Community: Culture	
Theatre	Within 800m / 10 minute walk of a railway station
Cinema	Within 800m / 10 minute walk of a railway station
Gallery	Within 800m / 10 minute walk of a railway station
Museum	Within 800m / 10 minute walk of a railway station
Social & Community: Sport & Leisure	
Indoor Sports Hall	Within 400m / 5 minute walk of a public transport hub
Swimming Pool	Within 400m / 5 minute walk of a public transport hub
Leisure Centre	Within 400m / 5 minute walk of a public transport hub

Table 19: Catchment distances and locational criteria associated with region-wide services and facilities. Note that for the purposes of this study we have taken access to a public transport hub to equate to access to a frequent bus route, which is one that has four or more buses per hour.

8.7 Following the criteria outlined above, the count of region-wide facilities within relevant public transport catchment areas is presented in Table 20. Comparing location of city wide facilities against public transport accessibility indicates that:

- The majority of all region-wide facilities, and certainly those within the education, health and culture categories, are within the relevant public transport catchment distances.
- Southend University Hospital, which is the main hospital in the study area, stands-out as being located outside the recommended catchment area for such a facility (within a ten minute walk of a railway station). It is also on the edge of the catchment area of frequent bus routes. This might thus be a facility to which public transport access should be improved in future.
- The majority of region-wide sports and leisure facilities are within the relevant public transport catchments, though some indoor sports halls and swimming pools are outwith the catchments, which is likely to encourage travel by car. It is also noted that some of these facilities, particularly those on the edge of the Southchurch neighbourhood in Southend, are located along main roads (in this case the A1159), and thus where access by car is likely to be more convenient than by a combination of bus and walking. Indeed, the scale of this road, the volume and speed of traffic along it, makes it a barrier to movement by people travelling by foot (or by bike) from adjacent residential areas. Should a mode shift away from private vehicles to walking, cycling and public transport use be desired then efforts to overcome these barriers will be required, including provision of safe and direct routes that make these an attractive proposition for people to use.
- The lack of facilities in some of the smaller settlements, combined with limited public transport provision in these places (see the previous section of this report), accentuates reliance on the car. This can add to living costs for residents in these locations and, when considering those who do not have access to a car, whether that is because of age, ability, cost or some other reason, can lead to social isolation. If Rochford District and Southend Borough are keen to reverse this then infrastructure improvements are likely to be needed that improve accessibility for all to region-wide facilities.

	Education				Health				Culture								Sport & Leisure					
	Further Education		Higher Education		District Hospital		Regional Hospital		Theatre		Cinema		Gallery		Museum		Indoor Sports Hall		Swimming Pool		Leisure Centre	
Place	Count	Count within good PT access	Count	Count within good PT access	Count	Count within good PT access	Count	Count within good PT access	Count	Count within good PT access	Count	Count within good PT access	Count	Count within good PT access	Count	Count within good PT access	Count	Count within good PT access	Count	Count within good PT access	Count	Count within good PT access
Rochford District																						
Canewdon																						
Great Stambridge																						
Great Wakering																	2	0	1	0		
Hockley																	3	2	3	2	1	1
Hullbridge																			1	1		
Paglesham																						
Rawreth																						
Rayleigh	1	1									1	0			1	1	5	4	3	3	1	0
Rochford					1	1											3	2	3	2		
South Fambridge																						
Stonebridge																	2	0				
Southend Borough																						
Southend urban area	4	4	2	2	3	3	1	0	4	4	1	1	6	5	5	3	23	20	10	10	13	13
Eastwood									*1*	*0*							*2*	*2*	*2*	*2*	*1*	*1*
Leigh	*1*	*1*			*1*	*1*							*2*	*1*	*1*	*0*	*7*	*7*	*4*	*4*	*5*	*5*
Prittlewell					*1*	*1*	*1*	*0*							*1*	*1*	*1*	*1*			*1*	*1*
Shoeburyness																	*2*	*2*	*1*	*1*	*2*	*2*
Southchurch	*1*	*1*			*1*	*1*									*1*	*1*	*7*	*7*	*2*	*2*	*2*	*2*
Southend (central)	*1*	*1*	*2*	*2*					*2*	*2*	*1*	*1*	*3*	*3*	*2*	*1*	*1*	*1*	*1*	*1*	*1*	*1*
Thorpe Bay																						
Westcliff-on-Sea	*1*	*1*							*1*	*2*			*1*	*1*			*3*				*1*	*1*
Total	5	5	2	2	4	4	1	0	4	4	2	1	6	5	6	4	38	28	21	18	15	14
Leigh North																	*4*	*4*	*2*	*2*	*3*	*3*
Leigh South	*1*	*1*			*1*	*1*							*2*	*1*	*1*	*0*	*3*	*3*	*2*	*2*	*2*	*2*

Table 20: Count of region-wide facilities within the catchment of good public transport provision (being a frequent bus route or railway station), and including sub-division of Leigh into North and South. Neighbourhoods in Southend are shown in italics.

Employment uses

8.8 Employment uses have been mapped against proximity to public transport (see Figure 46). These employment uses are those classified within Use Class 'B' and mapped as such by Rochford District and Southend Borough as designated employment areas.

8.9 The mapping of employment activities based on traditional land use classes means that other sources of employment, including the range of social and community infrastructure assessed in this report, as well as wider retail and town centre office functions, are not accurately captured. The town centres, particularly places like Southend and Rayleigh are major employment hubs in their own right but the focus of the designated employment areas is on light industrial use, storage and manufacturing. These, by their very nature, are often located with good access to the strategic road network or, historically, associated with waterfront access and rail corridors.

8.10 This pattern is reflected in Figure 46, with most employment sites being located towards the edge of urban areas, along main arterial roads and outside of public transport catchment areas. There is also a large area of employment land associated with Southend Airport. The main exceptions to this spatial pattern are employment sites in Shoeburyness and within Southend (central), alongside the rail corridor into Southend Victoria station.

8.11 It is also noticeable that a large area of land designated for employment purposes is located to the north of Southchurch and east of Prittlewell which the mapping of day-to-day services and facilities shows is a relatively complete area. So whilst these three areas all benefit from good access and are within the catchment of services and facilities, questions might be posed as to whether these represent the most effective and efficient use of land. On one hand they add to the completeness of the neighbourhood by providing local employment opportunities but, on the other, comprise vehicle dominated land uses in areas that could be reimagined as complete neighbourhoods with a high degree of walkability. These might be areas where rationalisation and intensification of employment uses is considered, allowing for a mix of complementary uses to be integrated here, or where opportunities for land to be released from employment use exist. Such an approach would need considering alongside the outcomes of other technical evidence studies prepared to inform production of the new Local Plans for Southend and Rochford.

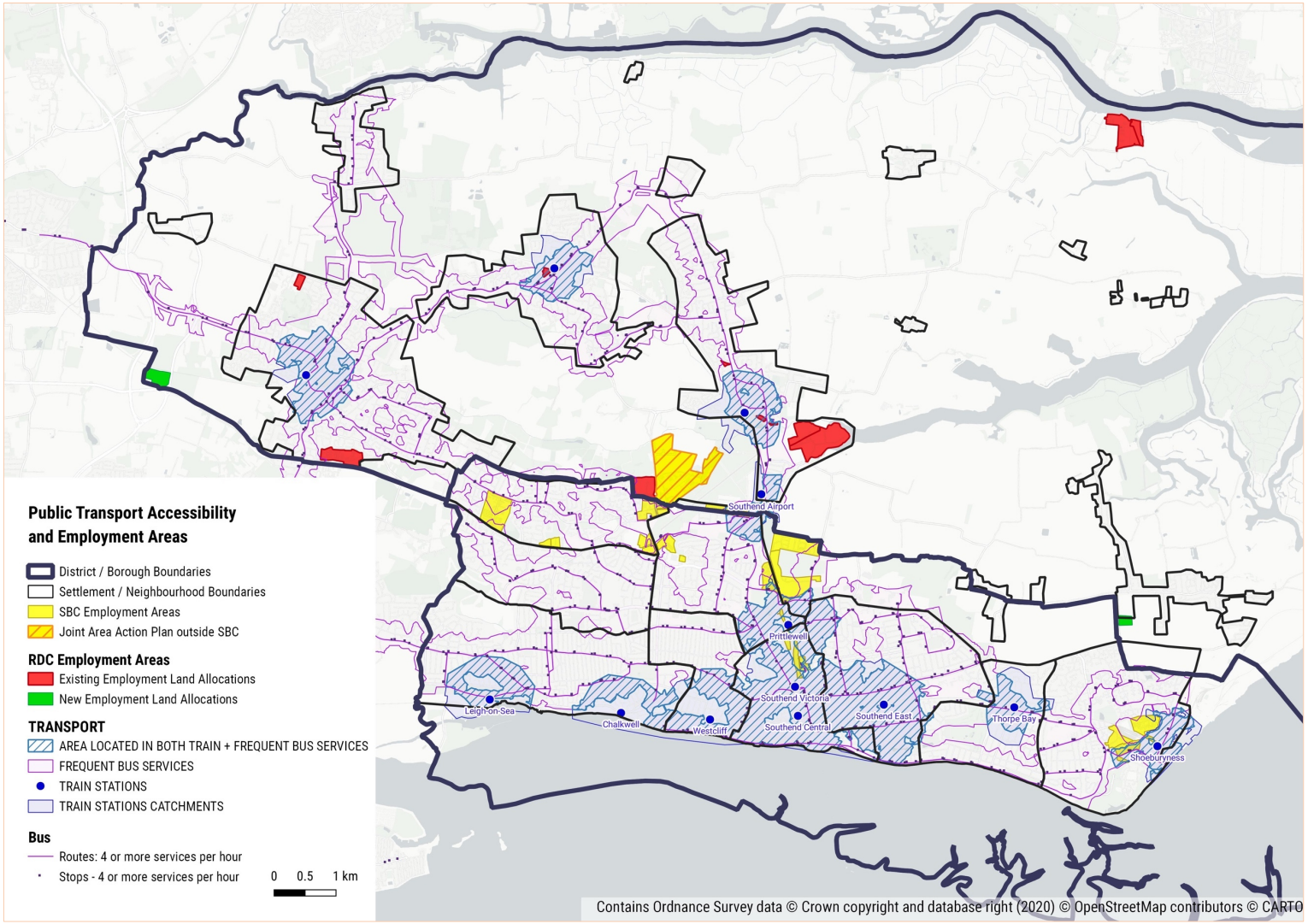


Figure 46: Employment land designations and relationship to public transport provision

9. Settlement role and hierarchy

Introduction

9.1 In terms of total population, provision and distribution of services and facilities, the Southend urban area as a whole is the dominant settlement within the combined study area. It is the main retail and commercial centre, location of civic and cultural facilities, and has very good public transport services. However, the approach to this study has been more nuanced and has assessed individual neighbourhoods in Southend as well as settlements in Rochford. This section of the report brings together the findings of the assessment undertaken at the three levels of (a) provision of and access to day-to-day services and facilities at the neighbourhood scale, (b) provision of and access to public transport provision, and (c) provision of region-wide services and facilities. Based upon these conclusions are drawn in respect of the settlement role and hierarchy.

Completeness

9.2 The assessment undertaken in this study has been undertaken at three levels. The main findings from these is summarised below before being brought together to inform the recommended settlement hierarchy.

Day-to-day services and facilities

9.3 Southend, as a whole, has a high level of completeness, with central areas and neighbourhoods generally assessed as being the most complete in terms of provision of day-to-day services and facilities and the area of each place within the walking catchment of these.

9.4 Within Southend Borough there is an almost continuous area of high completeness between the centre of Leigh (south), through Westcliff-on-Sea, Southend (central), Southchurch and parts of Prittlewell. Thorpe Bay (although a relatively small area) then presents a gap, with lower levels of completeness recorded, before increasing again in Shoeburyness. Completeness is more limited in Eastwood.

9.5 Within Rochford District, Rayleigh, Rochford and Hockley rank as the most complete settlements, displaying 'hot-spots' of completeness in their central

areas. With the exception of Thorpe Bay, all neighbourhoods in Southend rank as being more complete than settlements across Rochford District.

9.6 There is variation in provision across Rochford District. Although the three main settlements display the highest levels of completeness across all types of services and facilities, some of the mid-size places are also provided for across certain categories, particularly in terms of sports, leisure and civic facilities in places like Great Wakeing, Canewdon and Hullbridge. This partly reflects settlement size and the catchment areas associated with such facilities, with the presence of such a facility then meaning much of the settlement is with the walking catchment of it. This pattern does not hold true for the smaller settlements: as these reduce in size so the presence of facilities diminishes and thus completeness is reduced. Indeed, in many places, such as Great Stambridge, Paglesham, South Fambridge and Stonebridge, those facilities considered important for day-to-day activity are lacking.

Public transport provision

9.7 The Southend urban area is well covered in terms of access to frequent bus routes, with the quality of the public transport network strengthened through provision of multiple train stations operating on two separate lines. The central area, including the neighbourhoods of Southend (central), Southchurch, parts of Prittlewell and Westcliff-on-Sea, is the focus of the public transport system and benefits from good access to both bus and train services. The central area, in particular, is the hub of public transport access, with two railway stations, a bus interchange and bus station. Leigh (south) also benefits from two railway stations within the neighbourhood area. London Road (the A13) is the main east west spine through the Southend urban area and although it can act as a barrier to movement by people travelling north south by foot or bicycle, it is an important bus corridor and provides frequent bus services for many areas, linking neighbourhoods along it with the central area and wider transport interchange.

9.8 There are some gaps across Southend where walking catchments to train services is concerned, particularly in Eastwood (and Leigh (north)), but, on the whole, provision is good and better than across Rochford District. Rayleigh, Rochford and Hockley are the main public transport nodes in Rochford district, benefitting from provision of frequent bus routes and access to train services, although parts of these areas, towards the edges of the settlements, are outside the walking catchments of train stations, frequent and less frequent bus routes. Hullbridge is the only other settlement in Rochford District to benefit from a good bus service. Bus provision in other settlements across Rochford District is more limited., though again, is varied. Much of Great

Wakering is with the walking catchment of a bus stop providing more limited services, as is Canewdon. Elsewhere, places like Rawreth and Paglesham have much more limited provision and access to bus services.

9.9 The airport is also an important transport facility and is well served by its own railway station, providing good access to this by public transport for residents and visitors alike. This is of particular benefit to communities in the southern part of Rochford, though current access arrangements do reduce the size of the catchment area to this.

Region-wide facilities

9.10 The Southend urban area is home to the majority of region-wide services and facilities, particularly in relation to education, healthcare and cultural facilities. Most of these clustered in Southend (central) and Southchurch. Southend Town Centre (within the Southend central neighbourhood) is identified as a sub-regional centre and plays an important role for the local and sub-regional economy, particularly in terms of the retail offer and access to the seafront for leisure and recreation. Leigh is also home to a high proportion of region-wide facilities, though these figures are skewed to some extent by the land area covered by the neighbourhood. Sub-division of the neighbourhood shows a higher proportion of region-wide facilities in Leigh (south) than North, particularly in terms of cultural activities.

9.11 Within Rochford District, Rayleigh forms the main settlement for region-wide facilities, though Rochford and Hockley also benefit from some provision, with the presence of the district hospital in Rochford being particularly notable. Rayleigh also benefits from further education facilities.

9.12 Sports and leisure facilities are more evenly spread out across the settlements and neighbourhoods, though many of the places assessed lack provision of any of the facilities. This is more noticeable in Rochford District, with residents of the smaller outlying settlements needing to travel for all region-wide facilities. Conversely, in Southend Borough, the Thorpe Bay neighbourhood is the only neighbourhood that lacks provision of region-wide facilities. However, it is in close proximity to and within good public transport accessibility of facilities in adjacent neighbourhoods and across the wider urban area, and also benefits from access to the seafront.

Bringing the layers together

9.13 The settlements and neighbourhoods have been ranked based on the 'scores' achieved for the three levels of assessment outlined above. This is illustrated across three tables:

9.14 The first, Table 21, presents the scores achieved in each area, comprising (a) the aggregated percentage score of each area within the walking catchment of all facilities at the day-to-day level, (b) the percent of each area within the walking catchment of a frequent bus route, (c) the percent of each area within the walking catchment of a train station, and (d) the proportion of region-wide facilities found in each place. Train and bus services have been separated and entries provided for each of these as they afford different levels of access: the bus for short and medium journeys, the train for longer inter-urban trips.

9.15 The second, Table 22, then lists each place in order, based on the score achieved under each level of assessment. Where entries are shaded in this table it indicates where settlements or neighbourhoods have achieved the same score.

Place	Completeness for day-to-day facilities	Access to Public Transport: Frequent bus routes	Access to Public Transport: Train stations	Provision of Region-Wide facilities
Rochford District				
Canewdon	42%	0%	0%	0%
Great Stambridge	4%	0%	0%	0%
Great Wakering	34%	0%	0%	3%
Hockley	42%	53%	17%	7%
Hullbridge	40%	63%	0%	1%
Paglesham	2%	0%	0%	0%
Rawreth	32%	0%	0%	0%
Rayleigh	48%	56%	16%	12%
Rochford	45%	49%	19%	7%
South Fambridge	0%	0%	0%	0%
Stonebridge	3%	0%	0%	2%
Southend Borough				
Southend urban area	58%	74%	28%	69%
Eastwood	50%	63%	0%	6%
Leigh	57%	73%	19%	20%
Prittlewell	56%	77%	23%	4%
Shoeburyness	53%	59%	10%	5%
Southchurch	66%	94%	45%	14%
Southend (central)	68%	84%	90%	13%
Thorpe Bay	47%	62%	28%	0%
Westcliff-on-Sea	70%	85%	44%	7%
Leigh (north)	54%	80%	0%	9%
Leigh (south)	59%	68%	30%	12%

Table 21: Summary assessment for each settlement and neighbourhood within the study area, including sub-division of Leigh into North and South. Neighbourhoods in Southend are shown in italics

Ranking	Completeness for day-to-day facilities	Access to Public Transport: Frequent bus routes	Access to Public Transport: Train stations	Provision of Region-Wide facilities
1	*Westcliff-on-Sea*	*Southchurch*	*Southend (central)*	Southend urban area
2	*Southend (central)*	*Westcliff-on-Sea*	*Southchurch*	*Leigh*
3	*Southchurch*	*Southend (central)*	*Westcliff-on-Sea*	*Southend (central)*
4	*Leigh (south)*	*Leigh (north)*	*Leigh (south)*	*Southchurch*
5	Southend Urban Area	*Prittlewell*	Southend urban area	Rayleigh
6	*Leigh*	Southend urban area	*Thorpe Bay*	*Leigh (south)*
7	*Pittlewell*	*Leigh*	*Prittlewell*	*Leigh (north)*
8	*Leigh (north)*	*Leigh (south)*	*Leigh*	*Westcliff-on-Sea*
9	*Shoeburyness*	*Eastwood*	Rochford	Hockley
10	*Eastwood*	Hullbridge	Hockley	Rochford
11	Rayleigh	*Thorpe Bay*	Rayleigh	*Eastwood*
12	*Thorpe Bay*	*Shoeburyness*	*Shoeburyness*	*Shoeburyness*
13	Rochford	Rayleigh	*Eastwood*	*Prittlewell*
14	Hockley	Hockley	*Leigh (north)*	Great Wakering
15	Canewdon	Rochford	Canewdon	Stonebridge
16	Hullbridge	Canewdon	Great Stambridge	Hullbridge
17	Great Wakering	Great Stambridge	Great Wakering	Thorpe Bay
18	Rawreth	Great Wakering	Hullbridge	Canewdon
19	Great Stambridge	Paglesham	Paglesham	Great Stambridge
20	Stonebridge	Rareth	Rawreth	Paglesham
21	Paglesham	South Fambridge	South Fambridge	Rawreth
22	South Fambridge	Stonebridge	Stonebridge	South Fambridge

Table 22:Settlements and neighbourhoods ordered according to completeness scores achieved under each level in the assessment. Where entries are shaded those places have achieved the same score. Includes sub-division of Leigh into North and South. Neighbourhoods in Southend are shown in italics

9.16 The third, Table 23, then calculates the average position achieved by each settlement or neighbourhood. This carries over the shading from the previous table. Where an area has the highest score for a particular level of assessment it has received a ranking of one. The rankings are then added together and an average score generated. Those places with low average scores are the highest ranked places. The central area of Southend ranks as the most complete across all categories assessed, closely followed by Southchurch and Westcliff-on-Sea. This is reflective of the wide variety of facilities that cluster together in the town centre, its role at the regional level for retail, education, culture and entertainment, civic and government functions, and its high level of public transport services.

Place	Completeness for day-to-day facilities	Access to Public Transport: Frequent bus routes	Access to Public Transport: Train stations	Provision of Region-Wide facilities	Total Score	Average
Canewdon	15	16	13	17	61	15.25
Eastwood	*10*	*9*	*13*	*11*	*43*	*10.75*
Great Stambridge	19	16	13	17	65	16.25
Great Wakering	17	16	13	14	60	15
Hockley	14	14	10	8	46	11.5
Hullbridge	16	9	13	16	54	13.5
Leigh	*6*	*7*	*8*	*2*	*23*	*5.75*
Leigh (north)	*8*	*4*	13	*7*	*32*	*8*
Leigh (south)	*4*	*8*	*4*	*5*	*21*	*5.25*
Paglesham	21	16	13	17	67	16.75
Prittlewell	*7*	*5*	*7*	*13*	*32*	*8*
Rawreth	18	16	13	17	64	16
Rayleigh	11	13	11	5	40	10
Rochford	13	15	8	8	44	11
Shoeburyness	*9*	*12*	*12*	*12*	*45*	*11.25*
South Fambridge	22	16	13	17	68	17
Southchurch	*3*	*1*	*2*	*4*	*10*	*2.5*
Southend (central)	*2*	*3*	*1*	*3*	*9*	*2.25*
Southend urban area	5	6	5	1	17	4.25
Stonebridge	20	16	13	15	64	16
Thorpe Bay	*12*	*11*	*5*	*17*	*45*	*11.25*
Westcliff-on-Sea	*1*	*2*	*3*	*8*	*14*	*3.5*

Table 23: Ranking of settlements and neighbourhoods in each category, and average score achieved across these, including sub-division of Leigh into North and South. Neighbourhoods in Southend are shown in italics.

Recommended settlement hierarchies

Ranking based on completeness

9.17 Based on the scores of completeness outlined and ordered above an overall ranking of settlements and neighbourhoods has been prepared, as presented in Table 24.

Place	Total Score based on ranking of each place based on completeness across all three levels	Average score	Overall Ranking
Southend (central)	*9*	*2.25*	*1*
Southchurch	*10*	*2.5*	*2*
Westcliff-on-Sea	*14*	*3.5*	*3*
Southend urban area	17	4.25	4
Leigh (south)	*22*	*5.5*	*5*
Leigh	*23*	*5.75*	*6*
Prittlewell	*32*	*8*	*7*
Leigh (north)	*33*	*8.25*	*8*
Rayleigh	40	10	9
Eastwood	*43*	*10.75*	*10*
Rochford	44	11	11
Shoeburyness	*45*	*11.25*	*11*
Thorpe Bay	*45*	*11.25*	*13*
Hockley	46	11.5	14
Hullbridge	54	13.5	15
Great Wakering	60	15	16
Canewdon	61	15.25	17
Rawreth	64	16	18
Stonebridge	64	16	18
Great Stambridge	65	16.25	20
Paglesham	67	16.75	20
South Fambridge	68	17	21

Table 24: Overall ranking of settlements and neighbourhoods, based on average 'completeness' scores. Neighbourhoods in Southend are shown in italics

9.18 There is variation in levels of completeness across Southend as a whole, though it can be considered a relatively complete place. Breaking this down to the neighbourhood level illustrates differences across the urban area though. This indicates that Southend (central) is considered the most complete place in the study area, with good provision of day-to-day services and access to these for much of the neighbourhood, good public transport provision and region-wide services and facilities. Southchurch and Westcliff-on-Sea, adjacent to Southend (central) also score well across all categories. Leigh, perhaps due to its large area also scores well across all categories although, as noted elsewhere, should the boundaries of the neighbourhood be amended, based on the North South sub-division explored in this report, that changes the overall level of completeness: increasing this in the south and decreasing in the north. However, both remain highly complete in comparison to much of the study area.

9.19 Rayleigh is the highest scoring settlement within Rochford District, followed closely by Rochford and Hockley. The three main towns in the District display similar characteristics in terms of provision of day-to-day services and public transport accessibility, though Rayleigh is more important in terms of region-wide facilities.

9.20 Thorpe Bay and Shoeburyness are ranked as the least complete of the neighbourhoods in Southend: in Thorpe Bay this correlates with the very low density nature of the area and limited provision of services. In Shoeburyness it partly reflects geography: it's position at the end of the urban area, surrounded by water, MoD land and the Green Belt means that it does not benefit from access to facilities in adjacent neighbourhoods in the way that many of the neighbourhoods in Southend do. Below these are the smaller settlements in the more rural area of Rochford district, where the provision of local services and public transport networks are more limited.

Wider considerations informing hierarchy

9.21 The assessment of completeness is a spatial expression of settlement hierarchy, indicating where there is good provision of and access to services and facilities. Overlaid onto this are considerations of the role and function of central areas and the population of individual places.

9.22 The retail hierarchy for Southend (see Table 2) indicates that the central neighbourhood fulfils a role as a regional centre, with Leigh and Westcliff being District Centres. A network of supporting local centres sit below this. This reflects the scoring of completeness, which indicates Southend (central) and Westcliff being most complete, with Leigh (and, in particular, Leigh (south)) closely behind this. Southchurch is not designated within the retail hierarchy,

but it benefits from being in close proximity to and catchment of many of the facilities within the central area, supplemented by more local services. This is closely aligned with the South Essex Retail study[60] (see Section 10 of this report) which identifies Southend as a Major Centre followed by Hockley, Leigh, Rayleigh, Rochford and Westcliff which are all classified as Town Centres. This reflects their retail offer and catchment areas, being places that serve a large population, including those from outside of the settlement or area, including the rural hinterland. In the smaller settlements in Rochford district the retail offer is more localised.

9.23 Southend, and the central area in particular, is a major centre for employment; perhaps not in terms of traditional land use classifications, but certainly in respect of retail, leisure, health and public sector services, including local government. In Rochford District, Rayleigh is the main employment centre, though Rochford too is important, particularly as it is too a location for local government services. The importance of Rochford as an employment location is further emphasised by the location of the airport and the employment offer provided here.

9.24 In respect of population, Southend, as a whole, far exceeds the population of other settlements in the study area, with more than five times as many people living here as in the next largest settlement (Rayleigh) which in turn is twice the size of the next largest settlements in terms of population: Hockley and Rochford. There is a relationship with population and provision of services, and thus levels of completeness and hierarchy. Larger populations trigger the need for and are able to support a wide variety of services, including schools and healthcare. Beyond this, critical scales of mass are generated that attract and sustain facilities such as good public transport, hospitals, theatres and galleries. Within the study area these facilities are found in the central neighbourhoods of Southend and, to a less degree, in the three largest settlements in Rochford District: Rayleigh, Rochford and Hockley.

9.25 In Rochford District, population size allows several broad groupings of settlement to be identified. As noted above, Rayleigh, Rochford and Hockley are the three largest settlements in the district, followed by Great Wakering and Hullbridge, and then the smaller, more rural settlements. Canewdon sits between these. This is reflected in service provision: Rayleigh, Rochford and Hockley have greatest provision in the district, with Great Wakering, Hullbridge and Canewdon all having mid-levels of provision, though with variation. There is, for example, relatively good provision of and access to sports, leisure and

[60] PBA for Basildon BC, Castle Point BD, Rochford DC, Southend BC and Thurrock BC, November 2017, South Essex Retail Study

green infrastructure in these places. Service provision in smaller settlements is more limited.

9.26 Although the measure of completeness has considered provision of public transport, this is in the context of train services and frequent bus routes. There is also a network of less frequent bus routes in the area serving communities. In some places these supplement more frequent routes, in others, they are the only public transport choice available. In Southend Borough, the majority of the area is within the catchment of a frequent bus route but, in Rochford, the picture is quite different. Frequent routes are focused on connections between the three main towns of Rayleigh, Rochford and Hockley, with some services extending to Hullbridge. More limited services elsewhere, including the number of bus stops available in a place, impacts on accessibility: Great Wakering for example has numerous bus stops meaning the majority of the area is within walking catchment of bus service. Elsewhere, more limited provision impacts on access to bus services. Parts of Paglesham and Rawreth for example are outside the comfortable walking catchment of a bus route.

Suggested settlement hierarchy

9.27 Combining the scores of completeness with other factors outlined above allows for a settlement hierarchy to be suggested. A single hierarchy is presented for the study area as a whole and then, in recognition of the network of neighbourhoods in Southend, separate hierarchies for Southend Borough and Rochford District. These are based upon a series of tiers as outlined below.

(i) Tier 1

9.28 Tier 1 represents the higher order settlements. Within the study area, this is the Southend urban area as a whole. It is the main settlement in terms of population size, commercial activity, social and cultural facilities, and public transport provision. Its influence extends across the study area and beyond, drawing people in for reasons of work, education and leisure activities.

(ii) Tier 2

9.29 Tier 2 comprises settlements which score well across all levels of assessment, though not as consistently high as in Tier 1, and whose influence is more limited in scope. Within the study area Rayleigh is considered to be a tier 2 settlement. It provides a wide range of services and facilities at the day-to-day level and also at the region-wide level. It also has good provision of public transport services and is the main retail and commercial centre in Rochford district.

(iii) Tier 3

9.30 Tier 3 includes the settlements of Hockley and Rochford. These places benefit from reasonable levels of completeness, with some localised hot spots, particularly in more central areas. Although provision of region-wide facilities is limited they benefit from reasonable access to public transport, with frequent bus routes serving these areas. They also benefit from a train station and well established town centres.

(iv) Tier 4

9.31 Tier 4 includes the settlements of Canewdon, Great Wakering and Hullbridge. Great Wakering and Hullbridge are relatively sizeable settlements, with populations in the region of 5,000 – 6,000. Canewdon is smaller in population terms (around 1,000 people) though larger than the outlying settlements. All these places score relatively well in terms of provision of some day-to-day facilities, including primary schools, though there are gaps in provision. All are served by bus routes, though Hullbridge benefits from more frequent services than Great Wakering and Canewdon.

(v) Tier 5:

9.32 Tier 5 comprises the smaller outlying settlements in Rochford where provision of day-to-day services is more limited and where good public transport provision is lacking. Whilst there is provision of some day-to-day services within each of these places, residents are reliant on services and facilities in other higher order settlements. Limited public transport provision also means a reliance on travel by car. Places within this tier are Rawreth, Great Stambridge, Stonebridge, Paglesham and South Fambridge.

9.33 The recommended settlement hierarchy for Southend and Rochford as a whole is presented in Table 25 for clarity.

Tier	Settlements
Tier 1	Southend
Tier 2	Rayleigh
Tier 3	Rochford Hockley
Tier 4	Canewdon Great Wakering Hullbridge
Tier 5	Great Stambridge Paglesham Rawreth South Fambridge Stonebridge

Table 25: Recommended settlement hierarchy based on assessment of completeness

9.34 To better understand the role and function of neighbourhoods within Southend a separate hierarchy for Southend Borough has been prepared. This is presented below:

Tier 1: Southend (central): This is the highest overall scoring place in the study area. It includes the town centre, commercial and cultural activities, and has excellent public transport provision

Tier 2: Leigh: This is the largest single neighbourhood in Southend, both in terms of population and area. Its population also exceeds that of any of the settlements in Rochford district. Although its overall completeness score is below that of some neighbourhoods it has a well-defined town centre and good public transport provision, as well as good provision of day-to-day facilities and some facilities of region-wide importance. The eastern parts of the neighbourhood form part of the wider central area of Southend, where heat mapping indicates highest areas of completeness. North and western parts of Leigh are less complete but, at the same time, benefit from good green space provision. Should the

neighbourhood be divided along the lines of Leigh (north) and South, it is recommended that Leigh (south) remains in Tier 2, with Leigh (north) moving into Tier 3.

Tier 3: Prittlewell, Southchurch, Westcliff-on-Sea: These comprise the three neighbourhoods immediately surrounding the central area, and where they benefit from that proximity in terms of access to services and facilities. These are places with good public transport provision and where there are also some facilities of region-wide importance, including for example Southend Hospital which is located in Prittlewell. As outlined above, Leigh (north) would fall into this tier if the Leigh neighbourhood were to be sub-divided.

Tier 4: Eastwood, Shoeburyness, Thorpe Bay: These are the 'outer' neighbourhoods of Southend. All different in character, they score relatively well in respect of provision to services and facilities, though with some notable gaps. Eastwood is for example the only neighbourhood in Southend that does not benefit from a railway station, local centres are less well-defined and access is, in parts, limited by the built-form, with cul-de-sac layouts restricting the walkability of these places. Thorpe Bay is a lower density neighbourhood and Shoeburyness has a limited catchment area.

9.35 An updated version of the Southend neighbourhoods map as presented in Figure 2 of this report is presented overleaf (Figure 47), showing the proposed sub-division of Leigh in comparison with other defined neighbourhoods.

9.36 For comprehensiveness a separate hierarchy is also suggested for those settlements in Rochford District. This is reflective of the combined hierarchy for the study area as a whole, but with Rayleigh replacing the Southend urban area as the main Tier 1 settlement. The suggested hierarchy is:

Tier 1: Rayleigh

Tier 2: Hockley and Rochford

Tier 3: Canewdon, Great Wakering and Hullbridge

Tier 4: Great Stambridge, Paglesham, Rawreth, South Fambridge, Stonebridge

Figure 47: Updated map of defined neighbourhood areas in Southend, showing subdivision of Leigh into Leigh (north) and Leigh (south)

10. Neighbouring towns and settlements

Introduction

10.1 The study area does not operate as an 'island' and is influenced by neighbouring towns and cities. A high-level review of the role and function of neighbouring towns and settlements has thus been undertaken, but it is also acknowledged that towns and cities further afield, including for example, Basildon, Chelmsford and London also influence aspects, such as work patterns.

Town centre hierarchy

10.2 The South Essex Retail Study[61] includes an assessment of the network of main centres in the South Essex area and presents a recommended hierarchy of centres from a retail perspective. This notes that the larger centres of Southend, Basildon and Lakeside have a regional role, with other smaller town centres serving a localised catchment area.

10.3 The assessment of spending patterns indicates the degree of leakage to different places. This notes that for comparison and convenience goods, almost 80% of all available retail spend is retained in Southend Borough, but in Rochford District, the level is much lower, with 60-70% of the retail spend leaking elsewhere. It is inferred from the study that this leakage is to Thurrock Lakeside and Southend.

10.4 The study recommends that, in the context of South Essex, Southend is ranked as a 'Major Centre'. Basildon is also ranked as a Major Centre. Above this in the hierarchy Thurrock Lakeside is ranked as a Regional Centre, which is one whose influence and catchment extends across the region from a retail perspective.

10.5 Major centres are defined as those which:

'have a significant proportion of comparison goods relative to convenience goods. These centres generally have very good accessibility and significant employment, civic, service and leisure functions. Their catchment areas extend beyond the local authority area'.[62]

[61] PBA for Basildon BC, Castle Point BD, Rochford DC, Southend BC and Thurrock BC, November 2017, South Essex Retail Study
[62] Page 54, ibid.

10.6 Below this are recommendations for a network of Town Centres. Towns neighbouring the study area, including Hadleigh and Wickford, are ranked as Town Centres. However, the study notes that the catchment of these places is related primarily to the local authority area, but that they also function as an important service centre for surrounding rural areas. Hockley, Leigh, Rayleigh, Rochford and Westcliff are all also ranked as Town Centres. A series of Local Centres are then defined, which the report says primarily provide for local day-to-day convenience and comparison goods needs. This infers that, beyond the network of regional and major centres, the town centres serve local needs and do not have cross-boundary relationships. This message is also reflected in the South Essex Economic Development Needs Assessment. Commenting on the network of centres within Rochford District, it states that these *'contain a good range of shops, services and facilities to meet the needs of local communities'*.[63]

10.7 Within the Basildon Settlement Hierarchy study[64] Wickford is ranked as a 'Large Town', which is one that has a mix of services and facilities including primary and secondary schools, healthcare, leisure and community facilities, retail and commercial activities, and good public transport accessibility. However, it makes no comment on cross boundary relationships with neighbouring settlements in Rochford District.

10.8 In Castle Point, the Employment & Retail Needs Assessment[65] identifies Hadleigh as one of the main centres in the borough, all of which are noted as having a relatively local shopping function. It is also noted that there is a limited range of leisure and entertainment facilities across Castle Point, which reflects the small catchment population of the Borough but also the proximity to larger centres in Basildon and Southend, which provide for these needs. It is inferred from the report that rather than providing services for surrounding towns and settlements, that residents of Castle Point may travel elsewhere for these facilities.

Employment and journeys to work

10.9 Information presented by Nomis and based on the 2011 census shows inflows and outflows of commuters at the local authority level[66]. For Southend Borough, more people commute out of the Borough for work than those who travel into it. The main destinations for work are the City of London and City of Westminster, followed relatively closely by Rochford District and Basildon. There is also a reverse flow of people from these places. Flows of commuters

[63] GVA for Basildon BC, Castle Point BD, Rochford DC, Southend BC and Thurrock BC, November 2017, South Essex Economic Development Needs Assessment
[64] Basildon Borough Council, August 2015, Settlement Hierarchy Review
[65] NLP for Castle Point Borough Council, August 2012, Employment & Retail Needs Assessment
[66] See, for example, https://www.nomisweb.co.uk/census/2011/visualisations/chart

from London to Southend is negligible, but there is a far greater inward flow of commuters from Rochford into Southend than there is in the other direction. Conversely, more people travel out from Southend to Basildon than in the other direction. Other destinations for work include Chelmsford, Thurrock and Brentwood, though Southend also receives a similar number of workers commuting in from these locations. There is a net outward flow of more than 9,000 people from Southend every day for employment purposes (it attracts around 21,000 people but exports almost 30,000 people).

10.10 The data for Rochford shows that Southend is by far the main destination for the majority of all commuters, accounting for around a third of all journeys. Basildon is the second main destination for commuters, closely followed by the City of London and City of Westminster. However, the total combined journeys to these is less than those to Southend. There are also flows out to Castle Point, Chelmsford and Thurrock. The main source of commuters into Rochford is from Southend, with smaller proportions from Castle Point, Basildon, Chelmsford and Thurrock. There is a net outward flow of more than 14,000 people from Rochford every day for employment purposes (it attracts around 10,500 people but exports almost 24,000 people).

10.11 At the regional level, this would suggest that Southend is an important employment location, though perhaps not as significant as Basildon, which both imports and exports around 36,000 people for work on a daily basis, though attracting more people for work from Thurrock, Castle Point and Chelmsford than from Southend or Rochford.

Region-wide facilities

10.12 As noted above, research undertaken on behalf of neighbouring Castle Point Borough Council indicates a reliance on Southend and Basildon, as higher order settlements, for leisure and entertainment purposes. This extends to cultural facilities, including cinemas and theatres too, with limited provision outside of the larger settlements.

10.13 Castle Point though does benefit from the Mountain Bike Centre in Hadleigh that was originally opened as part of the London 2012 Olympics and, because of the quality of this facility, has a wide catchment. This is however a unique offer within the south Essex context and although it may attract people from Rochford District and Southend Borough, will not replace similar activities that people are able to undertake closer to home.

10.14 South Essex College operates a series of campuses across the South Essex region, providing a wide range of courses in further and higher education. This offer allows for student choice: some people from Rochford District and

Southend Borough may decide to study at one of the campuses in Basildon, Canvey or Grays but, equally, others from elsewhere may decide to study in Southend.

Summary

10.15 The review would suggest that the reach of surrounding towns is relatively limited, catering for the day-to-day needs of their residents and the immediate rural catchment. Higher order settlements, such as Southend and, further afield, Basildon, provide for wider retail needs (particularly comparison goods shopping), higher education, leisure and entertainment needs. The City of London and Westminster is the main destination for commuters although in the context of South Essex, Basildon is also a major location for work. At the level of the study area, there is a net inflow of commuters from Rochford into Southend, signalling that this is an important employment centre. Although the area is a net exporter of commuters, it does experience inward commuting from surrounding places. So whilst acknowledging that there will be some relationship between the network of towns within the study area and those immediately surrounding it, it is not considered to play a major factor in influencing use of day-to-day services, nor region-wide uses, which are focused on Southend.

11. Conclusions and recommendations

Implications for growth

11.1 Possible options for future growth strategies are set out below. Some of these work together and require further testing through the plan-making process.

Intensification in the areas of highest completeness

11.2 The central part of the Southend urban area is the most complete in terms of services, facilities and accessibility. Following the principles of sustainable development would suggest that this is a location where the use of land for new residential development should be optimised. Mapping of population densities within the most complete areas (Figure 48) indicates the presence of some low density areas. In places these correlate with the presence of larger uses and activities, including education and retail, as well as, in some places, parks and open spaces. However, new models of development, including the mixing of complementary uses, may allow for further growth in these areas, whilst retaining and potentially improving the quality of public open space..

11.3 Areas where densities could potentially be intensified include Southend (central), the southern parts of Prittlewell, Shoeburyness and parts of Eastwood. Southend Borough Council has an adopted Area Action Plan for the Central Area of Southend which includes ambitions to increase residential density here. The areas in Rochford District with the greatest completeness, and therefore capacity for intensification, are the centres of Rayleigh, Hockley and Rochford with some capacity for more restricted intensification in their suburbs and within Tier 3 settlements.

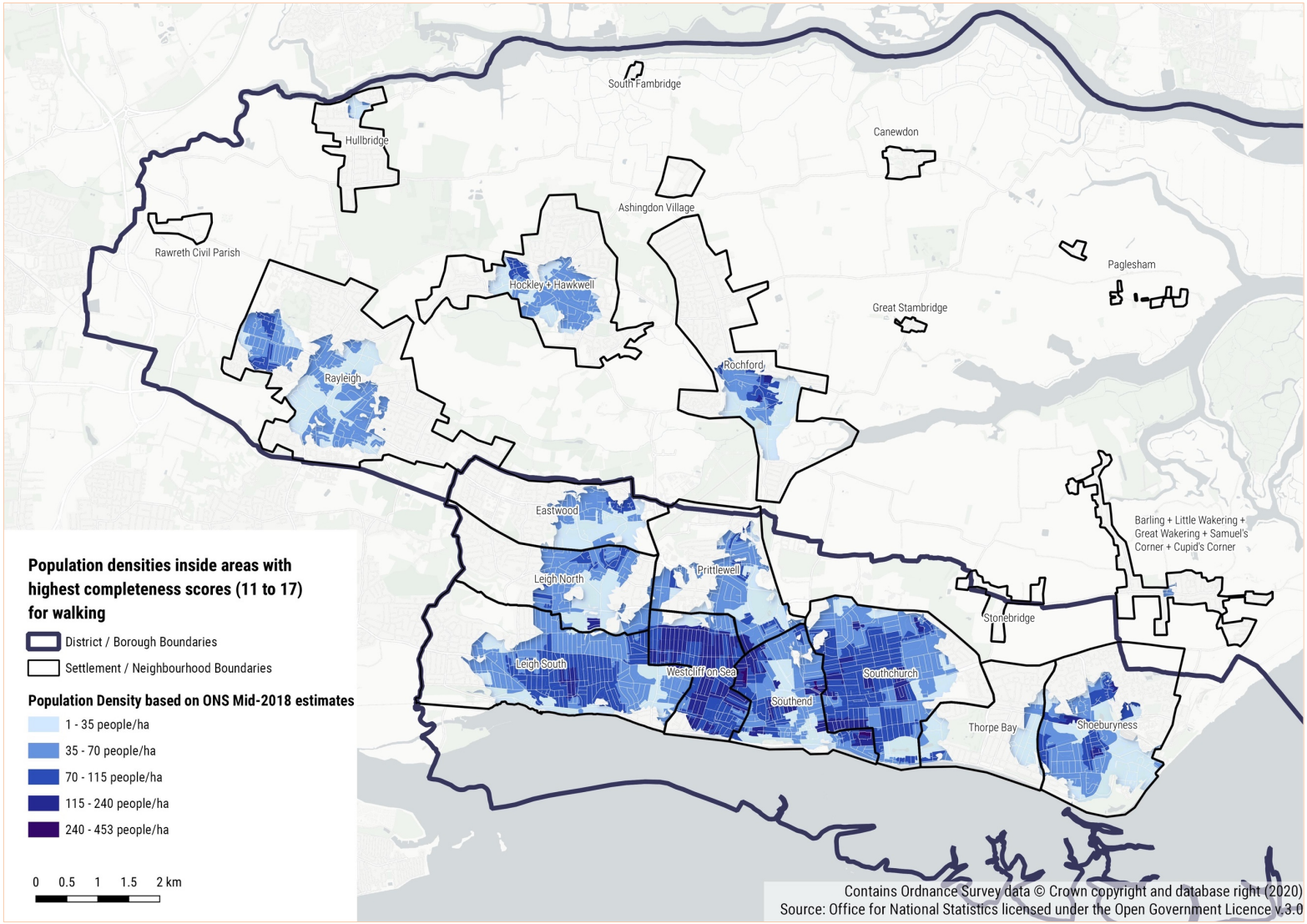


Figure 48: Population densities within areas achieving the highest completeness scores at the level of day-to-day services and facilities

Intensification around public transport nodes

11.4 The heat mapping indicates that, within the walking catchment of frequent bus routes, completeness scores are relatively good (Figure 49), though with some incidences of lower scores in Hullbridge and towards the edges of settlement boundaries. Focussing in on the combined walking catchment areas around train stations and bus routes (Figure 50) indicates that there are some areas with lower completeness scores in the most accessible locations. These areas include parts of Shoeburyness and Thorpe Bay, the confluence of Southchurch, Prittlewell and Southend (central), parts of Leigh (south), Rayleigh and Hockley. These are primarily areas of detached and semi-detached properties. Facilities lacking in these areas vary from place to place. Although an area might have good access it does not necessarily mean that it will be complete: some of these areas are places where people will travel from to access facilities elsewhere. This does though mean there is some potential for change at the neighbourhood level, though any growth would need to be sensitive to the character of the area but, through use of design codes, new forms of development might be incorporated that respond positively to the scale and form of the local area.

11.5 The walking catchment area around Southend Airport Railway Station also has a low completeness score. This reflects the currently limited access to the station, which is only accessible from the west at present. If new access points could be provided to the east side of the station, this might increase the area of accessibility and thus potential for additional growth. This would however need to take account of the presence of the airport and associated land uses when considering any future potential for residential development.

Regenerating more deprived areas

11.6 Indices of Multiple Deprivation have been mapped against the areas of highest completeness (Figure 51). There is no real overall spatial pattern or correlation between these. However, it does emphasise opportunities where new development and the associated investment this brings might be targeted to help improve levels of deprivation. This includes the entirety of Southend (central), much of Westcliff-on-Sea, Southchurch and parts of Prittlewell. These comprise the main central area of Southend and coincide with other opportunities outlined above.

11.7 In addition, parts of Shoeburyness are within areas of high deprivation and completeness, and where regeneration efforts might be targeted. In Rochford district the indices of deprivation are not as pronounced as in Southend, though the centre of Rochford town could see levels of deprivation reduce with investment in new homes, infrastructure and other supporting services.

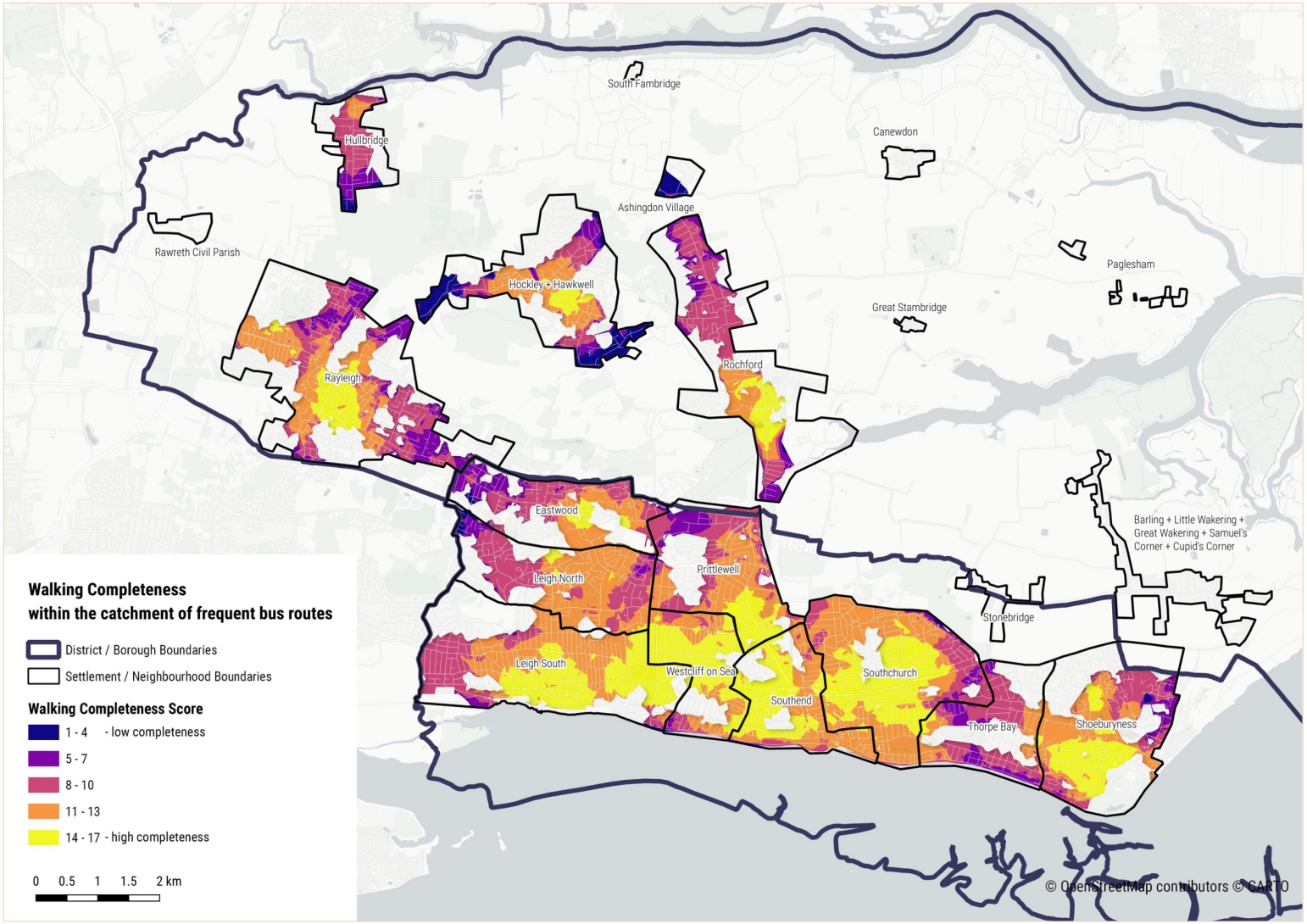


Figure 49: Completeness scores at the day-to-day level within the catchment areas of frequent bus routes

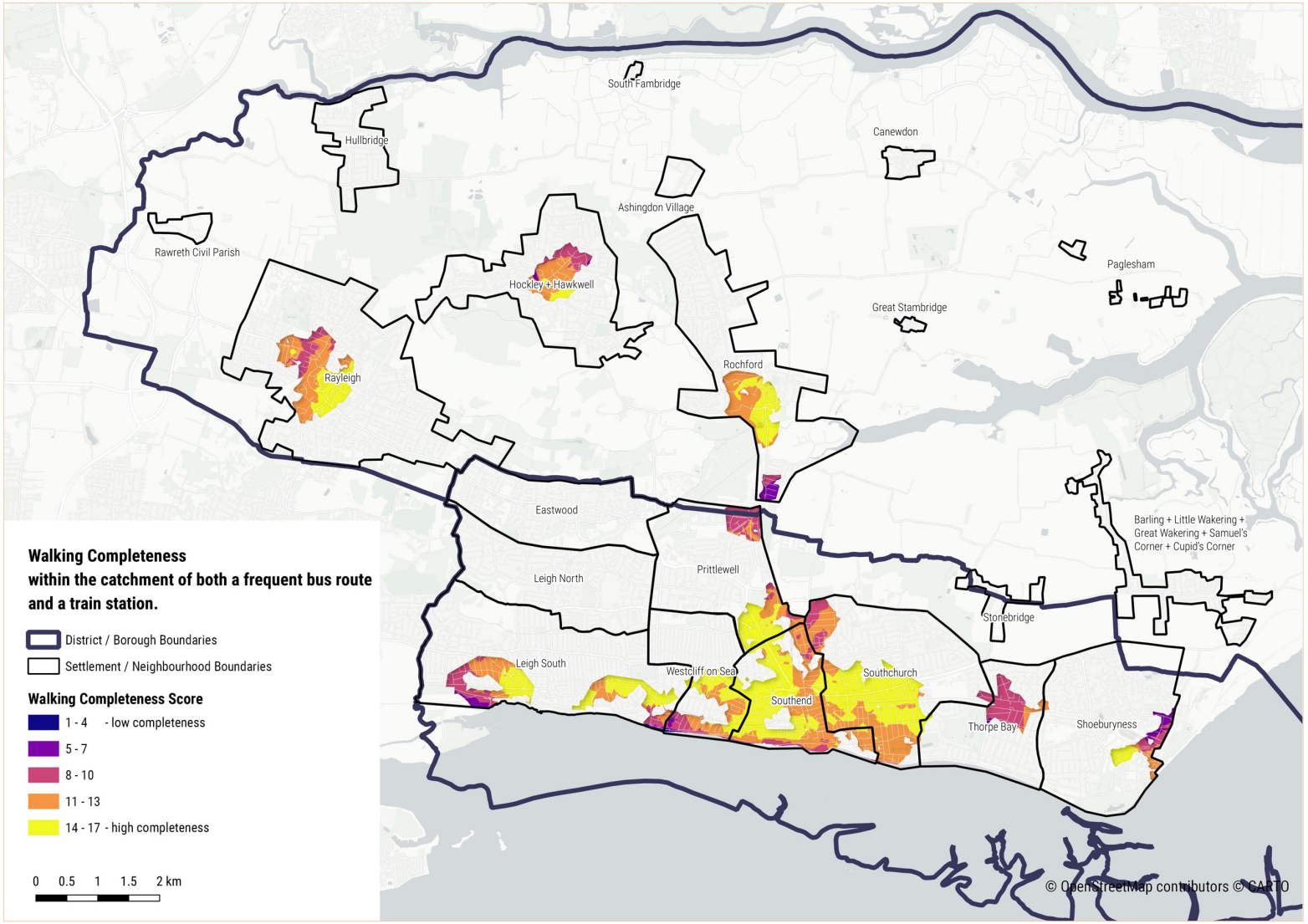


Figure 50: Completeness scores at the day-to-day level within the catchment areas of frequent bus routes and train stations

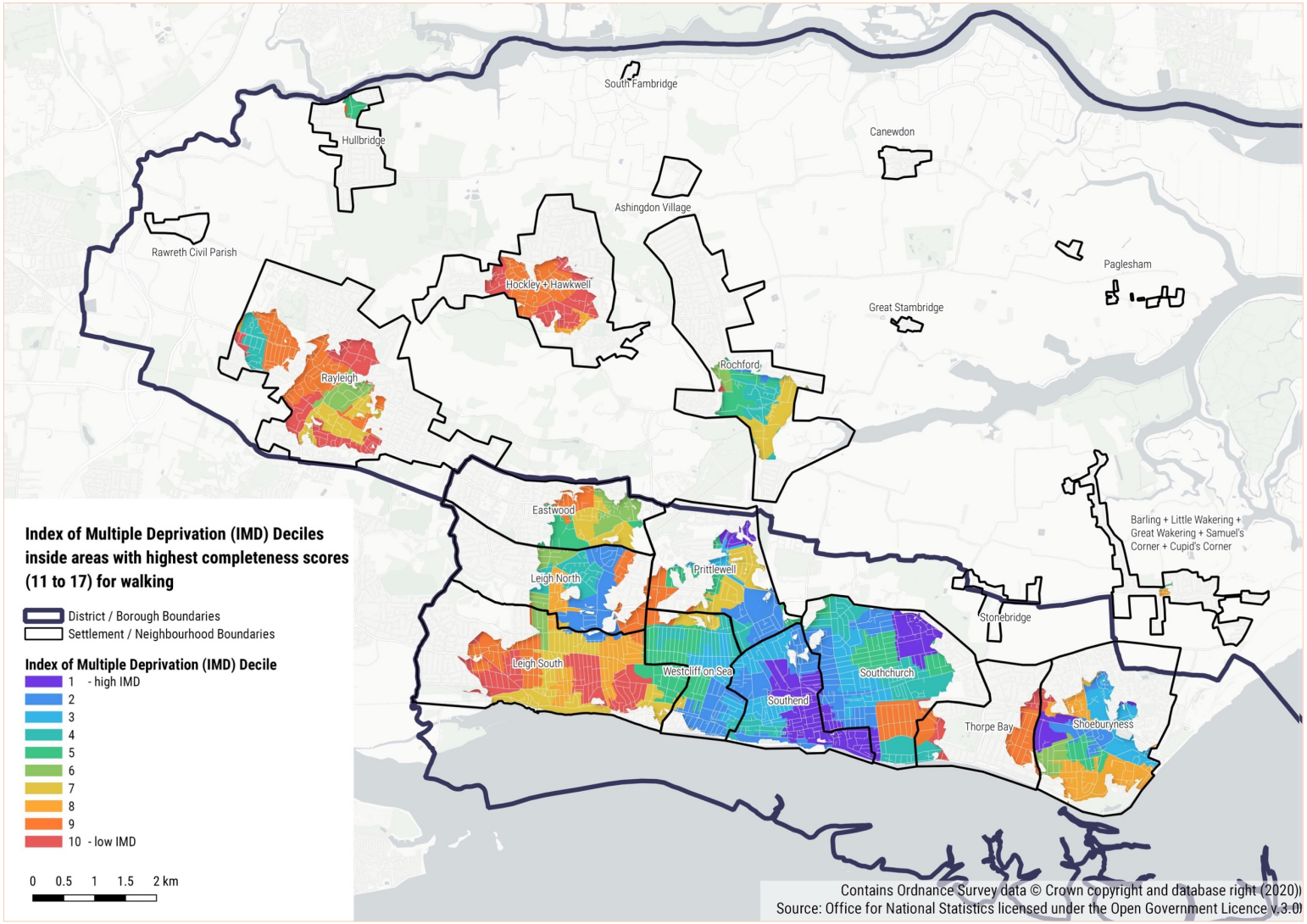


Figure 51: Indices of Multiple Deprivation within areas achieving the highest completeness scores for day-to-day services and facilities

11.8 The mirror image of the above has also been prepared and presented in Figure 52, showing indices of multiple deprivation in areas with lower completeness scores. This suggests that, in the main, areas of low completeness also have low levels of deprivation. This might appear to be counter-intuitive, as such areas might be further from or lack access to education and healthcare. However, these also tend to be the outer, more suburban locations, with lower density development and population densities, and where there is likely to be higher provision of open space providing health and social benefits. There is also a correlation with house prices, with some of these areas also achieving the highest prices in the study area: particularly in Thorpe Bay, parts of Leigh, Hockley and the northern parts of Rochford, towards Ashingdon.

11.9 However, there are some areas that stand out as having a low completeness score and higher indices of multiple deprivation. In Rochford district, parts of the smaller outlying settlements fall into this category. These are places where provision of public transport is more limited and where continuation of these trends may exacerbate social exclusion. These are places where some limited development and investment in infrastructure is required. Parts of Prittlewell and Rochford also stand out although, as noted before, these areas coincide with the presence of the airport and associated flightpaths. Other pockets of deprivation are found in Westcliff, Leigh (north) and Shoeburyness. As above, a combination of growth and infrastructure investment may help improve levels of deprivation.

Balancing population and completeness

11.10 In Section 6 the population of each settlement and neighbourhood in the study area was plotted against the level of completeness achieved in each place (see Table 14). Subject to a review of local infrastructure, their size and any surpluses or deficits associated with these, the implication is that some areas might be able to accommodate further development given that completeness scores are relatively high compared to population. These include Southend (central), Southchurch and Westcliff. Southchurch and Westcliff currently comprise areas of quite dense terraced housing, though potential may exist for intensification on the fringes of the neighbourhoods, along main public transport corridors.

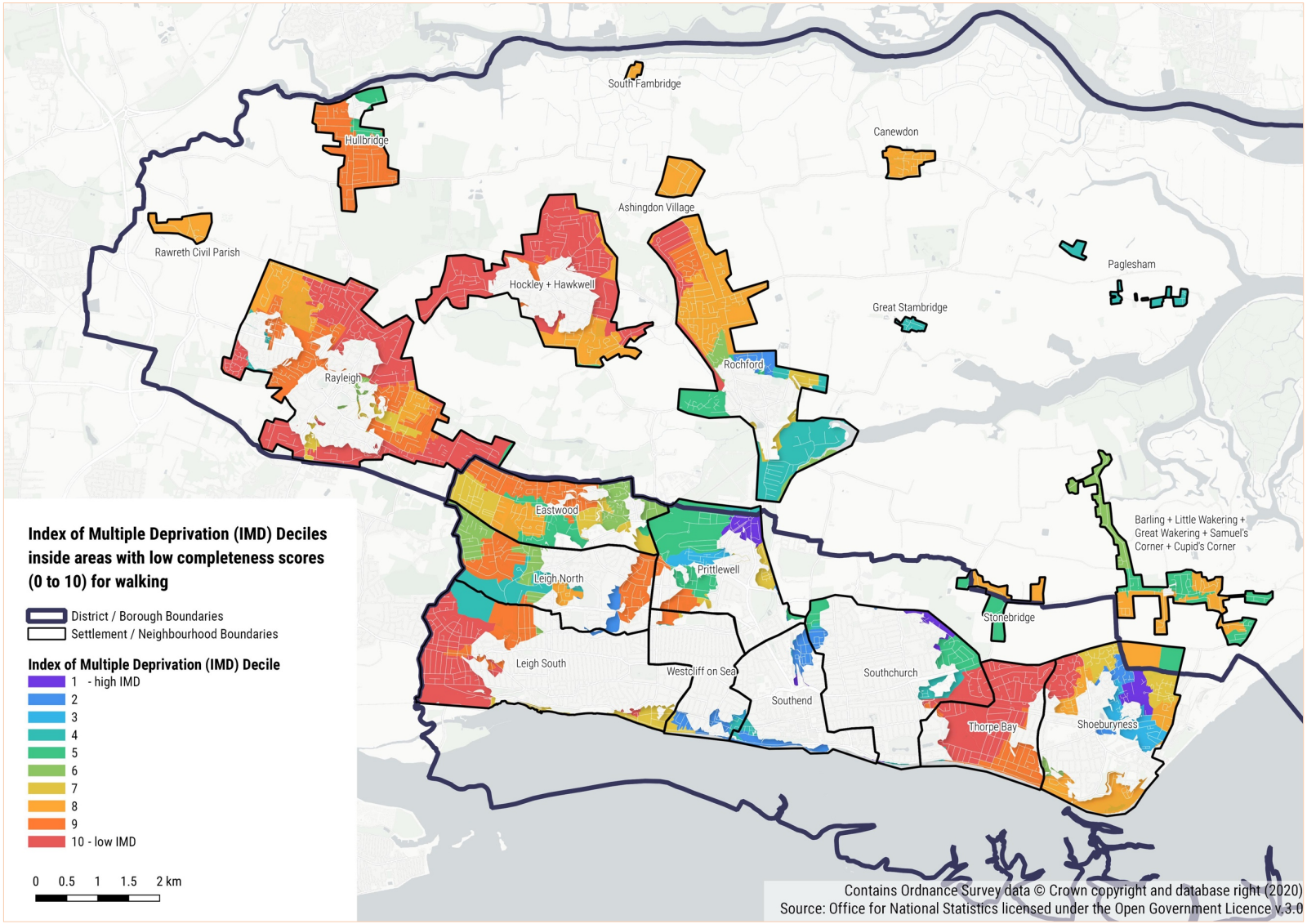


Figure 52: Indices of Multiple Deprivation in areas with lower completeness scores for day-to-day services and facilities

11.11 Equally, there are some places where levels of completeness might be lower than expected, including Rayleigh, Leigh (north), Rochford and Hockley. These are places where investment in social and community infrastructure might be directed, but where some additional growth might help deliver that. The Southend urban area as a whole could also benefit from additional infrastructure and day-to-day services and facilities, however the average for the Borough is masked by variation between neighbourhoods.

Relocating employment uses

11.12 The mapping of employment uses in this study (Figure 46) indicates that, in the main, these are located outside of the main central areas, away from public transport catchments, and close to the main highway network. There are some exceptions. This includes land in the centre of Shoeburyness and to the east of Southend Victoria train station. If these could be relocated it would then allow for the reuse of land in highly accessible locations, and with good completeness scores, to come forward for residential development. Including supporting activities and a complementary mix of uses here would further help create complete neighbourhoods, benefitting existing and new residents. The potential for relocation or rationalisation of employment uses would need to be reviewed alongside wider technical evidence being prepared to inform the Local Plan and whether this would be considered appropriate from an economic as well as a placemaking perspective.

Urban extensions

11.13 Towards the north of Southchurch and east of Prittlewell is an area within the walking catchment of some existing facilities and bus routes. This could comprise an area of search for future development. However, it is also the location of a series of sports and leisure facilities, providing a region-wide function, as well as employment uses. Furthermore, it is an area designated as Green Belt. The potential rationalisation of some of these uses and impacts on the Green Belt would need investigating.

Limited growth in lower-order settlements

11.14 The delivery of new infrastructure, services and facilities to support communities is often triggered by population thresholds. The result is that many smaller communities, which lack services and facilities, are considered unsustainable places and thus unsuitable for growth, thus denying them of the growth needed to support provision of new facilities and services.

11.15 Some limited growth in these places may help respond to local needs, particularly in terms of affordable housing, and could help support the provision of new or improved social and community facilities. However, the

scale of growth is unlikely to be sufficient enough to change the completeness score of these places. Alternative approaches to these places may thus be required, investigating how public transport services and healthcare provision might be improved.

11.16 Working with the communities in these locations, through neighbourhood planning for example, may help realise the benefits of growth, including locations for new development, as well as projects towards which the neighbourhood portion of the Community Infrastructure Levy might be directed.

Capacity for growth

11.17 Based on the assessment of completeness of each place and the discussion outlined above we summarise below which places could be made more complete over time and where this might be helped, or hindered, by additional growth.

(i) Completeness suggests place is a sustainable location for growth

11.18 **Southend Borough as a whole** is the main and dominant settlement within the study area, providing a range of facilities at the day-to-day level but which also provide a regional function, including healthcare, education, retail, culture and employment. It is also well connected and served by public transport, although is a net exporter of jobs. There is though variation across Southend and different strategies and growth potential should be reflected of this. The most complete neighbourhoods include Southend (central), Westcliff, Southchurch and Leigh (taken as a whole).

11.19 The **Southend (central)** neighbourhood is subject to an Area Action Plan and proposals for growth at present, though its role as a public transport, retail, leisure, culture, education and civic hub offers further potential, particularly given the lower population densities that currently exist in the heart of the centre.

11.20 Similar to the central area, the **Southchurch** neighbourhood is highly accessible, well served by public transport, and the majority of the area is within the catchment of a large number of services and facilities, including proximity to Southend town centre. There are some areas with lower population densities at present towards the outer edges of the neighbourhood, which might suggest there is capacity for intensification, and which could potentially help address issues of high deprivation in parts of the neighbourhood. These lower density coincide in part with schools and other community uses, suggesting that some remodelling of these might be required to make more

effective use of land. Such ideas are discussed further in later sections of the report.

11.21 **Leigh** is the largest neighbourhood in Southend, both by area and population. It benefits from a wide range of services and facilities, including a large district centre and two railway stations, as well as several 'region-wide' facilities, including further education, galleries, sports and leisure facilities. There are some 'gaps' in provision of services across the neighbourhood as well as a range of dwelling types and population densities. As with all areas, subject to the future scale and form of development, current levels of completeness would suggest that it is a suitable location for exploring provision of future growth. This is particularly true Leigh (south). If the neighbourhood were to be sub-divided as explored in this report, then the recommendations for Leigh (north) might be slightly different, moving it in to category (ii) discussed below. Leigh (south) would remain in this category.

11.22 **Leigh (south)** remains one of the largest neighbourhoods by population (despite the subdivision of the area explored in this report) and remains one of the most complete neighbourhoods in Southend. It also has good coverage of frequent bus routes and benefits from rail services, though the catchment area around these is relatively limited. The central area is the most complete and is also where highest densities are found. Improving links to stations and thus expanding the catchment around these might present an opportunity for additional growth.

11.23 **Westcliff** scores highly across all measures of completeness and benefits from proximity to the district centre around Hamlet Court Road as well as facilities within Leigh and the main central area and services in Southend. Public transport provision is also good. The relatively compact size of Westcliff, in comparison to other neighbourhoods, means it has potential to become a walkable place. However, existing population densities are high and property types are dominated by flats and maisonettes (including houses converted for these purposes). So whilst highly complete, caution may need to be exercised when suggesting future growth could be accommodated in Westcliff.

(ii) Level of completeness suggests significant growth could be sustained to improve completeness

11.24 Following from the above, other neighbourhoods across Southend are those which are less complete and where future growth might be accommodated alongside delivery of new facilities, thus enhancing completeness.

11.25 The southern parts of the **Prittlewell** neighbourhood adjoin the central area and benefit from proximity to services and facilities located there. It also

benefits from rail services, frequent bus routes, schools and healthcare, including Southend hospital which is located within the neighbourhood. However, there are gaps in completeness, areas of lower population density (in comparison to much of Southend) and high levels of deprivation. Further growth could support increased completeness, particularly in the north and west of the neighbourhood. This is though an area in the flightpath of Southend airport, with any future growth being cognisant of airport safety requirements and the importance of creating attractive, high quality environments for people to live.

11.26 Should Leigh be subdivided as discussed in this report than **Leigh (north)** would fall in this category. It is relatively complete, though this does fall away to the western edges of the neighbourhood. It is a relatively low density area with a mix of housing types, but where levels of completeness are in part related to the catchments around facilities found in other neighbourhoods, and where infrastructure barriers may hinder access to these: the A127 between leigh (north) and Eastwood being a good example of this. Opportunities that break this barrier, coupled with growth within Leigh (north), as well as provision of additional supporting services, could improve the completeness of this neighbourhood.

11.27 **Shoeburyness** is highly complete in parts, for example, in relation to sports and leisure provision, and healthcare, but less so in others, around green infrastructure and civic uses for example, yet benefits from access to train services and proximity to the waterfront. The layout and built form of Shoeburyness, including networks of culs-de-sac and barriers created by the railway line hinders movement and thus the catchment area of facilities. Future growth that helps break these barriers could contribute to increased levels of completeness. Employment uses located in Shoeburyness which are somewhat isolated from the rest of the study area might present opportunities to consider land swaps and relocations, allowing for additional housing growth and infrastructure provision.

11.28 **Eastwood** is the one neighbourhood in Southend that does not benefit from the presence of a railway station, though it does have good coverage of frequent bus routes. Town centre and civic uses are more limited than in most other neighbourhoods in Southend: provision of such facilities alongside additional growth might support an increase in completeness. The area also benefits from proximity to and frequent bus services into Rayleigh but, as with Shoeburyness, the nature of the built-form, including housing estate periphery roads and networks of culs-de-sac limit catchment areas. Unblocking these an improving connectivity for walking and cycling may go some way to increasing catchments areas and completeness.

11.29 **Thorpe Bay** stands in contrast to the other neighbourhoods in Southend. It is a much lower density area than other neighbourhoods, with high house prices and lower indices of multiple deprivation. It has lower levels of completeness, with no real 'hot-spots' where there is a high provision of services and facilities. It represents a 'gap' in completeness that extends from the central area through to Shoeburyness. Future growth in Thorpe Bay could help make it more complete as a neighbourhood, although this would need to sensitively reflect the character of the area. There is some change of scale and character around the station, which offers good access to shops and other facilities across Southend, and which might offer potential for change.

11.30 Within Rochford District, the three main towns of Rayleigh, Rochford and Hockley all display hot-spots of completeness, focused on the central areas, but which falls away beyond this.

11.31 **Rayleigh** is the largest settlement within Rochford District. It has a well-established and prosperous centre, is served by rail and frequent bus routes, and has educational and cultural facilities. There are though areas of low population density in and around the centre, where future growth might optimise proximity to services but at the same time contribute to provision of further support facilities.

11.32 **Rochford** and **Hockley** are similar in population size and completeness. Both benefit from train services and presence of frequent bus routes, though the catchments around these are fairly limited, with the highest scoring areas of completeness coinciding with relatively low population densities. Future growth could support and strengthen the town centres as a focal point for a wide range of services and facilities, enhancing completeness. In Rochford, this might also help address higher levels of deprivation. The south of Rochford ranks as the most deprived on the indies of deprivation, and this coincides with the flight path of Southend Airport. It is also an area currently in employment use. Any growth would need to consider wider land use change as well as health and safety associated with airport operations

(iii) Level of completeness suggests some growth could be sustained to improve completeness

11.33 **Great Wakering** and **Hullbridge** sit in the next tier down from Rochford and Hockley in terms of population size and completeness. However, some degree of growth, though perhaps more limited in scale, might be more appropriate, helping to support, sustain and, where possible, contribute to the provision of additional facilities, particularly at the day-to-day level. Gaps in health care (in Great Wakering) and education (in both settlements) might be plugged through

growth, with enhancements in bus provision also supporting access to facilities further afield.

(iv) Limited completeness suggests place is inappropriate for significant growth but may be able to sustain limited growth

11.34 Existing populations and service provision in the smaller, more rural settlements in the study area would suggest there is limited opportunity for growth. This includes **Rawreth, Great Stambridge, Stonebridge, Paglesham** and **South Fambridge**. Although its population is slightly greater, **Canewdon** also falls within this category.

11.35 Some villages in this category (e.g.: Canewdon) benefit from relatively high levels of completeness and self-containment but that the amount of growth needed to introduce the missing facilities may need to be transformational relative to their size. This is not to say that these places should not benefit from the opportunity for carefully managed growth, particularly in terms of providing new affordable homes for the community, which could contribute to small uplifts in completeness through some improvements to community facilities. However, this is only likely to provide for localised needs and would not be of a scale to support major investment in major new facilities. This scale of growth could be promoted through the neighbourhood planning process, should those communities wish to prepare such documents. Limited or small-scale growth should not though be seen as a reason to deny these communities the services they need, particularly for day-to-day purposes. Rather, different models of delivery should be investigated, which is expanded upon on in the sections below.

Wider recommendations for the Local Plan(s)

11.36 Beyond the considerations for potential future growth outlined above a series of wider recommendations are provided below. In summary, these suggest:

- New development, particularly residential development, that is of a scale sufficient to provide new services, should plan to accommodate and deliver these in the early phases of development.
- Provision of new facilities should be located where access by foot and bicycle can be maximised. These should ideally be located so that existing as well as new communities can benefit from them.
- Flexible, multi-functional buildings should be provided, allowing for a wide range of uses throughout the day and allowing for adaptability over time.

In areas of higher density development, consideration should be given to incorporating services and facilities into mixed use developments.

- In rural areas, where access to services and facilities can be limited, different models of delivery should be investigated, particularly in respect of healthcare.
- The rationalisation of road space should be investigated to provide more space for people to walk and cycle in safety, and thus make these more attractive propositions. Temporary measures can be trialled before making changes permanent.
- Walking, cycle and public transport networks should be fully integrated, allowing for seamless journeys to be made by these modes. This requires good interchange facilities as well as secure cycle parking that can be used in all weathers.
- Investment in bus services in rural areas is important as a lack of services in these areas can increase issues of social isolation.
- Placemaking strategies that promote and delivery walkable neighbourhoods should be promoted, with mixed-use, mid-rise development encouraged in inner urban areas.
- An approach to 'neighbourhood orientated development' rather than 'transit orientated development' should be promoted, that helps deliver compact, human-scale, mixed-use areas.
- Mid-rise development can accommodate a variety of uses, including different housing typologies, creating cohesive places.
- Mixed-use and mid-rise development based around delivery of perimeter blocks support street life and activity and successfully complement the best qualities of the built form, particularly in terms of character and scale.

Services and facilities

11.37 Neighbourhoods are only 'complete' when they include the full range of supporting uses and facilities, including, for example, schools, healthcare, parks and play spaces. Provision of such uses is important to quality of life, of helping to create a sense of community and belonging. Areas lacking such facilities, or where they are poorly designed, are unwelcoming or inaccessible, can have long-term financial and social costs. Providing them in a timely manner, and where they are well integrated with development, is important to good planning.

11.38 Where any new development is of a scale to generate a need for local services and facilities these should be planned into the growth area from the outset, and located such that all residents are within reasonable walking and cycling distances of these. Locating such uses in easy access of the home and co-located with other activities will help increase access and use by the whole community.

11.39 Whilst the provision of social and community infrastructure within any area of major new development should principally be focussed on addressing the needs of that development, they should also complement and, where possible, respond to the needs of existing communities upon whom development will impact. This will strengthen community cohesion.

11.40 Indeed, the provision of infrastructure is quite often raised by communities as one of the key concerns when new development is proposed. Through work on the Local Plans, Rochford District and Southend Borough should work with service providers to explore the phasing and delivery of uses. Wherever possible, new community uses should be delivered during the early phases of development to help build a sense of community and strengthen the integration with existing surrounding communities.

11.41 Flexible, multi-functional buildings and spaces should also be encouraged, allowing for the widest possible use and activity. This may also require investigating new models of delivery, particularly within existing built-up areas and where land for new uses is limited. In such places, mixed use developments might be considered, incorporating social and community uses on the ground and lower floors of development, with complementary uses, such as commercial and residential, above.

11.42 Although there are numerous examples of uses such as doctors surgeries being incorporated within mixed use developments, there are fewer examples of schools being delivered in this way. However, new models are being delivered and could provide lessons for the study area. Example projects include the ARK Atwood Academy and Amberley Waterfront development in Westminster, and the St Thomas' CE Primary School and associated flats in North Kensington. The Plimsoll Building within the Kings Cross development area is also a good example, incorporating new flats, a primary and nursery school, as well as a school for deaf children. Where such models would help deliver intensification and supporting facilities the authorities should work closely with partners to determine the most appropriate form of development and resolve any design issues associated with the co-location of uses.

11.43 Different models of delivery may also need exploring within rural areas. As the research undertaken for this study has shown, the smaller outlying settlements

within the study area have more limited provision of services and facilities for day-to-day needs within the settlement, and access to these by public transport is also limited by quality and frequency of service. This echoes challenges outlined by Defra in their Rural Proofing publication[67], which also highlighted the opportunities that such areas present, particularly in respect of the growth of Small and Medium Enterprises and the contribution this makes to the economy.

11.44 Access to healthcare is a key challenge within rural areas, particularly given the older demographic of these places. Public Health England[68] reports that local authorities have a key role to play by working in partnership with the NHS and Clinical Commission Groups to improve access to services and tackle wider issues impacting on health and wellbeing, including social care, planning and housing. A range of case study examples are presented that can help respond to the challenges of rural areas. These are perhaps most relevant to Rochford District and include, but are not limited to:

- Establishment of a Community Agents project in partnership between the local authority and local Rural Community Council where health care practitioners work alongside support from the voluntary sector to provide a range of health and social care that enables vulnerable people to remain living independently in their own homes.
- Making greater use of digital technology to expand upon the level of online healthcare currently provided, utilising this as a platform for web-based counselling for example. This however is linked with the need for reliable broadband, which is also often slower in many rural areas.
- Establishment of a 'rural health hub' where economics of scale do not allow for multiple services to be provided in different locations.
- Utilisation of existing community buildings to provide a base for health check services, rather than relying on purpose-built health facilities.

Access and movement

11.45 Whilst the study is primarily focused on the role and function of places, and thus the spatial distribution of future growth, the findings are intrinsically linked to wider considerations of access and mobility.

11.46 The study has drawn on extensive research to establish comfortable walking and cycling times that encourage people to use these modes to travel to the range of services and facilities in any area but, as that research has shown and

[67] Defra, March 2017, Rural Proofing: Practical guidance to assess impacts of policies on rural areas
[68] Public Health England and Local Government Association, 2017, Health and wellbeing in rural areas: Case studies

has been borne out in conversations through this study, the act of walking and cycling is often hindered by the quality or otherwise of supporting infrastructure. Main roads and the associated volume and speed of vehicular traffic form a barrier to movement by foot and are dangerous to cycle along.

11.47 During the period of the COVID19 social distancing precautions we saw many cities across the world roll out temporary walking and cycling measures, reducing space for vehicles to provide more and safer space for people to walk and cycle in, whether for reasons of work or for daily exercise. Many of these measures took the form of 'tactical urbanism': relatively cheap measures that allow cities to trial interventions before making them permanent. This is a measure that could be utilised in both Rochford District and Southend Borough, identifying important routes and allowing impacts to be measured. Ultimately, reallocating road space should provide fixed infrastructure that makes walking and cycling safer for all, but which also brings the wider social, environmental and economic benefits referred to in the study. Indeed, the separate heat mapping prepared for walking and cycling catchments at the level of day-to-day services indicates that the extent of overlapping cycle catchments is more limited than for walking: so investment in a more comprehensive cycle network may expand catchments and thus make this a more attractive proposition to users.

11.48 Alongside such measures, improvements to the quality of the public realm can provide more attractive places for people to spend time in, bringing economic benefits to central areas as well as environmental benefits through introduction of green infrastructure, and social benefits by providing places for people to meet, relax and exercise. Such places, at the heart of proposals for the 'quarter hour city' in Paris, are those where it is envisaged that new community kiosks will be provided, becoming places where the community can come together to meet, exchange supplies and share essential goods and tools for daily life. Both Rochford District and Southend Borough could explore introduction of these ideas further.

11.49 Research for the study has also shown that walking, cycling and public transport should all work together as an integrated travel choice, particularly for longer journeys: to region-wide services and facilities for example. So infrastructure that links these is important. This includes for example the provision of dry and secure cycle parking at bus stops and train stations, but potentially also exploring the creation of new mobility hubs that bring stations and stops together with the opportunity to hire a bike. And if people are to be encouraged to cycle then land use policies need to include a requirement for convenient and safe storage at the home and destination: cycle parking should be located

as close as possible to the front door to encourage people to use this mode of travel.

11.50 The importance of the bus network to social cohesion and inclusiveness has been highlighted in research cited in this report published by the Campaign for Better Transport. This is emphasised in statistics from the Department of Transport which show journey times to services in rural areas are around double that in urban areas[69], and that 60 percent of all road fatalities occur on country roads: almost eleven times higher than on motorways[70]. People in rural areas are thus being asked to travel further and potentially at greater risk.

11.51 Investment in walking and cycling infrastructure therefore also needs to be matched by a commitment to improve the quality and frequency of the bus service for the benefit of all residents. This will require Rochford District and Southend Borough to work in partnership with the relevant transport authorities and operators. However, through provision of strategic scale development, there is an opportunity for the Council's to secure funding towards improvements, and to also require that schemes are designed with walking, cycling and public transport provision in mind from the start.

11.52 Work by the PPS Group through their Portals to Places initiative[71] has highlighted the importance of an integrated transport system, with the bus as the backbone of this, demonstrating how and why services and facilities should all be within easy access of a bus stop (Figure 53). Rochford District and Southend Borough can take inspiration from this when setting policies for new areas of development but also when shaping regeneration and intensification opportunities.

[69] Department for Transport, 2014, Journey Time Statistics: Access to Services
[70] Department for Transport and Robert Goodwill MP, 14 October 2014, Country roads deadlier than you THINK!, Press Release.
[71] See https://www.pps.org/portals-to-places, accessed April 2020

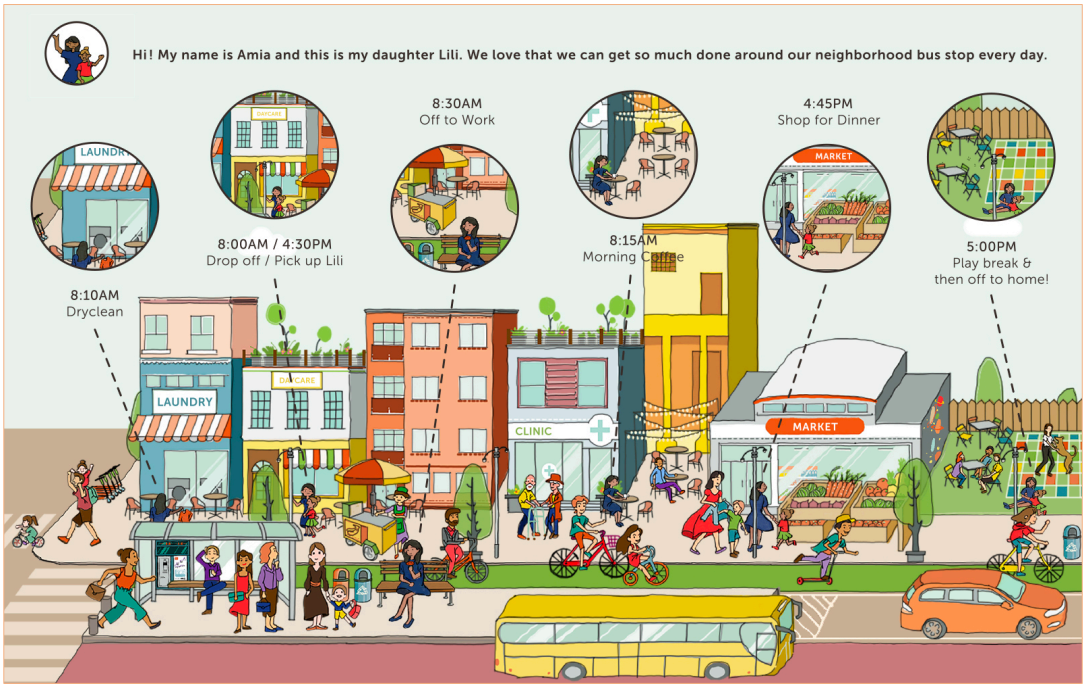


Figure 53: Extract from the Portal to Places initiative promoting the role of public transport as the primary mode of access to services and facilities in towns and cities, particularly at the neighbourhood level, where they become integral to daily life (source: PPS Group)

Urban Design

11.53 As set out in the NPPF and associated Planning Practice Guidance, policies that deliver high quality design in all new development should be embedded in Local Plans. This is given emphasis in the recent publication of 'Planning for the Future'[72] which promotes the creation of '*beautiful, sustainable places*'. This notes that local places will be asked to produce their own design guides and codes, prepared in response to local opinion and context.

11.54 The National Design Guide[73] establishes ten characteristics of well-designed places, and which apply equally to areas of new growth (e.g.: urban extensions) as well as intensification (e.g.: development within an existing urban area). Given the focus on walking and cycling within the assessment undertaken in this report (and which is reflective of wider Government guidance), the emphasis should be on creating mixed-use, human-scale, compact and well-connected places. Mid-rise forms of development can deliver densities that support provision of services and facilities in close proximity to the home, preferably in mixed-use and flexible development typologies that allow for adaptability over time.

11.55 Example illustrations prepared for the Mayor of Paris as part of the 'quarter hour city' (Figure 54) show how existing streets and spaces might be retrofitted

[72] MHCLG, March 2020, Planning for the Future
[73] MHCLG, October 2019, National Design Guide: Planning Practice Guidance for beautiful, enduring and successful places

to help deliver the concept of a compact and 'complete place'. For areas of growth and intensification across Rochford District and Southend Borough the respective Council's should look to best practice examples for inspiration, including the urban extension at Vauban in Freiberg, the Bo01 Housing Exposition in Malmo, and in the 'Linear Barcelona' model developed in Melbourne[74].

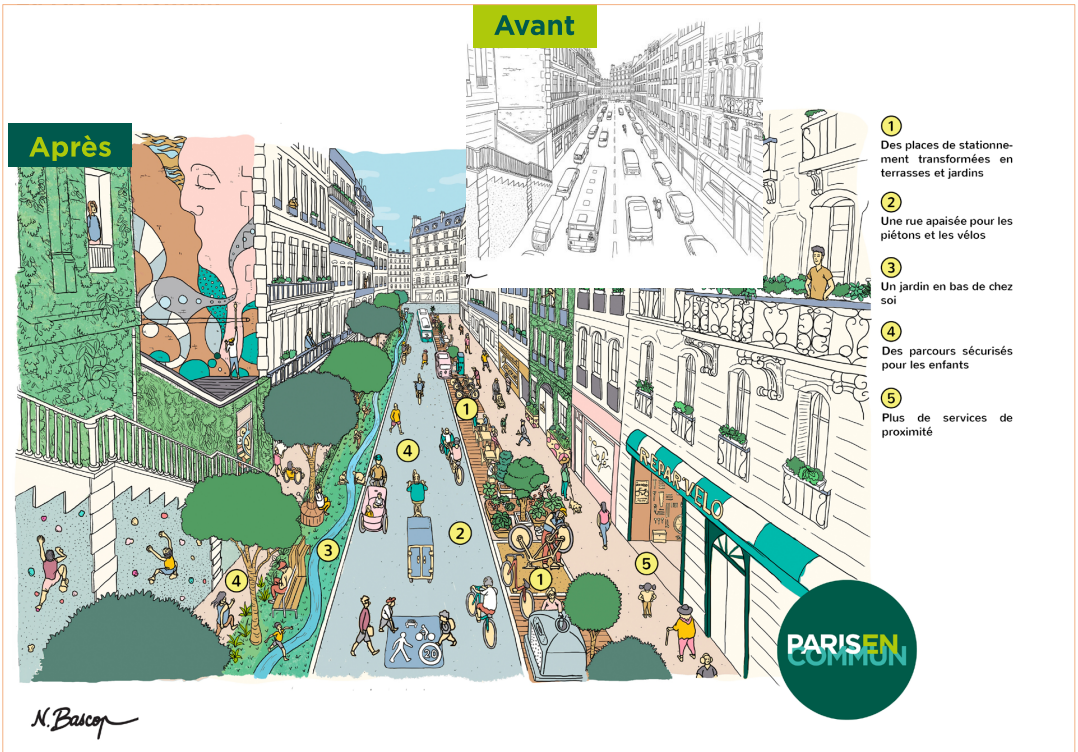


Figure 54: Illustration from the plans for transforming Paris into the 'quarter hour city' showing how a typical street might be transformed as part of the initiative (source: Paris en Commun),

11.56 These schemes take an approach to 'neighbourhood oriented development' rather than 'transit oriented development'. The later promotes high density development in close proximity to public transport to enable people to move quickly to other places. By contrast, the former is about supporting and strengthening the immediate neighbourhood, with a focus on walkability, mixed-use development and provision of services for day-to-day life. What the example schemes referred to above have in common is:

- A focus of development around strong public transport networks and with walking and cycling embedded into development.
- A recognition that mid-rise development can deliver high density development, whilst responding to character and quality of place, and that this scale has benefits in terms of embodied energy, as well as

[74] For more information on the thinking behind this see: Victoria Department of Transport and City of Melbourne, March 2010, Transforming Australian Cities for a more financially viable and sustainable future: transportation and urban design

reducing impacts on the local micro-climate that would otherwise be caused by taller buildings (e.g.: wind and over-shadowing).

- Strong guidance on building heights help control land values and, coupled with clear rules on development form, through production of design codes and guidance, helps facilitate the development process, and is more responsive to surrounding context and amenity.
- Allows for change over time, breaking development blocks down into individual plots, facilitating incremental change and adaptation on a plot by plot basis over time, rather than block by block, allowing for organic growth and minimising the impact on the wider area.
- That the form of sub-division outlined above allows for a wide variety of building forms and uses to come forward in close proximity to each other, allowing local services and facilities to be provided close to home, and building in urban resilience to change and the impact of economic cycles.
- That a mix of housing typologies should be integrated to help create a mixed and cohesive neighbourhood, with housing choice and opportunity for all.
- That visual variation within development creates life and interest, both at ground floor where street edges are activated, but also at the upper levels, where building design and features benefit from a connection to the sky, increased light within the building and, through the use of set-backs, within the centre of the development block.
- A diversity of open spaces, sizes and types, including a mix of (and clear hierarchy of) private and public places that allow people to gather and which strengthens social cohesion. These also recognise that streets should be treated as public spaces too, and are places for enjoying being in as much as for moving through.
- That the mid-rise form of development allows for greater interaction between the residential unit and the street, with the walkable nature of such buildings (rather than a reliance on using lifts to enable access to the highest storeys of tall buildings) encouraging more frequent use of local and ground floor services and facilities. This also provides for more 'eyes-on the street', further strengthening community cohesion and the sense of security.
- Integrating natural life to bring environmental and biodiversity benefits, as well as enhancing health and social-wellbeing.

11.57 The above provide a set of ideas as to the form of development that might be considered appropriate to help facilitate the concept of the complete neighbourhood within the context of Rochford District and Southend Borough, but which will need developing at the local level to reflect local character and identity.

Appendix 1: Completeness Maps

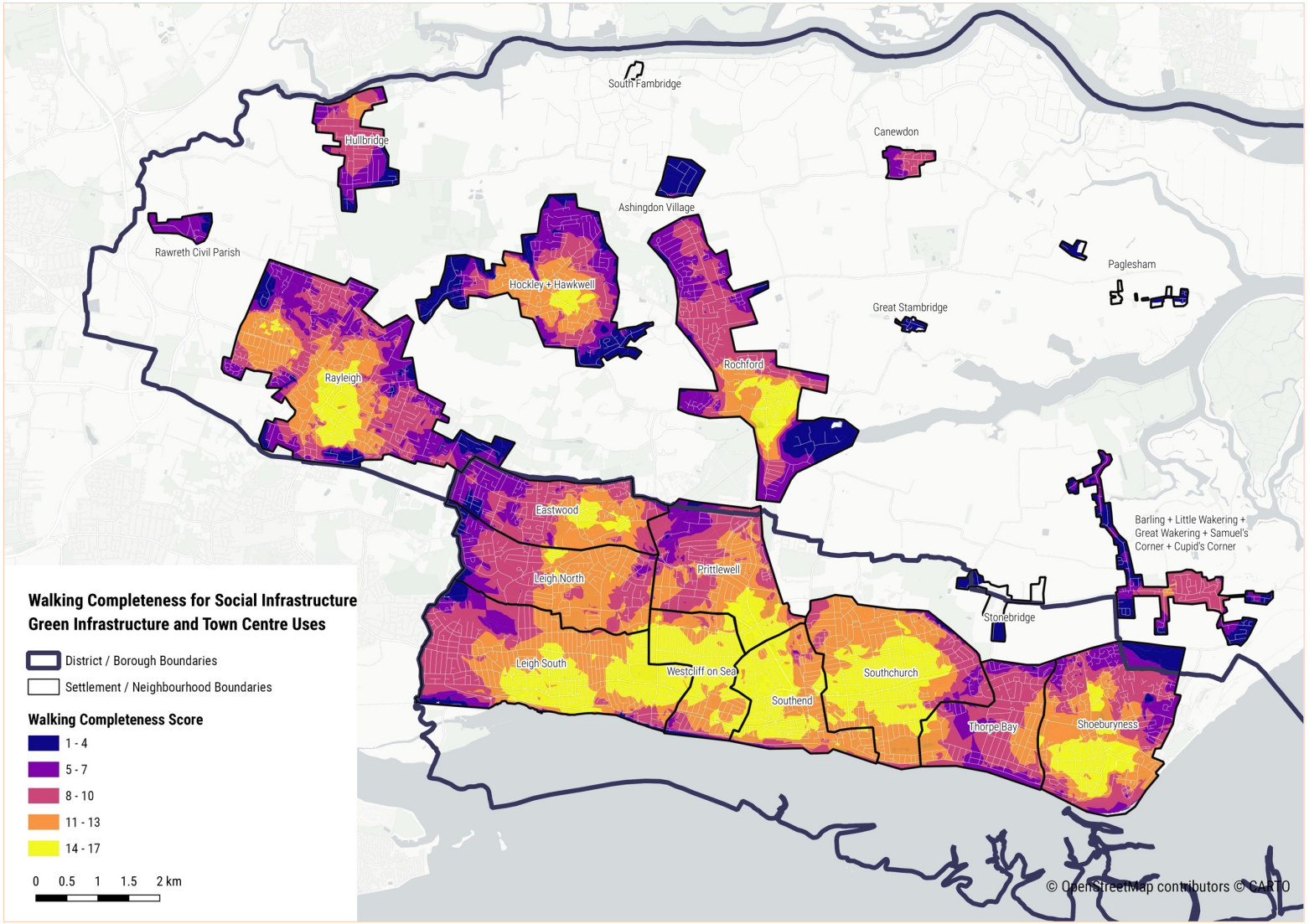


Figure 55: Degrees of completeness for all settlements and neighbourhoods within the study area, based on walking, including sub-division of Leigh into North and South

Appendix 2: Location of and heatmapping for day-to-day infrastructure types

The maps on the following pages are for the entire study area and include the sub-division of Leigh into Leigh (north) and Leigh (south).

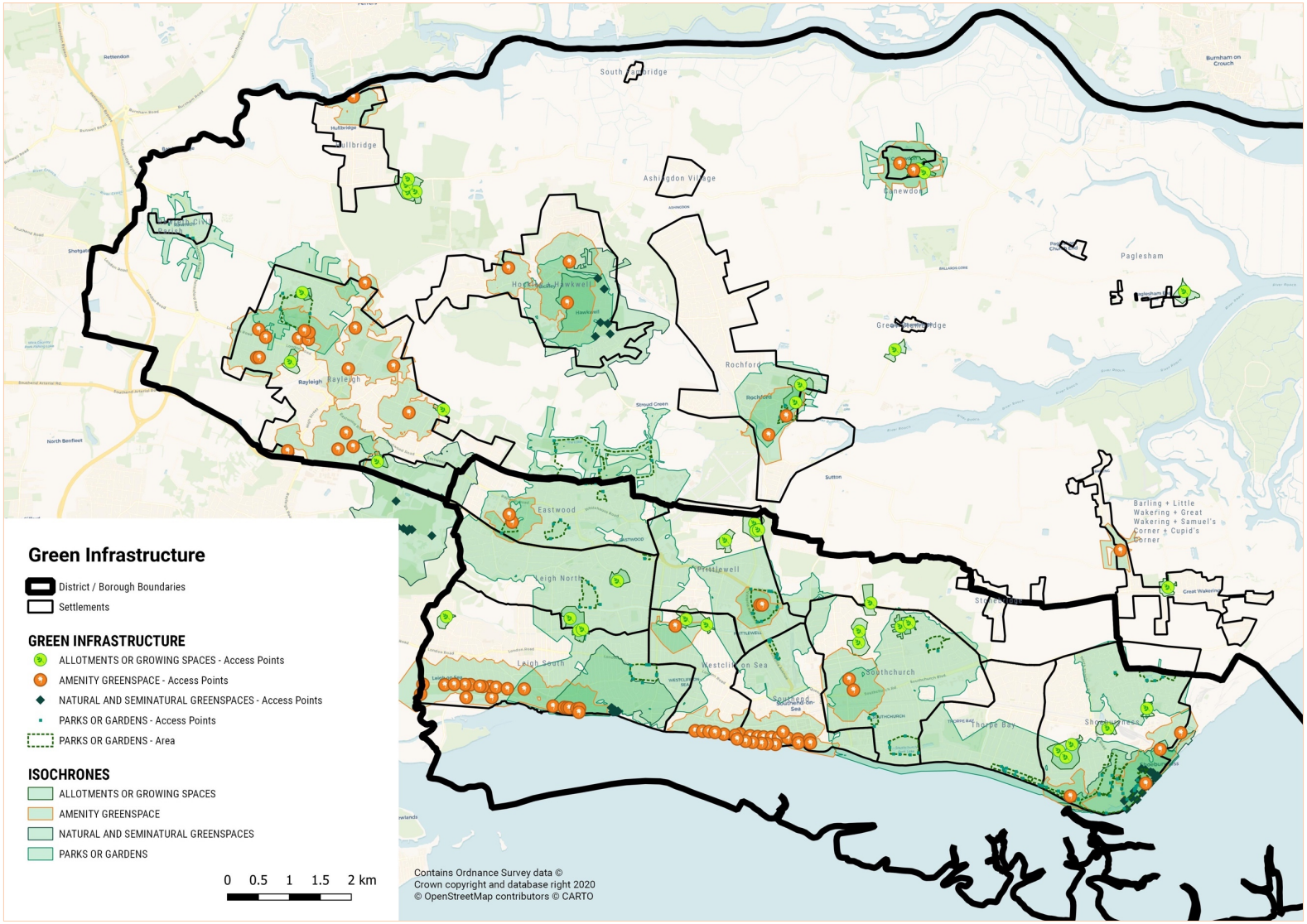


Figure 56: Green infrastructure – location and catchment areas

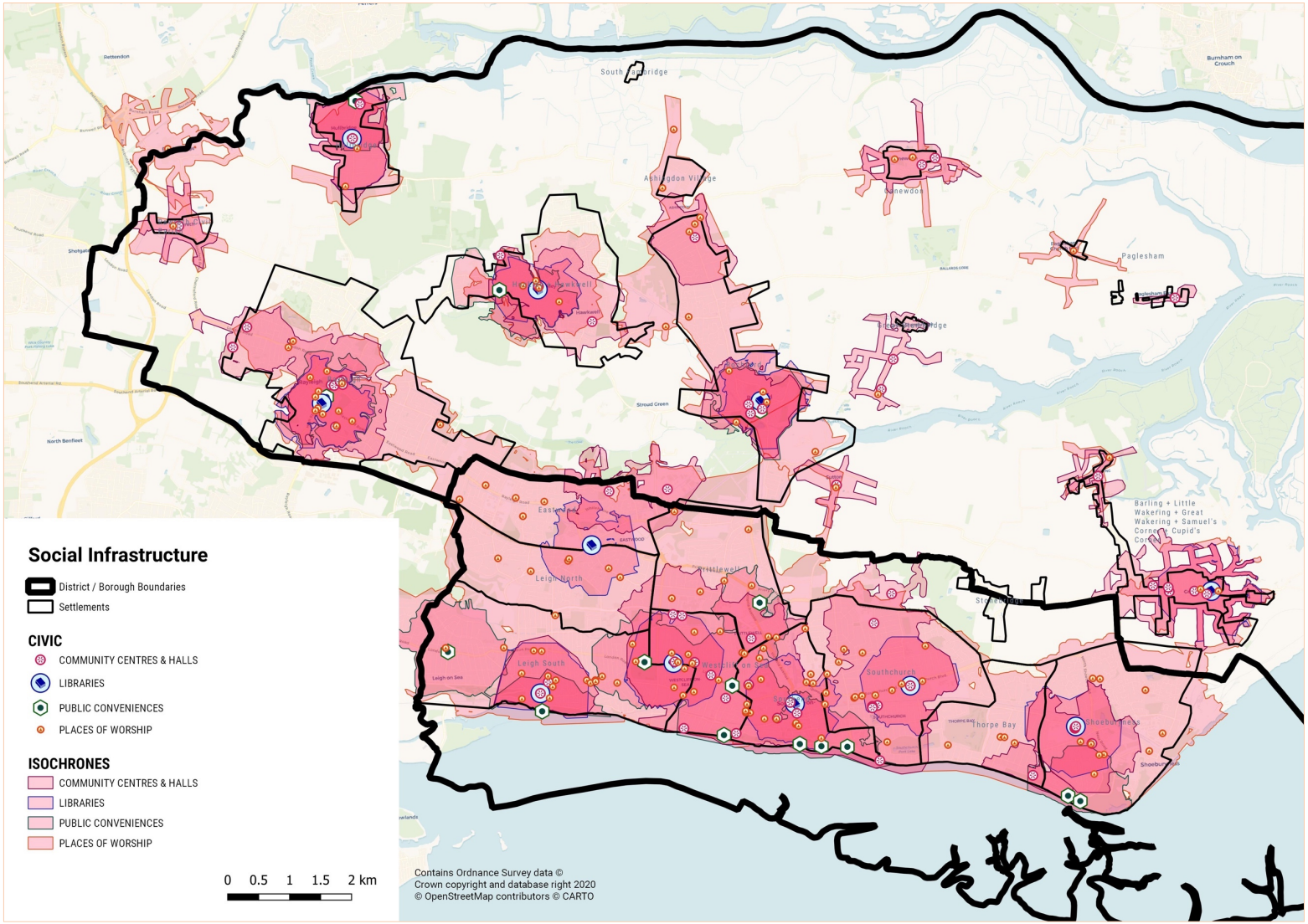


Figure 57: Civic facilities – location and catchment areas

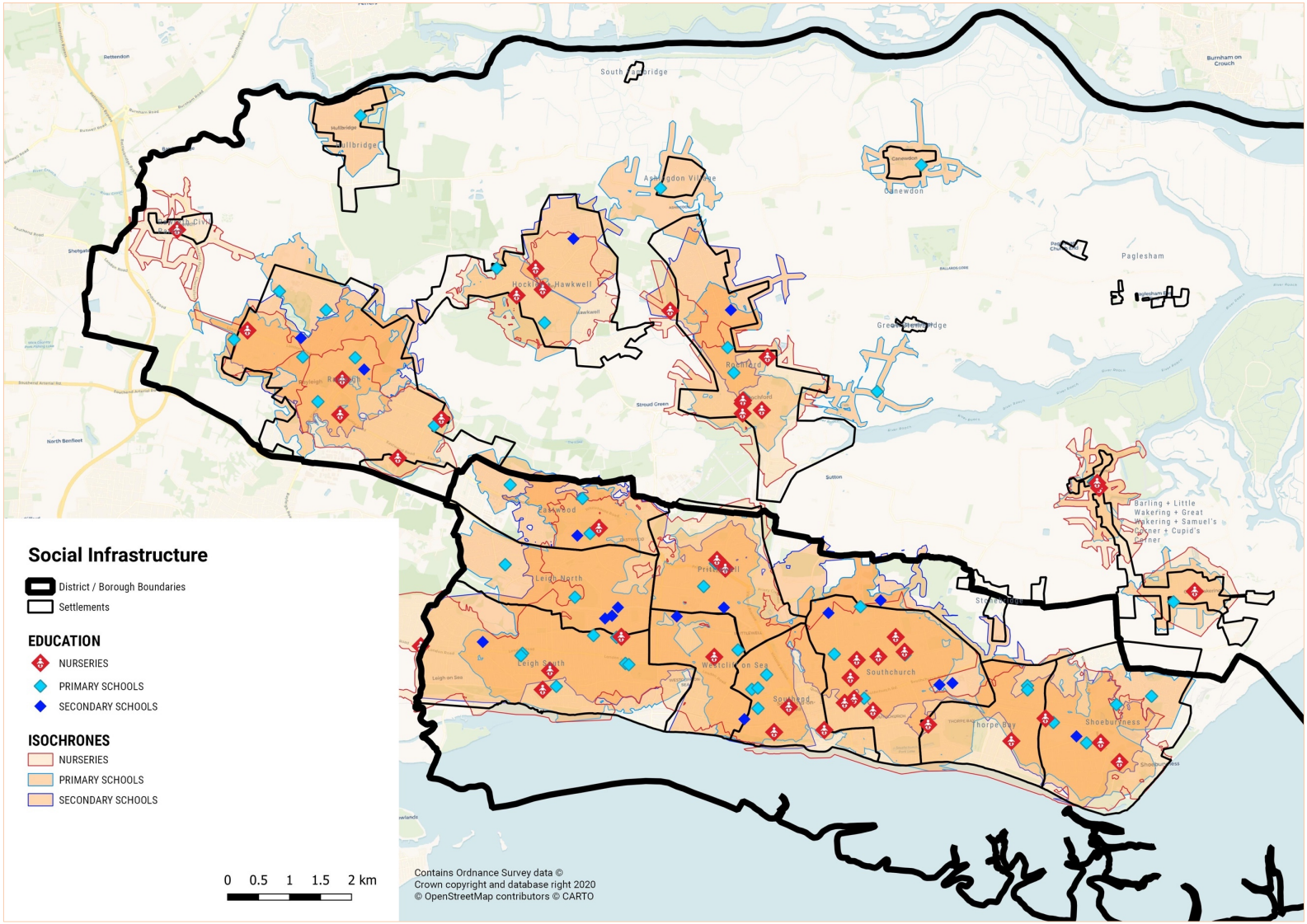


Figure 58: Education – location and catchment areas

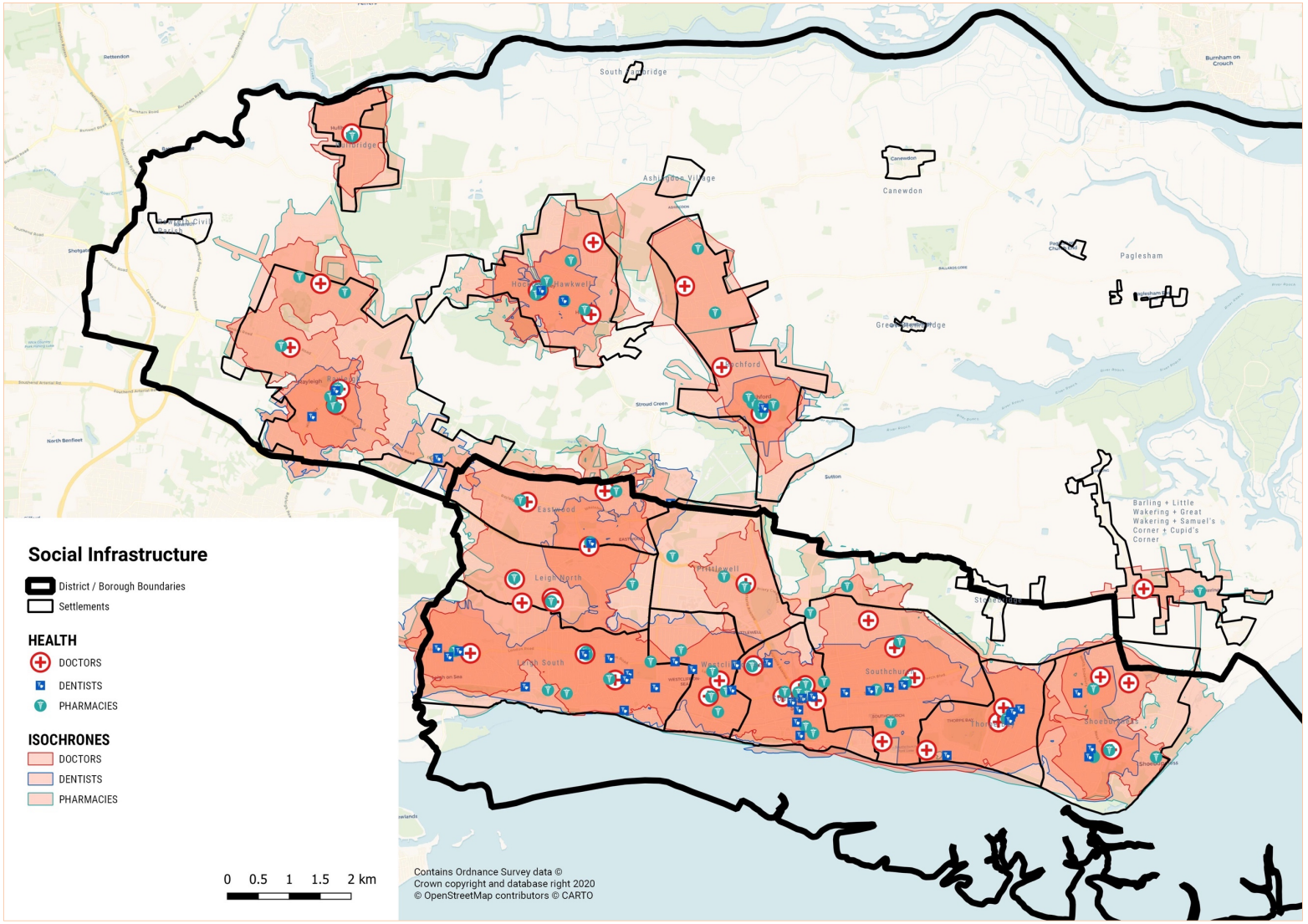


Figure 59: Healthcare facilities – location and catchment areas

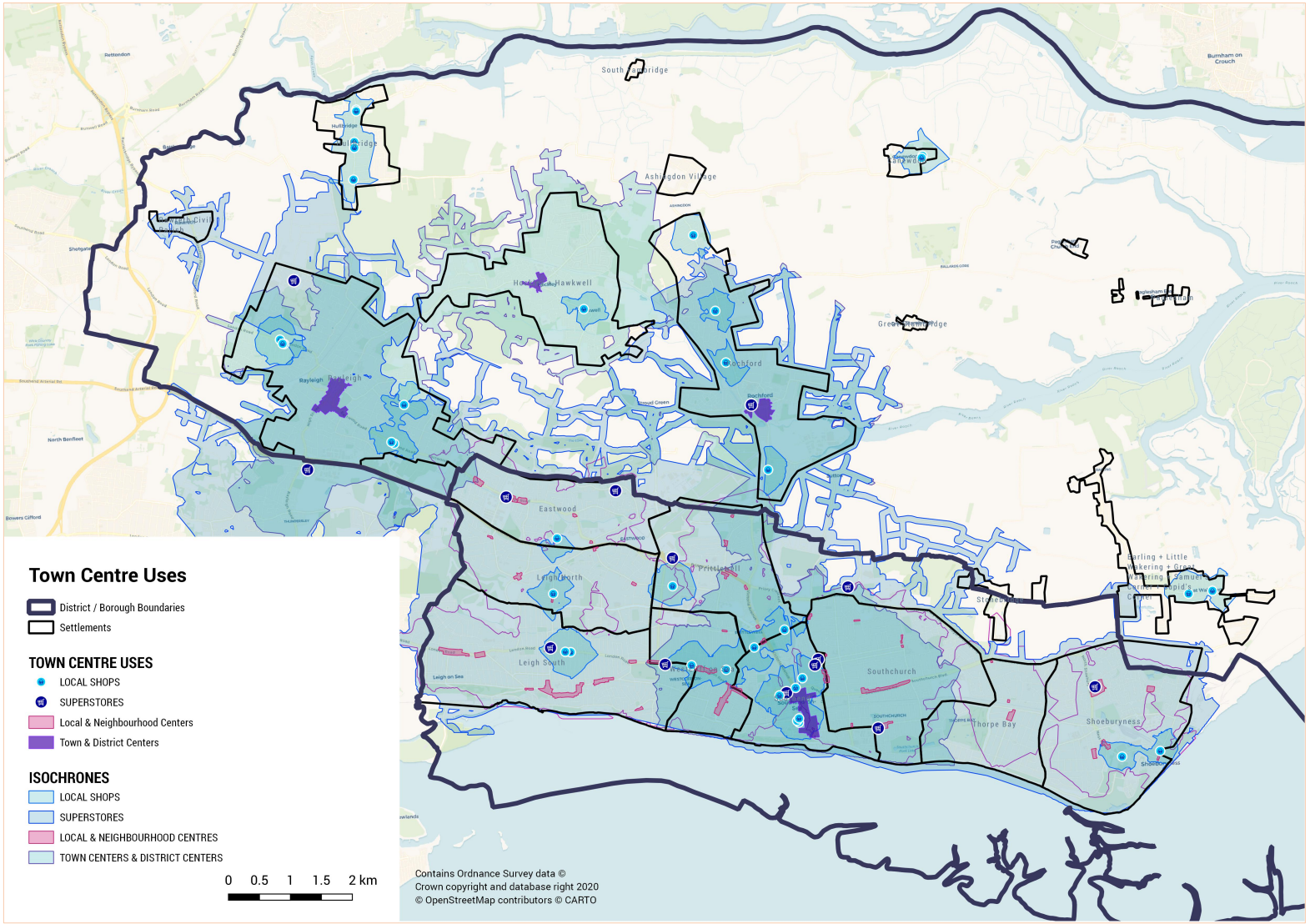


Figure 60: Town centres and retail uses – location and catchment areas (note: local shops are those outside of a designated centre)

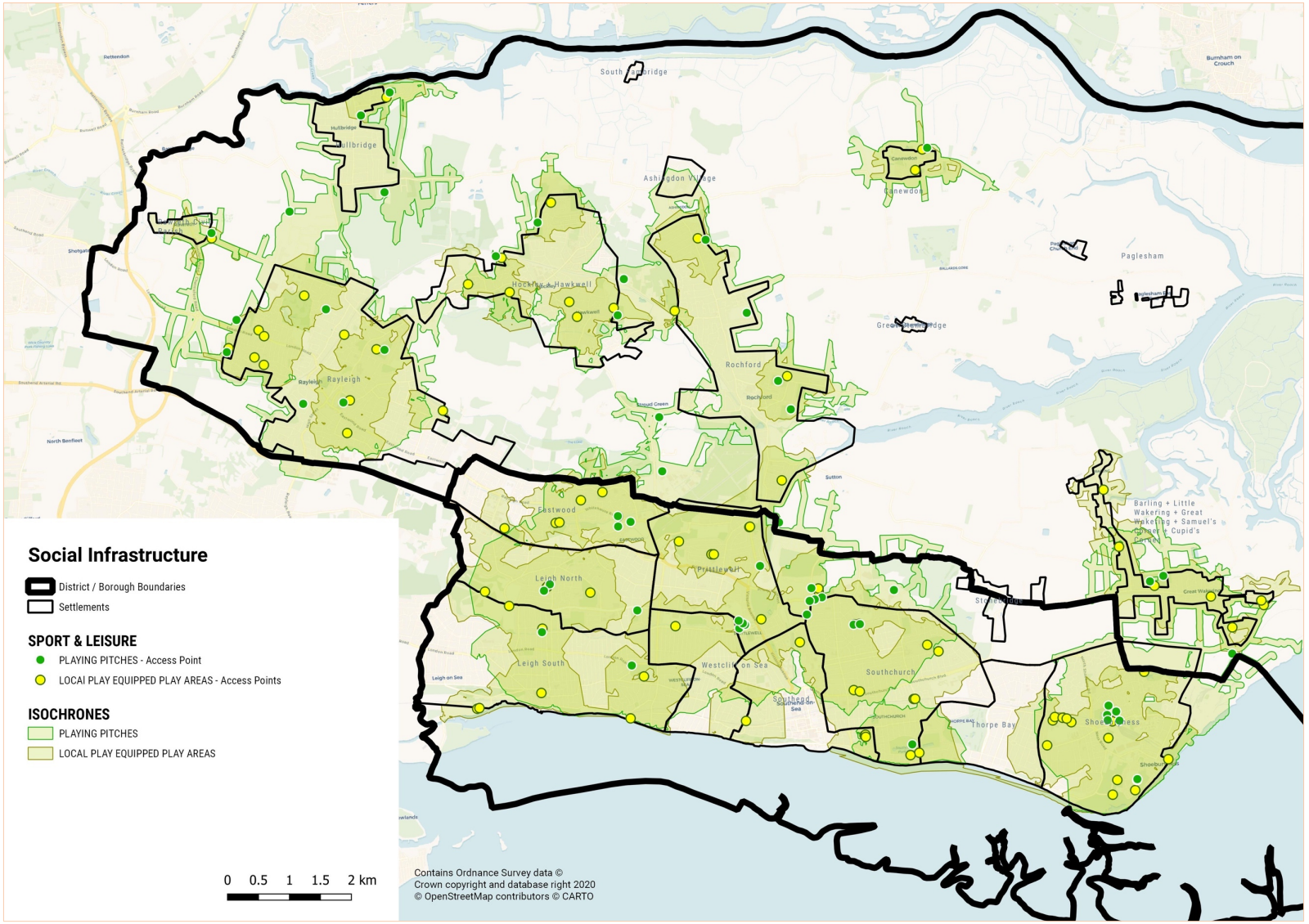


Figure 61: Sports and leisure – location and catchment areas

Appendix 3: Breakdown of completeness for all day-to-day services

		GREEN INFRASTRUCTURE					EDUCATION				CIVIC				
Place	Average across all day-to-day services and facilities	Allotments	Amenity green space	Natural / Semi-natural green space	Parks and Gardens	Average	Nursery	Primary School	Secondary School	Average	Community centres & hubs	Libraries	Places of Worship	Public Conveniences	Average
Rochford District															
Canewdon	41.8	20.6	99.5	0.0	100.0	55.0	0.0	100.0	0.0	33.3	100.0	0.0	93.3	0.0	48.3
Great Stambridge	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	84.2	0.0	0.0	0.0	21.1
Great Wakering	34.3	2.4	8.0	0.0	0.0	2.6	62.0	60.6	0.0	40.9	77.3	43.5	70.4	0.0	47.8
Hockley	41.7	0.0	35.6	35.5	32.4	25.9	58.1	25.9	40.3	41.5	47.0	21.8	51.2	28.2	37.1
Hullbridge	39.4	0.5	18.9	0.0	0.0	4.9	0.0	67.0	0.0	22.3	87.1	82.4	85.8	52.6	77.0
Paglesham	1.6	13.8	0.0	0.0	0.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	6.3
Rawreth	31.6	0.0	0.0	0.0	91.4	22.9	93.0	0.0	0.0	31.0	77.8	0.0	86.5	0.0	41.1
Rayleigh	48.3	1.5	49.9	4.2	16.9	18.1	50.9	75.6	53.0	59.9	45.3	18.2	68.6	19.7	38.0
Rochford	43.0	2.4	11.3	0.0	19.4	8.3	47.8	52.5	36.5	45.6	40.6	25.0	91.9	23.9	45.4
South Fambridge	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stonebridge	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.8	5.6	0.0	0.0	0.0	0.0	0.0
Southend Borough															
Southend urban area	57.9	3	15.3	6.9	60.1	21.3	77.4	73	69.5	73.3	45.8	27.8	98.6	28.3	50.1
Eastwood	*50.1*	*0.0*	*10.6*	*5.8*	*75.6*	*23.0*	*39.1*	*57.9*	*65.5*	*54.2*	*29.1*	*23.3*	*98.2*	*0.0*	*37.7*
Leigh	*57.3*	*2.4*	*16.7*	*13.1*	*62.2*	*23.6*	*72.7*	*71.6*	*74.7*	*73.0*	*25.5*	*29.4*	*98.7*	*38.4*	*48.0*
Prittlewell	*55.8*	*5.4*	*8.6*	*0.0*	*57.1*	*17.8*	*87.5*	*66.2*	*76.4*	*76.7*	*37.4*	*0.0*	*99.5*	*25.0*	*40.5*
Shoeburyness	*53.4*	*5.0*	*15.9*	*17.0*	*59.3*	*24.3*	*64.8*	*65.3*	*46.7*	*58.9*	*37.8*	*27.2*	*98.2*	*19.5*	*45.7*
Southchurch	*65.9*	*4.7*	*16.5*	*0.0*	*69.4*	*22.6*	*89.8*	*89.6*	*79.5*	*86.3*	*76.3*	*34.9*	*99.1*	*3.6*	*53.5*
Southend (central)	*67.4*	*0.0*	*26.4*	*0.0*	*44.7*	*17.8*	*97.0*	*87.9*	*72.5*	*85.8*	*89.9*	*53.9*	*100.0*	*69.3*	*78.3*
Thorpe Bay	*46.8*	*0.0*	*0.0*	*0.0*	*53.8*	*13.4*	*95.7*	*74.7*	*41.6*	*70.6*	*24.5*	*9.4*	*94.6*	*3.1*	*32.9*
Westcliff-on-Sea	*69.2*	*5.3*	*27.6*	*0.0*	*40.3*	*18.3*	*91.8*	*72.6*	*98.3*	*87.6*	*99.8*	*46.9*	*99.8*	*81.1*	*81.9*
Leigh (north)	*53.7*	*4.6*	*0.6*	*0.6*	*86.4*	*23.1*	*54.8*	*84.0*	*68.7*	*69.1*	*7.3*	*23.3*	*100.0*	*3.3*	*33.5*
Leigh (south)	*59.4*	*1.1*	*26.3*	*20.5*	*47.8*	*23.9*	*83.4*	*64.1*	*78.3*	*75.3*	*36.3*	*33.1*	*97.9*	*59.2*	*56.6*

Table 26: Percentage of each place within the walking distance of all day-to-day services and facilities, including sub-division of Leigh into North and South (continued overleaf)

		HEALTH				TOWN CENTRE USES					SPORT & LEISURE		
Place	Average across all day-to-day services and facilities	Dentists	Doctors	Pharmacies	Average	Local / Neighbourhood Centres	Local Shops	Superstores	District / Town Centres	Average	Local Play / Equipped Play Areas	Playing Pitches	Average
Rochford District													
Canewdon	41.8	0.0	0.0	0.0	0.0	0.0	56.3	0.0	0.0	14.1	100.0	100.0	100.0
Great Stambridge	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Great Wakering	34.3	0.0	20.9	44.9	21.9	0.0	27.7	13.2	0.0	10.2	87.3	76.9	82.1
Hockley	41.7	34.1	65.8	79.1	59.7	0.0	5.6	1.0	97.7	26.1	41.5	78.7	60.1
Hullbridge	39.4	0.0	84.4	99.5	61.3	0.0	48.4	6.1	0.0	13.6	14.7	100.0	57.3
Paglesham	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rawreth	31.6	0.0	0.0	0.0	0.0	0.0	0.0	94.5	0.0	23.6	55.9	86.5	71.2
Rayleigh	48.3	28.1	51.1	89.1	56.1	3.9	12.8	86.2	90.5	48.4	53.6	85.1	69.3
Rochford	43.0	17.5	62.8	86.5	55.6	0.4	17.6	80.9	77.3	44.0	33.9	84.0	59.0
South Fambridge	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stonebridge	2.5	0.0	0.0	0.1	0.0	17.8	0.0	19.2	0.0	9.2	0.0	0.0	0.0
Southend Borough													
Southend urban area	57.9	58	76.4	97.1	77.2	84.2	10.9	99.7	32.9	56.9	64.8	72.3	68.5
Eastwood	*50.1*	*36.2*	*85.4*	*100.0*	*73.9*	*88.6*	*1.9*	*100.0*	*3.6*	*48.5*	*63.8*	*62.8*	*63.3*
Leigh	*57.3*	*64.3*	*79.8*	*95.9*	*80.0*	*88.7*	*9.2*	*99.3*	*4.4*	*50.4*	*61.5*	*75.9*	*68.7*
Prittlewell	*55.8*	*7.3*	*46.7*	*99.8*	*51.3*	*80.8*	*17.1*	*100.0*	*51.5*	*62.4*	*72.7*	*100.0*	*86.3*
Shoeburyness	*53.4*	*48.2*	*60.1*	*89.5*	*65.9*	*75.5*	*7.0*	*99.7*	*0.0*	*45.6*	*66.5*	*93.8*	*80.1*
Southchurch	*65.9*	*65.0*	*94.2*	*99.0*	*86.1*	*92.3*	*0.0*	*100.0*	*80.9*	*68.3*	*87.4*	*70.0*	*78.7*
Southend (central)	*67.4*	*81.2*	*88.3*	*100.0*	*89.8*	*79.1*	*47.9*	*100.0*	*99.8*	*81.7*	*53.3*	*48.5*	*50.9*
Thorpe Bay	*46.8*	*90.1*	*82.5*	*99.5*	*90.7*	*66.6*	*0.0*	*100.0*	*15.0*	*45.4*	*36.6*	*18.8*	*27.7*
Westcliff-on-Sea	*69.2*	*80.9*	*70.7*	*100.0*	*83.9*	*91.3*	*23.3*	*99.3*	*85.2*	*74.8*	*62.9*	*74.7*	*68.8*
Leigh (north)	*53.7*	*33.1*	*77.5*	*93.3*	*68.0*	*90.8*	*10.2*	*100.0*	*0.0*	*50.3*	*69.1*	*87.7*	*78.4*
Leigh (south)	*59.4*	*82.9*	*81.1*	*97.4*	*87.1*	*87.5*	*8.6*	*98.8*	*7.1*	*50.5*	*57.1*	*68.9*	*63.0*

Table 26 continued from previous page

Note to table:
Local Shops refers to those located outside of a designated centre

	GREEN INFRASTRUCTURE				EDUCATION			CIVIC			
Place	Allotments	Amenity green space	Natural / Semi-natural green space	Parks and Gardens	Nursery	Primary School	Secondary School	Community centres & hubs	Libraries	Places of Worship	Public Conveniences
Rochford District											
Canewdon	✓	✓				✓		✓		✓	
Great Stambridge											
Great Wakering	✓	✓			✓	✓		✓	✓	✓	
Hockley		✓	✓		✓	✓	✓	✓	✓	✓	✓
Hullbridge	✓	✓				✓		✓	✓	✓	✓
Paglesham	✓							✓		✓	
Rawreth				✓	✓			✓		✓	
Rayleigh	✓	✓			✓	✓	✓	✓	✓	✓	✓
Rochford	✓	✓			✓	✓	✓	✓	✓	✓	✓
South Fambridge											
Stonebridge											
Southend Borough											
Eastwood		✓		✓	✓	✓	✓	✓	✓	✓	
Leigh	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
Prittlewell	✓	✓		✓	✓	✓	✓	✓		✓	✓
Shoeburyness	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Southchurch	✓	✓		✓	✓	✓	✓	✓	✓	✓	
Southend (central)		✓		✓	✓	✓		✓	✓	✓	✓
Thorpe Bay				✓	✓	✓		✓		✓	
Westcliff-on-Sea	✓	✓			✓	✓	✓	✓	✓	✓	✓
Leigh North	✓			✓		✓	✓			✓	
Leigh South	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓

Table 27: Services and facilities found in each settlement or neighbourhood, including subdivision of Leigh into North and South

	HEALTH			TOWN CENTRE USES				SPORT & LEISURE	
Place	Dentists	Doctors	Pharmacies	Local / Neighbourhood Centres	Local Shops	Superstores	District / Town Centres	Local Play / Equipped Play Areas	Areas of Playing Pitches
Rochford District									
Canewdon					✓			✓	
Great Stambridge									
Great Wakering		✓	✓		✓			✓	✓
Hockley	✓	✓	✓		✓		✓	✓	✓
Hullbridge		✓	✓		✓			✓	✓
Paglesham									
Rawreth								✓	✓
Rayleigh	✓	✓	✓		✓	✓	✓	✓	✓
Rochford	✓	✓	✓		✓	✓	✓	✓	✓
South Fambridge									
Stonebridge									
Southend Borough									
Eastwood	✓	✓	✓	✓	✓	✓		✓	✓
Leigh	✓	✓	✓	✓	✓	✓		✓	✓
Prittlewell	✓	✓	✓	✓	✓	✓		✓	✓
Shoeburyness	✓	✓	✓	✓	✓	✓		✓	✓
Southchurch	✓	✓	✓	✓		✓		✓	✓
Southend (central)	✓	✓	✓	✓	✓	✓	✓	✓	
Thorpe Bay	✓	✓	✓	✓					
Westcliff-on-Sea	✓	✓	✓	✓	✓			✓	
Leigh North		✓	✓	✓	✓			✓	✓
Leigh South	✓	✓	✓	✓	✓	✓		✓	✓

Table 27 continued from previous page

	GREEN INFRASTRUCTURE				EDUCATION			CIVIC			
Place	Allotments	Amenity green space	Natural / Semi-natural green space	Parks and Gardens	Nursery	Primary School	Secondary School	Community centres & hubs	Libraries	Places of Worship	Public Conveniences
Rochford District											
Canewdon	1	2				1		2		2	
Great Stambridge											
Great Wakering	1	1			3	2		6	1	3	
Hockley		3	2		3	2	1	3	1	4	1
Hullbridge	1	1				1		2	1	2	1
Paglesham	1							1		1	
Rawreth				1	1			1		1	
Rayleigh	4	11			5	7	2	8	1	14	1
Rochford	2	2			5	3	1	4	1	10	1
South Fambridge											
Stonebridge											
Southend Borough											
Southend urban area											
Eastwood		*1*		*3*	*1*	*3*	*1*	*1*	*1*	*5*	
Leigh	*4*	*3*	*1*	*2*	*3*	*9*	*4*	*2*		*28*	*3*
Prittlewell	*2*	*1*		*1*	*2*	*2*	*1*	*1*		*7*	*1*
Shoeburyness	*3*	*4*	*1*	*4*	*3*	*4*	*1*	*3*	*1*	*10*	*2*
Southchurch	*3*	*1*		*3*	*8*	*3*	*3*	*5*	*1*	*15*	
Southend (central)		*1*		*1*	*3*	*4*		*5*	*1*	*16*	*3*
Thorpe Bay				*1*	*2*	*2*		*1*		*4*	
Westcliff-on-Sea	*2*	*2*			*1*	*1*	*2*	*8*	*1*	*13*	*2*
Leigh (north)	*3*			*1*		*2*	*3*			*6*	
Leigh (south)	*1*	*3*	*1*	*1*	*3*	*7*	*1*	*2*		*22*	*3*

Table 28: Count of services and facilities present in each settlement or neighbourhood, including sub-division of Leigh into North and South

Notes to table:
(1) Local shops refers to those located outside of a designated centre (2) Facilities outside of a settlement or neighbourhood, but the catchment of which extends into that area, will contribute towards the completeness of that settlement or neighbourhood (3) Totals for the Southend urban area as a whole are not provided as some facilities, e.g.: amenity green space, straddle neighbourhood boundaries and would result in double counting

	HEALTH			TOWN CENTRE USES				SPORT & LEISURE	
Place	Dentists	Doctors	Pharmacies	Local / Neighbourhood Centres	Local Shops	Superstores	District / Town Centres	Local Play / Equipped Play Areas	Areas of Playing Pitches
Rochford District									
Canewdon					2			1	
Great Stambridge									
Great Wakering		1	1		2			7	3
Hockley	2	3	6		1		1	7	4
Hullbridge		1	1		5			1	3
Paglesham									
Rawreth								1	1
Rayleigh	3	4	6		6	1	1	10	6
Rochford	1	3	7		4	1	1	4	4
South Fambridge									
Stonebridge									
Southend Borough									
Southend urban area									
Eastwood	*1*	*3*	*3*	*4*	*1*	*2*		*5*	*2*
Leigh	*12*	*7*	*9*	*14*	*4*	*2*		*9*	*5*
Prittlewell	*1*	*1*	*3*	*5*	*2*	*1*		*4*	*2*
Shoeburyness	*3*	*3*	*4*	*5*	*2*	*1*		*10*	*2*
Southchurch	*4*	*4*	*5*	*6*		*1*		*6*	*2*
Southend (central)	*7*	*5*	*8*	*1*	*6*	*3*	*1*	*2*	
Thorpe Bay	*6*	*3*	*2*	*3*					
Westcliff-on-Sea	*3*	*2*	*5*	*3*	*2*			*1*	
Leigh (north)		*4*	*3*	*5*	*1*			*3*	*3*
Leigh (south)	*12*	*3*	*6*	*9*	*3*	*2*		*6*	*2*

Table 28 continued from previous page

Appendix 4: Accessibility Research

		Distance (m)	Source
EDUCATION (local)	Childcare/Early Years	800	Melbourne 20 Minute Neighbourhood
		1000	WYG How far do people walk? 2015
		1000	Providing for Journeys on Foot. 2000
		1200	Essex Walking Strategy. 2019
	AVERAGE	1000	
	Primary Schools	800	Melbourne 20 Minute Neighbourhood
		400	Portland Plan 2012
		1000	WYG How far do people walk? 2015
		1000	Providing for Journeys on Foot. 2000
		800	Plymouth & South West Devon Joint Local Plan 2014-2034
		1200	Essex Walking Strategy. 2019
		600	Shaping Neighbourhoods. Barton, Grant & Guise 2003
		450	Sustainable Communities, Barton. 2000
	AVERAGE	781.25	
	Secondary Schools	800	Melbourne 20 Minute Neighbourhood
		1000	WYG How far do people walk? 2016
		1000	Providing for Journeys on Foot. 2000
		1200	Essex Walking Strategy. 2019
		1750	Sustainable Communities, Barton. 2000
		1500	Shaping Neighbourhoods. Barton, Grant & Guise 2003
	AVERAGE	1208.333333	
		Distance (m)	Source
HEALTH (local)	Pharmacy	800	Melbourne 20 Minute Neighbourhood
		450	Sustainable Communities, Barton. 2000
	AVERAGE	625	
	Doctor/GP Surgery	800	Melbourne 20 Minute Neighbourhood
		1000	Shaping Neighbourhoods. Barton, Grant & Guise 2003
		400	Sustainable Communities, Barton. 2000
		1200	Essex Walking Strategy. 2019
	AVERAGE	850	
	Dentist	800	Melbourne 20 Minute Neighbourhood
		400	Sustainable Communities, Barton. 2000
		1200	Essex Walking Strategy. 2019
		1000	Shaping Neighbourhoods. Barton, Grant & Guise 2003
	AVERAGE	850	

Table 29: Table of catchment distances applied to different services and facilities

		Distance (m)	Source
CIVIC	Halls & Community Centres	800	Melbourne 20 Minute Neighbourhood
		1150	WYG How far do people walk? 2015
		450	Sustainable Communities, Barton. 2000
		800	Shaping Neighbourhoods. Barton, Grant & Guise 2003
	AVERAGE	800	
	Libraries	800	Melbourne 20 Minute Neighbourhood
		800	Shaping Neighbourhoods. Barton, Grant & Guise 2003
		450	Sustainable Communities, Barton. 2000
		1150	WYG How far do people walk? 2015
	AVERAGE	800	
	Places of Worship	800	Melbourne 20 Minute Neighbourhood
		1150	WYG How far do people walk? 2015
	AVERAGE	975	
	Public Conveniences	800	Melbourne 20 Minute Neighbourhood
		800	Providing for Journeys on Foot. 2000
	AVERAGE	800	
	Allotments	200	Shaping Neighbourhoods. Barton, Grant & Guise 2003
	AVERAGE	200	

		Distance (m)	Source
Sport & Leisure	Formal Outdoor Space		
	Playing Pitches	1200	Fields in Trust: Guidance for Outdoor Sport & Play 2015
	All outdoor sports	1200	
	Equipt/designated play areas: LAPS	100	
	Equipt/designated play areas: LEAPS	400	
	Equipt/designated play areas: NEAPS	1000	
	Other outdoor provision (MUGAs & Skate parks)	700	
	Informal Outdoor Space		
	Parks & Gardens	710	Fields in Trust: Guidance for Outdoor Sport & Play 2015
	Amenity Green Space	480	
	Natural & Semi-Natural	720	

		Distance (m)	Source
Town Centres	District/Town Centre	1750	Sustainable Communities, Barton. 2000
	AVERAGE	1750	
	Local/Neighbourhood Centre	800	Providing for Journeys on Foot. 2000
		450	Sustainable Communities, Barton. 2000
			Shaping Neighbourhoods. Barton, Grant & Guise 2003
	AVERAGE	625	
	Local Shop	400	Sustainable Communities, Barton. 2000
		800	Plymouth & South West Devon Joint Local Plan 2014-2034
		600	Portland Plan 2012
	AVERAGE	600	
	Superstore	2000	Shaping Neighbourhoods. Barton, Grant & Guise 2003

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		Threshold	Source
EDUCATION (local)	Childcare/Early Years		
		1 per 2000 people	Shaping Neighbourhoods. Barton, Grant & Guise 2003
		2000	Urban Design Compendium
		2500	Urban Task Force Report
		3200	Approaching Urban Design
	AVERAGE	2425	
	Primary Schools		
		4000	Shaping Neighbourhoods. Barton, Grant & Guise 2003
		5000	Sustainable Communities, Barton. 2000
		4000	Urban Design Compendium
		3250	Approaching Urban Design
	AVERAGE	4062.5	
	Secondary Schools		
		8000	Shaping Neighbourhoods. Barton, Grant & Guise 2003
		16000	Shaping Neighbourhoods. Barton, Grant & Guise 2003
		7000	Approaching Urban Design
		15000	Approaching Urban Design
	AVERAGE	11500	
		Threshold	Source
HEALTH (local)	Pharmacy		
		1 per 5000 people	Urban Design Compendium
	AVERAGE	5000	
	Doctor/GP Surgery		
		10000	Shaping Neighbourhoods. Barton, Grant & Guise 2003
		4000	Urban Design Compendium
		2750	Urban Task Force Report
		2750	Approaching Urban Design
	AVERAGE	4875	
	Dentist		
		10000	Shaping Neighbourhoods. Barton, Grant & Guise 2003
	AVERAGE	10000	

Table 30: Population and area thresholds assumed to trigger the need for various services and facilities

		Threshold	Source
CIVIC	Halls & Community Centres		
		4000	Shaping Neighbourhoods. Barton, Grant & Guise 2003
		4000	Urban Design Compendium
		11000	Approaching Urban Design
	AVERAGE	6333.333333	
	Libraries		
		4000	Shaping Neighbourhoods. Barton, Grant & Guise 2003
	AVERAGE	4000	
	Places of Worship		
		9000	Approoaching Urban Design
	AVERAGE	9000	
	Public Conveniences	n/a	
	AVERAGE		
	Allotments		
		0.3ha/1000 people	Fields in Trust: Guidance for Outdoor Sport & Play 2015
	AVERAGE		

		Threshold	Source
Sport & Leisure	Formal Outdoor Space		
	Playing Pitches	1.2 ha/ 1000 people	Fields in Trust: Guidance for Outdoor Sport & Play 2015
	All outdoor sports	1.2	
	Equipt/designated play areas: LAPS	0.25	
	Equipt/designated play areas: LEAPS	0.25	
	Equipt/designated play areas: NEAPS	0.25	
	Other outdoor provision (MUGAs & Skate parks)	0.3	
	Informal Outdoor Space		
	Parks & Gardens	0.8	Fields in Trust: Guidance for Outdoor Sport & Play 2015
	Amenity Green Space	0.6	
	Natural & Semi-Natural	1.8	

		Threshold	Source
Town Centres			
	District/Town Centre		
		1 per 24000 people	Shaping Neighbourhoods. Barton, Grant & Guise 2003
		32500	Approaching Urban Design
	AVERAGE	28250	
	Local/Neighbourhood Centre		
		6000	Shaping Neighbourhoods. Barton, Grant & Guise 2003
		7500	Urban Task Force
		6500	Approaching Urban Design
	AVERAGE	6666.666667	
	Local Shop		
		1500	Shaping Neighbourhoods. Barton, Grant & Guise 2003
		2250	Urban Task Force Report
		2250	Approaching Urban Design
	AVERAGE	2000	
	Superstore	24000	Shaping Neighbourhoods. Barton, Grant & Guise 2003
	AVERAGE	2000	

Table 30 continued from previous page

Links to selected source material referenced in Tables 29 and 30:

Melbourne 20-minute neighbourhood:

https://www.planmelbourne.vic.gov.au/current-projects/20-minute-neighbourhoods

WYG: How Far do People Walk?

https://www.wyg.com/uploads/files/news/WYG_how-far-do-people-walk.pdf

Providing for Journeys on Foot

http://www.hwa.uk.com/site/wp-content/uploads/2017/09/NR.4.3F-CIHT-Guidelines-for-Providing-Journeys-on-Foot-Chapter-3.pdf

Essex Walking Strategy

https://consultations.essex.gov.uk/rci/walking-strategy/supporting_documents/Essex%20Walking%20Strategy%20Consultation%20June%202019.pdf

Portland Plan

https://www.portlandonline.com/portlandplan/index.cfm?c=56527

Plymouth & South West Devon Joint Local Plan 2014-34

https://plymswdevonplan.co.uk/policy

Shaping Neighbourhoods (Barton, Grant & Guise, 2003)

https://books.google.co.uk/books/about/Shaping_Neighbourhoods.html?id=SnBf4PGntpwC&redir_esc=y

Sustainable Communities (Barton, 2000)

https://books.google.co.uk/books/about/Sustainable_Communities.html?id=oBLW_fZL1OMC&redir_esc=y

Fields in Trust Guidance for Outdoor Sport & Play

http://www.fieldsintrust.org/guidance

Urban Design Compendium

https://www.gov.uk/government/publications/urban-design-compendium

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