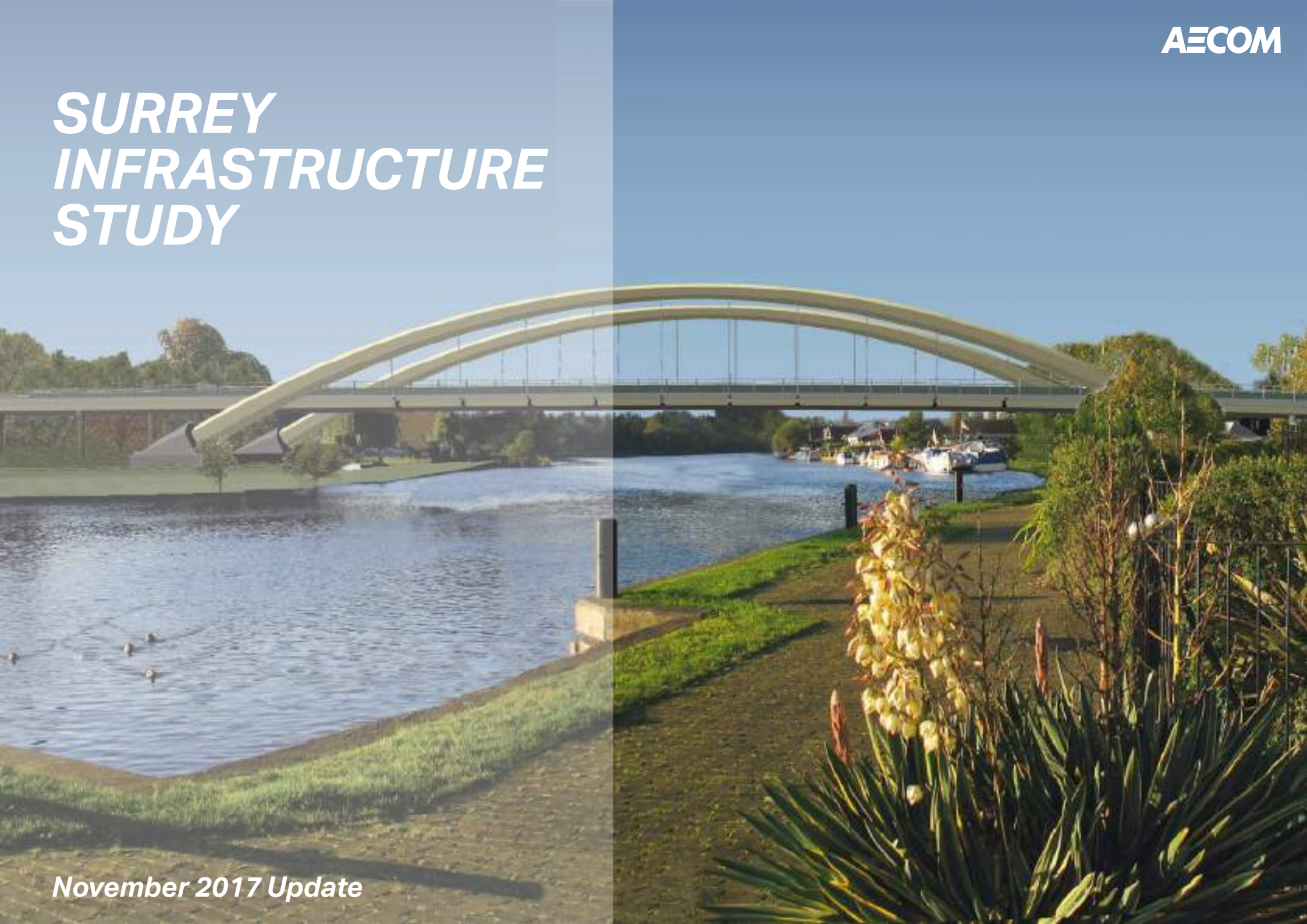
AECOM

SURREY INFRASTRUCTURE STUDY



November 2017 Update

Executive Summary

Technical Note on Report Limitations:

This document is a 'snapshot' at June 2017 and presents a technical evidence base of Surrey's infrastructure needs to 2031. As such, it reflects the stage Local plan preparation had reached at that date and relies on various data sets, assumptions and modelling work with associated limitations. These are set out within the study parameters on page 14-15 and the information caveats on page 137-139.

The Surrey Infrastructure Study (SIS) was completed in January 2016 and provided a 'snap-shot' in time as of July 2015, reflecting the position in terms of anticipated growth patterns, the infrastructure projects required to support growth, their costs and anticipated funding at both county and district levels. AECOM has now been commissioned to update the 2016 SIS to reflect the position as of June 2017 based on updated growth projections over the period 2016/17 to 2030/31.

This report sets out the updated findings following a desk based assessment carried out by AECOM in parallel with dialogue with Surrey County Council, local authorities and other infrastructure providers in Surrey.

This study presents an overview of growth patterns and the infrastructure projects needed to support such growth, their costs, how much funding has already been secured or is expected toward their delivery and the funding gap for the period up to 2031. It has been produced drawing upon information obtained from the local authorities, and following a period of engagement with infrastructure providers, but also includes some broad funding and cost assumptions and modelling work with associated limitations that may differ from those used in local infrastructure delivery plans and documents.

It provides a "snap-shot" in time, reflecting the position as of June 2017 and is not intended to supersede or replace local studies, which may have used different metrics that better reflect local circumstances

The preparation of the 2017 SIS has highlighted the need for continued collaborative working between the county, district and borough authorities, the Local Enterprise Partnerships and other service providers ranging from the NHS to the numerous utility companies.

It has also shown that shortfalls exist in terms of a standardised agreed approach towards a study of this kind including the collection of data on housing and employment sites, population forecasting, modelling infrastructure requirements and the costs and funding assumptions for that infrastructure.

The following identifies the key changes between the 2016 Surrey infrastructure Study and the 2017 Refresh.

The 2016 Surrey Infrastructure Study identified that:

- Surrey authorities planned for housing and economic growth from **2015-2030** to **deliver on average 3,137 dwellings per year**. This compares to **completions of 2,495 dwellings per year** across Surrey from 2010 to 2014. This comes to a total of **47,053 dwellings to 2030,** which results in a 5% increase in population or **60,991 additional people**.
- Delivering the infrastructure to support growth was identified to **cost at least £5.37 billion to 2030**.
- The study estimated **secured funding of over £993 million** and potential funding from the public sector, private sector and developer contributions of £1.23 billion.
- Taking into consideration the potential funding identified, a minimum **gap in infrastructure funding of £3.2 billion** was identified between 2015 to 2030.

The following key findings are highlighted from the 2017 study:

- Surrey authorities are planning to accommodate housing and economic growth over the 15 year period to 2031 delivering on average **4,357 dwellings per year.** This compares to completions of 2,486 dwellings per year across Surrey from 2011 to 2016.
- **65,356 dwellings** are expected between 2016 and 2031 with an associated population **increase of 106,123 people** (an increase of 9%).
- Delivering the necessary infrastructure to support that growth from now to 2031 is estimated to **cost at least £5.5 billion.**
- The study has estimated a combination of secured funding (£1.22 billion) and potential funding from the public sector, private sector and developer contributions (£1.83 billion). It is important to note that a full review of the funding position for each project included in the study is required to refine this estimation. This has been outside the scope of this project.
- Taking into consideration the potential funding identified, a **gap in infrastructure funding of £2.47 billion** still remains between now and 2031.
- The study demonstrates that current anticipated developer contributions. Central Government grants and other sources of income are not sufficient to support the scale of growth anticipated in Surrey in the period to 2031. This is without consideration of further potential changes to current funding sources which may reduce finances further, such as reduction in grants or additional exemptions from the Community Infrastructure Levy (CIL).
- CIL is at varying stages of adoption across the county (due to the difference in stages of adoption of Local Plans), resulting in variations in the amount of money that will be collected. The identified funding gap should be considered and taken into account when setting CIL rates.
- The infrastructure requirements and associated costs presented represent a scenario based on a population forecast constrained by planned housing targets as opposed to ONS population forecasts. Where the Objectively Assessed Need (OAN) has been used, these may be higher than the final target.
- **ONS population forecasts for Surrey over the same 15 year period are 34% higher than the study forecasts.** The estimated costs associated with the infrastructure to support population growth could therefore be increased considerably if a growth level nearer the ONS forecast was realised.

The following actions have been identified for Surrey and its partners to take the study findings forward:

- Developing an investment framework and strategy for infrastructure delivery in Surrey to support planned growth
- Joint work between the 12 Surrey local authorities to bid for funding through the Local Enterprise Partnerships
- Developing an infrastructure evidence based to 2050 for the Surrey, West Sussex and East Sussex (3SC) area
- Engaging with Government and national agencies to shape their investment plans, as part of the Sub-National Transport Body, Transport for the South East
- Working with authorities in London, the East of England and South East to coordinate strategic policy and infrastructure investment across the Wider South East, including joint lobbying for strategic infrastructure priorities
- Revisit the evidence base behind this study on a regular basis in collaboration with partners to maintain a rolling understanding of the infrastructure landscape and funding priorities;
- Consider the implications of infrastructure providers decisions both now and in the future. This study has used standard metrics to determine requirements for some infrastructure elements (such as healthcare, libraries, community and leisure, youth services, social care accommodation etc), but the actual requirements will be heavily dependent on service decisions on new delivery models which are affected by regulatory, financial and technological changes;
- Local authorities and infrastructure providers to continue to work together to maintain an up-to-date understanding of growth distribution and supporting infrastructure;
- Use the study as a basis for identifying local level shortfalls to support bids for future funding, including potential means outlined in Section 6;
- Develop a wider linkage to asset management reviews to best utilise the public sector;

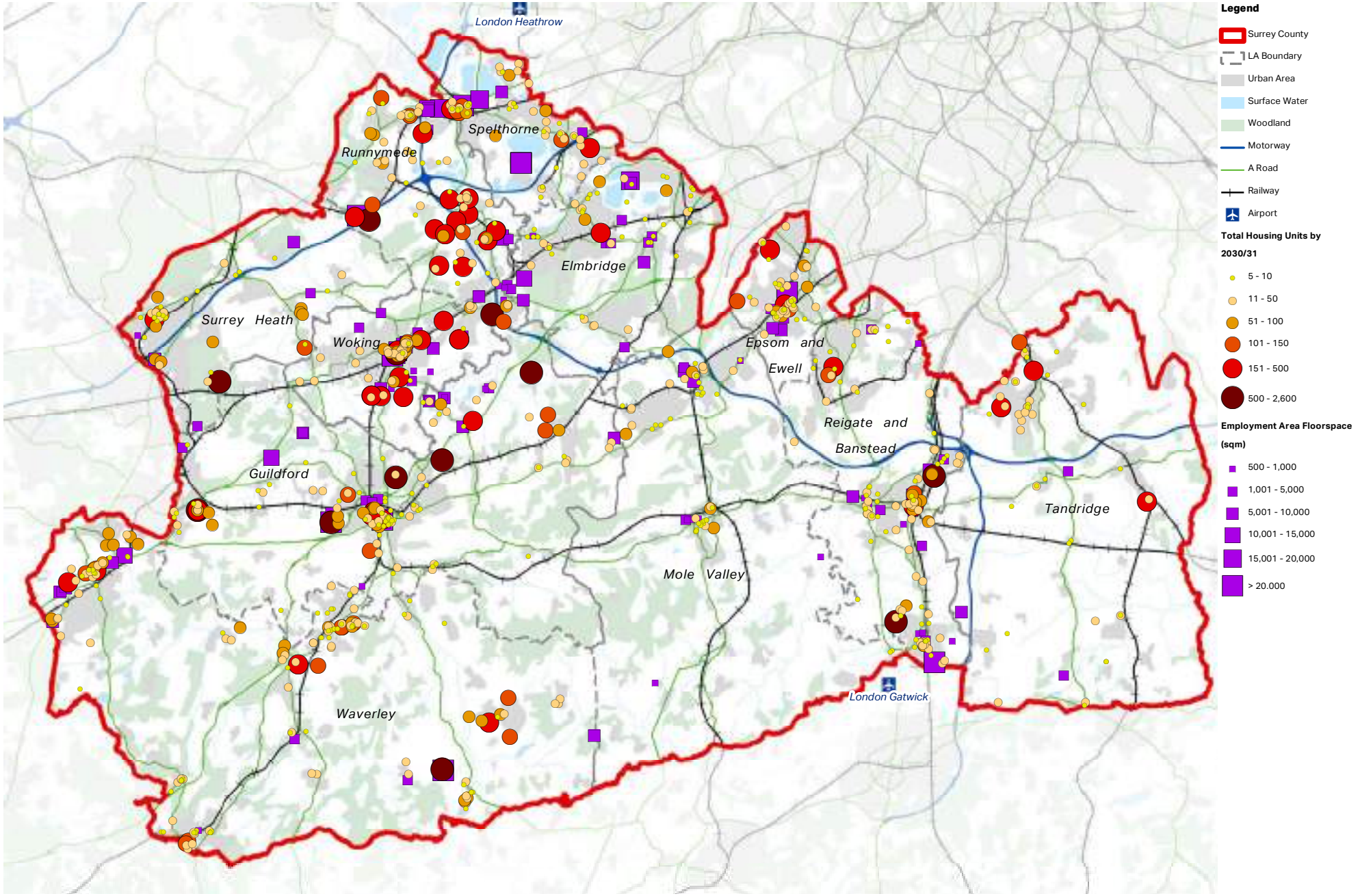


FIGURE A - STUDY AREA AND MAJOR HOUSING/EMPLOYMENT SITES

* This is based on the most up to date information at the time of publication and could be subject to change, subject to review of planning policy documents

Source: Local Authority data

SURREY

THE INFRASTRUCTURE STUDY IDENTIFIES THE FOLLOWING HEADLINES FROM 2016 TO 2031:

65,356
new homes

106,123
new people

59,000
new jobs

Total Infrastructure Costs: **£5,512,790,000**

Total Secured Funding: **£1,216,620,000**

Total Expected Funding: **£1,826,600,000**

Total Funding Gap: **£2,469,570,000***

% of Infrastructure Funded: **55%**

** (considering both secured and expected funding)*

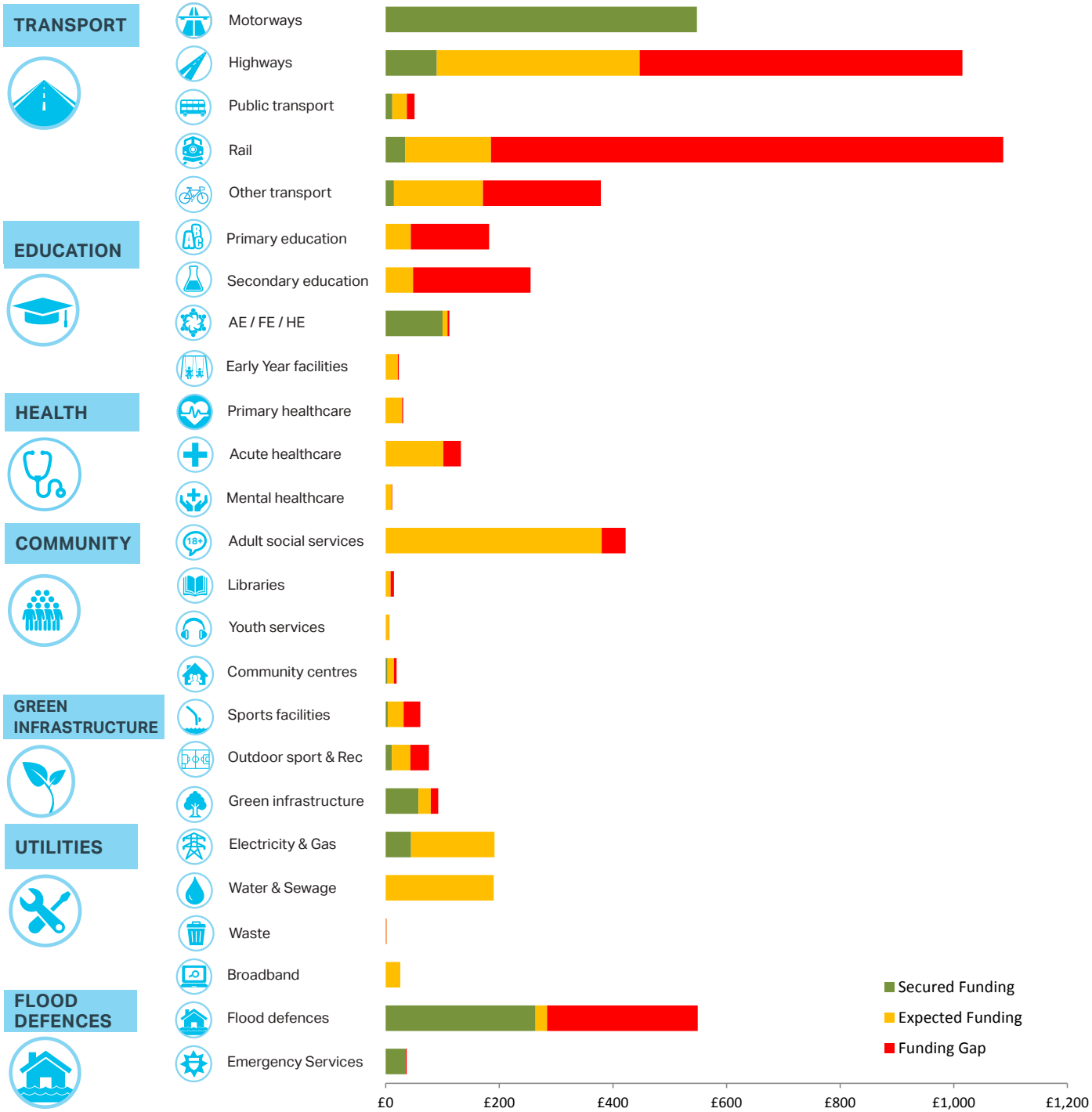


FIGURE B -SUMMARY OF INFRASTRUCTURE PROJECT COSTS AND FUNDING GAPS (2016-2031)

The diagram on the facing page illustrates the range of infrastructure required to support the delivery of 65,356 new homes from social infrastructure to transport and utility networks, open space and flood protection.

Our analysis has identified the potential costs of delivery alongside currently identified secured funding, potential funding from public, private and developer contributions and the remaining funding gap.

Having considered the range of potential funding options the analysis highlights a £2.47 billion funding gap between 2016 and 2031.

A similar level of investment in infrastructure is required across each of the three phases. However, given the budgets for beyond 2021 have not yet been set, it is difficult to gauge any degree of certainty regarding the level of investment beyond this date. Based on the information available, each phase currently has a significant funding gap identified.

Guildford is shown to have the largest infrastructure costs and gaps due primarily to a large number of major transport projects in the area. Waverley, Reigate & Banstead and Woking are also shown to have considerable infrastructure costs to support growth.

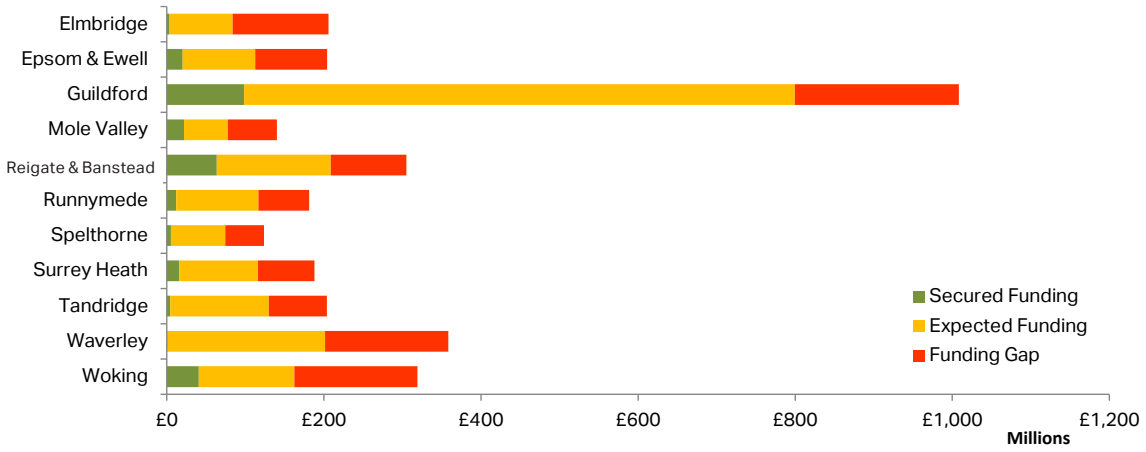


FIGURE C - TOTAL COST OF INFRASTRUCTURE AND ESTIMATED FUNDING

FIGURE D - TOTAL INFRASTRUCTURE COSTS AND ESTIMATED FUNDING

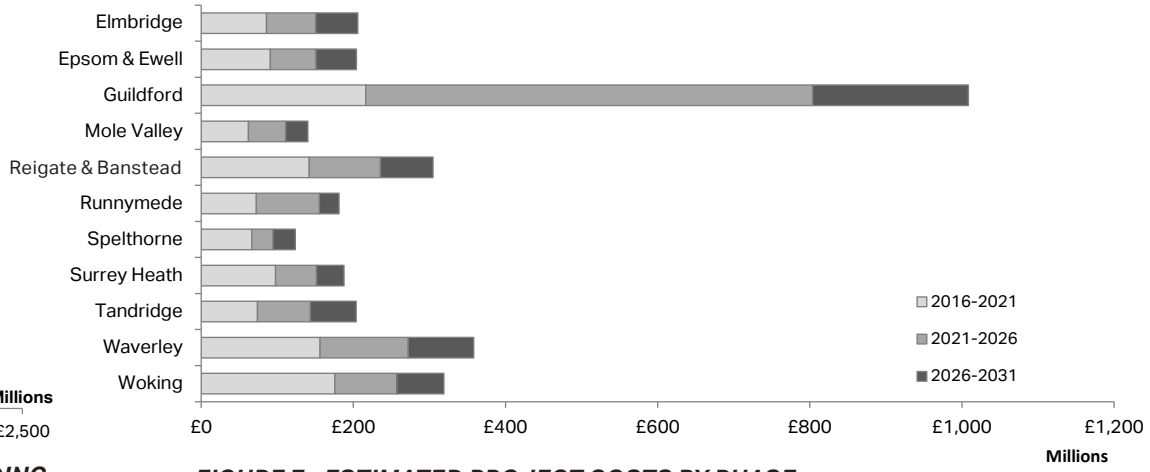


FIGURE E - ESTIMATED PROJECT COSTS BY PHASE

CONTENTS

01

The Surrey Infrastructure Study has been developed to demonstrate to Government, infrastructure providers, local communities and business the challenges being faced across Surrey in funding the infrastructure required to support growth and enhance the lives of existing and future residents.

INTRODUCTION

The 2017 Surrey Infrastructure Study (SIS) has been updated on behalf of the Surrey local authorities to provide an up to date view of emerging development and infrastructure requirements to support growth across Surrey.

The update presents a strategic view of growth distribution and infrastructure provision across Surrey drawing upon the projected growth anticipated to come forward within each of the Districts and Boroughs over the period to 2031.

This document outlines the strategic picture of the infrastructure required to support and unlock growth. It aims to:

- Collate and summarise population/housing growth projections across Surrey;
- Set out a combined understanding of capacity within current infrastructure provision and pipeline infrastructure projects being taken forward by local authorities and other infrastructure providers; and
- Highlight cumulative costs, funding streams and gaps in infrastructure funding.

The 2017 SIS has been produced for the following audiences:

- Officers and members within Surrey County Council and the 11 Surrey borough and district councils;
- The Coast 2 Capital and Enterprise M3 Local Enterprise Partnerships and Transport for the South East to inform priorities for investment to support growth objectives at both a strategic and a local level;
- Government and Infrastructure Providers – to demonstrate the potential distribution of growth, infrastructure requirements and funding gaps; and
- Residents and businesses to provide a county-wide view of development and infrastructure requirements and the challenges in delivering infrastructure across the county.

In addition the study takes into consideration external factors affecting growth and infrastructure provision in Surrey in relation to the wider London and South East growth requirements.

Of particular relevance is the 2014 Inspector's Report on the Further Alterations to the London Plan which highlighted the lack of capacity in Greater London to meet growth requirements with some of the identified 7,000 homes per annum shortfall likely needing to be met in areas outside London, including Surrey.

Within London this context is recognised at the political level. The Recent GLA report City for all Londoners (November 2016) states that in order to accommodate growth while meeting housing, social and economic needs of londoners, a collaborative approach between London boroughs, local authorities in the wider South East, and central government is required, in particular focused around infrastructure. This report raises a number of issues, in particular:

- It acknowledges that most of London's growth needs to be contained within London. However there is a need to agree joint infrastructure investment corridors - where infrastructure is planned to open up housing - that stretches beyond London's borders. This will require close cooperation with neighbouring authorities in the wider South East; and
- It acknowledges that as London grows, there will be a need to protect and enhance the environment, including the Green Belt. This means protecting the Green Belt and designated green space against growth pressures. Greater intensification of development should occur to ensure this.

The Mayor's Draft Transport Strategy (June 2017) has identified the important role that transport plays in linking London to the areas in the wider South East. It recommends that in order to plan London's transport, there is a need to consider new homes and jobs in the wider south east through the development of strategic corridors that continue outwards from London's growth corridors. It identifies two potential corridors, the South-Western / Surrey Corridor and the Gatwick / Brighton Corridor, which could have an impact on Surrey.

The London Plan includes mechanisms for closer political engagement and joint working with local authorities in the South East and East of England and they will influence the review of the London Plan currently underway.

Surrey local authorities are represented on the Shadow Partnership Board of Transport for the South East and are members of the Coast to Capital LEP and the Enterprise M3 LEP. These secured over £300m and £218m from the Government's Local Growth Fund, respectively, to support economic growth for the period 2015/16 to 2021. Combined, the Growth Deals will help create 36,000 jobs and 15,000 homes across the LEP areas. Therefore, it is increasingly necessary to adopt a more strategic approach to plan for infrastructure and unlock investment to support growth.

SCOPE OF THE STUDY

The Surrey Infrastructure Study covers all forms of infrastructure supporting the economic, environmental and social needs of Surrey (see Figure 1.2).

The categories covered in the report are shown in Figure 1.1.

The study is structured as follows:

Section 2 provides an overview of how growth and infrastructure is planned in Surrey.

Section 3 sets out social and economic growth drivers and the potential distribution of development in Surrey.

Section 4 provides an overview of infrastructure requirements across the county for a range of infrastructure provision including education, health, community, transport, utilities and flood protection.

Section 5 provides analysis on a local authority basis of development suitability taking into account infrastructure capacity and proposed investment.

Section 6 presents a commentary on delivery and funding issues affecting growth and infrastructure across Surrey.

Section 7 identifies recommendations and conclusions.

Section 8 details specific caveats supplied by some of the local authorities to accompany the housing forecasts.

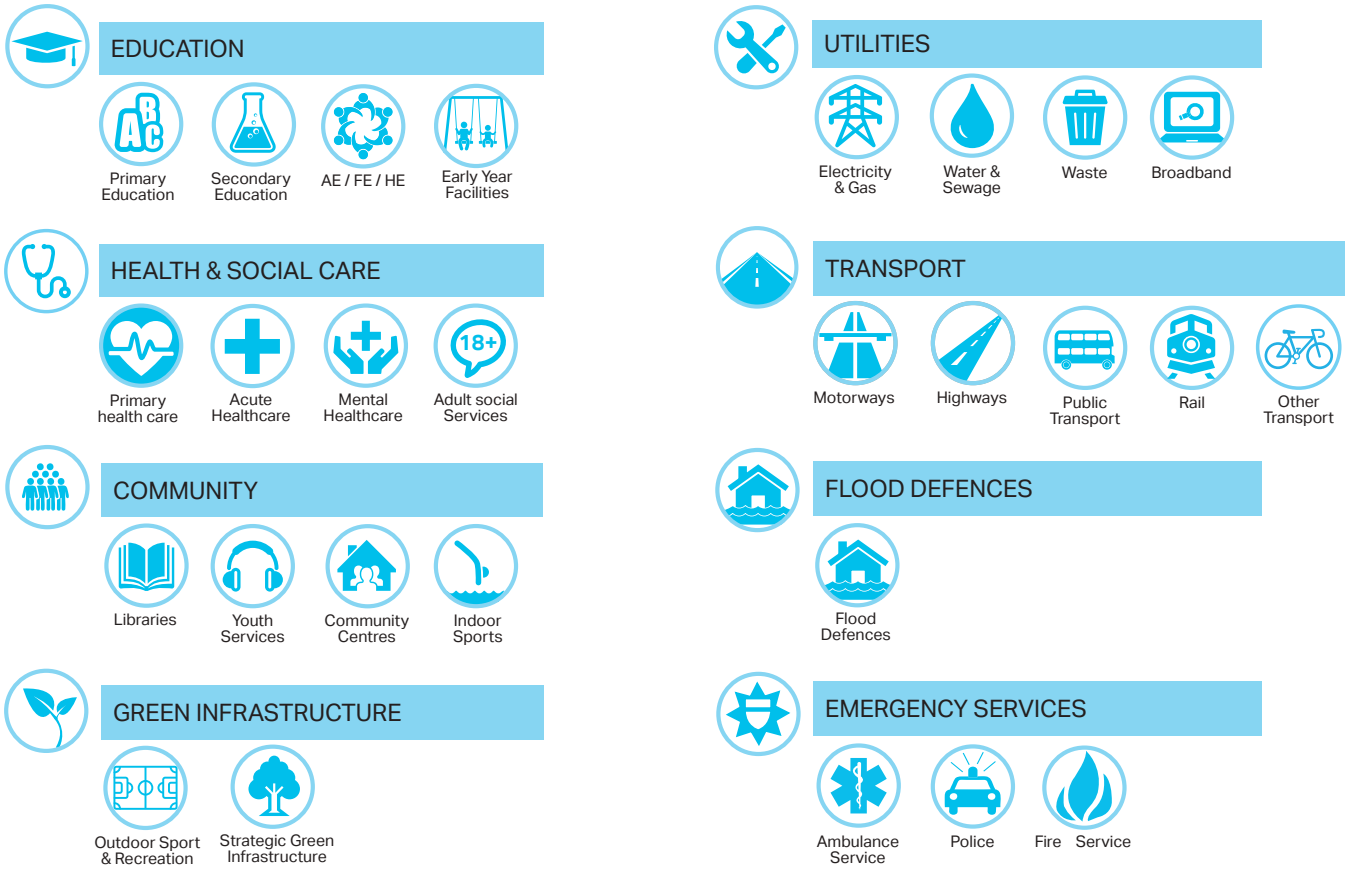


FIGURE 1.1 - INFRASTRUCTURE CONSIDERATIONS

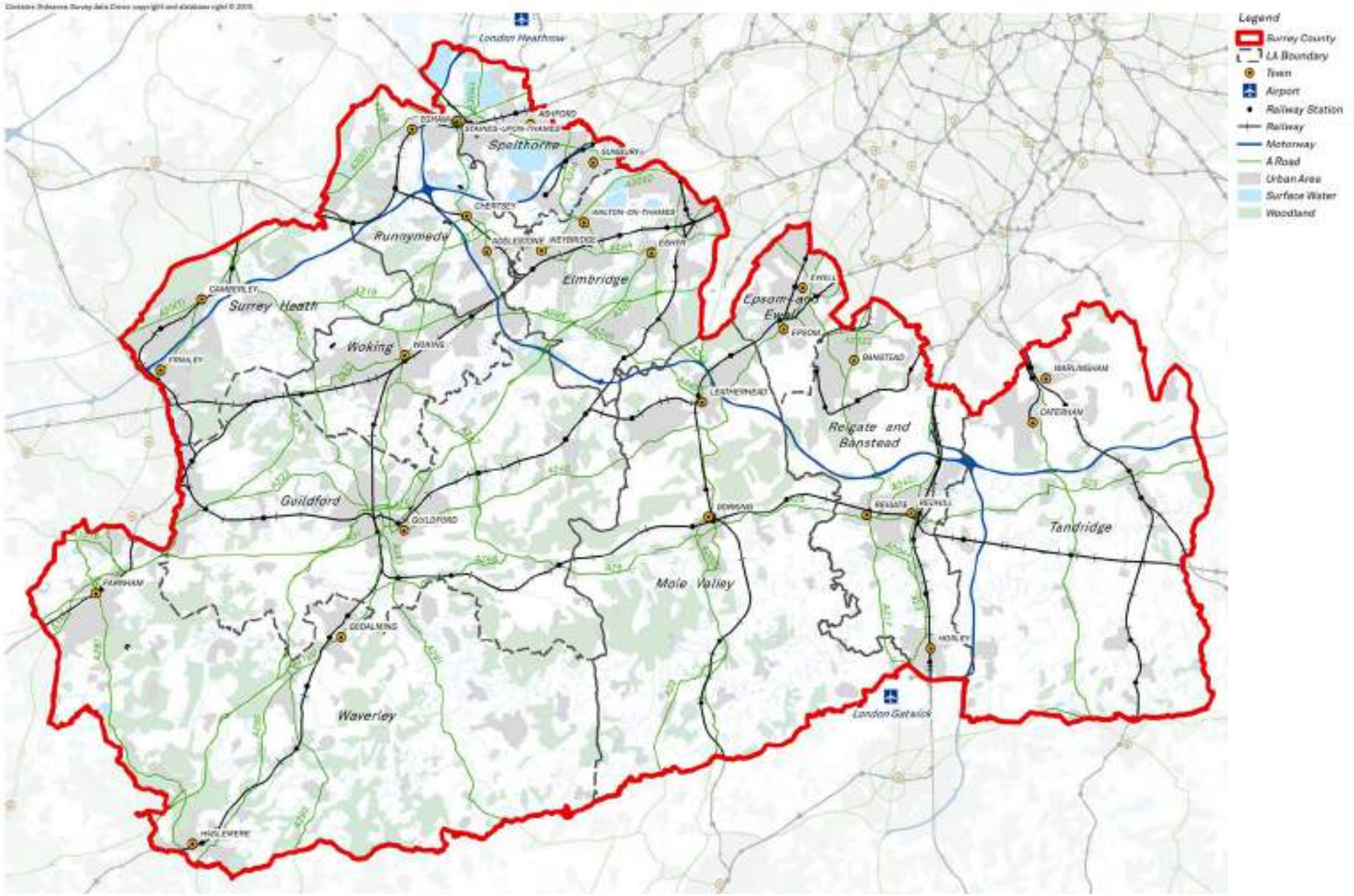


FIGURE 1.2 - STUDY AREA

PARAMETERS OF THE STUDY

This study has been prepared in accordance with the following parameters:

A Snapshot in Time:

- The housing, employment and population forecasts presented in this document represent our understanding of the growth context at June 2017 but it is recognised that this information is continually evolving and should therefore be treated as a snap shot in time only.

Housing Growth:

- The production of the Infrastructure Study has required close working with the local planning authorities (LPAs) to establish the latest understanding of potential additional housing delivery between 2016 and 2031.
- It is crucial to highlight the fact that across the eleven local authorities a significant variation in the progression of local plans and associated technical work exists. As a result, each LPA has agreed a working set of figures for the purpose of this study.
- The housing trajectories presented in this document have been provided by the LPAs but represent only the latest working assumption on likely housing delivery. Some are based on anticipated completions of sites and/or adopted local plan annual average figures, while others are taken from recent Strategic Housing Market Assessments (SHMA's). Specific caveats have been supplied by some of the local authorities and are presented in Section 8.

Employment Sites:

- Key employment sites presented in this document have been provided by the LPAs as sites likely to have significant implications for infrastructure provision. It does not include all employment sites and excludes smaller employment areas.

Population Forecasts:

- A technical population modelling scenario forecast has been produced by SCC using the PopGroup Model to inform the infrastructure study document and the technical infrastructure modelling associated with it. This is a bottom-up forecast constrained by the number of dwellings to be built in each individual local authority as advised by the local planning authorities in June 2017.

Infrastructure Analysis:

- The study has sought to establish the existing scale, distribution and capacity of all infrastructure types and the required additional investment in infrastructure to support growth to 2031 through the consolidation of existing service planning and through theoretical modelling where no service planning is available.
- The eleven local authorities have undertaken considerable work to understand the infrastructure requirements to support their local plans. Figure 2.3 presents the current availability of existing Infrastructure Delivery Plans (IDPs) across the county. These IDPs have formed important source documents for this study.
- Again, it is crucial to highlight the fact that across the eleven local authorities a variation in the progression of infrastructure planning work exists in conjunction with the progress on local plans. As a result, the inclusion of findings and proposed projects from those documents within this study must be accompanied by a health warning that they may not represent the latest position in the local area. It should also be noted that a number of the local authorities are currently in the process of updating their IDP.
- The topic specific infrastructure analysis represents a snap shot in time and does not necessarily reflect all current work underway across the various service areas to address capacity issues and plans for change in service provision.
- The analysis does not include detailed analysis of the impact of housing growth within London and adjoining counties (especially West Sussex, Hampshire and the Berkshire unitary authorities) which will have an impact on service demands within Surrey, particularly along border areas. This is explored however at a high level within Section 3.
- A project database has been created to record all identified project requirements, including the type, location, timing, costs and funding of those investments.

Cost Analysis:

- The costs of infrastructure presented in this document represent the sum of all entries in the project database under that infrastructure theme and location. It should be noted that not all items in the project database have an associated cost due to a lack of project details from which to estimate costs. This therefore means that the costs of infrastructure presented in this document represent a minimum figure.

- All costs presented in this report are based on current day prices and have not been index linked forward to the assumed date of requirement.
- A full set of cost caveats have been included at the conclusion of this document and explain the predominant source of cost information by each infrastructure topic.
- It is important to note that the total costs of infrastructure requirements for each local authority presented in this report are unlikely to match exactly those presented in the Infrastructure Delivery Plan of that LPA. This study covers all infrastructure topics for each local authority and has subsequently included additional project requirements which may not have been included in the local authority studies.

Funding Assumptions:

- The funding of infrastructure presented in this document is primarily based on the sum of all entries in the project database where a project has been identified as having secured funding or is expected to receive funding from one or more sources.
- The existing understanding of project specific funding is not complete and will need to be advanced by all interested parties.
- Funding has been classified into two categories of secured and expected.
- Secured funding represents any project funding that has been identified within each Local Authority's IDP or specifically noted as secured by source documents or in discussions with stakeholders such as the Environment Agency.
- Expected funding includes potential funding from the public sector, the private sector and developer contributions.
- The expected funding category includes a theoretical assumption on the potential developer contributions to that service requirement based on the number of new dwellings forecast in that area. The details of how the potential developer contribution has been calculated is included in Section 6.
- A number of working assumptions have had to be applied to other expected funding sources (both public and private) such as the likely NHS, private sector and utility company contribution to project costs which are inevitable but cannot at this time be confirmed as in many cases the project costs identified have been generated theoretically and do not represent actual projects. These working assumptions are also set out in more detail in Section 6 of the document.
- It should therefore be noted that the funding estimates presented in this document are indicative and based on a number of working assumptions and in the case of the NHS have not been validated. As this study is taken forward a greater degree of accuracy on potential funding sources is required.

02

PLANNING FOR INFRASTRUCTURE IN SURREY

THE BASIS OF THE STUDY

THIS STUDY DRAWS TOGETHER INFORMATION AND DATA FROM A RANGE OF SOURCES. IT SEEKS TO PIECE TOGETHER A STRATEGIC PERSPECTIVE ON GROWTH AND INFRASTRUCTURE PROVISION IN SURREY AT THE PRESENT TIME AND 15 YEARS INTO THE FUTURE.

It draws on the following information:

- Adopted and emerging Local Plans and Infrastructure Delivery Plans for all local authorities within Surrey
- Local Authorities' Local Plan evidence bases
- Other existing and emerging information, strategies and plans from local authorities across Surrey
- GIS database information provided by Surrey County Council
- Surrey County Council Pop Group model for population growth
- Documents produced by Coast to Capital & Enterprise M3 Local Enterprise Partnerships (LEP)
- Surrey Rail Strategy, Surface Access to Airports Study, the North Downs Line Assessment, and the Wessex Route Study
- Information from other infrastructure provider's plans including utility providers, the Environment Agency, Network Rail, Highways England and the National Health Service (NHS).

The study is based on a detailed analysis of issues in Surrey relating to growth and infrastructure current to June 2017. It should be recognised that this presents a snapshot in time and has no legal basis.

A spreadsheet database containing a list of all known infrastructure projects, costs and funding provides a detailed evidence base for this study.

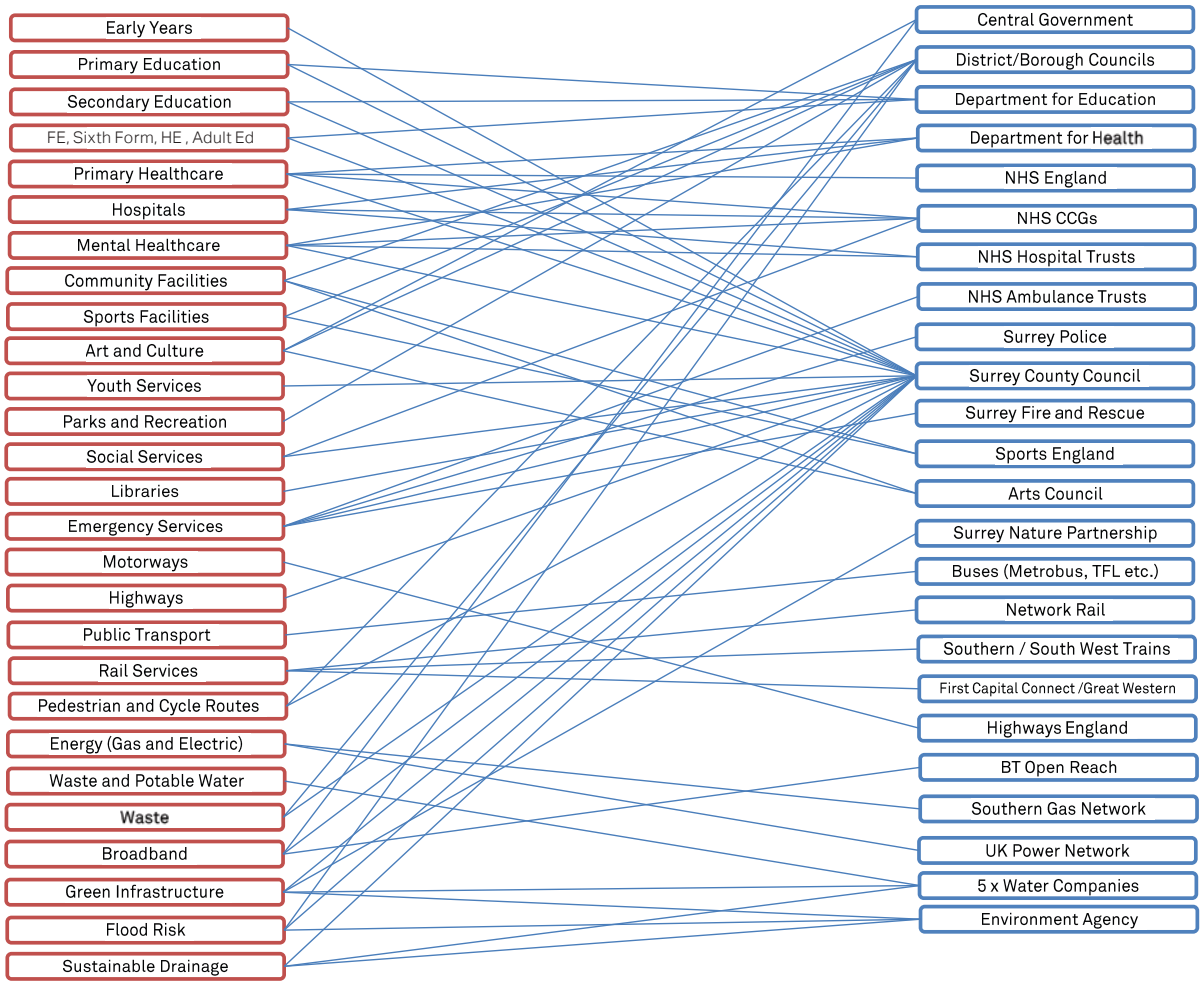


FIGURE 2.1- THE COMPLEX PATTERN OF INFRASTRUCTURE PROVISION IN SURREY

INFRASTRUCTURE PROVIDERS

FIGURE 2.1 SHOWS THE COMPLEX RELATIONSHIP BETWEEN INFRASTRUCTURE AND PROVIDERS IN SURREY. THE COUNTY COUNCIL AND THE DISTRICT AND BOROUGH COUNCILS PLAY A VITAL ROLE IN THE SUPPLY OF INFRASTRUCTURE IN SURREY. IN ADDITION A NUMBER OF PUBLIC AND PRIVATE ORGANISATIONS HAVE RESPONSIBILITY TO PROVIDE INFRASTRUCTURE TO SUPPORT EXISTING POPULATION AND PROPOSED GROWTH.

This study covers the following aspects of infrastructure provided by Surrey local authorities.

- Education (primary, secondary, further education and adult education)
- Other social infrastructure (libraries, adult social services and youth services, public health, community and sports facilities, parks and recreation)
- Highways and transport
- Waste management

In addition, other providers' requirements have been investigated including:

- Healthcare (NHS)
- Highways (Highways England)
- Rail and bus operators
- Utility services
- Other significant infrastructure (e.g. Environment Agency)

PLANNING FOR INFRASTRUCTURE

Changes to government legislation have modified how infrastructure planning is undertaken and placed greater emphasis on the link between the Local Plan and the delivery of infrastructure.

In Surrey it is the districts and boroughs who have responsibility for producing Local Plans as local planning authorities (LPAs).

Surrey County Council is a statutory consultee as an infrastructure provider, but does not have a statutory responsibility for plan making (with the exception of Minerals and Waste planning).

The Government's National Planning Policy Framework (NPPF) states that LPAs should work with other authorities and providers to assess the quality and capacity of a range of infrastructure types and the ability to meet forecast demands and take account of the need for strategic infrastructure within the LPA area (para. 162).

Local Plan policies on infrastructure delivery and development are required to operate together, in order to ensure delivery in a timely fashion. Where possible the NPPF recommends Community Infrastructure Levy (CIL) charges should be developed and assessed alongside the Local Plan (para. 177).

Localism Act 2011 and the NPPF also set out a duty to cooperate across boundaries enshrining the need for local planning authorities to engage with different organisations on strategic planning issues (para.179), in particular infrastructure providers as illustrated in Figure 2.2. County councils are subject to the duty and the LPAs are required to engage with Surrey County Council as a key infrastructure provider. However, there is no body in place to provide strategic co-ordination of growth across local authority boundaries or strategic infrastructure. Therefore, there is a vital need for increased dialogue and close collaboration between local authorities and infrastructure providers to ensure infrastructure is adequately planned for and delivered in tandem with area growth projections in order to meet service demand. In this way, this Study seeks to facilitate discussion by highlighting the core infrastructure issues which require attention.

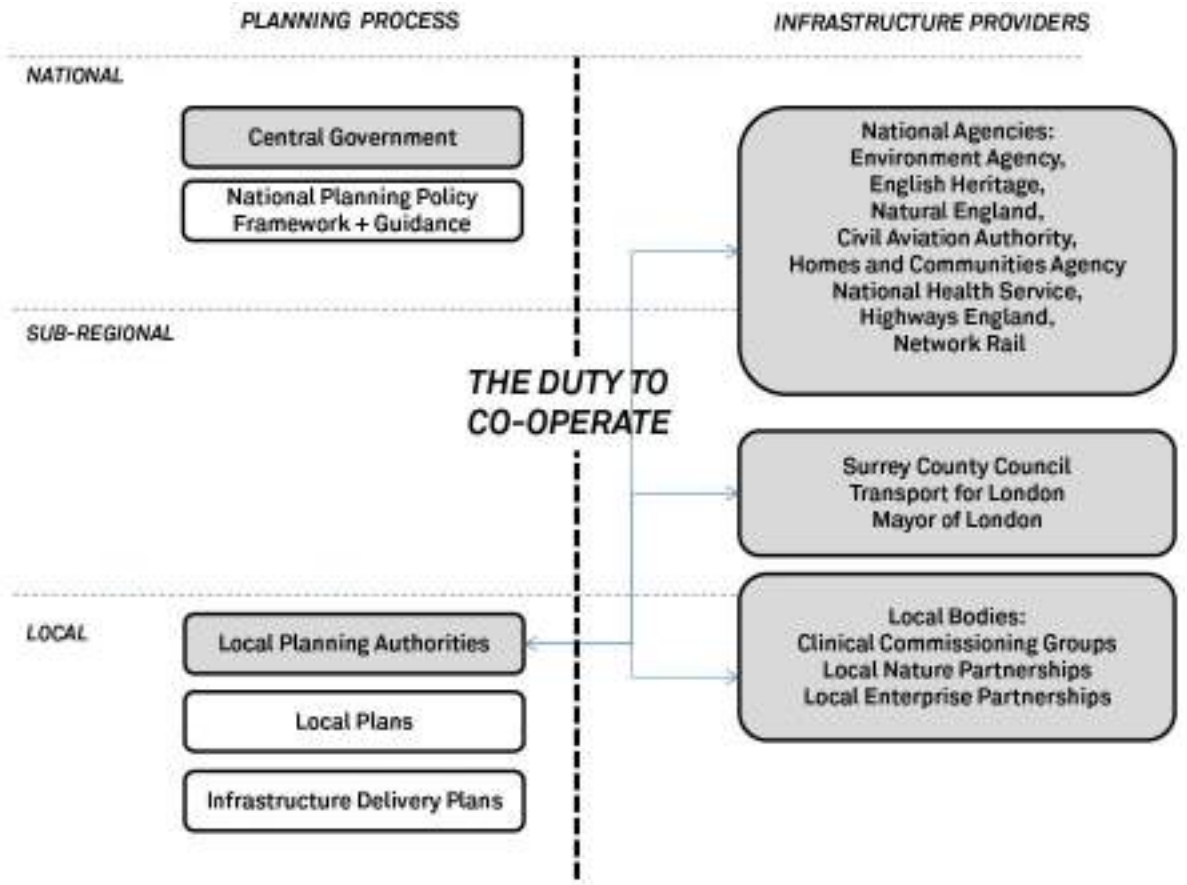


FIGURE 2.2- THE CURRENT PLANNING PROCESS AND INFRASTRUCTURE PROVISION IN SURREY

As illustrated in Figure 2.3, all LPAs in Surrey are at varying stages in terms of having an up-to-date Local Plan. Some plans have been adopted while others are in the process of being prepared. Where a local authority's Local Plan pre-dates the adoption of the NPPF, policies may no longer be up to date and may need to be revised. All have produced an "Infrastructure Delivery Plan" which sets out infrastructure required to support growth and funding regimes.

This document will assist Surrey Local Authorities to fulfil the "Duty to Cooperate" and piece together a co-ordinated understanding of growth and infrastructure across Surrey.

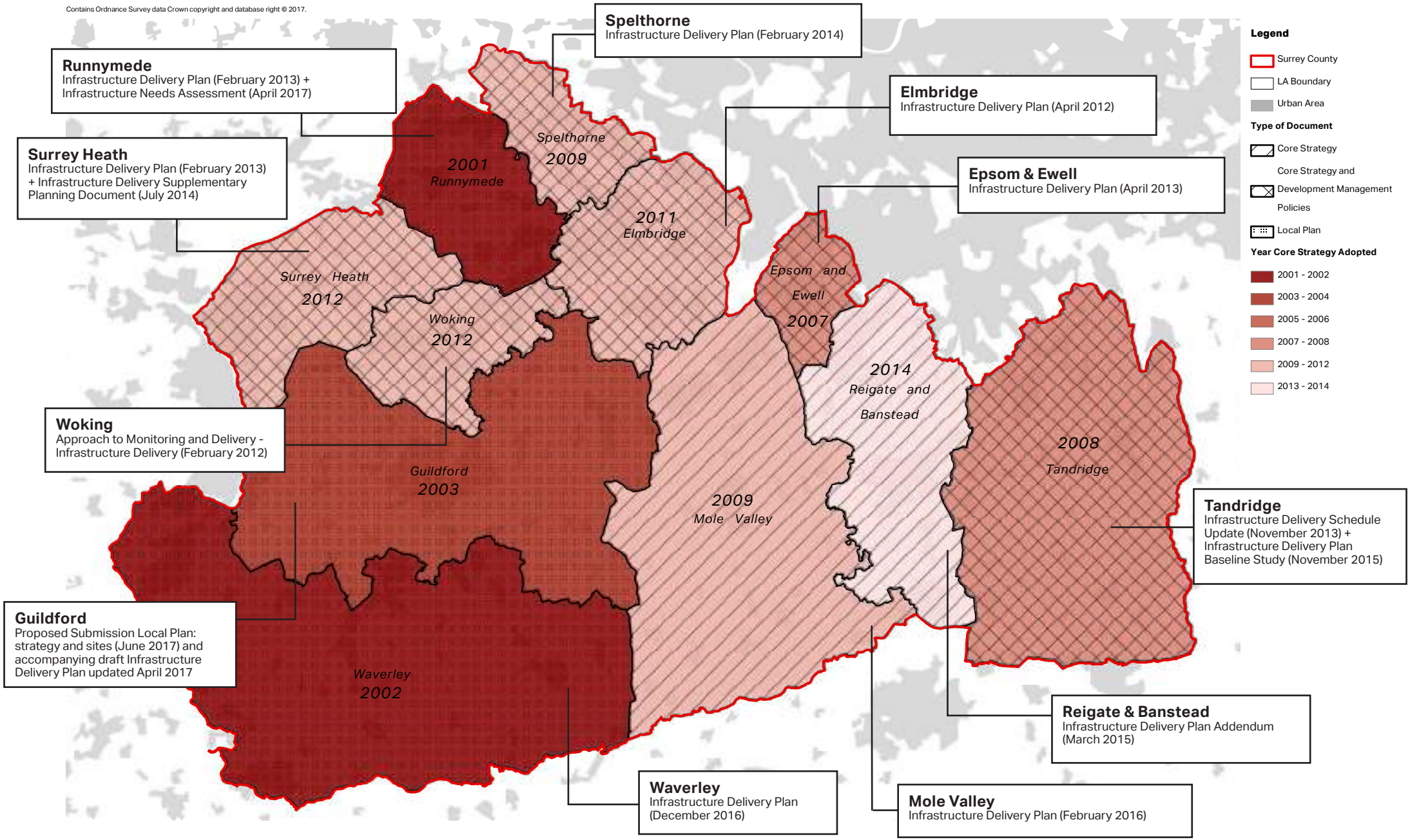


FIGURE 2.3 - LOCAL PLAN AND INFRASTRUCTURE DELIVERY PLAN STATUS IN SURREY LOCAL AUTHORITIES (JUNE 2017)

03

UNDERSTANDING SURREY'S GROWTH REQUIREMENTS

THIS SECTION AIMS TO SUMMARISE THE KEY ISSUES IN PLANNING FOR GROWTH IN SURREY TO 2031.

As highlighted in the previous section, growth in Surrey is planned for through the Local Plan process on an authority-by-authority basis. This section seeks to set the context for county-wide growth requirements and current planned growth areas as established within the Local Plans.

It comprises:

POPULATION GROWTH REQUIREMENTS

- Population modelling and growth assumptions to 2031;
- A social portrait summarising current socio-demographic issues and trends likely to impact on growth and infrastructure provision; and
- An understanding of housing growth requirements and locations.

ECONOMIC GROWTH REQUIREMENTS

- An economic portrait summarising current economic issues and trends; and
- An understanding of employment requirements and locations.

RELATIONSHIP WITH LONDON AND ADJOINING AREAS

- An understanding of impacts on Surrey from potential growth in adjoining areas, especially from London.

This growth context is then used as the basis for examining infrastructure requirements in the remainder of this study.

POPULATION PROJECTIONS

THERE ARE 2 DIFFERENT POPULATION PROJECTIONS WHICH NEED TO BE TAKEN INTO ACCOUNT:

2014 Based Sub National Population Projections from ONS

- Based on ONS census results, natural change and migration trends. These are unconstrained projections.
- Provided at the local authority level
- Used by Central Government departments and agencies for local authority funding
- Used by DCLG to produce the latest household forecasts which inform Strategic Housing Market Area Assessments (SHMAs)
- The ONS projection assumes a 2016 population of 1,182,100 for Surrey
- It projects a 2031 population of 1,320,700 - an increase of 140,100, equivalent to 12% growth

SCC PopGroup Model based Population forecast

- A bespoke population forecast produced specifically for this study to establish a population forecast directly linked (and constrained) by the planned housing;
- Based on ONS census results, natural change but constrained to the housing trajectories of planned growth for each of the local authorities;
- Local authority level data provided June 2017; and
- This projection assumes a 2016 base population of 1,174,200 for Surrey.

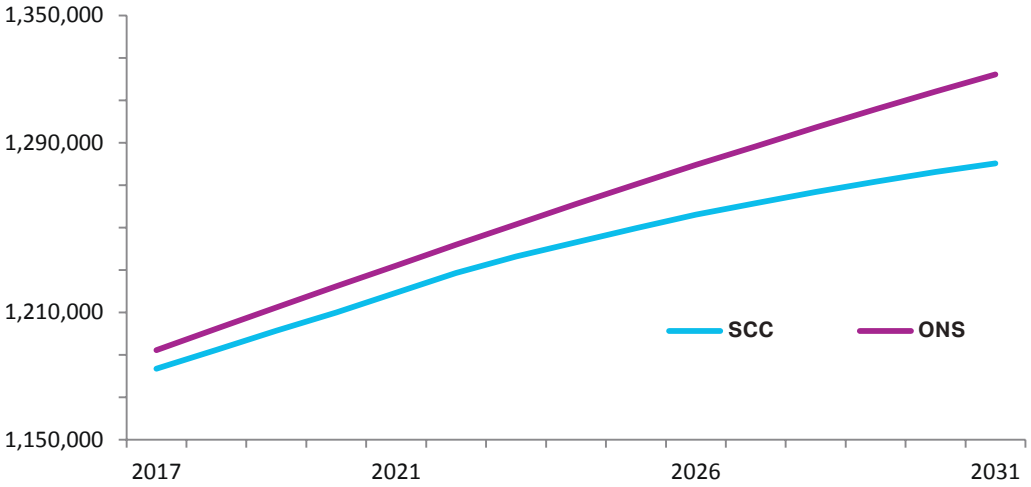


FIGURE 3.1 -2031 POPULATION FORECASTS

Source: SCC PopGroup Model Forecasts, ONS 2014 based Sub National Population Projections

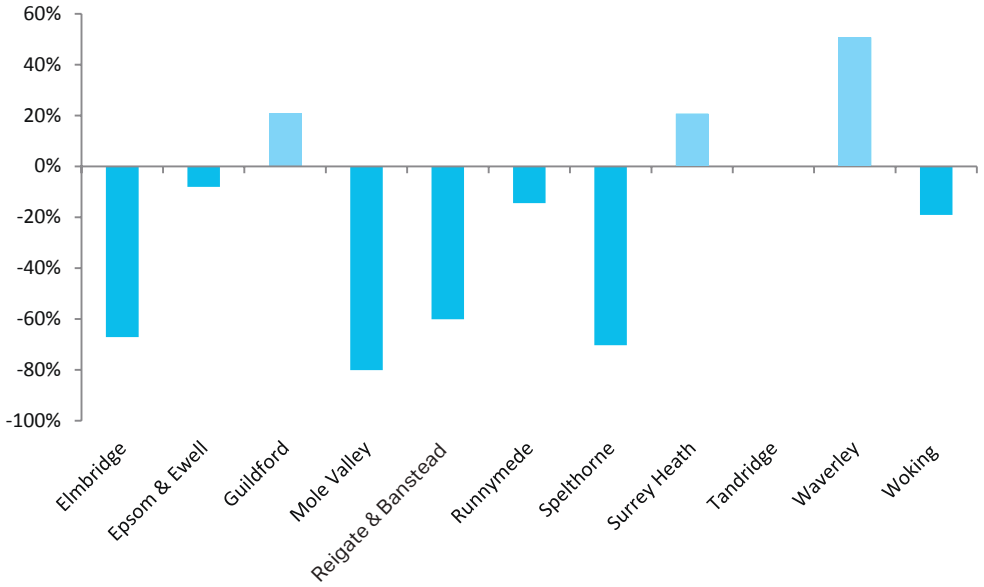


FIGURE 3.2 - SCC FORECASTS VARIATION FROM TREND BASED ONS FORECASTS (JUNE 2017)

- SCC Forecast projects a 2031 population of 1,280,300 - an increase of 106,100, equivalent to 9% growth
- It should be noted that given this data was taken from a snapshot in time, it may differ from any evidence in emerging plans and SHMAs.

HOW THE POPULATION FORECASTS VARY BY LOCAL AUTHORITY

The housing trajectory based SCC forecasts and trend based ONS forecasts portray a significantly different total population change across Surrey as a whole between 2017 and 2031. There are significant variations between the local authorities. As shown in figure 3.2 the population forecasts which have been driven by the current housing trajectories are considerably lower in Elmbridge, Mole Valley and Spelthorne compared to the trend based forecasts.

In contrast, Guildford, Surrey Heath and Waverley show housing based figures that are higher than the trend based forecasts, whilst Epsom & Ewell, Runnymede and Tandridge have the most similar housing forecasts between the two.

It is important to make clear why the population projections produced by SCC using the PopGroup Model are notably lower in most cases than the ONS population forecasts. As set out in the earlier study parameters section, the PopGroup model is constrained by the number of homes planned by the local authorities. All other assumptions on baseline population and natural change will match the ONS forecasts.

Additionally, some of the housing trajectories provided by the local authorities are based upon anticipated delivery of sites and/or annual average plan requirements rather than objectively assessed needs for housing.

3.1 SOCIAL PORTRAIT

THE FOLLOWING HEADLINES SUMMARISE KEY SOCIO-DEMOGRAPHIC TRENDS AND PROJECTIONS THAT WILL AFFECT THE DISTRIBUTION OF GROWTH AND PLANNING FOR SUPPORTING INFRASTRUCTURE TO 2031.

Surrey will grow by at least 106,100 people (9% increase) by 2031

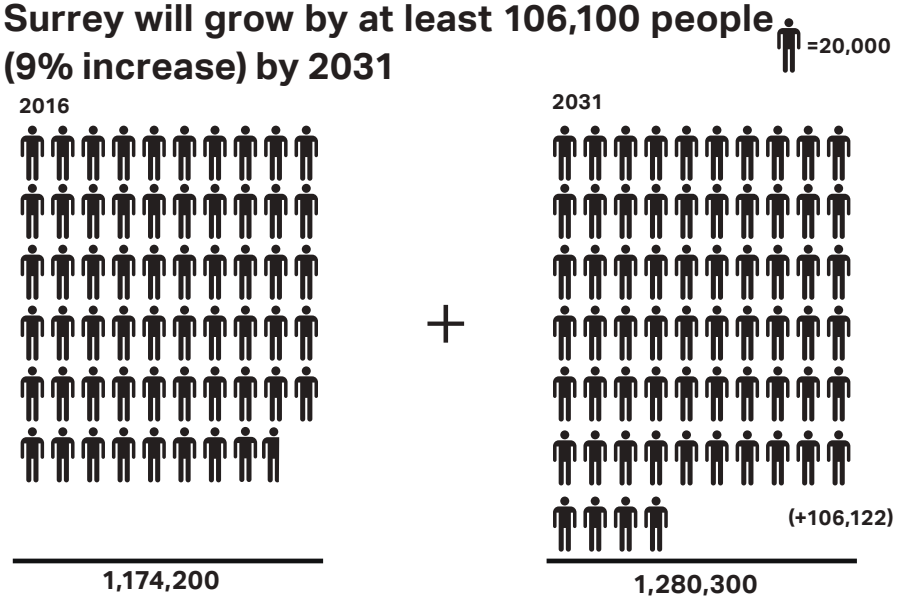


FIGURE 3.3
Source: SCC PopGroup Model

However, this growth varies significantly within Surrey, with the greatest increases currently projected in Guildford, Waverley, Epsom & Ewell and Tandridge.

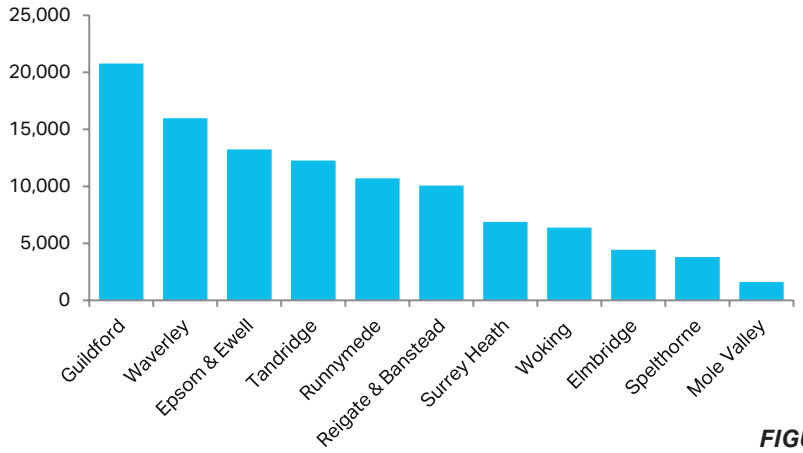


FIGURE 3.4
Source: SCC PopGroup Model

In 2015 the natural increase of Surrey was 3,125 people:

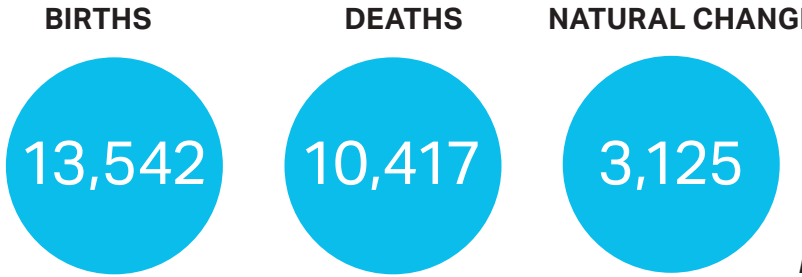


FIGURE 3.5
Source: ONS, 2015

In 2015 there was net international migration of 3,615 people into Surrey

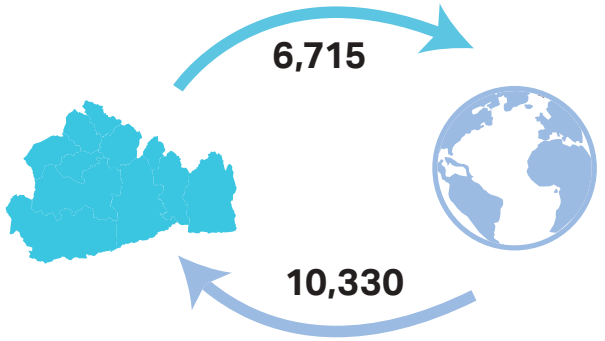


FIGURE 3.6
Source: ONS, 2015

Guildford saw the biggest net-increase in international migration of 1,540 people.

In 2015 there was net domestic migration (within UK) of -119 people into Surrey

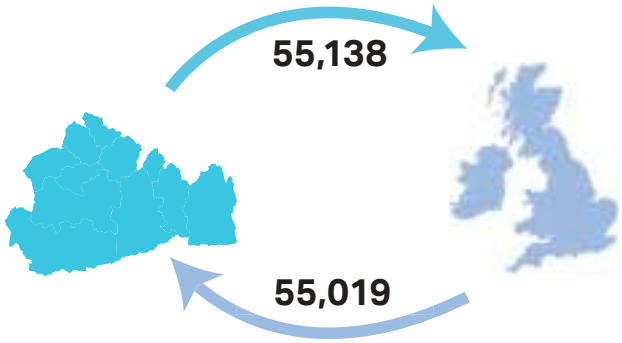


FIGURE 3.7
Source: ONS, 2014

Migration between Surrey and London 2002-2015

London and Surrey are increasingly interconnected - the flow of migrants from London into Surrey and Surrey into London is nearly 2:1 from 2002 - 2015, in which Surrey received a net increase of 149,300 people from London.

Elmbridge received 17% of migrants while Reigate & Banstead received 14% and Epsom & Ewell 11%.

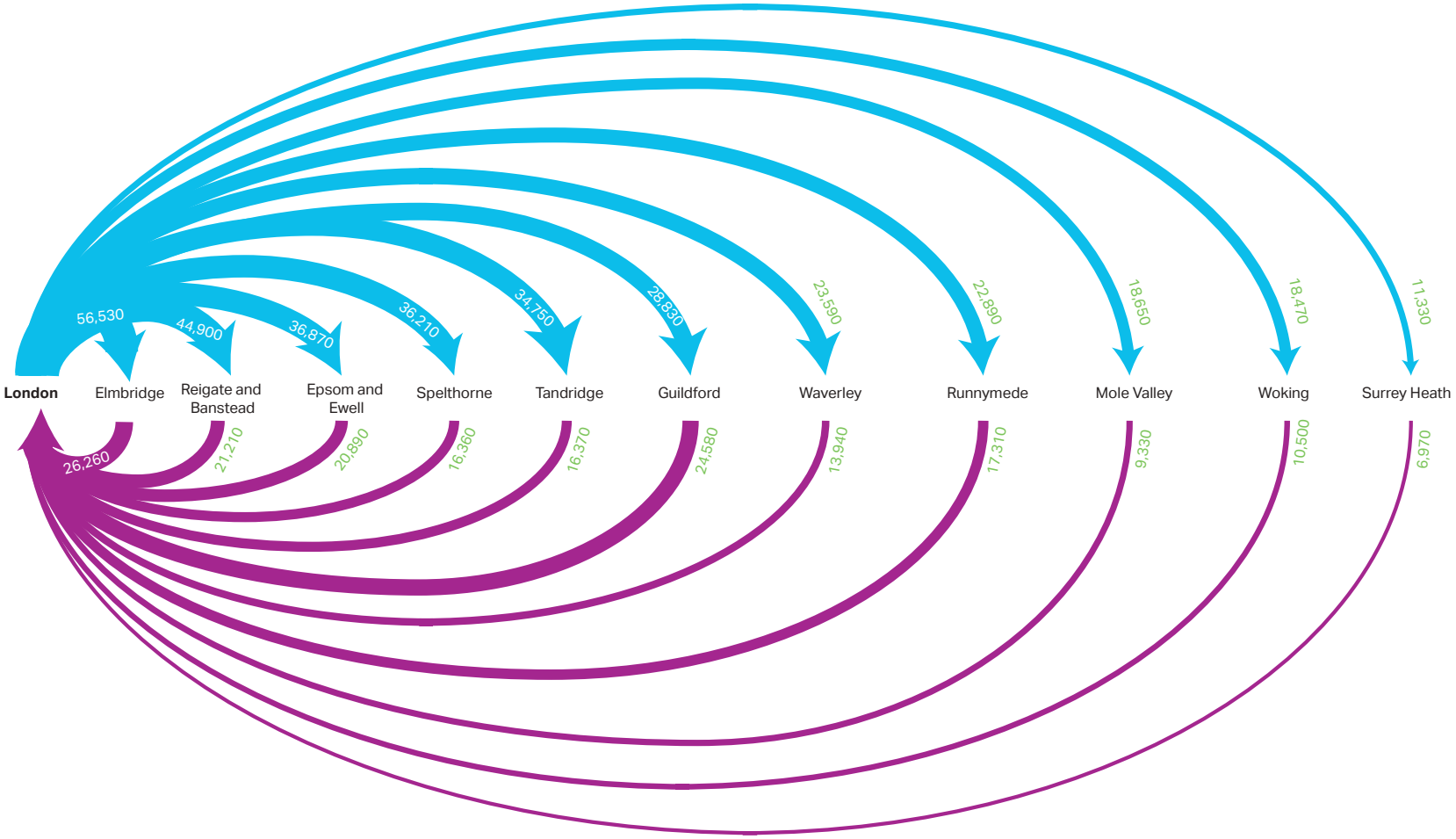


FIGURE 3.8 - INTERNAL MIGRATION BETWEEN LONDON AND SURREY LOCAL AUTHORITIES (2002-2015) (ONS)

Source: ONS, 2002-2015

The population is ageing: The greatest increase in age categories will be those over 60, with the biggest increase in 85+

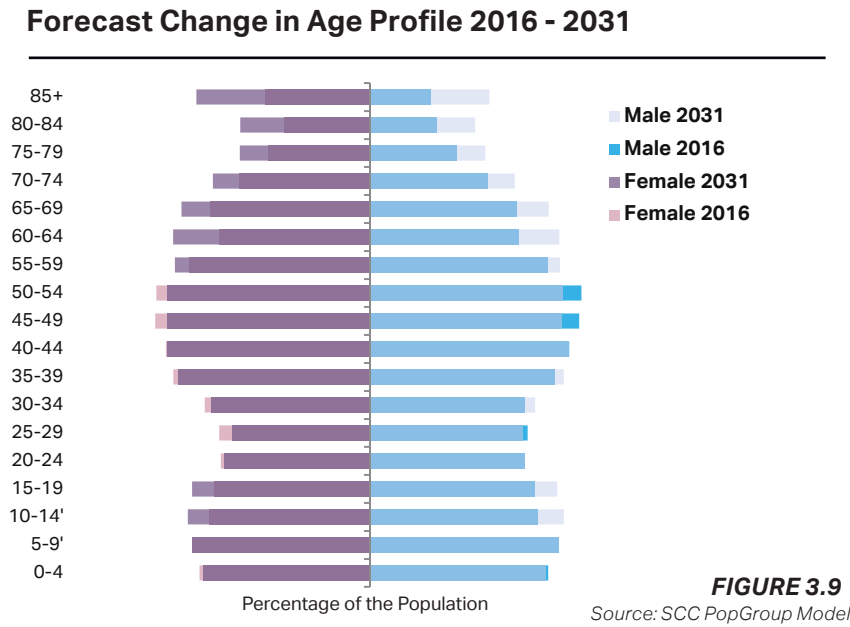


FIGURE 3.9
Source: SCC PopGroup Model

An ageing population will cause significant pressures on certain types of infrastructure demands (such as transport) in Surrey. Changing requirements for housing typologies, increasing needs for healthcare and accessible infrastructure will almost certainly rise as those over the age of 60 will begin to represent an increasingly significant proportion of Surrey's population.

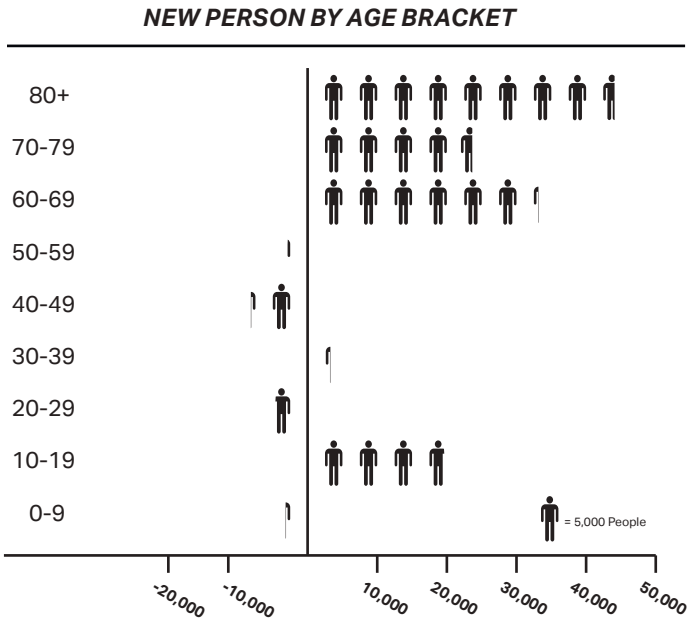


FIGURE 3.10
Source: SCC PopGroup Model

As the population gets older, working age residents will decline by 4% in their total share of the population by 2031, whereas elderly residents will increase their share by 4% of the population

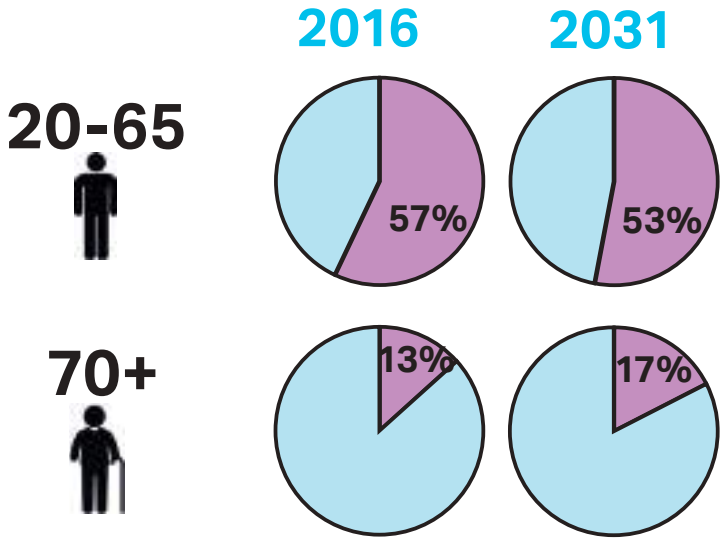


FIGURE 3.11
Source: SCC PopGroup Model

As the elderly population increases this will likely create greater demand for 1 bedroom dwellings, including apartments. Although evidence suggests a large majority of elderly residents prefer not to downsize which also presents challenges as larger family homes are not made available to younger and larger families.

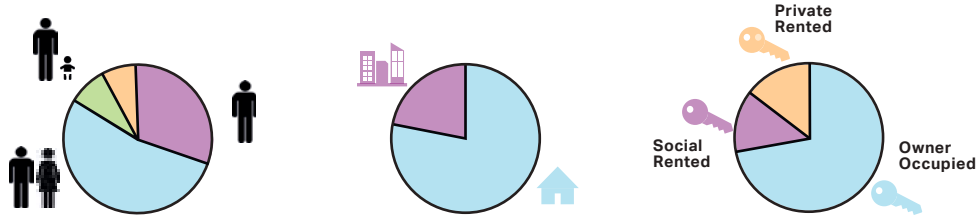


FIGURE 3.12
Source: ONS 2011

The majority of Surrey's current housing stock is well suited for families (49%), however as the population ages housing stock requirements will alter.

Over 78% of the current housing stock is family homes, which are not ideally suited for an ageing population that requires smaller accommodation

The current population in Surrey mostly own their homes (73%), with few privately renting (14%) or in social housing (11%)

Quality of life is generally high across Surrey

However, there are some pockets of deprivation in certain urban areas such as Guildford, Woking and Merstham.

This typically high quality of life is reflected by the fact that only 0.5% of Surrey's working age population are claiming Job Seekers Allowance (JSA). Furthermore, an analysis of the number of JSA claimants from January 2015 to January 2017 shows a significant drop of 34%, suggesting an improving economic position in Surrey.

Spelthorne (13%), Guildford (12%) and Reigate & Banstead (15%) experience the highest level of JSA claimant rates across Surrey, reflecting the disparities in wealth commonly representative of major urban centres.

WORKING AGE JOB SEEKERS ALLOWANCE CLAIMANTS 2014-15

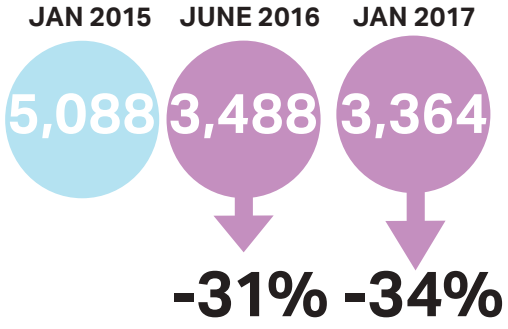


FIGURE 3.13
Source: NOMIS 2017

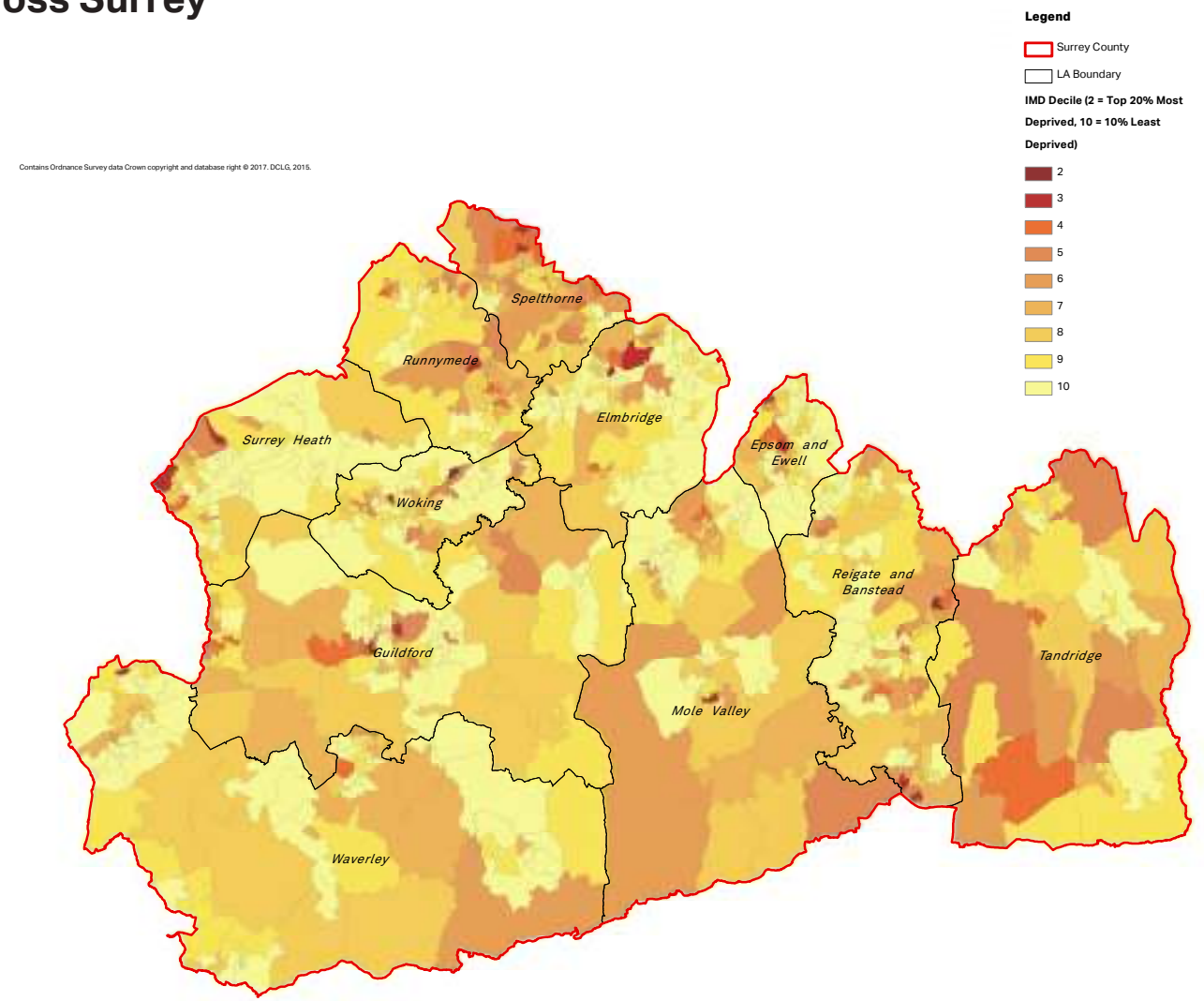


FIGURE 3.14 - INDEX OF MULTIPLE DEPRIVATION ACROSS SURREY (2015)
Source: DCLG (2015)

3.2 HOUSING A GROWING POPULATION

EXISTING HOUSING

There are approximately 486,000 housing units existing across Surrey local authorities. Figure 3.15 illustrates the distribution of those existing homes across the county with the largest share of homes accommodated by Reigate and Banstead, Guildford, Elmbridge and Waverley and the least homes within Epsom and Ewell.

The same figure illustrates the forecast additional dwellings between 2016 and 2031 as informed by the eleven local authorities for the purposes of this study (these are not all derived on the same basis as set out under the study parameters in Section 1 and the data caveats in Section 8). Figure 3.15 shows both the spread of that additional housing across the county as a whole but also the relative increase within each of the local authorities.

The local authority housing trajectories indicated that some 65,000 housing units are planned across Surrey between 2016 and 2031. This would equate to an annual completion rate of 4,357 dwellings which is considerably higher than the average achieved between 2006 and 2016 for Surrey as a whole which was closer to 3,000 dwellings per annum. Figure 3.16 illustrates the total completions achieved for each local authority between 2010 and 2016 according to DCLG data.

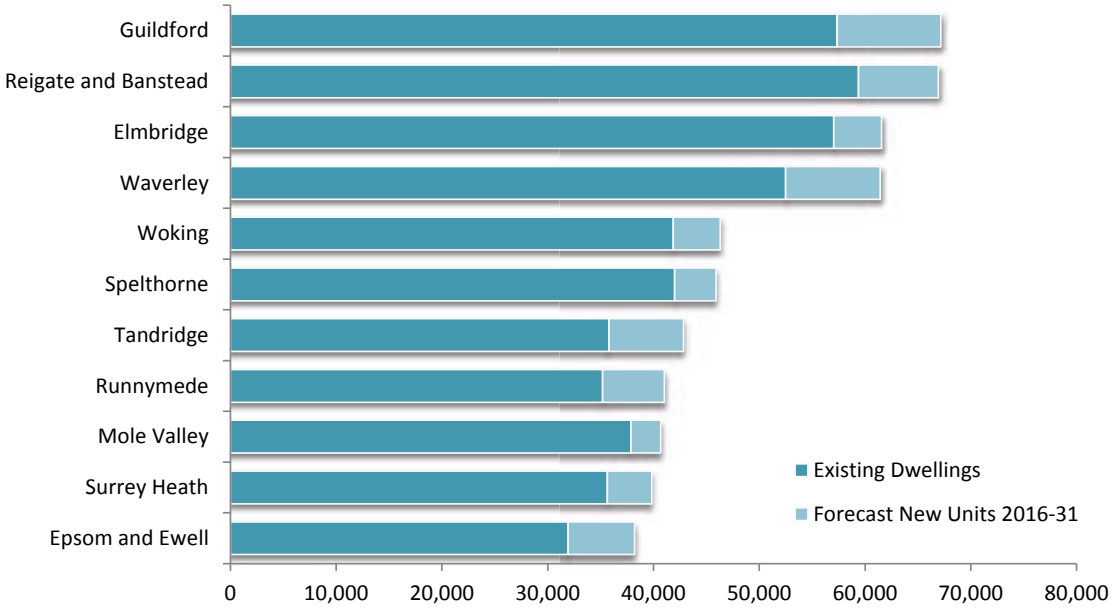


FIGURE 3.15 - EXISTING AND PROPOSED HOUSING

Source: ONS 2011, Local Authority data provided to Surrey County Council for Infrastructure Study

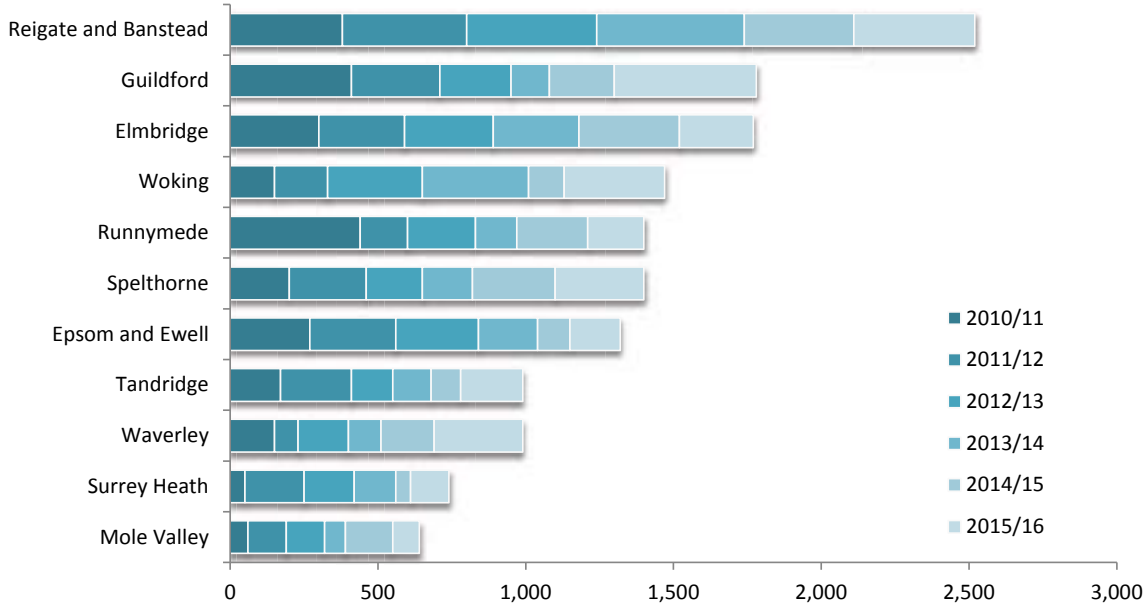


FIGURE 3.16 - RECENT HOUSING COMPLETIONS 2010/11 - 2015/16

Source: DCLG Completions Data

IDENTIFIED HOUSING SITES

For the purpose of this study the eleven local authorities were asked to provide two information sets.

The first was an agreed macro target housing trajectory for the local authority as a whole between 2016 and 2031. This was required to establish the total scale of housing growth expected over the study period and allow a bespoke populati on forecast to be produced to inform the assessment. The total number of homes forecast for each local authority is presented in figure 3.18.

The second set of information requested was detailed site specific data setting out the currently identified potential housing sites from all sources (permissions, allocations, strategic sites etc.). Where possible the associated phasing of these sites was also requested. This data has been used to map the distribution of forecast growth as illustrated in Figure 3.19 over the page.

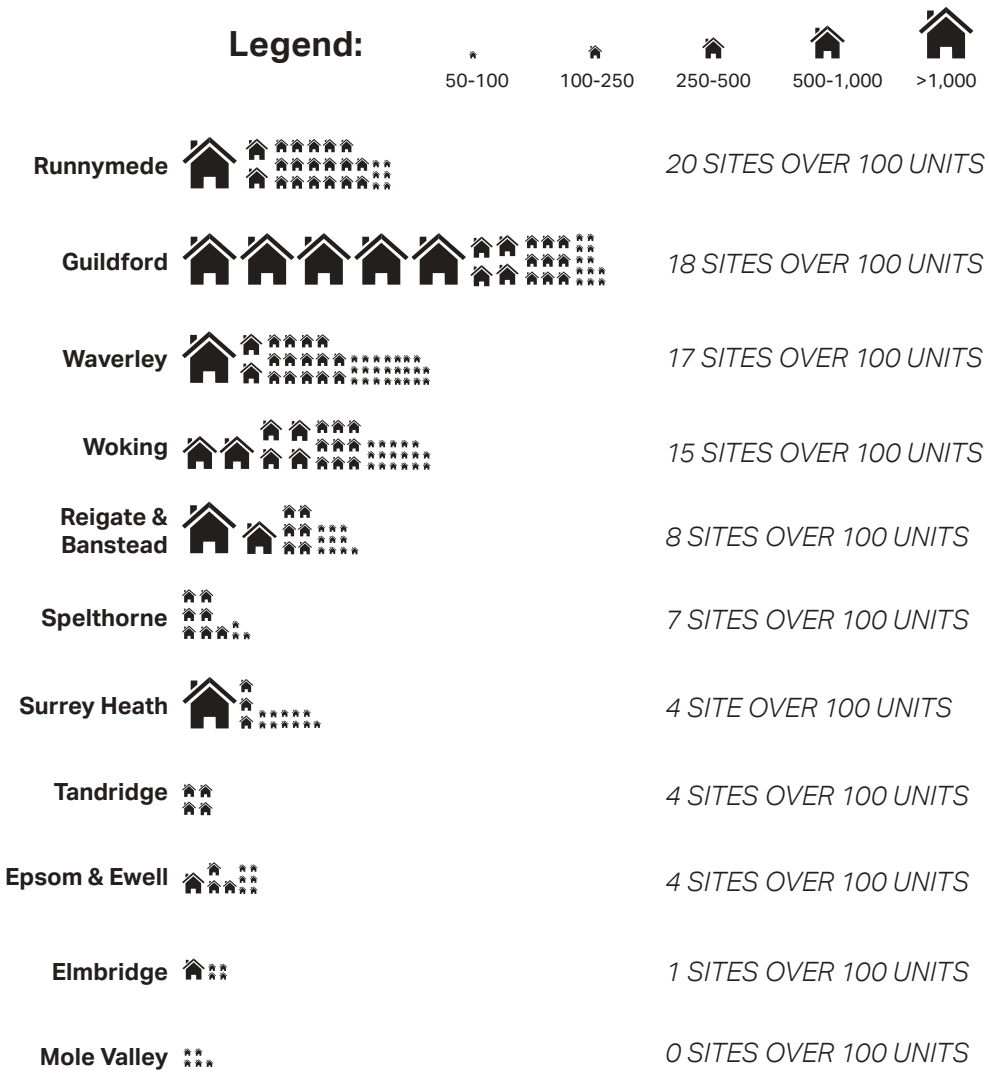


FIGURE 3.17 - NUMBER OF POTENTIAL SITES CURRENTLY IDENTIFIED FOR EACH AUTHORITY
Source: Local Authority data provided for Infrastructure Study

PHASING

Figure 3.18 demonstrates current anticipated phasing of housing in the period to 2031.

The phasing has been recorded alongside the trajectories at a site specific level allowing the growth in housing to be illustrated using GIS, as well as phased over time. The phasing is broken down into the following periods:

- 2016-2021;
- 2021-2026;
- 2026-2031.

The housing trajectories show the following:

- The greatest proportion of houses will come forward between 2016-2021, in which approximately 24,000 units are proposed. This accounts for 37% of the identified delivery of new housing across Surrey over the period to 2031; and
- Housing trajectories are lower in the long term as fewer sites have been identified for development.

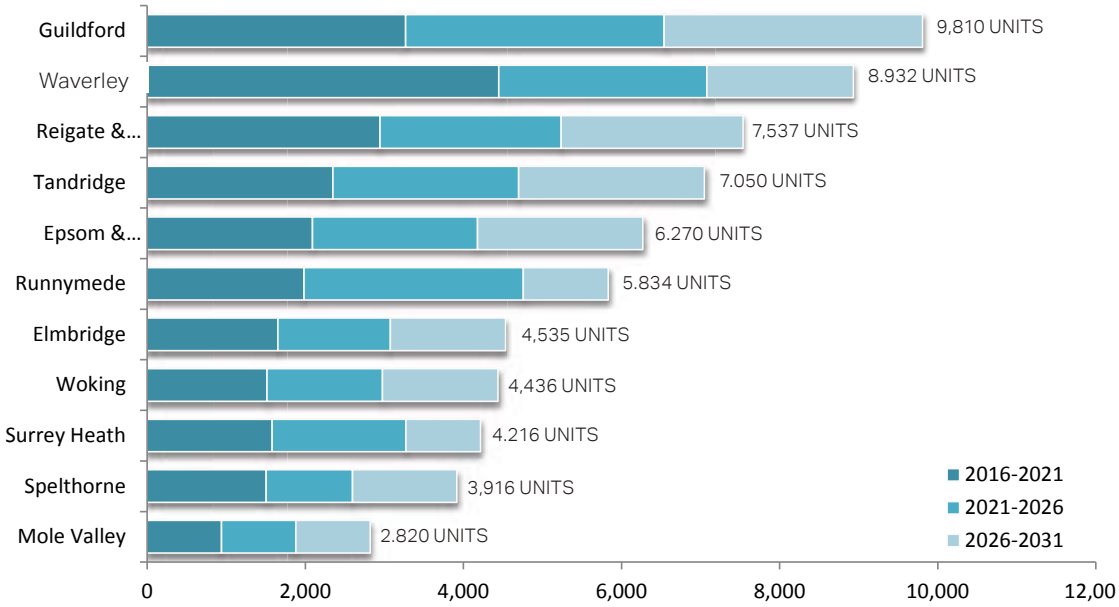


FIGURE 3.18 - PROPOSED HOUSING TRAJECTORIES PHASED OVER 15 YEARS

Source: Local Authority data provided for Infrastructure Study

Technical Note on Housing Trajectories:

As stated in the Study Parameters in Section 1 of this report the housing trajectories presented in this document have been provided by the LPAs but represent only the working assumption on likely housing delivery at June 2017 and do not necessarily represent the latest local plan position.

Importantly, analysis of the latest ONS population forecasts and associated DCLG household forecasts for Surrey suggest the housing figures presented for some of the local authorities within this section could underestimate future housing growth.

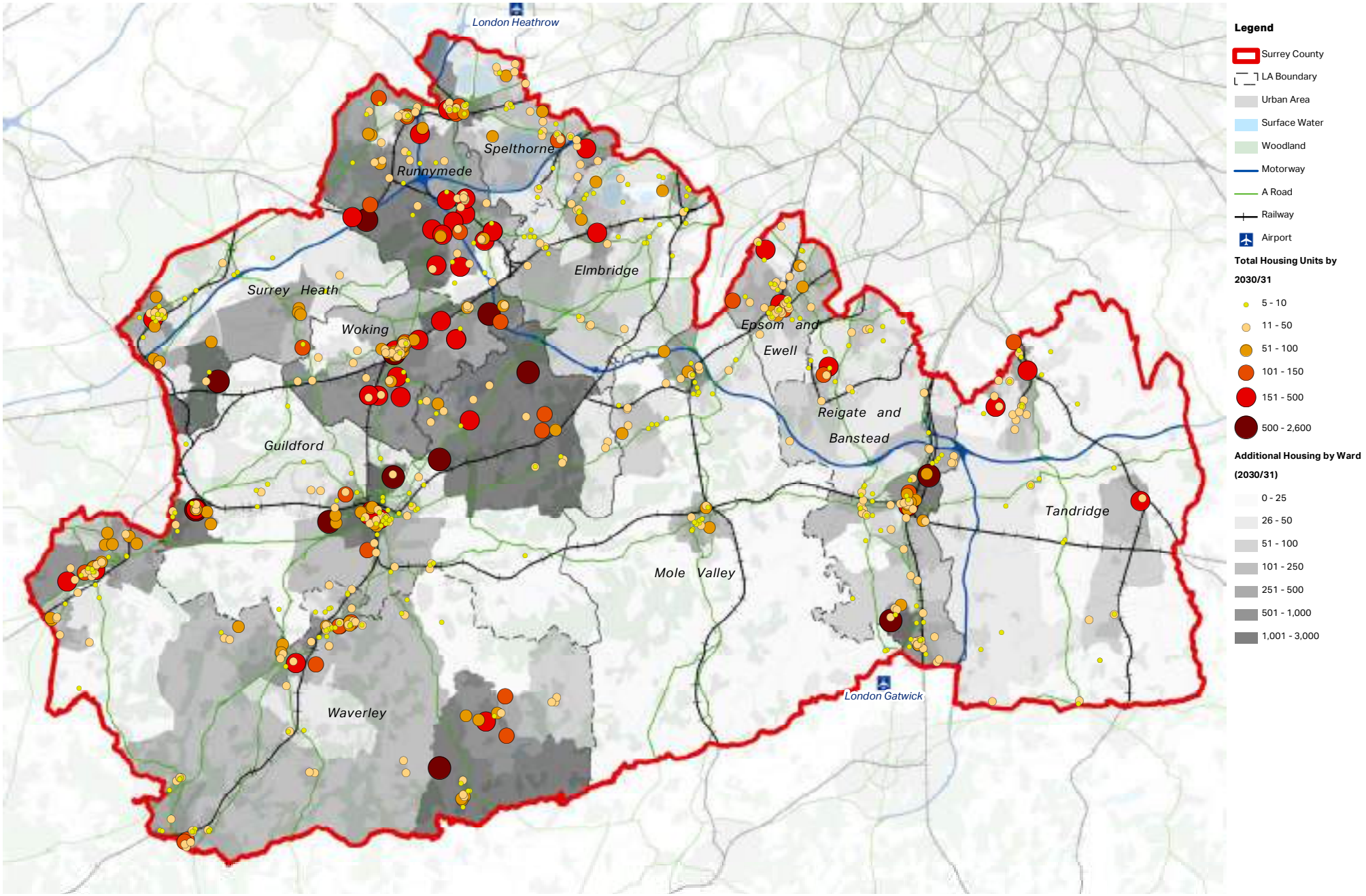


FIGURE 3.19 - MAJOR HOUSING SITES AND GROWTH BY WARD IN SURREY TO 2031

* This is based on the most up to date information at the time of publication and could be subject to change, subject to review of planning policy documents

Source: Local Authority data provided for Infrastructure Study

3.3 ECONOMIC PORTRAIT

SURREY'S ECONOMIC GROWTH IS DEPENDENT UPON ONGOING INVESTMENT IN INFRASTRUCTURE TO SUPPORT ECONOMIC ACTIVITIES, AND A WELL SERVICED HOUSING STOCK TO ENSURE A GROWING WORKFORCE CAN BE ACCOMMODATED. THIS SECTION SEEKS TO SET OUT THE CURRENT AND FUTURE ECONOMIC CONTEXT FOR SURREY AND LIKELY IMPLICATIONS FOR INFRASTRUCTURE.

ECONOMIC CONTEXT

Economic growth in Surrey varies across local authorities, with some areas performing well in many sectors, and others facing economic challenges.

On average, Surrey has seen strong economic growth. It is in close proximity to London as well as key infrastructure including Gatwick and Heathrow airports that connect it with the UK, Europe and the rest of the world. It has strong road and rail infrastructure providing primary connections to London and the rest of the UK (see Figure 3.20).

Surrey is located within the boundaries of 2 Local Enterprise Partnerships (LEPs) - Enterprise M3 (EM3) LEP and Coast to Capital (C2C) LEP.

Enterprise M3, which has been ranked the most resilient LEP area in England, currently has the second largest local business base, third highest skills and labour market, while ranking first in community cohesion. It covers mid and north Hampshire and west Surrey. It covers 14 district authorities across the two counties.

Currently, within the Enterprise M3 LEP there are 86,000 businesses that support 740,000 jobs. The LEP has a total GVA of £53bn. Future investments will focus on knowledge-intensive services that produce high value added in computing, defence, cyber security, digital media and professional services. The Enterprise M3 LEP are currently updating their Strategic Economic Plan. The revised plan will identify additional priorities and aims for future investment.

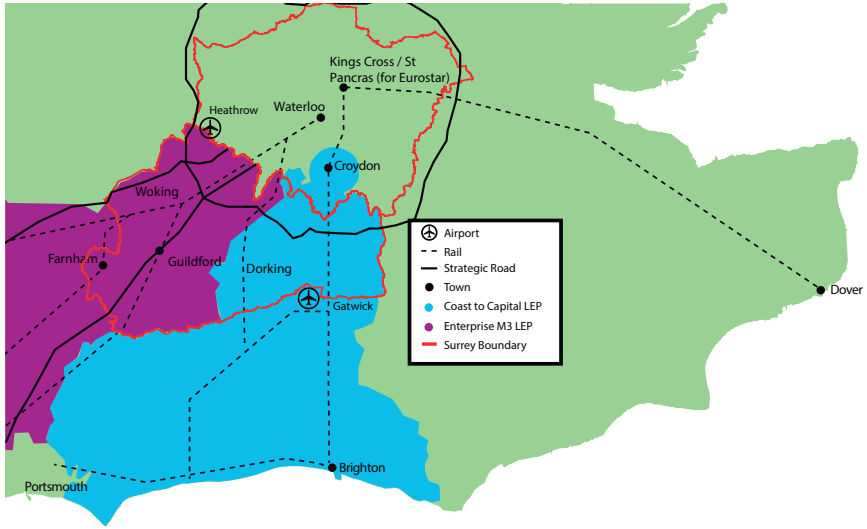


FIGURE 3.20 - REGIONAL ECONOMIC CONNECTIONS

Enterprise M3 aims by 2020 to have an increase of 25,000 jobs, improved GVA per head from 8% to 10% and to grow the overall business base by 1,400 businesses per annum.

The Coast to Capital LEP, covers all of West Sussex, Brighton and Hove, parts of East Sussex, parts of Surrey and extends up to Croydon in South London. The LEP has a total GVA of £49bn. The LEP's investment has a strong transport theme which accounts for the largest single part of its spending, with continued growth around the M23/A23 corridor and Gatwick a priority as it will improve UK and international connections within the C2C area.

Coast to Capital LEP increasingly sees future growth focused on service industries, where 80% of the area's economy is focused. To meet its targets the LEP is focusing on key sectors to improve the digital economy, enhance the environmental resilience to open up new land for development and enhance educational facilities and research centres.

The entire Gatwick Diamond area is increasingly becoming the economic hub of the local area. The Gatwick Diamond Initiative is a business-led partnership, funded by seven local authorities (Epsom & Ewell, Reigate & Banstead, and Crawley Borough Councils, Mole Valley, Horsham Mid Sussex and Tandridge District Councils), two County Councils (Surrey & West Sussex) and Gatwick Airport, aiming to grow the region's existing jobs base, attract new jobs and secure investments from companies that most closely match local industry strengths and the predominant sectors that drive the local economy.

A summary of economic headlines is shown overleaf, although these should be caveated as they do not take into account any consideration of 'Brexit'. The county's distribution of employment density is illustrated by Figure 3.21 on the adjoining page.

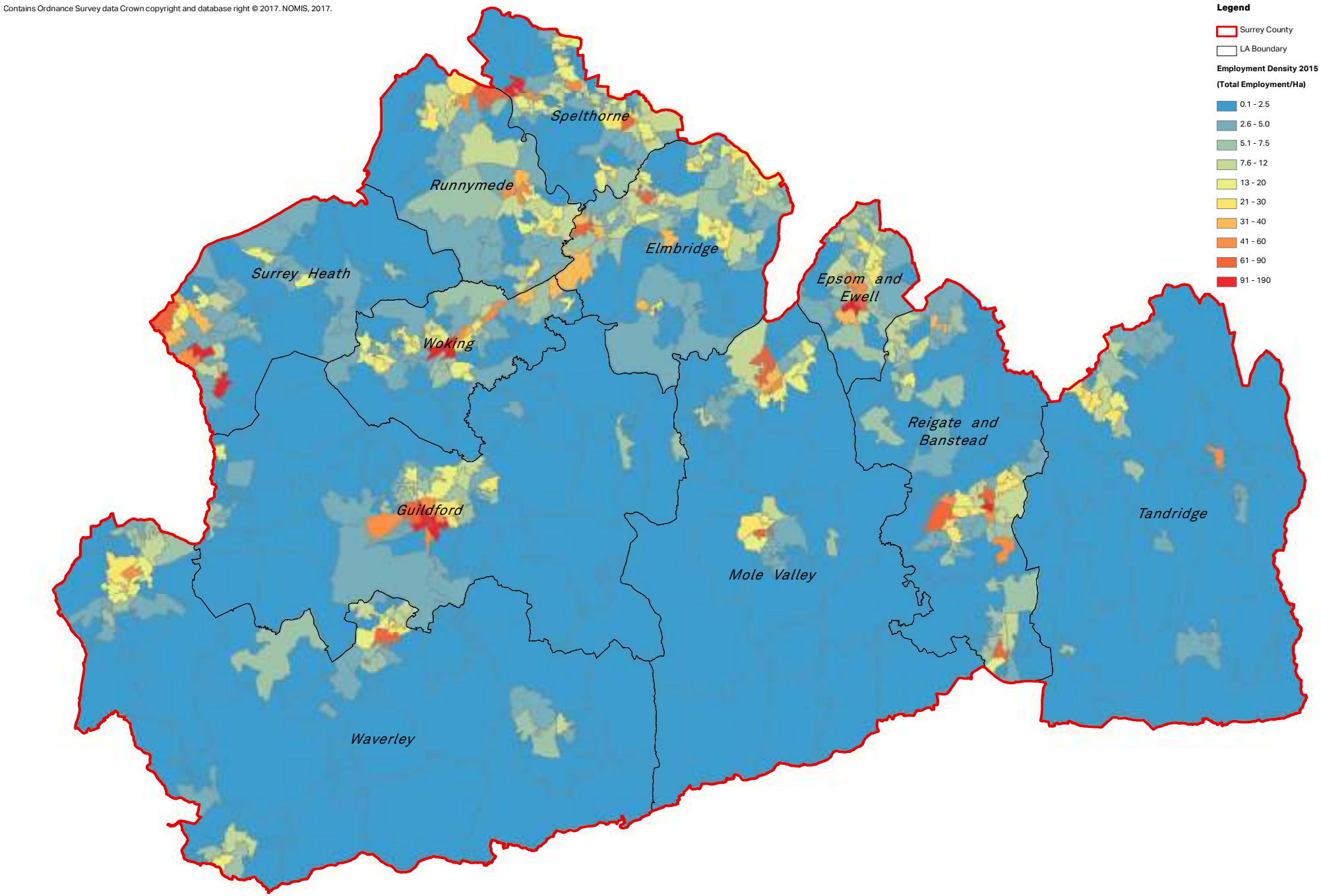
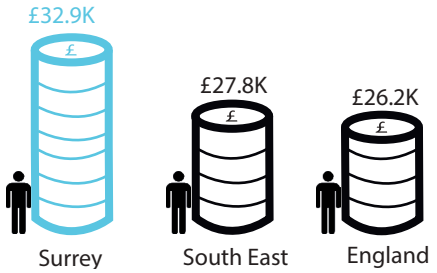


FIGURE 3.21 - EMPLOYMENT DENSITY

Source: ONS Business Register and Employment Survey 2015

Gross Value Added (GVA) per head

is high on average in Surrey



Source: GVA at 2011 (ONS)

FIGURE 3.22 - GVA PER HEAD

Surrey's GVA per head growth from 1997-2015 has outpaced the SE and is in line with the national average

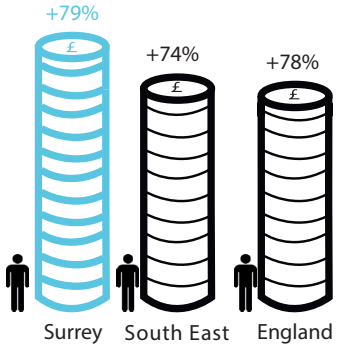
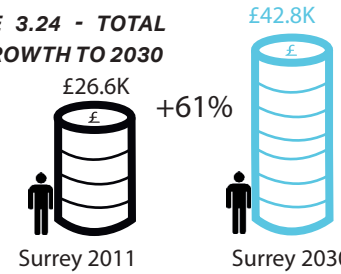


FIGURE 3.23 - HISTORIC GVA GROWTH

Source: GVA at 2015 (ONS)

This rate of growth will slow down to 2030, however Surrey can still expect a significant increase in its GVA per head to 2030

FIGURE 3.24 - TOTAL GVA GROWTH TO 2030



Source:Forecasts and future scenarios for the economy of Surrey: an update to the work done in 2010, 2013, SQW

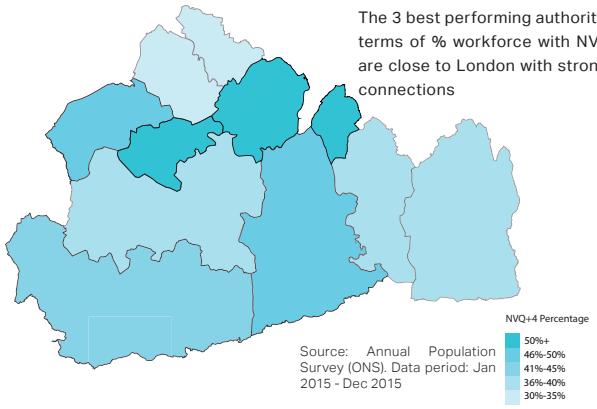
What does this mean?

Surrey does comparatively very well in it's GVA per head, however continued economic investment in infrastructure to enhance the competitive advantage of its proximity to Gatwick, Heathrow and London is necessary.

There is a strong workforce skills profile on average

Source: Annual Population Survey (ONS). Data period: Jan 2015 - Dec 2015

FIGURE 3.25 - % WORKFORCE WITH NVQ4+



Source: Annual Population Survey (ONS). Data period: Jan 2015 - Dec 2015

FIGURE 3.26 - % WORKFORCE WITH NVQ4+

However,

highly skilled occupations

make up 53% of occupations in 2014

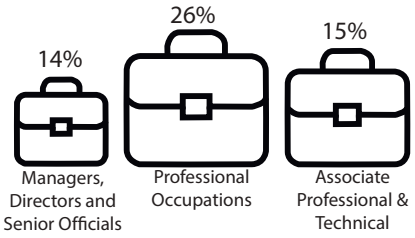


FIGURE 3.27 - OCCUPATIONAL TYPE 2014 Source: ONS 2015

What does this mean?

Overall, Surrey has a highly skilled and diverse occupational base meaning disposable income and in turn quality of life is generally high. However, there are areas of Surrey which lag behind the rest of the county in this respect. Although quality of life is still by no means poor, there is a need to continually invest in these areas, such as Spelthorne, to restrict any further decline and promote growth, while continuing to take advantage of Surrey's strong strategic location relative to London.

Median Salary levels

are significantly higher in Surrey than the average for England and the South East

Source: ONS

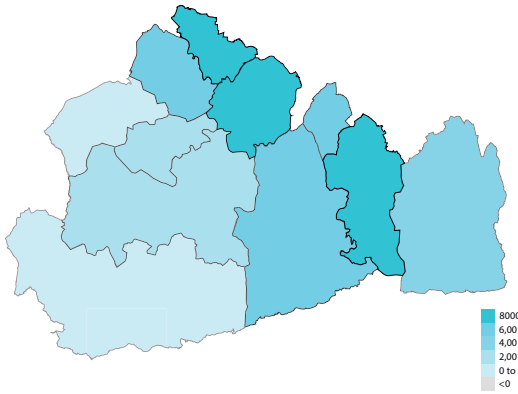
FIGURE 3.28 - SURREY RESIDENT EARNINGS (2016)

This highlights Surrey as a

net exporter of labour

which can impact negatively on GVA figures

FIGURE 3.29 - EXISTING COMMUTER PATTERNS Source: ONS



Elmbridge, Epsom and Ewell, Spelthorne, and Reigate and Banstead had over 7,500+ net commuting to London

All Local Authorities see an outflow of commuters to London

FIGURE 3.30 - NET COMMUTING IN 2014 Source: ONS

What does this mean?

More investment is also needed in transport infrastructure in the areas of high outflow commuting.

Job growth forecast to 2030

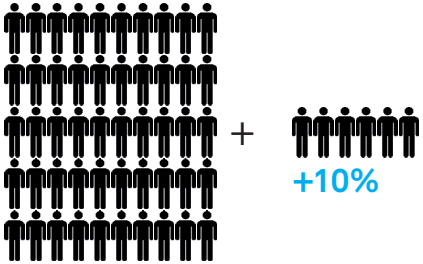


FIGURE 3.31 - JOB GROWTH FORECAST TO 2030

Source:Forecasts and future scenarios for the economy of Surrey: an update to the work done in 2010, 2013, SQW

59,000

new jobs in Surrey to 2030

Most recent forecasts anticipate that by 2030 Surrey will have experienced an increase of 59,000 new jobs, the equivalent of a 10% increase over the time period. However, these forecasts do not take into account Brexit.

Employment Growth in the following sub-sectors:

FIGURE 3.32 - SUB-SECTOR GROWTH TO 2030

Source: Forecasts and future scenarios for the economy of Surrey: an update to the work done in 2010, 2013, SQW

What does this mean?

Infrastructure investment is required to support job growth in areas where economic performance is comparatively weaker and address imbalances across the county.

The largest concentration of jobs is in wholesale, retail & public services

in line with the rest of the country

Wholesale & retail

14% (79,000 jobs)

Public-related services

24% (140,000 jobs)

FIGURE 3.33 - LARGEST EMPLOYMENT SECTORS IN SURREY

Source: - BRES (2015)

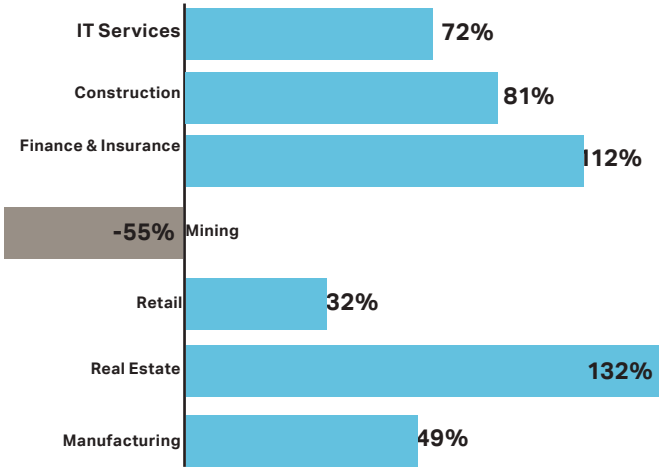


FIGURE 3.34 - SECTOR CHANGE TO 2030

Source:Forecasts and future scenarios for the economy of Surrey: an update to the work done in 2010, 2013, SQW

On average, Surrey has a strong representation in the knowledge economy

FIGURE 3.35 - % OF EMPLOYEES IN THE KNOWLEDGE ECONOMY

Source: - BRES (2015)

However, growth has slowed down in these sectors recently

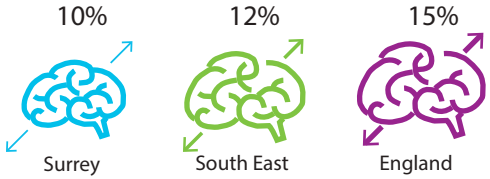


FIGURE 3.36 - GROWTH IN KNOWLEDGE ECONOMY EMPLOYEES (2010-15)

Source: - BRES (2015)

The knowledge economy is strongest in Mole Valley, Reigate & Banstead, Elmbridge, Runnymede, Waverley and Woking where higher value jobs are located:

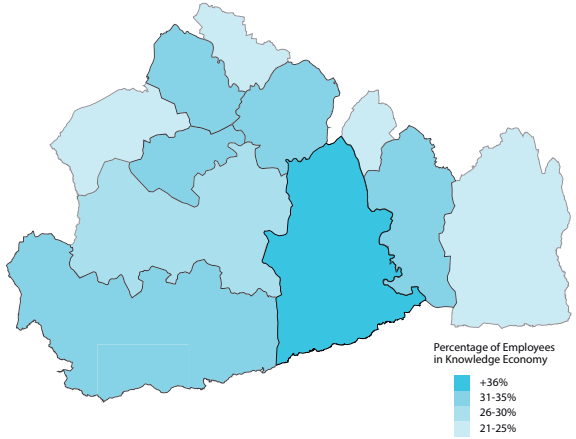


FIGURE 3.37 - PERCENTAGE OF EMPLOYEES IN KNOWLEDGE ECONOMY 2015 Source: - BRES (2015)

What does this mean?

Infrastructure investment is required to support growth in the knowledge economy. This should include attention to softer skills infrastructure provision.

3.4 SITES TO SUPPORT ECONOMIC GROWTH

In order to ensure ongoing economic growth, there are a number of key employment sites across Surrey.

Planning permissions, adopted and draft Local Plan employment allocations and existing employment sites with identified capacity have been recorded and those sites with over 500 sq.m of additional floorspace have been noted in Table 3.1 and illustrated in Figure 3.38.

The data presented here does not represent the net position on employment space (including the loss of employment space over the plan periods as well) but instead highlights significant new sites and capacity.

As illustrated, Surrey will continue to provide a wide range and quantum of commercial accommodation over the coming years and these employment sites will create additional requirements for the local and strategic infrastructure network, in particular the transport network and utility services.

It should be noted that Surrey accommodates a significant number of smaller businesses and employment sites below the 500 sq.m threshold included here.

	BUSINESS	INDUSTRIAL	MIXED USE	RETAIL	OFFICE	OTHER	UNCONFIRMED	TOTAL
Elmbridge	7	5	0	2	0	2	0	16
Epsom & Ewell	2	1	1	0	0	0	4	8
Guildford	12	6	2	7	1	0	0	28
Mole Valley	4	4	0	2	0	0	0	10
Reigate & Banstead	5	0	4	10	0	13	0	32
Runnymede	10	0	0	0	0	1	0	11
Spelthorne	1	0	4	0	0	4	0	9
Surrey Heath	2	2	0	0	0	3	0	7
Tandridge	0	3	0	0	0	0	0	3
Waverley	9	4	0	0	0	0	0	13
Woking	11	4	12	0	0	9	0	36
SURREY	***65***	***30***	***23***	***20***	***1***	***32***	***4***	***175***

TABLE 3.1 - KEY EMPLOYMENT SITES IDENTIFIED OVER 500 SQ.M - PERMISSIONS, ALLOCATIONS AND EXISTING SITES WITH CAPACITY (N.A = FUTURE USE UNCONFIRMED i.e. use has not been detailed in local plan)

Source: Local Authority data provided for Infrastructure Study

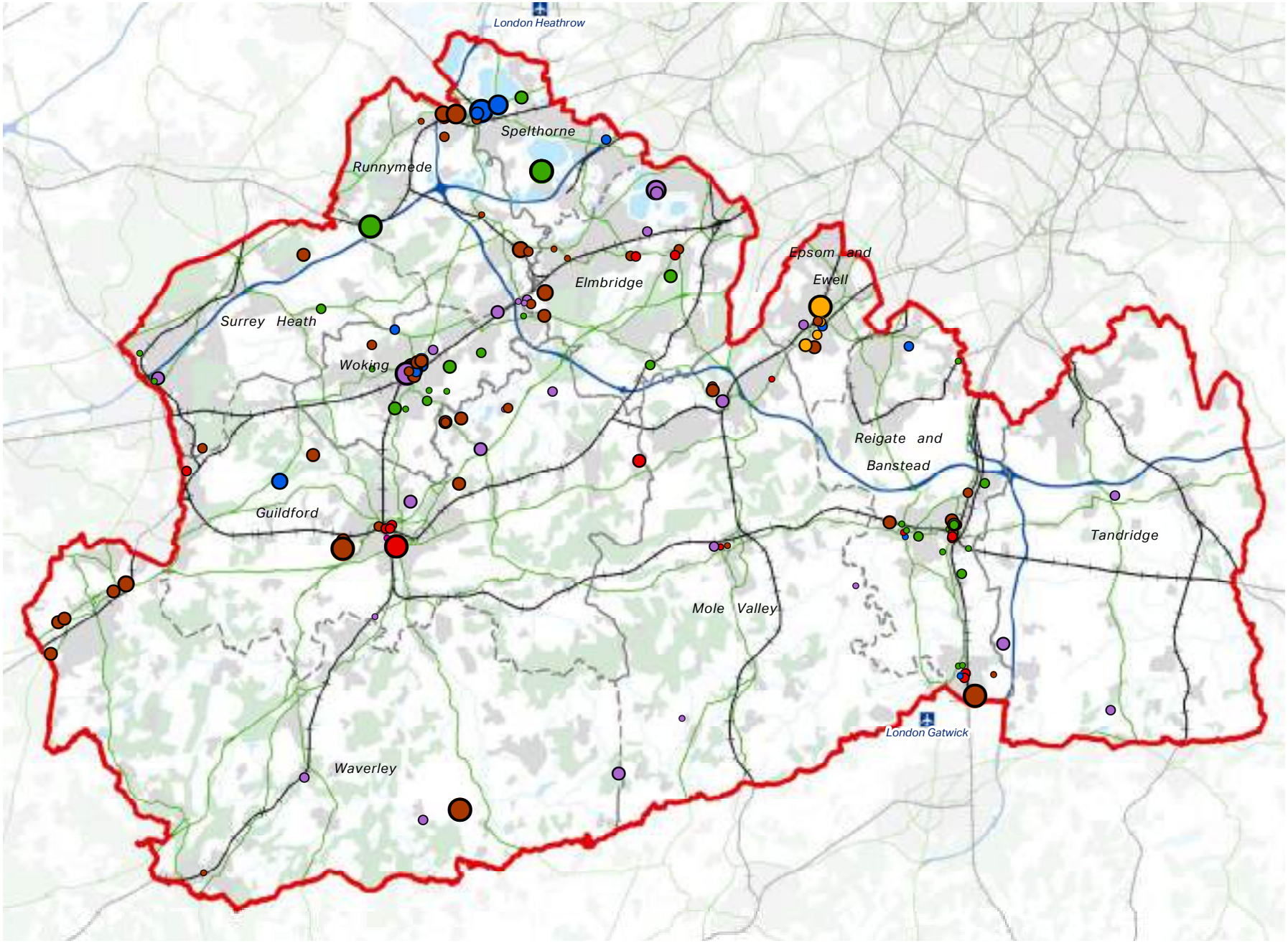


FIGURE 3.38 - SURREY EMPLOYMENT PERMISSIONS, ALLOCATION AND CAPACITY OVER 500 SQ.M

* This is based on the most up to date information at the time of publication and could be subject to change, subject to review of planning policy documents

Source: Local Authority data provided for Infrastructure Study

3.5 WIDER GROWTH

Having presented the forecast housing and economic growth across Surrey to 2031 it is also important to consider the planned growth in Greater London and the counties surrounding Surrey.

Figure 3.39 on the facing page illustrates the extent of planned housing across local authorities which adjoin the boundaries of Surrey County Council between 2016 and 2031.

Figure 3.39 also illustrates a number of key strategic development sites which are proposed in neighbouring authorities and are considered likely to impact on the strategic infrastructure that also serves Surrey in particular transport, education and healthcare. These include but are not limited to:

- Arborfield Garrison, Wokingham.
- Aldershot Urban Extension, Rushmoor.
- Whitehill Bordon, East Hampshire.
- Warfield, Bracknell Forest.
- Northern Horsham, Horsham.
- Heathrow opportunity Area, Hillingdon.
- Croydon Opportunity Area, Croydon
- Bromley Town Opportunity Area, Bromley
- Kingston Town Centre Opportunity Area, Kingston

As can be seen by the illustration of planned growth the greatest pressures of additional growth are likely along the northern and western boundaries of Surrey with a number of large strategic sites to the west of the county and the high level of planned housing delivery across the London boroughs.

ACCOMMODATING LONDON'S HOUSING DEMAND

The GLA's London Plan (2016) sets out the average annual minimum housing supply targets for each London borough until 2025. This identifies a minimum housing supply target across all boroughs of 42,000 homes per annum.

These targets are informed by the need for housing as evidenced by the GLA's 2013 SHMA and London's housing land capacity as identified through its 2013 SHLAA. The London Plan acknowledges that even against its own evidence base the alterations are planning for at least 7,000 shortfall each year over the plan period.

In terms of past housing delivery across London, over the 10 year period between 2004 and 2014, a total of 200,940 homes were completed across London. This equates to 20,094 homes per annum. This is under half the 42,000 housing target set out in the London Plan for the next 10 years, creating a significant shortfall of homes per annum unless delivery is improved significantly.

The report 'London's Unmet Housing Needs' (April 2014) authored by NLP has undertaken a high level assessment of the potential impacts of London forecast demand for housing in relation to the planned housing supply set out within the Plan.

This report identifies that whilst London itself may act with a degree of self containment as a housing market area, it is also clear that it exerts significant housing market pressures across a much wider area. This was recognised by SERPLAN which identified this area as the Rest of the South East (ROSE) area, but which NLP define as London's 'wider HMA' reflecting the fact that London's influence is wider than its administrative boundaries.

London's wider HMA effectively represents the area which London's unmet housing needs will have an influence upon and, therefore, encompasses the areas which will likely need to respond to London's unmet needs within their own Local Plans.

NLP looked at two factors: the migration flows from London to that local authority; and the commuting flow from that local authority to London. These were then converted into a simple percentage representing the extent of housing market linkage an area has with London, and therefore a theoretical proportional share of London's unmet housing demand.

This assessment by NLP suggests that If London fails to meet its housing need between 2015 and 2030 there is every indication that unmet needs in London will necessitate additional delivery of new homes in areas around London including Surrey. The assessment suggests a theoretical demand for housing across Surrey of up to 47,800 homes between 2015 and 2030 in addition to those already planned within the Local authority local plans. The greatest additional pressures are identified for Elmbridge, Epsom and Ewell, Reigate and Banstead and Spelthorne.

It is important to note this is purely a theoretical exercise and has not taken into account the limitations to development from the Green Belt and other constraints. It does however demonstrate the scale of potential impact the London housing demand can have upon Surrey into the future and with it the associated pressures on existing and planned infrastructure capacity. The Mayor is currently carrying out a full review of the London plan and a draft Plan is anticipated at the end of 2017.

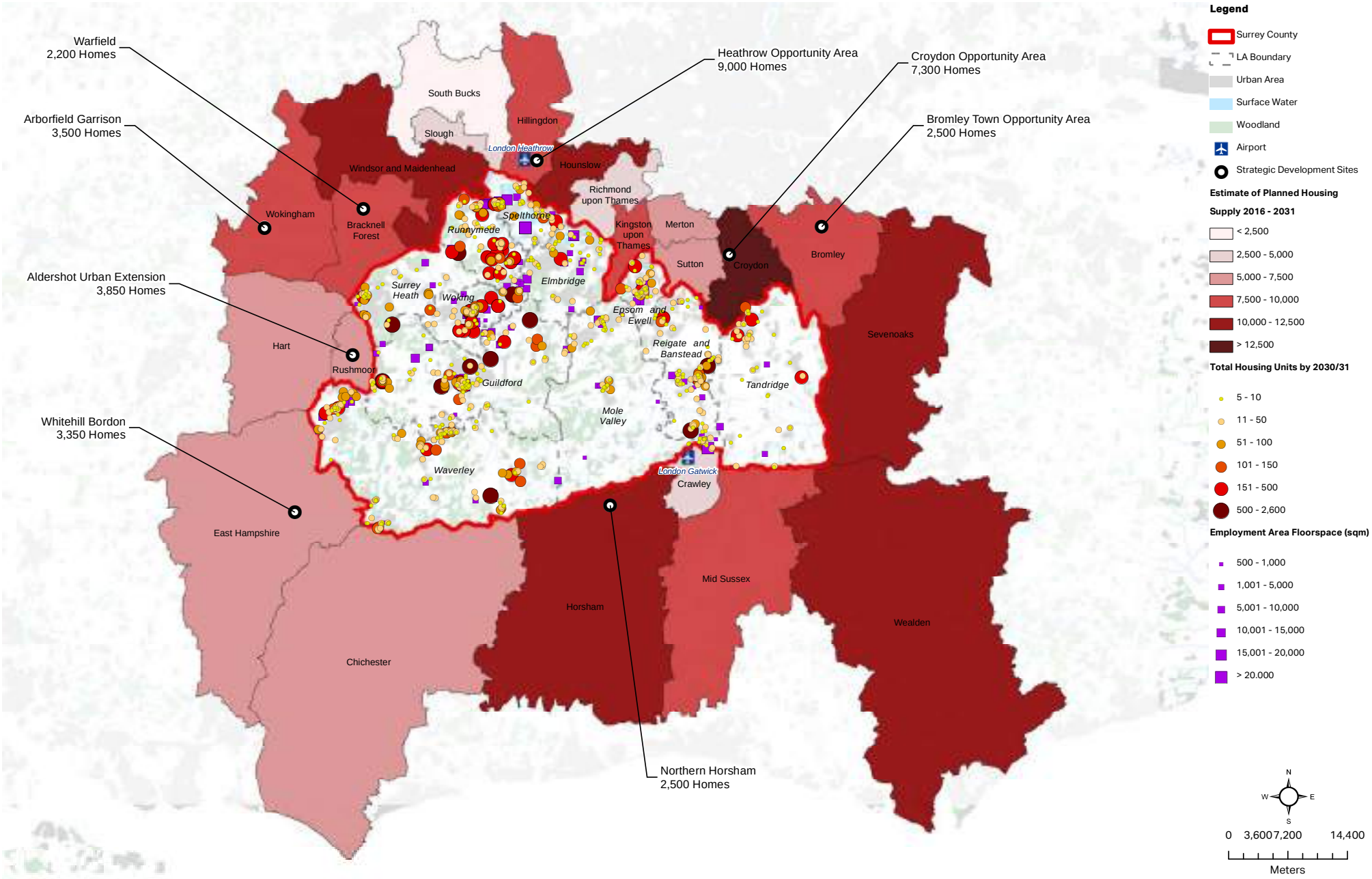


FIGURE 3.39 - ESTIMATED HOUSING FORECASTS AND KEY STRATEGIC SITES FOR LOCAL AUTHORITIES SURROUNDING SURREY COUNTY

Source: Published Local Plan documents and Further Alterations to the London Plan

04

INFRASTRUCTURE NEEDS AND REQUIREMENTS

THIS SECTION PRESENTS AN ASSESSMENT OF CURRENT INFRASTRUCTURE PROVISION AGAINST GROWTH FORECASTS TO 2031.

This covers the following infrastructure categories:

4.1 TRANSPORT

- Highways and roads
- Rail
- Public transport
- Airports
- Walking & Cycling
- Electric Vehicles

4.2 EDUCATION

- Early years and childcare
- Primary education
- Secondary education
- FE, Sixth Form, HE , Adult Education

4.3 HEALTH + SOCIAL CARE

- Primary Care Services
- Hospitals and Mental Health
- Adult Social Care

4.4 COMMUNITY

- Library Services
- Youth services
- Community and Leisure
- Outdoor sports and recreation

4.5 GREEN INFRASTRUCTURE

4.6 UTILITIES

- Energy
- Broadband
- Water + Waste Water
- Waste

4.7 FLOOD PROTECTION

4.8 EMERGENCY SERVICES

The following is considered for each type of infrastructure:

- Existing capacity across the county
- An understanding of infrastructure requirements to support forecast growth
- An analysis of current proposed projects and costs
- An understanding of additional projects and funding gaps required to support forecast growth.

4.1 TRANSPORT

EXISTING CAPACITY

Surrey	Surrey	Surrey
152	3,600	84
Miles of Motorways	Miles of Public Highway	Rail Stations

CURRENT SITUATION

Due to Surrey's location next to London, and the proximity of both Heathrow and Gatwick airports, there is considerable demand for movement within, to, from, and through the county. Surrey's motorways carry 80 percent more traffic than the average for the South East region and the A roads 66 percent more traffic than the national average. This has led to many of the roads already operating at capacity and if a traffic incident occurs, this can cause severe disruption on the wider network.

Surrey's main road and rail networks are radial, centred upon London. Orbital routes, with the exception of the M25, are relatively poor, exacerbated by the dispersed nature of towns.

While the county has a generally comprehensive rail network and a large number of rail stations, many services are at capacity and suffer from peak time overcrowding.

Improved road and rail access to Heathrow and Gatwick airports would increase Surrey's attractiveness as a business location. Currently it is quickest to travel to both airports by car from nearly everywhere in Surrey. Public transport to both airports needs to be faster with more direct services from Surrey towns to provide an alternative to car travel for passengers and employees.

SCC has used technical highway modelling to look at where current and future congestion bottlenecks are and will occur. This information has identified the areas under significant strain as:

- Guildford town centre;
- A3 Guildford;
- A3 between the Ripley junction and the A3/M25 (junction 10) Wisley interchange;
- A245 Portsmouth Road, west of A3 Painshill junction;
- A31 Alton Road on the approach to and through Farnham town centre;
- A22 near
- M3 junctions 3 to 4; and
- M25 junctions 13 to 14.

HIGHWAYS AND MOTORWAYS

The road network in Surrey comprises the Strategic Road Network (SRN), Primary Route Network (PRN) and local roads. The SRN has evolved principally to service London and consists of national trunk roads comprising:

- M25 – London Orbital; almost 1/3 of route is within Surrey
- M25 and M3 – forms part of the Trans European Road Network (TERN)
- M23 – key link to Gatwick and South Coast
- A3 – key link to Guildford and Portsmouth

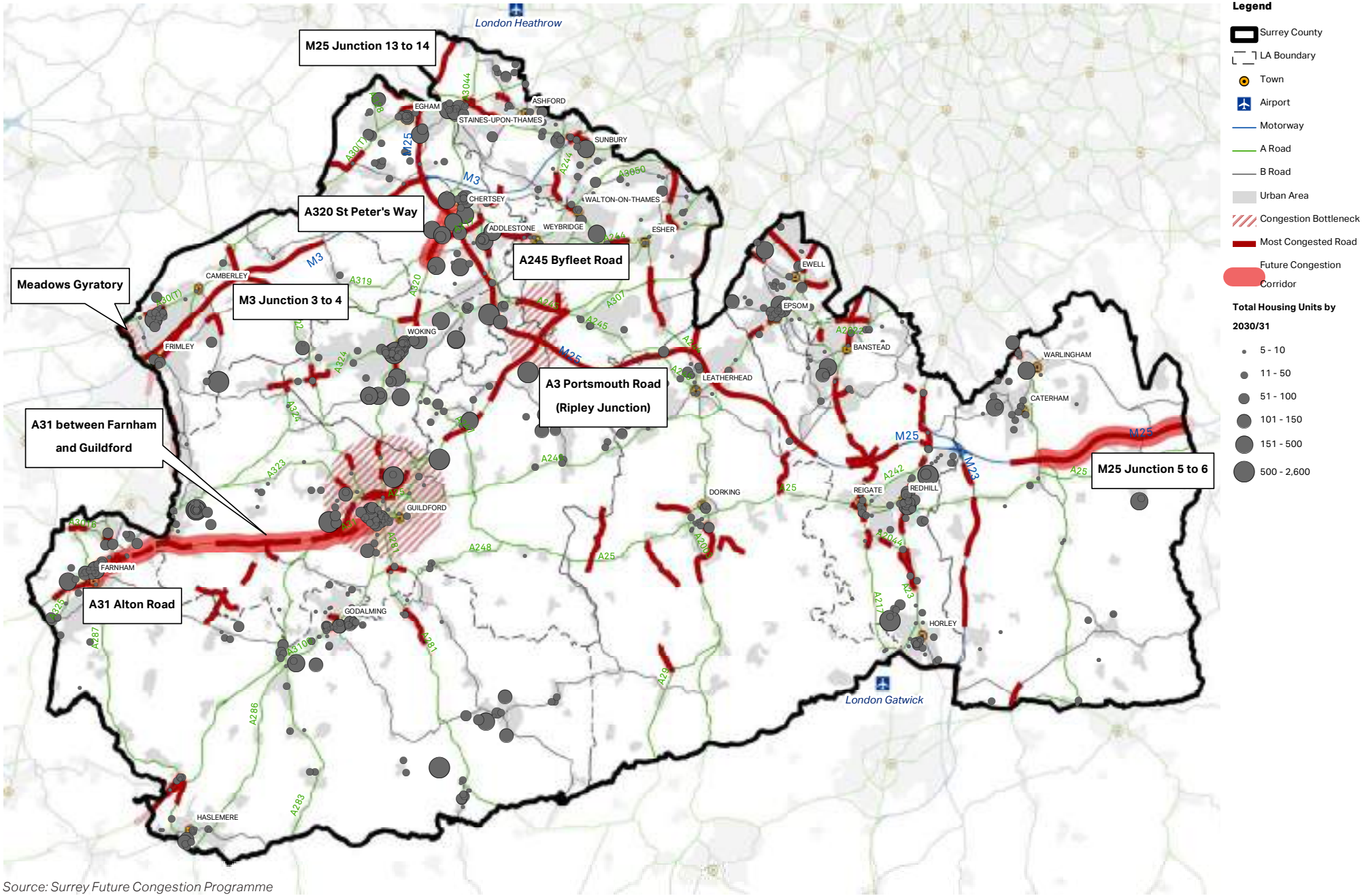
A number of regionally significant trunk roads also make up part of the SRN including the A3 and parts of the A30, A23 and A316 and is managed by Highways England.

Whilst Surrey's highway network is extremely busy, it does not suffer congestion to the degree that some metropolitan conurbations do. However, due to this busy nature, congestion does occur during the peak periods and at local hotspots, and rapidly arises when either incidents occur or traffic flow is disrupted. Surrey is particularly impacted by the knock-on effects of congestion on national roads which results in an increase of through traffic and a reduction in travel efficiency for local traffic. At the same time, travel demand is increasing as a result of additional development, both within and outside the county's boundaries, as well as increasing levels of car ownership and usage across the county which is becoming a larger driver of traffic growth than additional development.

The A3 corridor that provides access to London and Portsmouth in the south is a vitally important strategic route. With the opening of the Hindhead tunnel in 2011 the route has become more attractive to drivers, placing additional pressure on the corridor. Highways England (then Highways Agency) had proposed a number of junction improvements along the corridor as part of the Regional Transport Programme, however funding has been restricted in some instances due to these were abandoned

Figure 4.1

Existing major road network and congestion



Source: Surrey Future Congestion Programme

following the abolition of the Regional Transport Board. More recently, the DfT's Road Investment Strategy: for the 2015/16-2019/20 Road Period (March 2015) has mandated Highways England to prepare a major widening scheme of the A3 Guildford to enter construction starting in the next road period. Highways England has advised that, if an A3 Guildford widening scheme is approved with funding agreed, construction is unlikely to commence until 2024 at the earliest. In the interim, Highways England is considering several early, targeted improvement schemes for the A3 through the Guildford area. In March 2017 the Government committed to improve the A3 northbound off-slip road at the University interchange and the A3 southbound off-slip road at the Stoke Interchange. These improvements are still supported by the County Council and Highways England and are being developed subject to a strong business case and funding. In the longer term a more strategic solution to support a vibrant and growing Guildford is very likely to be required to deal with congestion on the A3. The Road Investment Strategy 2015/16-2019/20 road period includes Improvements to the A3 in Guildford as a schemes developed for the next road period.

Highways England have been undertaking an M25 South West Quadrant Strategic Study, which recognises that there is a need to relieve the motorway network and recommends reducing pressures and providing parallel capacity.

Existing Motorways and Trunk Roads Capacity Issues:

- M23 north of Gatwick;
- M25 J7-14 and J5; and
- M25 South West Quadrant – J12 to 14 is the busiest motorway stretch in Great Britain.
- A3;

Existing Highways Capacity Issues:

- A245 Byfleet Road, west of A3 Painshill junction;
- A24 around Dorking;
- A24 north of the M25 towards Epsom;
- Meadows roundabout A30 / A331 intersection;
- A320 between Woking and Chertsey; and
- A31 Guildford to Wrecclesham.

RAIL

There are currently 84 railway stations in Surrey and the county is served by an extensive rail network. Movements to and from central London are well catered for via the South West Mainline, Portsmouth Direct Line and the London-Brighton mainline. There is limited provision for orbital movement across the rest of Surrey, though the North Downs Line connecting Gatwick and Reading via Redhill and Guildford. The line from Redhill to Tonbridge, the Ascot-Aldershot line and the Virginia Water to Weybridge route offer opportunities to move from one part of Surrey to another without having to interchange closer towards London.

Surrey has some of the most overcrowded train journeys in England and Wales. Not all parts of Surrey are well served by rail. Some towns have no direct connections to London and rail connectivity to both Heathrow and Gatwick Airports from most of Surrey is poor.

BUS

The local bus network is an integral part of the transport system in Surrey. Some of the more urbanised areas of Surrey, and particularly those areas bordering London, are relatively well served by bus services. In rural areas, particularly to the south of the county, there are fewer routes and services are less frequent, many operating only hourly or at lower frequencies. There are three bus stations: Guildford, Redhill and Staines located in Surrey.

SCC, as the local transport authority, has an important role working in partnership with bus operators to develop quality bus partnerships to help enhance the bus offer and encourage more patronage. SCC is responsible for the highways on which the buses run, the traffic signals, junctions and bus lanes that can expedite their movement, as well as bus stop infrastructure, information and passenger waiting facilities.

AIRPORTS

Heathrow and Gatwick airports are vital to Surrey's economy and convenient and efficient access is essential. Improved road and rail access would increase Surrey's attractiveness as a business location.

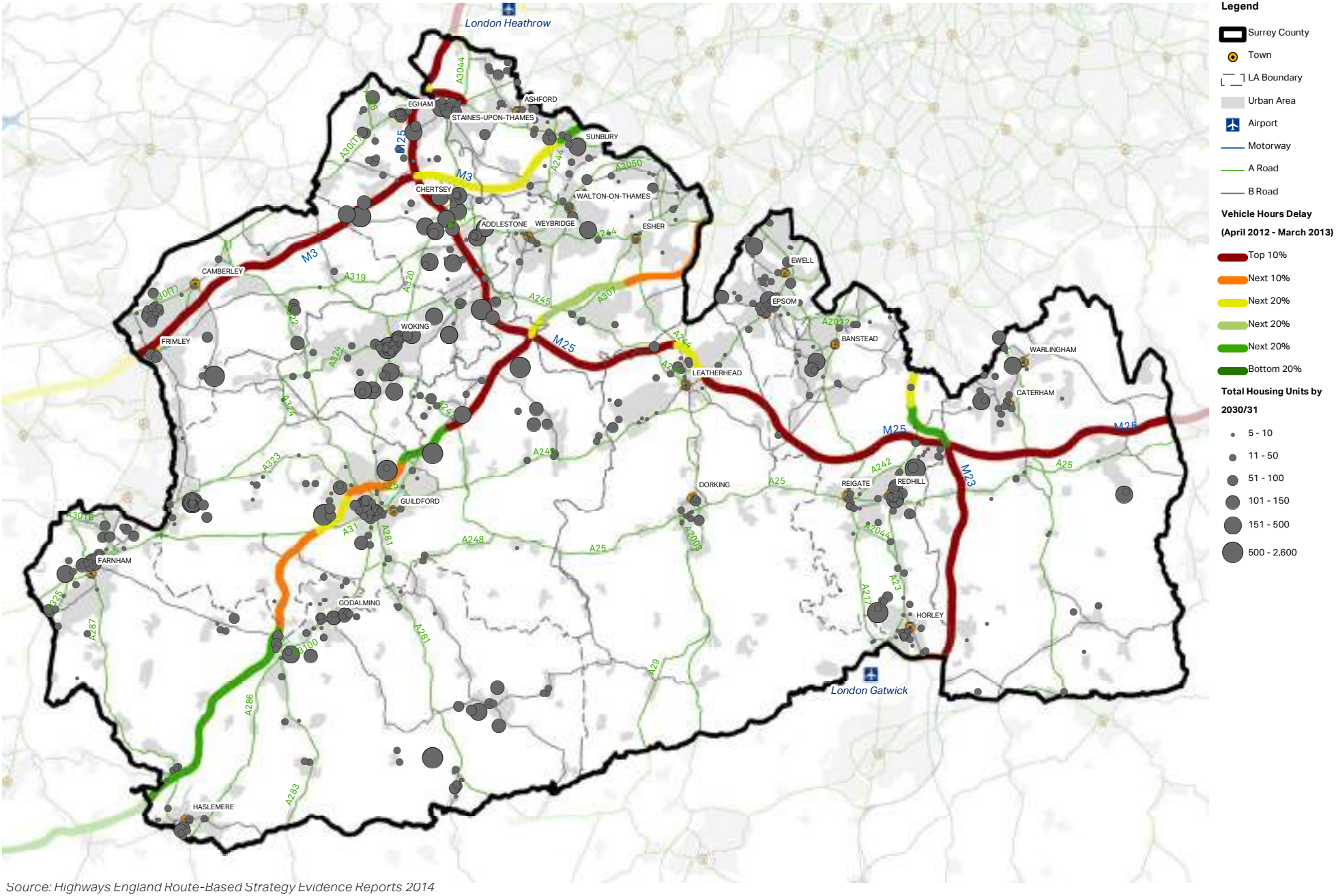
Currently it is quickest to travel to both airports by car from nearly everywhere in Surrey, even at peak times and with the high levels of congestion on Surrey's roads. Over 80% of passengers to both airports travel by car (private, rented or taxi), as do most employees at the airports coming from Surrey.

Congestion travelling to the airports leads to lost time for individuals and businesses. Improvements are needed on a number of routes including the A23/ M23 Hooley Junction, part of the A23 corridor to Gatwick. Public transport to both airports also needs to be faster with more direct services from Surrey towns to provide an alternative to car travel for passengers and employees. Currently, only Fastway 20 and 100 bus services provide quick and direct bus link to Gatwick.

The impact of various options is currently being assessed, including improving rail access to Heathrow from the south, and improving bus and coach services to both airports, as well as the North Downs Line improvements for Gatwick.

Figure 4.2

Motorway and trunk road - Vehicle Hours Delay



Source: Highways England Route-Based Strategy Evidence Reports 2014

WALKING & CYCLING

Surrey has almost 3,448 kilometres (2,143 miles) of footpaths, bridleways, and byways. SCC has produced a Right of Way Improvement Plan and Cycling Strategy as part of the county's Transport Plan.

High levels of bike ownership in Surrey indicate significant suppressed demand for cycling. However there are a number of issues and challenges, including but not limited to:

- The need to equip different road users with the skills to share the road safely
- The challenge of achieving cycle infrastructure segregation on narrow, congested roads

ELECTRIC AND HYDROGEN VEHICLES

The government is aiming for 'almost all' cars and vans to be zero emissions by 2050 and for the sale of new petrol and diesel vehicles to be prohibited by 2040. Hence by 2030, electric vehicles (EVs) - and to a lesser degree hydrogen fuel cell vehicles - are anticipated to increase significantly from their current market share. Plug-in hybrid EVs offering a smaller electric range in combination with a conventional petrol engine are also projected to grow significantly in the short to medium term. Home charging off-street on driveways makes up the largest proportion of charge points for EVs and this is expected to continue in the future and suited to Surrey's suburban/rural character. Beyond private households, Surrey has a sparse but growing network of off-street charge points (slow, fast and rapid) including at public car parks, workplaces, car dealerships and motorway service stations. The county council has so far installed only a handful of charge points on-street (for car club vehicles in Guildford) and at some council work places. Zap map provides the most comprehensive map of all publicly accessible charge points. Challenges for EV infrastructure include:

- Lack of interoperability; currently drivers must join multiple schemes if they wish to access all of the installed points.
- Demand for a range of types of charge point (not just due to desired speed) but because there is currently no fully universal charging plug type.
- Grant funding for installation but not for maintenance
- Capacity of the local electricity grid, particularly for the most demanding 'rapid' charges
- Obstacles relating to on-street charging including street clutter and questions as to whether parking bays should be reserved for EV users only
- Fast changes in technology - need to ensure that infrastructure provided isn't obsolete within a few years

Hydrogen fuel cell vehicles are further from mass market, but are being developed by a number of manufacturers. Hydrogen refuelling is faster than EV charging so a highly distributed network, as required for EVs, is not envisaged. In February 2017, the UK's first hydrogen filling station to be located on a forecourt opened in Surrey at Cobham services. A degree of diversity, with both electric and hydrogen vehicles meeting different needs is anticipated.

PROJECTS TO SUPPORT GROWTH

MOTORWAYS

Strategic corridors within the county are subject to high levels of congestion. Based on estimates of housing and population growth, Highways England are expecting future congestion on these routes. Schemes are required to manage this additional stress upon the network:

- Improvements to the strategic Wisley interchange between the A3 and M25 Junction 10 due to start 2019/2020
- The A23/M23 Hooley interchange north of the M25, experiences high levels of congestion and is identified as an investment priority by Highways England but is currently on hold.
- Capacity problems at M25 Junction 9 need to be addressed to facilitate growth in Leatherhead, whilst the future congestion projected between junctions 5 and 6 will also need to be considered and addressed.

Cost = £548,000,000
Funding Gap = £0

HIGHWAYS

The A3 is an area of significant congestion that is likely to get progressively worse. Delivery of projects to relieve congestion in town centres and along congested corridors will be critical to delivering growth.

- A3 Guildford Road Investment Strategy includes improving the A3 in Guildford from the A320 to the Hog's Back Junction with the A31, with associated improvements
- Several improvements are proposed in Guildford. This includes town centre traffic improvements and exploring options for reconfiguring traffic, increasing pedestrianisation, and major public realm improvements.
- A series of interventions along the A217 to relieve traffic congestion
- As part of the Greater Redhill Sustainable Transport Package, capacity improvements are being investigated at the A23 junction with Three Arch Road and Maple Road
- A281 Horsham Road / A248 Kings Road / A248 Broadford Road junction improvement scheme
- A31 Guildford to Wrecclesham
- A320 Corridor Strategic Solution to M25
- A217 / A23 / A25 wider network benefits

The future redevelopment of Dunsfold Aerodrome will result in a significant impact on the local and strategic highway network. In addition four potential locations for Tandridge Garden Village are currently being explored, including Redhill Aerodrome. This will require the provision of a new junction onto the M23 resulting in significant impact in terms of traffic flow.

Cost = £1,015,340,000
Funding Gap = £568,340,000*

RAIL

Capacity improvements are required to support growth and sustainable travel.

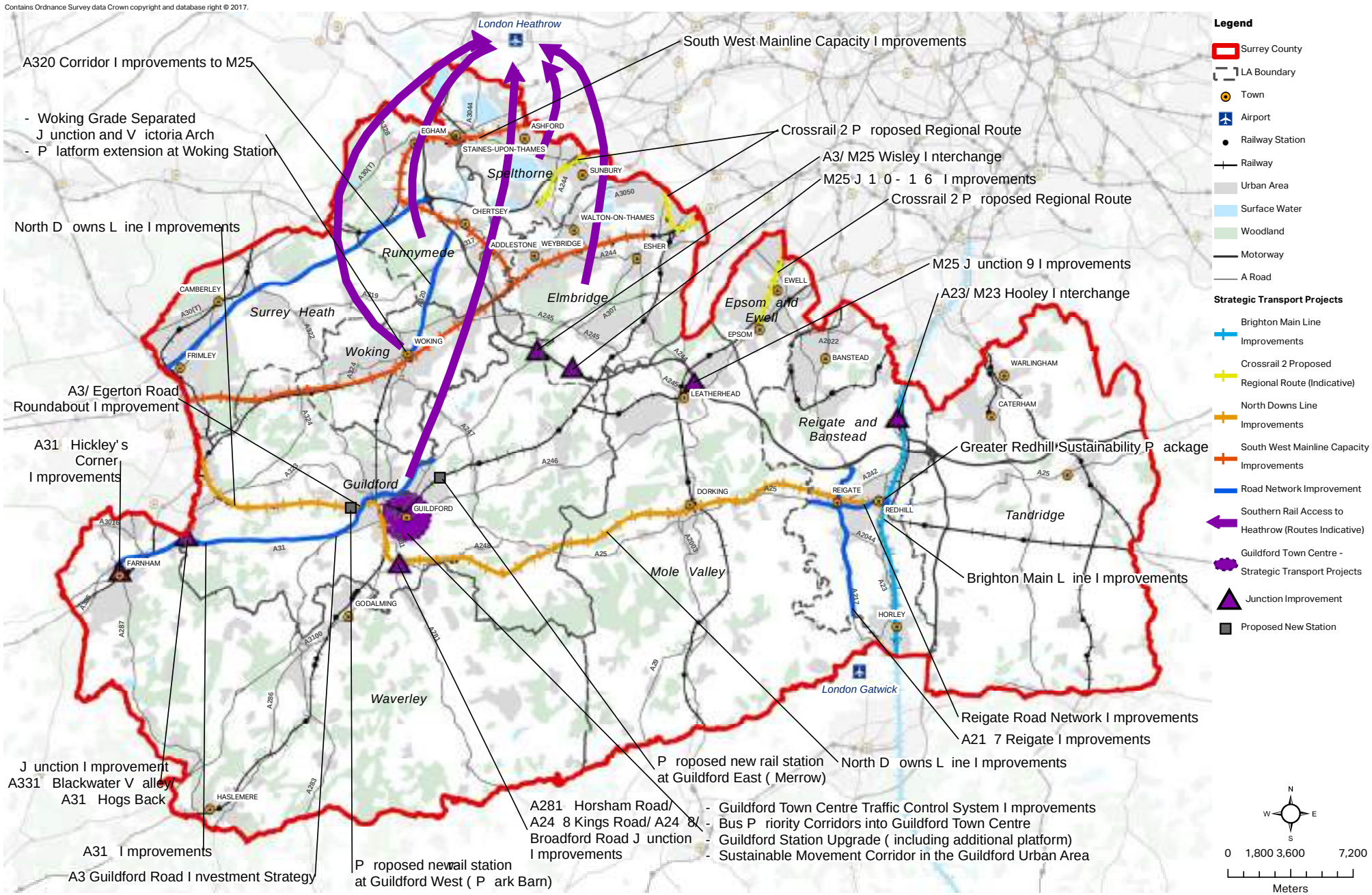
- The Surrey Rail Strategy highlights the need for capacity and infrastructure enhancements, including electrification, train lengthening and line speed enhancements on the North Downs Line, coupled with junction improvements, the removal of bottlenecks and associated capacity enhancements on the Brighton Main Line, all of which will improve orbital rail services across Surrey. This will increase capacity and journey opportunities on both lines and enhance access to / from Gatwick Airport. Additional station requirements at Guildford East (Merrow) and Guildford West (Park Barn) have also been highlighted through our Rail Strategy.
- The Wessex Route Study identifies key projects including the Woking Flyover, Platform 6 extension at Woking and an additional platform at Guildford Station.
- Crossrail 2 could potentially provide a significant capacity increase on the Southwest Main Line (SWML) largely addressing the forecast capacity gap, and extend lines into Surrey at Epsom, Shepperton and Hampton Court. The proposed regional route which extends into Surrey at Epsom and potentially other stations in the county is currently supported within Surrey's Rail Strategy. SCC has published a study to identify the optimum configuration of Crossrail 2 for Surrey and the best use of released capacity.
- Public transport to Heathrow needs to be faster with more direct services from Surrey. The impact of various options has been assessed, including options to improve Southern Rail access.
- A major railway station upgrade at Guildford, with infrastructure and service improvement at Longcross.
- Improving the operation and interface of Reigate Level Crossing and the A217 in Reigate town centre

Cost = £1,086,930,000
Funding Gap = £901,500,000*

** (considering both secured and expected funding)*

Figure 4.3

Strategic transport projects



Source: Map illustrates key strategic projects across the county but is not exaustive of all schemes recorded.

BUSES

To enable local bus services to operate efficiently and reliably, and to be attractive to new passengers, there is a need to deliver appropriate infrastructure and traffic management to support this. This will assist with encouraging bus operators to provide increased bus service frequencies and reduced journey time, while achieving high passenger satisfaction. Enhanced bus services will increase public transport accessibility to areas of employment and will support the sustainable development of new housing.

Quality Bus Corridors are being developed in partnership with the bus operators across the important economic centres in Surrey, including Redhill and Reigate, Horley, Epsom, Guildford, Woking, Staines and along the Blackwater Valley to Camberley. These schemes will include bus priority measures, new bus shelters, access improvements at bus stops, real time passenger information, marketing and promotion, and greater bus/rail interchange providing better connectivity.

Cost = £50,650,000
Funding Gap = £13,570,000*

WALKING & CYCLING & OTHER TRANSPORT

A series of walking and cycling improvements from the provision of new cycle routes to the widening of footways are required across all local authorities within Surrey in town centres and at busy junctions, not only to enhance connections for pedestrians and cyclists but to also improve access to public transport.

- The Sustainable Movement Corridor in the Guildford urban area is the most ambitious bus transit, walking and cycling scheme currently planned in the county. It will provide priority pathway for pedestrians, cyclists and buses, largely along existing roads in the town.

Greater Redhill Sustainable Transport Package is a series of improvements along sections of the A23: the A2044 and the A217 corridors in and around Redhill, Reigate, Salfords and Harley and along the National Cycle Route 21 (NCR21). Delivery of some of the elements of the package is already complete. The remainder of the works including bus corridor improvements and various cycle and pedestrian paths should be completed by March 2018.

Cost = £378,630,000
Funding Gap = £207,590,000*

ELECTRIC AND HYDROGEN VEHICLES

Central government grant schemes are in place for installation of charge points at workplaces and homes. On the Strategic Road Network Highways England is tasked with ensuring there is at least one charge point every 20 miles, although this is clearly below anticipated demand levels. Further to this, the government plans to legislate to enable an element of control in a primarily market-led approach to charge point network growth. For example creating new powers to require interoperability between charge point providers and requiring open-source information on the location, live status and prices of charge points. Proposed powers will extend to mandating charge point installation in selected strategic locations, should a market-led approach prove inadequate. The county council is currently developing an EV charging strategy. This is considering issues of location, type (charging speed and vehicle compatibility), accessibility and installation and maintenance contracts, in order to develop a coordinated charge point network.

** (considering both secured and expected funding)*