

Epping Forest District Council
**Epping Forest District Council
Local Plan**
Part A Report (Infrastructure
Delivery Plan)

Final | December 2017

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

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1 Introduction

1.1 Purpose of the Infrastructure Delivery Plan

Epping Forest District Council is currently progressing a Local Plan for the District, which will provide the policy framework up to 2033.

The National Planning Policy Framework (NPPF) and Planning Practice Guidance (PPG) require Local Plans to positively plan for development and the infrastructure required in the area to meet spatial objectives. Local planning authorities must progress a proportionate evidence base for infrastructure which assesses the quality and capacity of various forms of infrastructure.

Epping Forest District Council has commissioned Arup to prepare an Infrastructure Delivery Plan (IDP), to form part of the Local Plan evidence base. The purpose of the IDP is to set out the infrastructure that will be required to deliver the planned level of housing and employment growth in the district to 2033.

More specifically, the IDP seeks to:

- Understand the current baseline of provision in relation to physical and social infrastructure types;
- Determine infrastructure need across the District to support planned growth;
- Estimate cost, funding sources and phasing of delivery;
- Identify key bodies with responsibility for delivering infrastructure;
- Inform the selection of sites and drafting of policies to be included in the emerging Local Plan; and
- Inform further work being undertaken by the Council in relation to Local Plan viability and implementation.

1.2 Structure of this Report

This (Part A) report is structured as follows:

- **Section 2** outlines the national, sub-regional and local policy context for the delivery of infrastructure.
- **Section 3** provides a social and economic portrait of the District.
- **Section 4** summarises the methodology used to complete the Infrastructure Delivery Plan.
- **Sections 5 to 11** cover current and future infrastructure provision on a topic-by-topic basis:
 - Transport (**Section 5**);
 - Education (**Section 6**);
 - Health, social care; (**Section 7**)

- Emergency services (**Section 8**);
- Community and sports facilities (**Section 9**);
- Open space and green infrastructure (**Section 10 and Section 11**);
- Utilities and telecommunications (**Section 12**); and
- Flood protection and drainage (**Section 13**).

The Infrastructure Delivery Schedule is provided in a separate Part B report.

2 Policy Context for Infrastructure Delivery

This section of the Infrastructure Delivery Plan (IDP) provides a summary of the national and local policy context relating to infrastructure delivery.

2.1 National Policy Context

The National Planning Policy Framework (NPPF) states that local planning authorities must prepare a robust and evidence-based Local Plan which seeks to deliver sustainable development. As part of the statutory requirement to produce a Local Plan, national policy has placed a greater responsibility on local planning authorities to plan for the delivery of infrastructure. This includes infrastructure for transport, telecommunications, waste management, water supply, wastewater, flood risk and coastal change management, and the provision of minerals and energy (NPPF Paragraph 156). NPPF Paragraph 157 emphasises the importance of infrastructure in Local Plans, stressing the need to “*plan positively for the development and infrastructure required in the area to meet the objectives, principles and policies of the Framework.*”

The NPPF also emphasises the need for the Local Plan to be based on adequate, up-to-date and relevant evidence. Paragraph 162 sets out the infrastructure evidence base required for Local Plans. This states that local planning authorities should work with other authorities and providers to:

- Assess the quality and capacity of infrastructure for transport, water supply, wastewater and its treatment, energy (including heat), telecommunications, utilities, water, health, social care, education, flood risk and coastal change management, and its ability to meet forecast demands; and
- Take account of the need for strategic infrastructure, including nationally significant infrastructure within their areas.

The Planning Practice Guidance (PPG) paragraph 018, reference 12-018-201403036 further explains the role and function a Local Plan in delivering infrastructure, stating:

- The Local Plan is an opportunity for the authority to set out a positive vision for the area, but the plan should also be realistic about what can be achieved and when, including in relation to infrastructure. This includes identifying what infrastructure is required and how it can be funded and brought on stream at the appropriate time, as well as ensuring that the requirements of the plan as a whole will not prejudice viability.
- Early discussion with infrastructure and service providers is important to help understand their investment plans and critical dependencies.
- The Local Plan should make clear, for at least the first five years, what infrastructure is required, who is going to fund and provide it, and how it relates to the anticipated rate and phasing of development.
- For the later stages of the Plan period, less detail may be provided as the position regarding the provision of infrastructure is likely to be less certain.

- Where the deliverability of critical infrastructure is uncertain, the Plan should address the implications of this, e.g. possible contingency arrangements and alternative strategies.
- Whilst the detail concerning planned infrastructure provision can be set out in a supporting document (e.g. an infrastructure delivery programme that can be updated regularly), the *key* infrastructure requirements on which delivery of the Plan depends should be contained in the Local Plan itself.

National policy therefore requires a full understanding of the likely infrastructure requirements to facilitate growth to ensure a deliverable Local Plan.

2.2 Sub-Regional Context

The NPPF sets out the duty for local authorities to co-operate, recognising the crucial need for co-ordinated growth and infrastructure delivery. This means that a range of organisations at a sub-regional level have a role in infrastructure planning and delivery.

Local Enterprise Partnerships are partnerships between local authorities and businesses, and seek to decide the priorities for investment in roads, buildings, and facilities. The South East Local Enterprise Partnership (LEP) is currently the largest LEP outside of London and is made up of partnerships between East Sussex, Kent and Medway, Essex and Thames Gateway South Essex. The South East LEP determines strategic economic priorities including investments and activities to drive growth and create local jobs.

The South East Growth Deal (2015) sets aims and objectives for the lifetime of the Deal from 2015-2021. Specific emphasis is on investing in transport infrastructure and skills development. The four key priority areas in the LEP's Strategic Economic Plan are to:

- Enhance transport connectivity
- Increase business support and productivity
- Raise local skills levels
- Support housing and development

More specifically, key aims are to secure investment for the timely provision of infrastructure to ensure sustainable development in the future. South East LEP priorities are to:

- Create 45,000 new jobs
- Build 23,000 new homes
- Generate £700m of public and private investment
- See significant investment along key road and rail routes, to improve journey times and open up new site for jobs and homes
- Develop new business parks
- Invest in colleges and training providers.

The London Stansted Cambridge Consortium is a partnership of public and private organisations. Its objective is to promote growth and economic development within the corridor including making the case for the strategic pieces of infrastructure required, such as M11 junction 7a.

Essex County Council (ECC) is responsible for delivering and maintaining highways, transport, and schools infrastructure, in addition to providing libraries, adult social care and youth services. The County Council is also responsible for waste and is the Lead Local Flood Authority. ECC is working with the local planning authorities to assist in identifying the additional infrastructure that is needed to support growth set out in separate Local Plans.

Essex County Council commissioned the county-wide Greater Essex Growth and Infrastructure Framework (GIF) which sought to identify the scale of the growth, existing capacity, and an assessment of future infrastructure requirements to support the identified level of housing and economic growth to 2036. The study was published in February 2017. Where appropriate, the approach to modelling taken within the IDP is consistent with the GIF work.

Epping Forest District has also been working with neighbouring authorities within the same Strategic Housing Market Area to develop and test options for meeting housing need across the Housing Market Area and to determine the best spatial options for growth and the quantum that could be delivered to support the regeneration of Harlow. An independent study was commissioned to by the group to assess the most suitable sites for allocation in and around Harlow. These sites give rise to particular cross-boundary issues in relation to infrastructure provision, which requires a collaborative approach.

Epping Forest District Council, along with Harlow Council and East Herts District Council, are working collaboratively to support proposals for a Garden Town at Harlow and Gilston. The Garden Town project will see approximately 16,500 new homes built in Harlow and the surrounding area by 2033, including around 3,900 homes within Epping Forest District. The three authorities are working closely with Essex County Council, Hertfordshire County Council, South East LEP, Hertfordshire LEP, and site promoters. A Developer Forum, for both Harlow and Gilston Garden Town sites and other sites across the District, has been established to help coordinate the approach to infrastructure delivery across key stakeholders. A government grant has also been provided to help fund the significant amount of technical work required to deliver this ambitious project.

2.3 Local Policy Context

Epping Forest District Council is currently producing the Local Plan for the District. Once adopted, it will replace the Combined Local Plan 1998 and Alterations 2006 Policy Document, and set out the spatial strategy for employment, homes, services, and infrastructure provision.

The IDP provides the infrastructure evidence base on which to make planning and investment decisions for the District in the future. It provides an in-depth understanding of current provision and capacity, using anticipated population and employment growth to inform future needs and funding implications.

3 Social and Economic Portrait of Epping Forest District

This section provides a brief overview of some of the key socio-economic characteristics of the District which have direct implications for infrastructure planning.

Epping Forest District is in the south-west of Essex and borders Greater London on the southern edge. The District has a mix of rural and urban areas, with the population centred largely in the towns of Loughton/ Debden, Chigwell, Chipping Ongar, Epping and Waltham Abbey. For the most part the rural areas of the District are in the Green Belt (93% of the District is covered by Green Belt) which poses a challenge for accommodating growth and the required supporting infrastructure.

Parts of the District have good transport links into London, connected by the Central Line (London Underground). In the west of the District Roydon is on the mainline into Liverpool Street and both the M11 and M25 motorways run through the District. More rural parts of the District have poor public transport connections. Providing services which meet the needs of a dispersed rural population outside the main settlements is a challenge for infrastructure planning in the District.

The District is largely affluent with few areas of deprivation (English Indices of Deprivation, 2015). This indicates that there are few barriers to employment, education, housing and services, and the area demonstrates few issues around poor health and high crime levels.

The total population of the District in 2014 was 128,800 (ONS 2014-based sub-national population projections¹), rising to 130,300 in 2016 (ONS 2016 Mid Year Estimates). The 2014-based sub-national population projections show that, whilst the number of people aged 0-15 has remained almost consistent, there has been a significant rise in those aged 65 and over, increasing by almost 4% to 36,000 people. This will continue to put pressure on services to support elderly communities, and will have significant implications for future priorities in health, social care and housing. The number of people in single person households is also expected to rise from 52,000 people to 66,460 by 2033.

Residents in Epping Forest District are slightly below the Great British average in terms of qualification levels. Around 58,900 residents (74.7%) have achieved an NVQ2 and above (compared with the Great Britain average of 74.3%) and 31,400 residents (39.9%) have achieved an NVQ4 and above (compared to 38.2%) (ONS Annual Population Survey Jan 2016-Dec 2016). Epping Forest District has a slightly above average number of residents with no qualifications, with 8.2% with no qualifications against the British average of 8.0%.

The number of economically active residents is high in Epping Forest District, with 61,500 residents in employment or seeking work, equivalent to 78.0% of the

¹ As set out in Section 4.4, the 2014-based projected are used as the basis of the IDP forecast modelling.

population and higher than the British average of 77.8%. Conversely, unemployment rates are low, at only 1,800 people out of work, representing 2.9% of the population (and lower than the British average of 4.9%) (ONS Annual Population Survey Jan 2016-Dec 2016).

The ONS Annual Population Survey indicates that the occupation category that employs the greatest number of residents in Epping Forest District is Professional Occupations (14,200 employees, or 21.6%). The percentage of residents employed in the Managers, Directors and Senior Officials category is higher than the British average, employing 19.3% of the population compared to 10.6% British average (ONS Annual Population Survey Jan 2016-Dec 2016). Median residence-based gross weekly pay in 2016 was estimated at £636, which again is higher than the British average of £541 (ONS Annual Survey of Hours and Earnings, 2016). However, job density – the ratio of total jobs to population aged 16-64 – is low at 0.68, compared to the British job density of 0.83 (ONS Job Density, 2015).

Data shows that residents are most likely to travel to London for their place of work, with 25,826 commuting to London (representing 54%) (Census Travel to Work, 2011). Other places of work are within Epping Forest District (26%), and other locations in the rest of Essex (10%). The final 10% travel to others areas of Great Britain (Figure 1).

Figure 1: Employment locations for Epping Forest District residents

Place of work	Address whilst working: Epping Forest District (number)	Address whilst working: Epping Forest (percentage)
Epping Forest District	12,582	26%
Essex	4,763	10%
London	25,826	54%
Rest of Great Britain	4,862	10%

The high levels of out-commuting to London and destinations in Essex and Hertfordshire is a significant issue for infrastructure planning in the District.

4 Methodology

4.1 Assessment Scope

The IDP covers the types of infrastructure set out in Figure 2.

Figure 2: Scope of IDP

Category	Infrastructure
Transport	Highways
	Rail
	Bus network
	Walking and cycling
Education	Primary schools
	Secondary schools
	Further education
	Adult community learning
Health and Social Care	GPs
	Dentists
	Pharmacies
	Hospitals
	Mental health
	Community nursing
	Adult social care
Emergency Services	Ambulance
	Police
	Fire
Community and Sport	Libraries
	Youth centres
	Village and community halls
	Indoor sports facilities
	Outdoor sports facilities
Open Space and Green Infrastructure	Public parks and gardens
	Natural and semi-natural greenspace
	Amenity greenspace
	Provision for children and young people
	Cemeteries and churchyards
Utilities	Water
	Waste water
	Electricity

Category	Infrastructure
	Gas
	Waste
Telecommunications	Broadband

4.2 Overview of Methodology

The assessment is based on a three stage process to understand current and future infrastructure provision, set out below.

A combination of quantitative and qualitative sources have been utilised. Discussions were held with relevant Epping Forest District Council and Essex County Council officers as well as with contacts from a range of external providers throughout each stage of the assessment. A list of all the stakeholders that have been contacted is provided in Appendix A.

The demand forecast set out in this IDP is based on the level and distribution of housing and employment and traveller site/pitch development identified in the Submission Local Plan published under Regulation 19. The IDP is an iterative document and further work will be undertaken prior to the submission of the Local Plan. In particular, further transport modelling of the preferred sites will be undertaken by Essex County Council and further consultation on the implications of growth with utility providers will be carried out.

For many types of infrastructure, it is appropriate to consider the cross-boundary implications of growth, particularly in relation to strategic sites around Harlow.

4.2.1 Stage 1: Scope and review existing information

Stage 1 of the assessment focussed on understanding the current infrastructure provision across Epping Forest District and whether it is adequate to meet the needs of the current population. This stage also identified any planned improvements in infrastructure provision.

The Stage 1 qualitative and quantitative assessment of current infrastructure and its spatial distribution was principally undertaken through a review of secondary data sources. This analysis was supplemented by discussions with key stakeholders and local service providers to understand if existing facilities were ‘fit for purpose’.

4.2.2 Stage 2: Assess infrastructure needs and deficits

The purpose of Stage 2 is to understand future demand for infrastructure on the basis of the agreed development quantum and trajectory (summarised in Section 4.3) and identify existing shortfalls in provision and future deficits based on planned growth.

For certain infrastructure sectors it has been possible to set infrastructure benchmark ‘standards’, which can be used to derive estimates of the amount of provision that is required.

Where standards for infrastructure exist, future demand for these services has been modelled – more details are provided in Section 4.4. The remaining types of infrastructure have not been subject to forecast modelling, and have instead been considered in a qualitative manner, based on consultation with providers and the District and County Council.

This stage therefore provides an indication of whether current, planned and committed infrastructure would be sufficient to meet the District's future needs and demands in line with the proposed growth objectives of the Local Plan. This assessment therefore highlights where additional provision will be required to support growth.

Infrastructure need has been reported at a range of spatial scales, depending on the infrastructure type. The spatial scales include at the District, or wider regional level, or at the settlement level. For schools infrastructure, Forecast Planning Group² areas have been used to best reflect how pupil planning is carried out.

The West Essex Clinical Commissioning Group plans primary health care provision based on Neighbourhoods. The need for primary care health care facilities has been reported to reflect the CCG's planning areas.

4.2.3 Stage 3: Prepare delivery plan

Stage 3 draws together the infrastructure assessment information from the above stages to prioritise and cost the additional infrastructure required. More details of the approach to prioritisation and costing are provided in the accompanying Part B report.

The aim of this stage of the work was to identify sources of funding, including any shortfalls. This informed an understanding of the level of funding that needs to be sourced through developer contributions in order to support the level of growth anticipated through the Local Plan. The IDP is a live document and will be up-dated as appropriate as proposed interventions are scoped in more detail and more detailed cost information becomes available.

The final part of Stage 3 is the prioritisation and broad phasing of infrastructure provision. This is summarised within the Infrastructure Delivery Schedule (Part B report).

4.3 Development Quantum

The IDP has taken the quantum of development from the proposed housing allocations in the Regulation 19 Submission Local Plan, phased over the Plan period as per the trajectory. It also takes into account commitments (planning permissions) and a windfall allowance of 35 dwellings per year from 2022/23, which has been split indicatively across the District, with a weighting towards rural areas given that many windfall developments are expected to be rural exception sites (refer to Section 4.4). A summary of the quantum of housing and

² Forecast Planning Groups are sub-district spatial areas used to collectively plan for accommodating future pupil yields.

traveller pitches / yards growth which has been tested in each settlement is shown in Figure 3 and Figure 4.

Figure 3: Housing growth by settlement

Settlement	Housing units on allocated sites
Buckhurst Hill	87
Chigwell (including Chigwell Row)	376
Ongar	590
Epping (including Coopersale)	6
Fyfield	1,305
High Ongar	14
Loughton/Debden	10
Lower Sheering	1,021
Nazeing	14
North Weald Bassett	122
Roydon	1,050
Sheering	62
Stapleford Abbots	84
Theydon Bois	47
Thornwood	57
Waltham Abbey	172
Other rural sites	858
Latton Priory	1,050
Water Lane Area	2,100
East of Harlow	750
Total	9,816

Figure 4: Traveller pitches / yards growth by settlement

Settlement	Pitches / yards on allocated sites
North Weald Bassett	5
Waltham Abbey	5
Stapleford Abbots	1
Hamlet Hill (2 sites)	3
Roydon Hamlet	4
Nazeing	5
Latton Priory	5
Water Lane Area	5
East of Harlow	5
Total	38

Further detail on growth and expected phasing is set out in Appendix B.

4.4 Forecast modelling

As part of Stage 2 of the assessment, demand forecasting has been undertaken for the following types of social infrastructure:

- **Education:** children's clubs; nurseries; pre-schools; primary schools; secondary schools (including sixth form and further education); and adult community learning. Note, modelling of schools places has been undertaken by Essex County Council.
- **Health and social care:** GPs; dentists; hospital beds; independent living; nursing care; residential care; and extra care. Note, modelling of GP provision places has been undertaken by West Essex CCG.
- **Community and sport:** libraries; youth centres; community centres; sports hall courts; swimming pools; squash courts; health and fitness facilities; indoor bowling rinks; and indoor tennis courts.
- **Outdoor sports and recreation:** artificial grass pitches; tennis courts; athletics tracks lanes; golf courses; and children's play.
- **Green infrastructure:** public parks and gardens; natural and semi-natural greenspace; amenity greenspace; and provision for children and young people. Note, modelling of green infrastructure is taken from the Open Space Strategy (2017).

In order to understand the demand created by growth in population over the Plan period, the standards set out in the subsequent topic-specific sections were applied to the additional population arising from future housing.

The outcomes from the forecasting modelling are reported at different spatial scales, depending on the type of social infrastructure:

- **District wide:** total requirements within Epping Forest District

- **Schools Forecast Planning Groups:** mirroring the planning areas used for primary and secondary schools by Essex County Council.
- **GP Neighbourhood Areas:** mirroring the planning areas used for GP surgeries by West Essex CCG.
- **Settlements:** demand for individual settlements, where it would be expected that services would be delivered locally (e.g. children's play). It should be noted, however, that not every settlement is expected to have all types of services (e.g. dentists); instead, wider demand for these types of services would be met in certain settlements.

The forecast modelling is based on the 2014-based population and household projections, which were released in 2016 and are currently the most up-to-date source of information at the local authority level. The draft Local Plan is based on the 2015 SHMA (which used the 2012-based data available at the time of preparation), as well as various update papers which make use of more recent data including the 2014-based population and household projections.

Figure 5 below sets out the assumptions that have been used for the forecast modelling.

Figure 5: Modelling assumptions

Assumption	Reason
Overall average household size for the District to be taken from 2014-based household projections. Average household size assumptions will be altered across the sites depending on High, Medium and Low density categories.	To estimate the likely additional population arising from households.
Current housing and population levels by settlement has been calculated using the following method: <ul style="list-style-type: none"> • Ward-level and parish-level housing and population for 2011 were taken from the 2011 Census and applied to the settlements using a 'best fit' approach, consistent with the Settlement Hierarchy Technical Paper (2015). • To estimate the population growth in the period 2011-2016, additional population from completions was derived using the present-day average household size taken from the 2014-based household projections³, and added to the 2011 base. • Settlement populations were then adjusted to be consistent with the 2014 Mid-Year Estimate and 2014-based household projections for the District as a whole. 	To understand infrastructure needs on a sub-District level.
Future housing and population levels by settlement have been calculated using the following method: <ul style="list-style-type: none"> • To estimate the population growth in the period 2016-2033, additional population from proposed allocated sites, commitments and a likely level of windfall 	To estimate the likely number of additional population arising from households. To understand infrastructure needs on a sub-District level.

³ 2014-based household projections, DCLG (2016)

Assumption	Reason
<p>development (see below) was derived using the forecast average household size taken from the 2014-based household projections⁴, and added to the 2016 base.</p> <ul style="list-style-type: none"> No average household sizes for traveller pitches is currently available. There is no official definition as to what constitutes a single traveller residential pitch; travellers require various sizes of accommodation, depending on the numbers of caravans per pitch which varies with different families living at different densities. The convention used in the site selection methodology is that a pitch accommodates a single household and typically contains enough space for one or two caravans. For the purposes of forecasting, an average of two caravans per pitch was assumed, and the forecast average household size taken from the 2014-based household projections was applied to each caravan (acknowledging that multiple caravans would still be considered to be a single household). 	
Traveller pitch trajectories have been calculated in phases across the Plan period rather than yearly – delivery has been taken to be within the last year of the phase in question as it is unlikely that pitches would be phased over more than one year.	To estimate the phasing of traveller pitch delivery.
The 10% ‘lapse rate’ applied to committed development in the housing supply trajectory (designed to acknowledge non-delivery of some permissions) has not been applied for the purposes of the IDP.	To understand the upper end of future requirements, i.e. assuming that all consented development comes forward.
The windfall allowance of 35 dwellings per year from 2022/23 has been split across settlements, based on current population levels and expected areas of windfall development. There is a weighting towards rural areas given that many windfall developments are rural exception sites.	It is impossible to predict where windfall development will occur; however, this provides an indication based on scale of the settlement and historic trends.
Windfall development assumed to be houses rather than flats.	To apply standards to likely windfalls where they differ between houses and flats.
Commitments assumed to follow the same proportional split between houses and flats as occurring between 2011/12 and 2015/16.	To apply standards to commitments where they differ between houses and flats.
<p>Housing allocations in the following locations has been amalgamated into the following larger settlements:</p> <ul style="list-style-type: none"> Coopersale amalgamated into ‘Epping’; Chigwell Row amalgamated into ‘Chigwell’; and Sons Nursery, Hamlet Hill amalgamated into ‘Latton Priory’. 	To ensure these allocations are reflected in the IDP.

⁴ 2014-based household projections, DCLG (2016)

5 Transport

5.1 Highways

Highways infrastructure covers both the strategic road network and local roads within the District. Highways England is responsible for providing and managing the strategic network, whilst the local road network is managed by Essex County Council, which is the highways authority.

At the District level, Local Highways Panels (LHP) are responsible for setting local priorities in their areas. LHPs cover a broad scope, including traffic management, tackling congestion, road safety, passenger transport, cycling schemes and major improvement schemes.

5.1.1 Evidence Base and Strategic Issues

The main sources of evidence include:

- Consultation with Essex County Council
- Essex Transport Strategy: the Local Transport Plan for Essex (2011)
- Local Bus Service Assessment and Priority Policy 2015 to 2020, Essex County Council (2016)
- Technical Notes 1-8, prepared by Ringways Jacobs and Essex County Council
- West Essex and East Hertfordshire Local Plans Modelling, Technical Note 3 Stort Crossing/ Northern Bypass initial testing (2017)
- West Essex and East Hertfordshire Local Plans Modelling, Technical Note 4 – emerging option (2017)

The Essex County Council Local Transport Plan was published in 2011, and sets out the future vision and approach to transport within the county. The Plan covers a 15 year period to 2026 and is supported by an Implementation Plan, which is refreshed every three years along with a three year rolling investment programme. The Plan is strongly focused on long-term planning and ‘whole life costs’, and seeks to achieve five key outcomes:

- Provide connectivity for Essex communities
- Reduce CO2 emissions and improve air quality
- Improve safety on the transport network
- Maintain transport assets to an appropriate standard
- Provide sustainable access and travel choice for Essex residents

The Essex Transport Strategy sets out a series of priorities for West Essex. These focus on maintaining strong transport links with London, providing greater connectivity for rural communities, and improving the sustainable transport offer and modal share.

The Epping Forest Submission Local Plan sets out a number of policies relating to the future provision of transport infrastructure and the promotion of sustainable transport choices. The policies seek to widen the choice of travel opportunities using public transport, walking and cycling. Policy T1 Sustainable Transport Choices in the Submission Local Plan sets out that development should seek to minimise the need to travel, promote opportunities for sustainable transport modes, improve accessibility to services and support the transition to a low carbon future. Policy T2 Safeguarding of Routes and Facilities identifies the need to safeguard land required for proposed transport routes and facilities.

In order to support the levels of growth anticipated, especially around Harlow, significant investment in the strategic road network is required. Epping Forest District Council is working with the other Housing Market Area authorities (Harlow, Uttlesford and East Hertfordshire), as well as Essex County Council, Hertfordshire County Council and Highways England to resolve key issues with the strategic highways network. A Memorandum of Understanding has committed the parties to working together to resolve key highways issues, including improvements to M11 Junction 7 and the proposed new 7A near Harlow.

All growth locations in Harlow would increase the need for a major intervention to improve access to the M11 highways network, however growth to the East of Harlow is particularly reliant on the provision of Junction 7a.

5.1.2 Existing Provision

Essex County Council maintains an extensive infrastructure network, shown in Figure C.1 in Appendix C. Within Epping Forest District, there are two major motorways. The M25 London Orbital Motorway cuts east-west throughout the District, near to Waltham Abbey and Stapleford Tawney. The M11 runs north-south through the District and has an interchange with the M25, passing Sheering, Hastingwood, North Weald Bassett, and Chigwell. The A414 cuts across the north east of the District, passing through Chipping Ongar.

Significant levels of growth are planned for the District, which will place increasing pressure on existing transport services and create increased demand for new infrastructure.

5.1.3 Shortfalls in Current Provision

A range of studies have identified current capacity constraints on the road network, which present a range of challenges in supporting the proposed levels of growth for the area. Consultation with ECC identified that overall the network is generally within or approaching capacity with a number of key exceptions where junctions are exceeding capacity.

Congestion is an issue within towns throughout the District, and a number of the inter-urban routes are operating at or near to capacity. Discussions with ECC have highlighted in particular that the Epping High Road (B1393), running through the centre of Epping, currently experiences significant congestion problems, particularly around Ivy Chimneys/Bell Common traffic lights and Wake Arms roundabout. The B181 between North Weald and Epping also experiences

significant pressure. Similarly, routes through Loughton are congested, which is exacerbated by the fact that Junction 5 of the M11 has no northbound slip road, which subsequently draws traffic into the surrounding areas to access the motorway.

The high levels of out-commuting across the District places significant pressure on the road network, particularly during peak times. Congestion is common on sections of the A414 and is a particular issue at peak times.

In relation to the strategic sites, access to Harlow is currently limited due to only one link to the strategic road network, via Junction 7 of the M11. The Highways England London to Leeds (East) Route Strategy 2015-2020 identifies significant congestion at Junction 7 of the M11, and poor network connectivity particularly near Harlow.

Epping Forest District and Essex County Council have commissioned several studies in recent years to understand the existing highways issues, including detailed junction modelling. The *Epping Local Plan Highway Impact Assessment (Technical Notes 1-8)* (2013-onwards) used a 'scenario-based' approach to understand the impact that different quantum of growth in the District might have on highways infrastructure, and in particular on junction capacities. The assessment (2013-onwards) found that the following junctions have arms operating noticeably above capacity:

- Wake Arms PH (A104 / A121 / B1072 / B1393) – Epping
- Thornwood Road (B1393 / B181) – Epping
- Station Road (B1393 / Station Road) – Epping
- St. John's Rd (B1393 / St. John's) – Epping
- M25 J26 Southern RAB (M25 Off Slip / A121 / Honey Lane) - Waltham Abbey
- Station Road - Waltham Abbey

Further modelling work was undertaken to build on schemes tested in Technical Note 5, and identified further junctions that could experience capacity issues as a result of growth, and potentially could require mitigation. These Junctions include:

- A113 Ongar Rd - B172 Abridge Road
- A121 Church Hill - A1168 Rectory Lane
- Millsmead Way - A121 Goldings Hill
- A113 High Road - A1168 Chigwell Ln - A113 Abridge Rd
- A1168 Chigwell Lane - Langston Road - Oakwood Hill
- A1168 Chigwell Lane - The Broadway
- A1168 Chigwell Lane - Borders Lane
- A1168 Rectory Lane - Westall Road Rectory Lane

- A1168 Rectory Lane Pyrles Lane
- A1168 Rectory Lane Hillyfields Priority

The *Epping Local Plan Highway Impact Assessment* (2013-onwards) modelled future impacts for the period up until 2026 and 2036. By 2036, the majority of junctions across the District had at least one arm operating above capacity. The impacts of development against this background growth analysis is likely to result in an increasingly congested and unreliable road network. Work was also undertaken to understand opportunities for mitigation at particular junctions. Following this work it was recognised that a shift in modal share towards public transport will be required to support growth in a sustainable way.

5.1.4 Highways Infrastructure Requirements

Due to the significant level of investment and long timescales involved in increasing road capacity, the strategy for growth within Epping Forest District seeks to concentrate growth within areas with better public transport accessibility and opportunities for walking and cycling, as well as improving public transport and active travel opportunities.

Consultation with Essex County Council has highlighted that there are limited options for local highways interventions within Epping and other key settlements within the District, partly due to the protected land in Epping Forest and the high risk of diverting traffic to residential areas. The focus is therefore to encourage sustainable transport modes such as walking and cycling. Growth located in Epping, Loughton, Chigwell, Chipping Ongar and Waltham Abbey will be supported through improving links to public transport services, including extensions and improvements to the existing bus services and improved walking and cycling. At Waltham Abbey, improved access to train services from Waltham Cross and Cheshunt may be required. Bus, walking and cycling are covered in more detail in the following sections.

Accessibility work undertaken as part of the site selection process by Arup and Jacobs on behalf of EFDC assessed proposed housing sites in relation to the public transport network (road and rail), and their proximity to local services including schools and GP surgeries. This work has enabled sustainable locations to be prioritised in subsequent site selection work. The findings concluded that Loughton contained the largest number of sites with a high level of sustainability access, followed by the urban areas of Debden, Buckhurst Hill, Theydon Bois and Epping.

Of the towns and villages with limited levels of sustainable transport accessibility, it was identified that Chipping Ongar and North Weald Bassett have the largest existing populations and are therefore most likely to support the provision of additional sustainable transport. Better bus provision was proposed to accommodate the potential demand from large development proposals. However, it was identified that the economic viability of providing better sustainable travel infrastructure to rural villages is limited. This has informed the site selection exercise to determine the site allocations taken forward as part of the Submission Local Plan.

One of Essex County Council's ongoing priorities for West Essex involves lobbying the Government for improvements to journey time reliability in the M11 corridor. In particular, Essex County Council considers the introduction of a new motorway junction (Junction 7a) to be crucial in order to deliver the strategic growth planned for the area. Planning permission has been granted to allow Junction 7a improvements to Gilden Way in Harlow, and funding has been allocated. Plans for Junction 7a include creating an east-west link to help move traffic smoothly out of Harlow on the M11, and reduce congestion on the north-south links through Harlow. The scheme will include the construction of a new motorway junction between existing junctions 7 and 8, and the construction of a new link road and roundabout to the link proposed Junction 7a to Gilden Way and Sheering Road. This will also include widening and improvements to Sheering Road and Gilden Way. The prioritisation of this scheme in advance of further improvements to Junction 7 will provide greater gains in terms of additional capacity.

Modelling work undertaken by Essex County Council also identified the need for some key improvements to the A414, including further crossings of the River Stort. This is considered as part of an overall approach to the A414 corridor between the M11 and A1, and is expected to be part funded by developers over the next six to ten years⁵. Ongoing modelling work will further determine the potential for sustainable transport measures to reduce car trips as well as the potential for physical improvements to the highways network where feasible.

Modelling work has also been undertaken to assess the impacts of growth on the wider Harlow area. The West Essex and East Hertfordshire Local Plan Modelling Technical Notes 1-4 assess development in the West Essex and East Hertfordshire Strategic Housing Market Area, along with committed growth, to identify the expected network impact by 2033. The modelling work concluded that anticipated growth would result in additional traffic on the roads in the Harlow area. Key junction capacity issues were identified in the following locations:

- A414: Edinburgh Way/ Howard Way/ Harlow Retail Park
- A1025 Southern Way – Howard Way/ Tillwocks Road and Manston Road/ Tripton Road
- First Avenue/ B183 Gilden Way – Gilden Way/ London Road and Gilden Way/ Churchgate Street
- A1184 Corridor – Station Road/ West Road, Sawbridgeworth
- A1169/A1025 Third Avenue Corridor – Abercrombie Way

Network routing issues were identified in the following locations:

- A1169 Southern Way Corridor – Tillwick Rd
- Katherine's Way/ Southern Way

⁵ This intervention is outside the District but within the Garden Town. Further work required to determine an apportionment across the relevant local authorities and sites

More detailed junction modelling will identify improvements and mitigations schemes required. Ongoing modelling work will further determine the potential for sustainable transport measures to reduce car trips as well as the potential for physical improvements to the highways network where feasible.

There is ongoing consultation regarding the development of north-south and east-west sustainable transport corridors within Harlow. Plans for the north-south corridor are less advanced, and achieving this route would require greater investment. The proposed route of the north-south corridor land runs through land owned by Harlow Council and comprises an area designated as Green Wedge. Epping Forest District Council, Harlow Council and East Herts Council have commissioned further work through the Garden Town to progress the development of these transport corridors, and has procured consultants to undertake more detailed design work.

Future transport infrastructure needs in this area will also be affected by the potential relocation of the Princess Alexandra Hospital, either to the site proposed for allocation to the East of Harlow, or to Gilston in East Herts.

5.1.5 Funding Mechanisms

Funding sources will be considered further once the future highways infrastructure requirements are better known. Limited opportunities for funding major infrastructure will mean that additional growth in the District will be largely accommodated by making better use of existing transport networks. The focus of Essex County Council will be on identifying packages of measures to implement on the existing network that will improve integration and connectivity. Essex County Council has a Highways and Transport capital budget of £133m for the year 2017/18, to deliver projects to ease congestion and enhance connectivity across Essex⁶. At the District level, the Epping Forest LHP has almost £350,000 available in capital funding for the year 2017/18, including match funding⁷. This funding stream is available for range of highways schemes in the District such as congestion, signage and other minor improvements.

Department for Transport (DfT) and Highways England's *Road Investment Strategy (RIS): 2015 to 2020* sets out the long-term approach to improve major roads and motorways in England. The RIS is funded by Government, through a five-year fixed capital settlement, with strategic decisions set by the Secretary of State. The RIS outlines a commitment to provide extra capacity on junction 7 of the M11, to release additional capacity for the growth of Harlow and Epping Forest District. An expected cost of £25-50m is committed to fund significant road upgrades and make greater use of technology to improve traffic conditions including smart motorways. The RIS: 2015-2020 commits financial resources to support the upgrade of junction 7, however this funding has been allocated to junction 7a instead, to provide greater capacity gains in the short term. Junction 7 is on the list of schemes to be taken forward under RIS 2 for the post-2020 period.

⁶ ECC Revenue Budget and Capital Programme 2017/18

⁷ Epping Forest District Council Local Highways Panel Meeting Agenda (September, 2017)

It is expected that developer contributions will form a significant proportion of the funding to deliver highways improvements to support growth. Developer contributions will be expected to fund local highway improvements necessary to bring site forward for development. Where highways improvements are required which will require contributions from a number of developments, further work, in consultation with Essex County Council, will be required to determine the level of contributions and how these will be apportioned between respective developments. It anticipated that highways improvements will be delivered and funded through Section 278 Agreements.

5.2 Rail and Underground Network

Epping Forest District contains only one mainline railway station, at Roydon. Roydon Station is on the London Liverpool Street to Cambridge line via Harlow Town and Bishops Stortford. There are other stations adjacent to the District's boundaries, including Cheshunt, Broxborne, Harlow Town, Sawbridgeworth and stations in Brentwood and Romford.

Crossrail 1 is to the south of the District with stations at Romford, Gidea Park, Brentwood and Shenfield. Although not confirmed, Crossrail 2 is expected to come forward around 2030, and will be located to the west of the District, with stations planned for Waltham Cross and Broxbourne.

Epping Forest District is also served by the Central Line (main line and Hainault via Newbury Loop) with eight London Underground stations within the District:

- Buckhurst Hill Station
- Loughton Station
- Debden Station
- Theydon Bois Station
- Epping Station
- Roding Valley
- Chigwell Station
- Grange Hill

5.2.1 Evidence Base and Strategic Issues

The main sources of evidence include:

- Rolling Origin and Destination Survey (RODS), TfL (2014)
- Fit for the Future, TfL (2014)
- London Travel Demand Survey, TfL (2014)
- Essex Transport Strategy, Essex County Council (2014)
- Consultation with TfL
- Consultation with Network Rail

TfL's *Fit for the Future* report includes four priorities for London transport that are relevant to infrastructure in Epping Forest District:

- Safety and reliability
- Maximising capacity from the existing network
- Growing the network, including through Crossrail and Overground expansion

5.2.2 Existing Provision

The Central Line runs using a partially automated system, and in 2013 TfL increased services on the core section of the line to 34 trains per hour. However, trains within Epping Forest District are less frequent than this. TfL's RODS data from 2014 shows a peak hour train frequency on the five stations at the end of the Central line (Epping, Theydon Bois, Debden, Loughton and Buckhurst Hill) of between ten and 13 trains per hour.

There are complex station usage patterns in the District where some commuters choose to use a station which is not geographically proximate in order to access parking, childcare facilities etc. It is also noted from TfL data that people travel significant distances from outside the District to access Central Line services.

Two trains per hour stop at Roydon rail station in each direction during weekdays; services are less frequent during the evenings and weekends. Improvements to Roydon rail station have recently been carried out by current rail operator Abellio Greater Anglia. These include:

- Reconstruction of Platform 1
- Installation of a new waiting room
- Additional cycle parking
- New lighting, CCTV and information boards

There are significant planned improvements to the West Anglia Mainline to the south of Roydon as part of the four tracking works between Tottenham and Broxbourne.

5.2.3 Shortfalls in Current Provision

TfL's RODS data indicates that, on the five stations at the end of the Central Line in Epping Forest District, peak hour capacity is around 37% utilised, as shown in Figure 6.

Figure 6: Train loading in Epping Forest district

Stations	AM Peak Hour (0800-0900)		PM Peak Hour (1700-1800)	
	Eastbound	Westbound	Eastbound	Westbound
Buckhurst Hill	9%	34%	15%	8%
Loughton	6%	37%	10%	9%
Debden	2%	17%	6%	6%
Theydon Bois	2%	14%	5%	3%
Epping	N/A	10%	N/A	3%

There is no available data on the capacity of individual stations, (i.e. the amount of passengers that could be accommodated by the station premises and its facilities at any one time) and no evidence that any stations are nearing total capacity. However, significant concerns were expressed by residents through previous consultation on the Local Plan that certain stations are constrained.

By the 2020s, the Central Line (along with the Bakerloo, Piccadilly and Waterloo & City lines) will be operating the oldest trains and signalling on the network. TfL is progressing plans for a comprehensive renewal of these lines, including a single train fleet and signalling system. As part of this upgrade, TfL hope to add an additional 25% capacity to the Central Line by 2025.

In the past TfL have stated that there are capacity issues further down the line during peak times and discussions have been held with TfL about the implications of growth in Epping Forest District and neighbouring districts and London boroughs.

5.2.4 Rail and Underground Infrastructure Requirements

The capacity of the underground is a significant concern for local residents. Many residents choose to use the Central Line in preference to overground rail as it is a more cost effective mode of travel and provides better connections to employment, leisure and other locations within London and its surrounding area.

Analysis undertaken by TfL shows that there is currently capacity on the Central Line at stations within the District, though it is noted that trains become congested closer to Central London. TfL have also undertaken some analysis on future capacity on the line to 2041, looking at both impacts of growth in Epping Forest District as well as Waltham Forest and Redbridge, and the impacts of improvements to the London transport network (including National Rail capacity enhancements, HS2, Crossrail, Overground capacity enhancements, various underground upgrades, and bus capacity enhancements). The analysis found that the north-eastern part of the Central Line will continue to have capacity. It was found that the planned upgrade of the Central Line to 33 trains per hour will have a positive impact on capacity, and that Crossrail will also have a positive (but not transformative) impact. Taking into account planned growth over the plan period, this capacity is not expected to change significantly up to 2041.

The Queen Elizabeth Line will have some positive impacts on capacity in the District, including both the potential to free up capacity on the Central Line but

TfL do not consider that this will have a significant effect. The Queen Elizabeth Line will provide improved access to London from Broxbourne and Cheshunt stations.

There are limited future options to significantly improve capacity beyond the current planned Deep Tube Up-Grade Programme. There is however potential for demand management measures to spread demand over the peak periods.

As part of site selection undertaken as part of the Regulation 18 Draft Local Plan, the cumulative impact on the Central Line of proposed allocations within each settlement was assessed. This assessment has been updated for the purposes of the IDP. In order to calculate the additional number of commuters who might be expected to use the Central Line as a result of the proposed allocations, the following data sources and assumptions were used:

- The proportion of residents using the underground as their main mode of travel to work was taken from 2011 Census data^[1], at ward level and applied to individual settlements. For the purposes of the assessment it has been assumed that these proportions will continue across the Plan period.
- TfL's *London Travel Demand Survey* (2014) highlights that while the highest flows are between 0800-0900 and 1700-1800, the AM and PM peaks extend beyond these hours (0700-1000 and 1600-1900 respectively). It has been assumed that one-third of additional users would choose to travel outside 0800-0900 and 1700-1800; in reality this might be an overestimation.

In the assessment [and subsequent re-assessment](#), growth in any settlement which would result in an increase in eastbound or westbound peak hour travel of over 3% was considered to have a material impact on the expected peak use of the Central Line, and growth in any settlement which would result in an increase of over 10% was considered to have an impact on the capacity of the stations to accommodate this growth in demand. No settlements were found to have an increase of more than 10%, and only two (Epping and Loughton-Debden) were found to have an increase of over 3%. Most of the planned growth is therefore not expected to have a material impact on the capacity of the Central Line within Epping Forest District (though it may have an impact on the capacity of the Central Line or wider TfL network as a whole).

As well as commuters, it is expected that growth in Epping Forest District would lead to other types of trip generation, e.g. travel into Central London for shopping and for entertainment. These trips have not been modelled because they are likely to occur outside the peak times.

Proposed allocations on TfL land assets (e.g. car parks) have assumed no reductions in service provision or car parking levels – this would be achieved through the use of decked parking facilities or similar. This aligns with the approach taken in the site selection.

^[1] QS701EW - Method of travel to work

5.2.5 Funding Mechanisms

Upgrades to the Central Line would be the responsibility of TfL, whose income and funding comes from five main sources: fares income; other incomes (e.g. rents, congestion charging); grant funding from the Department for Transport, Greater London Authority etc.; Crossrail funding; and borrowing.

5.3 Bus Network

Bus services in Essex are delivered by a range of providers. The *Getting Around in Essex* bus strategy outlines that 85% of the bus network is provided commercially, with the remaining 15% supported by Essex County Council, funded by taxpayers and fares. The County Council services cover concessionary fares, school transport and Sunday and evening services, which would otherwise not be commercially viable.

5.3.1 Evidence Base and Strategic Issues

The main sources of evidence include:

- Getting around in Essex: A Bus and Passenger Transport Strategy, Essex County Council (2015)
- Consultation with Essex County Council

Consultation with Passenger Transport representatives from Essex County Council has highlighted that bus use across the District is relatively low. The low uptake of bus transport means the current service does not experience capacity deficits. Some parts of the District are poorly serviced by current bus routes, and do not provide sufficient connectivity between key locations. These shortfalls means that there is likely to be hidden demand, where services are not responding to the needs of potential local users.

5.3.2 Existing Provision

TfL currently runs bus services in Loughton and Waltham Abbey. Other providers of bus services in the District are set out in Figure 7.

Figure 7: Bus services in Epping Forest District⁸

Bus operator	Service area
Regal Busways	Operate services both commercially and on behalf of ECC through Harlow, Epping, and Waltham Abbey. They provide home to school transport for Epping St Johns.
NIBS Buses	Local bus company providing services for students attending Epping St John's School, along with other schools across Essex.
Arriva	Operate services in Epping Forest District and Harlow

⁸ Bus Operators in Essex (March, 2017)

<http://www.essexhighways.org/uploads/files/Getting%20Around/Bus/local-bus-suppliers-march-2017.pdf>

Bus operator	Service area
Galleon Travel	Operate services in Epping Forest District and Harlow. Operates some services on behalf of Essex County Council.

Essex County Council currently run evening and Sunday services to rural areas and villages to increase connectivity. The County Council also provide home to school transport for certain journeys, and additionally provides some ‘shopper services’ for people with no other means of transport. Essex County Council is currently undertaking a review of contracted services, with the aim of moving towards an increasingly demand based service.

Loughton benefits from a frequent and direct bus service that connects residential areas of Loughton and Debden to the town centres and tube stations.

There has been a history of poor service delivery by commercial providers in the past, offering an unreliable service, which has deterred higher use levels from local residents.

Bus routes during morning and evening peak travel times are shown in Figure C.2 and Figure C.3 in Appendix C.

5.3.3 Shortfalls in Current Provision

Across the District, the low level of service provision has deterred bus use and a significant level of investment would be required to provide a service at a sufficient frequency, and covering the appropriate routes, to make it attractive to users.

Some parts of the District, particularly the north and south, are poorly serviced by current bus routes, with buses not providing sufficient connectivity between key locations.

Bus services in North Weald Bassett are limited, and do not provide a service able to sufficiently accommodate the commuter population, with poor linking services to Epping town centre. Limited bus services in more rural parts of the District, such as Nazeing, offer poor connectivity to key destinations in the District, and encourage unsustainable transport patterns amongst local residents. Chigwell Parish are currently exploring a local hail and ride service.

5.3.1 Bus Infrastructure Requirements

Future requirements relate to the need to increase frequency and improve service coverage to encourage greater levels of use. Technical work undertaken by Jacobs found that although the majority of settlements have good levels of sustainable access in place, they would likely benefit from bus route extensions and/or improved walking and cycling links to realise the potential for sustainable transport uptake⁹. Opportunities to encourage the use of public transport, connect existing and new developments with key services and the potential to increase or divert bus services will be explored.

⁹ Technical Note 7 – Sustainable Accessibility Ranking, Mapping and Analysis (2016)

The approach to site selection has prioritised sites with access to reasonable public transport services in an attempt to encourage modal shift towards public transport. There will be opportunities for extending or rerouting services to serve new development, particularly larger sites which have the potential to increase demand.

The strategic sites surrounding Harlow present opportunities to improve the bus network in this area and to increase the bus modal share to serve the high level of development. This is in addition to the extensive network already existing in the town and the planned for east-west and north-south public transport corridors, which will provide the potential for bus, walking and cycling infrastructure to support planned growth and link the strategic sites to central Harlow.

Further work is being undertaken by Essex County Council to identify where there are opportunities to improve bus services to support the growth anticipated over the Plan period. This includes improvements to the frequencies of existing services and extending services to evening or weekends where these do not currently exist. Where significant levels of growth are planned there may be opportunities for new services such as potential for a Bus Rapid Transit between Epping and North Weald (subject to feasibility work being undertaken).

The Essex County Council *Local Bus Service Assessment and Priority Policy 2015 to 2020* outlines priorities for future service provision across the whole of Essex, arising from a public consultation process (Figure 8).

Figure 8: Priority allocation for future bus provision based on public consultation

Service Category	Priority Allocation
Monday to Saturday frequent services linking rural areas to key service centres (shopping, health, education, employment)	1
Monday to Saturday peak period services, offering access to employment, training and commuter services	2
Monday to Saturday urban services, connecting to key service centres and transport interchanges	3
Infrequent rural 'lifeline' services, linking rural areas to key service centres	4
Evening services after 7pm	5
Sunday services	6
Access to tourist and leisure destinations, and night buses	7

Source: Local Bus Service Assessment and Priority Policy 2015 to 2020, Essex County Council (2016)

5.3.2 Funding Mechanisms

The provision of bus services in Essex is a largely commercial operation, subsidised in part by Essex County Council. Essex County Council has a revenue budget of £31m for the year 2017/18 to cover passenger transport. This will primarily fund the concessionary fares travel scheme and support local bus

services. Further improvements to the bus network and service provision will be funded as part of the highways and transport capital budget of £208m for the year 2017/18. Growth locations will benefit from better public transport provision and sustainable transport options, which will result in a greater demand for bus provision, thus improving the viability of routes.

Developer contributions could play a role in funding bus services, in particular in pump priming new services for a limited period until they become commercially viable. The *Essex County Council Developers' Guide to Infrastructure Contributions* sets out that developer funding may be required to improve existing infrastructure, particularly where small scale developments are located near to frequent current bus routes. For larger developments, diversions to existing bus routes, or additional services may be required to ensure sufficient access. To align the delivery of bus services with the rate of growth, developer contributions may be sought to subsidise a service until it becomes commercially viable.

5.4 Walking and Cycling

Walking and cycling infrastructure is currently provided by Essex County Council, alongside a range of additional providers, including developers, Epping Forest District Council, and voluntary groups. Across Essex as a whole, there are Local Highways Panel Schemes and District funded schemes, although these are less common in Epping Forest District.

5.4.1 Evidence Base and Strategic Issues

The main sources of evidence include:

- Consultations with Essex County Council Sustainable Transport team
- Consultations with Ringway Jacobs (consultants to Essex County Council)
- ECC Epping Forest District Cycling Action Plan (2016)
- Essex Transport Strategy: the Local Transport Plan for Essex (2011)

The Infrastructure Act (2015) committed the Government to producing a Cycling and Walking Investment Strategy, to raise the profile of sustainable transport across the UK, and ensure sufficient cycle infrastructure is in place. The *Draft Cycling and Walking Investment Strategy* was published by the Department for Transport in March 2016, and the feedback from public consultation is currently being reviewed. The draft report sets out the Government's ambitions to make cycling and walking the natural choice for shorter journeys, or as part of a longer journey. Service delivery for key walking and cycling infrastructure has become increasingly devolved, to allow local bodies to support change in their areas.

At the county level, the Essex Cycling Strategy (2015) outlines a range of strategic issues. The key future aims outlined in the strategy include:

- Promote a 'Cycle Essex' brand
- Improve the quality and overall provision of cycling infrastructure

- Increase the support for local initiatives
- Appoint an Essex Cycling Advocate

The report shows that Epping Forest District had some of the lowest cycling levels across the County between 2001 and 2011, and the numbers of residents cycling to work is low. This has partly been due to a lack of planned interventions and limited infrastructure in the District, which has meant that cycling has not been sufficiently promoted. The *Epping Forest District Cycling Action Plan* (2016) sets out some of the key barriers to cycling. These include a lack of signposted routes, the fragmented provision of the current network, limited cycle parking facilities, congested roads with limited crossings and areas of hilly topography.

The Essex Transport Strategy (2011) sets out the County's objective to promote walking as a healthy and sustainable alternative to motorised transport, particularly for shorter journeys. The footway network within Essex includes Category 1 & 2 Footways, such as footways within town centres and those leading to schools, hospitals and stations, along with Category 3&4 Footways which include footways in residential areas. In addition to this walking infrastructure, the County Council manages Public Rights of Way (PRoW) networks, which provide key links for local communities.

Consultation with Essex County Council identified that walking facilities were of a reasonable standard throughout the District. Future improvements of walking infrastructure will help to provide alternative transport solutions within congested areas, particularly in Epping town centre.

5.4.2 Existing Provision and Shortfalls

Cycling infrastructure is limited in the District, and is formed of isolated stretches of cycle routes, and some provision for bike storage/parking. There are a number of key issues surrounding the provision of cycling infrastructure, including:

- Lack of signed routes
- Lack of existing infrastructure provision in populated areas
- Existing infrastructure is isolated and unconnected
- High traffic flows on main roads and lack of off-road routes
- Few safe crossings
- Lack of cycling infrastructure on rural roads

Off-road cycle lanes exist in some of the key settlements, connecting to social infrastructure, such as the area surrounding Epping Forest College in north Loughton. Within Epping, an off-road route has recently been built to connect Epping with Coopersale, providing access to St Margaret's hospital. This route however currently lacks sufficient lighting.

The District Cycling Action Plan (2016) identifies the lack of off-road cycling routes within the rural parts of the District, with the high-speed, congested nature of roads further deterring cyclists – particularly occasional cyclists. This is

notably the case in North Weald Bassett and Epping. Due to its location, Waltham Abbey has access to a part of the National Cycle Network, linking through the Lee Valley. Similarly, areas in the south of the District have the opportunity to connect with cycle routes in the London Boroughs.

Roding Valley Way is a new part planned cycle route, connecting north of Woodford to Ilford, and terminating near to Roding Valley Station. There is potential to extend this route to link with other stations in Epping Forest District, such as Buckhurst Hill, Loughton and Debden. At present, cycle routes connecting to stations within the District remain limited, with some bicycle parking facilities.

Figure 9: Cycle parking spaces at stations in Epping Forest District

Tube Station	Cycling Parking Space
Buckhurst Hill	16
Chigwell	0
Debden	16
Epping	38
Grange Hill	0
Loughton	22
Roding Valley	6
Theydon Bois	10

Cycling infrastructure, including cycle stands and specialised traffic signals, across the District is varied. Epping town centre has a number of cycle stands, located on the main high street and at the hospital. There is also a bicycle locking scheme located on Sun Street in Waltham Abbey.

Cycling infrastructure in Harlow is one of the best maintained in the county and covers most of the District. The overall levels of frequent cycling however are lower than expected, and there is currently insufficient cycling infrastructure at Harlow station.

5.4.1 Walking and Cycling Infrastructure Requirements

Consultations with the Sustainable Transport team at Essex County Council outlined how future agendas will focus on behavioural change, promoting cycling through community initiatives, and encouraging smarter working schemes. The Cycling Action Plan outlines a range of measures to improve cycling participation in the District, including both physical infrastructure and softer schemes to encourage behaviour change.

The future provision of cycling infrastructure will involve extensions to the existing network, along with supporting facilities such as cycling storage, lighting, widening of cycle routes and improved junctions. Public realm improvements will improve safety on busy roads, such as the High Road in Loughton. In some cases, paths will be widened to allow for multi-modal uses, and integrated with PRoW.

The ECC Cycling Action Plan lists a number of specific cycling interventions by settlement, reflected in the IDP Schedule. These schemes include extensions and upgrades to the existing network, improved connectivity to key service centres, and associated signage and lighting infrastructure.

Consultation with Essex County Council identified that improvements to footways are likely to be incorporated with larger highways interventions.

Additional walking infrastructure will be site specific to individual developments as appropriate, and will improve the attractiveness of short distance routes to key destinations such as stations and town centres. These interventions will include the provision of footway access, dropped kerbs to improve user access, footpath lighting, and safe crossing points. The sustainable transport corridors will include provision for segregated walking and cycling routes to connect the strategic sites with key facilities and service centres.

Planned provision of existing cycling infrastructure in neighbouring authorities will help to link Epping Forest District with larger urban centres. The southern part of the District is well placed to link up with Quietways provided by TfL in the London boroughs. TfL Quietway 2 in Walthamstow will offer a route to Central London from spring 2017, which will directly benefit Buckhurst Hill, only 3 miles away. There are also future proposals for a TfL Quietway 6 at Barkingside, which would benefit the Chigwell area.

Improved cycle access and infrastructure are expected as part of the proposed M11 7a Junction which will widen Gilden Way from the London Road roundabout to Marsh Lane, to create a three lane road. Improved Public Rights of Way cross points which tie into the new link road to Sheering Road roundabout will enhance existing walking and cycling routes in the surrounding area.

5.4.2 Funding Mechanisms

There are a range of funding options available for cycling infrastructure, including Central Government, Essex County Council and from developer contributions. There are a range of funding opportunities through Central Government, including through the South East Local Enterprise Partnership or the Department for Transport Access Fund.

In line with Government ambitions to increase per person cycling investment from £2.50 to £10 by 2020/21, Essex County Council seeks to increase the amount invested into encouraging cycling. Across the county, investment will initially be raised to £5 per person by 2017, and later increased to £10¹⁰.

The main source of funding for local highways infrastructure is derived from the Local Highways Panels across the county, particularly for schemes costing less than £100k. The Epping Forest LHP has almost £350,000 available in capital funding for the year 2017/18¹¹, including match funding. This funding is allocated to cover a range of highways schemes in the District such as congestion, cycling

¹⁰ Epping Forest Cycle Action Plan (2016), ECC

¹¹ Epping Forest District Council Local Highways Panel Meeting Agenda (September, 2017)

schemes, minor improvements and Public Rights of Way. The provision of local cycling schemes and smaller interventions can be funded as part of this budget allocated by Essex County Council.

For schemes costing more than £100k, funding is likely to be derived from a combination of Essex County Council, and available developer contributions associated with new developments subject to prioritisation.

Developer funding through S106 or 278 Agreements is likely to be an important source of funding. The *Essex County Council Developers' Contribution Guide* (2016) sets out that where appropriate, contributions might be sought to establish safe walking routes, particularly footways surrounding schools. For larger developments, contributions might be sought for ensure attractive walking routes to existing bus stops.

6 Education

6.1 Early Years and Childcare

Early years and childcare provision in Epping Forest District comprises a range of facilities, and includes independent nurseries, pre-schools and maintained school nurseries. A combination of providers additionally offer a range of part-time and full-time activities in the form of breakfast clubs, after-school care and holiday clubs.

Essex County Council has a duty to ensure that there are sufficient early years' places for children living in the county, and has an obligation to meet national standards of provision in terms of Free Early Education Entitlement (FEEE). Government legislation sets out that all 3 to 4 years old in England are entitled to 570 hours of free early education of childcare per year. This is usually formed of 15 hours a week for 38 weeks of the year. From September 2017, some 3- and 4-year olds may be entitled to a total of 1,140 hours per year, which is means tested. Some two year olds are also eligible for free childcare provision.

A range of organisations play a role in service delivery within the District. The County Childcare Sufficiency Strategy Group are a multi-agency group within Essex County Council, and are responsible for assessing the strategic issues affecting childcare, and formulating appropriate action plans to respond to identified issues. This group is made up of a broad range of agencies and actors, including library services, family information services, schools programme and Job Centre Plus. This reflects the increasingly collaborative approach to service delivery of childcare within the District.

6.1.1 Evidence Base and Strategic Issues

The main sources of evidence include:

- Essex Early Years and Childcare Strategy 2015-2018 (2015)
- Consultations with Essex County Council Children Community Development Officer
- Essex County Council Childcare Sufficiency Assessment (2011)
- Essex County Council Interactive map of childcare provision
- Ofsted Early Years Data (2015)
- Essex County Council Developers' Guide to Infrastructure Contributions, Revised Edition (2016)

The 2006 Childcare Act defines 'Sufficient Childcare' as being able to meet the needs of parents in the area who require childcare facilities to work – either to remain in work or take up employment. Current regulations on childcare entitles every three or four year old child to 15 hours' of free early years' provision for 38 weeks of the year. Provision must similarly be provided for two year olds from

less affluent families. Government plans for 2017 include the introduction of 30 hours of free childcare for working families.

The Childcare Sufficiency Assessment (2011) outlines the role of the County Childcare Sufficiency Strategy Group, and the collection of childcare occupancy data on a termly basis. The report indicates that there was an annual increase of registered births 2004-5 to 2008-9 academic year, and suggested that this was likely to continue. The more recent Early Years and Childcare Strategy (2015-2018), outlines future aspirations and the changing nature of childcare provision in the county:

- Offer access to healthcare services and Job Centre Plus through childcare providers.
- Work towards developing community/ family hub models linking providers to make services accessible to local families.
- Invest to expand or commission new Free Early Education Entitlement (FEEE) provision in hotspot areas by March 2016.
- Invest in the construction of nursery classes and Foundation Stage Units to provide additional nursery provision in primary and infant schools.

6.1.2 Existing Provision

There are currently 265 childcare providers in the District across all types of early years and childcare services. These are formed of both independent and public facilities, with a range of fee-paying requirements. The increase in breakfast clubs and other non-school related services has in part been in response to changing lifestyles and parental needs for greater flexibility. Conversations with Essex County Council outlined how parents tend to use a combination of formal and informal childcare services. The Government's plans to introduce 30 hours of free childcare for working families will place further strain on the childcare provision in the district. Any new developments will require additional childcare to support families to be able to work or study. Figure 10 provides a breakdown of childcare provision within the District; Figure C.4 in Appendix C shows this provision.

Figure 10: Breakdown of childcare provision in Epping Forest District. Source: Essex County Council

Type of provider	Number of facilities
Child minders	135
Day nurseries	25
Pre-school	45
Primary school nurseries	4
Independent school nurseries	6
After school clubs	21
Breakfast clubs	16
Holiday clubs	13

6.1.3 Shortfalls in Current Provision

Access to early childcare provision in Epping Forest District is under significant pressure across much of the District. Due to the strong transport connections to London, average salaries are also higher in Epping Forest District than in other parts of the County. Childcare providers therefore have to take into account local wages and the cost of running services when setting pricing schedules. The cost of childcare in the District is the second highest in the County.

Conversations with Essex County Council's Children Community Development Officer brought to light the need for increased childcare provision across the whole District. Capacity figures for childcare in the District show that around 70% of the pre-schools, nursery units of independent schools and primary schools nurseries have an occupancy rate of 80% or more. None of the holiday and after school clubs in the District were identified as having an occupancy rate of over 80%, however, this only represents unfilled capacity within this particular type of service. The working patterns and childcare requirements of parents vary considerably, and therefore require a range of options to be available.

There are a number of capacity 'hot spots', where current service provision is not meeting local need, particularly in providing FEEE for 2 and 3-4 year olds. Within the District, 23 out of the 32 wards do not have available FEEE capacity for 2 year olds. These are shown in Figure C.5 and Figure C.6 in Appendix C.

Government plans to extend the current allowance of FEEE provision for 3-4 year olds in 2017 is likely to worsen the situation as currently 30 of the 32 wards in the District have insufficient capacity to accommodate the additional demand. Consultations with Essex County council identify that pressures on childcare services are likely to increase, as there are currently no planned expansions of childcare infrastructure, with some providers planning to close in the near future.

6.1.4 Early Years and Childcare Infrastructure Requirements

Childcare facilities are increasingly provided alongside a range of other services, including primary schools, community centres and library facilities. In order to estimate the magnitude of early years and childcare required to serve the additional population expected over the Plan period, the following standards set out in Figure 11 have been used.

Figure 11: Early years and childcare standards

Infrastructure	Standard	Per	Source
Nursery	0.09 children	House	<i>ECC Developers' Guide to Infrastructure</i>
	0.045 children	Flat	<i>ECC Developers' Guide to Infrastructure</i>
	1 facility	56 children	<i>ECC Developers' Guide to Infrastructure</i>

Infrastructure	Standard	Per	Source
Pre-school	0.09 children	House	<i>ECC Developers' Guide to Infrastructure</i>
	0.045 children	Flat	<i>ECC Developers' Guide to Infrastructure</i>
	1 facility	46 children	<i>Essex Growth and Infrastructure Framework</i>

Based on expected additional population only (i.e. not taking into account existing capacity or shortfall), the demand for pre-schools and nurseries across settlements is shown in Figure 12. It should be noted that it is not necessarily expected that these services would be provided in every settlement, as this would depend on a range of factors including the type of provider/provision, opportunities for expansion, and critical thresholds for the delivery of new facilities.

Figure 12: Childcare additional demand (newly arising only) – by settlement

Settlement Groups	Pre-school newly arising demand over Plan period (facilities)	Nurseries newly arising demand over Plan period (facilities)	Total newly arising demand over the Plan period (facilities)	Total newly arising demand over the Plan period (places)
Buckhurst Hill	0.31	0.25	0.56	28
Chigwell	1.12	0.91	2.03	102
Chipping Ongar	1.38	1.11	2.49	124
Epping	2.62	2.11	4.73	236
Fyfield	0.07	0.05	0.12	6
High Ongar	0.13	0.10	0.23	12
Loughton / Debden	2.17	1.76	3.93	196
Lower Nazeing	0.58	0.47	1.05	52
Lower Sheering	0.07	0.06	0.13	6
North Weald Bassett	2.22	1.78	4.00	200
Roydon	0.21	0.17	0.38	18
Sheering	0.23	0.19	0.42	20
Stapleford Abbotts	0.18	0.15	0.33	16
Theydon Bois	0.16	0.12	0.28	14
Thornwood	0.41	0.33	0.74	38
Waltham Abbey	2.00	1.61	3.61	180
East of Harlow	1.51	1.21	2.72	136
Latton Priory	2.13	1.71	3.84	192
Water Lane Area	4.21	3.38	7.59	378

Additional demand for nursery capacity will primarily be met through private providers responding to market demand.

6.1.5 Funding Mechanisms

Childcare in Essex is provided by private organisations. The Department of Education invest capital resources to commission FEEE provision, to meet national standards of free childcare provision.

Developer contributions also offer a potential source of funding for childcare provision, and help to mitigate the cumulative impact arising from growth. Contributions are required where there is a current or forecast lack of provision in the immediate area of the proposed development. However, this must be considered against all other competing demands for contributions to other services.

6.2 Primary Schools

The provision of primary school education covers children aged 4 to 11 years old. Essex County Council has a duty to ensure that there are sufficient school places for children living in the county.

Since the introduction of Academies and Free Schools in 2010, the provision and operation of schools has shifted towards greater levels of institutional autonomy. Academy schools are independent of local authority control, and are instead funded directly by central Government, and sponsors. Free schools have similar levels of autonomy, however can be set up by a range of groups, including charities, universities, parents, teachers, businesses and faith groups. Both types of school do not have to follow the national curriculum.

6.2.1 Evidence Base and Strategic Issues

The main sources of evidence include:

- Consultation with Essex County Council
- Commissioning School Places in Essex 2016-2021, Essex County Council (2016)

The *Commissioning School Places in Essex 2016-2021* report sets out the current provision of primary and secondary schools maintained by Essex County Council. A range of data on schools within the District is provided to help stakeholders assess the future demand likely to be placed upon this infrastructure as a result of growth. The report outlines the current organisation of school places, including the existing capacity and number of pupils on roll, along with forecasts of future pupil numbers.

6.2.2 Existing Provision and Shortfall

Within Epping Forest District, school capacity is assessed through Forecast Planning Groups (FPG), which divides the District into defined spatial areas in order to effectively plan school infrastructure. Currently there are 38 primary schools within the District (including five Free Schools and one academy), split across nine FPGs.

The *Commissioning School Places in Essex 2016-2021* report provides capacity information for primary schools for the academic year 2015/16, and a forecast capacity figure for the academic year 2020/21. These forecast pupil figures are based on historical admissions trends, the current number of pupils on roll, historic birth rate trends and current GP registrations within school admissions boundaries.

The Department for Education sets out that schools should operate with a spare 5% capacity, or headroom, to allow for operational flexibility and maximise parental choice. Figure 13 and Figure 14 set out current and forecast capacity figures for FPGs for the academics years 2015/16 and 2020/21 respectively. Figure C.7 in Appendix C shows the location of schools.

The data has been sourced from the *Commissioning School Places in Essex 2016-2021* report, with an assumed 5% head room applied.

Figure 13: Primary school capacity figures, academic year 2015/16, by Forecast Planning Group (FPG)

Forecast Planning Group	Total Number on roll 2015/16	Total primary capacity 2015/16	Surplus/ deficit capacity 2015/16
Ongar (Group 01)	836	927	91
Epping (Group 02)	1,332	1,379	47
Waltham Abbey (Group 03)	1,597	1,596	-1
Buckhurst Hill/ Loughton South (Group 04)	1,224	1,248	24
Chigwell/ Lambourne (Group 05)	1,015	1,075	60
Loughton (Group 06)	2,511	2,657	146
Nazeing (No Group)	262	285	23
Roydon (No Group)	202	200	-2
Uttlesford (Group 05)	835	767	-68

Figure 14: Forecast primary school capacity figures, academic year 2020/21, by Forecast Planning Group (FPG)

Forecast Planning Group	Total number on roll 2020/21	Total primary capacity 2020/21	Surplus/ deficit capacity 2020/21
Ongar (Group 01)	851	927	76
Epping (Group 02)	1,488	1,515	27
Waltham Abbey (Group 03)	1,646	1,625	-22
Buckhurst Hill/ Loughton South (Group 04)	1,241	1,397	156
Chigwell/Lambourne (Group 05)	1,115	1,075	-40
Loughton (Group 06)	2,695	2,691	-4
Nazeing (No Group)	265	285	20
Roydon (No Group)	206	200	-6
Uttlesford (Group 05)	800	752	-48

The figures for FPGs show that there are surplus primary schools places, with some localised capacity issues across the District.

For the academic year 2015/16, all FPGs other than Uttlesford (which includes Sheering Church of England School in Epping Forest District) had available capacity. The Waltham Abbey (Group 03) FPG and Roydon FPG however have a deficit when the 5% buffer is applied. The forecast capacity figures for 2020/21 show that Waltham Abbey (Group 03), Chigwell/Lambourne (Group 05), Loughton (Group 06), Roydon and Uttlesford (Group 05) FPGs will experience a capacity deficit.

FPGs within Essex are cross-boundary. It is therefore appropriate to consider schools within adjoining authorities, particularly in relation to the key growth locations. Figure 15 outlines the FPG for primary schools in Harlow, based on schools located within 1km (transport networked) of the Epping Forest District boundary. This same methodology was applied to all authorities neighbouring Epping Forest District, to identify schools located within 1km of the District boundary. Although an important consideration, the capacity of schools within the other adjoining authorities is of less strategic importance.

Due to the location of the Garden Town sites, Harlow schools capacity has been considered more closely, to fully understand cross-boundary infrastructure requirements.

Figure 15: Forecast primary school capacity figures for Harlow, academic year 2015/16, by Forecast Planning Group (FPG)

Forecast Planning Group	Total number on roll 2015/16	Total primary capacity 2015/16	Surplus/ deficit capacity 2015/16
Harlow (Group 01)	1,914	1,824	-90
Harlow (Group 02)	1,818	1,811	-7
Harlow (Group 05)	1,019	1,063	44

Figure 16: Forecast primary school capacity figures for Harlow, academic year 2020/21, by Forecast Planning Group (FPG)

Forecast Planning Group	Total number on roll 2020/21	Total primary capacity 2020/21	Surplus/ deficit capacity 2020/21
Harlow (Group 01)	1,953	2,223	276
Harlow (Group 02)	2,021	1,910	-111
Harlow Group (05)	1,127	1,377	250

There are only three FPGs in Harlow that have schools located within 1km from the Epping Forest District boundary. Harlow (Group 01) has a current deficit capacity, however forecast figures for the academic year 2020/21 demonstrate a significant surplus. This is due to the planned provision of the New Hall Farm academy school, which will accommodate the needs of pupils residing in and around the growth locations in east Harlow. In contrast, Harlow Group 02 shows a future deficit in response to natural population growth, despite significant capacity expansion of Pear Tree Mead primary and nursery school. Harlow (Group 05) shows both a current and forecast capacity surplus, partly due to planned expansions at Longwood Primary Academy and the Kingsmoor Academy. There are a number of schools that have saw a small increase in capacity between 2014/15 and 2015/16: Staples Road Primary School (+88 places); Epping Upland CE Primary School (+30 places); The Alderton Infant School (+27 places); Matching Green CE Primary School (+11 places); Hillhouse CE Primary School (+10 places); and Chigwell Row Infant School (+3 places).

A number of primary schools will undergo refurbishment work to improve the quality of ageing infrastructure, however additional capacity will not be provided.

6.2.3 Primary Schools Infrastructure Requirements

Modelling has been undertaken by Essex County Council to understand the future requirements for primary school places. Consultations with Essex County Council outlined a number of delivery options for meeting additional demand for schools infrastructure, including the expansion of existing schools or the delivery of new schools. Smaller levels of proposed growth are not likely to create the need for a school in their own right, and can usually be absorbed within existing infrastructure. The cumulative impact of multiple growth locations, however, could justify new provision.

The Infrastructure Delivery Schedule (Part B report) includes the following interventions for primary education:

- One new (2.1ha site) school at East of Harlow, including provision for on-site early years provision (contributing to the requirements in Section 6.1).
- One new (2.1ha site) school at Latton Priory, including provision for on-site early years provision (contributing to the requirements in Section 6.1).
- One new (2.1ha site) school at Water Lane Area, including provision for on-site early years provision (contributing to the requirements in Section 6.1).
- One new (2.1ha site) school at Epping, including provision for on-site early years provision (contributing to the requirements in Section 6.1).
- One new (2.1ha site) school at North Weald Bassett, including provision for on-site early years provision (contributing to the requirements in Section 6.1).
- Expansion of one or more primary schools within Buckhurst Hill / Loughton Forecast Planning Group.
- Expansion of one primary school within Chigwell / Lambourne Forecast Planning Group, and upgrading of temporary accommodation of up to four schools (Chigwell, Stapleford Abbots and/or Lambourne)
- Expansion of one or more primary school within Ongar Forecast Planning Group (Chipping Ongar, High Ongar, Fyfield, Matching Green or Moreton).
- Expansion of two primary schools within Waltham Abbey Forecast Planning Group.
- Expansion of Nazeing Primary School.
- Upgrading of temporary accommodation at Epping Upland CE Primary School.
- Upgrading of temporary accommodation at Leverton Primary School.
- Upgrading of temporary accommodation at High Ongar Primary School.

6.3 Secondary Schools and Post 16 Education

Secondary school education covers pupils aged 11-16. Essex County Council has a duty to ensure that there are sufficient secondary school places for children living in the county. The provision of sixth form facilities covers pupils aged 16-

18, and are often co-located with secondary schools. Post-16 facilities are provided by the Education Funding Agency, which sits within the Department for Education. The provision of Further Education services covers pupils over the age of 16, who are studying a course in an FE college, training provider or within their local community.

6.3.1 Evidence Base and Strategic Issues

The main sources of evidence include:

- Commissioning School Places in Essex 2016-2021, Essex County Council (2015)
- DfE Edubase
- Essex Employment and Skills Board, Evidence Base (2016)
- Consultation with Essex County Council

The provision of secondary education has been a longstanding issue in the District, with bottlenecks occurring from 'feeder' primary schools. The provision of secondary education has recently changed within the District, with four secondary schools forming a consortium to jointly provide sixth form services. The resulting District Sixth Form is comprised of four secondary schools:

- Debden Park High School
- Epping St Johns School
- Roding Valley High School
- King Harold Business School

The sixth form consortium was in operation at the beginning of the 2015/2016 academic year, with the lower sixth year occupying the facilities. The collaboration of these facilities enables greater flexibility and choice for post 16 education within the District.

In addition to this sixth form consortium, there are two sixth forms attached to secondary schools that have been in operation on a long standing basis. These include West Hatch High School and the Davenant Foundation School, which upholds a faith-based admissions criteria. Conversations with Essex County Council have highlighted migration flows of Epping residents to Harlow and Havering Colleges.

6.3.2 Existing Provision and shortfalls

6.3.2.1 Secondary schools and sixth forms

The *Commissioning School Places in Essex 2016-2021* report provides information on the current provision and capacity of secondary schools and adjoining sixth forms in the District. The document provides a detailed breakdown of existing capacity, number of pupils on roll, future expansion and future capacity surplus and deficits. The report combines capacity figures for secondary

and sixth form education within the District, and for this reason they will be assessed together within this section.

Within Epping Forest District, secondary school capacity is assessed through Forecast Planning Groups (FPG), which divides the District into defined spatial areas in order to effectively plan school infrastructure. There are seven secondary schools within the District, as shown in Figure C.8 in Appendix C.

The report shows capacity for the academic year 2015/16, and a forecast capacity figure for the academic year 2020/21. The forecast pupil figures are based on historical admissions trends, the current number of pupils on roll, historic birth rate trends and current GP registrations within school admissions boundaries.

The Department for Education sets out that schools should not operate at full capacity, but require a 5% head room to allow flexibility in the operating service, and maximise parental choice. Figures 17 and 18 set out the capacity surplus and deficits for the 2015/2016 academic year, and forecasts for 2020/21 respectively.

The data has been sourced from the *Commissioning School Places in Essex 2016-2021* report, with an assumed 5% head room applied.

Figure 17: Capacity figures for secondary schools, academic year 2015/16, by Forecast Planning Group (FPG)

Forecast Planning Group	Total No on roll (NOR) 2015/16	Total secondary capacity 2015/16	Surplus/ deficit capacity 2015/16
Loughton (Group 01)	4,488	4,268	-220
Epping/ Waltham Abbey (Group 02)	1,387	1,568	181
Harlow (Group 01)	4,928	5,529	601
Uttlesford (Group 01)	1,263	1,485	222

Figure 18: Capacity figures for secondary schools, academic year 2021/22, by Forecast Planning Group (FPG)

Forecast Planning Group	Total number on roll 2020/21	Total secondary capacity 2020/21	Surplus/ deficit capacity 2020/21
Loughton (Group 01)	4,895	4,411	-484
Epping/ Waltham Abbey (Group 02)	1,708	1,568	-140
Harlow (Group 01)	5,914	5,529	-385

Forecast Planning Group	Total number on roll 2020/21	Total secondary capacity 2020/21	Surplus/ deficit capacity 2020/21
Uttlesford (Group 01)	1,361	1,485	124

The figures for FPGs show that there are current surplus secondary schools places, with some localised capacity issues in Loughton (Group 1). In contrast, the forecast capacity figures for 2021/21 show that the Loughton (Group 01), Epping/Waltham Abbey (Group 2), and Harlow (Group 1) FPGs will experience a capacity deficit.

FPG within Essex are cross-boundary. It is therefore appropriate to consider school provision within adjoining authorities, in relation to the key growth locations. There are two secondary schools in Harlow located within 1km (according to the transport network) of the Epping Forest District boundary; Passmores Academy and the Stewards School Science Academy. These two schools are part of the Harlow Secondary school FPG. The location of the strategic sites requires a joined-up approach in assessing current school provision and capacity with Harlow. Although an important consideration, the capacity of schools within the remaining adjoining authorities is of less strategic importance.

The recent opening of the Ongar Academy has provided significant additional capacity for secondary and sixth form pupils in the District. The staggered intake of pupils will require a five year period to achieve full capacity. In addition, Epping St John's Church of England Secondary School underwent significant refurbishment in 2013, which included a new £18m facility.

6.3.2.2 Further Education

Epping Forest College is the only Further Education (FE) facility within the District, and is located in Loughton. The college has a large catchment area that draws pupils from outside the District boundaries, including wider rural Essex and east/north-east London boroughs. Figure 19 sets out the capacity of the college, drawing on data from the last academic year (through discussions with the college).

Figure 19: Capacity figures for Epping Forest College

FE facility	NOR	Course enrolment capacity	Building capacity
Epping Forest College	3,296	7,000	1,600

The figures show that the current number of students on roll is considerably higher than the building capacity. However, consultation identified that the flexible nature of timetabling at Epping Forest College, such as evening and part time courses, allows for a much larger number of students than the physical

capacity of the building. The college is therefore operating within capacity. Figure 20 sets out the breakdown of students on roll at the college.

Figure 20: Further Education

FE facility	Pupils aged 16-18	Pupils aged over 19, and part time students	Total pupils enrolled
Epping Forest College	1,724	1,572	3,296

There are currently no plans to expand the existing infrastructure for post 16 education. Consultations with Essex County Council identified how Epping Forest College will be included in a County-wide review of post 16 education, which commenced in November 2016. This is set to review provision delivery across Essex in terms of being supportive of economic growth (skills), demographic growth and potential collaboration with neighbouring colleges to facilitate financial savings.

6.3.3 Infrastructure Requirements

Modelling has been undertaken by Essex County Council to understand the future requirements for secondary school places. Consultations with Essex County Council outlined a number of delivery options for meeting additional demand for schools infrastructure, including the expansion of existing schools or the delivery of new schools. Smaller levels of proposed growth are not likely to create the need for a school in their own right, and can usually be absorbed within existing infrastructure. The cumulative impact of multiple growth locations, however, will justify new provision.

The Infrastructure Delivery Schedule (Part B report) includes the following interventions for secondary education:

- One new secondary school (10ha site) at East of Harlow.
- One new secondary school (10ha site) at Latton Priory.
- Expansion of secondary schools within Loughton Forecast Planning Group (Loughton and/or Chigwell).
- Expansion of St John's School in Epping.
- Expansion and potential future relocation of King Harold Secondary School in Waltham Abbey.
- Expansion of secondary school places in the Ongar area.

6.3.4 Funding Mechanisms

There are a number of Central Government funding sources for revenue and capital expenditure on schools. The main revenue funding allocations from DfE to schools and local authorities is the dedicated schools grant (DSG). The DSG

divides funding across three main blocks, covering schools (80%), high needs¹² (13%) and early years (7%). For 2016/17 Essex County Council received a DSG of £539m. The majority is passed on to schools, though a proportion is kept by the Council to fund education support services to all schools across Essex. The level of funding available to ECC through the DSG will be subject to reductions as schools convert to academies.

A number of funding streams are provided by the Department for Education / Education Funding Agency for capital investment in schools including through Devolved Formula Capital (DFC) Allocations, School Condition Funding, and Priority School Building Programme.

Essex County Council is proposing to invest £365m capital in schools over the next three years, to create new school places and maintain the quality of existing assets.

Some schools additionally generate their own incomes, through a combination of fundraising activities based on parental donations, leasing out premises for community use and business sponsorship.

Academies are funded using the local funding formula, which is then recouped from local authorities. This funding is then paid to academy trusts via the General Annual Grant. In addition to this funding stream, academies also receive funds from the Education Services Grant (ESG) to cover the cost of services that local authorities would typically provide.

Developer contributions (through S106 and potentially through CIL in the future) could also be used to fund schools. The Essex County Council Developers' Contribution Guide sets out that financial contributions will be used to fund capital works to provide additional capacity at academies, Free Schools or maintained schools in the appropriate area. The expansion of existing schools can be complex due to the ability of Free Schools and academies to refuse proposed expansions. In these circumstances, developer contributions could be used to provide extensions and refurbishment of schools in the surrounding areas. Where new schools are required, developers may be required to provide land. Further work will be undertaken to ensure costs are apportioned reasonably and fairly across developments where appropriate.

The future of school funding is likely to take the form of a national funding formula, to help standardise allocations across the county and ensure that pupils with the same characteristics and costs are funded at the same rate. These changes are proposed to be phased in the academic year 2019-2020, with a transitional phases covering from 2017-2019.

The delivery of schools will be a combination of new school sites and expanding existing infrastructure. Consultations with Essex County Council indicated a preference towards the delivery of 2FE schools at primary level and 6-10 FE at secondary level, as they are more cost effective. There is scope to expand some of the smaller schools to bring them in line with this preference.

¹² The high needs funding system supports provision for pupils and students with special educational needs and disabilities (SEND)

Future provision of schools infrastructure will be against the backdrop of the changing role of the County Council, transitioning from a direct provider to a commissioning and facilitating role. The increasing prominence of Free Schools and Academies will further increase the importance of partnership working and will open up new streams of funding in the emerging Plan period, however there may potentially be less funding going directly to ECC. Decisions surrounding the provision of these facilities will require ongoing consultation between the County Council, the DofE and the EFA.

6.4 Special Educational Needs and Disability

Special Educational Needs and Disability (SEND) provision covers pupils who experience difficulties or disabilities that makes learning more challenging in comparison to most pupils of a similar age. SEND provision can be located as a unit within mainstream schools, or within an independent SEND facility.

SEND services are coordinated by Essex County Council to ensure the provision of high quality services for all pupils with SEND. The provision of these services is a complex process. There are pupils attending schools within Essex however other local authorities are responsible for their statements. Similarly, there are cases where Essex County Council is responsible for pupil statements, even if pupils are being schooled outside of the county.

6.4.1 Evidence Base and Strategic Issues

The main sources of evidence include:

- Commissioning School Places in Essex 2016-2021, Essex County Council (2016)
- Department for Education Edubase
- SEN Joint Strategic Needs Assessment, Essex County Council (2015)

Recent policy by the Government has streamlined the process by which children and young people apply for and access special needs services. The Children and Families Act (2014) seeks to address the wider cultural and statutory challenges that constrain the SEND system. The new legislation was partly in response to the national shortfall of educational attainment for SEND pupils.

There have been year on year increases in the numbers of children with SEND applications in Essex, 5,377 to 7,016 in the period 2007 – 2014. This equates to an increase of over 30% in this 6 year period, and is significantly higher than the England average. Future projections suggest that Essex numbers are likely to increase by around 2% for the next six years (SEN JSNA).

The Special Educational Needs Joint Strategic Needs Assessment (2015) provides a map of pupils requiring SEND provision residing in LSOAs. The majority of Epping Forest has fewer than 4 pupils requiring SEND provision per LSOA, however areas to the east and the south of the district experience slightly higher pupil counts.

6.4.2 Existing Provision

The majority of urban areas within Essex are located within 10km of a Special Educational Needs facility. There are however more rural areas that do not fall within a 10km radius, including eastern parts of Epping Forest District.

Within West Essex, SEND facilities are independent from mainstream schools, and there are currently no mainstream schools with a SEND unit or resourced provision.

There are two SEND schools located in Epping Forest District, which are Wells Park in Chigwell and Oak View in Loughton. Their capacity is set out in Figure 21.

Figure 21: SEND facilities within Epping Forest District

SEND facility	Wells Park	Oak View
Pupils on roll (2016) (Commissioning School Places in Essex 2016-2021)	46	85
Places (JSNA, 2015)	50	85
Surplus/(deficit)	4	0
Age range	5-11	3-19
Boarding facilities	Yes	No

6.4.3 Infrastructure Requirements

There is no current 'standard' in relation to SEND provision. However, it would be expected that an increase in Epping Forest District's population would lead to an increase in demand for this service. These needs would need to be through new facilities or expansion of existing facilities.

The number of SEND applications are predicted in the Joint Strategic Needs Assessment to increase on average by 2% over the next six year period. A new Specialist Provision Capital Programme will increase specialist provision across Essex. The provision of SEND infrastructure across the County will include eight additional Autism support Centres, and up to ten centres catering specifically to pupils with Social, Emotional and Mental Health (SEMH) difficulties. Although the location of these additional facilities is not yet known, the catchment areas for SEND facilities are significantly larger than mainstream schools, with longer travel times. Even if located in adjoining authorities, these facilities could increase provision options for pupils in the District.

6.4.4 Funding Mechanisms

There are a number of funding streams available to provide educational support for high needs pupils. The Designated School Grant (DSG) provided by the Education Funding Agency includes a 'basic per-pupil entitlement', used to make general provision for all pupils, including SEND pupils. Local authorities also

receive High Needs Block Funding as part of the DSG, which is distributed directly to schools.

Essex County Council has committed to improve and expand the number of SEND schools across the county. In partnership with Schools Forum, Essex County Council has committed a £50m capital investment to fund SEND accommodation over the next three years.

The Department for Education provide additional funding through the Notional SEND Budget, which provides further financial support for SEND pupils. Schools have the ability to spend this funding how they see fit.

6.5 Adult Community Learning

Adult community learning covers a wide range of non-formal courses, which might range from personal development to older people's learning, IT courses, employability skills, family learning or skills- or hobby-based learning (such as learning a new language). Community learning is sometimes thought of as part of other types of adult education, e.g. apprenticeships and workplace training. However, this assessment focuses on community-based learning alone, as distinct from further education.

6.5.1 Evidence Base and Strategic Issues

The main sources of evidence include:

- Further Education and Skills in Essex, Essex County Council (n/d)
- Essex Residents' Survey, Essex County Council (2014)
- Essex Residents' Survey, Essex County Council (2015)
- Consultation with Essex County Council

The *New Challenges, New Chances: Next steps in implementing the further education reform programme* (2011) report published by the Government outlines the key ambitions for community learning. The report offers detailed proposal to overcome a range of challenges involving skills gaps, access to education and to promote high quality learning at all levels of adult education.

6.5.2 Existing Provision

There are no large adult community education providers within Epping Forest District. However, there are facilities in Harlow (Harlow College and ACL Harlow). There is also a Loughton & Epping branch of the Essex Federation of the Workers Education Association (WEA), which is a voluntary provider of adult education. WEA provides courses in existing community halls etc., rather than purpose-built accommodation.

6.5.3 Shortfalls in Current Provision

Essex County Council undertook a residents' survey in 2014, which included attitudes to adult community learning. The survey found that around 41% of respondents from Epping Forest District already consider themselves to be participant in lifelong learning, and that 64% of respondents District would like to participate in some form of adult learning in the future (compared with 56% across Essex as a whole). A follow-up survey in 2015 suggests that participation levels across the county have reduced slightly.

Relevant barriers to participation in learning across Essex were found to include:

- Lack of time
- Costs associated with courses
- Location / transport
- Lack of childcare

6.5.4 Infrastructure Requirements

There is no current 'standard' in relation to adult community education. However, it would be expected that an increase in Epping Forest District's population would lead to an increase in demand for this service. This might be met within the District (through new facilities or groups making use of existing community halls etc.), or at accessible centres outside the District.

6.5.5 Funding Mechanisms

Community education providers are funded through a range of sources. The ECC Adult Community Learning service is predominantly funded by the county council. Essex County Council has an Education and Lifelong Learning Budget of £45m. This fund covers large areas of expenditure and a range of services across the District, including ACL.

ACL is supplemented by Government funding via the Skills Funding Agency (SFA), or the Education Funding Agency (EFA). The Skills Funding Agency has produced a new Adult Education Budget, offering a single funding line, replacing previous separate streams. The WEA is a voluntary provider, however is supported by the Government through funding from the SFA.

7 Health, Social Care and Emergency Services

7.1 Primary Healthcare Overview

Primary healthcare provides the first point of contact within the health system. Primary care services include General Practice (GPs), dental practices, community pharmacists and optometrists, along with NHS walk in centres and 111 telephone services. These services are provided by a range of independent contractors.

NHS's *Transforming Primary Care in Essex* report states that these services are not currently integrated. GP services are currently organised into Clinical Commissioning Groups, with Epping Forest District falling under the West Essex CCG, alongside Uttlesford and Harlow.

The *Transforming Primary Care in Essex* report outlines the future vision for primary healthcare services in the county. Alternative models of healthcare delivery are being explored to help decentralise service provision across the local communities. The provision of GPs, dentists and pharmacies will be integrated within General Practice hubs. This integration will be accompanied by improved information sharing and a greater use of technology, to create a more responsive service for the changing demographic and lifestyles within Essex.

7.2 GP surgeries

7.2.1 Evidence Base and Strategic Issues

The main sources of evidence include:

- West Essex Joint Strategic Needs Assessment (2015)
- Transforming Primary Care in Essex, NHS (2014)
- NHS Choices
- Health and Social Care Information Centre
- Consultation with West Essex Clinical Commissioning Group and Princess Alexandra Hospital
- Five Year Strategic Plan for West Essex Health and Care System 2015-2020 (n/d)

The NHS is undergoing a shift in service delivery in response to rising demands and decreasing resources. New models of service provision are focusing on a more integrated network of community and social care services, enhanced out of hours services, and the collaboration of a more diverse range of healthcare professionals.

The five year strategic plan for West Essex reflects this strategic direction, and places significant emphasis upon delivery integrated and 'seamless' services across the Uttlesford, Harlow and Epping Forest District. The key challenge

within the West Essex CCG is providing high quality services for more people, with less financial resources available. The *Transforming Primary Care in Essex* report states the current model of healthcare provision across the county is not sustainable. There is no new funding available, and there is significant variation in the quality of premises, which are often not used in the most efficient way.

The five year strategic plan outlines a series of strategic issues faced by the West Essex CCG. These include:

- Inequalities in health, quality of life and access to healthcare.
- Fragmentation in the delivery of care.
- Varying use and effectiveness of preventative measures.
- Rising obesity.

Compared to national averages, Epping Forest District experiences better than average health. However, there are a range of challenges that need to be addressed through improved service provision, including responding to an ageing population, tackling inequalities amongst deprived communities, improving access for rural areas, and counteracting the rising levels of obesity across the district.

7.2.2 Existing Provision

West Essex CCG currently manages GP provision through four ‘neighbourhood areas’ within the District:

- Epping, Ongar, North Weald Bassett and Theydon Bois
- Loughton
- Buckhurst Hill and Chigwell
- Waltham Abbey

There are also three within Harlow – North Harlow, Central Harlow, and South Harlow.

There are currently 19 GP surgeries in the District, including four branch surgeries. There are an additional 12 surgeries within a 1km radius (transport networked) of the Epping Forest District boundary. Locations are shown in Figure C.9 in Appendix C.

Figure 22 sets out the number of patients registered at each surgery in relation to the number of GPs currently based there. The NHS do not set standards for FTE GPs per 1,000 patients per practice, recognising differing patient needs in different areas, and an increasing move towards ‘skills mixing’, such as bringing in nurses and Allied Health Professionals (AHP). For the purposes of this baseline, an indicative standard of 1 FTE GP per 1,800¹³ patients has been used to provide an overview of existing capacity and shortfalls within the District. It should be noted that there is no available data outlining FTE GP figures. In order

¹³ This figure is also in line with North Weald Bassett Masterplanning Study (2014)

to best reflect the number of FTE GPs, an FTE ratio of 83% has been applied, as suggested by NHS Digital¹⁴.

Due to the centralised nature of patient information of branch surgeries, an assumption of the split of GPs and patients across the parent and branch surgeries has been assumed to calculate the indicative capacity. The assessment suggests there is a current capacity of 147,600 GP registrations, and an unused capacity across the District of 29,392 registrations.

Figure 22: GP surgeries in Epping Forest District

Health centre	Number of GPs ¹⁵	Number of registered patients (HSCIC, 2017)	Capacity based on the average GP to patient ratio (1:1,800)
Abridge Surgery 37 Ongar Road, Abridge, RM4 1UH	3	3,800	2,289
Chigwell Medical Centre 300 Fencepiece Road, Ilford, IG6 2TA	6	8,720	1,751
The Forest Practice 26 Pyrles Lane, Loughton, IG10 2NH	3	5368	2,156
The Loughton Surgery (Station Road Branch) 11 Station Road, Loughton, IG10 4NZ	3	5368	2,156
Traps Hill Surgery Branch 25 Traps Hill, Loughton, IG10 1SZ	8	10,891	1,640
High Street Surgery 301 High Street, Epping, CM16 4DA	3	7,302	2,933
Kings Medical Centre 23 Kings Avenue, Buckhurst Hill, IG9 5LP	4	7,527	2,267
The Limes Medical Centre (Branch) The Plain, Epping, CM16 6TL	6	4,687	941
North Weald Surgery (Limes Branch) 67 Wheelers Farm Gardens, North Weald, CM16 6HW	2	4,687	2,823

¹⁴ Due to the lack of alternative data, this ratio has been applied to calculate capacity in the District. It should be noted that in some instances NHS Digital's estimate of FTE has been criticised as potentially overestimating practice hours. It does however provide a greater level of accuracy than using publically available GP figures at face value, and therefore has been used.

Health centre	Number of GPs ¹⁵	Number of registered patients (HSCIC, 2017)	Capacity based on the average GP to patient ratio (1:1,800)
Waltham Abbey Branch Surgery (branch) 1st floor, WA Health centre, Sewardstone Road, Waltham Abbey, EN9 1NP	2	4,687	2,823
Thriffs Mead Branch Surgery (Limes Branch) Poplar Row, Theydon Bois, Epping, CM16 7NE	2	4,687	2,823
Loughton Health centre The Drive, Loughton, IG10 1HW	5	11,888	2,865
Market Square Surgery 13 Sewardstone Road, Waltham Abbey, EN9 1NP	3	8,067	3,240
Ongar Health Centre Fyfield Road, Ongar, Essex, CM5 0AL	16	11,924	898
Nazeing Valley Health centre 64-66 North Street, Nazeing, EN9 2EU	2	3517	2,119
Palmerston Road Surgery 18 Palmerston Road, Buckhurst Hill, IG9 5LT	2	4,760	2,867
The River Surgery 16 Rous Road, Buckhurst Hill, IG9 6BN	4	4202	1,266
Keyhealth Medical Centre Sewardstone Road, EN9 1NP	2	6,487	3,908
Maynard Court Surgery 17-18 Maynard Court	6	3,905	784

7.2.3 Shortfalls in Current Provision

Initial consultation highlights that there is an overall capacity deficit within the surgeries serving Epping Forest District, particularly as branch surgeries do not provide additional capacity. Surgeries in the District are facing rising patient demand, particularly from an ageing population with complex health needs. There are very limited out of hour's providers within the District, which places increased pressure on St Margaret's Hospital.

The patient to GP capacity ratio set out in Figure 22 shows 13 of the 19 surgeries are operating above the optimum standards. Local perceptions within the GP Patient Survey reflect this, with the main areas of complaint focusing on difficulties in booking an appointment, and long patient waiting times.

Consultation with the West Essex CCG identified that a significant proportion of GPs in the area are nearing retirement. This may have implications for healthcare provision in the District. Conversations with West Essex CCG advised that recruitment of nurses remains a significant problem for healthcare in the area, with high housing costs being one of the main barriers.

7.2.4 Infrastructure Requirements

Modelling has been undertaken by West Essex CCG to understand the future requirements for additional GP floorspace across the Neighbourhood Areas. The Infrastructure Delivery Schedule (Part B report) includes the following interventions for GP provision:

- Buckhurst Hill and Chigwell Neighbourhood Area – 84 sqm additional floorspace
- Epping, Ongar and Abridge Neighbourhood Area – 716 sqm additional floorspace
- Loughton Neighbourhood Area – 196 sqm additional floorspace
- Waltham Abbey – 173 sqm additional floorspace
- Harlow strategic sites (combined) – 641 sqm additional floorspace

Opportunities to meet this requirement through expansions and/or relocations of existing surgeries, and new facilities, will be further considered by the CCG. NHS Procurement guidelines typically favour larger floor plans as they are more cost effective to run. This could favour the modernisation and expansion of existing surgeries, as opposed to new surgery provision.

7.2.5 Funding Mechanisms

Funding for GP practices is primarily through the General Medical Services (GMS) and the Personal Medical Services (PMS). The GMS is negotiated between the BMA General Practitioners Committee and NHS Employers, on behalf of the Government. At least half of the money received is from the global sum core funding for essential services, and is weighted by need. The PMS are locally agreed contracts between the NHS England and a GP service. These allow for greater local flexibility by allowing variation in the range of services provided by the practice, the financial arrangements for those services, and who can hold the contract. It is found that expenditure on PMS practices is higher than on GMS services.

In April 2016 NHS England published the *General Practice: Forward View* aimed at improving general practices. It commits to investing a further £2.4 billion a year by 2020/2021 into GP services (14% increase in real terms). Further investments will be made in workforce and workload, but of significance here is the further investment in practice infrastructure. £900 million over the next five years will be invested through the NHS's Estates and Technology Transformation Fund. New rules will enable NHS England to fund up to 100% of the costs for premises developments, where previously caps were for only 66% funding. There

will be additional technology improvements for better provision of IT services and technology for GPs.

Developer contributions also offer a possible source of funding, but will have to be balanced against other priorities in the District.

7.3 Dentists

7.3.1 Evidence Base and Strategic Issues

The main sources of evidence include:

- Transforming Primary Care in Essex, NHS (2014)
- Consultation with West Essex CCG
- Consultation with the West Essex Primary Care Service

The provision of dental care within Epping Forest District takes multiple forms, including high street dental practices, community dental services and hospital out-of-hours services.

7.3.2 Existing Provision and Shortfalls

Figure 23 shows the number of dental practitioners currently located within the District; their locations are shown in Figure C.10 in Appendix C.

Figure 23: Dentists in Epping Forest District

Dentist	Location	Number of dental practitioners	Accept NHS patients
Ongar Dental Practice	Ongar	1	Yes
The Tooth Booth	Epping	3	Yes
Alexanders Dental Practice	Waltham Abbey	1	Yes
Market Square Dental Surgery	Waltham Abbey	2	Yes
Cobbins Brook Dental Practice	Waltham Abbey	5	Yes
Loughton Dental Spa	Loughton	3	Yes
J. Atherton Dental practice	Loughton	2	No
Church Hill Dental practice	Loughton	4	Yes
Forest Hill Dental Practice	Loughton	1	No
Broadway Dental Clinic	Loughton	4	Yes
Station Road Dental Practice	Loughton	3	Yes
Loughton Dental Centre	Loughton	4	Only under 18's
Valley Dental Practice	Buckhurst Hill	7	Yes
The White House Practice	Buckhurst Hill	6	No
The Queen's Dental practice	Buckhurst Hill	1	Only under 18's

In addition to these surgeries, community dental services are available at St Margaret's Hospital, and are aimed at providing dental care to residents who cannot access General Dental Services. Community dental services are centrally managed by the West Essex Primary Dental Care Service, with the head office in Harlow. A part time community dentist currently offers services in Waltham Abbey Health centre and Waltham Abbey Primary Care Centre. West Essex CCG also provide an out-of-hours dental service, also located at St Margaret's Hospital.

7.3.3 Infrastructure Requirements

The *Transforming Healthcare in Essex* report produced by the NHS states that dental services within Essex remain fragmented across separate providers. The future vision for dental care in the county involves the use of specialist-led facilities to provide complex restorative care to patients, and greater integration of dental services with other forms of primary care.

Community dental services in Essex are similarly transitioning into a new model of service provision. Future provision by the Community Dental Services will focus around service delivery from centralised 'hubs' in larger settlements across the county. Additional services will also be provided from mobile dental units, and clinics in neighbouring authorities, and throughout Essex as a whole. This will improve access for patients living in more rural locations.

In order to estimate the amount of dentists required to serve the additional population expected over the Plan period, the following standards set out in Figure 24 have been used.

Figure 24: Dentist standards

Infrastructure	Standard	Per	Source
Dentists	1 FTE GP	2,000 population	<i>North Weald Masterplan (derived from NHS source)</i>

Based on expected additional population only (i.e. not taking into account existing capacity or shortfall), the requirement for additional dentists settlements is shown in Figure 25. It should be noted that whilst demand is broken down by settlement, it is not necessarily expected that delivery of these services would be in every settlement, i.e. not every settlement would be expected to have a dental surgery.

Figure 25: Dentist additional demand (newly arising only)

Settlement groups	Newly arising demand over Plan period (Dentist FTE)
Buckhurst Hill	0.23
Chigwell	0.78
Chipping Ongar	0.94
Epping	1.75
Fyfield	0.04
High Ongar	0.08
Loughton / Debden	1.56
Lower Nazeing	0.40
Lower Sheering	0.05
North Weald Bassett	1.43
Roydon	0.13
Sheering	0.15
Stapleford Abbots	0.12
Theydon Bois	0.10
Thornwood	0.26
Waltham Abbey	1.40
East of Harlow	0.87
Latton Priory	1.23
Water Lane Area	2.43

7.3.4 Funding Mechanisms

Dental services are provided by independent practitioners, with the addition of NHS funding to subsidise provision for NHS patients. It is common for dental practices to offer both NHS and private services. There are a number of providers in the District that do not offer NHS services. There might be opportunity to expand local provision if these services were partly contracted by the NHS.

7.4 Pharmacies

7.4.1 Evidence Base and Strategic Issues

The main sources of evidence include:

- Transforming Healthcare in Essex, NHS (2014)
- NHS Choices
- Essex Pharmaceutical Needs Assessment (2015)
- Essex Pharmaceutical Needs Assessment: West Essex Area Locality Report (March 2015)

Key providers of pharmacies include the Essex Health and Wellbeing Board and the NHSE Area Team.

The *Essex Pharmaceutical Needs Assessment* was undertaken in 2015 to assess how pharmaceutical services across the county meet the needs of the population. The report identifies the important role of pharmacies in community healthcare provision, offering a regular source of advice and access to simple self-treatment.

They provide services such as non-smoking and sexual health, without the need to book an appointment, and play a key role in out-of-hospital care. At the local level, pharmacies increasingly act as a platform in which to communicate health messages, and encourage lifestyle changes. This role is crucial in the early detection of illness, and strengthening the effectiveness of preventative measures. For these reasons, pharmacies tend to see significantly more people than many other NHS care settings.

The *Transforming Healthcare in Essex* NHS report envisions a more prominent role for pharmacies in community healthcare. Pharmacists should become the first point of contact for the public, with the aim of reducing pressure on GP surgeries, out-of-hours services and Accident and Emergency departments. The *Essex Pharmaceutical Needs Assessment* report outlines that demographics most likely to visit a pharmacy at least once a month include older people, children, women aged 55 and over and those with a long term condition.

7.4.2 Existing Provision

There are currently 24 pharmacies within Epping Forest District, shown in Figure C.11 in Appendix C. These services are located in the key service centres across the District, including Ongar, Epping, Waltham Abbey, Loughton, Buckhurst Hill and other smaller settlements. The *Essex Pharmaceutical Needs Assessment: West Essex* notes that the majority of pharmacies in Epping Forest are open between 09:00am until 18:00 (Monday to Friday) and 09:00-17:00pm on a Saturday. Only three pharmacies were open on a Sunday. While only a handful of pharmacies provide disease specific medicine management services and a quarter provided some screening services including for diabetes and cholesterol, approximately half provided home delivery services.

Figure 26: Pharmacies in Epping Forest District

Pharmacy	Location	Online Prescription Services
Glennon Chemists	Waltham Abbey	Yes
Lloyds Pharmacy	Waltham Abbey	Yes
Lloyds Pharmacy	Waltham Abbey	Yes
Boots Pharmacy	Epping	Yes
Lloyds Pharmacy	Epping	Yes
Well Epping – The Limes MC	Epping	Yes
Theydon Bois Pharmacy	Epping	Yes
North Weald Chemist	North Weald	Yes

Pharmacy	Location	Online Prescription Services
Leach and Burton Ltd	Loughton	Yes
Boots Pharmacy	Loughton	Yes
Kg Dispensing Chemist	Loughton	Yes
Total Medcare Limited	Loughton	Yes
Morrisons Pharmacy	Loughton	Yes
Well Loughton – Loughton HC	Loughton	Yes
Boots Pharmacy	Loughton	Yes
Hutchins Chemist	Loughton	Yes
Oakwood Pharmacy	Loughton	Yes
Elgon Chemists	Nazeing	Yes
Lloyds Pharmacy	Chipping Ongar	Yes
Brookhouse Pharmacy	Chigwell	Yes
Well Ongar – High Street	Ongar	Yes
Safedale Ltd	Buckhurst Hill	Yes
Dees Pharmacy	Roydon	Yes
Easter Pharmacy	Buckhurst Hill	Yes

Source: NHS Choices

The 2008 White Paper entitled Pharmacy in England: building on Strengths – Delivering the Future, states that community pharmacies should be easily accessible to the local population, and that all local residents should be within a 20 minute journey by car of a pharmacy, and where possible by sustainable modes of transport. The *Essex Pharmaceutical Needs Assessment* (2015) confirms that the whole of Epping Forest District meets this access criteria.

7.4.3 Shortfalls in Current Provision

Compared to the average for Essex as a whole, the West Essex CCG has a lower provision of pharmacies. However, this lower provision is in line with the lower than average dispensing rate. The *Essex Pharmaceutical Needs Assessment: West Essex* showed that from a resident survey 84% stated that they have not experienced any problems accessing their usual pharmacy or dispensing doctor.

The *Essex Pharmaceutical Needs Assessment* report outlines that in rural areas, services are not always available within the immediate locality. High street pharmacies within Epping Forest are predominantly located in urban settlements, leaving the north east of the District and more rural settlements with limited access.

All of the listed pharmacies within the district have online prescription services available, offering a more responsive and flexible service for residents with restricted access. In addition to this service, two of the GP surgeries in the District are dispensing practices (Ongar Health Centre and The Ongar Surgery), allowing

doctors to provide pharmaceutical services to eligible patients living in rural areas. For these patients, dispensing services are available during surgery opening hours.

7.4.4 Infrastructure Requirements

The *Essex Pharmaceutical Needs Assessment* considered the impact of development and housing growth on the provision of community pharmacies. Both travel distances and access to provision were taken into account, with the conclusion that all areas are well served by the existing network of pharmacies, and no gaps in provision have been identified.

It was noted however that changing models of healthcare provision are likely to impact upon pharmacy services. The movement towards a 7-day service for GPs may require additional hours from current contractors, to ensure that local residents can easily access prescriptions. The Department for Health have outlined ambitions to shift towards multi-speciality community providers, to ensure greater integration of pharmacies with the NHS. In the context of funding constraints, there will be ongoing attempts to modernise the pharmacy systems. These will include encouraging online ordering, click and collect and home delivery options in accessing prescriptions.

7.4.5 Funding Mechanisms

Pharmacists are private practitioners, who receive NHS funding to provide free prescriptions to those qualifying, and additional NHS health services. The average (median) pharmacy received around £220,000 a year in NHS fees and allowances. However in the context of NHS funding cuts, this allowance is being reviewed.

Before a registered pharmacy can dispense prescriptions issued under the NHS, it must be included in the pharmaceutical list maintained by NHS England. Applications for new, additional or relocated pharmacy premises must be made to the local NHS England Area Team. Most routine applications for a new pharmacy will be assessed against the Pharmaceutical Needs Assessment.

Proposals for future reform set out a reduction in funding of £170m for 2016/17. In contrast to other public sector services, there is a low online uptake of pharmacy services, which means the NHS are responsible for funding a large estate. There is a drive to ensure efficiency by removing pharmacies that are within clusters. There will be revised funding streams opportunities through the Pharmacy Integration Fund (PhIF).

7.5 Secondary healthcare overview

Secondary care services are generally provided by Care Commissioning Groups, and predominantly include hospital and community care services. Such care services include the following:

- Planned hospital care
- Rehabilitative care
- Urgent and emergency care

- The majority of community health services
- Mental health services
- Certain GP services

7.6 Hospitals

7.6.1 Evidence Base and Strategic Issues

The main sources of evidence include:

- Consultation with West Essex CCG
- Consultation with Princess Alexandra Hospital
- Care Quality Commission
- 5 Year Strategic Plan for West Essex Health and Care System 2015-2020 (n/d)
- PAH Strategic Context, Officer Discussion with DC Planning Representatives and PAH, NHS Trust

The NHS Business Plan (2016/17) outlines the increasing pressures the UK health services are under, particularly in A&E, waiting times for operations and the overall management of hospital finances.

The *5 Year Strategic Plan for West Essex Health and Care System* report outlines that the local hospital for many residents across West Essex is the Princess Alexandra Hospital (PAH) in Harlow. Continued population growth has placed increasing pressure on hospital services. The report states that the PAH Emergency Department receives over 110,000 patients each year, and has seen a 50% increase in emergency admissions since 2010/11, making it one of the busiest departments in England.

An Inspection by the Care Quality Commission in 2015 outlined that the trust has “significant capacity issues”, with a high pressure on available bed spaces. The hospital estate is ageing and insufficient for current healthcare needs, and has accumulated a large maintenance backlog of over £28 million.

The southern part of the District will be affected by changes at Whipps Cross Hospital in Waltham Forest, which faces significant estate challenges, and is in the process of being reorganised and redeveloped to provide a more extensive range of community services. Conversations with the West Essex Care Commissioning Group have outlined how stroke service and supported rehabilitation services in Epping Forest District are under strain, with hospital services unable to provide the required bed space.

7.6.2 Existing Provision and Shortfalls

Epping Forest District has one hospital, which is the St. Margaret’s Hospital in Epping. The area is also served by Princess Alexandra Hospital in Harlow. The Princess Alexandra Hospital NHS Trust is currently considering options to meet its future service requirements through a Strategic Outline Business Case. As part

of this work the potential to relocate the Princess Alexandra Hospital from its current site within Harlow is being considered. Two potential sites for relocation are currently being considered: Gilston, to the north of Harlow (within the East Hertfordshire); and land to the East of Harlow within Epping Forest District. If PAH relocates to a new site then provision at St Margaret's may be reviewed.

The Council will work cooperatively with all relevant stakeholders to ensure the future provision of high quality healthcare facilities and services to serve the wider area.

St Margaret's Hospital is managed by the Princess Alexandra Hospital (PAH) NHS Trust. NHS data on overnight bed availability and occupancy shows that for Q4 2015-16, 93.8% of the PAH Trust overnight bed spaces were occupied, with 96% of general acute overnight bed spaces occupied. 87.4% of total day bed spaces were also occupied. This is shown in Figure 27. Disaggregated data for St. Margaret's Hospital is not available.

Figure 27: Available and occupied bed capacity for Princess Alexandra Hospital NHS Trust

	General and acute	Learning disabilities	Maternity	Mental health	Total
Available	424	-	41	-	465
Occupied	407	-	29	-	436
%	96.0%	-	59.2%	-	93.8%

7.6.3 Infrastructure Requirements

Across England, there are currently approximately 0.0025 hospital beds per person (Mid-2014 Population Estimates for Clinical Commissioning Groups in England). Applying this current level of provision to new population expected over the Plan period would suggest an additional demand for an extra 72 hospital beds. However, due to changes in the provision of health care expected over the Plan period – e.g. a move to more day procedures or localised treatment – there is not necessarily a straightforward link between population and hospital beds. The West Essex CCG will undertake more detailed assessment of future need as part of its ongoing forecasting.

7.6.4 Funding Mechanisms

Hospitals are funded by the Department of Health (DH). In December 2015, the DH set up a Sustainability and Transformation fund, to support challenged hospitals improve finances and achieve greater efficiency. Funding is distributed from this fund to all providers of emergency care, with additional finances made available for hospitals capable of delivering additional improvements.

7.7 Mental Health

Mental health services cover a range of emotional and psychological difficulties. Within Epping Forest District, services are provided by the North Essex

Partnership Trust and the South Essex Partnership Trust. In addition to these services, therapists provide mental health therapy under the Improving Access to Psychological Therapies (IAPT) programme.

7.7.1 Evidence Base and Strategic Issues

The main sources of evidence include:

- North Essex Mental Health Joint Commissioning Strategy, 2013-2017 (n/d)
- 5 Year Strategic Plan for West Essex Health and Care System 2015-2020 (n/d)
- Consultation with West Essex CCG
- The Five Year Forward View for Mental Health, NHS (2016)
- Southend, Essex and Thurrock Mental Health and Wellbeing Strategy 2017-2021 (2017)

The Southend, Essex and Thurrock Mental Health and Wellbeing Strategy 2017-2021 brings together three local authorities and seven clinical commissioning groups to bring forward a comprehensive vision for improving mental healthcare outcomes. Essex faces a range of strategic challenges, including demographic shifts, fragmented service provision and increasing demand made more acute by a series of cost reduction programmes. As the population grows, the prevalence of mental illness is also likely to increase, particularly for dementia due to the increase in the elderly population. The strategy has a strong focus on prevention, early intervention, resilience and recovery. A single mental health commission will be created bringing together the local authorities, NHS and other partners around a common plan. This will work in partnership to coproduce services with clinicians, experts and families. New care models are being established which will also reduce costs through better prevention and service improvements. The West Essex Clinical Commissioning Group has commissioned its own primary care service through the Improving Access to Psychological Therapies (IAPT) programme. IAPT is an NHS programme, offering services for treating disorders such as anxiety and depression. These services offer Psychological Wellbeing Practitioners (PWP) and High Intensity CBT Therapists, who offer low and high intensity intervention respectively. There are a number of such therapists across Epping Forest District, often working from home.

7.7.2 Existing Provision and Shortfall

North Essex Trust are commissioned by the CCG to provide secondary mental healthcare across an area which includes Epping Forest District. The following are provided:

- Access and assessment services for those needing new assessments. Whilst the base is at the Derwent Centre in Harlow, assessments are undertaken in venues in Epping Forest District, most usually the Epping Forest Mental Health Recovery Service in Loughton.

- Intensive home treatment services for those who are experiencing acute episodes which may result in a hospital admission or those who have just been discharged.
- Mental health recovery services, providing community treatment for those with secondary mental health needs. This team is based at Epping Forest Mental Health Recovery Service in Loughton. The service consists of community psychiatric nurses, social workers, psychiatrists, psychologists, occupational therapists and an employment advisor.
- Early intervention, providing assessment treatment and support for those experiencing their first episode of psychosis.
- Dementia and frailty services, providing assessments and on-going support and treatment based at Regent's Road in Epping. The majority of the support, care and treatment is provided within the individual's own home.
- Inpatients Service at the Derwent Centre in Harlow (for under 65s) and the Mental Health Unit within St. Margaret's Hospital (over 65s).

7.7.3 Infrastructure Requirements

There are no 'standards' on the provision of mental health services in Essex; for this reason, it has not been possible to model future infrastructure requirements.

The Essex County Council Developers' Contribution Guide has identified that specialised housing with care for older people and working age people with disabilities needs to be provided in a number of areas across Essex County. Specialised housing is characteristically 12 flats with an on-site office. There is also a need for move-on accommodation of self-contained flats in general needs accommodation.

The NHS's Five Year Forward View for Mental Health report produced by the Mental Health Taskforce (2016) sets out the future delivery models for mental healthcare in the UK. To help 'plug the gaps' of the current system and maximise efficiency, future provision will focus strongly on integration, more flexible responses and out of hours crisis care, and define clear care pathways. This will include joining up services more effectively with existing NHS health providers, along with a range of community services such as the Jobcentre Plus, services for young people and other voluntary sectors.

7.7.4 Funding Mechanisms

Mental health services in Epping Forest District are funded by the West Essex Clinical Commissioning Group (CCG). The CCG model receives funding allocations from the NHS, based on a local funding formula, to reflect local population changes and deprivation. In addition to NHS funding, Essex County Council funded social workers, who are fully integrated into the mental healthcare service within the District.

Developer contributions can also provide crucial funding streams for delivering a range of supported living options.

7.8 Community Nursing

District nurses form a key part of primary healthcare, and provide support for a complex range of care needs in patients own home or a residential home. District nursing services are coordinated alongside a range of bodies, including social services, voluntary agencies, and other NHS organisations. The Royal College of Nursing (RCN) states how community nursing is the mainstay of locally delivered health care. The report ‘Pillars of the Community’ outlines the role of community nurses as promoting health, healing, growth and development, as well as preventing disease, illness and disability.

7.8.1 Evidence Base and Strategic Issues

The main sources of evidence include:

- Pillars of the Community: the RCN’s UK position on the development of the registered nursing workforce in the community, RCN (2010)
- Consultation with West Essex Clinical Commissioning Group

National healthcare policy is increasingly favouring care taking place outside hospitals and surgeries, for both economic and ideological reasons. An ageing population will put further pressure on these services in the future, particularly as accommodating the complex range of care needs within hospital facilities is unviable. Primary care services, where appropriate, are being delivered in home and residential settings to provide ongoing support. As more people are living longer, new service models are required to enable people to remain within their homes and communities.

The Department of Health, in partnership with the NHS Commissioning Board and the Queen’s Nursing Institute, have developed a Community Nursing Development programme. This programme seeks to introduce a new model of service delivery for District nursing, which focuses on mobile working, the efficient targeting of resources, greater integration across health bodies and improved technology.

There are three existing centres within Epping Forest District from which community nursing is organised:

- Buckhurst Way Community Health Clinic
- Buckhurst Way Clinic
- Epping Forest Specialist Dementia and Frailty Team

There are no current ‘standards’ on the provision of community nursing. However, in recent years there has been a renewed emphasis on community nursing to treat people in their homes rather than requiring treatment or stays in hospitals. The future provision of District nursing is likely to be delivered as part of a package of care treatments, targeted at specific patient groups.

7.9 Adult Social Care

This section focuses on three types of adult social care:

- Independent living
- Extra care
- Residential care

Independent living facilities are designed to provide housing for people over the age of 55 whose current home no longer meets their needs – e.g. as a result of social isolation, a need to downsize, access to care and support etc.

The term extra care housing often relates to an extension of the types of housing provided through independent living, although with escalating levels of domestic and personal care to suit the changing needs of the occupants.

There are two main categories of residential care facilities. Nursing care will always include one qualified nurse or doctor, and can therefore cater for people with conditions that require nursing attention. Residential homes will call in routine and emergency medical support from other agencies (e.g. GPs or district nurses), as required. Both types of facilities provide accommodation, meals and personal care. It should be noted that whilst residential care is often thought of as catering for older people, some facilities will cater in part or exclusively for other ages with specific needs. Given that this is not always clear which groups are catered for, they have not been disaggregated.

7.9.1 Evidence Base and Strategic Issues

The main sources of evidence include:

- Shaping Futures: Market Position Statement, Designing Services for the Future 2015-2025, Essex County Council/ NHS (n/d)
- The Housing, Learning and Improvement Network – Shop Tool
- The Independent Living Programme for Older People, Essex County Council (2016)
- People in Essex can live independently and exercise choice and control over their own lives, Essex County Council Commissioning Strategy (2014)
- Care Quality Commission directory
- www.carehome.co.uk

Essex County Council's *Shaping Futures: Market Position Statement, Designing Services for the Future 2015-2025* looks at the adult social care needs that are likely to be required across the county over the next decade. It concludes that extended periods of residential stay are not desirable, and that more should be done to help people stay in their homes. There is also a desire to manage demand for social care by diverting away from formal care to community based resources. However, even if people use formal services later, increasing life expectancies

mean that services are required for longer – therefore in real terms volume and general demand for social care is expected to increase in the future.

7.9.2 Existing Provision

7.9.2.1 Independent Living

Essex County Council's *Independent Living Programme for Older People* (April 2016) document outlines the demand and current provision of Independent Living Units in the district (Figure 28). Presently, there is only one scheme (Honey Tree Court in Loughton), consisting of 40 units.

Figure 28: Demand and current provision for independent living units

Independent living provision (April 2016)	Demand	Existing	In development	Shortfall
Independent Living Rental Units	102	40	0	62
Independent Living Ownership Units	175	0	0	175

Source: *Independent Living Programme for Older People* (April 2016)

7.9.2.2 Extra Care

Across Essex, there are currently 478 units of extra care accommodation through 11 schemes (*Shaping Futures: Market Position Statement, Designing Services for the Future 2015-2025*). Provision is not known on a district level.

7.9.2.3 Residential Care

Provision of spaces within care homes is also a significant issue and will become more acute with the ageing population. Data from the Care Quality Commission Directory shows that Epping Forest currently has 20 residential care homes and nine nursing homes, with a capacity of 1,351 spaces.

Figure 29: Residential care within the District

Facility	Settlement	Spaces
Nursing homes		
Forest Place Nursing Home	Buckhurst Hill	90
Queens Court Nursing Home	Buckhurst Hill	90
Sherrell House	Chigwell	92
Revitalise Jubilee Lodge	Chigwell	36
Barchester Ashlar House	Epping	36
Woodland Grove	Loughton	72
1 Sewardstone Close	Waltham Abbey	20

Facility	Settlement	Spaces
Ashbrook Court Care Home	Waltham Abbey	70
Paternoster House	Waltham Abbey	108
Residential homes		
Lugano Residence for the Elderly	Buckhurst Hill	27
Belmont Lodge Care Centre	Chigwell	46
Bramble Close Habilitation Unit	Chigwell	4
Alder House	Chigwell	20
Wensley House Residential Home	Epping	48
Treetops Care Home	Epping	52
Beechlands	Loughton	28
Loughton Hall	Loughton	33
The Mellows	Loughton	50
Cunningham House	North Weald	54
Willowcroft Care Home	Sewardstone	7
Frank Foster House	Theydon Bois	80
Marcis House	Theydon Bois	32
Wealdhall Residential Home	Thornwood	39
Willow Court	Waltham Abbey	11
Honey Lane Care Home	Waltham Abbey	41
Tallis House	Waltham Abbey	101
Vibrance - 138-138a Mason Way	Waltham Abbey	10
Sherbrooke Hostel	Waltham Abbey	25
Upshire Residential Home	Waltham Abbey	29
Total		1,351

Source: Care Quality Commission directory; www.carehome.co.uk

7.9.3 Shortfalls in Current Provision

7.9.3.1 Independent Living

Essex County Council undertook a demand analysis assessment, which identified a shortfall in independent living units of a total of 237 units in the District, of which 62 are for the affordable market (rental only) and 175 are ownership

(outright sale and shared ownership) (Figure 28, above). This forms part of the objectively assessed need for the District as established in the SHMA (in contrast with extra care and residential care which falls under institutional use).

There is a scheme of 60 units (30 rental and 30 ownership) which is currently at the planning application stage and would be due for completion in 2018/19. If this development receives permission and goes ahead this would leave a remaining shortfall in provision of 177 units.

7.9.3.2 Extra Care

The volume of extra care facilities on offer across the county is low, at 1.5 per 1,000 of the population compared to the national picture of 4.5 per 1,000. Based on the national prevalence rates, More Choice Greater Voice recommends 25 units per 1,000 of the population 75+. Compared to this recommendation Essex currently has a deficit of 2,700 units.

Applying these county-wide ratios to Epping Forest district would have an indicative current shortfall of around 280 spaces.

7.9.3.3 Residential Care

The Strategic Housing for Older People Analysis Tool (SHOP@) suggests demand standards of 45 nursing home places and 65 residential places per 1,000 population aged 75 and over. If applied to current population, this would result in:

- a surplus in residential care of 135 places; offset by
- a deficit in nursing care of 166 places.

Therefore, there is a total deficit in residential care of 31 places. The south of the District is particularly pressured due to a large proportion of spaces being filled with residents from London. In addition, the Princess Alexandra Hospital has limited capacity to provide bed spaces, especially for patients with dementia. There is therefore a need for additional care home places to free up hospital beds. There may be opportunities to convert residential care facilities into nursing care.

7.9.4 Infrastructure Requirements

Growth in population combined with changing demographic patterns mean there will be additional demand for adult social care facilities. In order to estimate the magnitude of adult social care required to serve the additional population expected over the Plan period, the following standards set out in Figure 30 have been used.

Figure 30: Adult social care standards

Infrastructure	Standard	Per	Source
Independent living	25	1,000 55 and over	Independent Living Programme for Older People, Essex County Council

Extra care	25	1,000 75 and over	Strategic Housing for Older People Analysis Tool (SHOP@)
Nursing care	45	1,000 75 and over	Strategic Housing for Older People Analysis Tool (SHOP@)
Residential care	65	1,000 75 and over	Strategic Housing for Older People Analysis Tool (SHOP@)

Note, demand for independent living is based on 25 places per 1,000 people over the age of 55. It is understood that, whilst this is the same standard as was originally used in Essex County Council's *Independent Living Programme for Older People* document, more detailed demographic analysis was also undertaken.

Based on expected additional population only (i.e. not taking into account existing capacity or shortfall), the demand for adult social care across the District is shown in Figure 31.

Figure 31: Adult social care additional demand (newly arising only)

Infrastructure	Newly arising demand over Plan period (places)
Independent living	253
Extra care	88
Nursing care	158
Residential care	228

Taking into account the deficits set out in Section 7.9.3, the total demand for adult social care over the Plan period is shown in Figure 32.

Figure 32: Adult social care additional demand (newly arising and existing capacity/shortfall)

Infrastructure	Existing capacity (-) / shortfall (+)	Newly arising demand	Total
Independent living	237	253	490
Extra care	280	88	368
Nursing care	166	158	324
Residential care	-135	228	93

It should be noted that the Schedule included in the Part B report only includes institutional (C2) provision, and so independent living units have been excluded.

7.9.5 Funding Mechanisms

Adult social care services are privately provided, however Essex County Council have contracts with providers to subsidise a set number of bed spaces. Developer contributions could play a role in delivering specialist housing need, however there will be a limited pool of capital from these contributions to distribute across

the District's infrastructure needs. The County Council provide a capital grant scheme and models for land and building donations to support scheme viability.

Essex County Council's Adult Social Care Budget was £414m for the 2016/17 year, an increase of £10m from the previous year's budget. At present, 81% of this budget is used in the provision of care packages for vulnerable adults, in the form of residential care. Due to the demographic pressures facing the District, an addition £5m was added to the 2016/17 budget to accommodate the rising number of older people.

The integrated and complex nature of healthcare provision poses challenges for the future planning of services, with new models of provision likely to emerge over the Plan period. Decisions about the relocation of Princess Alexandra Hospital will have significant implications for service delivery and will require further analysis once confirmed. The level of growth proposed for the District might justify a new centralised care 'hub', to co-locate key primary health services. Policy D2 Essential Facilities and Services in the Submission Local Plan supports proposals for new essential facilities and services where they meet an identified local need. In order to understand the impact of new residential development on health, the policy also requires all Use Class C2 developments and Use Class C3 residential development proposals in excess of 50 units to prepare a Health Impact Assessment. Such an assessment will measure the wider impact upon healthy living and the demands that are placed upon the capacity of health services and facilities arising from the development.

The provision of secondary healthcare services such as adult social care is likely to become more critical within the District, due to the ageing demographic profile. These demographic trends will place greater demand upon health services within the District, particularly the various forms of supported accommodation for the elderly. This is reflected in Policy H1 Housing Mix and Accommodation Types of the Submission Local Plan, which supports the delivery of housing and specialist accommodation for those with support needs, including for older people, where they meet an identified need.

8 Emergency Services

The plan period will see a new model of delivery for emergency services across the region. The trend will be towards a reduction in facilities to create a more efficient service and respond to financial pressures. Emergency services will make savings through increased joint working across authority boundaries, and targeted resources to areas of acute need. Local need will be accommodated through community teams and representatives, offering a greater presence in community spaces, however there will not be any new dedicated facilities.

8.1 Ambulance

The main sources of evidence include:

- Care Quality Commission: East of England Ambulance Service NHS.

Across Essex, ambulance services are provided by the East of England (EoE) Ambulance Service. This service was established in 2006, and provides emergency care services across Bedfordshire, Cambridgeshire, Hertfordshire, Essex, Norfolk and Suffolk. Across this area, there are 130 sites, and a fleet of 1,000 vehicles. Within Epping Forest District, ambulance stations are located in Waltham Abbey, Loughton, Epping and Ongar.

Throughout 2014/15, the EoE Ambulance Service saw significant improvements to overall performance, against the background of increased demand. These improvements included:

- Undergoing a major recruitment period
- Strong focus on up skilling and training
- Increasing ambulance cover
- An overall efficiency saving of £14m

The service has seen an overall improvement in clinical quality indicators, with more patients receiving appropriate care. In some areas of service delivery however, the Trust is performing slightly below the national standard. Across the region, the Trust has experienced increasing pressure on services, particularly in the context of meeting response time targets. In response to these challenges, new models of service provision are being developed to meet with demand and resourcing constraints.

Changes to service provision are predominantly focused upon the modernisation of vehicles and medical devices, and reorganisation of the current workforce model. In addition, efforts to recruit clinical staff into 'clinical hubs' are being made to significantly improve the number of patients treated over the telephone or signposted to other services. This will place less demand on new infrastructure. The Operations Support team regard future priorities for ambulance-related estate to include:

- The restructuring and increased provision of training facilities

- Ongoing investment in maintenance, particularly addressing the backlog maintenance programme
- The development of an estates strategy to address key concerns
- To implement a revised operating model, including a new clinical career pathway

8.2 Police Services

The main sources of evidence include

- Essex Policy Reform document (2012)
- Policy and Crime Plan 2016-2020
- Police and Crime Commissioner for Essex Annual Report (2014/15)

Police services in Epping Forest District are provided by Essex County Council, however a number of other authorities are involved in the integrated provision of services. The Community Safety Partnership (CSP) in Epping Forest District is made up of a number of local organisations:

- Epping Forest District Council
- Essex Police
- Essex County Council
- NHS West Essex
- Essex Probation
- Essex Fire & Rescue
- Voluntary Action Epping Forest
- Victim Support

The Police and Crime Plan 2016-2020 was prepared by the Police and Crime Commissioner for Essex. One of the priorities contained in this Plan is for 'more local, visible and accessible policing', ensuring that crime prevention is based in the community. There is an aspiration to work with partners to establish Community Safety Hubs in every policing district, with police co-located with local community safety partners. Along with increased mobile policing, the purpose of such a move is to ensure policing is undertaken closer to local communities. In addition, the Brentwood and Epping Forest area has a District Commander, who is responsible for developing clear plans that focus on addressing crime, safety and anti-social behaviour in that particular area.

Policing in West Essex is split up into neighbourhoods. Essex shares a number of resources with Kent police, including Serious Crime Directorate, and Support Services Directorate (includes Business Services, Corporate Finance, Estate Services, Human resources, Information Technology, Procurement, and transport). Epping Forest District has one base for officers in Loughton, and has

no public desks. The two public desks were closed for use in March 2016, and residents will now have to travel to Harlow to report a crime in person.

The *Essex Police Reform Strategy* (2012) outlines the new policing model for Essex, and future plans for greater collaboration with the Kent police. Some key reforms were outlined, which will significantly impact future service provision and the overall policing model for the District:

- 2011-2014 reduction of 388 police officer posts, partly through reducing the number of Police Community Support officers (PCSOs)
- Borderless policing
- Greater use of technology
- A better use of intelligence
- Better match of resources to demand
- Reduced senior management to lower overall costs
- Creation of Local Policing Areas
- Each local authority split into District Policing Areas

The more recent Police and Crime Commissioner for Essex Annual Report 2014/15 strategy builds on increasing efficiency in its police services, starting with the rationalisation of the Essex Police Estate. It summarises that the force estate totals 1.25million square foot and has around 80 properties. They concluded that many of these properties are no longer fit of purpose or are in need of extensive and expensive maintenance. This is estimated to cost £30million with an additional £2m per year needed to maintain the estates in its current condition. As such there are planned collaborations with Kent Police to share IT, HR and other support services to reduce the space needed, and utilities technology to support the Essex Police to become more agile and efficient.

8.3 Fire and Rescue Services

The main sources of evidence include

- Consultation with Epping Forest District Fire Service
- Essex Fire Authority Strategy 2016-2020
- Consultation with Essex Fire Service

In 2016, the Essex Fire and Rescue department consulted the public on options for the future provision of services, which all have implications for estate and service provision in Epping Forest District. The department is aiming to reduce risk and ensure both continued performance and quality in the context of financial constraints.

The response to this consultation showed a perceived need for greater efficiency, value for money, and an overall recognition of the necessity of change in the current financial services. Essex Fire Services are undergoing efficiencies to make savings of around £8m by 2020. Under the agreed option, the Service will have 66

fire engines across the County, 18 of which would be wholetime (permanently based at a fire station) and 48 would be on-call.

In Epping Forest District specifically, this has meant the removal of a second fire engine from Loughton fire station (shifting from a two pump station to a one pump station), and a change of the crewing system to on-call at Waltham Abbey fire station. Changes to service provision at Waltham Abbey Fire station are expected to be delivered by 2020, and will include the station transitioning from 'day crewed' to an 'on call' service.

Overall, these changes will see a reduction in watch-based wholetime firefighter from the current 570 to 432 and a net increase in on-call firefighters from 437 to 456. This option would save £6.4m from the operational budget.

The option that was most favoured following the consultation has been assessed as to how much additional capacity can be handled with and still meet the response time standards. The preferred options can deal with an additional 55%. However, the consultation did raise concerns about the impact of the option on specific local areas, specifically to Loughton and Waltham Abbey in Epping Forest District. It was generally agreed that in light of the overall decline in incident levels across the county, it is reasonable to reduce the fire and rescue service's operational resources to match reducing demand levels. This is on the provision of re-balancing current provision to ensure the high risk areas are provided for, and proactively investing in preventative measures.

Consultation with the Epping Forest District Fire Service has highlighted that new residential premises form a relatively low risk, due to the in-built fire safety precautions. The Fire Service undertake extensive consultation with developers and the local authority around parking, emergency vehicle access, and water supplies. This suggests that there will be few issues responding to the demand created for services from new communities.

The existing fire service has some spare capacity, and therefore it is not considered that any new facilities will be required, and that new growth across Epping Forest District will not present challenges to the existing quality of service. There are no known expansions, or additional provision, planned for stations within the District.

8.4 Funding Mechanism

Police and fire and rescue services are funded through a combination of Central Government grant and council tax revenues. Ambulance services are funded by NHS England.

There are no identified physical infrastructure requirements associated with the quantum and distribution of growth proposed in Epping Forest District.

9 Community and Sports Facilities

9.1 Libraries

Library services in Epping Forest District are provided by Essex County Council. The nature of library provision is changing, with a greater shift towards providing an integrated community hub offer. Many of the services in Epping Forest District currently co-locate with partners to achieve a ‘one-stop’ service for residents.

9.1.1 Evidence Base and Strategic Issues

The main sources of evidence include:

- Consultation with Essex County Council

The *Community Libraries* report produced by the Arts Council and Local Government Authority in 2015 sets out the changing ways in which local residents use library facilities. The report draws upon best practice experience to outline ways in which communities are supporting and managing local library services.

Library facilities in the district are also used for community-run events and activities, and are increasingly becoming spaces where the public can come together.

9.1.2 Existing Provision

Current library provision is shown in Figure 33.

Figure 33: Library provision in the District

Library facility	Location	Active membership (2015-2016)	% Active membership within 15 mins drive
Epping Library	St John's Road, Epping	2,554	92.3%
Buckhurst Hill Library	Queens Road, Buckhurst Hill	1,385	94.4%
Waltham Abbey Library	Sun Street, Waltham Abbey	3,326	93.3%
Loughton Central Library	Traps Hill, Loughton	8,816	94.0%
Chipping Ongar Library	High Street, Chipping Ongar	2,118	93.1%
Debden Library	Borders Lane, Loughton	587	93.7%
North Weald Library	High Road, North Weald Bassett	684	94.2%
Chigwell Library	Hainault Road, Chigwell	995	95.4%

Essex County Council also provides ten mobile libraries to increase access to a range of services. Mobile libraries are not restricted to serving just one district or borough and, as such, usage info at the Epping Forest District level is not readily available. The stops within the District are shown in Figure 34.

Figure 34: Essex mobile library stops in Epping Forest District



Source: Essex County Council Library Services

9.1.3 Shortfalls in Current Provision

Conversations with Epping County Council outline how Epping Forest District is well matched in terms of library provision and population. Despite this, visits, loans and active membership across the District's libraries have fallen slightly over the last few years. For example, active membership across all eight libraries was 22,291 in 2013/14, falling to 19,835 in 2015/16.

Given that the libraries are based within settlements, they are less accessible to more rural areas of the District. However, there are no distance standards relating to libraries. In addition, the mobile library service helps to serve rural areas. For this reason, it is assumed that there is no existing deficit library provision.

9.1.4 Infrastructure Requirements

The future requirements in relation to libraries are set out holistically with other types of community facilities (youth services and village and community halls) in Section 9.3.4.

9.2 Youth Services

9.2.1 Evidence Base and Strategic Issues

The main sources used for this section include:

- Consultation with Essex County Council

9.2.2 Existing Provision and Shortfalls

The Essex Youth Service operates a community model with youth workers becoming ‘community commissioners’ supporting the community to deliver services themselves. Essex County Council retains ownership of a number of physical Youth Centres (two in Epping Forest District), where utilisation is maximised, especially for those youth functions that aren’t compatible with other community uses. Whilst no new facilities are planned to be built, it may be necessary to provide multi-purpose community spaces as part of larger developments which take account of specialised requirements of youth provision.

9.2.3 Infrastructure Requirements

The future requirements in relation to youth services are set out holistically with other types of community facilities (libraries and village and community halls) in Figure 37.

9.3 Village and Community Halls

Community facilities and halls covers a range of spaces and centres in the District that serve the community. The *Epping Forest Open Space, Sport and Recreation Assessment* (2012) defines village and community halls as ‘multi-purpose indoor facilities that are capable of accommodating a range of sports and physical fitness activities, mostly at a recreational level’.

9.3.1 Evidence Base and Strategic Issues

The following sources have been used in this section:

- Epping Forest Open Space, Sport and Recreation Assessment (2012)

9.3.2 Existing Provision

The *Open Space, Sport and Recreation Assessment* from 2012 is the most up-to-date source of information on local community hall provision. It outlines the main

provision of village and community halls in the District. Figure 35 and Figure C.12 in Appendix C shows the 43 facilities provided in the Open Space report, with the addition of one facility listed in the Essex County Council property database, which appeared to perform a similar function to those assessed in the report.

Figure 35: Community and village hall provision in the District

Facility	Location	Type
The Room in the Rodings	Roding	Hired space (wedding venue)
Debden Park Community Centre	Chigwell	Hired space
Roding Valley Hall	Buckhurst Hill	Hired space
Woollard Centre	Buckhurst Hill	Hired space
Limes Farm Community Centre	Grange Hill	Purpose built centre, including EFDC Housing Office, and hired spaces
Faversham Hall	Chigwell Row	Hired space
Victory Hall	Chigwell	Hired space
Epping Hall	Epping	Epping Town Council offices and hired space
Jack Silley Pavilion	Epping	Hire space
Epping Green Chapel	Epping Green	Church hall, hired space
Fyfield Village Hall	Fyfield	Hired space
High Ongar Village Hall	High Ongar	Hired space
Abridge Village Hall	Lambourne	Shared building with doctor's surgery, hired space
Lambourne End Parish Room	Lambourne End	Former chapel, hired space
Murray Hall Community Centre	Loughton	Hired space
Kingsley Hall	Loughton	Hired space
Lopping Hall	Loughton	Hired space
Matching Tye Village Hall	Matching Tye	Hired space
Moreton Village Hall	Moreton	Hired space
Magdalen Laver Village Hall	Magdalen Laver	Hired space
Nazeing Leisure Centre	Nazeing	Hired space
Thornwood Village Hall	Thornwood	Hired space
Queen's Hall Community Centre	North Weald	Hired space
North Weald Village Hall	North Weald	Hired space
Hastingwood Village Hall	Hastingwood	Hired space
Budworth Hall	Ongar	Hired space
St. Christopher's Hall	Roydon	Hired space
St. Martin's Church Rooms	Ongar	Hired space
St. James's Church Room	Ongar	Hired space

Facility	Location	Type
United Reform Church Hall	Ongar	Hired space
Roydon Village Hall	Roydon	Hired space
St Peter's Church Hall	Roydon	Hired space
Parma Room	Roydon	Hired space
Toot Hill Village Hall	Stanford Rivers	Hired space
Stapleford Abbots Village Hall	Stapleford Abbots	Hired space
Theydon Bois Village Hall	Theydon Bois	Parish Council office, and hired space
Theydon Bois Scout Hut	Theydon Bois	Scout use, and hired space
Theydon Bois Former Youth Centre	Theydon Bois	Hired space
St Mary's Church Hall	Theydon Bois	Hired space
Waltham Abbey Town Hall	Waltham Abbey	Town Council offices, hired space
Ninefields Community Centre	Waltham Abbey	Hired space
Town Mead Sports & Social Club	Waltham Abbey	Social club (membership required), hired space
Willingale Village Hall	Willingale	Hired space
Waltham Abbey Community Centre	Waltham Abbey	Hired space

9.3.3 Shortfalls in Current Provision

The *Open Space, Sport and Recreation Assessment* concluded that provision of community space was equivalent to one hall per 2,907 people (2012 based). A comparison was made with neighbouring Uttlesford, which had a provision of one hall per 1,426, offering a much higher rate of provision than Epping Forest District. The Limes Farm Community Centre is the only purpose built centre in the District, and operates a number of community services. The remaining community spaces are formed of church halls, village halls and council offices available to hire.

The report provides a qualitative assessment of quality and use of each facility. It is clear that the size, quality and age of community vary considerably across the District. Overall, the majority of facilities appear to be well used, and support a range of activities and events in the community. There are early redevelopment plans in place for the redevelopment of Sewardstone Village Hall, which is currently closed.

9.3.4 Infrastructure Requirements

For the purposes of the IDP, the future requirements for community facilities – libraries, youth services and community and village halls – have been considered together. This is because there is a movement towards the delivery of these services in an integrated manner, to make best use of the assets. The assessment converts this requirement into floorspace. However, it should be noted that this is

in essence a ‘worst case’ as the floorspace standards used do not take into account efficiencies of co-location or joint delivery.

In order to estimate the amount of community floorspace required to serve the additional population expected over the Plan period, the following standards set out in Figure 36 have been used.

Figure 36: Community floorspace standards

Infrastructure	Standard	Per	Source
Libraries	1 library	7,000 population	<i>ECC Developers' Guide to Infrastructure Contributions</i>
	30m ²	1,000 population	<i>ECC Developers' Guide to Infrastructure Contributions</i>
Youth services	1 youth centre	1,200 houses (60 young people)	<i>ECC Developers' Guide to Infrastructure Contributions</i>
	2.3m ²	Child	<i>Out of School Alliance</i>
Community and village halls	1 hall (180m ²)	2,900 population	<i>Open Space, Sport and Recreation Assessment</i>

It should be noted that the 2012 evidence is considered to be out-of-date and the standards set are not considered to be appropriate for future provision in the District. This section therefore uses them only as indicators with the understanding that future provision of should be supported by further evidence looking at supply and demand.

Based on expected additional population only (i.e. not taking into account existing capacity or shortfall), the requirement for additional community floorspace across settlements is shown in Figure 37.

Figure 37: Community floorspace additional demand (newly arising only)

Settlement groups	Newly arising demand over Plan period (GP FTE)			
	Library (m ²)	Youth (m ²)	Community / village hall (m ²)	Total (m ²)
Buckhurst Hill	14	24	28	66
Chigwell	47	76	97	220
Chipping Ongar	57	87	117	261
Epping	105	168	217	490
Fyfield	3	4	5	12
High Ongar	5	8	10	23
Loughton / Debden	94	181	194	469
Lower Nazeing	24	38	50	112
Lower Sheering	3	4	6	13
North Weald Bassett	86	129	177	392
Roydon	8	13	15	36

Settlement groups	Newly arising demand over Plan period (GP FTE)			
	Library (m ²)	Youth (m ²)	Community / village hall (m ²)	Total (m ²)
Sheering	9	14	19	42
Stapleford Abbotts	7	12	15	34
Theydon Bois	6	10	13	29
Thornwood	16	24	32	72
Waltham Abbey	84	132	174	390
East of Harlow	52	87	109	248
Latton Priory	74	123	153	350
Water Lane Area	146	242	301	689

9.3.5 Funding Mechanisms

Community infrastructure is funded by a range of developer contributions, the voluntary sector and a range of Government grants.

Public libraries are funded by local authorities, and are likely to have increasingly constrained resources in the future. There are a range of additional funding grants available for communities on a bidding basis through the Arts Council, and the Big Lottery fund. Community centres receive funding from a range of stakeholders, including developers, local authorities, and voluntary organisations.

Developer contributions could also be sought in relation to library, youth service and community facilities provision. The *Essex County Council Developers' Contribution Guide* sets out that contributions towards libraries will be sought where a significant population increase is brought about by development, which cannot be met by existing provision. Library expansion is likely to co-locate with a range of other community services. For youth centres, developer contributions can play a part in supporting 'youth hubs', satellite centres, community buildings, and outdoor spaces where young people can socialise.

Essex County Council's Funding and Investment team provides funding to support voluntary and community sectors across Essex. The county council uses the Open for Community service, which helps local organisations identify appropriate funding streams.

9.4 Sports Facilities

The provision of sports infrastructure within the District covers both indoor and outdoor facilities, and includes public and private services. The Sports & Physical Activity Needs Assessment (2015) undertaken by Essex County Council identifies that adult participation levels in physical activity in Essex is generally higher than both the national and regional averages. However, the report notes that almost 75% of adults in Essex are not meeting government recommended levels of exercise to achieve healthy lifestyles. The Built Facilities Strategy (2017)

similarly confirms an increase in adult participation in sport and active recreation between 2011 and 2016.

The future objectives of the District Council are to increase the number of people actively participating in sport and physical activity. As set out by Active Epping Forest¹⁶, the aspirations for sports infrastructure provision across the District are to assist in delivering benefits across a range of objectives, including health and wellbeing, local regeneration and social inclusion.

9.4.1 Evidence Base and Strategic Issues

The main sources of evidence are:

- Sports & Physical Activity Needs Assessment (2015)
- Epping Forest District Built Facilities Strategy (2017)
- Active Places Epping Forest District Area Profile, Sports England
- Consultation with Active Essex and Epping Forest District Council

9.4.1.1 Indoor sports facilities

Epping Forest District Built Facilities Strategy (2017) looks at the following types of sports facilities:

- Sports halls, equivalent to three or more badminton courts or more (the Strategy also identifies where smaller halls are also present)
- Studios
- Health and fitness suites
- Indoor swimming pools

9.4.1.2 Existing Provision and Shortfall

The facility audit undertaken as part of the Built Facilities Strategy identified a number of different types of facilities, as set out in Figure 38.

Figure 38: Existing facilities in Epping Forest District

Facility	Sports Halls (3+ courts)	Sports Halls (2+ courts)	Health & Fitness Suites	Indoor Swimming Pools
Chigwell School	1		1	
Davenant Foundation School	1		1	1
David Lloyd Club (Chigwell)		1	1	1
Debden Park High School	1			
Epping Forest College			1	

¹⁶ <https://www.activeessex.org/profile/active-epping-forest/>

Facility	Sports Halls (3+ courts)	Sports Halls (2+ courts)	Health & Fitness Suites	Indoor Swimming Pools
Epping Sports Centre	1		1	
Epping St John's	1			
Guru Gobind Singh Khalsa College	1			
King Harold Academy Sports Centre	1		1	
Krunch Gym			1	
Loughton Leisure Centre			1	2
Marriott Leisure Club (Waltham Abbey)			1	2
Metropolitan Police (Chigwell Sports Club)			1	
Nuffield Health Chigwell Fitness & Wellbeing Gym			1	2
Ongar Leisure Centre	1		1	1
Pro SW Gym			1	
Roding Valley High School	1	1		
Waltham Abbey Swimming Pool			1	2
West Hatch High School Academy	1			1
Woolston Manor Golf and Country Club			1	1

Detailed quality assessments were undertaken on all strategic sports facilities in the District. The assessments illustrate that in general, current facility provision is adequate across District, albeit with some quality issues in particular facilities.

Sports Halls

The *Built Facility Strategy* focuses on ‘strategic’ sports facilities that are a minimum of four badminton courts. Four-court sports halls provide far greater flexibility to operators and users as they can accommodate the majority of indoor sports such as football (5-a-side and training), volleyball, basketball and netball. A court of this size also provides sufficient run-up space to accommodate indoor cricket nets, and can be divided to allow for multiple activities at once.

In line with Sport England’s Facility Planning model (2017 National Run), there are considered to be nine halls in the District that meet the eligibility criteria strategic halls. All of these sites have some level of community use, with residents being able to book the facilities at some point during the week (though they are

not necessarily ‘pay and play’). There are also a number of smaller ‘activity halls’¹⁷.

Figure 39: Sports halls in Epping Forest District

Site	Type of Hall	Size of Hall (sqm)
Chigwell School	Main	486
Chigwell School	Activity Hall	180
Davenant Foundation School	Main	486
Davenant Foundation School	Activity Hall	180
Davenant Foundation School	Activity Hall	180
Debden Park High School	Main	594
Epping Sports Centre	Main	594
Epping St John's	Main	690
Epping St John's	Activity Hall	153
Guru Gobind Singh Khalsa College	Main	486
King Harold Business & Enterprise Academy	Main	486
Ongar Leisure Centre	Main	594
Roding Valley High School	Main	561
Roding Valley High School	Activity Hall	306

New sports hall provision has recently been completed at Ongar Academy which will be available to the community and managed by the academy administration team. (Note, this facility did not exist at the time of *Built Facilities Strategy* assessment and therefore was not been included within the facility audit.)

There are large areas of the District that are not served by a pay and play accessible sports hall. These areas are predominantly located in the south and north-west of the District, including Chigwell, Nazeing and Sheering. The Strategy notes that residents are served by facilities falling within other local authorities; however, this means the Council has little control over the sports hall provision that is used by its residents.

Health and Fitness Suites

Health and fitness facilities are dedicated areas with equipment and machines used for physical activity. They are made up of a number of ‘stations’ which is an area that typically houses a piece of equipment. The *Built Facilities Strategy* considers facilities with 20 stations or more. There are currently 16 such facilities across the District, consisting of local authority, education and privately-operated facilities.

¹⁷ Activity halls are a sub category of sports hall. They are defined by Sport England as multi-sports halls where activities take place, however do not meet the requirements to qualify as a main hall, and do not consist of a purpose built studio.

Figure 40: Health and fitness suites in Epping Forest District

Facility	No. of Stations	Ownership Type	Management Type	Access
Chigwell School	8	Private Education	Private Education	Registered Membership use
Davenant Foundation School	16	Academy Trust	Academy Trust	Private Use
David Lloyd Club (Chigwell)	145	Commercial	Commercial	Registered Membership use
Epping Forest College	15	Further Education	Further Education	Private Use
Epping Sports Centre	70	Local Authority	Trust – P4P	Pay and Play
King Harold Academy Sports Centre	20	Academy Education	Academy Education	Private Use
Krunch Gym	91	Commercial	Commercial	Registered Membership use
Loughton Leisure Centre	90	Local Authority	Trust – P4P	Pay and Play
Marriott Leisure Club (Waltham Abbey)	18	Commercial	Commercial	Registered Membership use
Metropolitan Police (Chigwell Sports Club)	11	Trust	Commercial	Registered Membership use
Nuffield Health Chigwell Fitness & Wellbeing Gym	150	Commercial	Commercial	Registered Membership use
Ongar Leisure Centre	40	Local Authority	Trust – P4P	Pay and Play
Pro Sw Gym	24	Commercial	Commercial	Registered Membership use
Waltham Abbey Swimming Pool	47	Local Authority	Trust – P4P	Pay and Play
West Hatch High School Academy	6	Academy Education	Academy Education	Private Use
Woolston Manor Golf and Country Club	6	Commercial	Commercial	Registered Membership use

There are a number of ongoing facility development projects that should be considered as part of the future supply assessment;

- Loughton Leisure Centre will grow from 90 stations to approximately 150 stations, following the health & fitness refurbishment.

- The existing poor quality provision at Waltham Abbey Swimming Pools will be replaced by an 80-station fitness suite, provided as part of the new leisure centre at Hillhouse.
- The Health and Fitness suite at Epping Forest Sports Centre will be extended, with the addition of at least two new studios for spinning and classes.

Swimming Pools

There are currently 17 swimming pools spread across 11 sites across the District. Places for People operate swimming pools at Loughton Leisure Centre, Ongar Leisure Centre and Waltham Abbey Swimming Pool, with the remaining sites owned and managed by a combination of private operators and education establishments. The assessment found that the northern part of the District is not within a 20-minute drive time catchment of a pay and play swimming pool within the District; however, this area is largely covered by access to Harlow Leisurezone and provision in other local authorities.

Figure 41: Swimming pools in Epping Forest District

Facility	Facility Type	Ownership Type	Management Type	Access
Chigwell School	1 Lido	Private Education	Private Education	Private Member
Davenant Foundation School	1 Main	Academy Trust	Academy Trust	Yes
David Lloyd Club (Chigwell)	1 Main 1 Lido	Private Operator	Private Operator	Private Member
Loughton Leisure Centre	1 Main 1 Learner	Epping Forest DC	Trust	Pay and Play
Marriott Leisure Club (Waltham Abbey)	1 Main 1 Learner	Private Operator	Private Operator	Private Member
Nazeing Primary School	1 Lido	Essex CC	LEA	No
Nuffield Health Chigwell Fitness & Wellbeing Gym	1 Main 1 Lido 1 Learner	Private Operator	Private Operator	Private Member
Ongar Leisure Centre	1 Main	Epping Forest DC	Trust	Pay and Play
Waltham Abbey Swimming Pool	1 Main 1 Learner	Epping Forest DC	Trust	Pay and Play
West Hatch High School Academy	1 Main	Academy Trust	Academy Trust	No
Woolston Manor Golf and Country Club	1 Lido	Private Operator	Private Operator	Private Member

Places for People are currently working with the Council to deliver new and refurbished facilities across the District. As part of this improvement programme, a new £9.5 million leisure centre is to be developed in Waltham Abbey, which will replace the existing Waltham Abbey Swimming Pool. This new facility will provide a new 25m six lane swimming pool and a 15m learner pool, acting as a

direct replacement to the existing provision at Waltham Abbey Swimming Pool. As a result of this development, the overall quality of facilities will improve, however the quantity across the District will stay consistent.

9.4.1.3 Infrastructure Requirements

Sports Halls

The *Built Facilities Strategy* highlights the following interventions relating to sports halls:

- High quality sports hall facilities should be provided in the north of the District, in a location that is accessible by areas such as North Weald Bassett, Epping and Chipping Ongar, as well to the west of the District, towards Harlow. This could be achieved through either the refurbishment of existing facilities or provision of additional facilities. The Council has committed to consider options to provide improved facilities, to replace existing facilities for residents in the central and north eastern areas of the District. This could include the potential delivery of a new facility at North Weald Bassett.
- ‘Pay and play’ sports hall provision is also required in the south of the District, which it would be accessible by residents from Loughton, Chigwell, Waltham Abbey and the surrounding areas.
- The provision of ‘pay and play’ facilities should be increased by 12 badminton courts across the District. This should be pursued through a combination of the development of new facilities, alongside the increased supply of third party facilities (education facilities), through formal Community Use Agreements. This should include the agreement of new Community Use Agreements (CUAs) for new education facilities currently under construction, especially at Ongar Academy and West Hatch High School.
- As part of such new development, gymnastics facilities should be prioritised to meet the growing needs of residents and reduce the waiting lists of the two major clubs in the area.

To ensure that the supply of education facilities are secure, CUAs are in place with Chigwell School, Davenant Foundation School, Debden Park High School, Guru Gobind Singh Khalsa College and Roding Valley High School.

Health and Fitness Suites

The existing quantity and quality of health and fitness provision meets the needs of residents and therefore no additional provision is required, over and above the existing supply. However, there are a number of recommendations relating to the existing facilities made by the *Built Facilities Strategy*:

- Health and fitness provision at Waltham Abbey Pool requires modernisation or replacement. It is envisaged that this will be provided through the proposed replacement facility at Hillhouse.

Health and fitness provision at Epping Sports Centre and Ongar Leisure Centre will need to be modernised and improved, with any future facility being

accessible to residents throughout the central and north-eastern areas of the District.

Swimming Pools

The supply and demand analysis has illustrated that no further provision is required for swimming pools over and above the existing level of provision. The focus should instead be on improving the quality and accessibility of the existing facility stock and ensuring that swimming pool provision is located in areas ensure the greatest possible number of residents can access the facilities. The *Built Facilities Strategy* highlights two projects:

- Swimming provision should be enhanced in Waltham Abbey (as part of the relocation to Hillhouse), with high quality water space of at least a six-lane 25m main pool and a fit-for-purpose learner pool.
- The swimming pool provision at Ongar Leisure Centre is at the end of its life and requires modernisation or replacement (either at the existing site or a new site).

9.4.2 Outdoor Sports Facilities

Outdoor sports facilities can be split in the following types:

- Tennis courts
- Athletics tracks
- Golf courses

9.4.2.1 Evidence Base and Strategic Issues

The main sources of evidence are:

- Epping Forest Open Space, Sport and Recreation Assessment (2012)
- Active Places Epping Forest Area Profile, Sports England

The information provided in these two sources do not always align in regards to the profile of existing outdoor sports provision – this may be a result of changes in provision that have occurred since 2012, or because of differing definitions of particular types of standards (e.g. size standards). The information in the rest of this section presents both, and attempts to provide a reconciliation between the two sources.

It should also be noted that the 2012 evidence is considered to be out-of-date and the standards set are not considered to be appropriate for future provision in the District. This section therefore uses them only as indicators with the understanding that future provision of outdoor sports facilities will need to be based on up-to-date demand and feasibility analysis.

9.4.2.2 Existing Provision

Existing provision data from the 2012 Assessment and Sports England data is presented in Figure 42. Given the occasional discrepancy between the two sources, the figures in red denote those taken forward into the next stages of the assessment. Current provision is shown in Figure C.16 in Appendix C.

Figure 42: Current outdoor sports facility provision

Facility	2012 Assessment	Sports England data (amended)		Reconciliation
Tennis courts	53	30	No amendment made	Several differences across two sources – reasons not clear
Athletics tracks	0	0	No amendment made	-
Golf courses	13 (216 holes)	13 (207 holes)	Driving ranges removed from totals	Sports England data does not include West Essex Golf Club (appears to still be operational), and includes Chigwell Hall (does not appear to offer golf)

9.4.2.3 Shortfalls in Current Provision

There is no current information available on the capacity or otherwise of existing provision. However, if the standards set out in Section 9.4.2.4 are applied to the current population figures, this would result in the shortfalls shown in Figure 43.

Figure 43: Outdoor sports facilities current capacity / shortfall

Infrastructure	Existing provision	Existing capacity (-) / shortfall (+)
Tennis courts	30	27.09
Athletics tracks	0	0.53
Golf courses	13	0.13

9.4.2.4 Infrastructure Requirements

In order to estimate the amount of outdoor sports facilities required to serve the additional population expected over the Plan period, the following standards set out in Figure 44 have been used, taken from the 2012 *Open Space, Sport and Recreation Assessment*.

Figure 44: Outdoor sports facilities standards

Infrastructure	Standard	Per	Source
Tennis courts	1	2,300 population	Open Space, Sport and Recreation Assessment

Infrastructure	Standard	Per	Source
Athletics tracks	1	250,000 population	Open Space, Sport and Recreation Assessment
Golf courses	1	10,000 population	Open Space, Sport and Recreation Assessment

Based on the expected additional population only (i.e. not taking into account existing capacity or shortfall), the requirement for additional outdoor sports facilities across the District is shown in Figure 45.

Figure 45: Outdoor sports facilities additional demand (newly arising only)

Infrastructure type	Newly arising demand over Plan period (number of new facilities)
Tennis courts	12.49
Athletics tracks	0.11
Golf courses	2.87

Taking into account the deficits set out in Section 9.4.2.3, Figure 46 shows the infrastructure requirements using the available District-level standards set out in the 2012 assessment, to calculate both the shortfall and newly arising demand for outdoor sports facilities over the Plan period.

Figure 46: Outdoor sports facilities additional demand (newly arising and existing capacity/shortfall)

Infrastructure	Existing capacity (-) / shortfall (+) (facilities)	Newly arising demand (facilities)	Total (facilities)
Tennis courts	27.09	12.49	39.58
Athletics tracks	0.53	0.11	0.64
Golf courses	0.13	2.87	3.00

While the figures shown in Figure 46 provide context for the provision of outdoor sports facilities, it is not considered that they provide a rounded picture of the need in the District and therefore should not be taken as absolute. Future provision of outdoor sports facilities should be supported by further evidence looking at supply and demand. The need to re-provide these facilities in the future should be carefully considered, as demands for other facilities may be greater.

Residents' options of places to exercise have broadened, and are no longer confined to specified locations. Parks and public footways, for example, are increasingly used for cycling and walking activity groups, particularly amongst the older communities, and for personal training sessions. This places less demand on the provision of dedicated outdoor sports facilities.

9.4.3 Playing pitches

In line with the Epping Forest District Council Playing Pitch Strategy, this section will focus on pitch facilities used by the following sports:

- Football (including both grass pitches and Artificial Grass Pitches)
 - Adult football
 - Youth football 11v11
 - Youth football 9v9
 - Mini Soccer 7v7
 - Mini Soccer 5v5
- Rugby Union
- Cricket (including grass and artificial wickets)
- Hockey

9.4.3.1 Evidence Base and Strategic Issues

The main sources of evidence are:

- Epping Forest District Council Playing Pitch Strategy (2017)

9.4.3.2 Existing Provision

Football

The Epping Forest District Council Playing Pitch Strategy (2017) shows that football is the most popular sport within the District, with 249 teams recorded across all age groups, and including both male and female teams. The strategy shows that most pitches across the District are rated as ‘standard’ quality, with an even spread across ‘good’ and poor ‘quality’ pitches. This standard level of quality has remained at a consistent level, with major clubs continuing to grow. There are number of localised issues with pitch drainage and maintenance, and a number of poor quality sites, however these are mainly smaller rural pitches, which have limited or no formal football demand.

Both the supply and demand for football within the District is dominated by the South sub-area. The southern part of the District is home to the majority of large clubs, and a number of strategic football sites. In terms of ownership, a large proportion of pitches in the study area are owned by the district or county council, with other ownership spread across a number of different organisations. Epping Forest also has a high proportion of private ownership, largely through individual land owners. There are a total of 132 pitches, across a range of typologies, shown in C.17 and C.18 in Appendix C.

Figure 477: Current provision of football pitches

Type of football pitch	No. pitches
Adult football (11 v 11)	52
Youth football (11 v 11)	14

Youth football (9 v 9)	23
Mini soccer (7 v 7)	36
Mini soccer (5 v 5)	7

When looking at the breakdown of demand by area, the strategy shows a significant amount of demand in the south sub-area, which is primarily formed of large junior clubs, and a few major adult clubs. There is predominantly lower formal football in the west and east sub-areas of the District, with a small number of clubs located in Waltham Forest and Ongar.

Cricket

The Epping Forest District Council Playing Pitch Strategy (2017) shows that the demand for cricket across the District is high, with 18 clubs, hosting many junior and senior teams. In terms of existing provision, there is a relatively even spread of cricket sites across the local authority, with a particular concentration in the southern part of the District. The total number of cricket wickets across the District are set out in Figure 48, and shown in Figure C.19 in Appendix C.

Figure 48: Current provision of grass and artificial wickets

Local Authority sub-area	Grass Wickets	Artificial Wickets
East sub-area	61	3
South sub-area	109	3
West sub-area	62	0
All	232	6

The high level of supply in a relatively small area is a result of a number of independent cricket playing education facilities, as well as major clubs located in Epping, Loughton and Chigwell.

The ownership of cricket sites is varied across the District, however there is a particularly high proportion of privately owned facilities. This could have an impact on the long-term security of cricket provision across the District.

The strategy notes that the quality of cricket provision is particularly good in the East and South sub-areas of the District. Provision in the west of the District however scored lower for site quality, with changing facilities and artificial wickets identified as a particular issue.

In terms of quality, the lowest rated elements of cricket provision across the District are artificial wickets, which is reducing the ability of clubs to train and play on non-turf pitches during the season.

Rugby Union

Within the District, there are eight rugby pitch sites, set out in Figure 49. This provision is shown in Figure C.20 in Appendix C.

Figure 49: Current provision of rugby pitches

Playing pitch site	Sub-area	Community use on site	Ownership
Debden Park High School	South	Not available	Academy Trust
Epping Upper Clapton RFC	West	Available	Sports Club
Jubilee Park Pavilion (Ongar RFC)	East	Available	Ongar Town Council
King Harold Business and Enterprise Academy	West	Not available	Academy Trust
Ongar Academy (Ongar Leisure Centre)	East	Available	Academy Trust
Roding Valley High School	South	Available	Local Education Authority
Loughton Rugby Club	South	Available	EFDC
Roding Valley Playing Fields South	South	Available	EFDC

The Strategy undertook a quality assessment, which identified that all pitches across the District scored poorly in terms of maintenance. Similarly, 57% of existing pitches have no artificial infrastructure, which is considered inadequate in meeting local needs. Consultation undertaken as part of the assessment identified that drainage is an issue for the grass pitches.

Hockey

The District has two sites that have full size sand or water based artificial grass pitches that are suitable for competitive hockey, as set out in Figure 50. This provision is also shown in Figure C.21 in Appendix C.

Figure 50: Current provision of hockey pitches

Site name	Sub-area	Surface	Ownership	Availability and security of community use
Debden Park High School	South	Sand Filled	Academy	Not Available
Old Loughtonians Hockey Club	South	Water Based	Trust	Available/ Secured
Old Loughtonians Hockey Club	South	Water Based	Trust	Available/ Secured

Due to the unavailability of Debden Park High School for community use hockey, all club play is accommodated at Old Loughtonians Hockey Club (OLHC). The two pitches available for community use are of high quality provision, and underwent extensive renovations due to its use as a training venue for the London 2012 Olympics.

The Playing Pitch Strategy (2017) identifies a suitable catchment time for hockey pitches as a 20 minute drive time. This means that the western and southern parts of the District also fall within catchment areas of facilities in neighbouring authorities. To the east of the District however, a large part of the sub-area does not site within the catchment area of any suitable facilities.

9.4.3.3 Shortfalls in Current Provision

Football

The Playing Pitch Strategy (2017) identified a club to team ratio in the District of 1:4.4, showing that each club runs on average 4.4 teams. This can be compared to the national ratio of 1:3.3, showing that there are substantially more teams within each club compared to the national level.

There is currently a small over-supply for grass pitches across the District. However, when only considering pitches with community access, this surplus is minimal, and there are existing deficits across some pitch typologies. There is an identified deficit in the provision of youth 11 v 11 pitches across the District, with many 12-15 year old participants using larger than recommended adult size pitches. There is also a substantial deficit in the provision of 3G Artificial Grass Pitches, particularly in the southern part of the District.

Cricket

For the cricket pitches available for community use across the District, there is current spare capacity for grass cricket provision. However, a number of the sites with current community access do not have long term security in terms of landholding. When only considering those sites which do have long term, secure community access, there is an existing deficit. This demonstrates that clubs are reliant on sites that are not secured for long term provision, including Fives and Heronians Cricket club in Chigwell, Nazeing Common and High Beach Cricket Clubs.

For the East sub-area of the District, there is currently spare capacity for grass cricket provision. Even when only considering sites secured for long term community use, this existing level of capacity remains.

For the South sub-area, there is a current deficit of grass cricket provision, for all sites with community access. This deficit worsens when only sites which are secured for long term community use are taken into consideration.

For the West sub-area, there is spare capacity for grass cricket provision for all sites that are available for community use. However, when only considering sites secured for community use, there is a large existing deficit. This demonstrates the reliance that clubs place on un-secured sites in this part of the District.

Overall, the Strategy concludes that there is not adequate accessible and secured provision for cricket across the District. This is mainly due to a lack of security and certainty at a number of the larger, high profile sites.

Rugby Union

There is a significant deficit for secured and accessible rugby provision across the District, with all three sub-areas showing insufficient provision of available and secured grass pitches. Supply and demand analysis undertaken as part of the Playing Pitch Strategy shows that there is no spare capacity during peak periods at a number of rugby sites. These include:

- Epping Upper Clapton RFC
- Jubilee Park Pavilion
- Loughton Rugby Club
- Roding Valley Playing Fields South

This is caused by two home clubs having high junior and senior demand, which has led to the overuse of poor quality grass provision. As a result, a number of pitches have low carrying capacity due to poor maintenance and insufficient drainage infrastructure.

Hockey

There is currently a small oversupply of hockey provision in the District. It should be noted however, that consultation undertaken with club users as part of the Playing Pitch Strategy (2017) showed that provision at the OLHC is well-used during peak periods, with the site having limited capacity for further growth. There is enough capacity at the existing site to meet the current needs for outdoor hockey in Epping Forest District.

9.4.3.4 Infrastructure Requirements

Infrastructure requirements for sports pitches have been identified in line with the Epping Forest District Playing Pitch Strategy (2017). The strategy identifies need using the Sport England Playing Pitch Calculator, using data from the Strategy, match play in peak periods and projected change in demand. The consideration of forecast need set out in the strategy also considers expected latent demand, which takes into account residents with a desire to participate, however cannot or do not as a result of limited provision or access.

Football

It is expected that the demand for youth and mini pitches is likely to increase in line with growth projections.

There is an expected latent demand for football to provide an estimated growth of 162 teams across all ages. The largest growth is expected to be in the Youth 11 v 11 and mini-soccer age groups.

When all sites are considered, the existing grass and Artificial Grass Pitch provision across the District is expected to meet future demand. This does not

however consider the potential loss of sites. When only sites that are secured for long term community use are considered, there is a significant deficit of provision projected across the District, particularly in the western sub-area. The Playing Pitch Strategy (2017) uses the Sport England Playing Pitch Calculator to identify facility requirements to meet anticipated demand. This calculates a total need for 24 football pitches, across a range of typologies, as set out in Figure 50.

Figure 50: Future football pitch requirements (including both newly arising demand and latent demand)

Pitch typology	No. pitches required
Adult Football	5
Youth Football	12
Mini Football	7

Cricket

The future demand for cricket is projected to increase across the District, with the largest growth in the southern area. In line with future population projections, there is a significant deficit of grass cricket, both available and secured pitch provision, projected across the District. However, when considering both grass and artificial pitch provision as part of the supply, future capacity analysis shows that there is sufficient provision to accommodate anticipated future demand.

For the east sub-area, analysis undertaken for future projected demand from both latent and population demand suggests that there is expected to be spare capacity.

For the South sub-area, projected demand for latent and population driven demand calculates that there is likely to be a significant deficit for cricket provision. This is primarily due to the large amount of cricket currently being played in the sub-area, and the presence of large, well-run clubs that are continuing to grow, and likely to have additional junior demand in the coming seasons.

For the West sub-area, analysis suggests that the existing deficit will worsen, exacerbated by the lack of non-turf pitch capacity across this part of the District.

The Playing Pitch Strategy (2017) uses the Sport England Playing Pitch Calculator to identify facility requirements to meet anticipated demand. This need is set out in Figure 51.

Figure 51: Future cricket pitch requirements (including both newly arising demand and latent demand)

Pitch typology	No. pitches required
Cricket	3

Rugby Union

The future demand for rugby in the District is expected to increase, putting additional pressure on existing facilities. Further capacity is therefore required to meet the current and future needs of local residents.

The Playing Pitch Strategy (2017) uses the Sport England Playing Pitch Calculator to identify facility requirements to meet anticipated demand. This identified need is set out in Figure 52.

Figure 52: Future rugby pitch requirements (including both newly arising demand and latent demand)

Pitch typology	No. pitches required
Rugby Union	2

Hockey

Future demand for hockey in the District is expected to grow, through a combination of population growth and the conversion of latent demand. This forecast demand can be satisfied at the existing OLHC site, and therefore no additional pitches are expected to be required.

The Playing Pitch Strategy (2017) sets out a number of recommendations to support the provision of sports infrastructure across the District. These include:

- Work with clubs that are currently playing at unsecured sites to agree long term security of tenure with landholders
- As part of the Submission Local Plan and ongoing planning policy, protect all sites designated as sports pitches
- Improve the maintenance regime across all local authority managed sports sites
- Address the widespread issue of poor ancillary and changing pavilion quality, through the replacement and refurbishment of existing ancillary facilities.

9.4.4 Funding Mechanisms

Essex County Council has very limited financial resources to support the provision of sports infrastructure, whilst also having no statutory obligation to provide further sports facilities. The future provision of services therefore needs to be delivered in the most cost effective way, focussing on partnership arrangements and the co-location of integrated services.

There are also funding opportunities available through the Primary School Premium, which is a government funded initiative to improve sports and physical activity within primary schools. The Sports & Physical Needs Assessment sets out that primary schools on average receive around £9,500 each a year from this funding stream.

Sport England play a significant role in financing sports infrastructure and offer a range of funding in Essex. Consultation with Active Essex indicated that Sports England provide funding for 10% of a sports facility, to help establish initial backing. Further, the Football foundation, which combines funding from the Premier League, the Department for Media, Culture and Sport, Sport England and the FA is a significant potential source.

The private sector plays an important role in funding the provision of sports facilities, particularly for sports such as swimming, gyms, dance and golf.

10 Green Infrastructure

Epping Forest District is host to a number of environmental assets. The District is predominantly rural in character, with a landscape formed of ridges and valleys, along with substantial rural wooded areas, including Epping Forest.

Green infrastructure refers to a network of green spaces and other environmental features. It incorporates both urban and rural assets and should be planned and managed as a multi-functional resource. Green infrastructure assets provide a range of benefits including providing ecological habitats, contributing to landscape character and quality, making places healthier and more distinctive, providing amenity and recreational opportunities as well as a range of ‘eco-systems’ benefits such as climate change mitigation and pollution control. More valuable green spaces have multiple uses and are connected as part of an integrated network as opposed to being isolated.

10.1 Existing Provision and Shortfalls

The District has good access to a number of strategic green spaces, such as the Lee Valley Regional Park, which provides a significant recreational resource for the area. The Lee Valley Regional Park follows the course of the River Lea for almost 23 miles (37 km) from Ware in Hertfordshire to the River Thames. A substantial area lies within the District, including extensive visitor and recreational facilities as well as heritage assets such as Waltham Abbey Gardens, Gunpowder Mill and Gunpowder Park.

The largest wooded area in the District is Epping Forest, though there are also significant areas of woodland to the north of Epping and to the south of North Weald. The Conservators of Epping Forest are charged with the duties and responsibilities for conserving and protecting Epping Forest under the Epping Forest Act 1878. Epping Forest Land covers 5% of the District, and together with the Buffer Lands, over 7% of the District. It is a major public recreation and tourist destination, which makes a major contribution to the provision of open space within the District. The Forest is protected by Site of Special Scientific Interest status and is designated as a Special Area of Conservation (SAC). As the competent authority under the Conservation of Habitats and Species Regulations 2017, the Council is subject to statutory duties to ensure that plans and projects will not adversely affect the integrity of the Epping Forest SAC and the reasons for its designation. There are identified issues in relation to poor air quality in and around the Forest and also pressures as a result of its recreational opportunities. The Council is committed to working with partners to address these issues.

The Forest in particular experiences considerable pressure on its habitats from visitors from both within and outside of the District and road traffic pollution as well as air pollution from London. The Forest is owned and managed by the City of London Corporation and is adjoined by buffer lands purchased by the Corporation to protect its boundaries from encroachment by urban development. These buffers can also act to relieve recreational pressure on the Forest. The

potential impact of development on the Forest can arise from development some distance from the Forest itself, particularly in terms of the impact of air pollution from traffic generated on its sensitive ecosystems and from additional recreational pressures.

On the southern boundary of the District is Hainault Forest which lies partly within the District, but mainly within the London boroughs of Havering and Redbridge. There are other scattered areas of woodland, veteran trees and networks of established hedgerows which structure the landscape.

The District benefits from a number of key walking routes, such as The Essex Way and Three Forests Way, which links up a historic woodland, river valleys and open space across the wider Essex region. The District has good access to other key walking routes such as Flitch Way, which cuts horizontally through the District linking Enfield with East London and the River Thames.

There are two main river systems in the District, the Roding, which runs along the eastern boundary, and the Lee River, which runs on the Western boundary. The northern area of the District is partly covered by the Stort Catchment. The Stort Valley Way is a key footpath that follows the River Stort from Roydon, through to Harlow and Sawbridgeworth.

10.2 Future Requirements

The future conservation and enhancement of Epping Forest through the management of potential impacts as a result of development and potential opportunities to enhance its biodiversity is supported by the Local Plan. A Memorandum of Understanding to manage the impacts of growth within the West Essex/East Hertfordshire Housing Market Area on Epping Forest SAC was agreed in March 2017.

In pursuit of protecting the vulnerable habitat of Epping Forest the Council seeks to provide alternative spaces and corridors that can relieve the recreational pressure on the Forest. It is recognised that additional development in the District is likely to give rise to further visitor pressure on the Forest that needs to be mitigated. This can be achieved by increasing public access to land that is not in the Forest, and altering the character of existing open spaces and the links between open spaces. These linkages are intended to improve access for walkers, dog walkers, cyclists and horse riders, as well as provide space, including additional space for wildlife and plant species. The Lea Valley Regional Park Authority is preparing proposals for the future use of sites that cover eight areas across the Park. Epping Forest District is partially covered by Area 5 proposals, which were adopted in 2013. These proposals aim to enhance current visitor facilities at Gunpowder Park, to create a visitor hub and improve both pedestrian and cycle access. A new Management Plan is being developed to set out the ongoing management of Epping Forest's landscape, wildlife and visitor population. This will cover the period 2017 to 2027.

10.3 Funding and Delivery

The Submission Local Plan states that the District's green and blue infrastructure network will be extended, maintained and enhanced through a number of policies, including:

- the location of development (Policy SP 2 and Chapter 5)
- adapting to climate change
- protecting habitat and improving biodiversity (policy DM 1)
- sustainable urban drainage systems (Policy DM 16)
- supporting sustainable transport choices (Policy T 1)
- open space, sport and recreation provision (Policy DM 6)

The Council will therefore expect all development proposals, where appropriate, to contribute towards the delivery of new green and blue infrastructure which develops and enhances a network of multi-functional green and blue assets¹⁸ throughout the District. This will be proportionate to the scale of the proposed development and the rural or urban context. The Council will support development which contributes to the District's existing green and blue infrastructure and where possible, enhances and protects networks. It will secure additional provision where deficiencies have been identified. Where on site provision is not feasible then the use of S106 agreements will be sought to contribute to green infrastructure.

In relation to Epping Forest, it is recognised that some housing sites will not be of a sufficient scale to make provision for a meaningful proportion of natural green space. Where those sites are within the 'sphere of influence' of the Forest (as determined by an up-to-date Visitor Survey, the most recent of which was undertaken in October/November 2017) the Council will seek contributions to support the development and implementation of an access management strategy by the City of London Corporation.

All outline or detailed planning applications for new homes within the settlements of Loughton, Epping, Waltham Abbey, North Weald Bassett, Theydon Bois, Coopersale, Thornwood, Buckhurst Hill, Chigwell and Chigwell Row will be required to make a financial contribution to access management and monitoring of visitors to the Epping Forest SAC, in accordance with Visitor Survey Information which demonstrates this is needed.

In addition, the Council will ensure the provision of a meaningful proportion of Natural Green Space or access to Natural Green Space, to help mitigate against potential or identified adverse effects of additional development in the District. This is particularly in relation to strategic developments, and those on the Epping Forest SAC and Lee Valley SPA. These measures could involve:

- providing new green spaces; or

¹⁸ Multifunctional green and blue assets – any corridor or place that has a number of purposes, for example a pond can provide flood water storage, a place to row a boat and a wildlife haven.

- improving access to green space; or
- improving the naturalness of existing green spaces; or
- improving connectivity between green spaces where this would not contribute to a material increase in recreational pressure on designated sites.

Planning applications on sites within 400m of the Epping Forest SAC will be required to submit a site level Habitats Regulations Assessment setting out how any urbanisation effects (including from fly tipping, the introduction of non-native plant species and incidental arson) will be mitigated against.

11 Open Space

11.1 Open Space

11.1.1 Evidence Base and Strategic Issues

The main source of evidence is:

- Epping Forest District Open Space Strategy (2017)

Epping Forest District Open Space Strategy (2017) categorises open space into the following typologies¹⁹:

- **Public Parks and Gardens:** including urban parks, country parks and formal gardens, and very often including formal elements of provision such as ornamental lawn, herbaceous border or rose gardens.
- **Amenity Greenspace:** including informal recreation spaces (private or open to the public), roadside verges, greenspaces in and around housing and other premises e.g. hospitals, schools and colleges, industrial and business premises and village greens. This type of open space may be delivered alongside other typologies, including provision for children and young people.
- **Natural and Semi-Natural Greenspace:** including woodland, urban forestry, scrub, grasslands, open access land wetlands and vacant open land. Maintenance is usually informal, but may include elements of intervention such as coppicing for the long term health and natural balance of woodland, flail cutting of meadow to increase biodiversity, and clearance of water habitats.
- **Provision for Children and Young People:** including play areas, areas for wheeled play (e.g. skateboarding), outdoor ‘kickabout’ areas, and other less formal areas (e.g. ‘hanging out’ areas, teenage shelters). This type of open space may include different aspects of play, such as natural or ‘green’ play, or ‘iplay’ which incorporates information technology elements to stimulate greater use.

The Strategy suggests a number of standards, largely based on national standards from Fields in Trust.

11.1.2 Existing Provision and Shortfalls

11.1.2.1 Public Parks and Gardens

There are two public parks and gardens in the District; Abbey Gardens in Waltham Abbey and Roding Valley Recreation Ground in Buckhurst Hill (see Figure C.22 in Appendix C, taken from the *Open Space Strategy*). In total, the area of both sites is 40.78ha – based on this level of provision and the Fields in

¹⁹ Allotments and cemeteries and graveyards are also included in the *Open Space Strategy*, but are considered in other sections of this IDP.

Trust standard of 0.8ha/1,000 population, the *Open Space Strategy* identifies a current shortfall of 65.54ha across the District. However, it should be noted that the levels of quantitative provision should be balanced against the presence of large areas of accessible countryside and other typologies of open space in the District. In particular, the provision of natural and semi-natural greenspace does provide an abundance of outdoor recreational space.

Harlow Town Park and Gibberd Garden in Harlow also serves some communities within Epping Forest District, including in Roydon and Nazeing.

11.1.2.2 Amenity Greenspace

In total, there are 70 listed amenity greenspaces above 0.2ha within the District, totalling 74.99ha. Using the Fields in Trust standard of 0.6ha/1,000 population, the District has a good overall provision of this type of open space. The *Open Space Strategy* notes that accessibility is generally good, with most major settlements covered by overlapping catchments (see Figure C.23 in Appendix C, taken from the *Open Space Strategy*).

11.1.2.3 Natural and Semi-Natural Greenspace

Natural and semi-natural greenspace includes areas of woodland, meadow, or other natural or semi-natural open space. The most significant is Epping Forest, which is approximately 19 kilometres long from north to south, and up to four kilometres wide. It provides a range of high quality facilities for residents of the District. Epping Forest District is also has access to extensive land holdings open to the public and managed by the Lee Valley Regional Parks Authority in the west of the District, and a number of woodlands and commons managed by the District Council and other landowners. In total, the area of natural and semi-natural greenspace across the 78 sites is around 4,337ha – well beyond what might be required when applying the Fields in Trust standard of 1.8ha/1,000 population. The greenspace is shown in Map C.24 in Appendix C (taken from the *Open Space Strategy*).

11.1.2.4 Provision for Children's Play and Young People

There are 44 sites of playspace in Epping Forest District, totalling 4.82ha. When applying the Fields in Trust guidelines of 0.25ha/1,000 population, this suggests a current shortfall of 28.41ha across the District (see Map C.25 in Appendix C, taken from the *Open Space Strategy*).

11.1.3 Infrastructure Requirements

In order to estimate the amount of open space required to serve the additional population expected over the Plan period, the *Open Space Strategy* uses the benchmark standards set out in Figure 53.

Figure 53: Open space standards

Infrastructure	Standard	Per	Source
Public parks and gardens	0.8ha	1,000 population	Open Space Strategy (from Fields in Trust)
Amenity greenspace	0.6ha	1,000 population	Open Space Strategy (from Fields in Trust)
Natural and semi-natural greenspace	1.8ha	1,000 population	Open Space Strategy (from Fields in Trust)
Provision for children and young people	0.25ha	1,000 population	Open Space Strategy (from Fields in Trust)

It should be noted that whilst these standards are appropriate on a District level, it might not be realistic to expect all development proposals to meet these standards due to the nature of the site and surrounding area etc. In these instances, it might be more appropriate for developments to contribute to open space through other means, for example off-site provision or financial contributions to improve quality and connectivity of green infrastructure.

The *Open Space Strategy* identifies current shortfalls for each settlement by the end of the Plan period. It should be noted that the total number of homes and their distribution modelled in the Strategy does not exactly align with the final Regulation 19 consultation distribution.

This requirement for different types of open space is set out by settlements in Figure 54.

Figure 54: Open space additional demand (existing capacity and newly arising demand) – by settlement

Settlement	Public parks and gardens (ha)	Amenity greenspace (ha)	Natural and semi-natural greenspace (ha)	Provision for children and young people (ha)
Buckhurst Hill	4.03	6.97	(capacity)	2.95
Chigwell	12.20	4.31	(capacity)	3.63
Chipping Ongar	6.40	1.80	3.81	1.99
Epping	13.12	2.87	(capacity)	3.78
Loughton	28.80	(capacity)	(capacity)	8.66
North Weald Bassett	6.44	3.29	(capacity)	1.93
Roydon and Nazeing	7.45	4.47	(capacity)	1.68
Theydon Bois	4.10	(capacity)	(capacity)	1.20
Waltham Abbey	10.45	9.88	(capacity)	5.38

The following interventions are recommended by the *Open Space Strategy*:

Public parks and gardens

- Roding Valley Recreation Ground should be upgraded to fulfil its role as a public park for Buckhurst Hill, and to meet future need in relation to proposed allocations in Loughton.
- Provision of a public park in Chigwell; consideration should be given to adapting and upgrading Chigwell Row for this purpose.
- The Open Space Strategy suggests that consideration should be given to adapting and upgrading the 1.6 ha site which forms part of the Tower Hill development in Epping and/or the site owned by Epping Town Council near Ivy Chimneys Road.
- Consideration to be given to the creation of a public park in Chipping Ongar to serve the settlement and outlying areas.

Amenity greenspace

- Additional provision to be considered in the south of Buckhurst Hill.
- Additional provision and enhancement on new sites in Chigwell.
- Additional provision to be considered in the west of Waltham Abbey.
- Additional provision to be considered in the south of Buckhurst Hill.
- Additional provision in the centre of Nazeing.
- Additional provision in Epping.
- Additional provision in Chipping Ongar.
- Additional provision to be considered in North Weald Bassett.
- Improvements should be made to meet the shortfalls in quality in individual settlements, particularly around the provision of interpretative signage where there is interesting local heritage and history in order to enhance a sense of place, seating, and softening of the landscape with natural planting to improve and enhance biodiversity.

Natural and semi-natural greenspace

- Steps should be taken to conserve accessible countryside, particularly in the east of the District where there is less provision of natural and semi-natural greenspace. This needs to be achieved by better linkages to existing walking and cycling routes, and improved waymarking.
- The network of green spaces should be linked and extended in order to connect existing open space, link settlements, and provide improved wildlife habitats.
- New proposed strategic allocations should include provision to create greenways to connect communities and existing open spaces.

- Improvements should be made to entrances in order to make them more welcoming and accessible. These should include informative signage and greater visibility.
- Wherever possible, better interpretation should be used to increase knowledge in natural history and local heritage.
- Rights of Way and other footpaths should be improved and signposted in order to increase access to the countryside for pedestrians and cyclists.
- Qualitative improvements should be considered where required.

Provision for children and young people

- Opportunities should be taken to increase the quantity and accessibility of provision for children and young people throughout the District.
- Additional facilities should be provided in Chigwell.
- More provision should be made in areas of deficiency, in particular of LAPs across all settlements, LEAPs in the north and east of the District, and NEAPs in the centre and north of the District.
- New local facilities (LAPs and LEAPs) should be considered in line with implementation of proposed strategic allocations around Harlow. Fields in Trust standards for the creation of LAPs, LEAPs and NEAPs in new development should be applied.
- Upgrades to several current facilities (refer to the *Open Space Strategy* and Part B of the IDP for more details).
- The provision of kickabout, picnic, and other informal areas in the vicinity of equipped playgrounds should be considered in order to increase play value for children and young people.
- Play areas should be made more welcoming where this has been identified as a requirement, with informative signage and landscaping, including more tree planting to increase their attraction, enhance biodiversity, and provide shade.
- The opportunity should be taken to upgrade play areas where necessary with more exciting and stimulating play equipment (zip wires, 'iplay', green play, etc.), as well as the addition, repair and replacement of rubberised safety surfacing).

In addition, the *Open Space Strategy* also states that the future needs of the proposed strategic allocations around Harlow should be carefully monitored in relation to all open space typologies – although these sites are well-served by parks and gardens in Harlow, and by natural and semi-natural greenspace to the west and south, needs should be continually assessed. For the purposes of the Infrastructure Delivery Schedule included in the Part B report, the newly arising need, calculated using the standards included in the *Open Space Strategy*, have been included. It should be noted that these are benchmark standards and will be subject to further planning in line with the approach set out in the Submission Local Plan Policy SP3. The use of strategic masterplans will enable the specific requirements to be determined.

11.2 Allotments and Community Gardens

The *Epping Forest District Open Space Strategy* (2017) defines an allotment as land to grow food crops; community gardens, on the other hand, are generally more informal and may include garden landscapes for outdoor relaxation. The primary purpose of this type of open space is to provide opportunities for people to grow their own produce and lead healthy and socially inclusive lifestyles. Allotments are also a key part of a local recreational offer, and help to preserve and support local biodiversity.

11.2.1 Evidence Base and Strategic Issues

The following sources have been used in this section:

- Epping Forest Open Space Strategy (2017)
- Consultation with Parish Councils

11.2.2 Existing Provision and Shortfalls

The *Open Space Strategy* reports that there are 45 allotment sites across the District (see Figure C.26 in Appendix C, taken from the *Open Space Strategy*). Most of these are managed by town and parish councils, though a few are controlled by community groups and may have a wider remit (e.g. outdoor recreation). The total area of these allotments is 36.24ha, which is a current oversupply of 9.66ha when a standard of 0.2ha/1,000 population is applied.

The Strategy highlighted a number of qualitative issues in relation to existing provision, including signage, boundary conditions, vacancy and upkeep issues, and facilities on offer.

The Strategy found that, with the exception of Waltham Abbey and Chigwell, all settlements have sufficient levels of current allotment provision. In addition, Chipping Ongar and North Weald Bassett have sufficient provision currently but may require additional provision by the end of the plan period, depending on demand.

In order to assess the demand for allotments at the local level, 21 parishes within the District were contacted, and asked to provide information on waiting lists and any changes in trends. The thirteen responses received from parish councils showed a varied picture of demand across the District. A few parishes without allotment plots reported having received requests from interested residents, suggesting there is some demand at the local level. For the larger Parishes allotment sites were typically fully utilised. Epping Town Parish identified long waiting lists ranging from a couple of months to a few years. Some of the smaller and more rural settlements reported having allotments available, however plots are gradually being taken up, and remain popular with residents who do not have a garden. Loughton Town Council have relatively small waiting lists of around seven people or less, however have experienced an 80% increase in demand in the last year. It was noted that demand for allotments fluctuates in line with fashion, including popular television programmes.

11.2.3 Infrastructure Requirements

The *Open Space Strategy* reports that even with the projected level of growth over the plan period there will still be an oversupply of allotment space across the District. Overall, both the findings of the audit and the consultation undertaken as part of the Strategy clearly highlighted that further provision of allotments is not required in the District. Recommendations therefore focus on encouraging further use and usability of existing allotment sites.

- Consideration should be given to rationalisation of Allotment sites where there are significant numbers of vacant plots.
- Where there are shortages of other forms of open space, consideration should be given to adapting redundant allotments to fulfil local need.
- Better promotion of allotments should be carried out in order to encourage increased usage, particularly where vacancy rates are low.
- Existing sites should be improved for individual settlements, including better signage and welcoming entrances at Buckhurst Hill site, provision of signage at Lime Avenue in Chigwell, and at Moreton Road in Chipping Ongar. There should be improved security fencing and greater access at Tylers Green in North Weald Bassett, better signage at all sites in Nazeing and Roydon, and improved access and entrances at sites in Waltham Abbey.
- Where sites are well-used, they should be upgraded wherever possible to improve facilities for ploholders (better parking provision, improved water supply, better site security, etc.).

11.3 Cemeteries and Churchyards

There are different types of burial grounds, which are often used interchangeably but refer to different things:

- Churchyards or graveyards can usually be defined as burial grounds within the boundary of a church.
- Cemeteries are burial grounds outside church confines. All or part of the cemetery may be consecrated for use by a particular faith.

11.3.1 Evidence Base and Strategic Issues

The following sources have been used in this section:

- Epping Forest District Open Space Strategy (2017)

The primary purpose of this type of open space is for burial of the dead and quiet contemplation, but the amenity and visual benefits are also important, as well as the opportunities to promote wildlife conservation and biodiversity, especially in older churchyards. Cemeteries and churchyards can be a significant open space provider in some areas particularly in rural areas. The current provision within the District is shown in Figure C.27 in Appendix C, (taken from the *Open Space Strategy*).

11.3.2 Existing Provision and Shortfalls

The *Open Space Strategy* notes that there are no defined guidelines or quantitative standards for cemeteries and churchyards. Demand for burial provision is influenced by changing preferences, in particular the increasing proportion of people opting for cremation over the past few decades. Across the country, there has also been an increasing demand for ‘natural’ or ‘green’ burials, such as woodland burial grounds. This is often because they represent a more environmentally-friendly burial or because they provide a more contemplative or reflective environment in which to remember the deceased. This type of burial ground can provide a wide range of open space benefits to the community.

Burial preferences are also determined by faith. For example, whereas Muslim and Jewish communities tend to favour burial, Sikh and Hindu communities almost always choose cremation. Some faith communities may wish to have dedicated areas within a burial ground where members of the same community may be buried and remembered together.

Burial grounds should be accessible to the whole of the community, both for attending funerals and for visits to remember the deceased. Facilities and services should therefore be designed and executed in compliance with the Disability Discrimination Acts.

The *Open Space Strategy* recommends that steps should be taken to create a new cemetery in Loughton to meet the need for future burial space. In addition, a review of available burial space should be undertaken from Waltham Abbey, Chigwell and High Ongar.

11.4 Funding

Essex County Council has designated budgets to support strategic environmental improvements in response to planning issues. For the 2016/17 year, a budget of £1m was available to environmental strategic planning issues, and a £2m fund available for the Lee Valley Regional Park. There are a range of bodies that provide funding for children’s play areas and community allotments, including Sports England, the Community Development Foundation, the Big Lottery Fund, along with other charitable trusts.

Developer contributions are likely to play a part in funding sports infrastructure, particularly as part of schools, where sports pitches are required. The *Essex County Council Developers’ guide to Infrastructure Contributions* (2016) report outlines how sports facilities might be delivered in partnership with community facilities. There are multiple options for ‘big win’ hub facilities, including a Multi Sports Arenas, skate parks and a Multi-Use Games Arena.

Developer contributions are likely to be a significant source of funding for open space and green infrastructure improvements.

11.5 Delivery

The provision of open space and preserving and enhancing environmental assets is of key importance in light of future growth. Within the Local Plan, Policy DM 6 Designated and Undesignated Open Spaces states that, where appropriate, development proposals will be expected to provide open space or links to open space. This will ensure development is accompanied by appropriate levels of access to different types of open space. Opportunities to improve and develop the green infrastructure network will be identified as part of a green infrastructure strategy. This will identify specific projects which might be funded through CIL.

Policy DM 6 in the Submission Local Plan also states that development on open spaces (including on sites allocated through the Local Plan) will only be permitted if it does not result in a net loss of open space, or reasonable access to alternative open space within a settlement. In circumstances where the partial loss of open space is considered justified, the predominantly open nature of the remainder of the site should be maintained and enhanced, together with the visual amenity and its active play and recreation function.

12 Utilities

12.1 Overview

The aim of this chapter is to assess the likely impact which the proposed quantum of development in Epping Forest District will have upon the existing utility infrastructure in the area. In order to identify potential future shortfalls in the utility networks, an assessment has been made of the expected utility demands compared to the current and forecast capacity within the networks. The demands have been estimated by applying unit demand rates to the quantum of development. The utility unit demands are based upon information provided from various utility providers and on professional judgement. The capacities of the networks have been determined from information provided by the utility providers in the area.

The assessment assumes an average dwelling size of three bedrooms in order to account for a worst case scenario. A traveller pitch is assumed to house one family in two caravans, and so has been taken as one dwelling for these calculations.

12.2 Water

12.2.1 Evidence Base and Strategic Issues

The main sources of evidence are:

- Affinity Water, Business Plan 2015-2020, 2012
- Affinity Water, Water Resources Management Plan 2015-2040, 2014
- Thames Water, Water Resources Management Plan 2015-2040, 2014
- Consultation with Affinity Water and Thames Water

Central government have policy priorities for secure, sustainable and affordable supplies of water, as outlined in the Water for Life White Paper (2001). The accompanying Environment Agency's The Case for Change – Current and Future Water Availability (2011) identifies the stresses put on water supply given the expected population growth and seeks to understand the scale of the challenge. The report concludes that the future of water resource availability is uncertain, given the combined impacts of climate change, population growth, and changes in lifestyle. Managing a consistent supply of water will become more of a challenge, and as such a strategic and local planning including demand management and the development of new resources will be necessary.

12.2.2 Existing Provision

The regulated water companies in the area are Thames Water and Affinity Water. Thames Water and Affinity Water are responsible for the full range of water supply process including production, treatment, distribution, metering and billing.

12.2.2.1 Thames Water

Thames Water is the UK's largest water and wastewater services company, serving over 13.5million customers in London and the Thames Valley, supplying an average of 2,600MI/day of drinking water. Thames Water supply area covers around 8,000 square km, and is divided into six water resource zones (WRZ). Part of Epping Forest District sits within the London WRZ. In the London WRZ the water supplies are sourced mainly through surface water abstractions of the River Thames and River Lee, via reservoirs (80% of supply) and a small amount (20%) by groundwater abstraction. There are some minor bulk export transfers from London WRZ to Affinity Water. These are set to increase to 16.1MI/d by 2034.

12.2.2.2 Affinity Water

Affinity Water is the UK's largest water-only supplier, providing more than 900 million litres of water each day to a population of over 3.5 million people. Affinity Water is divided into eight WRZ, where EFDC falls into Resource Zone 5 (Stort) and serves the remaining area of the east side of the district.

The potable water within WRZ5 is mainly supplied via abstraction points. Affinity Water have arrangements with six neighbouring water companies for the bulk supply import of treated water into their WRZs and with four companies for the bulk supply export to different locations. Currently an average of 0.31MI/day is donated from Cambridge Water and 0.03MI/day from Essex and Suffolk Water to Affinity Water WRZ5.

Figure 48: Map of Affinity Water eight Water Resource Zones



12.2.3 Shortfalls in Current Provision

12.2.3.1 Thames Water

Thames Water undertake plan-based forecasts, as part of their Water Resources Management Plan (WRMP), using local authority Local Plan growth projections to estimate a forecast total increase in population within the supply area of between 2 million and 2.9 million people by 2040 (three quarters of which is forecast in London). Over the same planning period, the baseline water supplies are also expected to reduce. Figure 5 shows the current and forecast supply demand balance in each of the water resource zones, which indicates that London WRZ is already experiencing water supply deficits. It is understood that these changes are principally driven by the impact of climate change on groundwater sources and therefore a reduction in available deployable output.

Figure 495: Thames Water supply-demand balance in each Water Resource Zones (deficits shown in red)

Water Resource Zone	2011	2015	2020	2025	2030	2035	2040
London	18.8	-59.4	-132.7	-213.1	-291.7	-361.1	-415.9
Swindon and Oxfordshire	37.34	27.08	-0.14	-12.05	-21.30	-26.70	-32.66
Slough, Wycombe and Aylesbury	21.47	11.57	7.93	4.89	0.77	-2.60	-6.09
Guilford	6.85	0.85	0.06	-1.14	-2.14	-2.85	-3.80
Henley	5.32	5.14	4.76	4.31	3.80	3.26	2.67
Kennet Valley	41.25	26.05	21.68	16.38	11.41	7.84	5.59

Source: Thames Water, Water Resources Management Plan 2015-2040

12.2.3.2 Affinity Water

In 2015, Affinity Water's WRZ5 was already reported to have a deficit of between 1-10MI/day. This has been calculated to increase to >10MI/day by 2040. As part of their Water Resources Management Plan a number of options are being investigated and undertaken to alleviate this issue. These include demand reduction methods such as: leakage reduction; metering households; new tariffs; and local water reuse, and supply side options including: bulk transfer options from other water companies and WRZs; surface water and groundwater abstraction licence investigations; treated water storage; effluent reuse; and desalination.

12.2.4 Infrastructure Requirements

An estimation of the projected potable water demand generated by the proposed housing growth distribution has been made. The demands have been estimated by applying unit demand rates to the number of residential dwellings across each development, which have been grouped together in Figure 6 by settlement. The utility unit demands are based upon information provided from various utility providers and previous Arup studies, accounting for the lower potable water usage rate for metered houses in this area.

Figure 506: Forecast potable water demands

Settlement	Potable Water Demand (m ³ /day)
Buckhurst Hill	28
Chigwell	109
Chipping Ongar	156
Epping	346
Fyfield	4

Settlement	Potable Water Demand (m ³ /day)
High Ongar	11
Loughton	270
Lower Nazeing	41
Lower Sheering	4
North Weald Bassett	278
Roydon	18
Sheering	22
Stapleford Abbotts	12
Theydon Bois	15
Thornwood	50
Waltham Abbey	229
East of Harlow	199
Latton Priory	281
Water Lane Area	556
Total	2,630

12.3 Funding Mechanisms

As both Affinity Water and Thames Water have addressed the risk of a potable water shortfall in the future, it is highly unlikely that the developer will have to contribute to the cost of these water resource works. In some cases, it is possible that there will be developer contributions required for more local water infrastructure reinforcements. These costs would be calculated based on site specific information including location, phasing and demand.

All proposed developments will require local upgrades and connections in order to connect to the existing water network. These works are typically funded by the developer. However as the proposed developments are located within the proximity of other existing developments, it is unlikely that these connection costs will be prohibitive.

Detailed network analyses will be required to be undertaken on a site-by-site basis by Affinity Water/Thames Water to ensure that the distribution network has sufficient capacity to support the developments.

A number of the proposed sites have water mains through them. These will either require diverting or developments adhering to no-build easements.

12.4 Wastewater Treatment and Sewage

Wastewater treatment refers to the treatment of both domestic and commercial waste water, including from toilets, baths, and washing machines, as well as industrial waste. It can also be rainwater run-off from roads and other impermeable surfaces such as roofs and pavements. If left untreated, this can cause contamination and significant adverse impacts on the water environment, including oxygen depletion, eutrophication of water as a result of the build-up of nutrients, and sewage litter. Wastewater can be treated for appropriate disposal or reuse of sewage sludge.

12.4.1 Evidence Base and Strategic Issues

The main sources of evidence are:

- Thames Water, Long-term Strategy 2015-2040, 2014
- Thames Water, Sewerage Catchment Studies: Ravensbourne Valley, 2016
- Consultation with Thames Water

The Urban Waste Water Treatment Directive (91/271/EEC), adopted in 1991, is an EU directive that has the aim of protecting the water environment for the animals and plants that live in and around water, and its use as a resource for drinking water, sanitation, industry and commerce. The EU Member States, including the UK, are required to implement the Directive through their national legislation. Further, the NPPF and Planning Practice Guidance (PPG) set out an overall approach for the provision of adequate water and wastewater infrastructure to support sustainable development.

12.4.2 Existing Provision and Shortfalls

Thames Water operate and maintain the Wastewater Treatment Works (WwTWs) and sewerage network in Epping Forest District. Thames Water provide wastewater services to 15 million customers who fall within their catchment, and operate 108,000km of sewer through which an average of more than 4.2bn litres of wastewater is collected every day.

There are a number of WwTWs which serve the Epping Forest District, varying in size from serving only a single hamlet to thousands of town residents:

- Rye Meads
- Abbess Roding
- Thornwood
- North Weald
- Moreton
- Wallingale
- Theydon Bois

- Epping
- Stanford Rivers
- Ravensbourne Valley

Thames Water are currently working to reduce flooding in the Ravensbourne Valley, which incorporates south-east Chigwell and Stapleford Abbots. During heavy rainfall, the sewerage system in the Ravensbourne Valley has occasionally become overwhelmed, and has been associated with sewer flooding in some local areas. Thames Water have constructed a catchment hydraulic model, incorporating survey information, to quantify the risk of flooding to properties and determine the mechanism of flooding. Continuous modelling and monitoring is improving the accuracy of the model, with the study due to be completed in 2017. Once completed, the study will identify potential ways to reduce the impact of sewerage flooding across the catchment. Liaison with Thames Water will be important particularly for the developments in this area, in order to prevent any increase in sewage flooding.

12.4.3 Infrastructure Requirements

An estimation of the projected foul water to be generated by the proposed housing growth distribution, taken as 95% of the projected water demands, has been made. The estimated foul water generation is shown in Figure 7.

Figure 517: Forecast foul water demands

Settlement	Foul Water Generation (m ³ /day)
Buckhurst Hill	27
Chigwell	104
Chipping Ongar	148
Epping	329
Fyfield	4
High Ongar	10
Loughton	256
Lower Nazeing	40
Lower Sheering	4
North Weald Bassett	264
Roydon	18
Sheering	21
Stapleford Abbots	11
Theydon Bois	14
Thornwood	47
Waltham Abbey	217
East of Harlow	189

Settlement	Foul Water Generation (m ³ /day)
Latton Priory	267
Water Lane Area	528
Total	2,498

Thames Water have undertaken an assessment based on proposed allocations, which suggested some required some strategic and local upgrades.

Figure 58: Strategic and local upgrades by settlement²⁰

Settlement	Water Response	Waste Water Network	Waste Water Process
Buckhurst Hill	No infrastructure concerns.	No infrastructure concerns.	No infrastructure concerns.
Chigwell	Local upgrades to the existing drainage infrastructure required	No infrastructure concerns.	No infrastructure concerns.
Ongar	No infrastructure concerns.	Local upgrades to the existing drainage infrastructure required	Local upgrades to the existing drainage infrastructure required
Coopersale	No infrastructure concerns.	No infrastructure concerns.	Local upgrades to the existing drainage infrastructure required
Epping	No infrastructure concerns.	Local upgrades to the existing drainage infrastructure required.	Local upgrades to the existing drainage infrastructure required.
Fyfield	No infrastructure concerns.	No infrastructure concerns.	Local upgrades to the existing drainage infrastructure required.
High Ongar	No infrastructure concerns.	No infrastructure concerns.	Local upgrades to the existing drainage infrastructure required.
Loughton	Local upgrades to the existing drainage infrastructure required	No infrastructure concerns.	No infrastructure concerns
Lower Sheering	No infrastructure concerns.	No infrastructure concerns.	No infrastructure concerns.

²⁰ Based on Thames Water Assessment, summarised by Arup

Nazeing	No infrastructure concerns.	Local upgrades to the existing drainage infrastructure required	No infrastructure concerns.
North Weald Bassett	No infrastructure concerns.	Local upgrades to the existing drainage infrastructure required	Local upgrades to the existing drainage infrastructure required
Roydon	No infrastructure concerns.	No infrastructure concerns.	No infrastructure concerns.
Rural	No infrastructure concerns.	No infrastructure concerns.	No infrastructure concerns.
Sheering	No infrastructure concerns.	Local upgrades to the existing drainage infrastructure required	No infrastructure concerns.
Latton Priory	No infrastructure concerns.	Local upgrades to the existing drainage infrastructure required	No infrastructure concerns.
Water Lane Area	No infrastructure concerns.	Local upgrades to the existing drainage infrastructure required	No infrastructure concerns.
East of Harlow	No infrastructure concerns.	Local upgrades to the existing drainage infrastructure required	No infrastructure concerns.
Stapleford Abbots	No infrastructure concerns.	No infrastructure concerns.	No infrastructure concerns.
Thornwood	No infrastructure concerns.	No infrastructure concerns.	Local upgrades to the existing drainage infrastructure required
Theydon Bois	No infrastructure concerns.	No infrastructure concerns.	Local upgrades to the existing drainage infrastructure required
Waltham Abbey	Local upgrades to the existing drainage infrastructure required	Local upgrades to the existing drainage infrastructure required	No infrastructure concerns.

Further consultation with Thames Water will be required as the proposals for each site develop to ensure that the optimum solution is implemented. Developments may need to be phased to allow reinforcement works and upgrades to the network to be undertaken in a timely way. This should also assist with the long lead in times for reinforcements.

Thames' Water network assessment assumes that there will be no surface water connections into public sewers. Surface water should be managed based on the following hierarchy for disposal: infiltration/disposal at source (most preferred); discharge to watercourse; discharge to surface water sewer; and discharge to combined sewer (least preferred). It is reasonable for Thames Water to assume that developers will dispose of their surface water, without increasing the strain on their network.

It is a legal requirement for suppliers to accept foul drainage (but not surface water) connections from a new development, and so issues relating to connection to the foul network should not prevent a development going ahead, though there may be cost implications. It is anticipated that Thames Water will meet the costs of strategic upgrades, but that any local upgrades would be borne by the developer(s).

Thames Water prepared a Greater Harlow Position Statement in August 2017, concerning development in and around Harlow and the impacts on Rye Meads WwTW. It states that:

- Rye Meads is currently being upgraded, due to complete in 2018. The main scope of the project is to extend the treatment capacity and improve discharge quality standards of the existing sewage treatment works to enable it to treat an increased volume of incoming flow.
- The upgrade will provide Rye Meads with a treatment capacity of 447,134 PE (Population Equivalent). Based on Thames Water's current growth forecasts, from a final effluent stream point of view Thames Water currently expect the site to have capacity up to 2036.
- There might be a need to deliver upgrades in sludge and storm streams during AMP7, but the site is expected to have sufficient capacity in all streams by 2026 and maybe beyond.
- Given the scale of development coming forward in the region, Thames Water are regularly reviewing sewage treatment works capacity, and working closely with local councils.

12.4.4 Funding Mechanisms

There are three types of charges associated with connecting to the wastewater network. These are currently under reform by Ofwat, with the changes due to be implemented from April 2018. The charges are:

- New Connection Charges – the cost of connecting premises to public sewers.
- Requisition Charges – contribution to costs of the physical infrastructure between the existing network to (and on) a new development.
- Infrastructure Charges – these cover all network reinforcement work away from the development site.

As previously stated, it is anticipated that Thames Water will meet the costs of strategic upgrades, but that any local upgrades would be borne by the developer(s).

12.5 Electricity

The energy industry in the UK is separated between the generators, the network operators and the suppliers. Electricity transmission and distribution sections are owned by separate companies. The companies recover the costs of operating and maintaining their systems by levying charges on electricity traded using their

network. National Grid owns and maintains the electricity transmission system in England. National Grid also provides electricity suppliers from generation to local distribution companies. There are six Distribution Network Operators (DNOs) in Great Britain. DNOs own, operate, and maintain the distribution networks and charge suppliers for using the distribution system.

12.5.1 Evidence Base and Strategic Issues

The main sources of information used for this section include:

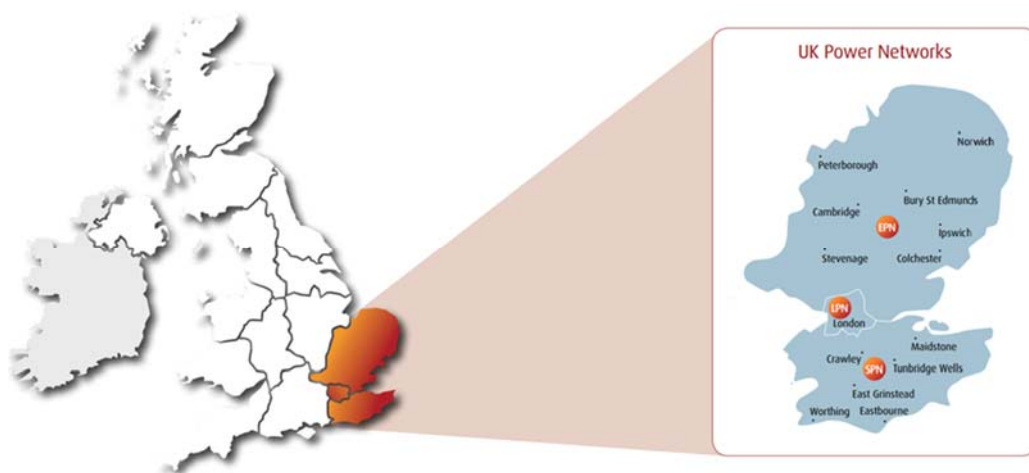
- UK Power Networks, Business Plan 2015-2023, July 2013
- Eastern Power Networks, Long Term Development Statement (LTDS), November 2016
- London Power Networks, Long Term Development Statement (LTDS), November 2016
- Discussions with UKPN

The current electrical infrastructure in Epping Forest District is not constrained, however to support planned development growth strategic reinforcement works are likely to be required. These are discussed in detail within this section, and should be followed up with continued consultation as proposals develop.

12.5.2 Existing Provision

The DNO in Epping Forest District is UK Power Networks (UKPN). UKPN divide their jurisdiction into three operating areas, Eastern Power Network (EPN), London Power Network (LPN) and Southern Power Network (SPN). Epping Forest District is predominately sited within the EPN, with the southern portion of the district being within LPN. As a regional DNO, UKPN are required to produce Long Term Development Statements (LTDSs) giving detail of the current and future status of their network. This includes load forecasts for the next five years on their 132kV and 33kV equipment.

Figure 52: UK Power Networks



The electrical supply system for the majority of Epping Forest District is from the National Grid 275kV overhead lines which run along the western district boundary. The Grid Supply Points (GSPs) at Rye House and Brimsdown step down the electrical voltage to be distributed across the area. The villages to the south-east of the district are supplied via Warely GSP.

A number of 132kV lines connect the GSPs to Bulk Supply Points (BSPs) in the UKPN 33kV network. Those serving Epping Forest District include:

- Rye House Grid GSP - West Harlow Grid BSP/ Rye House Grid BSP / Epping Grid BSP;
- Brimsdown Grid GSP – Brimsdown North BSP / Buckhurst Hill BSP; and
- Warley GSP – Hornchurch BSP.

This 33kV network then disperses the electricity supply to local Primary substations. Primary (33 kV to 11 kV) substations generally feed out to secondary (11 kV to Low Voltage) substations which connect to local homes and commercial premises. It is the primary substations that generally pose the biggest obstacles to development, as the triggering of works to upgrade or provide new primary substations can result in high costs being passed on from UKPN to the developer.

The below existing primary substations supply the area:

- Lindsey Street
- Ongar
- New Harlow*
- Rye House Primary*
- Broxbourne*
- Harlow West Primary*
- South Harlow*
- White Rodding*
- Waltham Abbey
- Epping New Road
- Fairlop Road*
- Noak Hill*

* These substations are located outside of the district boundary, but supply some properties within the district.

The primary substations feed a network of distribution substations throughout Epping Forest District. These distribution substations have varying capacities depending upon the extent and demands of the premises they supply.

UKPN, like all regional DNOs, operate a first come, first serve basis for electricity. This means that a development site may absorb the existing capacity in an electricity substation, requiring the next development to contribute towards any upgrades.

12.5.3 Shortfalls in Current Provision

UPKNs LTDSs for both EPN and LPN demonstrate that there is currently available electrical capacity at their primary substations in the area. This continues with their forecast available capacities for 2021. These are calculated based on the individual substations firm capacity and UKPNs forecast maximum demand.

Figure 539: UKPN forecast available substation capacities

Primary Substation	Forecast 2020/21 Available Capacity (MW)
Lindsey Street	4.0
Ongar	3.1
New Harlow	24.9
Broxbourne	4.9
Harlow West Primary	30.9
South Harlow	20.9

Primary Substation	Forecast 2020/21 Available Capacity (MW)
Waltham Abbey	2.6
Epping New Road	10.4
Fairlop Road	19.8
Noak Hill	3.6
Total:	125.1

As part of their LTDSs, UKPN list their development proposals which are planned to increase network capacity or demand side response, however there are currently no works of this nature planned within Epping Forest district.

The following new development connections have been requested for these substations:

- Broxbourne Primary 33/11kV substation – a connection offer has been made for a total capacity of 1.20MVA.
- Epping New Road Primary 33/11kV – seven connection offers have been made, with a total demand of 12.53MW.
- Harlow West Primary 33/11kV substation – two budget estimates have been provided for a total of 10.24MVA and a connection offer has been made for 1.25MVA.
- New Harlow Primary 33/11kV substation – a connection offer has been accepted by a customer for 1.25MVA, and a further eight connection offers have been made for a total demand of 26.77MVA.
- Ongar Primary 33/11kV substation – a budget estimate has been provided for a demand of 3.00MVA.
- Rye House Grid 275/132kV GSP – a connection offer has been made for a connection of 1.47MVA.
- Rye House Grid 132/33kV substation – connection offers have been made for a total capacity of 11.40MVA.
- Rye House Local 33/11kV Primary substation – a budget estimate has been provided for 1.60MVA, and four connection offers have been made for a total demand of 7.49MVA.
- South Harlow Primary 33/11kV substation – a connection offer of 8.25MVA has been made.

Should these (and/or any other new) developments connect to the network, then the available capacity of the network as discussed here would reduce.

12.5.4 Infrastructure Requirements

The electrical power requirements for the proposed level of development has been estimated. Houses have been assumed to be gas heated, as this is deemed the preferred option, however electrical heating has been proposed for the traveller

growth. Diversification within each building has been accounted for within these calculations, as the maximum demand will not occur in every building of the same use type simultaneously.

Figure 60: Forecast electricity demands

Settlement	Electrical Demand (MW)
Buckhurst Hill	0.19
Chigwell	0.75
Chipping Ongar	1.00
Epping	2.36
Fyfield	0.03
High Ongar	0.07
Loughton	1.84
Lower Nazeing	0.30
Lower Sheering	0.03
North Weald Bassett	1.91
Roydon	0.14
Sheering	0.15
Stapleford Abbots	0.08
Theydon Bois	0.10
Thornwood	0.34
Waltham Abbey	1.57
East of Harlow	1.37
Latton Priory	1.93
Water Lane Area	3.80
Total	18.0

The available capacities of the existing primary substations in close proximity to the proposed sites for allocation are set out in Figure 61. This assessment is based on UKPN's 2020/21 forecast loads and the firm capacity for each of the primary substations as per their November 2016 Long Term Development Statements. For this assessment it has been assumed that developments will be served by its closest primary substation. The total demand required from each substation is highlighted in red where it exceeds the available capacity.

Figure 61: Electrical demand / capacity assessment

BSP	Primary Substation	Forecast 20/21 Available Capacity (MW)	Settlement served (by closest distance)	Forecast demand (MW)	Total requirement (MW)	Surplus / Shortage (MW)
Epping Grid	Lindsey Street	4.0	Epping	2.36	4.71	-0.71
			North Weald Bassett	1.91		
			Theydon Bois	0.10		
			Thornwood	0.34		
	Ongar	3.1	Fyfield	0.03	1.16	1.94
			High Ongar	0.07		
			Chipping Ongar	1.06		
Rye House Grid	New Harlow	24.9	Sheering	0.15	1.54	23.36
			Lower Sheering	0.03		
			East of Harlow	1.37		
	Broxbourne	4.9	Lower Nazeing	0.30	0.30	4.60
West Harlow Grid	Harlow West Primary	30.9	Roydon	0.14	3.94	26.96
			Water Lane Area	3.80		
	South Harlow	20.9	Latton Priory	1.93	1.93	18.97
Brimsdown	Waltham Abbey	2.6	Waltham Abbey	1.57	1.57	1.03
Buckhurst Hill	Epping New Road	10.4	Buckhurst Hill	0.19	2.03	8.37
			Laughton	1.84		
	Fairlop Road	19.8	Chigwell	0.75	0.75	19.05
Hornchurch	Noak Hill	3.6	Stapleford Abbots	0.08	0.08	3.52

The connection offers discussed in Section 11.5.3 have not been accounted for in this surplus supply calculations. This is due to the large uncertainties of whether these connections will be actually made to the network.

These results show that the total electrical demand for the Epping Forest District Local Plan sites is far lower than the available capacity of the surrounding primary substations. However, due to the location of some substations relative to the development sites it is not feasible for all of the available capacity to be utilised.

Figure shows that the total electrical demand forecast for the developments served by Lindsey Street primary substation slightly exceeds its forecast available capacity. These include developments within the settlements of Thornwood,

Theydon Bois, North Weald Bassett and Epping. The larger developments in North Weald Bassett and Epping contribute largely to the electrical demand.

As it is a minor shortfall, it would not be efficient to construct an additional primary substation to supply these developments. These can cost between £5-10million, providing 20-30MW, which is far larger than the demand required. A few alternative options have been suggested below:

- Connect the developments in North Weald Bassett to South Harlow primary substation. Costs associated with this would be large due to the distances required to link the two. Further discussions with UKPN would be required to determine the feasibility of this proposal and the associated costs. It could possibly be developed in conjunction with Latton Priory to reduce costs.
- Possible upgrade works to increase the capacity of Lindsey Street primary substation. Further consultation would be required as proposals are developed to determine the condition of the substation and the feasibility of this proposal.

The point at which the available electrical capacity is forecast to be exceeded depends on the phasing schedule of these proposed developments. Therefore developments constructed prior to this date can utilise the existing available capacity, until reinforcement works are required.

Although only Lindsey Street substation is forecast to be over capacity, should all of the proposals discussed in Section 11.5.3 connect to the network prior to our developments, these would also cause capacity issues at Epping New Road, New Harlow and Ongar primary substations. Due to the uncertainties of these connections, their impacts have not been considered further. Solutions for smaller capacity deficits typically involve the upgrade of existing substations or extending the existing network to utilise capacity from nearby.

Figure 62 shows the forecast available capacity at the Bulk Supply Points which serve the proposed developments. These appear to be sufficient for the proposed demands for Epping Forest District. As can be seen, there is limited available capacity at Brimsdown North Grid but this should still be sufficient to support the settlement of Waltham Abbey.

Figure 62: Bulk supply substation capacities at 132kV

Grid Supply Point	Bulk Supply	Available Capacity (MW)	Total Forecast Demand (MW)	Surplus / Shortage (MW)
Rye House	Epping Grid	75.1	5.87	69.23
	Rye House Grid	58.4	1.85	56.55
	Harlow West Grid	44.9	5.87	39.03
Brimsdown	Brimsdown North Grid	7.3	1.57	5.73
	Buckhurst Hill	30.8	2.78	28.02
Warley	Hornchurch Grid	23.2	0.08	23.12

Initial comments from UKPN stated that Harlow West Grid may require reinforcement should all of the primary substations in the Harlow areas be required to utilise all of their available capacity. As the forecast demand in this area is much smaller than the forecast available capacity of these substations, this should not pose as a constraint to these developments.

Note should be taken that due to the rural location of Epping Forest District, electricity distribution cables are often overhead lines (OHLs). Many of the 11kV distribution cables will also be overhead lines, rather than following beneath roads which is common of urban networks.

Where these cables (either overhead or below ground) coincide with proposed development sites there are two options:

- Divert – Cables can be diverted along an alternative route. Early consultation with UKPN at the detailed masterplanning stage is recommended to establish costs.
- Easement – cables are retained in their existing position and the development is designed incorporating the easement as open spaces, green spaces, road etc. Typical easements vary depending on the asset owners and the voltage of the cables. These will require a legal agreement with UKPN to be implemented.

12.5.5 Funding Mechanisms

UK Power Networks are responsible for building, operating, and maintaining their electricity infrastructure.

A new primary substation can cost in the region of £5-10million depending on the surrounding electrical network and its capacity. It is anticipated that providers will meet the costs of strategic upgrades, but that any local upgrades, such as connections to the existing 11kV network, would be borne by the developer(s). As the proposed developments are within the proximity of areas where there is a physical presence of the UKPN 11kV network, connections to the low voltage networks will not be cost prohibitive to the proposed the new developments.

12.6 Gas

12.6.1 Evidence Base and Strategic Issues

The main sources of information used for this section include:

- National Grid, Gas Ten Year Statement, November 2016
- National Grid, High Pressure Gas Pipe locations TL, 2017
- National Grid, Gas Distribution Connection Services Charges, 2016
- National Grid Gas Distribution Ltd, Long Term Development Plan (LTDP), 2016

- Consultation with Cadent Gas (previously known as National Grid Gas Distribution Ltd)

The Energy White Paper charts the significant demand on energy over the next 20 years. As such, it will be necessary to upgrade much of the energy infrastructure during this period. Requirements will include expansions of national infrastructure such as overhead powerlines, extending substations, and new gas pipelines, and new infrastructure such as smaller scale distribution generation and gas storage sites.

12.6.2 Existing Provision and Shortfalls

National Grid National High Pressure (NHP) transmission gas mains transport gas throughout the UK at up to 85bar. Distribution Network Operators receive high pressure gas from National Grid's transmission pipelines. Gas enters the local network at high pressure and through a series of pressure reducers, governors and gasometers and increased mains sizes, the pressure is adjusted for distribution to premises. Epping Forest District is well served by National Grid's NHP pipes, which cross the district in multiple locations.

Cadent Gas is the DNO for gas in Epping Forest District. This company was previously known as National Grid Gas Distribution Ltd until May 2017, and as such their current valid documents are written under this name.

Cadent Gas produce Long Term Development Plans (LTDP) in order to forecast their demand and supply for the next ten years. According to the 2016 LTDP there is an overall annual reduction in gas demand due to less favourable economic outlook, increases in UK gas prices and the increase in renewable energy.

There are no planned reinforcement works in the Epping Forest District.

12.6.3 Infrastructure Requirements

A summary of the forecast utility demands generated by the proposed allocations is shown below in Figure 63. It has been assumed that houses will be gas heated, whilst traveller sites will be independent of the gas network.

Figure 63: Forecast gas demands

Settlement	Gas Demand (MW)
Buckhurst Hill	0.39
Chigwell	1.51
Chipping Ongar	2.15
Epping	4.79
Fyfield	0.05
High Ongar	0.15
Loughton	3.73
Lower Nazeing	0.59
Lower Sheering	0.05

Settlement	Gas Demand (MW)
North Weald Bassett	3.84
Roydon	0.26
Sheering	0.31
Stapleford Abbotts	0.16
Theydon Bois	0.21
Thornwood	0.69
Waltham Abbey	3.16
East of Harlow	2.76
Latton Priory	3.89
Water Lane Area	7.68
Total	36.4

Consultation with National Grid on the distribution of development tested as part of Regulation 18 Draft Local Plan consultation confirmed that there is sufficient capacity in the gas distribution system to accommodate allocations, and that there are no plans to reinforce/upgrade the network. As the connections process works on a ‘first come first serve’ basis, there is no guarantee that this capacity will still be available at the time a connections request is sent in. Some local reinforcements may then be required should the proposed demand exceed the capacity of the local distribution mains.

12.6.4 Funding Mechanisms

National Grid and Cadent Gas are responsible for building, operating, and maintaining their electricity infrastructure. However the developer is responsible for funding connections from the proposed developments to the existing low pressure gas network. As the proposed sites are within proximity of existing developments, these costs will not be prohibitive.

Some local reinforcements may be required should the proposed demand exceed the capacity of the local distribution mains.

12.7 Telecommunications

12.7.1 Evidence Base and Strategic Issues

- Ofgem ‘Making communications work for everyone: Initial conclusions from the Strategic Review of Digital Communications’ (2016)
- Superfast Essex

This section covers the provision of Broadband services to residents and businesses. It is recognised that digital services are important for resident’s digital inclusion, participation in society and in democratic processes, whilst providing necessary connectivity for businesses to drive the economy. In light of this, the Government has committed to giving all premises in the UK access to a minimum

of 2Mbps download speeds for both residents and businesses. Ofcom are the independent regulator for the UK communications industry and have launched a Digital Communications Review. The strategy focuses on guaranteeing universal broadband availability at a sufficient speed, supporting investments and innovation in ultrafast broadband networks, and improving the quality of service delivered by the whole of the telecoms industry. There is a drive to eventually provide superfast broadband to all residents and businesses across the UK.

12.7.2 Existing Provision

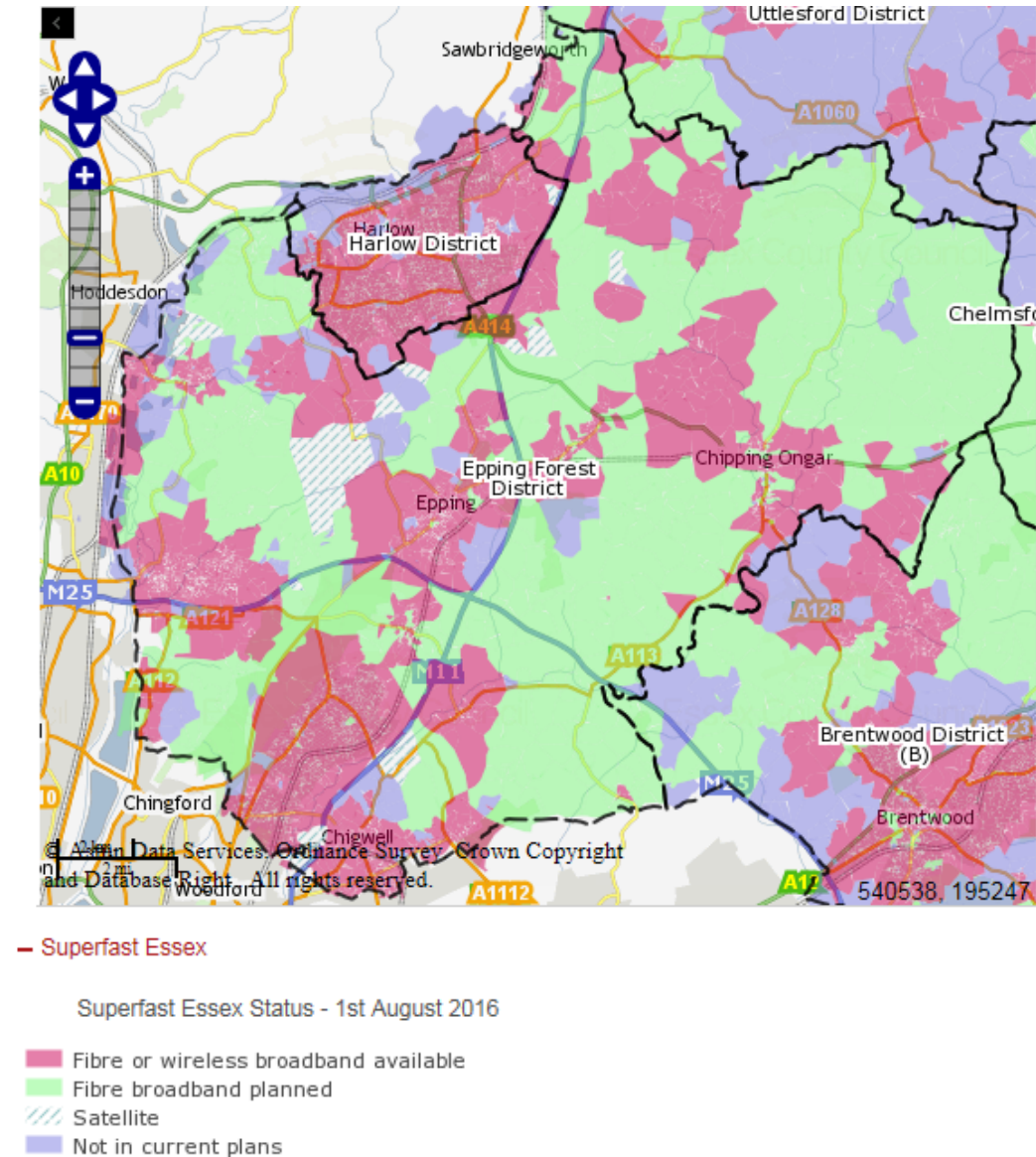
Superfast broadband coverage in Epping Forest District was above the Essex average in 2013, and future planned investment should mean that 97% of Epping Forest District will have access to superfast broadband by early 2020 (compared with 94% in the whole of Essex).²¹ Essex County Council are coordinating the Superfast Essex Broadband scheme, which is part of the national Superfast Britain Programme. The aim of the programme is to ensure that 95% of the county has access to fibre broadband by 2019, with a download speed of 24Mbps.

The scheme is available to both residents and businesses that do not currently have access to broadband speeds on 2Mbps. Essex County Council are also currently delivering the Rural Challenge Project which will bring ultrafast to rural communities in Essex by 2019. The Rural Challenge will focus on the east of Epping Forest District. Fyfield, Stapleford Tawney, Ongar, Moreton, Bobbingworth and the Lavers and Theydon Mount will be able to access ultrafast broadband speeds. This £7.5m project is part funded by UK government, Essex County Council, Epping Forest District Council and Gigaclear.

The map below shows the current and planned broadband coverage in Epping Forest District. The District has a number of settlements with fibre or wireless broadband access, including Epping, Chigwell, Waltham Abbey, parts of Nazeing and Chipping Ongar. Fibre broadband is planned for the majority of the district that does not currently have provision, however it is understood that due to some technical and financial difficulties, some parts of the District will be confined only to basic satellite broadband.

²¹ 'A profile of people living in Epping Forest', Essex Local Authority Portraits Joint Strategic Needs Assessment, Organisational Intelligence (2016)

Figure 544: Current and planned for broadband provision in Epping Forest District



12.8 Waste

Epping Forest District Council is the Waste Collection Authority (WCA), and is therefore responsible for the collection of waste and recycling from domestic properties. Essex County Council is the Waste Disposal Authority (WDA), and is responsible for disposing of waste collected by the District Council.

12.8.1 Evidence Base and Strategic Issues

The main sources of evidence include:

- Essex County Council's Minerals and Waste Development Scheme
- Essex County Council Adopted Waste Local Plan

- Essex Minerals Local Plan
- Minerals and Waste Authority Monitoring Report 2015-16
- Joint Municipal Waste Management Strategy for Essex, 2007-2032
- Waste Capacity Gap Report 2015

The Essex County Council's Minerals and Waste Development Scheme (MWDS) outlines the relationship between the Mineral and Waste Local Development Documents and sets out a timetable for preparing each development plan document with key milestones. The scheme indicates that informing the public and other relevant stakeholders is a key issue to be managed at all stages in the preparation of development plan documents.

The Waste Local Plan addresses the future waste needs of Essex and Southend-on-Sea; this plan area is comprised of 13 District, Borough and City Councils, covering 3,737km². The core aim of the plan is net self-sufficiency in waste management, by 2032, in order to manage all waste in the most sustainable way possible. The plan outlines a need to divert waste away from landfills and move waste management up the waste hierarchy, where possible. Essex County Council focuses on mitigating and adapting to risks from climate change through new waste management developments. However, the plan acknowledges that waste management developments can have significant negative impacts on their surroundings and the quality of life of local residents. The Plan states that new waste management developments must be located in suitable locations based on a set of specific criteria.

The Joint Municipal Waste Management Strategy for Essex, 2007-2032 (JMWMS) sets out a vision to significantly reduce the amount of waste sent to landfill and to achieve this by forming the Essex Waste Partnership, comprised of Essex County Council, the 12 District councils and Southend-on-Sea Borough Council. The Essex Minerals Local Plan (MLP) demonstrates that mineral resources are essential to our current way of life. However, they are finite and must be dealt with in a sensitive way in line with local waste management. The plan states that there are significant sand and gravel resources along the River Lea terraces in Epping Forest. A site is outlined at Shellow Cross Farm for low level restoration with a small processing plant.

12.8.2 Existing Provision

The Minerals and Waste Authority Monitoring Report 2015-16 outlines a number of existing permitted operational and non-operational key waste management sites in the Epping Forest District: two non-hazardous waste transfer, two recycling for household waste, one hazardous waste transfer, one waste storage and one unspecified transfer. The monitoring report also indicates six materials recovery facilities: three unspecified recycling/recovery/treatment, one metal recycling, one end of life vehicles and one Waste Electrical and Electronic Equipment (WEEE) treatment. One biological treatment facility is identified; this is an operational open-windrow composting facility. One non-operational inert landfill facility at

High Ongar is identified as well. There are no collected waste transfer station sites within the District.

Figure 555: Waste management facilities in Epping Forest District

Facility Name	Facility Types
Evans Thornwood, Thornwood Common	Aggregate Recycling Centre
AGT Card Ltd, Waltham Abbey	End of Life Vehicles
Epping Forest Council Depot	Hazardous Waste Transfer
Total Waste Management Ltd., Thornwood Common	Metal Recycling
Threshers, Hastingwood	Non Hazardous Waste Transfer
Ashlyns Organic Farm, North Weald Bassett	Open-Windrow Composting
Luxborough Lane HWRC, Chigwell	Recycling Centre for Household Waste
Town Mead HWRC, Waltham Abbey	Recycling Centre for Household Waste
Woolmongers Lane, Nine Ashes	Soil Screening
Resting Pests, Moreton	Unspecified Recycling / Recovery / Treatment
Evergreen Oil, Ongar	Unspecified Recycling / Recovery / Treatment
Bobbingworth Leachate Treatment Plant	Unspecified Recycling / Recovery / Treatment
Wood Farm, Moreton	Unspecified Transfer
Chase Farm, North Weald Bassett	Waste Storage
Recycle Telecom Ltd, Waltham Abbey	WEEE Treatment

12.8.2.1 Municipal Solid Waste

Municipal Solid Waste (MSW) is waste that is collected by District Councils from household kerbside collections or deposited at Recycling Centres for Household Waste (RCHW) or at recycling 'bring sites'. This may also include some small scale, locally collected commercial waste.

The JMWMS states that in 2007/08 Essex produced 732,400 tonnes of MSW across the county; 38% of this was recycled or composted. In the Epping Forest District. 37.09% of MSW was recycled or composted during this period.

Figure 66: 'Bring sites' in Epping Forest District

Facility Name	Location
Queens Road Car Park	Buckhurst Hill
Limes Avenue	Chigwell
Rodding Lane	Chigwell
Cotis Lane Car Park	Epping
Loughton Way	Loughton
Oakwood Hill	Loughton
Traps Hill Car Park	Loughton

Facility Name	Location
Lee Valley Car park/Dobbs Weir Road	Nazeing
Hurricane Way	North Weald
Short Stay High Street Car Park	Ongar
Beaumont Drive Car Park	Roydon
Thornwood Village Hall/Weald Hall Lane	Thornwood
Hill House	Waltham Abbey
Quaker Lane Car Park	Waltham Abbey
Waltham Abbey Swimming Pool	Waltham Abbey
Tesco Sewardstone Road	Waltham Abbey
Willingdale Village Hall/Beech Road	Willingdale

12.8.2.2 Non-hazardous waste

Essex County Council deals with non-organic, non-hazardous waste arising within the area as well as waste that is imported from Greater London. This import from London is planned to cease in 2026 according to the adopted London Plan 2015.

The Waste Capacity Gap Report 2015 predicts that non-organic, non-hazardous waste will increase to 2.15 million tonnes per annum by 2032. The WDA is exploring long-term management solutions for this waste and the Waste Local Plan includes a site allocation to accommodate this waste.

12.8.2.3 Hazardous waste

Most of the hazardous waste arising within the county is exported. There are no plans for the management of hazardous waste within the county.

12.8.2.4 Biological waste

There are currently nine biological waste management facilities across Essex, one of which falls within the Epping Forest District boundaries. Biological waste treatment involves the use of microorganisms to break down organic waste, including food waste, green waste and paper waste. Therefore, this type of waste management is categorised as “recovery” in the waste hierarchy.

The Waste Capacity Gap Report 2015 predicts a deficit of between 242 and 309 thousand tonnes per annum for biological treatment by 2031/32; this type of waste treatment is categorised as recovery in the waste hierarchy.

12.8.3 Existing Capacity

The Waste Local Plan acknowledges that it is essential to establish a baseline understanding of how much waste is being managed now and how much is likely to be managed in the period until 2032. The existing waste management capacity for Essex County Council is outlined below.

Figure 67: Waste capacity in Essex

Facility Type	Estimated Capacity (tonnes)
Transfer	1,776,928
Non-inert materials recovery	2,262,963
Biological treatment	280,938
Inert materials recovery	2,072,073
Energy recovery	21,792
Disposal (landfill)	17,964,802
Hazardous landfill	<i>Facility closed April 2014</i>

12.8.4 Infrastructure Requirements

The Waste Local Plan acknowledges that continued economic growth will influence the future volumes of waste in the county. Based on the Waste Capacity Gap Report 2015, the plan sets out that new waste developments to serve the needs of Essex county up to 2032 should be concentrated around main population centres: Basildon, Chelmsford, Colchester, Harlow and Southend-on-Sea. This will result in reductions in transporting waste as the majority will be treated close to its source.

The Waste Local Plan makes no strategic site allocations for waste infrastructure within the District. However, Langston Road/Oakwood Hill in Loughton is included as an area of search for waste management development. The areas of search outlined in the plan are designated around employment areas allocated in Local Development Plans. The purpose of the areas of search are to offer flexibility in waste management of local needs. Proposals for waste management development at these sites will be supported, provided that the design and use of the facility is compatible with existing employment uses. Pinnacles and Roydenbury Industrial Estate in Harlow – close to the Water Lane Area allocation – is also identified as an area of search.

13 Flood Protection and Drainage

Infrastructure provision for flood defence and surface water management includes a range of measures to counteract the risks arising from local flooding. The Flood and Water Management Act (2010) states that local flood risk includes the flood risk from surface runoff, groundwater and ordinary watercourses.

Flood defence is a statutory obligation, and is provided by a number of authorities. Essex County Council is Lead Local Flood Authority (LLFA) and are responsible for developing a strategy for flood risk management, and the relevant monitoring procedures. In addition to Essex County Council, the Environment Agency is responsible for managing flood risk from main rivers or the sea, alongside engagement with the District Council and sewage companies and highways authorities.

13.1 Evidence Base and Strategic Issues

The main sources of evidence include:

- Level 1 Strategic Flood Risk Assessment Updated, AECOM (2015)
- Loughton, Buckhurst Hill and Theydon Bois Surface Water Management Plan, EFDC and ECC (2016)
- Update to the River Roding Flood Risk Management Strategy (2012) Managing Flood Risk in the Roding Catchment Over the Next 100 Years
- Flood and Coastal Resilience Partnership Funding, Defra (2011)

The Level 1 SFRA identifies that forms of flooding experienced in the District are: ‘fluvial’ from rivers and other watercourses; ‘pluvial’ from rain i.e. surface water flooding resulting from rain; and ‘groundwater’ flooding which is the emergence of water from the ground away from river channels. The SFRA 1 identified surface water run off as the greatest risk to the District with regard to flooding.

The District consists of two main river systems, including the Roding and Lee rivers. The River Roding flows north to south through the district along the eastern boundary. The river originates from Molehill Green in Uttlesford, and discharges into the Thames at Barking Creek. The Roding catchment covers two thirds of the district, with the Lee flowing along the western boundary and the catchment covering the remaining western part of the district.

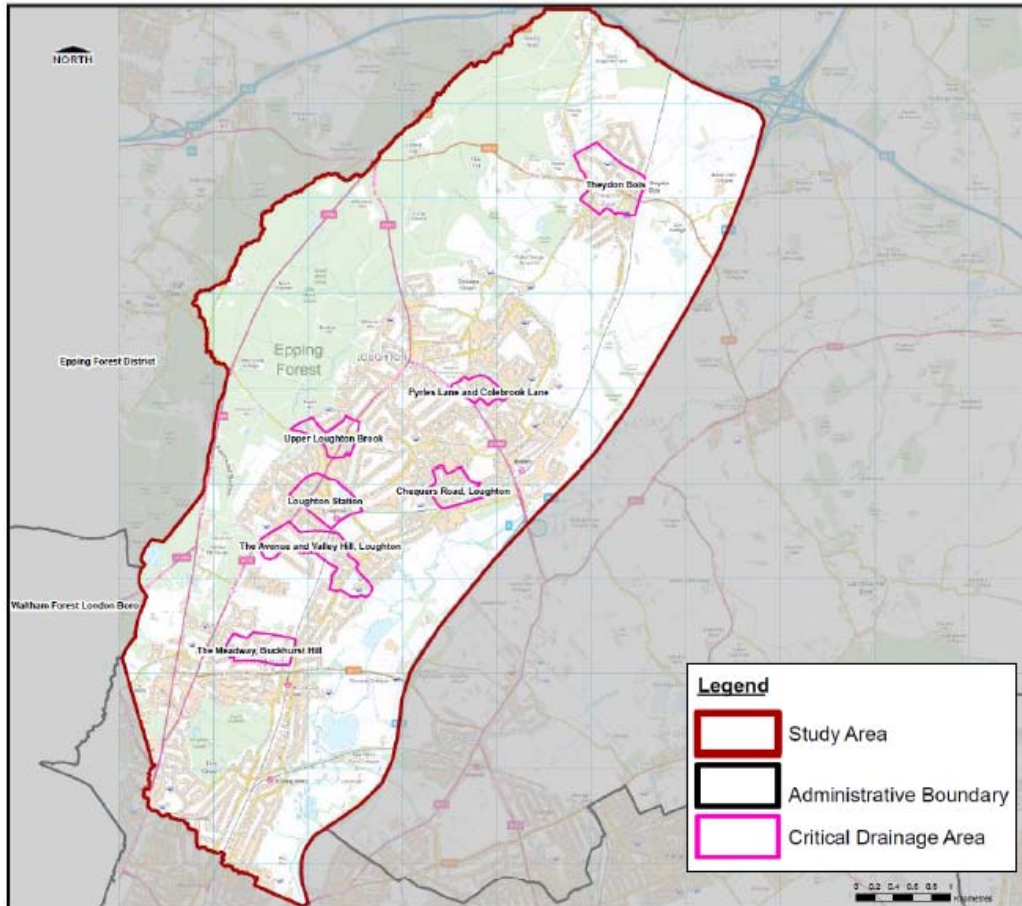
Due the majority of the district overlaying London Clay, the Roding catchment has a rapid response to rainfall, and is vulnerable to flooding.

Within Epping Forest District, the main urban areas that fall within the upper Roding Catchment include Fyfield, Thornwood, North Weald Bassett and Chipping Ongar. The lower Roding catchment area includes more densely populated settlements, including Abridge, Loughton, and Chigwell.

A series of smaller waterways within the district create flood risks for Loughton, Buckhurst Hill and Theydon Bois. The Loughton, Buckhurst Hill and Theydon

Bois Surface Water Management Plan (2016) identified seven Critical Drainage Areas across these three settlements.

Figure 68: Loughton, Buckhurst Hill and Theydon Bois Surface Water Management Plan



Source: Loughton, Buckhurst Hill and Theydon Bois Surface Water Management Plan

The Loughton, Buckhurst Hill and Theydon Bois Surface Water Management Plan identifies Loughton as an area particularly vulnerable to surface water flooding, with around 1,000 properties at risk from flooding.

It is estimated that 183 properties, the majority being residential, in Lower Nazeing are at risk from fluvial flooding in the occurrence of a 1% annual probability event. According to the report, Nazeing Brook has the lowest standard of protection of all the Lower Lee tributary rivers.

13.2 Existing Provision

Epping Forest District has a long history of flooding, and therefore has undertaken a range of alleviation schemes.

Figure 69: Flood alleviation schemes

Flood Defence Infrastructure	Location	Completed	Purpose	Capacity/ standard
Loughton Brook Flood Storage Reservoir	Staples Road	1995	Built to protect Loughton town centre from flash flooding associated with Loughton Brook	The pond can store up to 47,200 cubic metres during a 1 in 75 year event
Thornwood Brook Flood Storage Reservoir	Thornwood	1998	Part of a two reservoir scheme to protect Carpenters Arms Lane	The reservoir can store 14,350 cubic metres of water during a 1 in 100 year event
Cripsey Brook Flood Storage Reservoir	Woodside and Duck Lane, Thornwood	1998	Part of the same reservoir scheme as Thornwood Brook	
Culverts	Woodside, Brookfield, Weald Hall Lane and Weald Hall place.			Withstand a 1 in 100 year flooding event
Church Lane Flood Storage Reservoir	North Weald Bassett	1990	Gravity bypass pipe diversion to protect North Weald Bassett from flooding associated with the North Weald Brook.	The reservoir will store 38,000 cubic metres of water during a 1 in 50 year event.
Thornhill Flood Storage Reservoirs	North Weald Bassett	1995	To protect North Weald Bassett from flooding caused by water running off the higher ground near the old Radio Station in Ongar.	The two ponds combined are capable of storing 6,300 cubic metres of water in a 1 in 75 year flooding event.
Upshire Flood Alleviation Scheme	Waltham Abbey	2009/10	To reduce flooding from Cobbins Brook to properties in Waltham Abbey	Earth embankment and upstream storage area that can withstand a 1 in 50 year flooding event.
Lower Lee Flood Relief Channel		1970s		Deteriorating quality of infrastructure means that the relief channel could only withstand a 1 in 20 year flooding event
EFDC Trash Screens (Storm Grilles)			EFDC maintains a network of 62 trash screens, designed to collect large debris and prevent blockages within the culverts.	

Source: *Level 1 Strategic Flood Risk Assessment EFDC and Harlow Council (2011)*

13.3 Infrastructure Requirements

The Surface Water Management Plan for Loughton, Buckhurst Hill and Theydon Bois incorporates an Action Plan which identifies specific projects for surface water management, including priorities, responsibilities and timescales.

The site selection process took into account flood risk zones and sites within Flood Zone 3b were discounted from further assessment. The methodology incorporated a sequential approach whereby land in Zone 2 and 3 was only considered where need cannot be met in Flood Zone 1. As such, all sites are

considered suitable for development from a flooding perspective, subject to mitigation measures as appropriate. This should include integration of Sustainable Urban Drainage Systems (SuDS) into the design of new developments.

13.4 Funding Mechanisms

Funding for flood and coastal erosion risk management (FCERM) projects is largely directed through DEFRA. ECC and EFDC will hold further discussions with the Environment Agency and Thames Water to determine potential for funding (including Flood Defence Grant in Aid funding, Local Levy Funding, AMP 5 / 6, and other funding opportunities).

Where specific measures are required to support development, these would be funded by developers. Development contributions may be sought for flood risk management measures, including alleviation, storage and related environmental enhancement.

Appendix A

Stakeholder List

A1 Stakeholder List

Infrastructure type	Organisation	Key contact
Early Years & Childcare	Essex County Council	Gill Holland
Primary School	Essex County Council	Blaise Gammie, Yeelam Yau, Monica Bird
Secondary School	Essex County Council	Blaise Gammie, Yeelam Yau, Monica Bird
Post-16 Education	Essex County Council and Epping Forest College	Paula Hornett, Ben Eshun
Adult Community Learning	Essex County Council	Katherine Burns
Primary Healthcare	West Essex CCG	Geoff Roberts, Jolene Roberts
Secondary Healthcare	North Essex Partnership University NHS Foundation Trust	Stephanie Rea
Acute Care	Princess Alexandra Hospital	Marc Davies
Adult social care/ Independent Living	Essex County Council	Gary Heathcote, Eda Niland
Dentists	South East Partnership Trust and independent providers	Gill Bater
Community centres	Epping Forest District Council	Amanda Thorn
Youth Services	Epping Forest District Council	Louisa Stirling
Libraries	Essex County Council	Lee Shelsher, Steve Cooper
Green Infrastructure	Epping Forest District Council	Christopher Neilan
Allotments	Parish Council representatives	Various
Sports facilities	Active Essex/ Epping Forest District Council	Rob Hayne, James Warwick, Kelly Harman
Highways and Transport	Essex County Council/ Ringway Jacobs	David Sprunt, Charles Freeman, Simon Jones
Waste Water and Water Supply	Thames Water	Mark Matthews
Flood Risk and Surface Water Management	Epping Forest District Council	Susan Stranders
Emergency Services	Essex Fire Service	Dave Bill
Emergency Services	Police	Caroline Wiggins
Economic Development	One Epping Forest	John Houston

Appendix B

Housing Delivery Trajectory
2016/17 – 2032/33

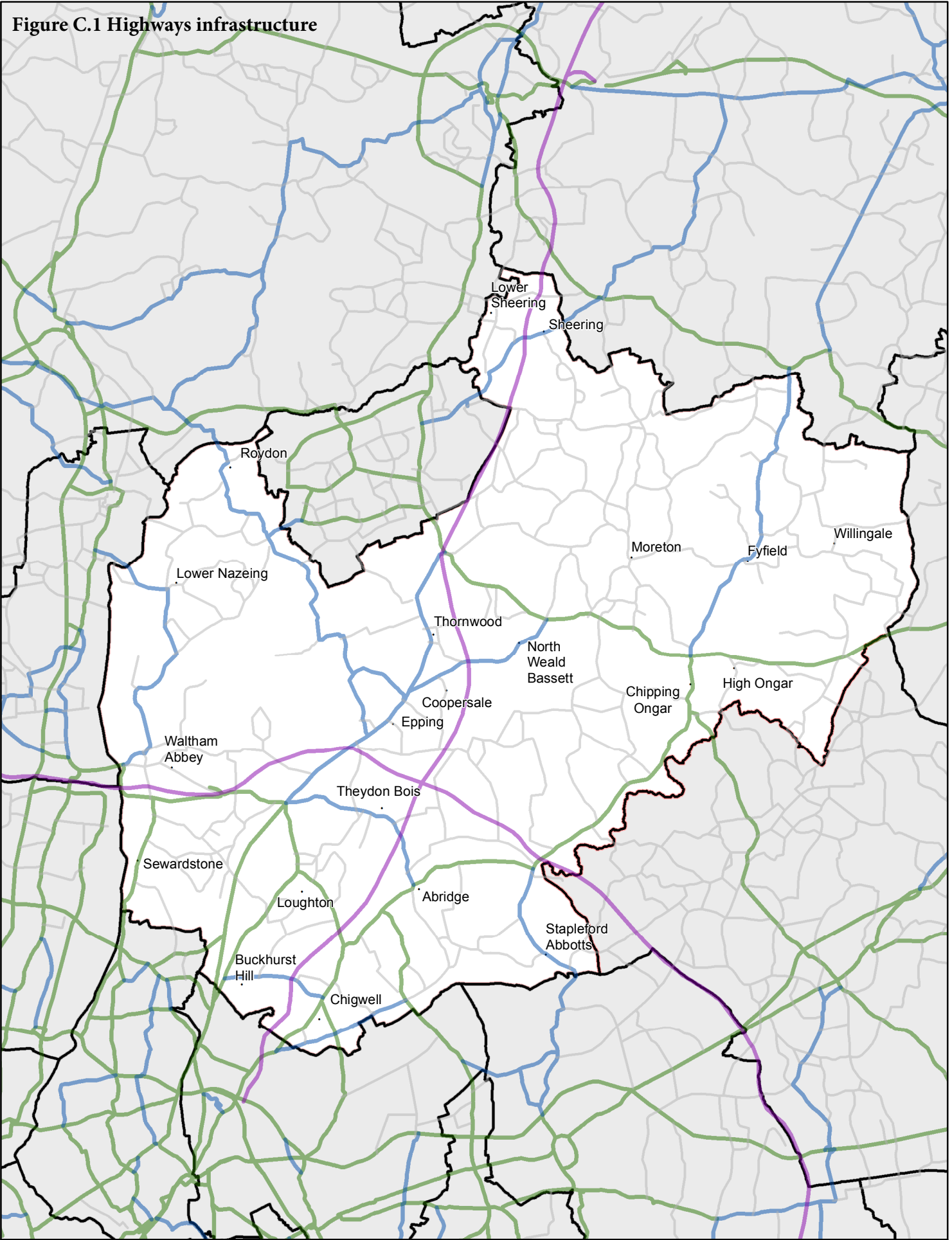
New ref	Settlement	Type	Total	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33
BUCK.R1	Buckhurst Hill	Housing	41					20	21											
BUCK.R2	Buckhurst Hill	Housing	50					25	25											
BUCK.R3	Buckhurst Hill	Housing	16													16				
CHIG.R1	Chigwell	Housing	12			6	6													
CHIG.R2	Chigwell	Housing	25				12	13												
CHIG.R3	Chigwell	Housing	11			5	6													
CHIG.R4	Chigwell	Housing	105							20	20	30	35							
CHIG.R5	Chigwell	Housing	32						16	16										
CHIG.R6	Chigwell	Housing	66													33	33			
CHIG.R7	Chigwell	Housing	100															20	40	40
CHIG.R8	Chigwell	Housing	29					14	15											
CHIG.R9	Chigwell	Housing	6						6											
CHIG.R10	Chigwell	Housing	9							9										
CHIG.R12	Chigwell	Housing	8					8												
CHIG.R11	Chigwell	Housing	11				11													
CHIP.R1	Chipping Ongar	Housing	99						19	20	30	30								
CHIP.R2	Chipping Ongar	Housing	27					13	14											
CHIP.R3	Chipping Ongar	Housing	135						15	30	30	30	30							
CHIP.R4	Chipping Ongar	Housing	29					14	15											
CHIP.R5	Chipping Ongar	Housing	123						23	25	25	25	25							
CHIP.R6	Chipping Ongar	Housing	11					11												
CHIP.R7	Chipping Ongar	Housing	107						20	27	30	30								
CHIP.R8	Chipping Ongar	Housing	33					11	11	11										
CHIP.R9	Chipping Ongar	Housing	9				9													
CHIP.R10	Chipping Ongar	Housing	17					8	9											
SP3.3	East of Harlow	Housing	750							50	100	100	100	100	100	100	100	0	0	0
COOP.R1	Epping	Housing	6							6										
EPP.R2	Epping	Housing	500							50	50	50	50	50	50	50	50	50	50	
EPP.R1	Epping	Housing	450							45	45	45	45	45	45	45	45	45	45	
EPP.R3	Epping	Housing	89					29	60											
EPP.R4	Epping	Housing	34					14	20											
EPP.R5	Epping	Housing	43							21	22									
EPP.R6	Epping	Housing	47						23	24										
EPP.R7	Epping	Housing	31						15	16										
EPP.R8	Epping	Housing	44					20	24											
EPP.R9	Epping	Housing	50					25	25											
EPP.R10	Epping	Housing	6					6												
EPP.R11	Epping	Housing	11				5	6												
FYF.R1	Fyfield	Housing	14					14												
RUR.R2	High Ongar	Housing	30				15	15												
HONG.R1	High Ongar	Housing	10					5	5											
LOU.R17	Loughton/Debden	Housing	12			6	6													
LOU.R18	Loughton/Debden	Housing	8			8														
LOU.R1	Loughton/Debden	Housing	165					25	30	30	40	40								
LOU.R2	Loughton/Debden	Housing	192					32	40	40	40	40								
LOU.R3	Loughton/Debden	Housing	9						9											
LOU.R4	Loughton/Debden	Housing	217						17	40	40	40	40	40						
LOU.R5	Loughton/Debden	Housing	154						30	30	30	30	34							
LOU.R6	Loughton/Debden	Housing	10				10													
LOU.R7	Loughton/Debden	Housing	20												20					
LOU.R8	Loughton/Debden	Housing	29					14	15											
LOU.R9	Loughton/Debden	Housing	111				21	30	30	30										
LOU.R10	Loughton/Debden	Housing	12					12												
LOU.R11	Loughton/Debden	Housing	9					9												
LOU.R12	Loughton/Debden	Housing	10												10					
LOU.R13	Loughton/Debden	Housing	6												6					
LOU.R14	Loughton/Debden	Housing	33										16	17						
LOU.R15	Loughton/Debden	Housing	6											6						

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Appendix C

Maps

Figure C.1 Highways infrastructure





<div>Report on Infrastructure Delivery Plan</div> <div>ARUP</div> <div> Epping Forest District Council</div>	<div>Drawing No.</div> <div>EFDC-IDP-0001</div>	<div>Content</div> <div>Highways infrastructure</div> <div>Contains Ordnance Survey & Royal Mail Data © Crown Copyright & Database Right 2015 EFDC Licence No: 100018534 2015 © Royal Mail Copyright & Database Right 2015</div>	<div>Legend</div> <ul style="list-style-type: none">SettlementsMotorwayA RoadsB RoadMinor RoadSurrounding AuthoritiesEpping Forest District Boundary <div>N</div> 
	<div>Date: September 2016</div>		
	<div>Scale: 1:150,000</div>		

Figure C.2 Peak morning bus routes

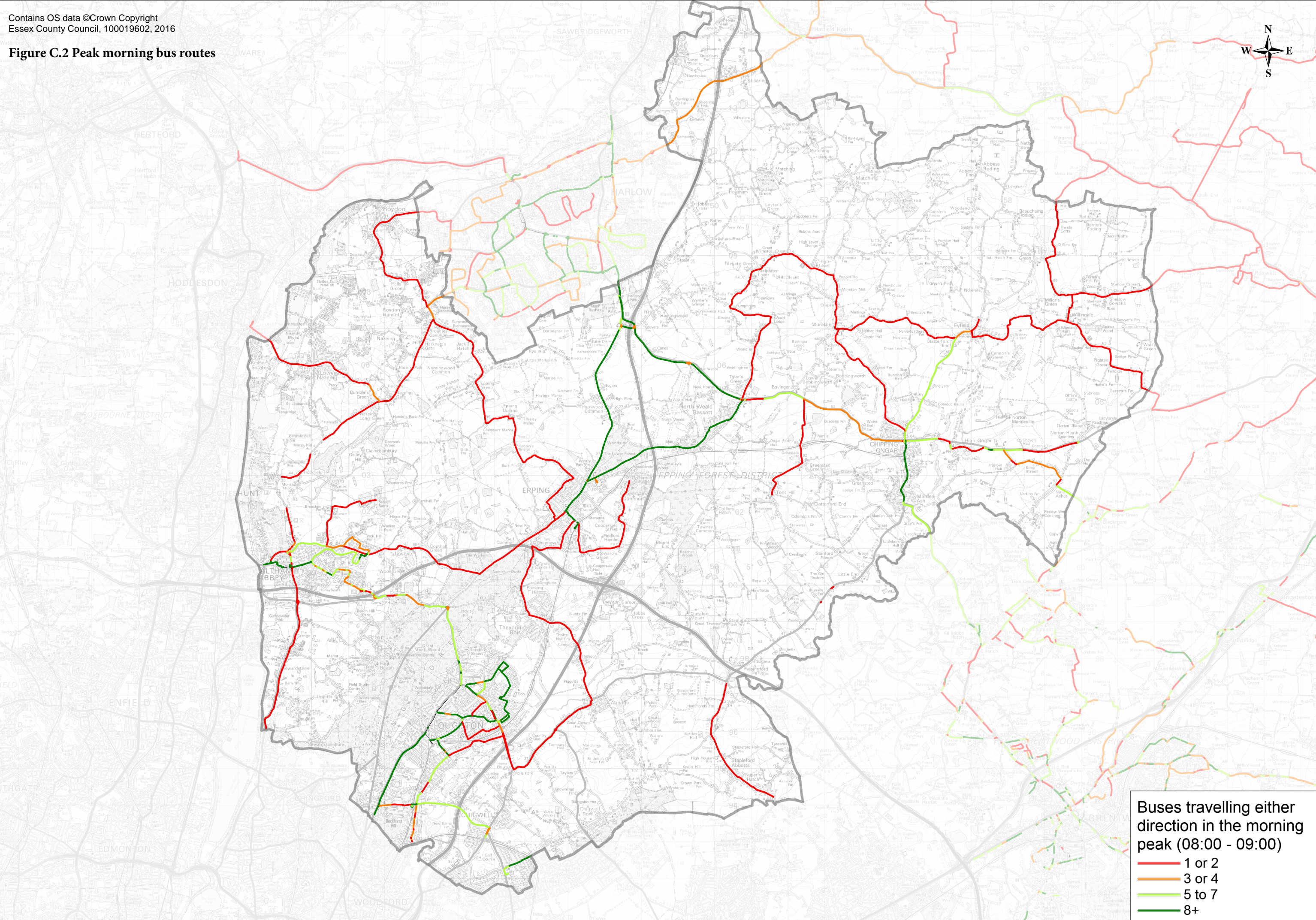


Figure C.3 Peak evening bus routes

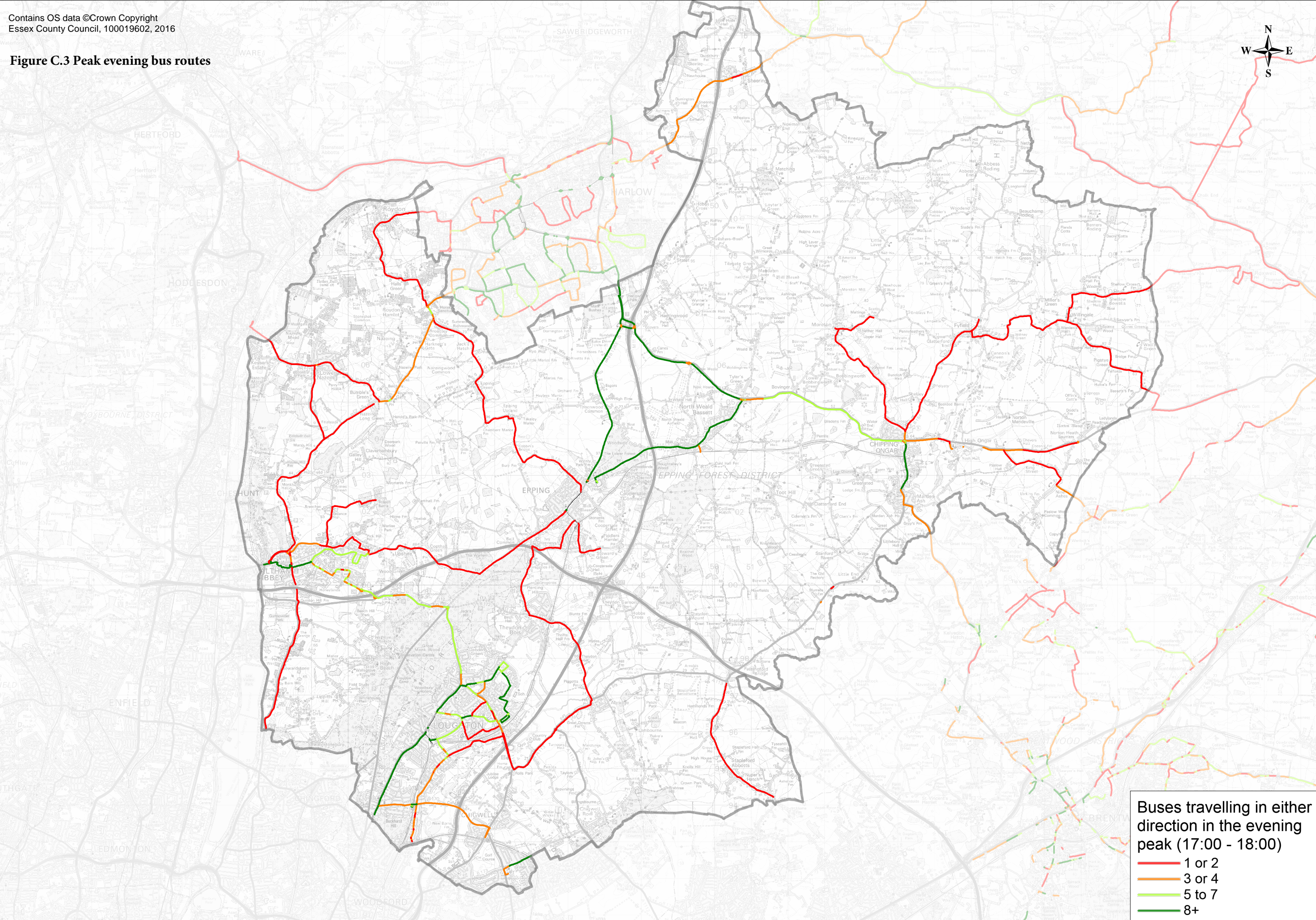


Figure C.4 Early years and childcare provision

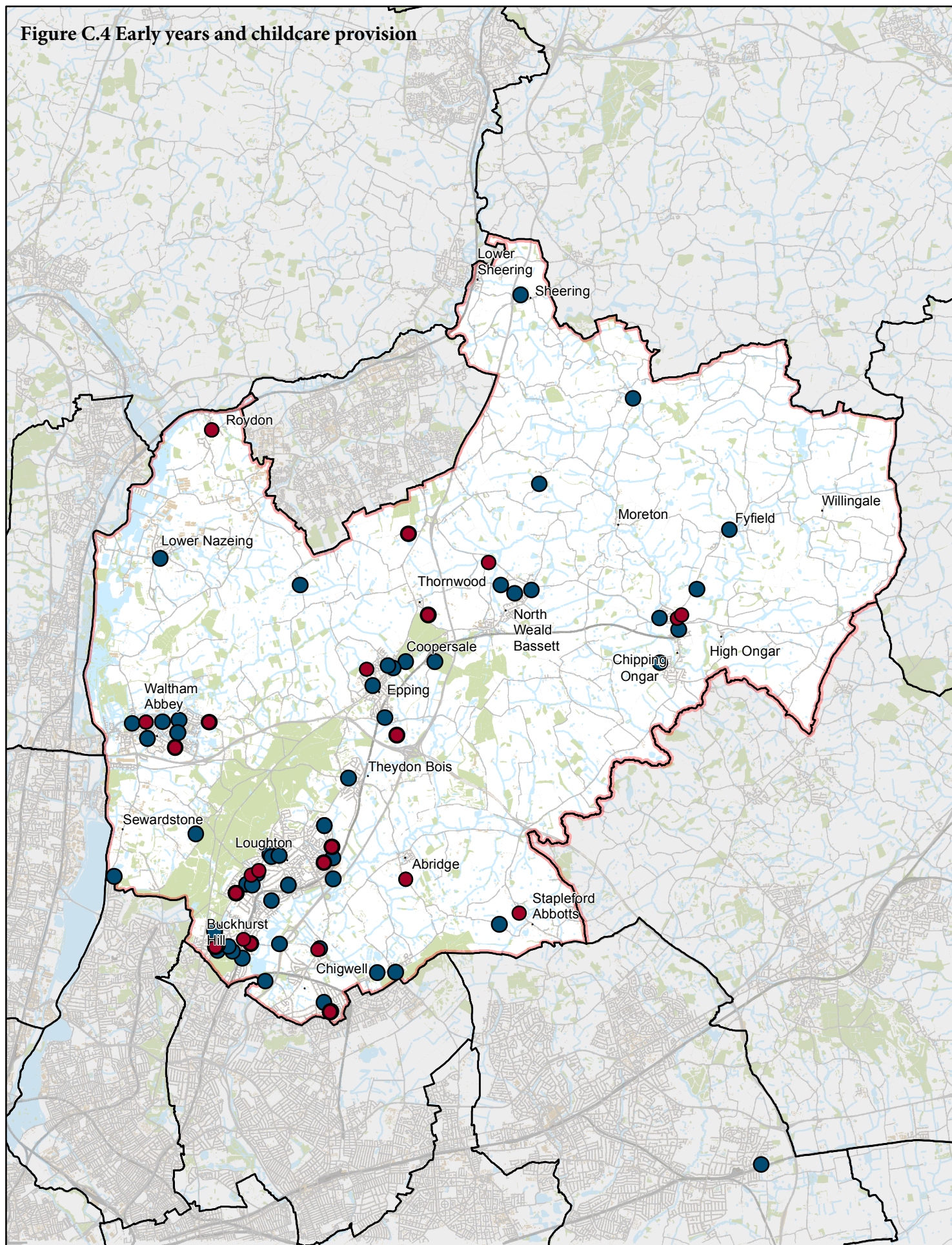


Figure C.5 Free early years education for 2-year olds

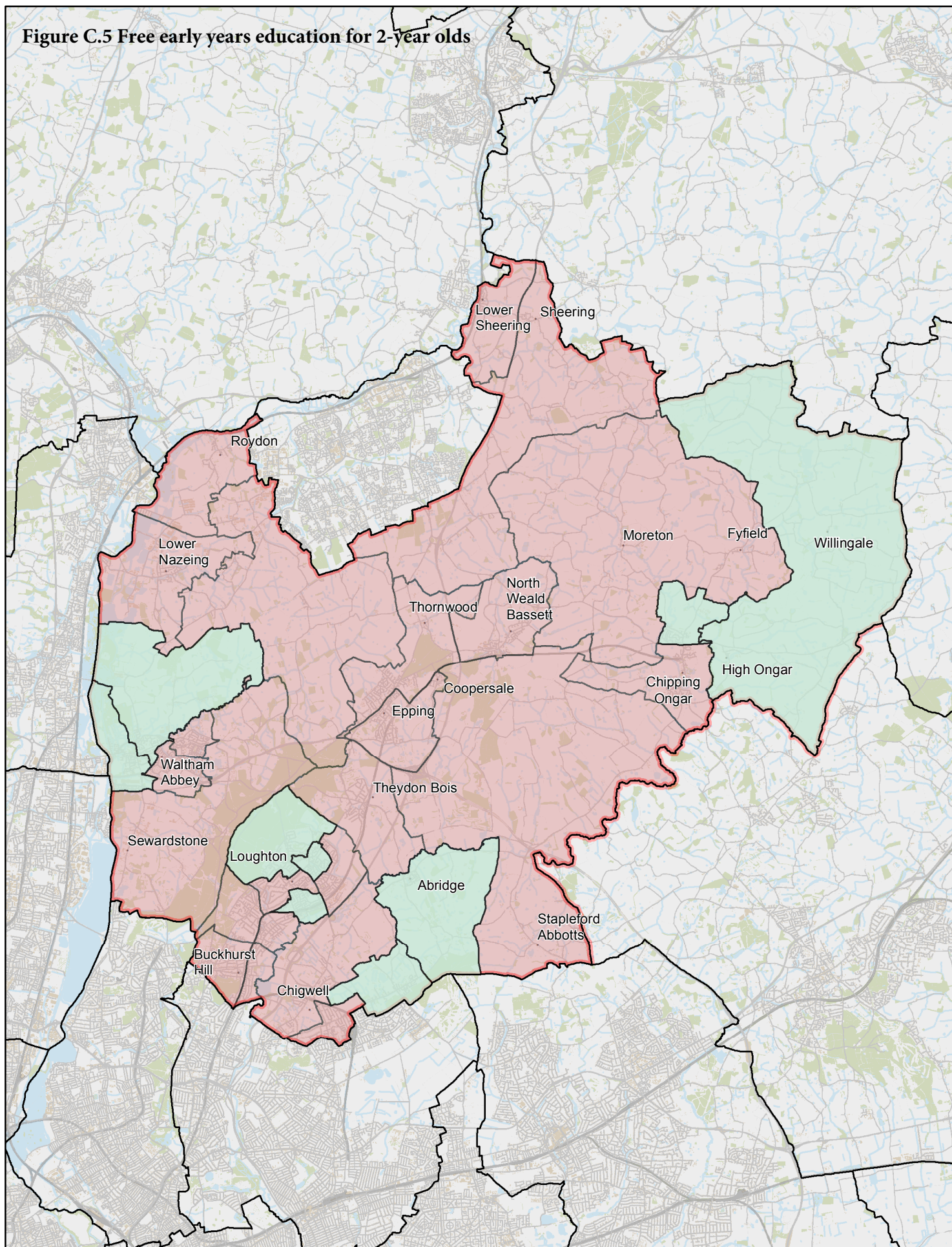


Figure C.6 Free early years education for 3- and 4-year olds

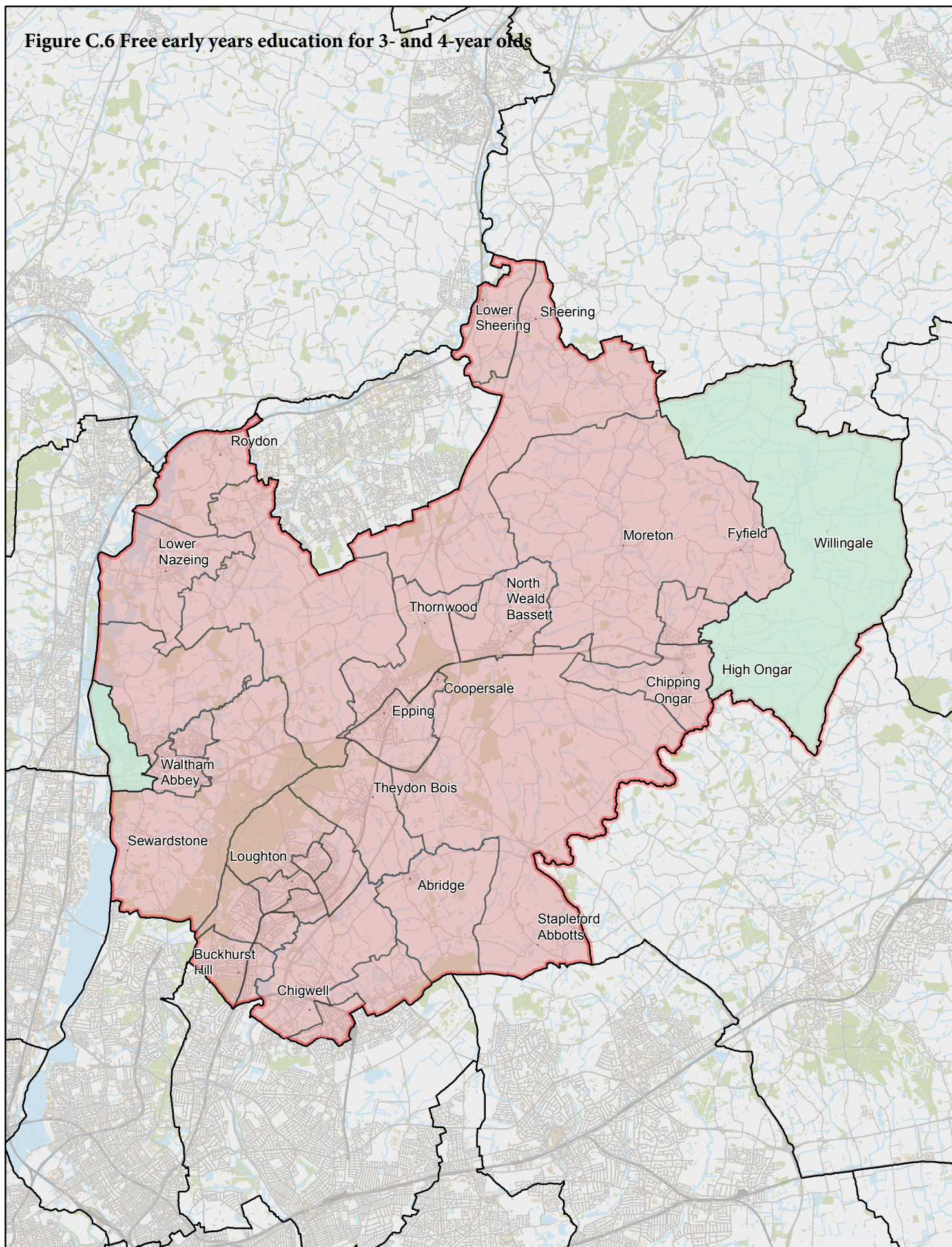
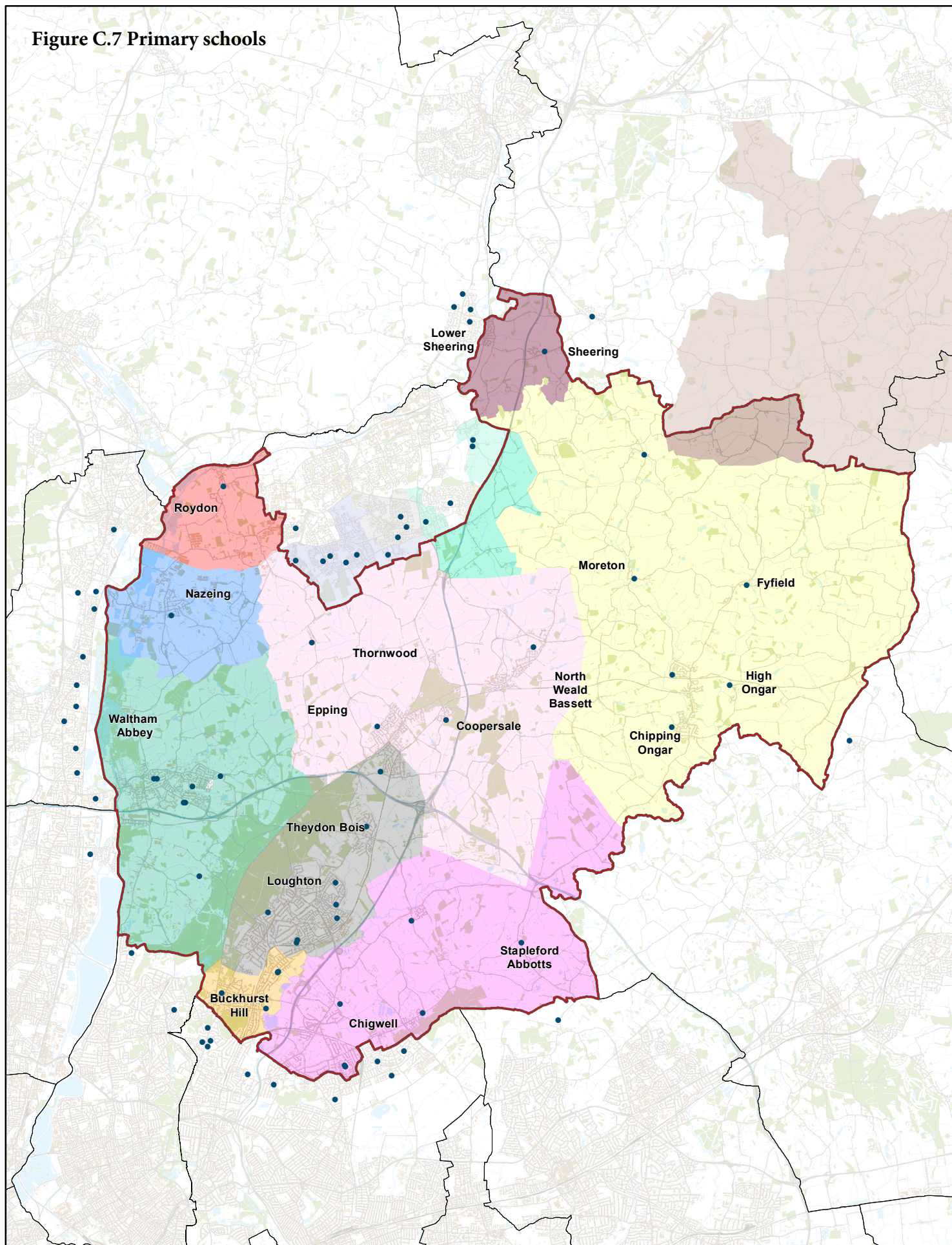


Figure C.7 Primary schools



Report on Infrastructure
Delivery Plan



Drawing No.
EFDC-IDP-0006

Date: November 2016

Scale: 1:150,000

Content
Primary schools with Forecast
Planning Groups (FPG)

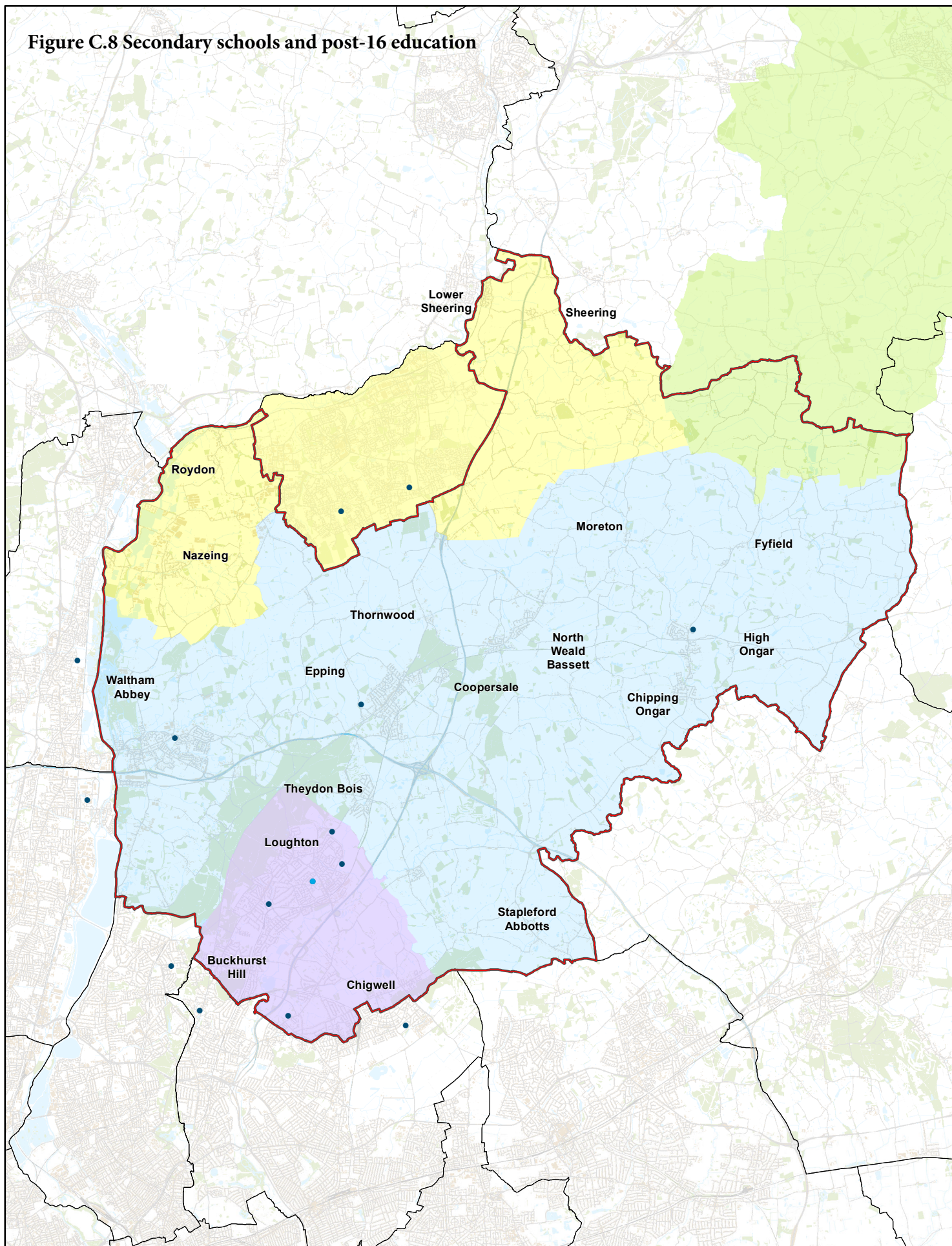
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Legend

- Primary schools
- Group 01 Ongar
- Group 02 Epping
- Group 03 Waltham Abbey
- Group 04 Buckhurst Hill/ Loughton South
- Group 05 Chigwell/ Lambourne
- Group 06 Loughton
- No Group Roydon
- No Group Nazeing
- Group 01 Harlow
- Group 02 Harlow
- Group 05 Uttlesford
- Group 05 Harlow



Figure C.8 Secondary schools and post-16 education



**Report on Infrastructure
Delivery Plan**



Drawing No.
EFDC-IDP-0007

Date: November 2017

Scale: 1:150,000

Content

Secondary schools with Forecast
Planning Groups (FPG), and
Post-16 Education

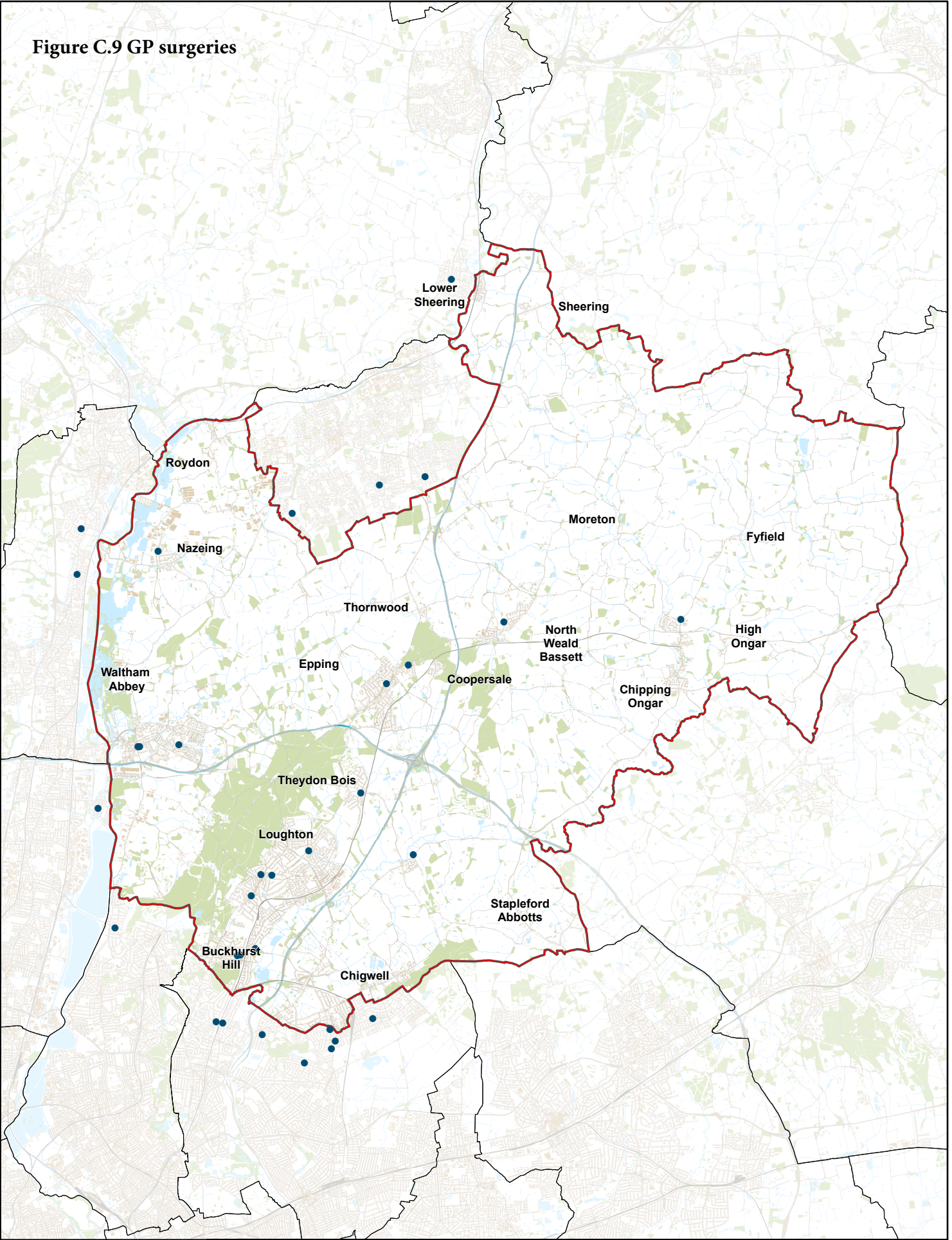
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Legend

- Epping Forest College (FE)
- Secondary schools
- Group 01 Loughton
- Group 02 Epping/Waltham Abbey
- Group 01 Harlow
- Group 01 Uttlesford



Figure C.9 GP surgeries







<div>Report on Infrastructure Delivery Plan</div> <div>ARUP</div> <div> Epping Forest District Council</div>	<div>Drawing No.</div> <div>EFDC-IDP-0008</div>	<div>Content</div> <div>GP surgeries</div> <div><small>Contains Ordnance Survey & Royal Mail Data © Crown Copyright & Database Right 2015 EFDC Licence No: 100018534 2015 © Royal Mail Copyright & Database Right 2015</small></div>	<div>Legend</div> <div> GP surgeries</div> <div> Epping Forest District Boundary</div> <div></div>
	<div>Date: November 2017</div>		
	<div>Scale: 1:150,000</div>		

Figure C.10 Dental surgeries

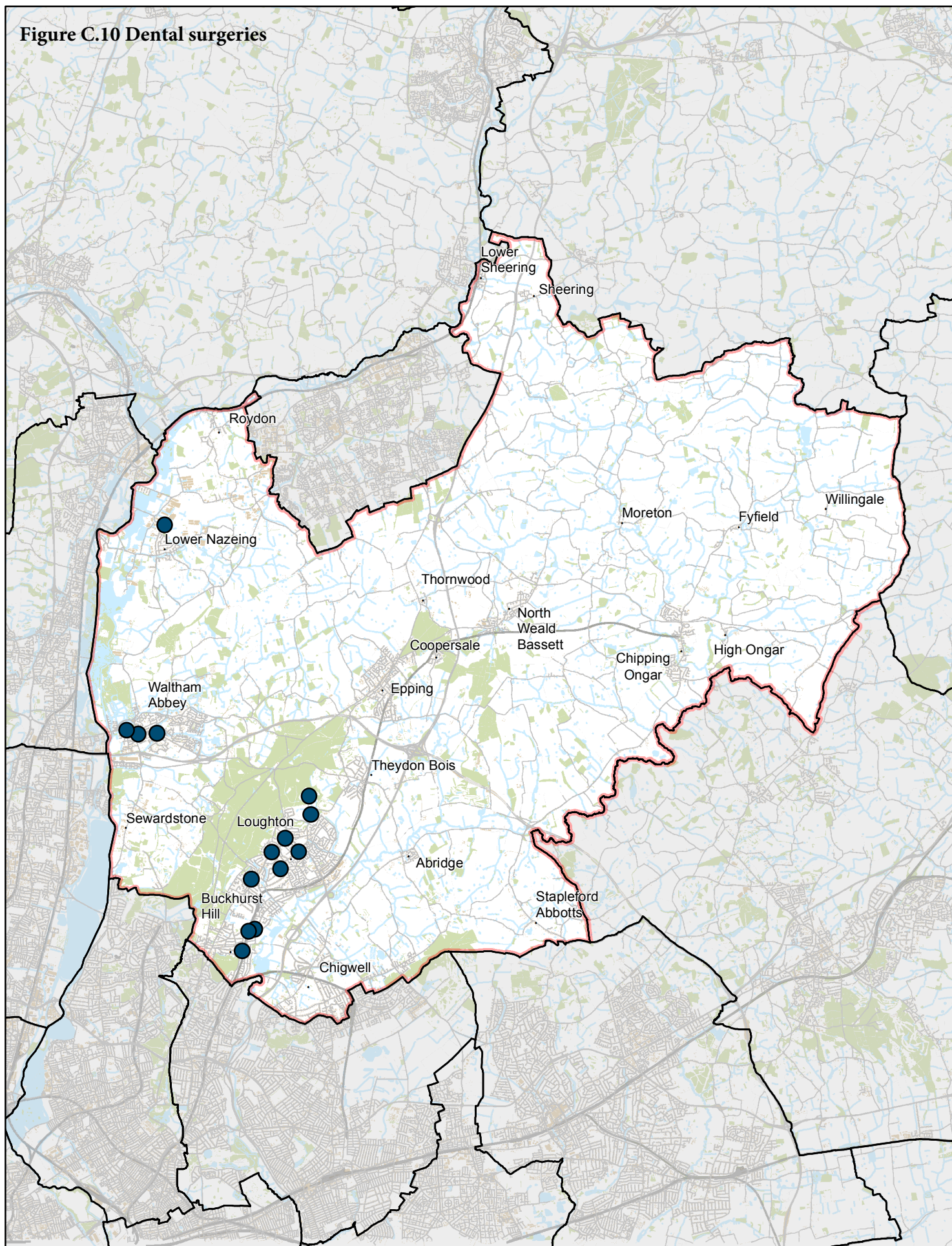


Figure C.11 Pharmacies

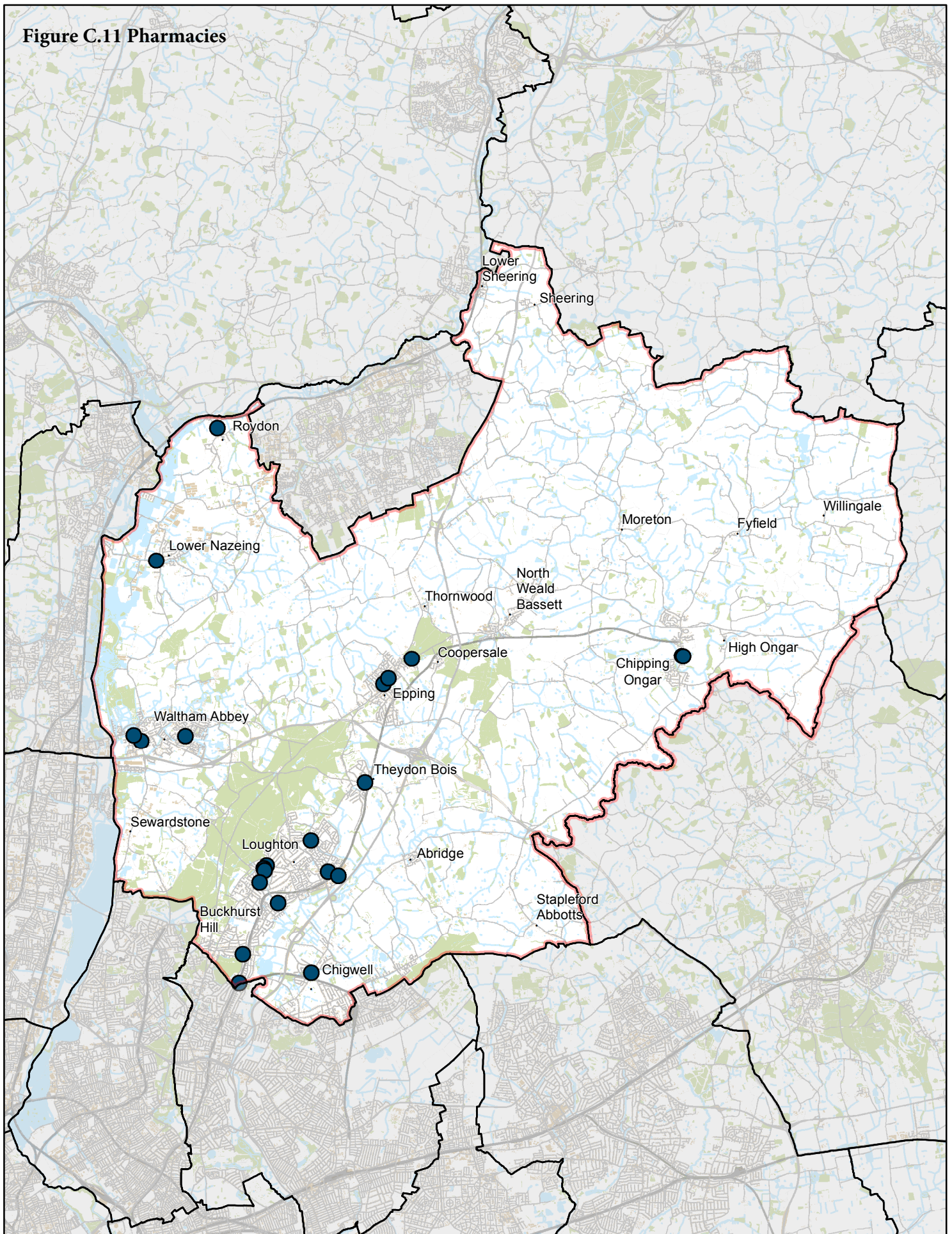
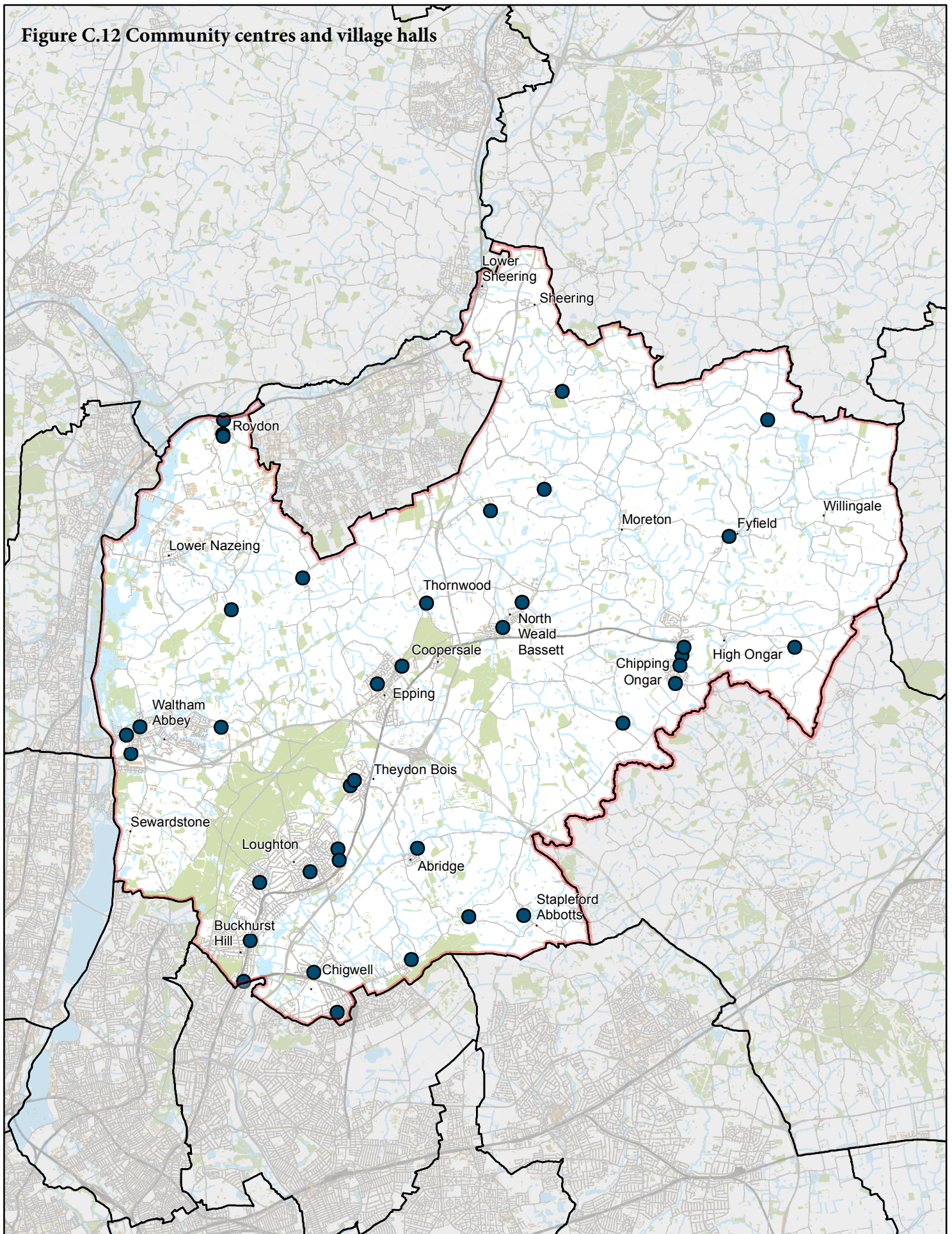
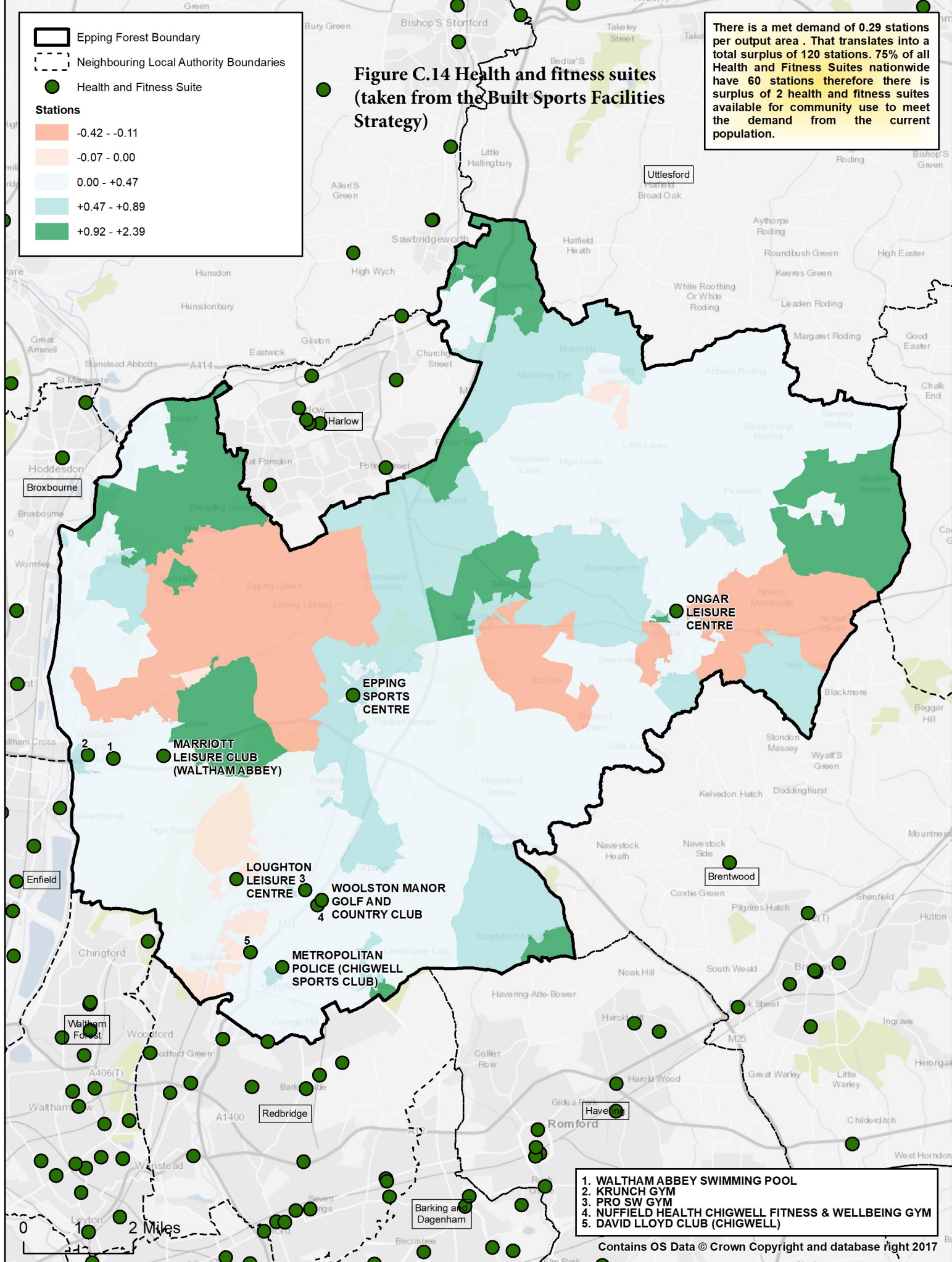


Figure C.12 Community centres and village halls

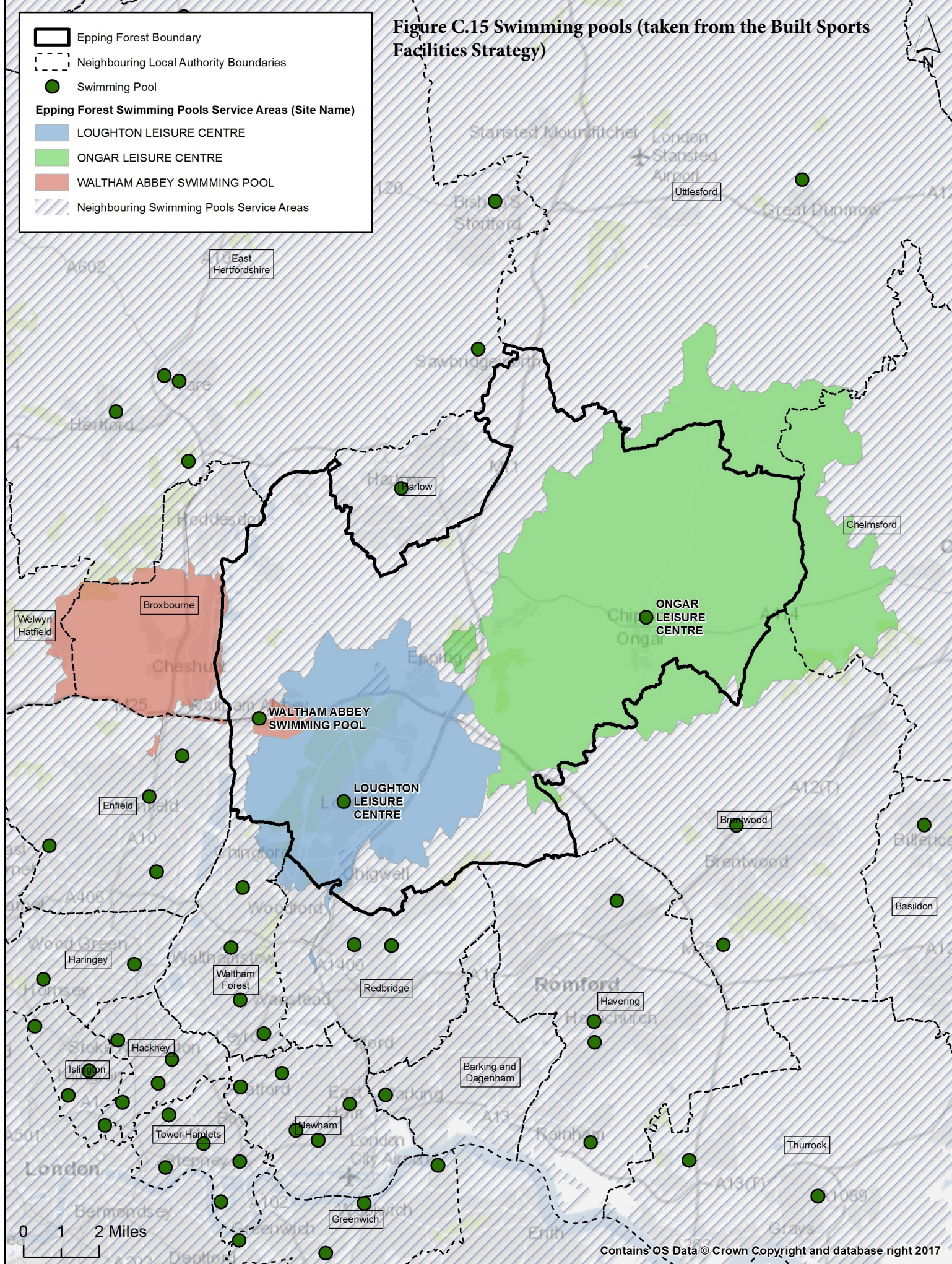




Health and Fitness Suites latent demand in stations per output area in Epping Forest (2017)



Figure C.15 Swimming pools (taken from the Built Sports Facilities Strategy)



Swimming Pools with community use availability service areas in Epping Forest (up to 20 minute drive time)

Figure C.16 Outdoor sports facilities

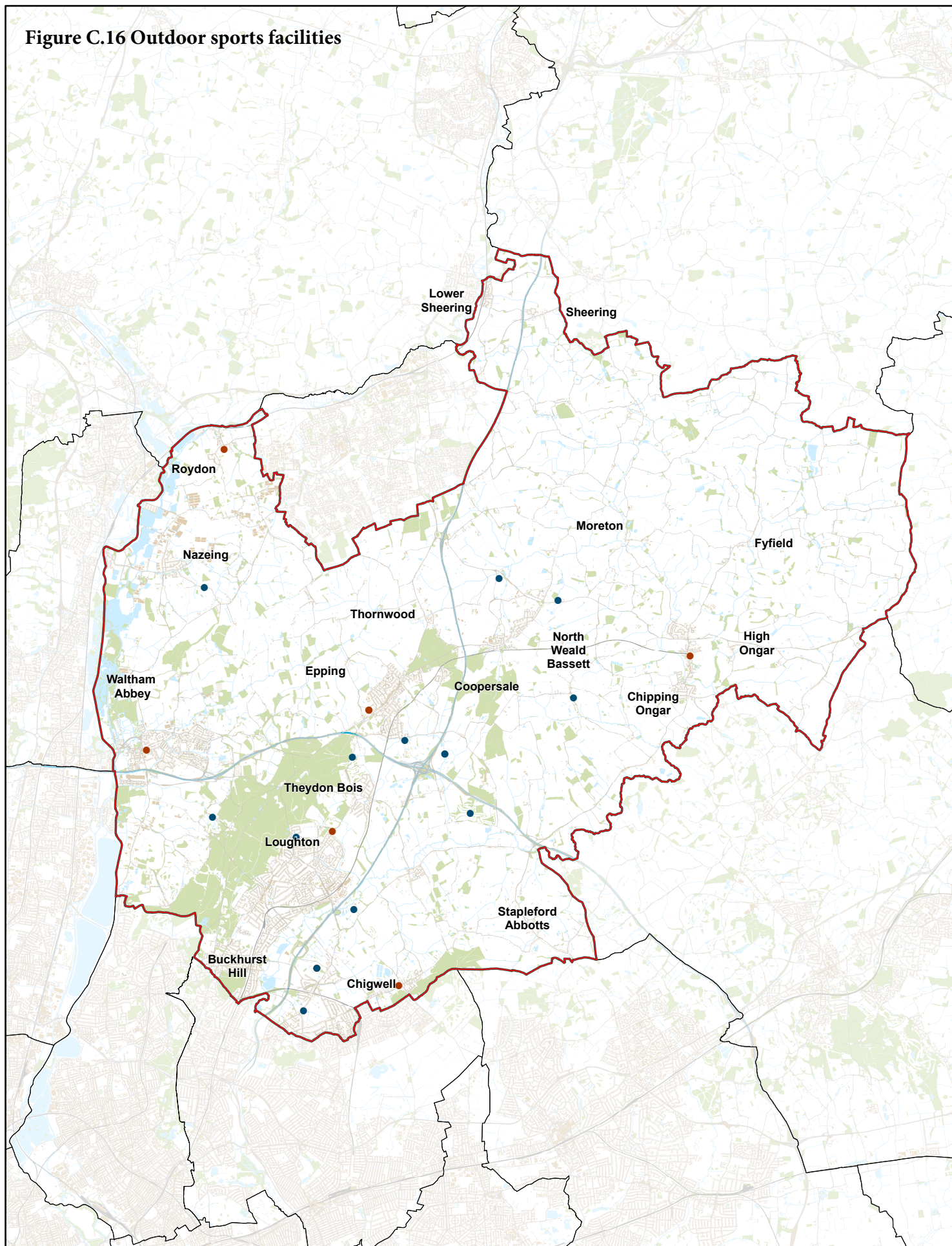
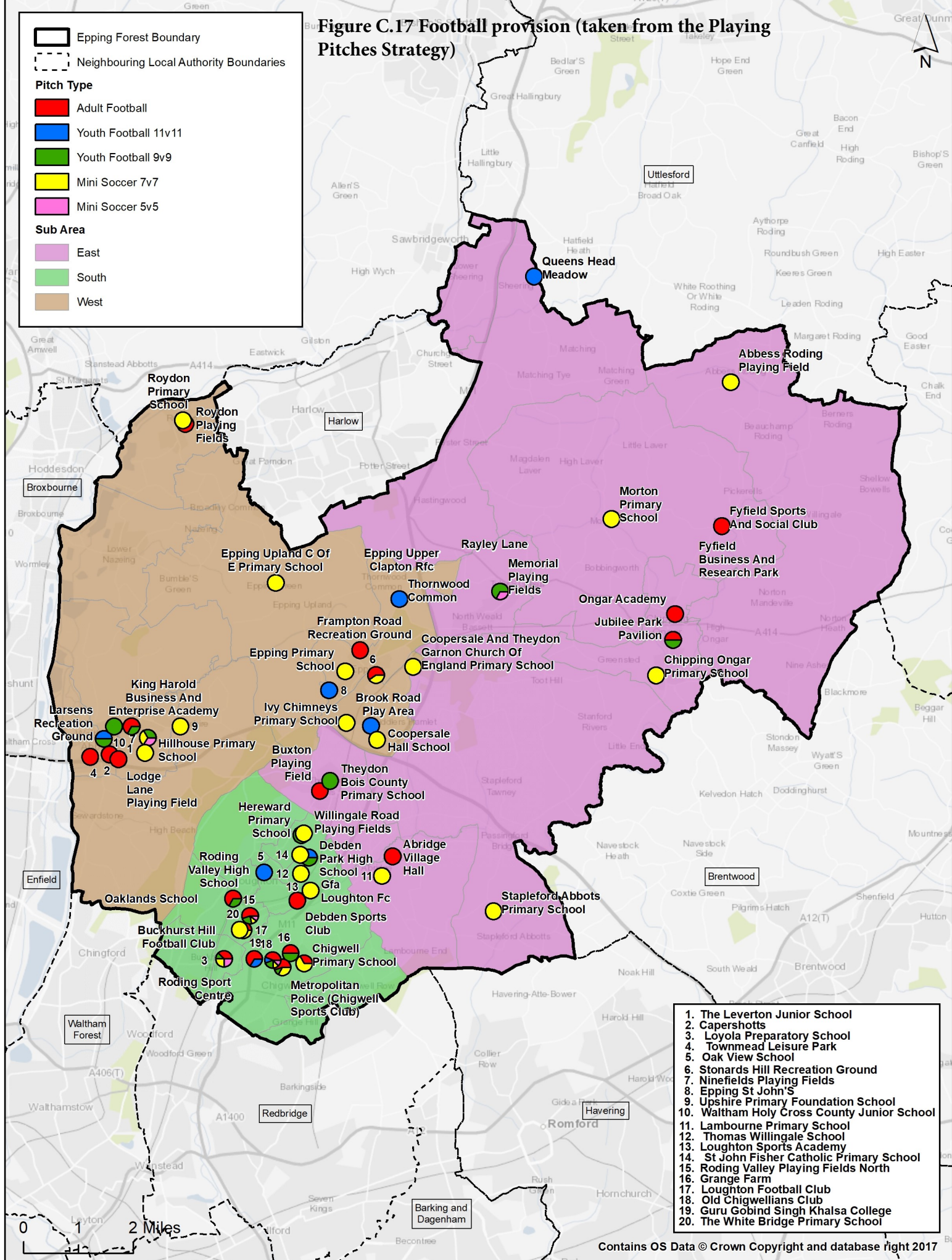
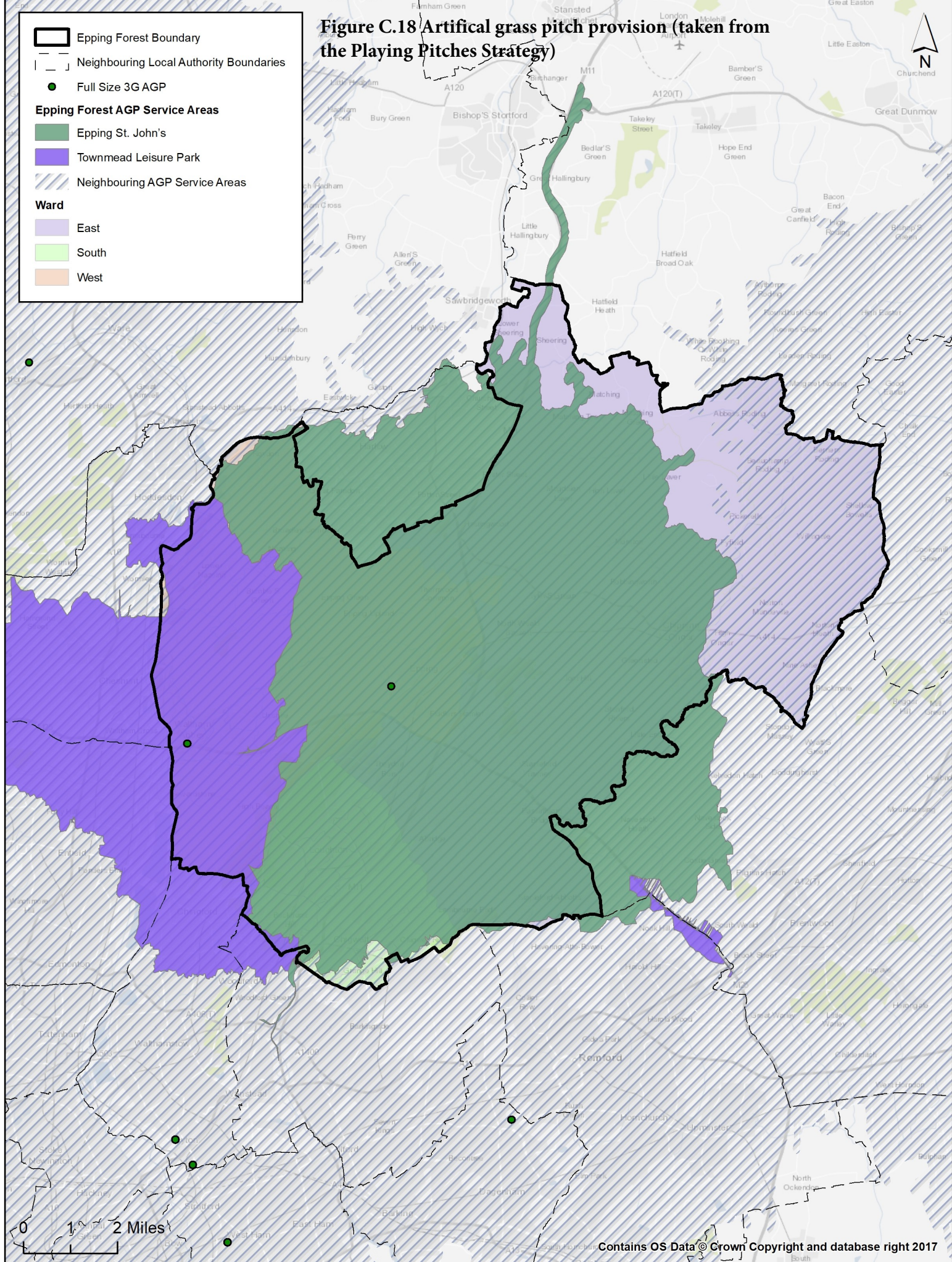


Figure C.17 Football provision (taken from the Playing Pitches Strategy)

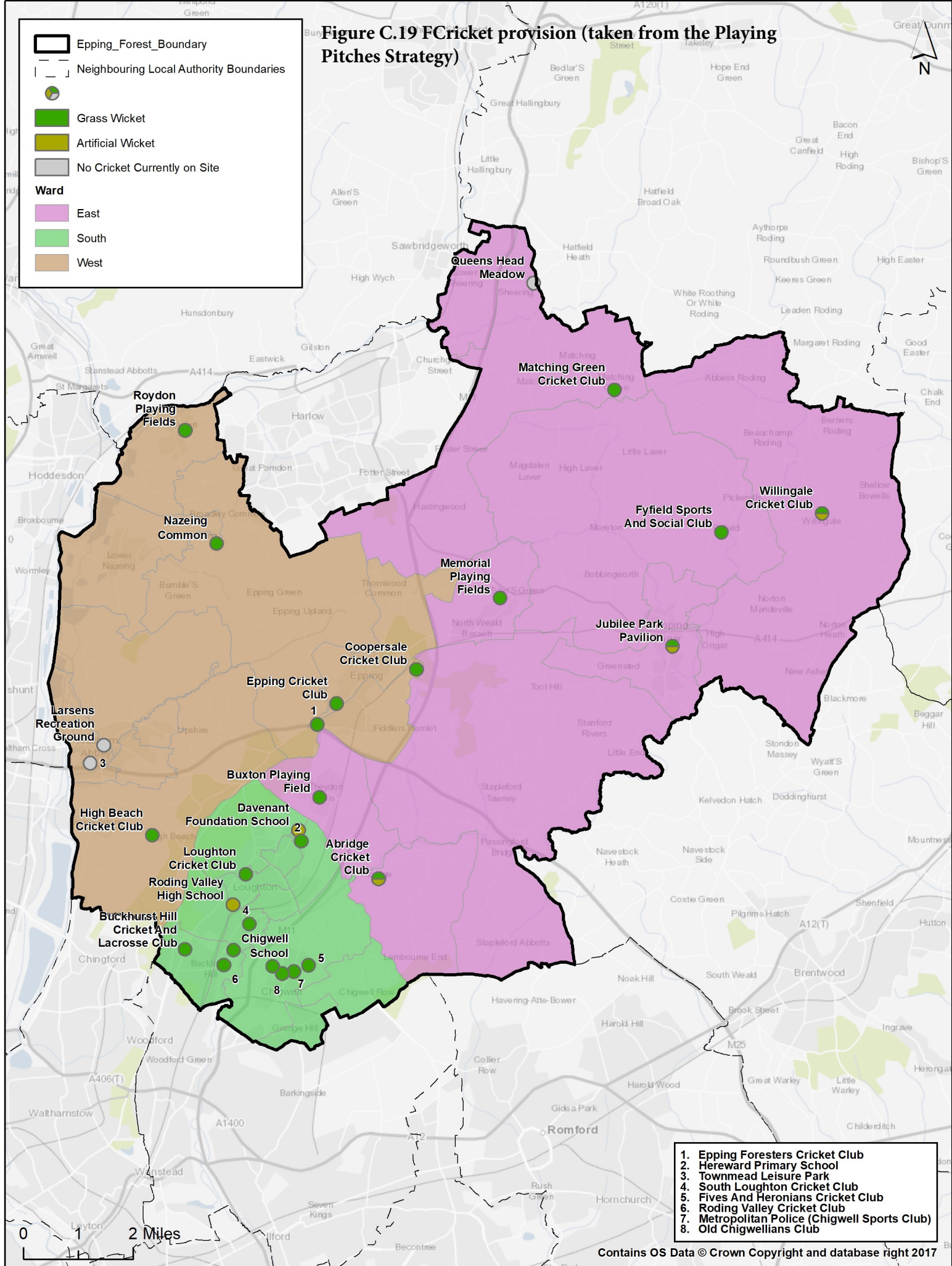


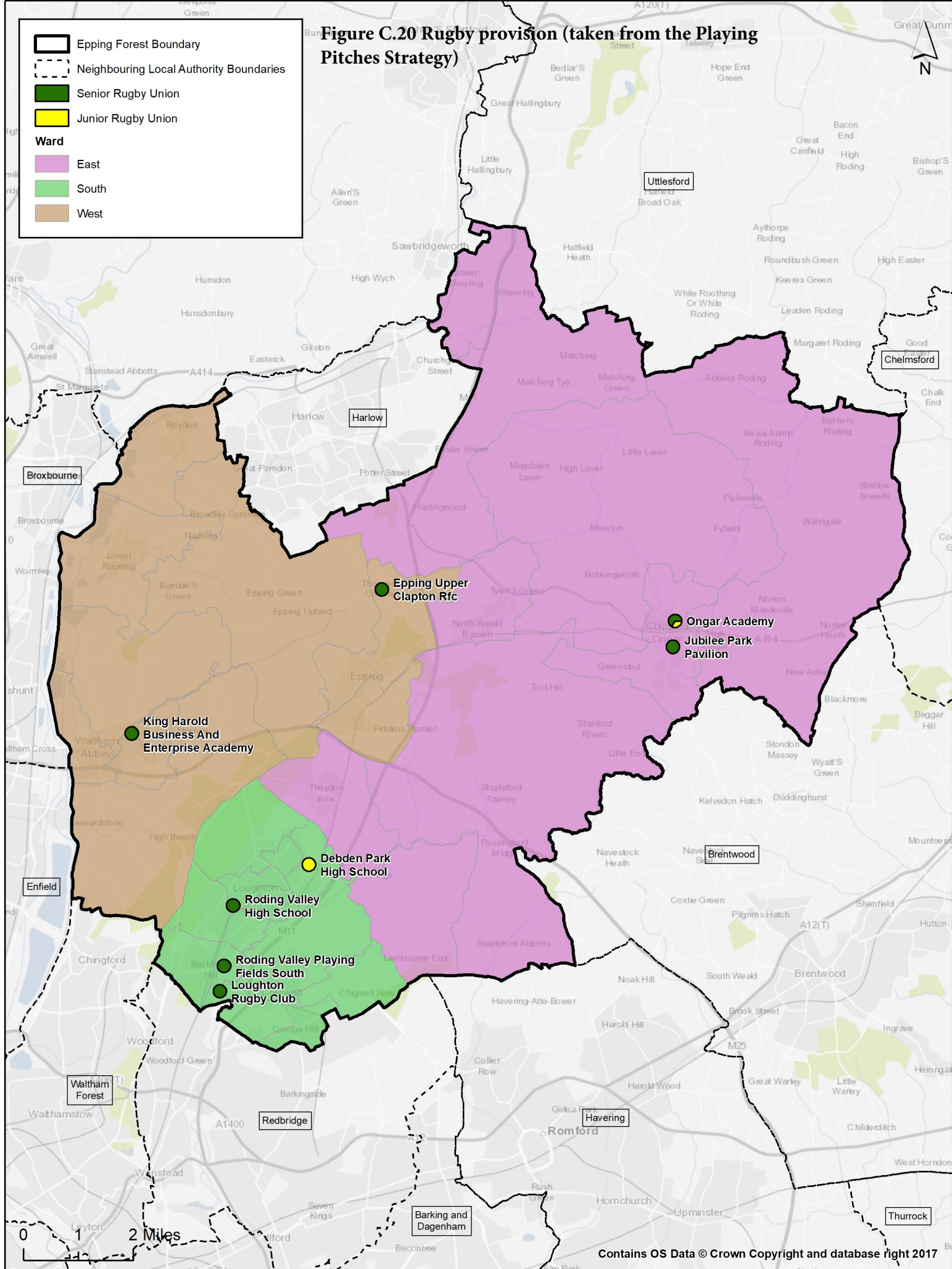


Full size 3G AGP sites with community use availability service areas in Epping Forest (up to 20 minutes drive time)



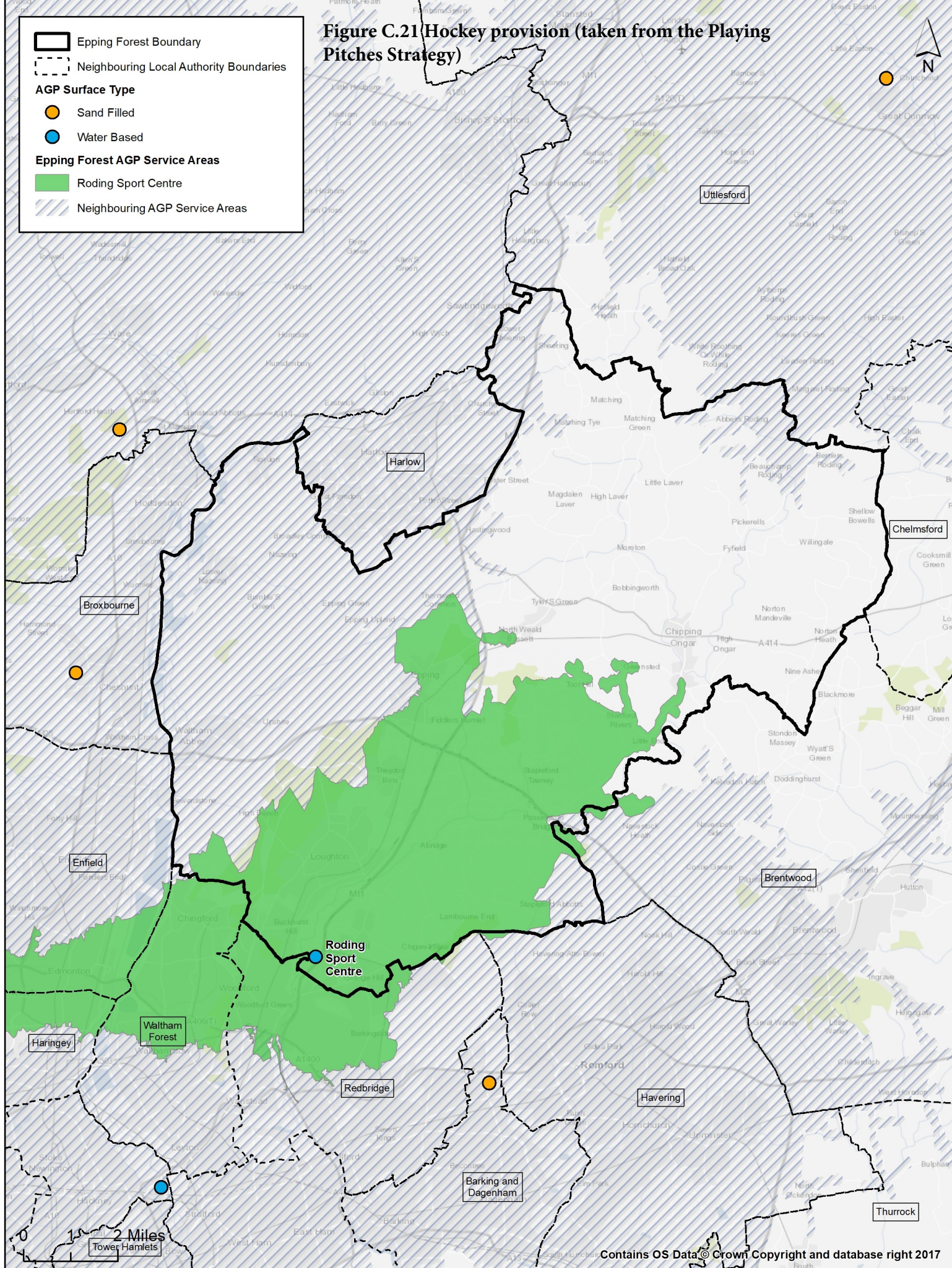
Figure C.19 FCricket provision (taken from the Playing Pitches Strategy)





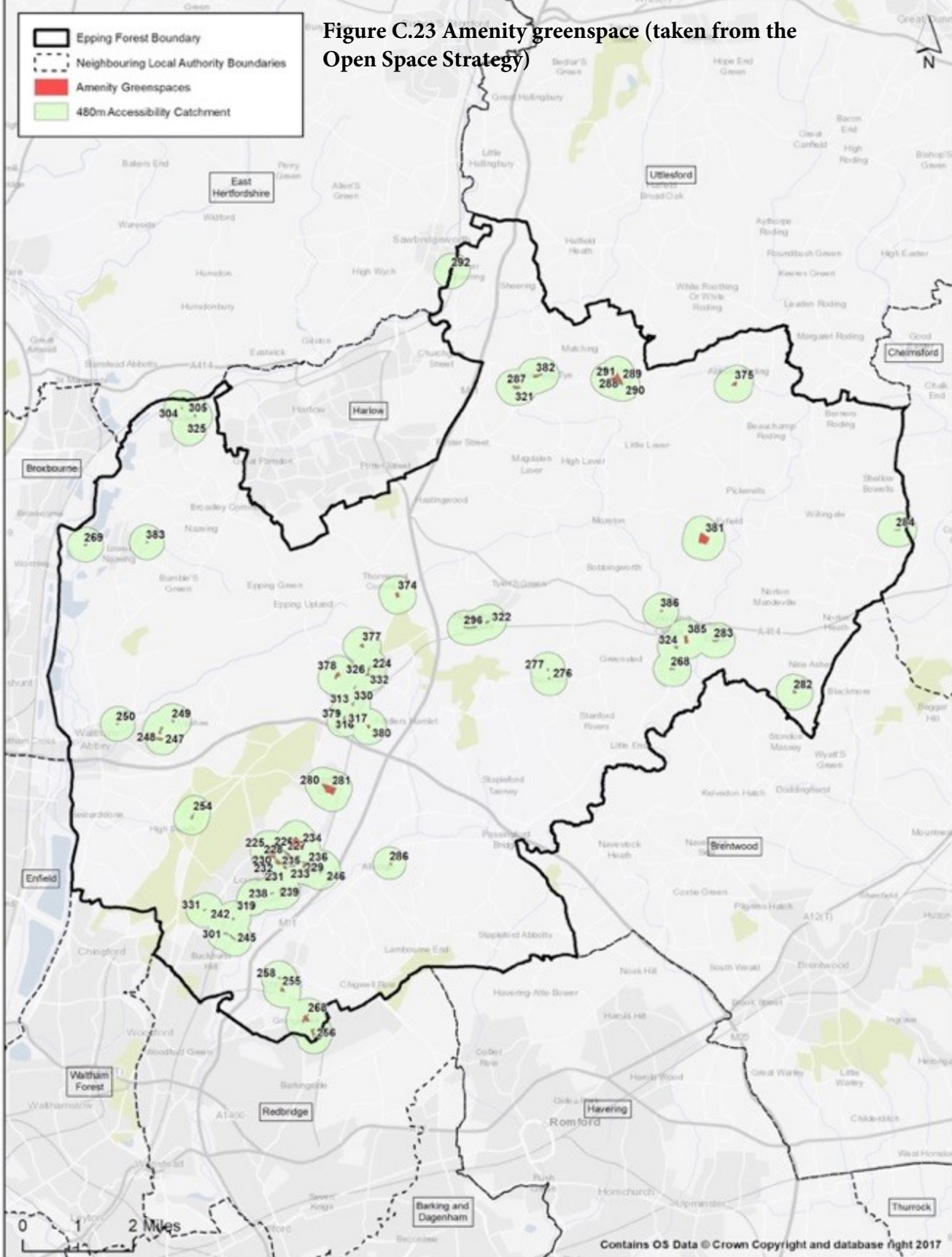
Rugby Union sites by pitch type in Epping Forest

Figure C.21 (Hockey provision (taken from the Playing Pitches Strategy))



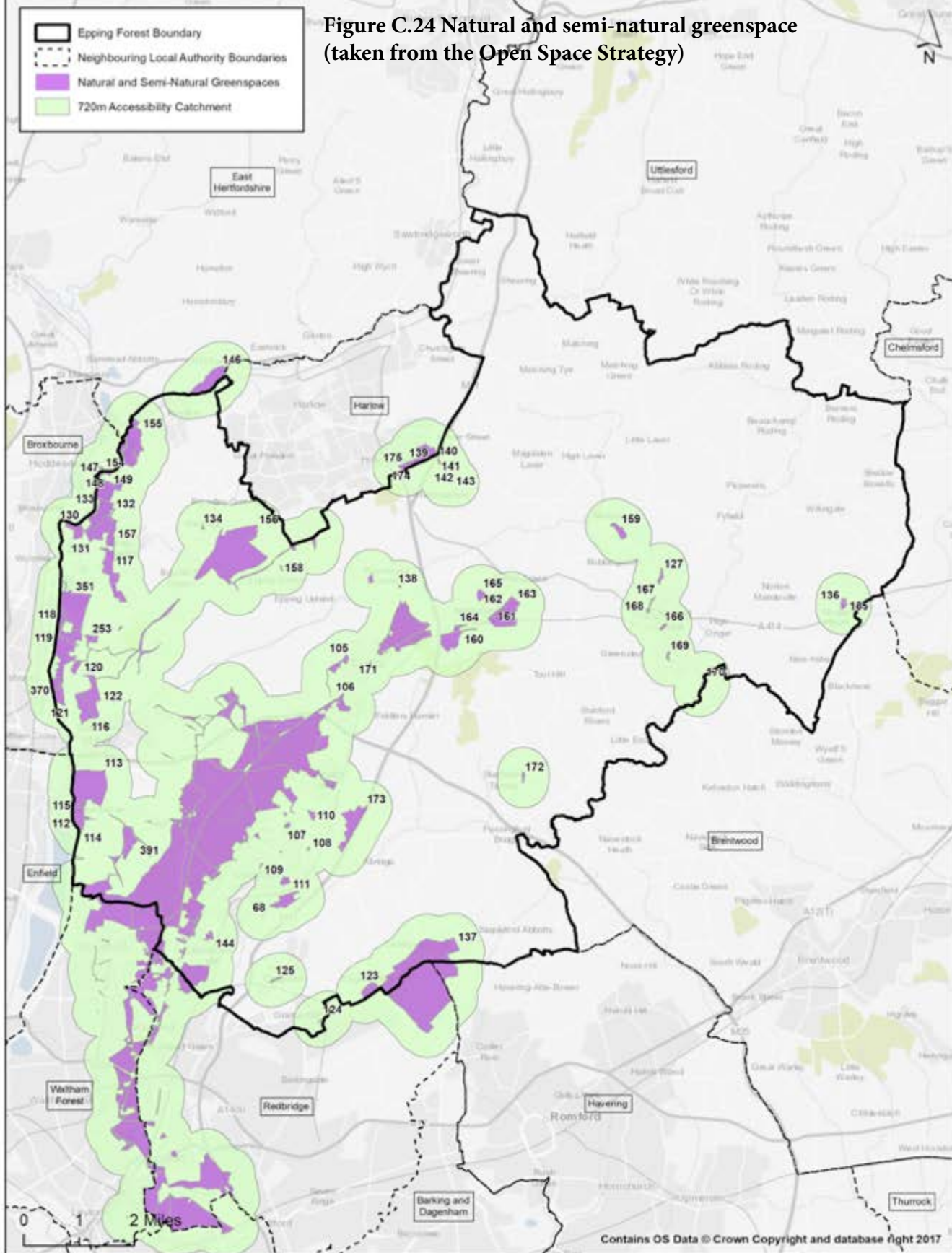
Full size sand and water based AGP sites with community use availability service areas in Epping Forest (up to 20 minutes drive time)

Figure C.23 Amenity greenspace (taken from the Open Space Strategy)



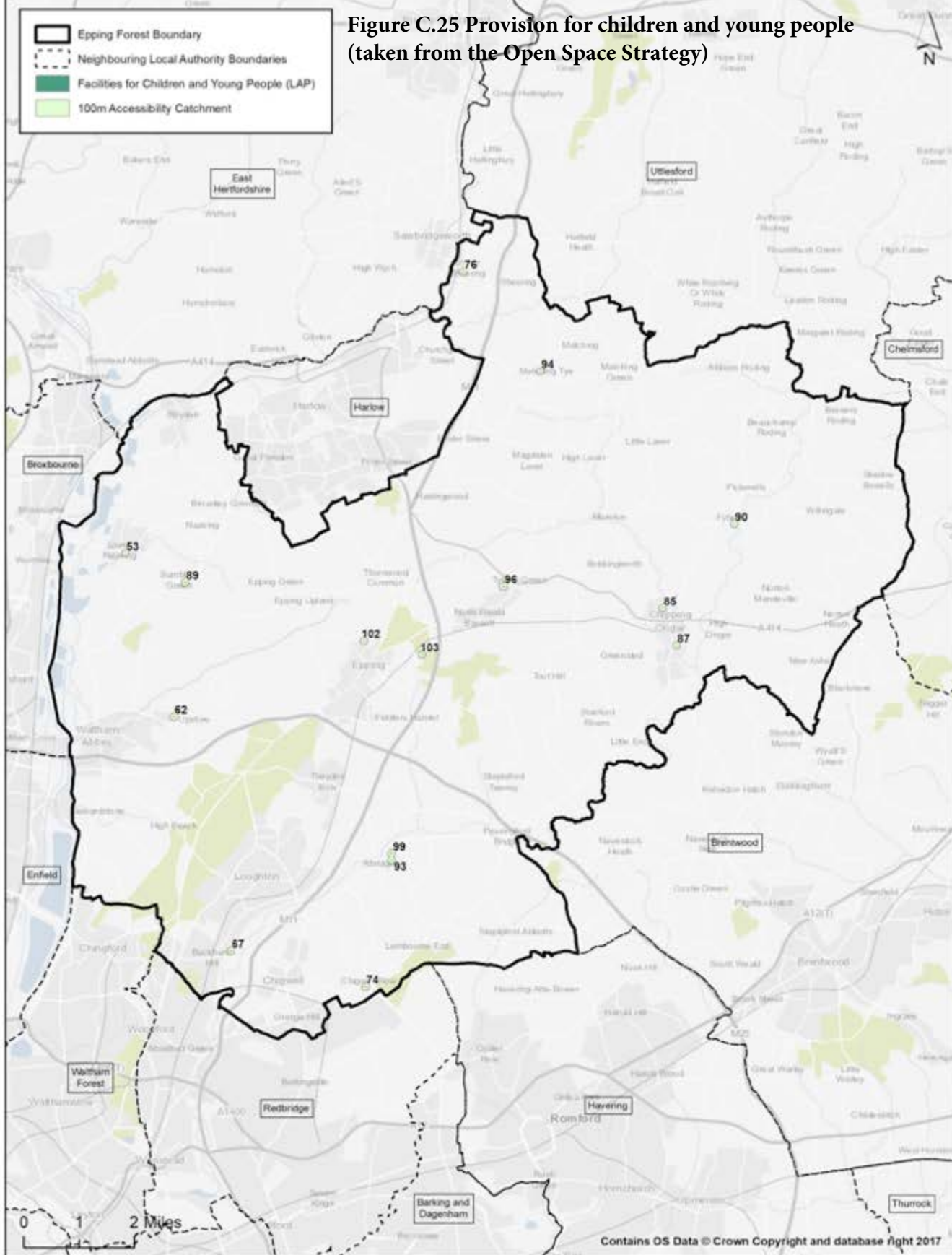
Amenity Greenspaces accessibility catchments in Epping Forest

Figure C.24 Natural and semi-natural greenspace (taken from the Open Space Strategy)



Natural and Semi-Natural Greenspaces accessibility catchments in Epping Forest

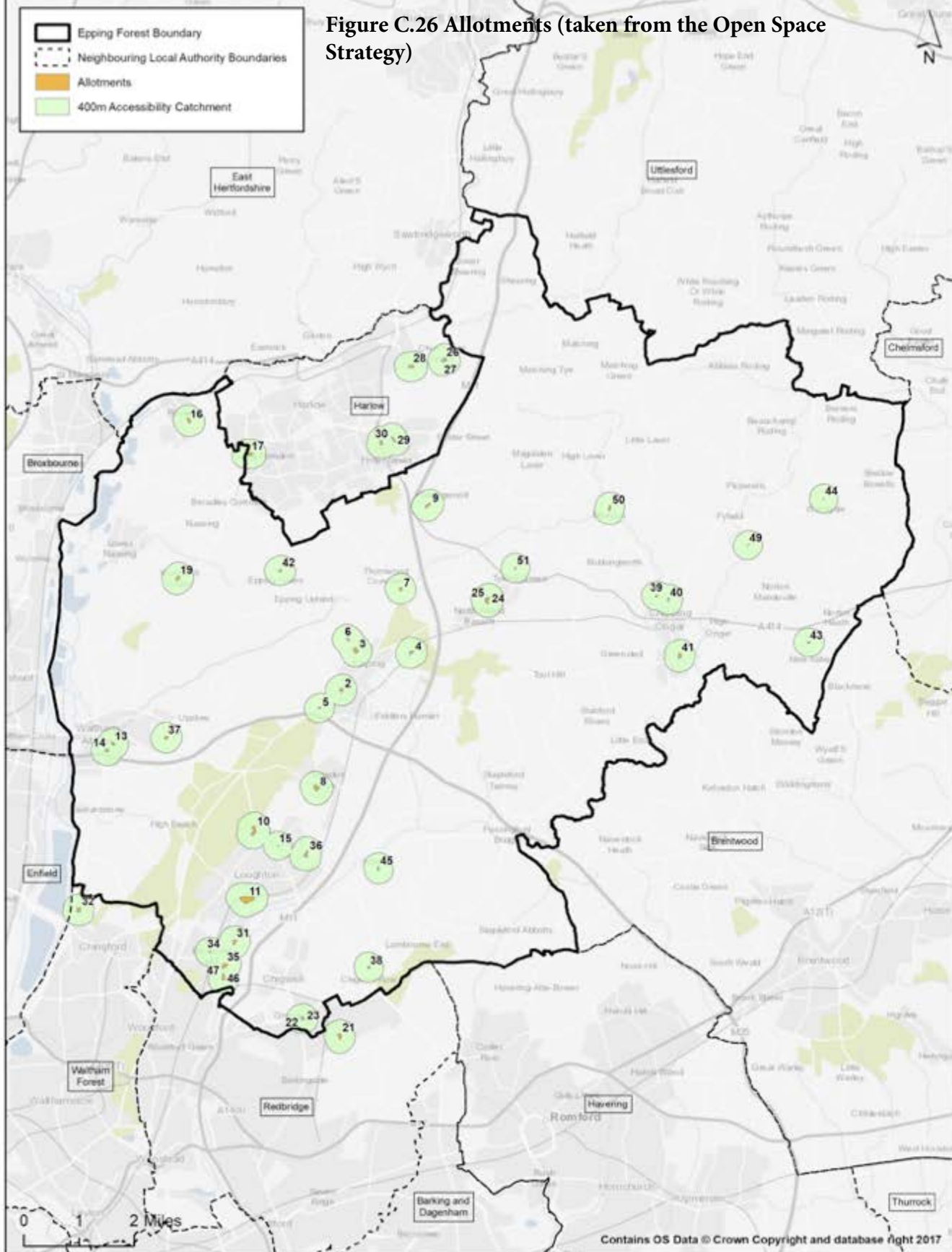
**Figure C.25 Provision for children and young people
(taken from the Open Space Strategy)**



Facilities for Children and Young People (LAP) accessibility catchments in Epping Forest



Figure C.26 Allotments (taken from the Open Space Strategy)



Allotments accessibility catchments in Epping Forest

