BEXLEY LOCAL CHARACTER STUDY



Rev 4 May 2021

LB BEXLEY

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Bexley Local Character Study
LB Bexley

Some of the content in this report was is drawn from the LBB Urban Morphology Study, produced by We Made That and Troy Planning

LBB Placemaking Projects Team

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Purpose

The Local Character Study defines spatial qualities within the borough, qualities that should be protected and enhanced through planning policy and new development. The specific conditions that make up these qualities are set out in this report.

The purpose of this study is to inform policy and decision making. In particular it will serve as a key piece of evidence to support both the emerging Local Plan and the Draft Design Guide Supplementary Planning Document.

It identifies aspects of the physical environment in the borough - both built and unbuilt - that are fundamental to its unique character.

The study sets out processes that have shaped, and continue to shape the physical character of the borough. The forces behind these changes are socio-economic, geographical and architectural, and directing future changes in the borough must take account of these ongoing processes.

Aside identifying these forces of change, the study also analyses how this is affecting the built environment today. It does this through breaking the borough down into areas that share common physical characteristics, such as landscapes, urban typologies or geographic areas. In each case the study sets out the spatial qualities that should be protected, aspects that create poor environments, and how sensitive these areas are to change in the future.

Policy Context

The National Planning Policy Framework (NPPF) sets out the Government's economic, environmental and social planning policies for England and how these are expected to be applied. It must be taken into account in preparing the development plan, and is a material consideration in planning decisions.

The NPPF places local character at the heart of planning. Paragraph 9 sets out that development should take local circumstances into account, to reflect the character, needs and opportunities of each area. Section 12 Achieving well-designed places in particular makes clear that plans and decisions should take account of the existing character and context. Paragraph 127 seeks to ensure that developments "are sympathetic to local character and history, including the surrounding built environment and landscape setting". Where there is a strong sense of place, developments should seek to maintain it. Poor design is described as that which "fails to take the opportunities available for improving the character and quality of an area". Whilst local character should not be used to prevent or discourage appropriate innovation or change, it must still be a key consideration.

The desirability of maintaining an area's prevailing character and setting must be taken into account in policies and decisions that seek to make efficient use of land by achieving appropriate densities (paragraph 122).

Elsewhere, the NPPF describes the key contributions to local character made by both the natural environment (section 15) and the historic built environment (section 16).

As with all policies, design and related policies must be underpinned by relevant and up-to-date evidence. Policies affecting local character must be "grounded in an understanding and evaluation of each area's defining characteristics" (paragraph 125). Elsewhere, the NPPF suggests that evidence about local character, such as area-wide design assessments, can support the delivery of land for housing. The Bexley Local Character Study serves as that evidence base. The document sets out an evaluation of the borough's

defining characteristics, providing the understanding of local character necessary to support the draft Local Plan and the Design SPD.

The importance of understanding local character is underscored in the national planning practice guidance (NPPG) on Planning for well-designed places. It in turn sign-posts to the National Design Guide, which highlights the importance of existing character and context to good design, suggesting that good development enhances positive qualities of local character whilst improving negative ones. The NPPG also emphasises the need for a robust evidence base underpinning policies related to design, noting that local design principles "are most effective when based on appropriate evidence of the defining characteristics of the area, such as its historic, landscape and townscape character" (paragraph 004). The design principles and other guidance in the emerging Design Guide SPD will be informed by the descriptions of Bexley's characteristics set out in this study.

London Plan

The London Plan describes the intrinsic relationship of high quality design to existing character and context. The Plan seeks to draw on the positive aspects of places to help inform the future enhancement and development of an area, requiring planning policy and decisions be underpinned by a nuanced understanding of local character.

Policy D1 instructs boroughs to define the character of the borough through area assessments of the characteristics, qualities and value of different places. The policy describes the elements of character that covers the physical, social and growth context that must be analysed.

This analysis must be used to identify suitable locations for growth within the borough, and ensure accommodating change is consistent with respecting character.



1 West Street, Erith

Bexley Today

Bexley
Communities
Urban Form
Views
Landscape
Movement

Bexley

The London Borough of Bexley is an outer London borough in south east London, covering an area of just over 6,000 hectares. It shares its borders with the London Boroughs of Greenwich, Bromley, Thurrock in Essex, Barking and Dagenham, and Havering, as well as Sevenoaks and Dartford in Kent. Being positioned within London, on the edge of Kent and in the heart of the Thames Gateway, Bexley contains a unique combination of characteristics such as its industrial legacy, suburban character, Metropolitan Green Belt, and water courses.

The ONS mid-2019 population estimate for Bexley is 248,000. This figure is projected to increase to around 300,000 by 2040.

Bexleyheath is the borough's main strategic centre whilst Sidcup, Welling, Crayford and Erith are additional major town centres. These centres make a significant contribution to the borough's employment and are centres for retail and services.

There are three main railway lines running through Bexley in an east-west direction (covering zones 4-6). They connect the borough to central London to the west and Kent to the east. Currently there are no underground or Docklands Light Railway services in the borough, however will extend as far as Abbey Wood, in the north west of the borough. Long term, it is anticipated that Crossrail could be extended further east into the borough. Bexley is well served by Transport for London buses; the reliance on buses being significantly elevated due to the relative lack of alternative modes of public transport.

The A2, A20 and A2016 are the main vehicular routes through the borough. Similar to the railway lines, these run in an east-west direction, linking Bexley to central London, Kent and the M25. These routes are heavily used by commuters, often resulting in congestion at peak times.

Current north-south transport links are poor and the lack of crossings over the River Thames means that Bexley is physically cut-off from its adjoining authorities of Havering and Barking and Dagenham.



2 Mitchell Close, Belvedere

Communities

The socio-economic profile of a place is fundamental to its character, the way this character is perceived by people and the propensity for this character to change over time.

The demography of a local area has a profound influence on the way it is perceived, both by those living there and by outside observers. It also influences the way residents utilise that built environment, in terms of the occupational density of the housing stock, the maintenance of buildings and landscaping, and the uses that congregate within the area to serve the residents. Finally, it is a key factor in the nature of change and development in an area by determining the need for types of spaces and the level and type of change which is considered acceptable.

For those reasons, the relationship between the character of a place and its socio-economic profile is important, though potentially fraught with complications. Although Bexley's built environment is broadly uniform across the borough with regards to morphological features including housing types, urban form and structure, and topography, the borough comprises a collection of separate and distinct places – these distinctions are outputs of various elements including historical evolution and land uses, and in some instances reflect different demographic profiles of those places. This document sets out the broad demographic make-up of the borough and highlights where distinctions exist. This make-up is defined through a series of socio-economic data, such as Indices of Multiple Deprivation, health and wellbeing indicators, population density, employment data, educational qualifications, and crime statistics.

The document analyses data at a variety of spatial levels. Note that ward boundaries were recently amended in May 2018 and many data sets are based on the previous wards.

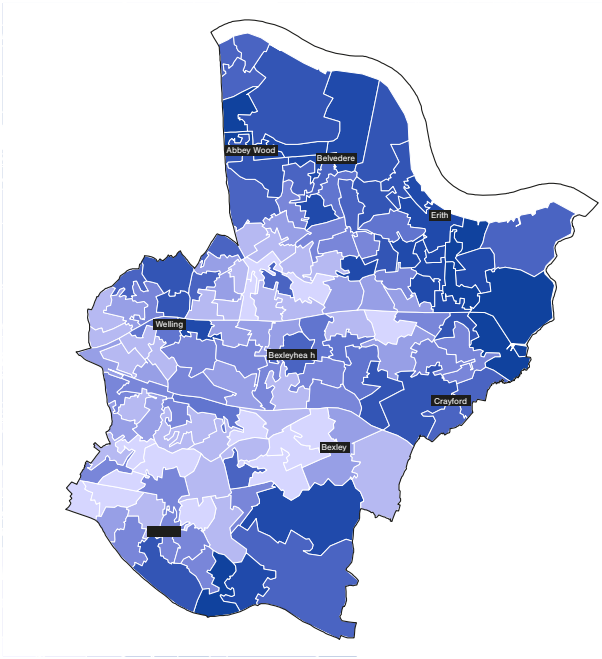


3 English indices of deprivation 2015. DCLG. https://www.gov.uk/government/statistics/english-indices-of-deprivation-2015

Deprivation

The standard measure of deprivation is the Index of Multiple Deprivation (IMD), a Government source which calculates relative deprivation for every Lower Super Output Area (LSOA). The IMD is based on 37 indicators across domains of income, employment, education, health, crime, barriers to housing and services, and living environment.

Each domain has a different weighting, with factors such as income and employment being weighted more heavily than living environment. The results are shown as an IMD decile. The most recent IMD was calculated in 2015[3].



4 Index of Multiple Deprivation Deciles across Bexley by LSOA, 2019

The borough-wide picture is one of relatively low deprivation, with an average IMD score of 16.17. The average rank is 13,505, out of a total 32,844 LSOAs across England.

Bexley has some of the lowest levels of deprivation within England. Although there are some areas of deprivation, none are within the top 10% in England; by contrast, at least a dozen are within the least deprived LSOAs in England. Bexley's deprivation levels are even lower relative to London, which as a region contains the majority of the most deprived areas of the country along with the North East, Liverpool, Manchester, Sheffield, and Derby. Bexley's average IMD score is the 8th lowest in London and its average rank is also the 8th out of London.

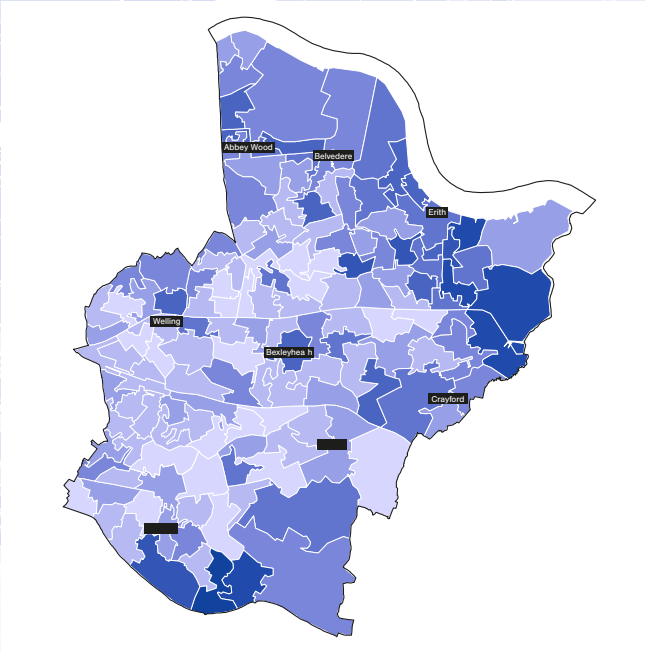
There is a clear spatial distribution of deprivation in the borough, with a strip of deprivation across the north and other areas in the south around the Crays, in East Wickham, and in parts of Crayford. There is a central band of relatively higher (though still lower) deprivation along the A2/Bexleyheath railway line corridor. By contrast, most of the LSOAs with the lowest levels of deprivation are found in a broad swathe of the south of the borough around Bexley Village and to the north of Sidcup town centre, in addition to other spots around Barnehurst and the St Michaels area of Welling/Bexleyheath.

Health and Wellbeing

The health of the Bexley population is generally better than the England average. This considered, issues of health disparities are present in the borough with life expectancy being 6.4 years lower for men and 5.1 years lower for women in the most deprived areas of Bexley when compared to those within the least deprived areas. Childhood obesity has also been identified as an issue within the borough, given that for pupils in Year 6, 24% of children are classified as obese or severely obese, which is worse than the average for England. A snapshot of childhood obesity levels at both Reception and Years 6 ages is shown in Figure 5. The borough is also experiencing increasing rates of diabetes.

Data from Sport England's Active Lives Survey (published October 2019) suggests that the percentage of Bexley adults who engage in regular physical activity is comparable with the London and national average (with 64.6% classified as active). In addition, 10.5% of Bexley adults are classed as not being active enough, whilst 24.9% are inactive.

Research from the Children's Active Lives Survey (published December 2018) suggests that only 15.4% of Bexley's young people are being active 60 minutes or more every day (CMO guidelines), with more than 36% doing less than 30 minutes a day.



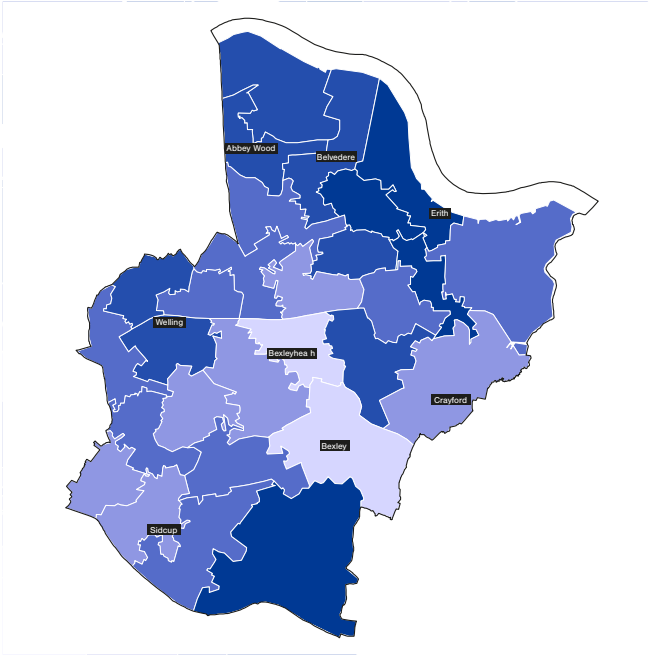
5 Index of Health Deprivation Deciles across Bexley by LSOA, 2019

Consultation undertaken as part of the development of the Health and Wellbeing Strategy has highlighted mental health to be of particular concern among the borough's population. The proportion of young people (5-16) affected by mental health disorders is slightly lower in Bexley than the average for London and the average at a national level. The overall suicide rate combined for males and females in Bexley is also slightly lower than the average for London and at a national level.

6 LBB Health and Wellbeing Strategy 2020

5 Source: GLA datastore

While the proportion of residents suffering directly from mental health disorders in Bexley is lower than the regional and national averag es, mental health is a particular concern to local people[6].



7 Year 6 children obesity by MSOA, 2019

7 Source: Public Health England

< 15%
15-24%
24-28%
28-40%
> 40%

Population density

Bexley was home to 247,258 in mid-2018, up from 231,997 in 2011 (Census) and 218,300 in 2001 (Census). Population growth has been a constant feature of Bexley's character, with the most significant increase in the 1930s when the total population doubled from 100,000 in 1931 to 200,000 in 1941. Population growth is expected to continue, with the GLA 2017-based trend population projections projecting that the borough will be home to just under 300,000 residents in 2040.

Children and young people (under 25) account for almost a third of the population, whilst older people (aged 65 and over) account for a sixth. The black and minority ethnic population accounted slightly less than a quarter of the population (22% in 2017). International migration is relatively slow compared to other parts of London and the country, with only around 500 international migrants moving to Bexley each year; the 2011 Census shows the top three countries of birth for those born outside of the United Kingdom as Nigeria, India and Ireland.

The population density is 4,086 people per sq kilometre, based on a borough area of approximately 60.5 sq kilometre. However, Bexley residents actually live in areas which are denser than suggested, because the borough-wide population

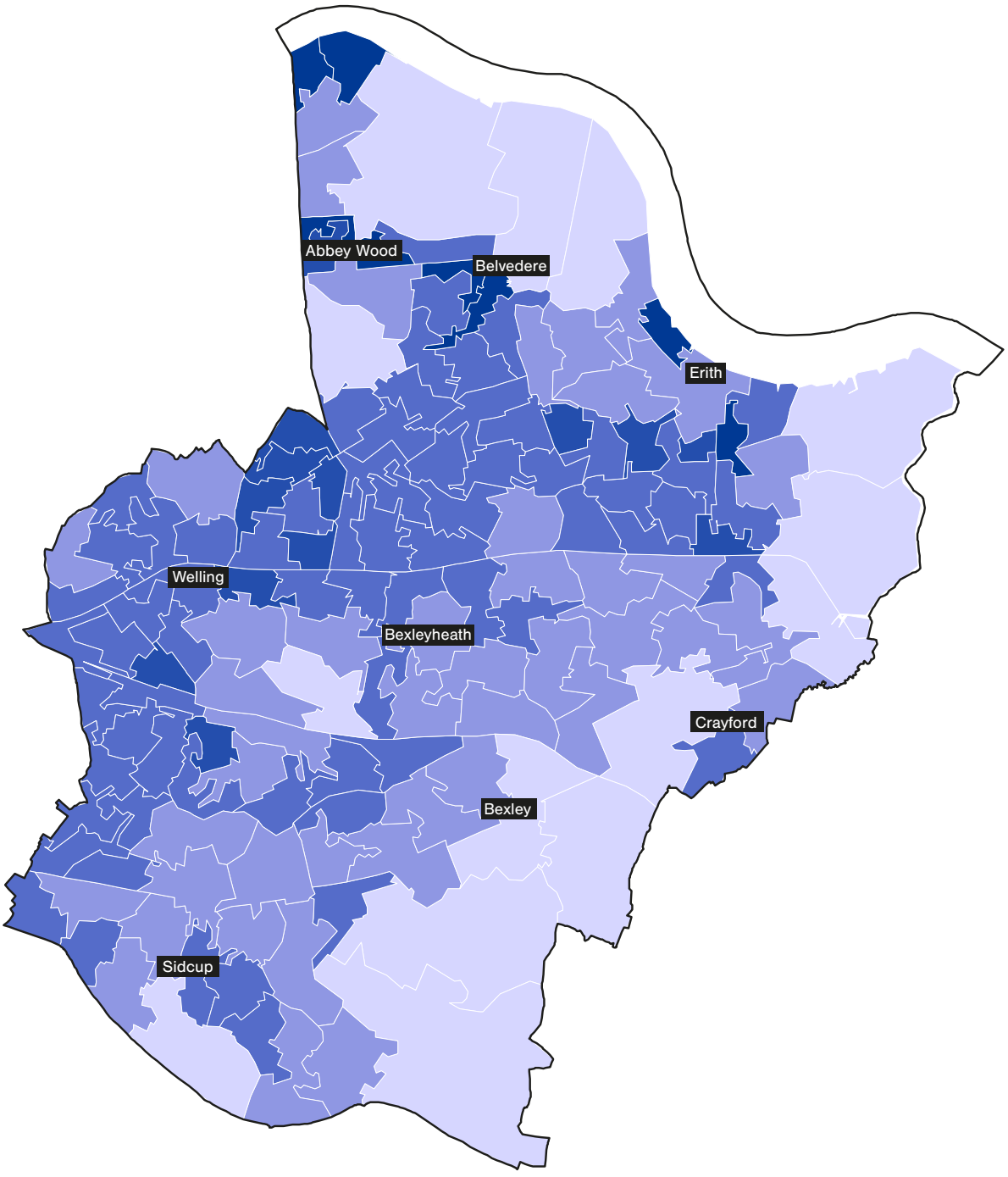
density is skewed by rural areas such as around North Cray and the borough's extensive parklands. Bexley's built up areas have far higher levels of population density; excluding rural or other sparsely-population areas (those LSOAs with fewer than 2,000 people per square kilometre), the borough's population density is actually 5,104 people per square kilometre.

Bexley has one of the lowest population densities of London boroughs, with only five boroughs having lower numbers of people per square kilometre. Its population density is lower than the London average, which is 5,729 people per kilometre. However, the London average is skewed by highly dense areas, such as the Islington and Kensington which are amongst the most dense areas of the United Kingdom. Bexley's population density is broadly in line with the average population density for outer London, which stands at 4,291 people per kilometre.

Bexley's residents live in the 101,000 households estimated to exist across the borough. The average household size was 2.495 at the 2011 Census.

The wards in the north of the borough have larger populations than those in the middle and south. The 2016 population of Thamesmead East was 12,524, with 13,536 residents in Belvedere and 12,974 residents in Erith, whilst southern wards much smaller populations including 10,847 in Longlands and 11,865 in Sidcup.

There are strikingly higher levels of population density in the north of the borough than the south. An analysis of population density by LSOA found that the top five most dense areas in the borough are all in the north.



8 Population density by land area
Source: ONS

< 25pph
25 - 50pph
50 - 75pph
75 - 100pph
> 100pph

N

0 2km

Employment

Bexley's historical development as a suburban community is reflected in the continuing high proportion of working residents who live in the borough to take advantage of the quality of life offered but commute into central London to access a variety of jobs. Other residents commute to other outer London boroughs or to Kent.

But Bexley's economy does not rely entirely on commuters bringing home central London salaries. Locally, there is a broad business base, ranging from award winning, innovative small and medium enterprises to major multinational companies. In 2017, there were 8,860 businesses in Bexley, providing some 73,000 jobs, representing a high rate of economic activity. The number of businesses and jobs is on track to grow, thanks in part to the fact that start-up rates are higher than other boroughs. There is however relatively poor job growth in the borough, and slower growth in employment rates generally, with the number of Bexley residents in employment now increasing at a slower rate than the rest of London.

Many of jobs are in key sectors including logistics, construction and manufacturing. A recent review of employment land has found recent growth in industries education, health, and knowledge economies including scientific and technical activities. Bexley is a highly industrious borough and is one of the most important manufacturing locations in London, home to almost 400 companies making everything from sausages to prestige sports cars. These businesses are concentrated in the borough's town centres and industrial locations, including along the nearly six miles of River Thames frontage that supports one of the highest rate of commercial river activity in London.

Statistics[9] indicate a high rate of economic activity amongst Bexley residents, with the ONS annual population survey 2018 indicating that 79.9% of adults aged 16-64 are economically active. Most of these are employed and just over a tenth of borough residents are self-employed. The unemployment rate of adults aged 16-64 is 3.2%, one of the lowest rates in London, but the proportion of 18 to 24 year olds in Bexley claiming jobseekers allowance is higher than the London average.

Residents work in a variety of roles which require varying skills levels. Approximately one-third (32.3%) of working residents are managers, directors, single officials or in professional occupations. Another third (32.6%) are at associate or administrative levels. A tenth are in skilled trades occupations, and the remainder are in unskilled occupations including sales and customer service.

9 ONS Annual Population Survey, Jan 2018-Dec 2018, ONS Crown Copyright Reserved [from Nomis on 12 July 2019].

Although the borough has a very low unemployment rate, a ward-level analysis[7] of Bexley's rate of Claimant Count (those people looking for work whilst claiming an out-of-work benefit) as a proportion of the population finds rate of unemployment benefit claims are higher in the north of the borough.



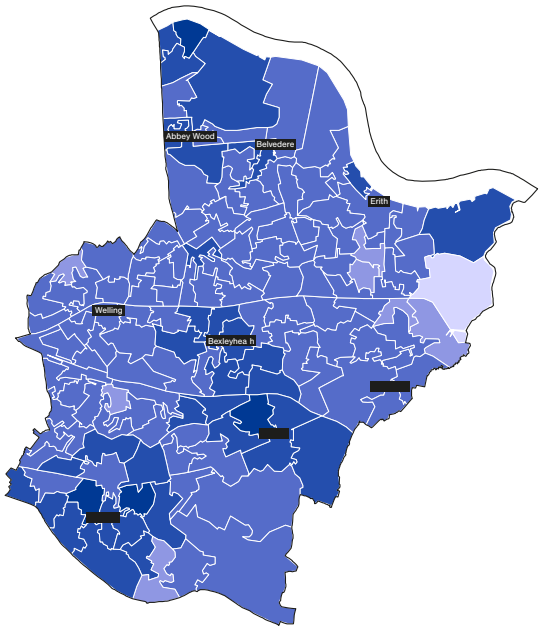
10 Claimant count as proportion of ward population (Courtesy LBB Insight Team)

The highest rates of claimants are in Erith (3%), North End (2.5%) Thamesmead East (2.4%) and Belvedere (2%) wards, all of which line the borough's northern border. The lowest rates are in the middle and towards the south of the borough, with only 0.6% of the working age population in St Michaels and Brampton Wards claiming.

Educational Qualifications

A lower proportion of Bexley's working age population has qualification of degree level or above relative to both London and UK averages. The spatial distribution of those with such qualifications is focussed around Sidcup, Bexley village and North Thamesmead. In general the level of population with a degree or above is higher in the south of the borough.

The proportion of the population with no qualification is close to the London average and slightly lower than UK averages. The spatial distribution of those with no qualifications is focussed in the area North of Welling and in Slade Green.



11 Population with degree or above, 2011

10 Insight Team, LB Bexley, An Economic Assessment, April 2018. https://www.bexley.gov.uk/sites/default/files/2020-07/Economic-Assessment-of-the-London-Borough-of-Bexley.pdf

11 Source: ONS

Crime

Bexley is one of London's safest boroughs when it comes to crime, both in terms of the number of crimes committed and the rate of crime by population, according to data provided by the Metropolitan Police.

In the year to June 2019, there were 16,776 crimes counted in the borough. This equates to a crime rate of approximately 67 crimes per 1000 members of the population.

Violence against the person was the most common crime type reported within Bexley during this period by a substantial margin, representing 28.6% of all reported crimes. Other frequent crime types included theft (17.6%), vehicle offences (17.3%), and burglary (10.9%), This broadly mirrors London in terms of frequency of crime types, except violence against the person is only the second-most frequent type of crime London-wide but is the most common type within Bexley.

Bexley has one of the lowest incidences of reported crimes in the capital. During the same period in which Bexley saw 16,776, the London-wide crime count was 881,614, a rate of 97.97 crimes per 1000 population. Some boroughs reported significantly higher numbers of crime, including Westminster which reported 75,354 offences, a rate of over 298 crimes per 1000 population, despite having a similar size population as Bexley. Even other London boroughs experienced far higher incidents, such as Hounslow which reported 26,260 crimes, a rate of 94.4 crimes per 1000 population. In fact, during this period only four London boroughs reported a lower rate of crimes. Bexley reported the lowest rate of crime in south east London.

Despite its relatively low rates of crime, Bexley experienced one of the highest rises in crime rates over the previous five years of all London boroughs, according to a comparative analysis of borough crime rates from 2014/15 to 2018/19. Crime rose 28% during this period, the fourth largest increase amongst all London boroughs.



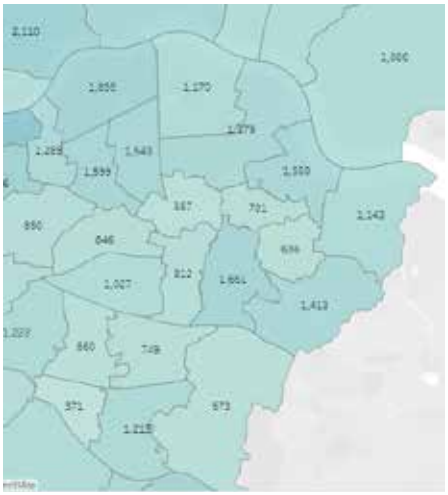
12 Crime statistics by London borough, July 2018 to June 2019

Crime rates do not tell the full story, because perception of crime is arguably more influential in perception of a place than the actual crime rate. There is

a disparity between crime rates and perception of crime rates – people feel that there is more crime than is reported and they feel more likely to be a victim of crime than the odds indicate they actually will be. For example, 1 in 5 people (19.1%) told the Crime Survey for England and Wales (CSEW) in March 2016 that they were very or fairly likely to be a victim of crime in the following year but in reality the same study found crime prevalence in the year ending March 2016 was actually 15.2%.

Whilst there are crime hotspots within the borough, they do not cluster within any geographic region but are rather dispersed across the area. A review of crimes reported by safer neighbourhood area[9] – a geographic area assigned by the Metropolitan Police for administrative and patrolling purposes – shows the distribution of crime across the borough.

Notably, every safer neighbourhood area in the north of the borough experienced a high level of crime, but not every area which experienced a high level of crime is in the north of the borough. Thamesmead, Belvedere, Erith, and Slade Green & North End all reported high levels of crime, but so did Falconwood & Welling, Bexleyheath, Crayford, and Sidcup. It appears that crime is most frequent in areas with district or strategic town centres, expect in the north of the borough where it is found in areas without town centres including Thamesmead East and Slade Green & North End.



13 Crime statistics by Safer Neighbourhood Team, July 2018 to June 2019

Urban Form

Bexley's urban form is determined by predominant building types and the period in which the area developed, each of these aspects given local variations by topographical features across the borough. This landscape, of river valleys to the north and east and uplands to the west and south of the borough structures the pattern of urban form.



14 Interwar housing built on uplands above Edwardian and Victorian urban fabric of Erith

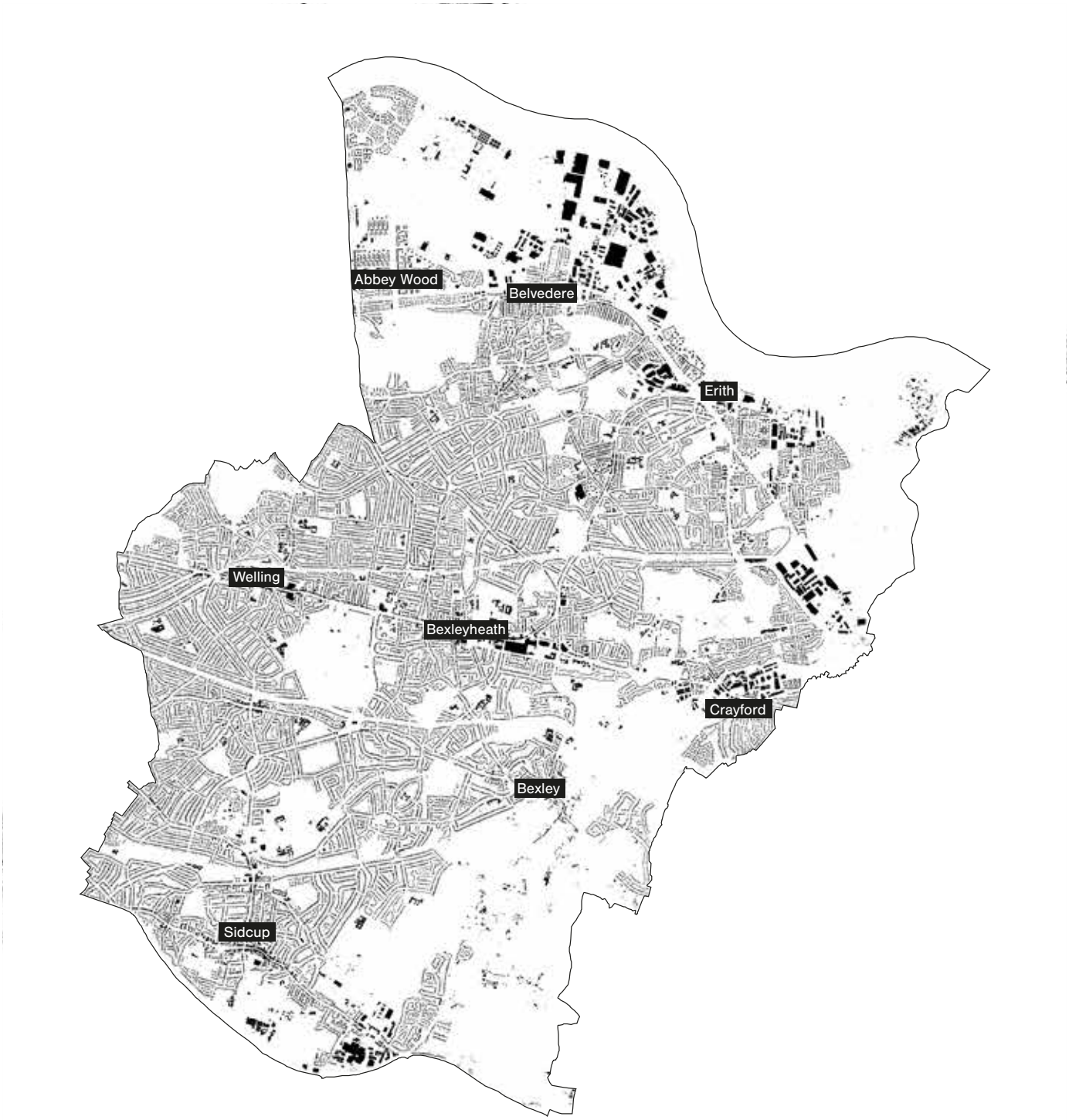
The river basins, particularly the Thames due to its scale, creates layers of different urban grains parallel to the rivers.

This follows a sequential pattern of large scale industrial urban form, denser flatted development, tight grained terraces on the valley edges followed by a looser grain semi-detached and detached housing on the uplands. These patterns are reflected in the size of buildings, with larger buildings on the higher, flatter ground; smaller buildings on the slopes and very large buildings along the valley floors itself.

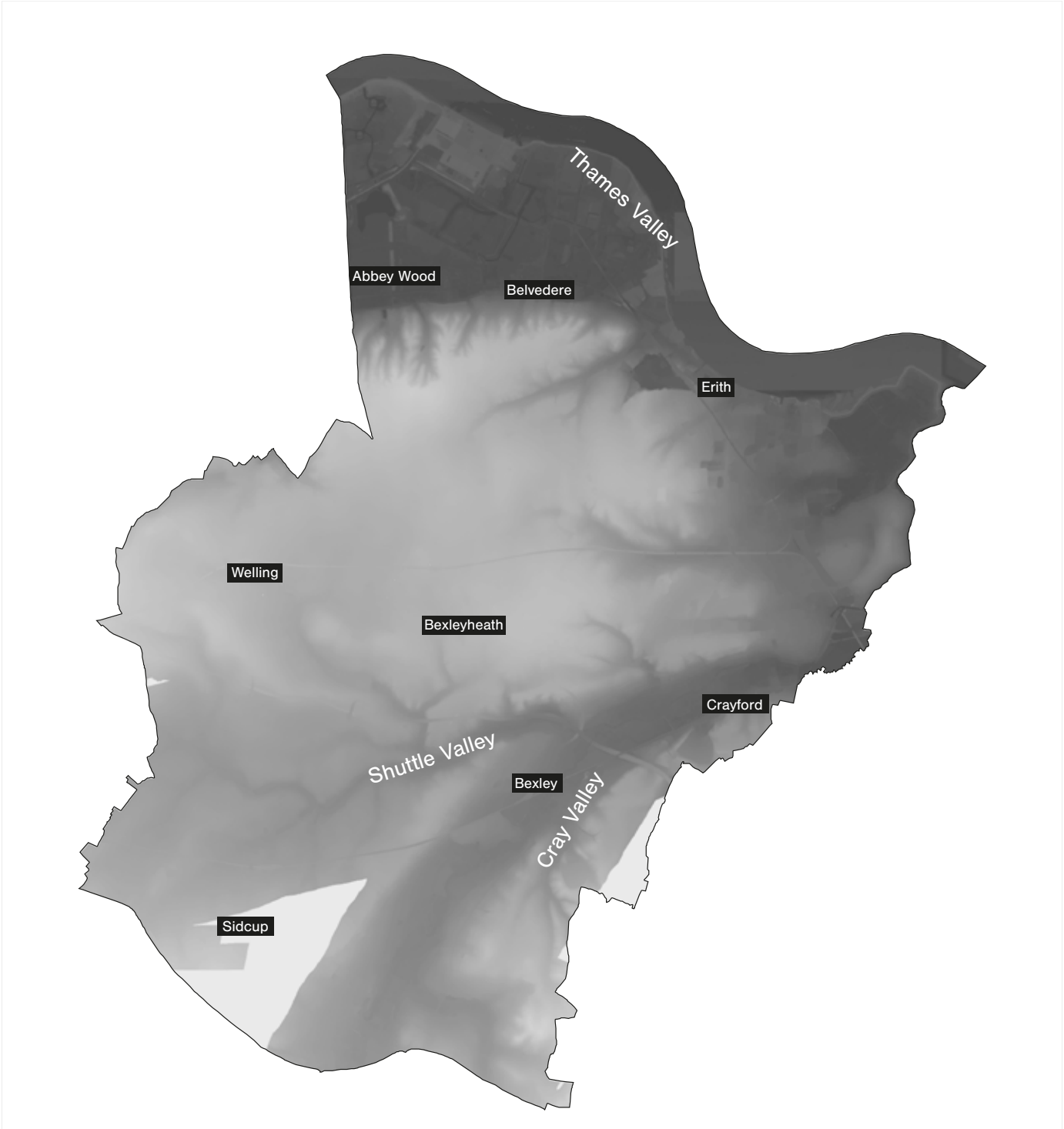
Fundamentally influenced by topography, infrastructure reinforces these patterns. East to west routes in particular tend to create clusters of denser development such as through Sidcup, Welling, Bexleyheath, Crayford and Erith. This is a result of a wider variety of building ages and a greater mix of uses along these corridors. These areas are also where buildings rise above the two storeys that characterise the majority of the rest of the borough.

In the south and west of the borough, where changes in topography are less dramatic, settlement patterns are less influenced by linear patterns of infrastructure. Sidcup, Blackfen and Foots Cray exhibit these characteristics, generally with a tighter grain towards the centre of these places. The size of plots are more generous in the south of the borough, particularly south of the A2.

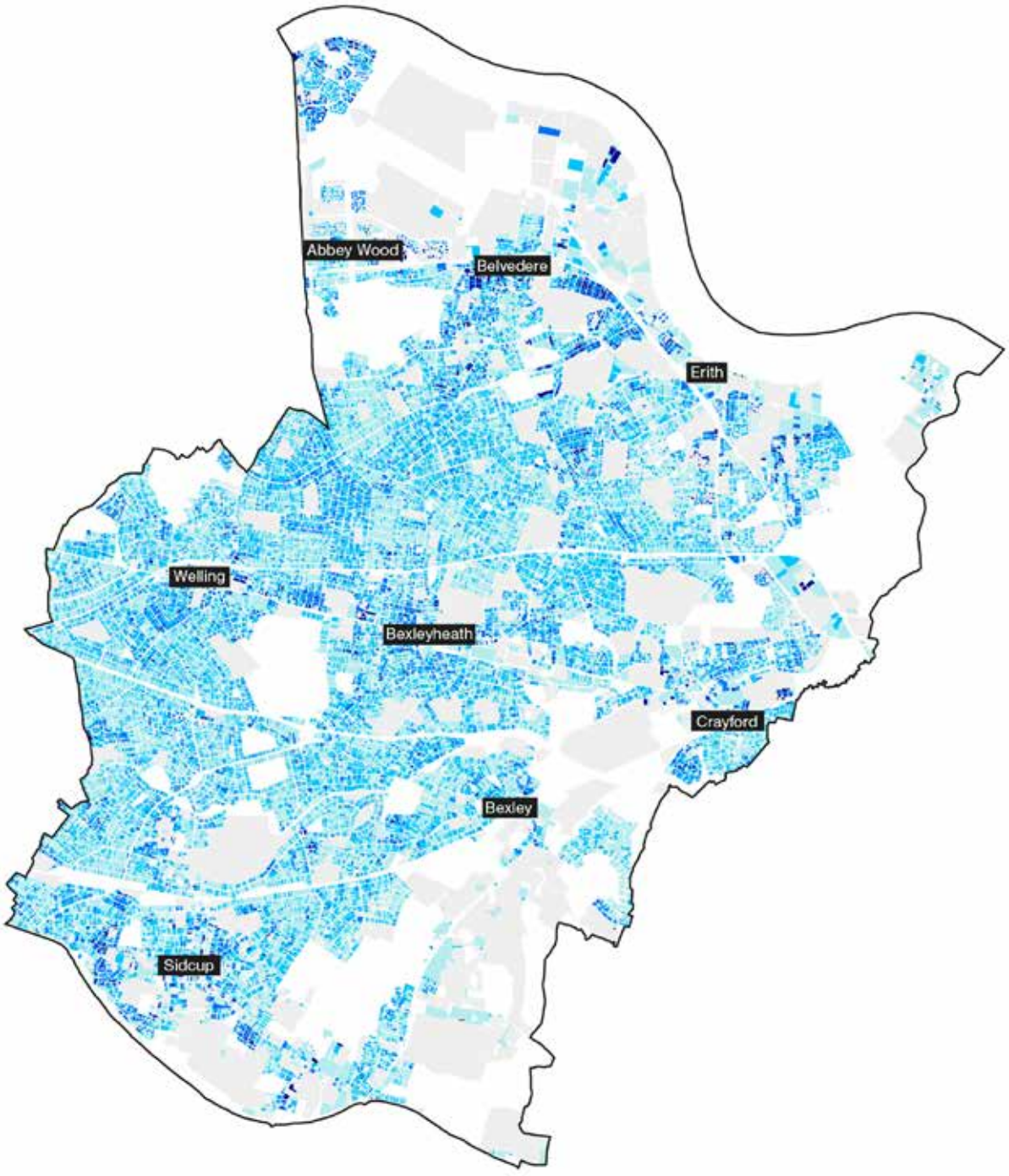
14 Source: www.britainfromabove.org.uk



15 Urban Grain by Parcel
Source: Ordnance Survey Mastermap, elaborated by We Made That and Troy Planning



16 Digital Terrain Model
Source: Environment Agency
The borough is defined by three main river valleys: the Thames, Cray and Shuttle. This creates sharp distinctions between settlement on valley floors and sides and on the flatter high ground. The reworking of terrain through human inhabitation can also be seen in the north of the borough.



17 Floor to Area Ratio
Source: Ordnance Survey Mastermap, elaborated by We Made That and Troy Planning
Transitions in built form is more abrupt in northern parts of the borough, where topography and infrastructure create areas of distinct FAR. Transition in FAR is more gradual in southern parts of the borough.

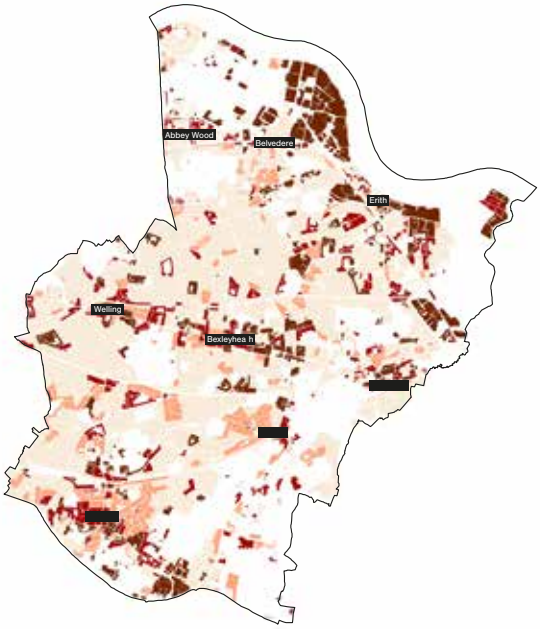
Overall, this leads to a pattern of more uniform urban form on the upland areas, and more varied urban form on the slopes and valley floors.

This uniformity is a result of fewer constraints on the construction of housing due to landform and the particular period in history that these upland areas were developed. This uniformity is reflected not only in replicating standard house types but also in regular parcel sizes and street widths that were made possible through simple, consolidated land ownership patterns in central and western parts of the borough in the early C20th.



18 Interwar housing development set out following regular formal principles.

Developed as large estates, mainly through the inter-war period, these areas tend to exhibit large blocks due to the growing influence of cars in urban planning at that time. Combined with efficient site planning of large estates, this results in a block pattern dominated by long, thin plots.

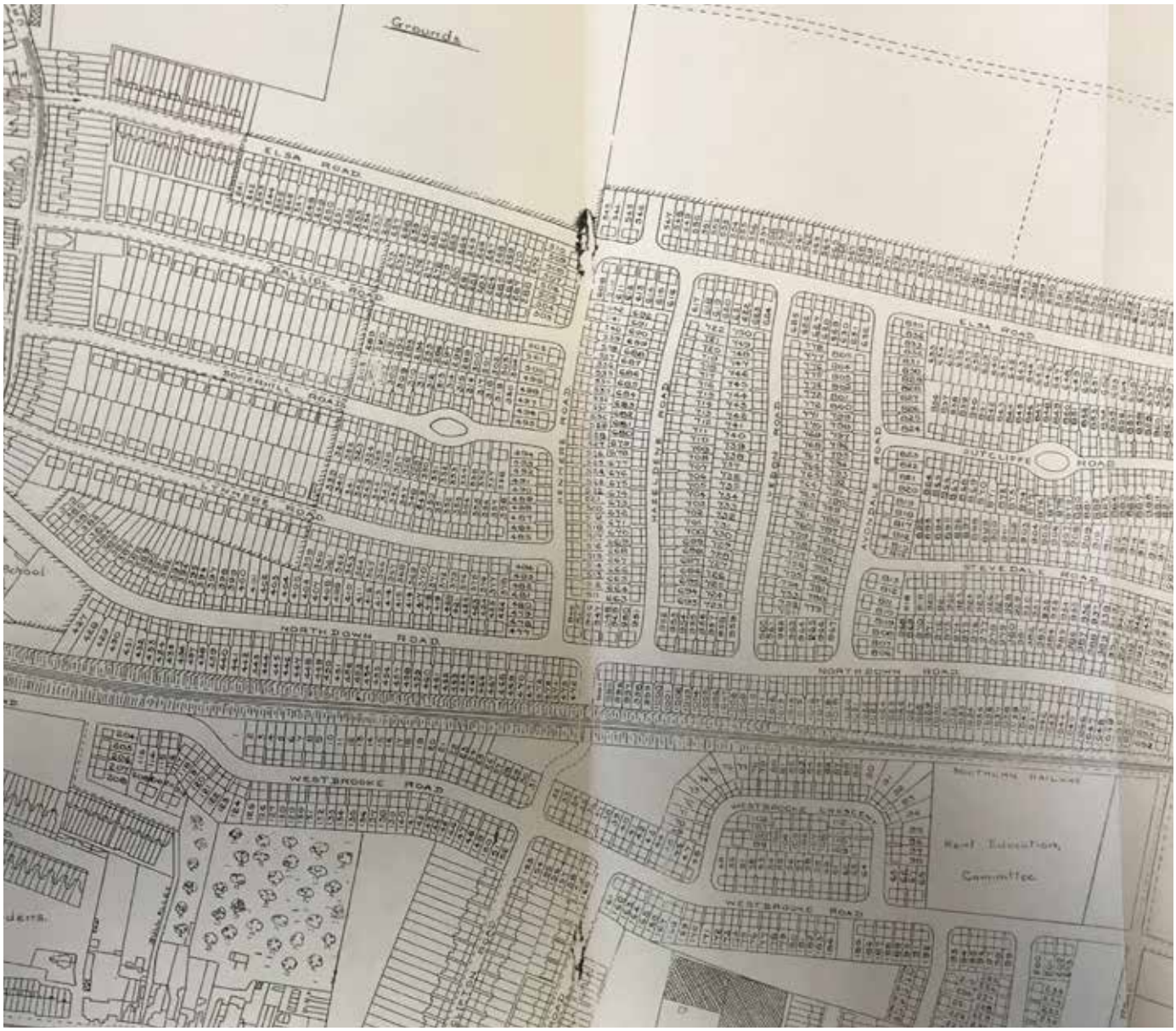


19 Variation in building volume (darker red is greater variation) shows the uniformity of built form in central parts of the borough.

The scale of planning of these inter-war estates also reflect formal arrangements such as circuses, grids and gently curving streets. This uniformity is rarely broken except by infrastructure such as primary roads, railways and by open spaces.

The pattern of open spaces in the borough is of very large, but relatively few, open spaces. These spaces tend to be on the sloping ground, offering long views across the river valleys. Where built form meets these large open spaces, or where it is adjacent to large infrastructure, building typology and plot sizes tend to change, leading to different urban form around the fringes of these spaces.

18 Source: www.britainfromabove.org.uk

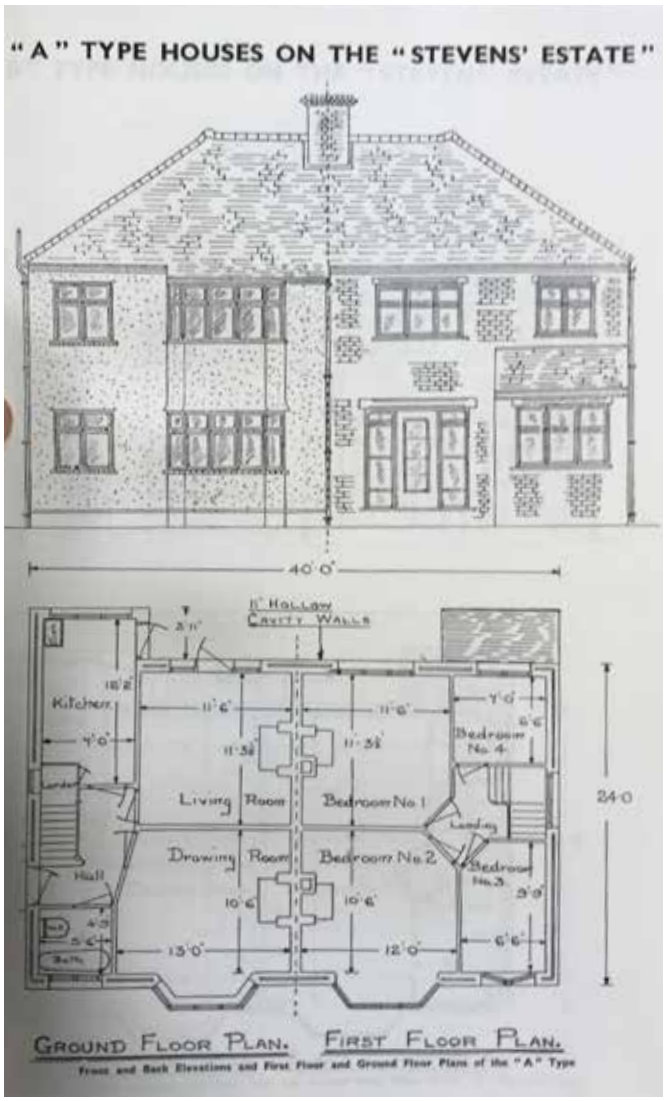


20 Layout of the “Stevens No. 5 Estate“, Welling
Typical inter-war urban form, exhibiting long, thin blocks of consistent, uniform building types.

Source: ‘The Stevens Estate’



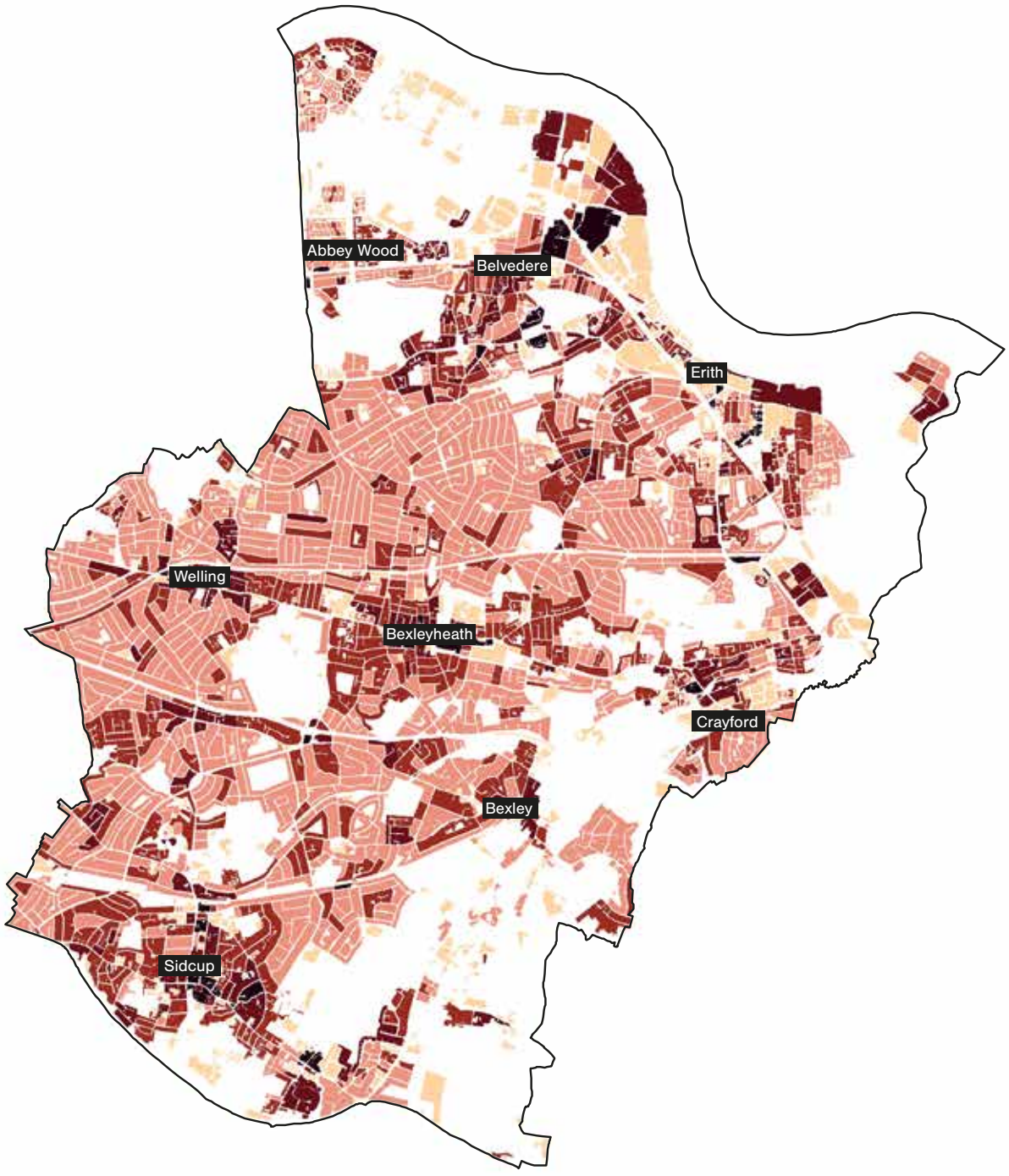




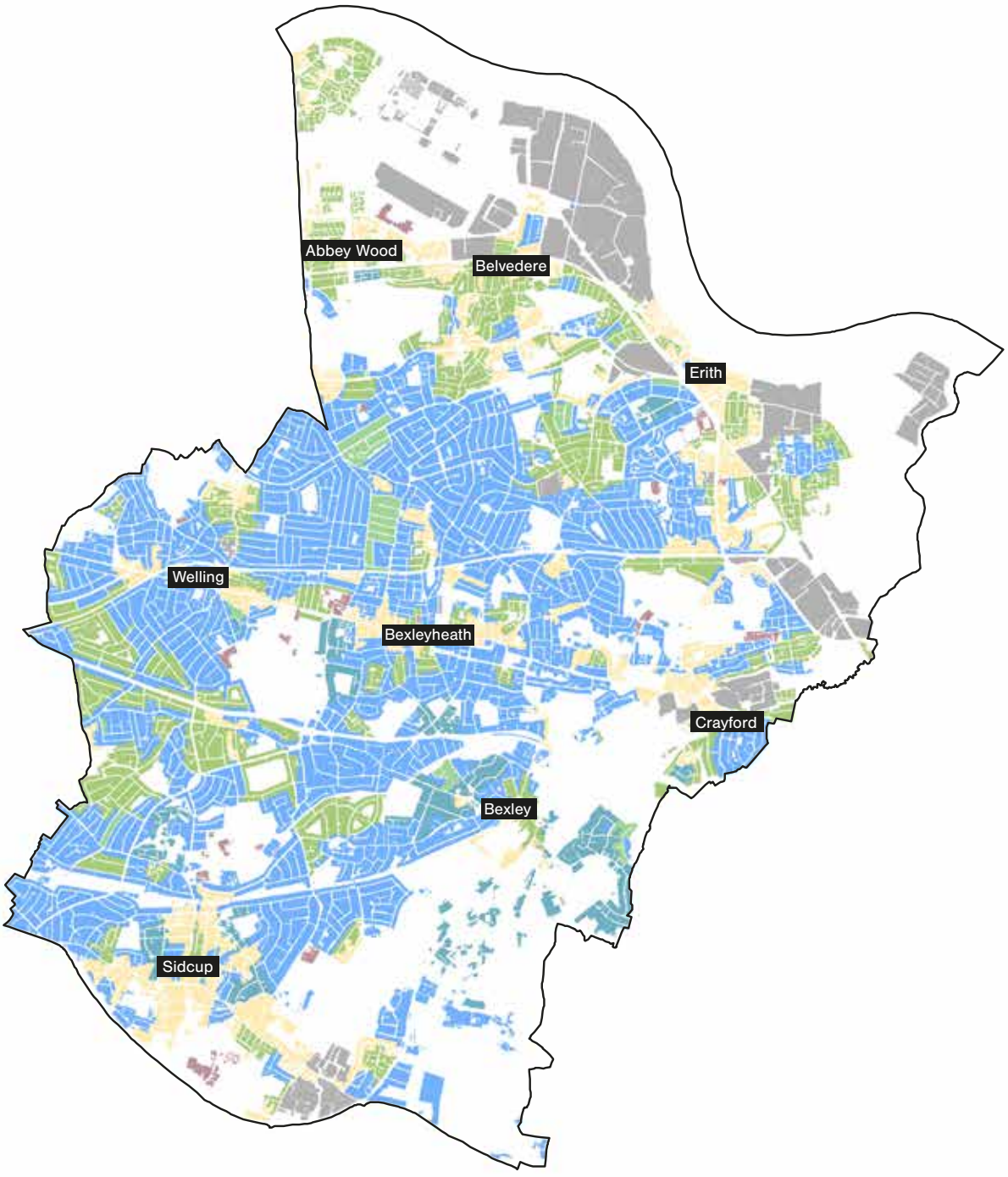
21 Belvedere
Topography creates areas of varied built form on steeper slopes, despite the replicating house types.

22 Longlands Avenue
Large parts of central and western parts of the borough exhibit very uniform urban form, characterised by replication of standard house types on very similar sized plots.

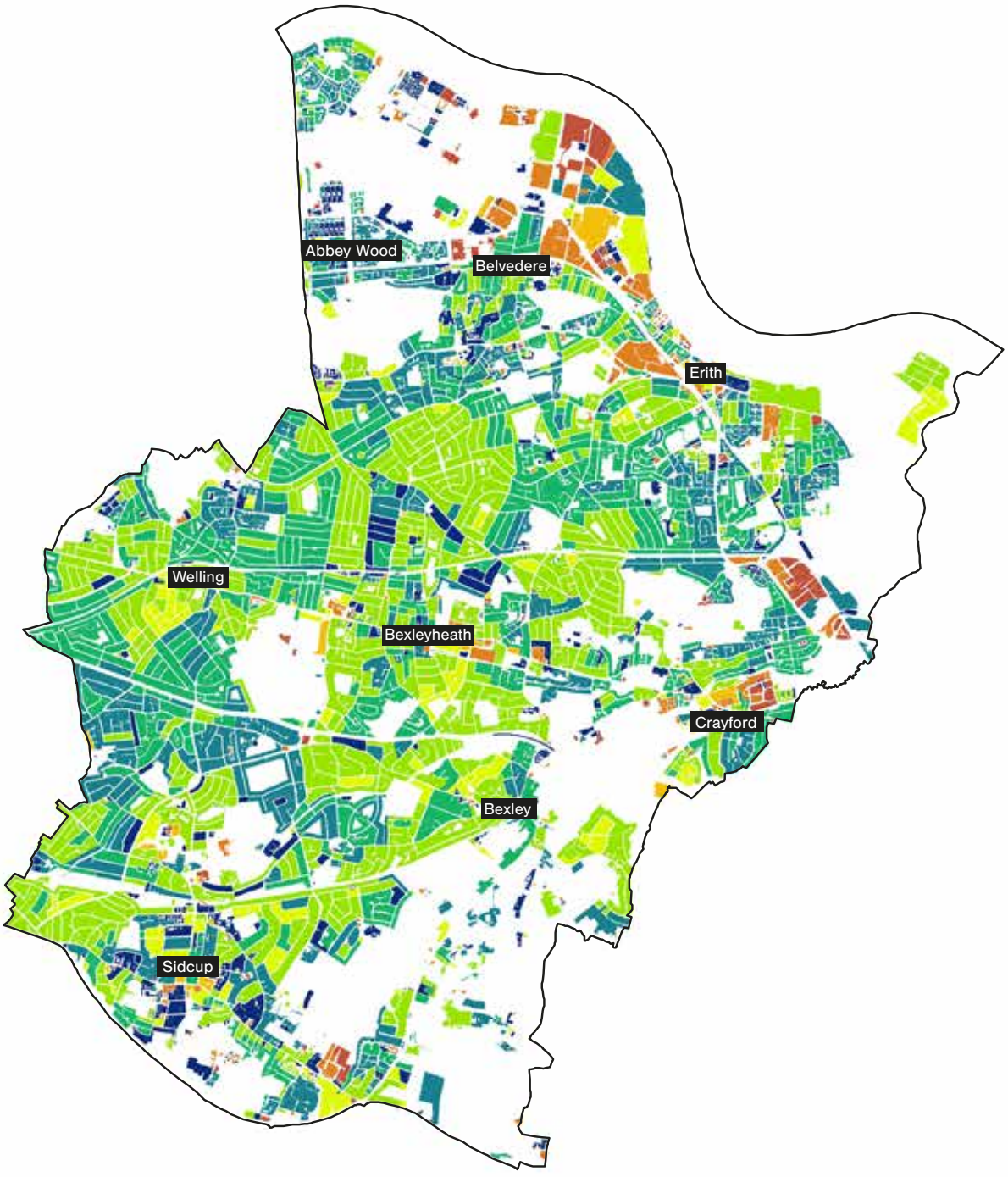
23 Typical house type, Stevens No. 5 Estate, Welling
Source: Stevens Estate
In areas of low variation in FAR, the very strong group form that defines the character of these areas comes from the uniformity of house types.



24 FAR Variation within each island
Source: Ordnance Survey Mastermap, elaborated by We Made That and Troy Planning
Variation in FAR shows how homogeneous (low variation) or heterogeneous (high variation) urban form is across the borough. In general this shows homogeneous areas where there character is strongly defined by defined by the uniform nature of the built environment.



25 Predominant Type
Source: Ordnance Survey Mastermap , elaborated by We Made That and Troy Planning
The majority of the borough is characterised by semi detached houses. More varied typologies exist around the fringes of infrastructure, open spaces and town centres.



26 Building Volume
Source: Ordnance Survey Mastermap , elaborated by We Made That and Troy Planning
Building volume shows a differentiation of residential fabric, mixed use areas and industrial areas. Within residential areas smaller buildings are found on steeper ground, in the west of the borough and along the Cray and Shuttle valley floors.

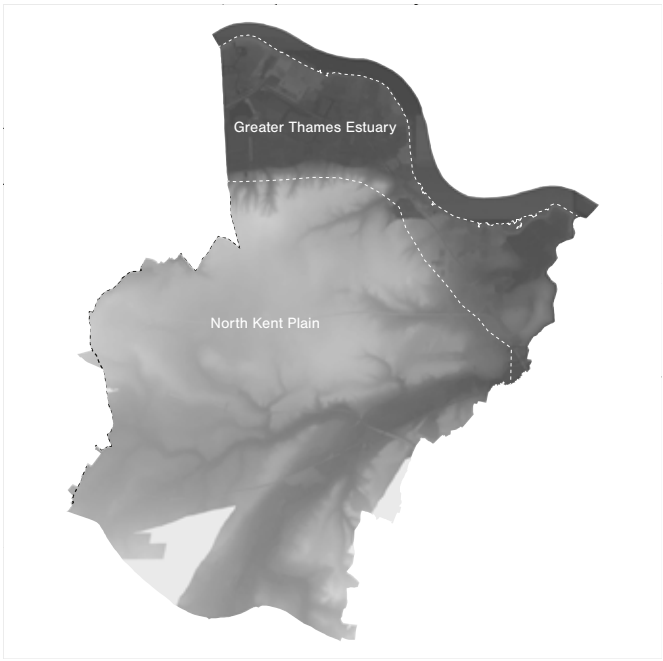
< 180m³
180 - 330m³
330 - 420m³
420 - 620m³
620 - 870m³
870 - 1090m³
1090 - 4000m³
4000m³ +

N

0 2km

Landscape

Landscape plays an influential role in the physical character of the borough. The strength of this landscape is a product of the area's geology, where the Thames Group, a geological formation that covers much of Surrey, Hampshire and Berkshire to the west meets the Thanet Group, a chalk formation that covers much of Kent and the Thames Estuary. This transition runs approximately through Belvedere, Erith and Crayford and defines the landscape character areas of the borough, the Greater Thames Estuary and the North Kent Plain. These two areas have differing ground conditions, with superficial deposits rather than bedrock defining the Greater Thames Estuary character area. Historically these distinctions in ground conditions have influenced patterns of development, where cultivation for agriculture has been possible and where construction of buildings has been least constrained.

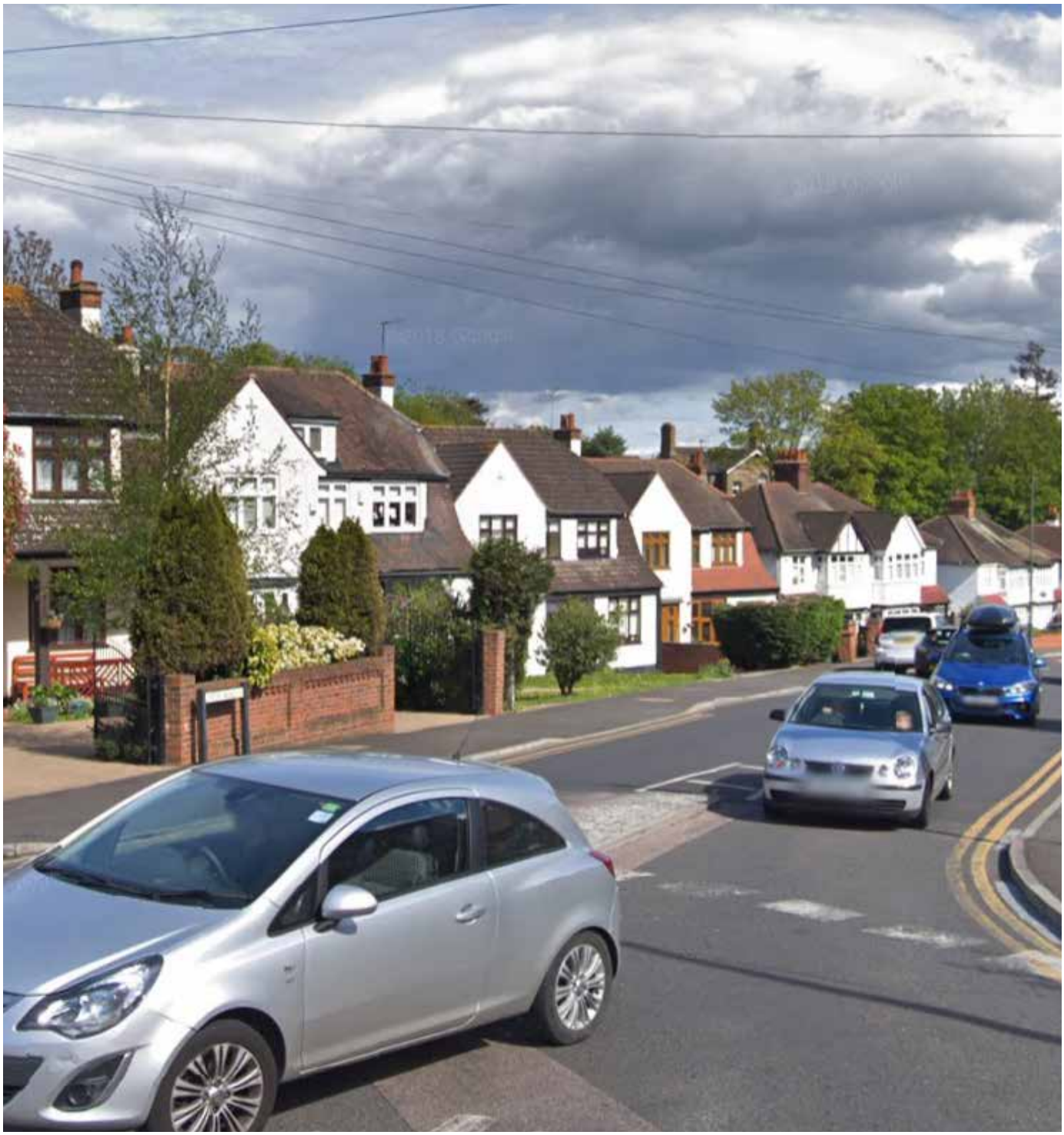


27 Landscape Character Areas
Source: Natural England

This defines a number of Natural Landscape Areas, each with specific spatial and ecological qualities.

- Cray River Valley
  Chalk river with a natural profile which flows through a sequence of floodplain meadows and wet woodlands following the sinuous form of the river.

- Lower Thames Floodplain
  A vast, flat riverside tidal zone retains in places extensive grazing marshes. Flood defences have allowed development of other areas, but the area retains a low, open, expansive



28 Mount Road
Topography and vegetation are constituent parts of the streets spatial character.

quality.

- South London Pebbly Sands Historic heathy commons which have endured as extensive woodland due to poor soils inappropriate for arable farming. This elevated land offers views over the Thames Basin from ridgetops and summits.

Landscape and Built Form

As each landscape area creates specific ecologies, constrains development in particular ways and has been protected through legislation in varying ways, the borough has examples of a multitude of ways landscape and built form combine to define character.

Broadly, this falls into three categories:

- Landscape creates the setting for buildings. The degree to which this is an important relationship to defining character depends on the typology of built form, as set out in chapter 6.
- Areas with strong landscape features often have the richest and longest history. Exploitation of natural resources often drove the urban and economic development of Bexley. Today these heritage assets draw people into these natural environments, creating multifunctional spaces that bring diverse groups of people together.
- Large open areas retain a distinctive landscape quality. There are many reasons for large areas remaining undeveloped, such as land ownership, poor soil fertility, technical constraints on construction, protection through legislation or areas of resource extraction.

Across all three categories, the relatively low rise, low density urban development in the borough means landscape remains prominent. As private houses with gardens is the dominant building typology in the borough, a large proportion of this landscape is private and often hidden from view.

Landscape is particularly important in the setting for heritage assets, conservation areas, listed buildings, locally listed buildings, scheduled monument, and Registered Historic Parks and Gardens.

In many conservation areas in the borough, elements of the green infrastructure network are integral to setting and landscape quality.







29 The Drive, Sidcup
Vegetation as setting for buildings

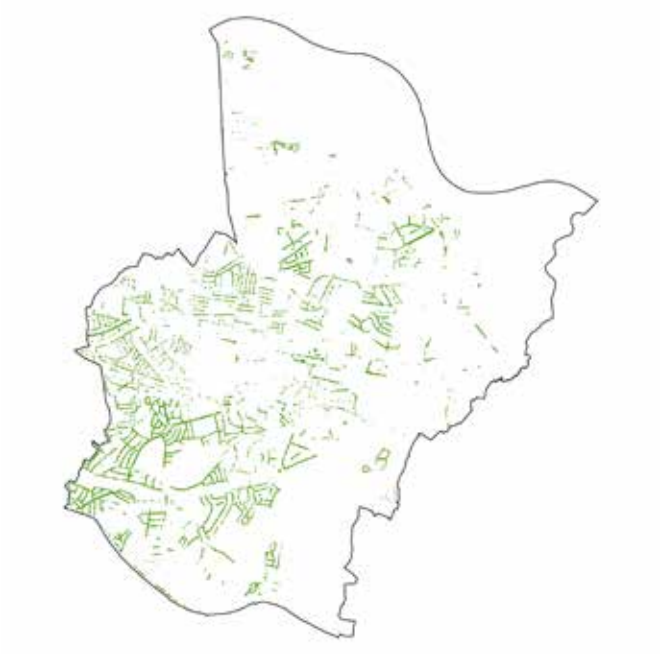
30 Crayford Marshes
Large open space with distinctive landscape quality

31 Hall Place
Coincidence of heritage assets with areas of special landscape quality.

Vegetation

Canopy cover varies significantly across the borough. The upstream parts of the Cray valley have particularly high canopy cover. In the north, Lesnes Abbey woods and Franks Park have strong landscape elements of mature woodland and are surrounded by residential areas that have a higher degree of canopy cover due the sloping topography.

The distribution of canopy cover in Erith Marshes demonstrates how large infrastructures such as roads, railways, dykes and ditches have become mature, identifiable landscape elements through mature trees and shrubs. Given the low lying topography these form distinctive parts of the landscape. Crayford Marshes, in contrast, has had fewer modern artificial interventions and so remains much more open, and canopy cover does not contribute significantly to the landscape character.



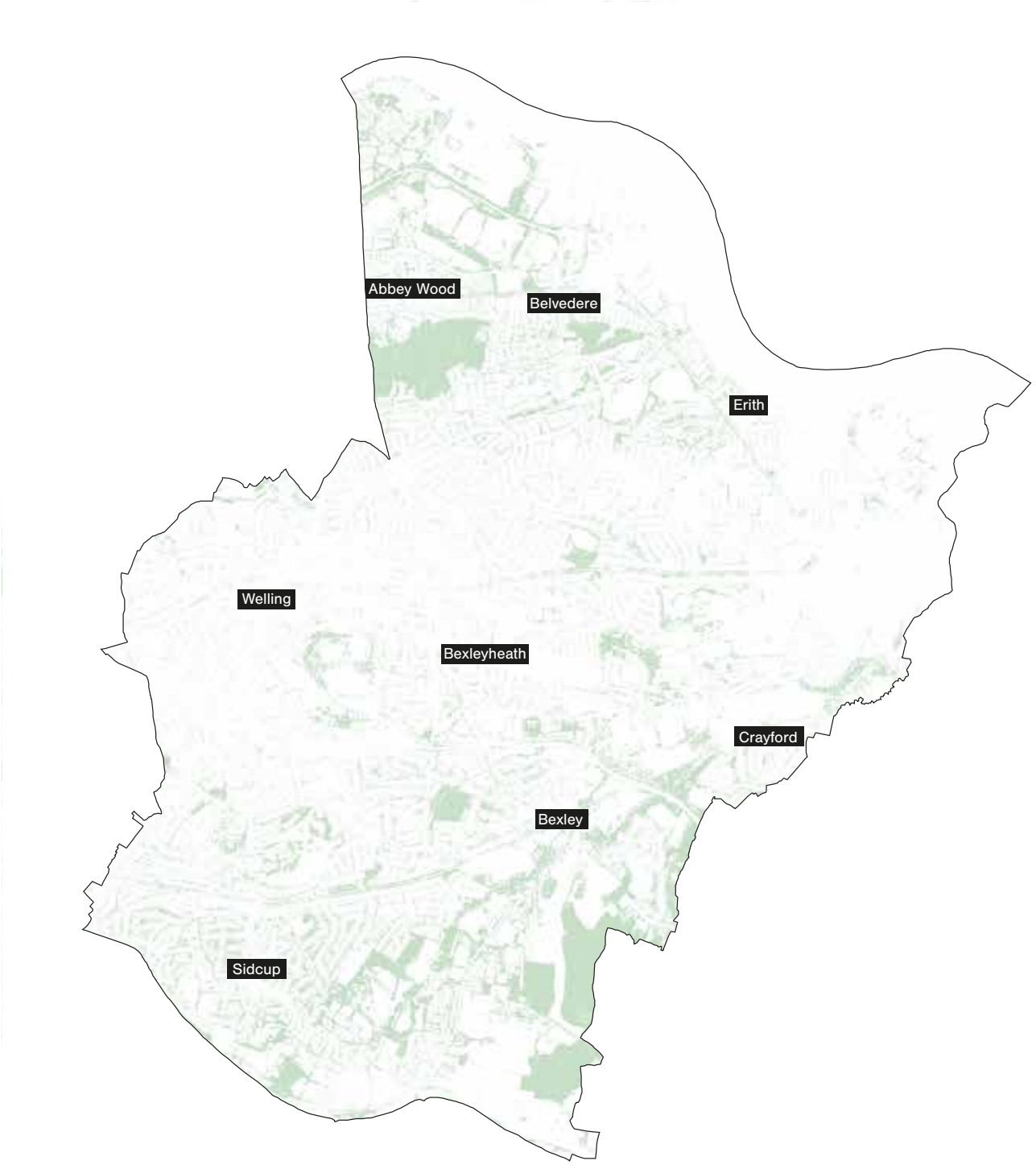
32 Street Trees
Source: GLA

Within residential areas more broadly there is an unequal distribution, with greater canopy cover south of the A2. This pattern is also reflected in the distribution of street trees. Residential areas south of the A2 have more continuous, denser pattern of street trees. This follows the distribution of building types that have a propensity to retain soft landscape in the form of front gardens, such as large detached and semi-detached houses, and those that tend to have lost this space to accommodate on plot parking, such as semi-detached houses on smaller plots.

Landscape Character

Larger areas of distinct landscape character are formed around contiguous open spaces. Due to their scale they provide strategic green corridors for movement and also host important built assets. They are:

- The Cray Valley
- Crayford and Erith Marshes
- Lesnes Abbey



33 Canopy cover
Source: GLA

N

0 2km

Cray Valley

Location & Surroundings

The Cray Valley is located in the south-east of the borough. The dual carriageway of North Cray Road (A233) runs directly through the valley, linking Bexley Village in the north to Foots Cray in the south. To the east, Joyden's Wood straddles the borough boundary between Bexley and Dartford (the majority of the woodland being located within Dartford borough).

To the south, a number of garden centres/ nurseries are present along Maidstone Road (B1273). Foots Cray Business Area is located in the south-west of the valley with a small primarily residential area immediately to the north of the business area.

The valley runs initially through a wide and open meadow landscape. The geology here includes major bands of chalk which rise close to the surface.

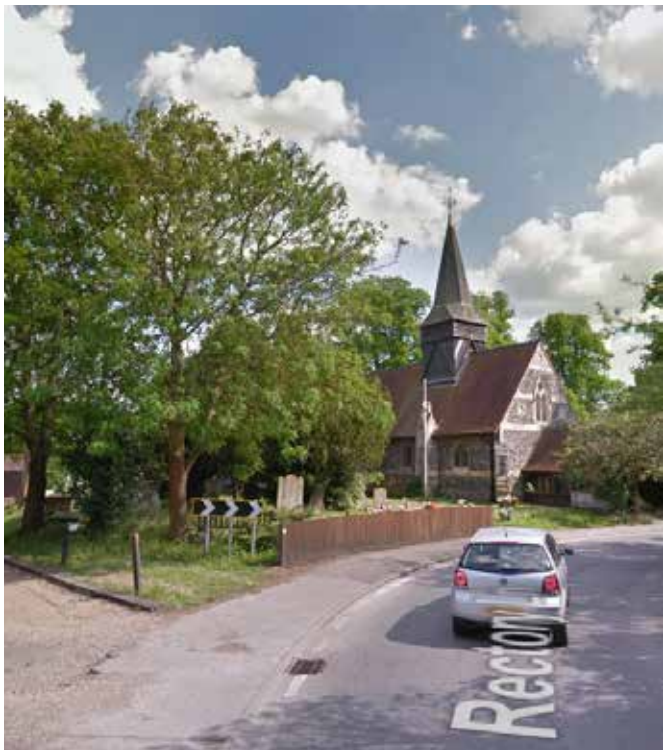
This chalky character defines much of the flora and fauna of the river valleys. The woodlands of Chalk Wood and Joydens Wood bordering the open meadows at Footscray straddle the geographic boundary between Bexley and Dartford, where the Green Belt includes the slopes of the North Downs which contain ancient woodland connected by hedgerows surrounded by open farmland.
North of Old Bexley village the valley is characterised by extensive woodland, grazed water meadow, horse paddocks and arable fields.

Historic landscapes which contain field patterns and elements of a built man-made environment from a previous time period. The Cray river path (The LOOP) is disrupted by the significant barrier of a major road and rail crossing. Further northwards the landscape changes into Crayford Marshes with a very different character.

Foots Cray Meadows is a large area of parkland (97 hectares) and a Local Nature Reserve including the ancient North Cray Woodland and extensive wildflower meadows. Originally this land was part of the Foots Cray Palace Estate, though the house burned down in 1940 leaving the land for recreational use. Also present









34 Five Arches Bridge
Over the River Cray at Foots Cray Meadows
35 Hall Place
At the confluence of the River Shuttle and River Cray

36 All Saints Church
Rectory Lane
37 St James Church
North Cray Road

are large areas of neutral grassland and species-rich fen. Overall the landscape has a rolling character with some views down the valley from this raised location.

Access and Use

The Cray Valley can be accessed at various points, with numerous footpaths and bridleways intersecting the valley – particularly through Joyden's Wood, Chalk Wood and Foots Cray Meadows.

Foots Cray Meadows is accessible from North Cray Road, Leafield Lane, Rectory Lane, Bexley Lane, Water Lane, The Spinney, The Grove and Riverside Road. The nearest railway station is Albany Park, and the site is on bus routes 492 and B14. There is a small car park on Rectory Lane.

Chalk Wood is primarily accessible via Parsonage Lane, where parking is also available. The nearest bus route to the woods is the 492 and Bexley is the closest railway station.

The LOOP, one of the Mayor's Strategic Walking Routes runs through the area. This links from the River Thames (Thames Path) to Sidcup Place in the south and beyond. The Shuttle Riverway Walk links from the west into the LOOP walk at Hall Place.

Being part of the urban fringe the area is under considerable pressure to accommodate an ever increasing level of leisure activities. Weekly boot sales on land at Honeydale Farm (Wednesdays, Sundays and Bank Holiday Mondays, April-October) bring significant numbers of visitors.

Landscape Qualities

- Meandering river channel with riffles and pools along the profile.
- Willow and alder wet woodland.
- Floodplain meadows backed by woodland.
- Curving hedgerows defining the outer margins of the floodplain.
- Reedbeds and cressbeds alongside the river.
- Riverside walks and bridges.
- Remnant parkland landscapes – specimen trees and composed views.

Challenges

Insensitive development affecting the area Elements of the built environment associated with the recreational use of many parts of the Cray Valley area are incrementally having a detrimental effect on the characteristics, use and quality of the area and as a consequence they are seriously eroding the open nature and rural countryside atmosphere.











38 Foots Cray Meadow
Meandering River Cray creates important aquatic marginal habitats and meadows backed by woodland and curving hedgerows.

39 Remnant parkland landscapes
Ornamental man made and lake and unique designed landscapes, providing setting for Statutory Listed and Locally Listed buildings.

40 Maidstone Road
Patchwork landscape with open field and rolling farmland.

41 Parsonage Lane
Rural lanes defined by grass verges, tall boundary hedgerows and large mature trees

42 Honeydale Farm car park
Large areas of dense ancient woodland

Traffic associated with some uses is also having a negative effect.

Insensitive use of the area

As mentioned above certain uses and the intensity of certain activities are incrementally creating an urban environment contrary to the characteristics of the open nature of the area. This is particularly relevant to the horsey culture elements in and around Old Bexley. The intensity of agriculture with the introduction of large areas of polytunnels is particularly insensitive.



43 Foots Cray Meadow
Meandering River Cray creates important aquatic marginal habitats and meadows backed by woodland and curving hedgerows.

44 Remnant parkland landscapes
Ornamental man made and lake and unique designed landscapes, providing setting for Statutory Listed and Locally Listed buildings.

45 Maidstone Road
Patchwork landscape with open field and rolling farmland.

46 Parsonage Lane
Rural lanes defined by grass verges, tall boundary hedgerows and large mature trees

47 Honeydale Farm car park
Large areas of dense ancient woodland

Crayford and Erith Marshes

Location & surroundings

The marshes lie to the north of the borough, in the Thames Estuary. They are largely low-lying open former river floodplain areas on the urban fringe, in use primarily as grazing areas for horses. They are bounded to the north by the River Thames and foreshore mudflats, to the east, west & south by urban land uses, in the form of industrial areas, housing and infrastructure. The River Darent, a tributary of the Thames runs south to north between Crayford and Dartford Marshes forming the administrative boundary between Bexley in London and Dartford in Kent. The River Darent does not mark a boundary in terms of landscape character. The marshes lie within Countryside Character Area 81 (CCA81), Greater Thames Estuary.

The influence of the Thames on the landscape at Erith Marsh is less apparent than at Crayford Marshes, as is the sense of extensive openness, remoteness and wilderness. This is due in part to the large industrial buildings/sites on adjacent land, and in part to topography and to the low vantage point of pedestrian access through Erith Marsh. In addition, Thames river defences obstruct views to the river in the northern section, and the embankment carrying the Eastern Way, which provides an elevated view for vehicles, creates a visual and physical barrier within the marsh between northern and southern sections.

On Erith Marshes, at the southern site boundary, extensive tree cover beyond the East Thamesmead Business Park and the rising wooded ridge of Lesnes Abbey Wood reinforce containment of the landscape north & south. However, despite visible buildings such as the towers beside Southmere Lake, or gas holders and warehousing to the east, expansive views from ground to sky east & west dominate, helping to retain the remaining Thames Estuary scale of this marsh.

Both marshes are also one of a few remaining examples of Thames side grazing marshes. It is a UK priority habitat supporting national and local BAP species.

The areas also provide way-marked walking routes which are part of the











48 Howbury Moated site
A Scheduled Ancient Monument close to Slade Green on Crayford Marshes

49 Erith Yacht Club
An attractor of activity to the rivers edge on Crayford Marshes

50 Crossness Pumping Station
A heritage asset that attracts visitors to the riverside area of Erith Marshes.

51 Sewage incinerator
The low topography of Erith Marshes makes the incinerator a dominant landmark in the landscape.

52 Dartford Creek Barrier
A prominent piece of infrastructure on Crayford Marshes

Mayor's Strategic walking network (The London Outer Orbital Path or LOOP) and the Thames Path.

Thames Road marks the southern boundary to Crayford marshes. Here the River Cray runs through a hidden landscape of abandoned wharves before joining the River Darent in a striking landscape of tidal mudflats and reed beds. These extend to the tidal flood barrier which marks the outfall to the Thames. The river divides the Crayford and Dartford Marshes. The settlements on the western edge of the marsh are a mixture of formerly river-based industries and the relatively new housing estates of Slade Green and Howbury. Right on the edge of the marshes is one of the oldest markers of settlement, the twelfth century Howbury Moat. The chalky walls of this moated manor house now enclose a tangled wilderness of a garden whose oldest trees stand up out of the open landscape of the marshes.

Crayford Marshes are seen as part of a landscape of flat open marshland on both sides of the Thames, comprising areas of grazing marsh and salt marsh drained by a network of ditches and divided by the "sinuous" River Darent.

Erith Marshes is described as "remnant marshland", with flat low lying topography. It contrasts well with the surrounding built up area. The East London Sewage incinerator is identified as a landmark building of significance on the Thames frontage.

Erith Marshes is a Site of Metropolitan Importance for Nature Conservation and one of a few remaining examples of Thames side grazing marshes". It is a UK priority habitat supporting national and local BAP species. Part of the area is managed as a Local Nature Reserve.

The juxtaposition of built form and general land use within the area has a high negative impact. Many elements within the landscape such as roads and structures are recent and have become characteristic of the area, but are not locally distinct.

On Erith Marshes there is very little evidence of the cultural elements of the former estuarine grazing marsh or of natural links with adjacent areas - the functional integrity of this area is very poor.

Access and Use

Urban skyline features can be said to be recent characteristics. The original sea defences and drainage patterns, which are the remnants of the historic character of the area, are generally overwhelmed by large engineering bunds and have become degraded through lack of appropriate









53 Water courses defining geometries
Curving hedgerows following watercourses and networks of medieval (meandering) and modern (rectilinear) reed-fringed drainage ditches.

54 Tidal landscape
Extensive intertidal mudflats, divided by evolving winding creeks and embanked pathways.

55 Expansive landscape
Flat landscape creating low horizons dominated by the sky with few trees or vertical boundaries such as hedges or fences.

56 Industrial and military heritage
Prominent industrial facilities as well as pill boxes, wharves, jetties and industrial archaeology.

management of watercourses. This is potentially a very distinctive landscape which could be said currently has a poor sense of place. The openness of the area means that visibility is high.

Crayford Marshes are accessible via Moat Lane to the west, off Thames Road to the south-west, and off Manor Road to the north-west. There is no designated parking for the marshes. Way-marked footpaths in the form of the Thames Path and the LOOP (Crayford) allow good pedestrian access. Erith Marshes access is more restricted.

Landscape Qualities

- Curving hedgerows following watercourses
- Flat, expansive landscape, with low horizons.
- Remote and wild.
- Open grazed saltmarshes patterned by networks of medieval (meandering) and modern (rectilinear) reed-fringed drainage ditches.
- Extensive intertidal mudflats, divided by evolving winding creeks.
- Reedswamp.
- Embanked pathways.
- Virtually no trees.
- Industrial and military heritage – pill boxes, wharves, jetties, industrial archaeology.

Challenges

- The marshes are greatly fragmented by views of industrial and housing development, creating discordant fragments of the character area.
- The Crayford Ness Industrial Area is located on the north-eastern tip of the marshes, at the mouth of the River Darent.
- Erith Marshes and the adjacent employment area designations pose a continuing threat that development will seek to expand on to the marsh area.
- There have been issues with illegal fly-tipping off the roads running through the marshes.
- The original sea defences and drainage patterns, which are the remnants of the historic character of the area, are generally overwhelmed by large engineering bunds and have become degraded through lack of appropriate management of some watercourses.
- The riverside industrial sites are accessed via narrow roads that are not heavily used outside business hours, are poorly lit and not overlooked. There is considerable fly-tipping associated with these routes, where they are not controlled by site security.
- The foreshore itself is strewn with detritus from the river, substantial quantities of domestic and commercial waste, which detracts from the wilderness character of the riverside, and adds to the impression of neglect.



57 Crayford Marshes
Curving hedgerows following watercourses and networks of medieval (meandering) and modern (rectilinear) reed-fringed drainage ditches.

Lesnes Abbey and Franks Park

Location & surroundings

The Lesnes Abbey site is located on the north-western boundary of the London Borough of Bexley. The London Borough of Greenwich lies immediately to the west. Abbey Road borders the site to the north, Woolwich Road to the south and Knee Hill Road to the west. The site is intersected by New Road which runs north to south. Lesnes Abbey Woods also comprises Hurst Wood, to the west of New Road. The site is located close to Abbey Wood train station and is well served by local buses.

The close relationship to the River Thames was perhaps the main reason why the Abbey was founded on the site. It was built on a sloping site, at the bottom of the ridge on slightly higher land, which lay between river marshes to the north and Upper Belvedere to the south. It was thus conveniently situated close to the River Thames, making it possible to get stone and other supplies to the Abbey site by boat, and to the main London to Dover road which soon became a busy thoroughfare for the thousands of pilgrims who travelled annually to Becket's shrine in Canterbury.

Today, the relationship is tenuous; the flat open marshland has been subsumed by suburbia, with the tower blocks of Thamesmead and the industrial landscape of the 1960/70s regeneration dominating. Panoramic views are still impressive from around the site at the bottom of the ridge, higher into the woodland areas, views are mainly obscured by the dense woodland foliage.

In terms of the socio-economic relationship with the wider community, the site is surrounded by some of the most deprived communities in the Borough of Bexley and Greenwich as well as Greater London as a whole. The local community has poor access to open space and limited opportunities to experience the natural environment.

Access and Use

The lack of dedicated car parking appears to be an issue - the majority of users currently park on-street on roads around the open space, mainly on Abbey Road.







58 Remains of Lesnes Abbey
Large and accessible remains attract visitors

59 Formal Gardens
An addition to the natural landscape creates particular qualities

60 Views to the north
The topography and landscape create a close and sensitive relationship between the large open spaces and developed areas to the north

In addition, the site appears remote from residential areas to the north, although there is a dedicated pedestrian link route to the site. There are small residential enclaves to the east which appear as being deficient in open space provision. It may be considered a priority to link these areas with good green pedestrian access routes to Lesnes or Franks Park.

At present the site seems very much under-used by all potential user groups, however in terms of limited and minimal impact on the natural environment this can be taken as a positive. The London Borough of Bexley has devloped projects to maximise potential and increase the use of the resource. This will involve community engagement; a new “hub” building; new interpretation material; gateway promotion and new signage; new pathways and landscaping.

Landscape Qualities

- Ancient woodland.
- Historic commons with acid grassland and lowland heath.
- Mosaic of secondary woodland (oak and birch), scrub and heathland.
- Hazel coppice.
- Scots pine.
- Hedgerows and meadows.
- Panoramic viewpoints from ridgetops and summits, particularly views from the ridge overlooking the River Thames.
- Acid bogs on valleys and at springlines on slopes.
- Continuity offers opportunities for green corridors. Elevation means belts of trees and woodlands are prominent features of the wider area.

Challenges

Insensitive development affecting the area The residential high rise blocks and wind turbines to the north impact on views from the site and are particularly detrimental if considering the historical and topographical relationship of the ridge to the Thames marshes and the river foreshore.

No knowledge of fly-tipping. Antisocial behaviour is a common problem in all areas, but particularly in areas which are remote from residential properties. In the case of Lesnes, there have been issues with under-age drinking, vandalism; graffiti, and mopeds. Out of hours the site is patrolled at regular intervals by a Council employed security firm.











61 Vegetation
Open grasslands have unique character and also enable long views

62 Ancient Woodland
Mature trees of a variety of species are special characteristics

63 Playspace
Attractors for activity

64 Thamesmead
The marsh landscape makes Thamesmead a prominent part of the surrounding landscape

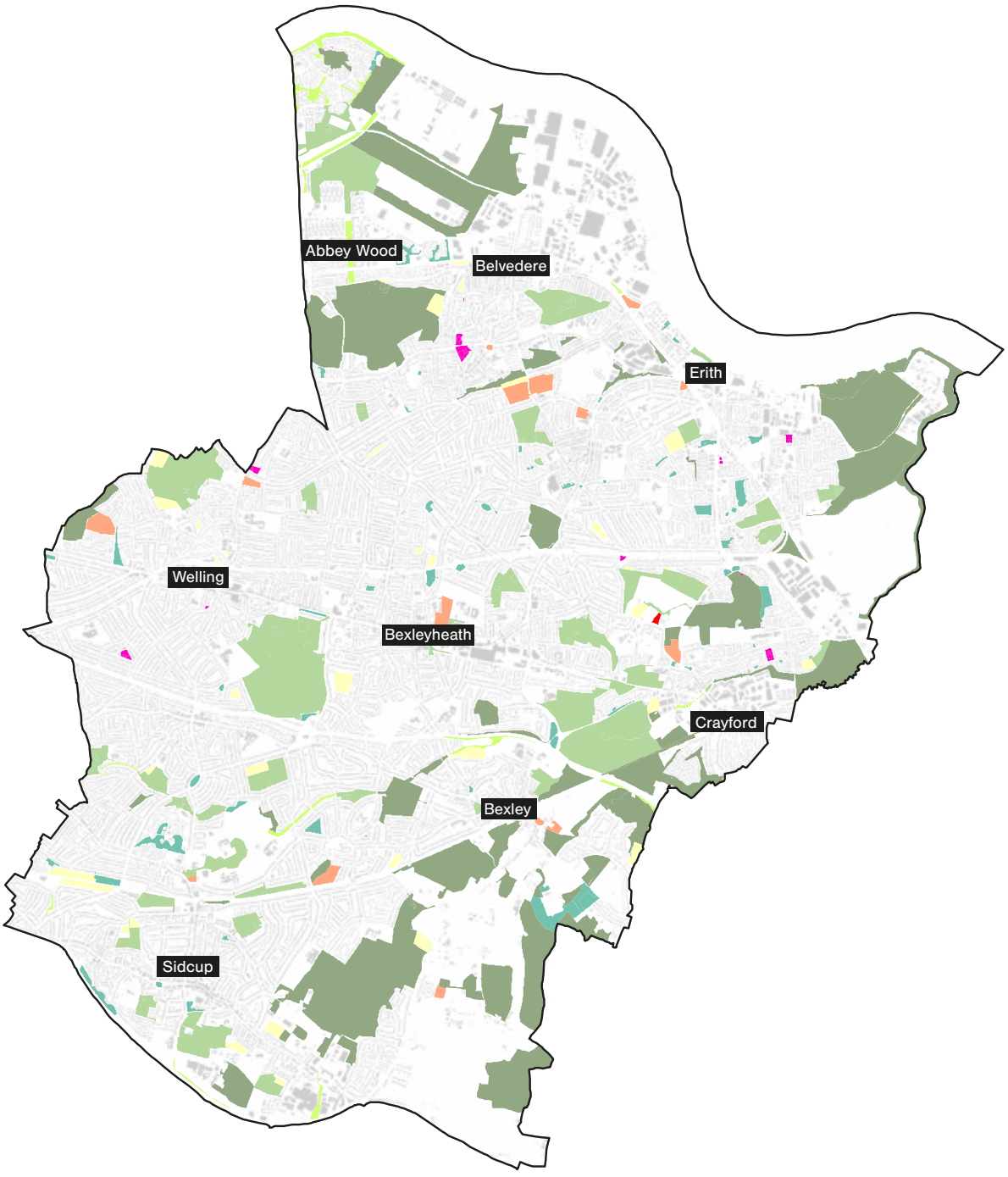
65 Woodland
The scale of woodland and topography means the horizon formed by the tree line an important characteristic

Open Spaces

The borough benefits from a wide variety of open space typologies. The majority of open spaces are found along the river valleys, particularly the natural and semi-natural green spaces. Strong historical links between settlements and the river valleys means that open spaces are more common close to older parts of the borough, for instance Erith, Crayford, Bexley village and Sidcup. Thamesmead also benefits from a strong relationship to open spaces.

Parks and Gardens are more dispersed, often as a legacy of large estates that occupied the higher ground over the history of the borough.

The pattern of pre- and inter-war-development generally provides less public open space, instead providing generous gardens. As such large areas in the central/eastern parts of the borough suffer a deficiency in access to open space.



66 Distribution of open space in the borough
Source: Ordnance Survey Mastermap

Air

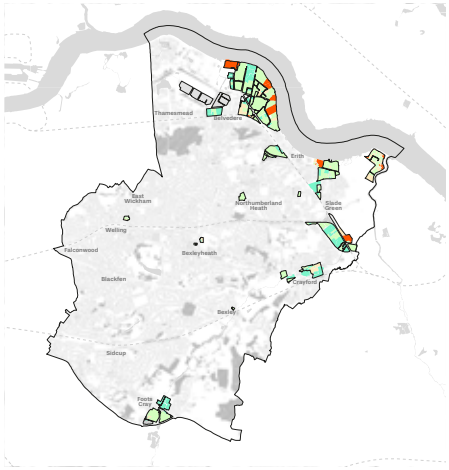
Given Bexley's position on the periphery of London and its relatively low densities, the borough has in general better air quality than more central boroughs.

Main transport corridors through the borough, however, do create areas with much higher levels of air pollution, notably the A2, A207 and A206.

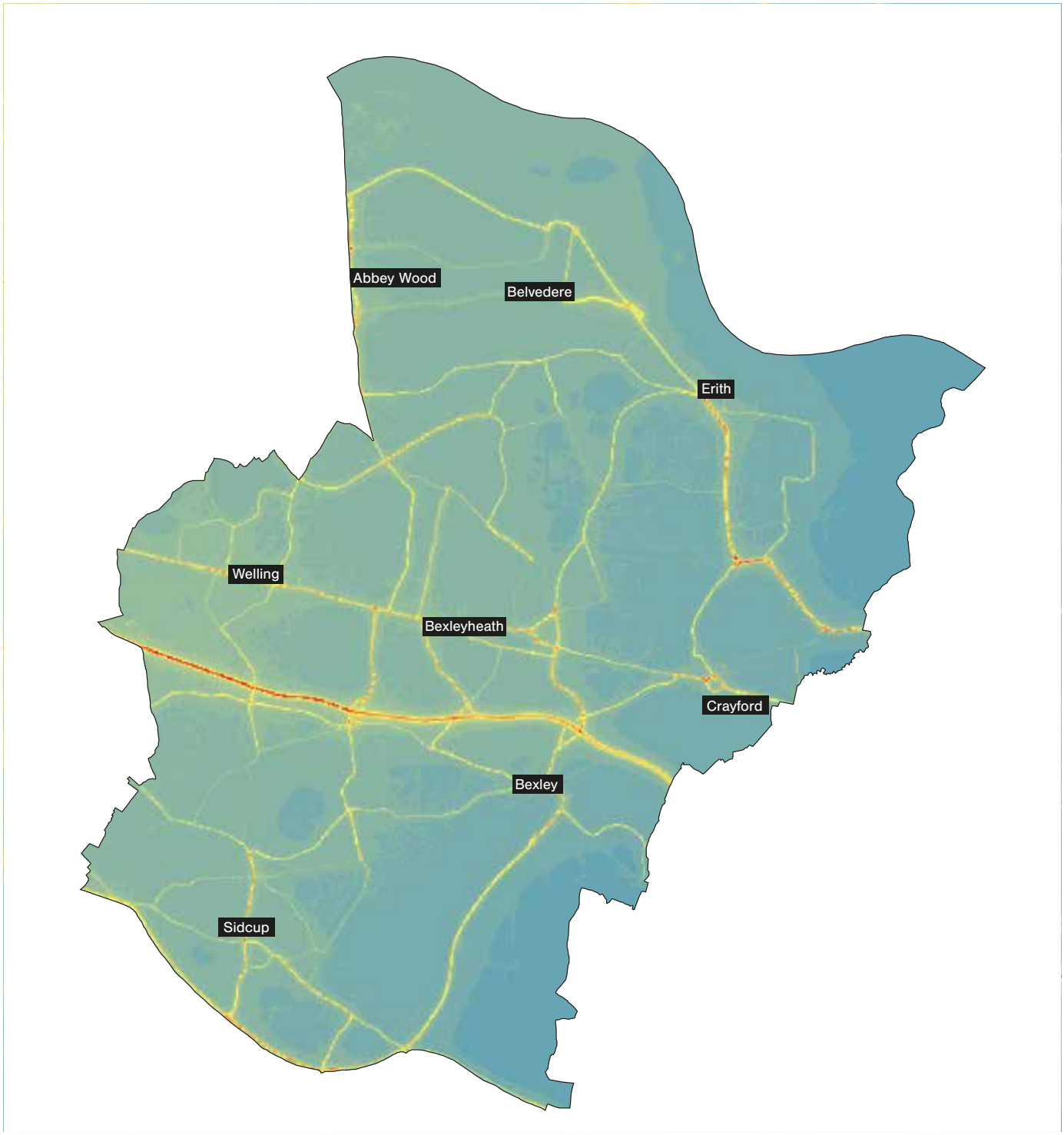
The relative lack of large open spaces and higher levels of development in the west of the borough means that air pollution is also higher in these areas.

In addition to the relatively localised effects of high volumes of vehicle movements along transport corridors, locations of industry in the borough also create poor local environmental conditions.

Industrial activities creating poor environmental conditions tend to be located in the north of the borough, often in riverside locations.



67 Local environmental impact, industrial areas



68 Annual Mean NO2 Concentrations 2016
Source: LAEI

High
Low

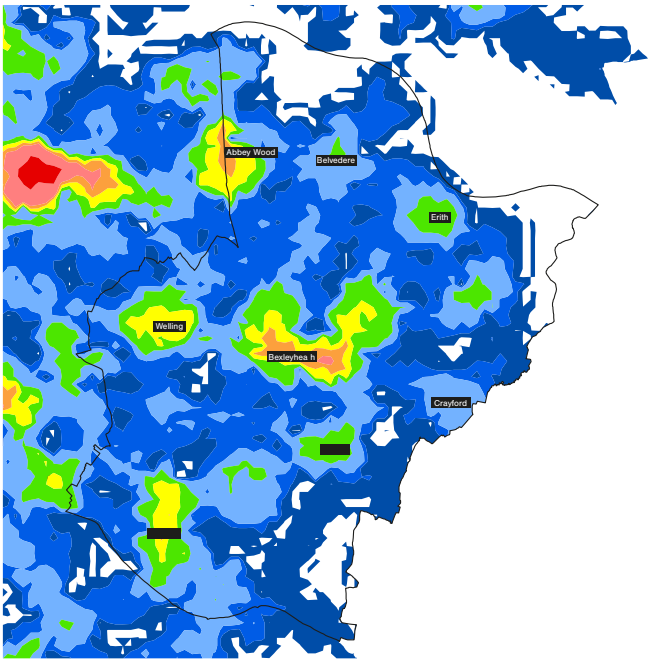
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Movement

The borough's topography has had a significant impact on the movement network that characterises the borough today.

The location of settlements close to the rivers and infrastructure that supported them has created a general pattern of east-west connectivity in the borough. North-south links in the form of rail connections, cycle routes and bus routes are few.



69 PTAL, 2016

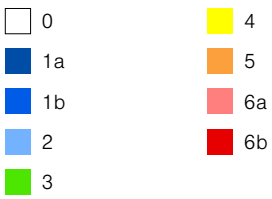
Bexley has a lower proportion of sustainable transport users when compared to London wide figures. This includes walking (24% Bexley, 33% London wide) and cycling (1% Bexley, 3% London wide).

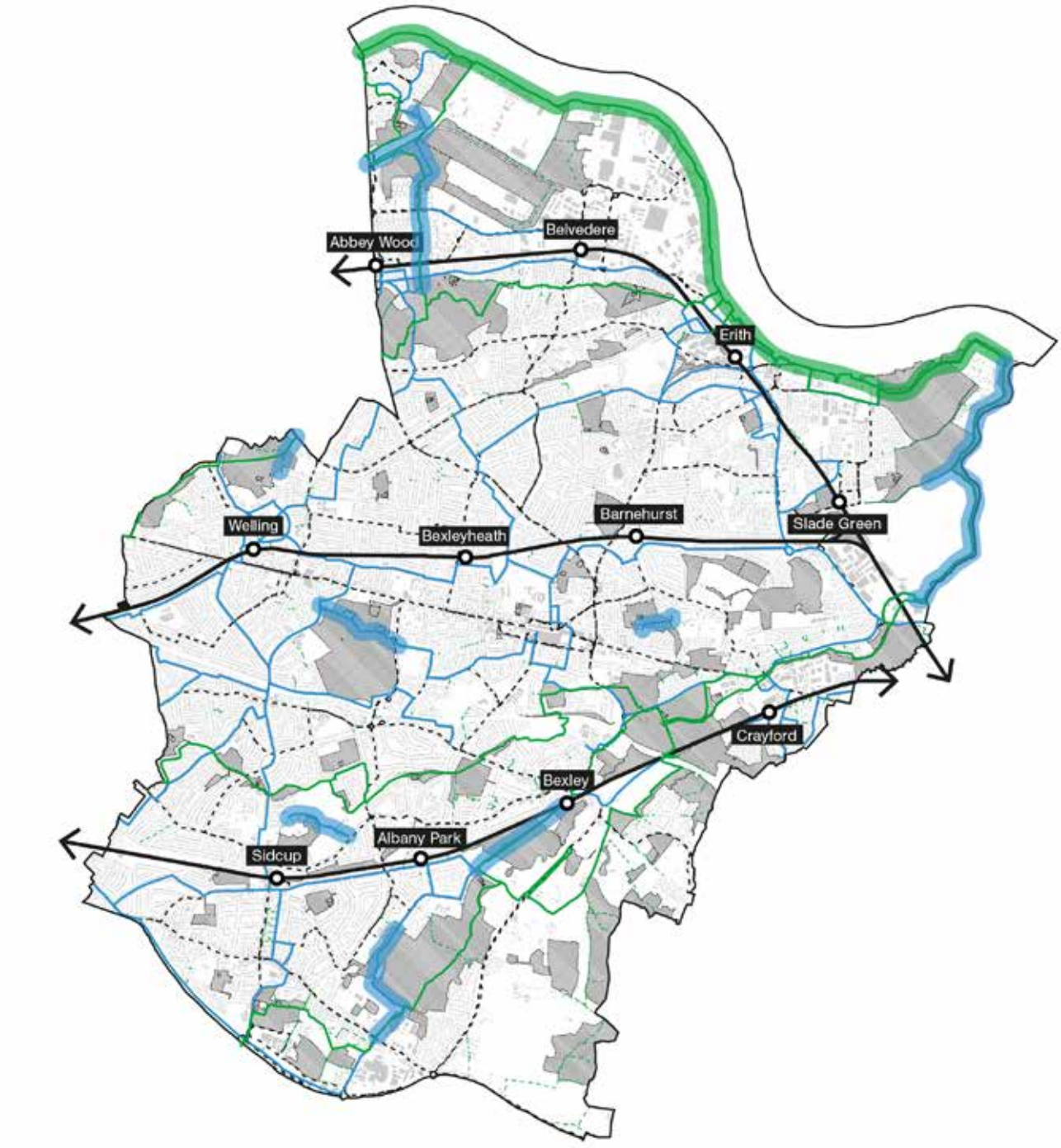
Where active travel options are well developed, these paths tend to cluster along the valley edges, both along the north and eastern sides of the borough and often through large high quality open spaces.

Areas of good Public Transport Accessibility (PTAL) are generally located around town centres, although the locations of train stations in Sidcup, Welling and Bexleyheath creates areas of predominantly residential use with good access to public transport. There are also large residential areas with poor PTAL, notably north and south of Welling and Bexleyheath.

In general the pattern of PTAL and active travel means that large parts of the borough often experience high levels of private car usage. Opportunities for movement by cycle or on foot often coincides with large open spaces, adding to their character.

69 Source: TfL





70 Active Travel Network

- Cycle route
- Off-road cycle route
- Footpaths
- Railway
- PROW
- Bus route
- Thames Path
- Open space

N

0 2km

The Evolution of Bexley

The Development of Modern Bexley
Periods of Change
Conservation Areas
Heritage Themes

The Development of Modern Bexley

The topography of the borough creates a series of different landscapes that form east-west bands in the borough, shaping the pattern of infrastructure and reinforcing an east-west pattern of development.

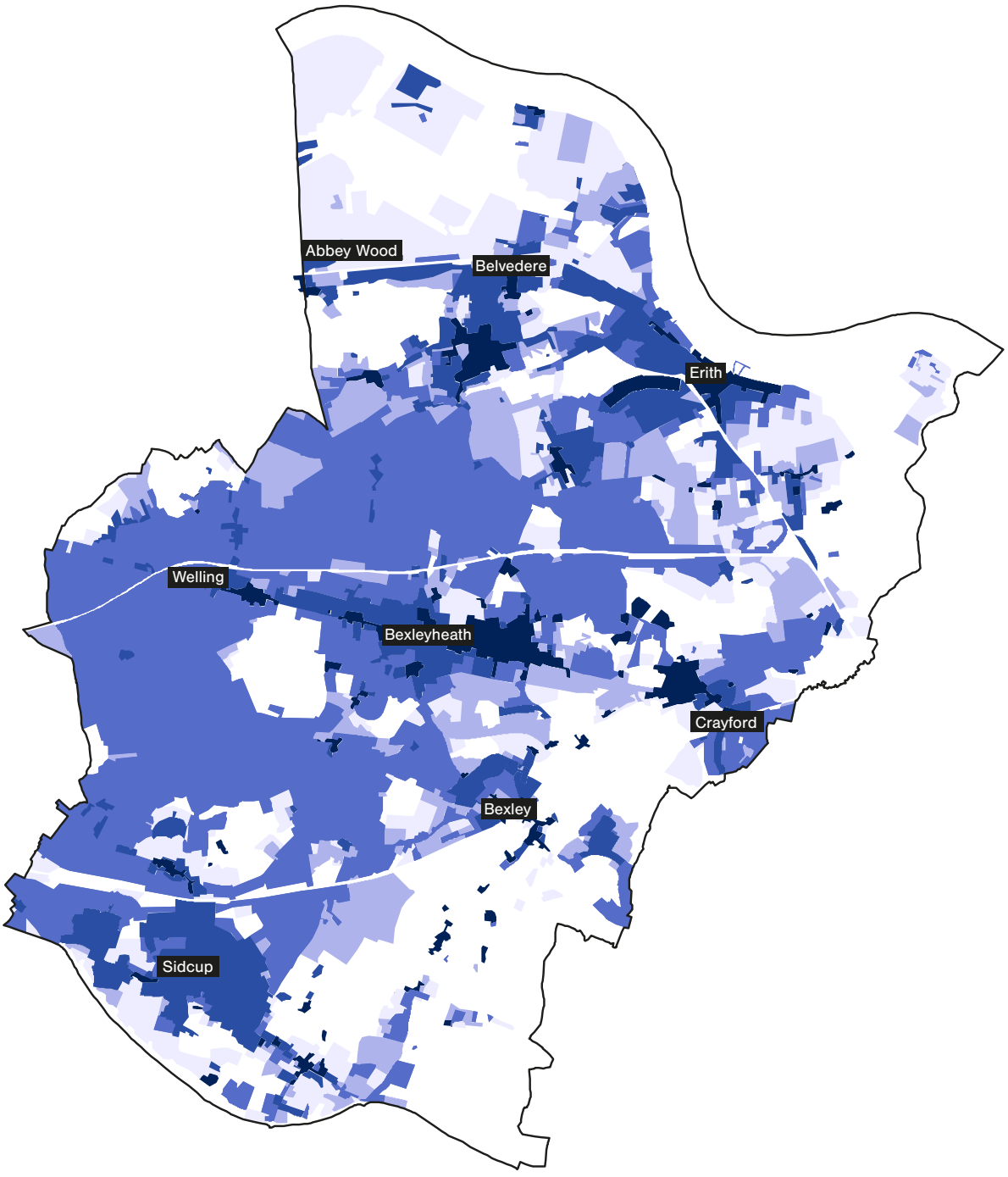


71 Historic settlements (in 1870) in relation to topography.

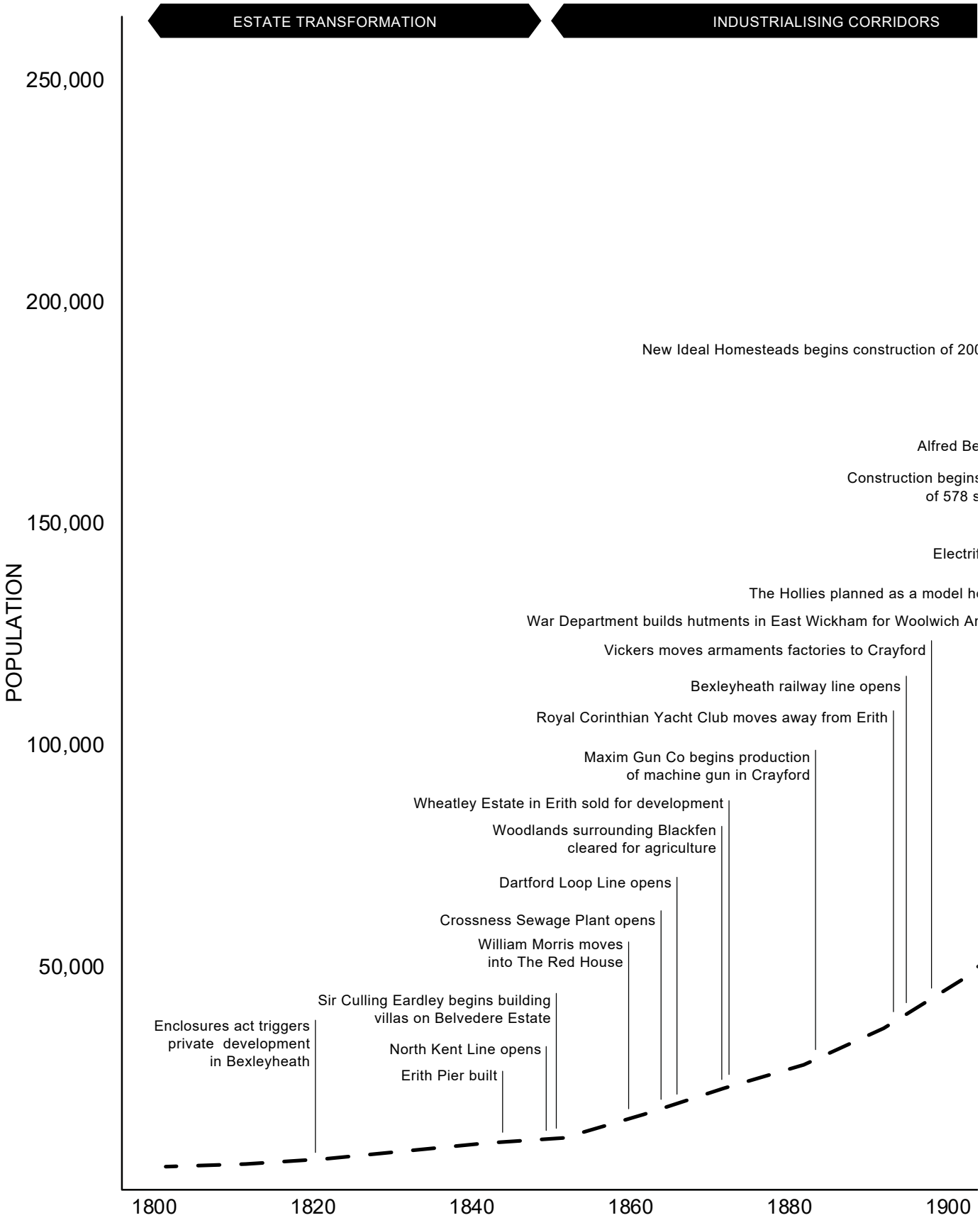
This relation to topography illustrates both the importance of rivers and the prominent ridge that runs through present day Welling and Bexleyheath. As the locations of the oldest urban fabric in the borough, the geographical features of these settlements - relations to the high ridge or to the river- form an important cultural role in the identity of the borough.

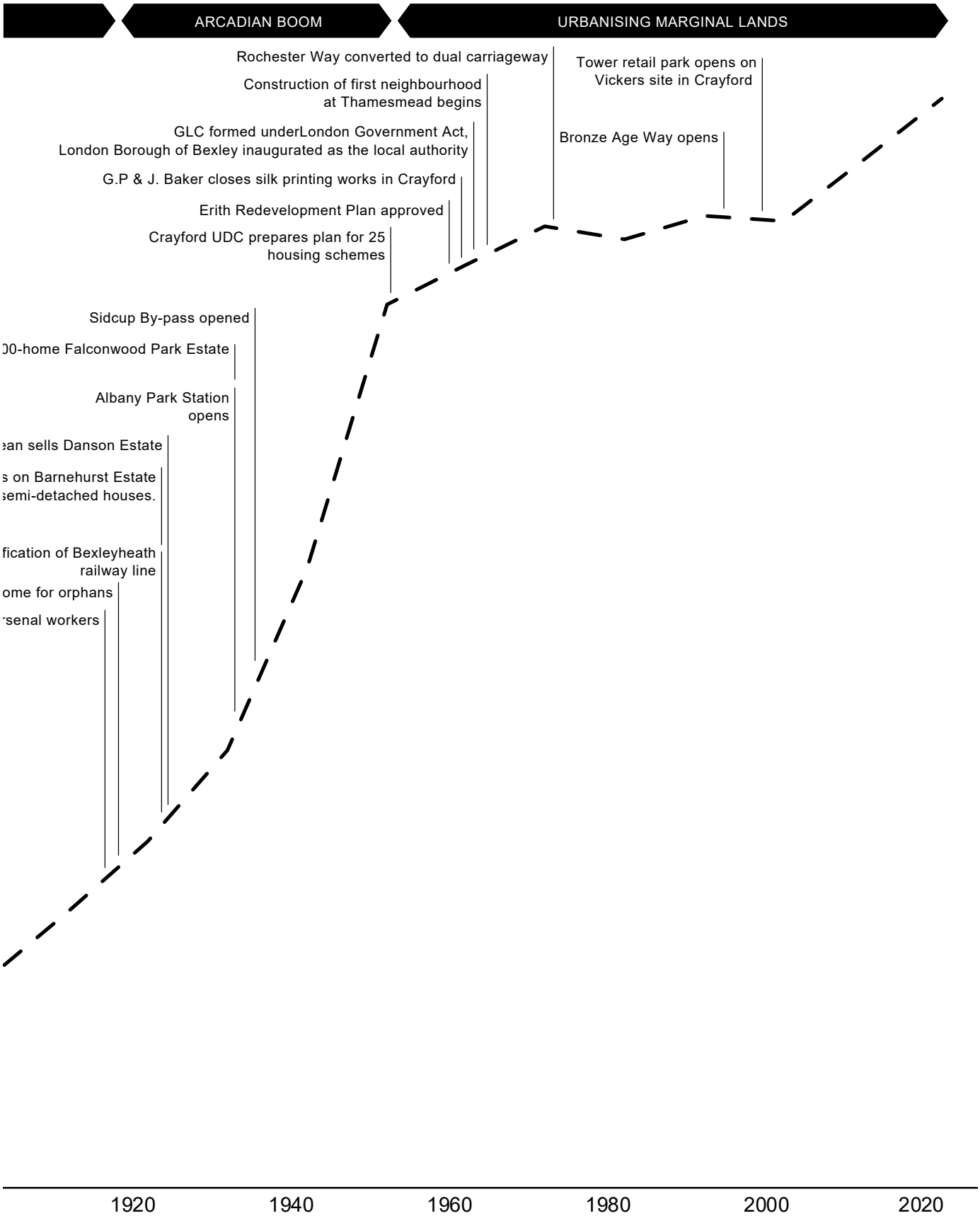
Prior to the late C19th Bexley remained largely rural with the exception of a number of small settlements. Erith, Crayford, Bexley and Foots Cray had grown around the opportunities offered by the rivers, whilst Welling and Bexleyheath formed around Watling Street.

The timeline on the following page shows milestones in the development of the borough's built environment and its character, from 1801.



72 Urban Extension
Source: Elaborated from Ordnance Survey


ESTATE TRANSFORMATION
INDUSTRIALISING CORRIDORS
250,000
200,000
150,000
100,000
50,000
POPULATION
1800
1820
1840
1860
1880
1900
New Ideal Homesteads begins construction of 20(
Alfred Be
Construction begins
of 578 s
Electrit
The Hollies planned as a model h
War Department builds hutments in East Wickham for Woolwich Ar
Vickers moves armaments factories to Crayford
Bexleyheath railway line opens
Royal Corinthian Yacht Club moves away from Erith
Maxim Gun Co begins production
of machine gun in Crayford
Wheatley Estate in Erith sold for development
Woodlands surrounding Blackfen
cleared for agriculture
Dartford Loop Line opens
Crossness Sewage Plant opens
William Morris moves
into The Red House
Sir Culling Eardley begins building
villas on Belvedere Estate
Enclosures act triggers
private development
in Bexleyheath
North Kent Line opens
Erith Pier built


ARCADIAN BOOM
URBANISING MARGINAL LANDS
Rochester Way converted to dual carriageway
Construction of first neighbourhood at Thamesmead begins
GLC formed underLondon Government Act, London Borough of Bexley inaugurated as the local authority
G.P & J. Baker closes silk printing works in Crayford
Erith Redevelopment Plan approved
Crayford UDC prepares plan for 25 housing schemes
Tower retail park opens on Vickers site in Crayford
Bronze Age Way opens
Sidcup By-pass opened
00-home Falconwood Park Estate
Albany Park Station opens
ean sells Danson Estate
s on Barnehurst Estate semi-detached houses.
fication of Bexleyheath railway line
ome for orphans
rsenal workers
1920
1940
1960
1980
2000
2020

Bexley is an ancient parish that formed part of Kent, within the diocese of Rochester. Bexley is written in ancient deeds as Bekesley deriving its name from Becc or Beke, to signify a stream, and ley, being a pasture. In the Domesday book, Bexley is written as Bix (Parishes: Bexley. The History and Topographical Survey of the County of Kent: Volume 2. E Hasted. British History Online, 1797).

This also highlights the importance of rivers and stream historically throughout the whole Borough. For example, Maxim and Vickers operated out of Crayford Creek to get the products straight to the Thames; the Thames is extremely important for serving the Borough's industrial heritage; Crossness is located to the Thames to serve the sanitation problems of the 19th Century; and many of the large, grand houses which the Borough has/had were constructed along rivers like the River Cray.

Bexley in 1870

Bexley remained largely rural until as recently as the mid C19th. At that time the area was characterised by large rural estates under the ownership of wealthy landowners. Large areas of economically productive woodland formed large parts of these estates, whilst other unproductive heathland areas still dominated the landscape.



73 Estate woodlands, 1870s

Access to abundant power and clean water in the form of rivers enabled industries such as tanning and silk printing to develop in Crayford in the C19th. During the 1840s Erith also developed into a small resort town on the river. The pier enabled steamer moorings which bought visitors to a hotel and victorian pleasure gardens.

Following the enclosures act the small town of Bexleyheath began to grow along the London to Dover Road as smaller landowners were able to build private properties on newly enclosed land.

The form of this development followed the roman route of Watling Street, along which Welling had already developed as a small Saxon village. The North Kent railway accelerated development in the north, particularly where industry had already developed around access to the river.

73 Source: Ordnance Survey



74 Danson Estate

Erith in particular expanded, as the railway triggered speculative development aimed at wealthy commuters who could now reach London conveniently. The character of the town also began to change rapidly with the development of riverside industrial facilities of an increasing scale. This industrialisation of the riverside expanded further completion of the Crossness Sewage Plant in 1865.

The economy as a whole remained principally agricultural, but became more intensive through the construction of glasshouses and market gardens



75 Linear development along Watling Street

74 Source: Bexley Heritage Trust

75 Source: Ordnance Survey

to enable the growing of higher value fruit crops and flowers that could be transported to London via the new railways. This particularly clustered on the flatter, subdivided land around development in Welling and Bexleyheath.

1871 - 1910

Local authority owned trains built by Erith, Dartford and Bexley Councils opened 1903-6 in the north of the borough, increasing rush hour electric trains to Charing Cross and fuelling speculative development.

The building of railways drastically reduced the journey time into central London, allowing the middle classes a means of living further outside of the city whilst retaining their jobs. Victorian suburbs built up around towns such as Erith and Sidcup. Locally, tram systems created in the early 1900s provided the working classes a new means of reaching job opportunities.

As well as a closer relation to London as a labour market, Bexley was subject to the construction of utility facilities (oil, gas, water) as the city grew rapidly. Aside these new facilities heavy industry grew, particularly in the north along the River Thames. As the area around Erith became increasingly industrial in character, landowners sold off parts of the large

estates for speculative development, such as the Wheatley estate in Erith. The form of this new development was very different from the dense, complex settlements that had slowly emerged over previous centuries. The model By-Laws of 1877 required gridded streets of set proportions. Combined with the speculative nature of the development and the pattern books it employed, this created regular, repetitive streets of housing.



76 Speculative development, Sidcup

Those estates that remained began to fell woodland, which was declining in value as competition from coal and foreign imports grew, and cultivate the cleared land for agriculture. Development continued to take a similar linear form as had emerged in the north as further train lines in the centre and south of the borough were developed with access into London.

The towns of Welling and Bexleyheath, and Belvedere and Erith become contiguous along these movement corridors. Generally development occupied the flatter ground, and therefore linear streets of terraced houses were easy to lay out in a regular pattern.

The train links also bought new economic opportunities. The clearing of woodland and conversion to agricultural production enabled horticulture in particular to develop in the form of nurseries, often to the rear of development and thus further encouraging a linear settlement pattern. Prior to the creation of modern local government, Watling Street was the dividing line between the parish of Plumsted and the parish of Bexley. Development took a more concentric form in southern areas around new train stations.

Large open spaces were retained around remaining estates such as Danson House and Sidcup Manor House and as a result retained a more open separation between settlements in these locations. Smaller villages and towns away from either the river or newly built rail stations, such as North Cray and Blackfen experienced very little development in this period. These villages therefore have an absence of Victorian and Edwardian architecture at their core.

The architecture of this period also introduced ideas that would have a

76 Source: Bexley Archives

significant impact on later phases of development in the borough. The introduction of traditional building elements (half timber framing, ornamentation) in response to Georgian architecture that was perceived to have become dull and formulaic through the introduction of health and safety regulations and the economy of speculative construction.

Edwardian housing distinguished itself from revivalist Victorian architecture in referencing only those historic elements that are strictly in accordance with contemporary needs, for example the use of the hall as a living room.

Referencing simple country buildings and early Georgian and Queen Anne era architecture rather than English renaissance/late Georgian, this period introduced architectures that would inform the later mass produced suburban housing of the mid C20th.

An early adoption of these principles was built in Bexleyheath in the 1860s in the form of the Red House, the home of William Morris. This architecture drew on rural and in particular agricultural architecture.

The cottage style that emerged from studies of lower, wider rural housing had a more horizontal in emphasis than Georgian and Victorian architecture. Edwardian housing also broke larger estates into groups following picturesque principles, such as the use of gable ends to unify short terraces and greens to create groupings of buildings. Internally, late Victorian medium size houses moved kitchen and scullery to the rear, with internal bathroom stacked above.

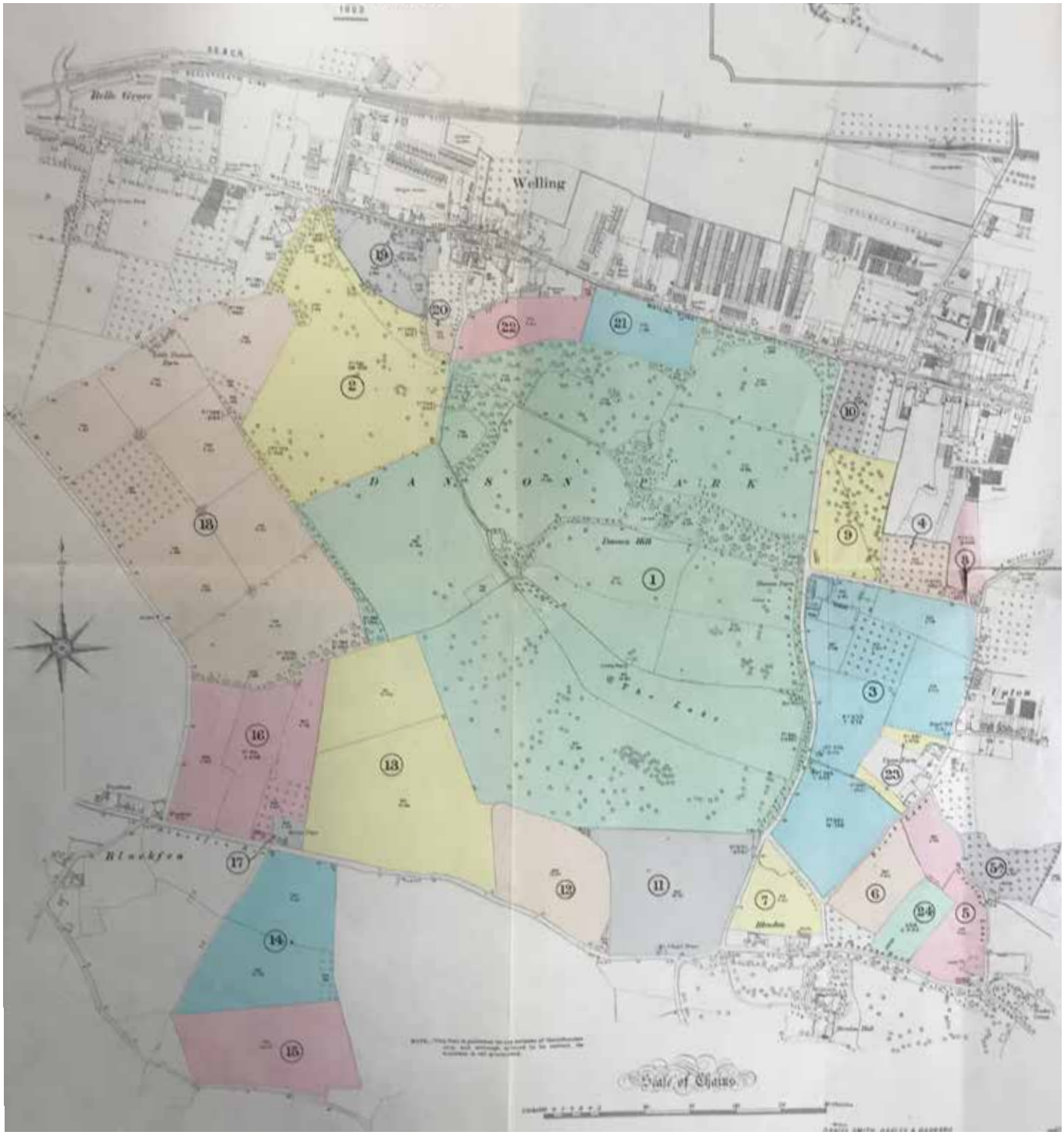
Suburban plots allowed wider houses, with one of the reception rooms having direct access to the garden via a conservatory or French doors. With this move rear gardens became much more pleasant spaces for the first time, and became a place to entertain.

Bay windows became more common following the abolition of glass and window taxes in 1851, allowing bay windows to be added to larger suburban houses, creating a strong alignment between ground and first floor windows and emphasising the asymmetry of elevations. Pre-fabrication also made casement windows more affordable.

1911 - 1938

Bexley's historic links to the military meant that the two world wars bought rapid change. This impacted on the north of the borough in particular where military facilities had historically developed.

The manufacture of armaments accelerated in the years leading up to and including



Sales particulars for the sale of the Danson Estate, 1956
Parcels show how the large estate was subdivided into individual housing estates.

77 Source: Albany Park Estate, Sidcup



New housing near Blackfen, 1932

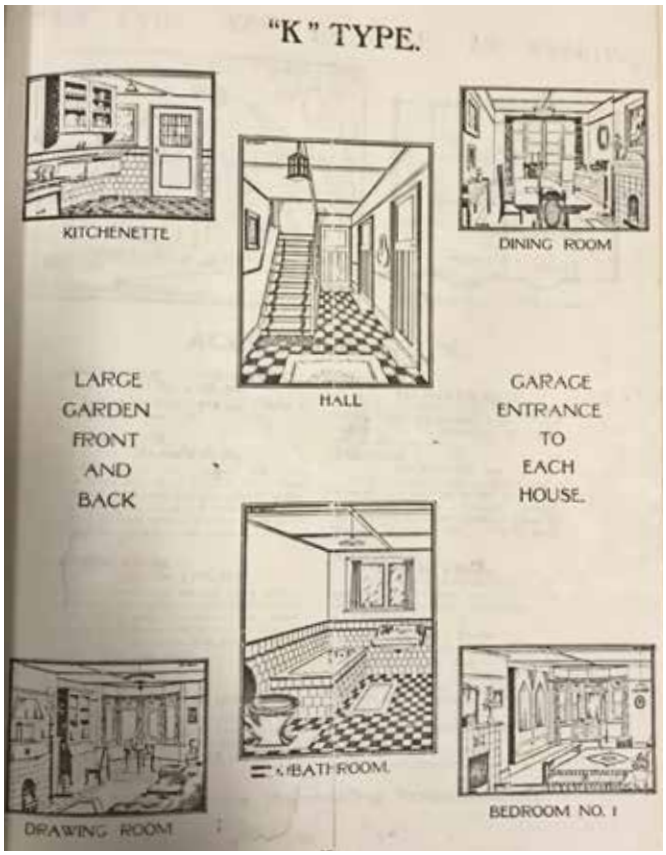
78 Source: www.britainfromabove.org.uk

the Great War, when mechanised warfare and the application of recent advances in production including the assembly line created an almost insatiable demand for weapons and related goods. Crayford, which was home to the invention of the machine gun, became known for production of guns and aircraft, and Erith for ammunition.

The increased production required a massively increased workforce. The workforce at the national armaments firm Vickers expanded from 300 to 14,000 at its Crayford facilities alone over the course of the war. These workers and their families required housing, and employers and the government both stepped in to provide it. Vickers built 800 homes.

During the inter-war period, all areas underwent a period of rapid change. The population grew from 21,104 in 1921 to 32,626 in 1931 to 77,020 in 1938. Urban expansion focussed mainly on the high, flatter ground in the centre of the borough along the newly built A2 and along the railways.

Across Britain, there was a drive of middle-class commuters who sought to move out of their inner city homes in search of an improved quality of life in more semi-rural locations. This was the wave of suburbanisation for those who could not afford the costly Victorian villas of the previous periods, but could afford the reduced costs facilitated by standardisation of construction and



79 Advertisement for new housing estate, Sidcup

cheaper materials.

Metro-Land in north-west London into Hertfordshire was so named because of the homes built along the new Metropolitan line railway, but the same concept took place in Bexley, facilitated in the central areas by the electrification of the existing Bexleyheath railway line. Although helped by new infrastructure, the driving force

79 Source: 'Penhill Park Estate' New Ideal Homesteads

behind this growth was new ways of building on a mass scale and a national demand for new housing. In fact housing provision in the 1930s ran ahead of adequate train provision, with some purchasers walking up to two miles to reach their trains.

The sale of the large estates that had shaped the pattern of development for centuries, such as the Danson Estate, enabled volume house builders to create entire new neighbourhoods. The owners, seeing the opportunities of selling their land and exploiting their social standing, lobbied for the improvement to railways to facilitate development, often serving the anticipated neighbourhoods soon to be built rather than established settlement.

As Bexleyheath and Welling developed, the historic Roman Road emerged as their town centres. This shaped the built form, particularly around the town centres, which exhibited a linear pattern of development along the road with small side streets branching off, which then integrate with the much longer streets developed as part of the inter-war estate.

The electrification of the railways enabled more frequent, more reliable services and signalled a step change in the scale of development as the value of agricultural land rose.

A few house builders, particularly Ideal Homesteads Ltd, built large estates of mainly two storey detached and semi-detached homes, aimed at people moving out of the city in search of larger homes with access to open spaces and fresh air. The local authorities also built new estates during this period.

Enabled by attractive mortgages, low deposits and cheap construction, developers aimed these homes at a the lower end of the market. The diversification of target customers introduced different types such as bungalows and chalets, developers also promoted the variety of houses through branding their homes as product linked to a new attractive lifestyle.

This expansion was enabled by mass produced, standard house types arranged in regular, efficient plots. The scale of these urban blocks was dramatically different to pre-war urban fabric. New estates were planned around the predicted rapid growth of private car ownership, particularly leading to much longer urban blocks than earlier development.

Large employers also built higher quality homes for their workforce, such as the Barnes Cray estate built around the Vickers munitions factory.

Whilst the standardised styles of the major builders dominated, in some locations builders constructed bespoke properties.

These often exhibited a more unique architectural style, including the popular Art Deco homes such as those which remain on Danson Road in Bexleyheath.

The volume house-builders adapted aspects of Edwardian architecture to their standard mass produced typologies. They also differentiated their houses for private sale from neo-Georgian cottage council estates being built across London.

This lead developers to favour deep gables and bay windows in an 'old english' style emulating Bailloe-Scott and garden suburbs such as Hampstead. Bay window construction becomes lighter, tiles hung from a brick base rather than solid mullions.

The organisation of homes also changed, with privacy in particular becoming increasingly important, meaning front doors on semi detached becoming separated and even moving to the sides of houses.

1938 - 1960

Development slowed significantly during this period . In the early part of the period, labour and goods were primarily diverted to the war effort, leaving little for residential construction, even as homes were being lost in the Blitz. The years following the war were optimistic but characterised by austerity, again with little resource available for large-scale development seen in the inter-war period.

Whilst typologically similar to the inter-war years, development during this period extended into more challenging areas such as the river plains, surrounding infrastructure and on the steeper slopes. Due to the technical challenges of building in such locations, the urban form of these new neighbourhoods is more irregular than earlier periods.

As with many parts of London, the area suffered significant bomb damage during WWII, largely due to its proximity to the Royal Arsenal at Woolwich and the concentration of armaments works that



80 Varied urban form, Northumberland Heath

80 Source: Bexley Archives

81 Source: Ordnance Survey

formed key targets for air raids.

Erith in particular was badly hit during the war, due to the concentration of factories supporting the war effort and its location along the River Thames, in part because German bombers used the river as a guide for their return journeys and often released any leftover bombs along the way.

The town was so badly decimated that, when industrial decline accelerated the poor conditions in the area, the Council proposed a comprehensive regeneration scheme. The Blitz was not confined to



81 WWII Bomb Census Map

the north of the borough, however, and German bombs destroyed many of the suburban houses that had been built only years before. This left a series of empty sites across the borough: streets otherwise lined with uniform semi-detached houses retained vacant plots for years, many of the sites developed in the 1970s or later with small blocks of garden-style flats.

In addition to the private sector delivery of homes that had characterised the boom of previous decades, local authorities also significantly increased their development of large planned estates and regeneration projects.

The widespread access to gas and electricity transformed the plans of houses. Rear extensions became less common, reducing the size of kitchens and creating a simplified relationship between the reception rooms and the gardens, promoting socialising in the garden further. Bathrooms were generally moved upstairs.

1960 - 2018

Development remained primarily led by a public sector attempting to provide housing lost during the war, with the private sector hamstrung by austerity and a series of recessions plus an inability to compete with the councils for building materials and labour.

However, the economic and cultural renaissance of London that began in the 1980s began to create increased demand for private sector housing. London's population, long decimated the Blitz and the success of "New Town" outside of its boundaries, finally began to grow

again in 1988, and has grown every year since, finally surpassing its 1930s peak population in 2015. From 6.9 million in 1991 to 8.2 million just twenty years later. London's population has increased rapidly in recent decades, exacerbating a housing crisis already evident across much of the south east of England.

The private sector resurged over this period across London, including in Bexley. 21st century development has been denser; in 2017/18, the average density from all approvals was 76 dwellings per hectare, almost double the density achieved by typical inter-war development. Reflecting developer ambitions to increase densities, blocks of flats have become a dominant typology on larger sites across the borough.

Following a steady decline in the economic success of the town, the centre of Erith underwent significant change under the Erith Redevelopment Plan, replacing the largely Victorian town with a modernist plan.

In place of the fine grained town the new shopping centre and housing was a dramatically different scale. Tower blocks and an introverted, pedestrianised shopping centre characterised the new town centre. The separation of pedestrian movement and vehicular traffic also created a radical change in scale of streets and open spaces.

Further public sector projects shaped the north of the borough, principally the development of Thamesmead and the construction of Bronze Age Way, both led by the GLC.

As a result of significant damage during the war and the subsequent decision to relocate military activities in more defendable locations, the GLC identified land for a large new riverside development in Ministry of Defence land spanning Greenwich and Bexley.

The scale of development at Thamesmead and its period of construction means it exhibits a number of different approaches to urban development. These range from tower blocks, high density low-rise block, and lower density estates built around cul-de-sacs, all typologies that are found across northern parts of the borough in the second half of the C20th.

Whilst echoing concerns for health, daylight and open spaces that were at the core of inter- and post-war housing, development in the 60s and 70s explicitly re-imagined what this could mean architecturally. Large windows, massive urban blocks and a radically simplified formal language characterise development in this period.

Evoking craft and pre-industrial forms



of construction was central to earlier architectural periods in the borough, but this changed significantly in the 60s and 70s. New building technologies were also trialled and developed to reduce costs, particularly in early phases of Thamesmead.

A new neighbourhood of Slade Green was also developed in the north-east of the borough. Urban extension in the rest of the borough was more fragmented, and often provided space for new schools and community facilities in open spaces.

82 Thamesmead under construction

(c) Tony Ray-Jones, RIBA Library Photographs Collection

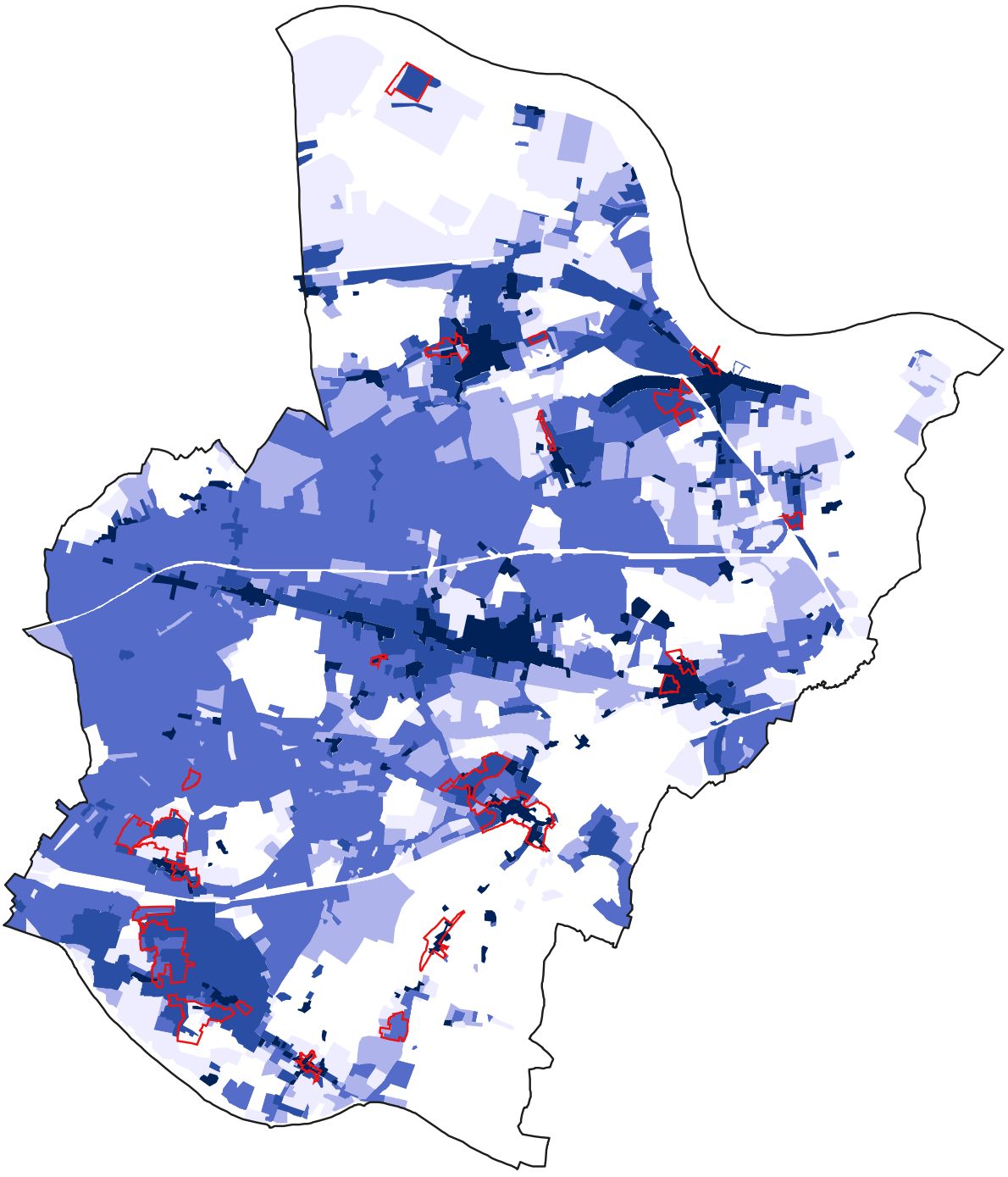
Conservation Areas

There are 23 conservation areas in the borough. In general conservation areas are located in northern, eastern and southern areas, with only one located in central areas and none in western parts of the borough. Conservation areas tend to be larger and more contiguous in southern parts of the borough, in Bexley Village and Sidcup in particular. As such they play a much stronger role in the definition of character in these areas.

Conversely, conservation areas in the north tend to be smaller and more dispersed, reflective of the way the urban fabric has tended to be more exposed to redevelopment and renewal through exposure to economic shifts over time. Additionally, the pattern of urban development reflects the industrial character of the area, including conservation areas such as Crossness focussed on industrial sites of historical significance and those such as Star Hill typifying the dense urban streets of terraced housing built for workers.

Many conservation areas have a special quality due to their homogeneity and replication of particular building elements. Examples of such a quality is often the product of planned estates such as Brook Street, Longlands Road, Oak Road, Old Forge Way and Willersley Avenue/ Braundton Avenue. As the majority of residential conservation areas were developed as planned estates, examples of conservation areas with a settlement pattern that has survived over time are rare, although Halfway Street and Old Bexley are instances of this in the borough. The interrelationship of landscape and topography often contributes to the significance of conservation areas. Erith Road, Foots Cray, North Cray and Star Hill are examples that draw special characteristics from their relationship to parkland, the river and topography respectively.

The importance of landscape at a smaller scale is also evident in the role played by building setting. This is particularly important where the spaciousness of built form is key to its spatial quality, such as at Willersley Avenue/Braundton Avenue, High Beeches, The Hollies, Lensey Park and Christ's Church.



83 Conservation Areas
Source: Elaborated from Ordnance Survey

Extension 1960 - 2018
Extension 1938 - 1960
Extension 1910 - 1938
Extension 1870 - 1910
Urban Extension 1870

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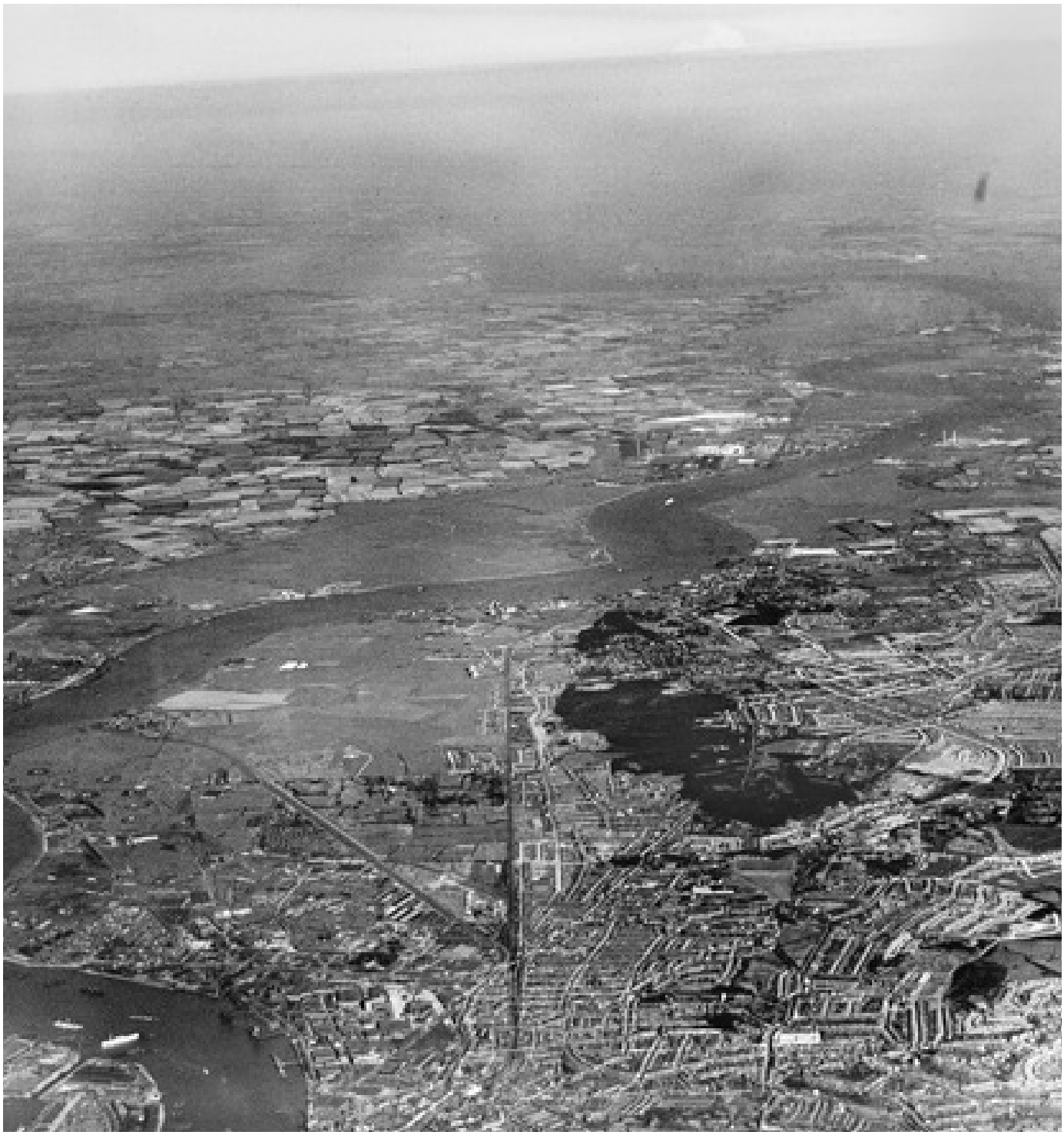
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Heritage Themes

Whilst the borough has gone through significant change throughout its history, there have been persistent themes that have shaped built and unbuilt environments over this time, and will continue to do so.

These themes are often a result of conditions that have remained stable over centuries - the borough's topography, geology, ecology, hydrology, and relationships to the city of London, to the sea and to continental Europe.

Although some of these themes are drawn from the environment, for instance the rural landscape that until relatively recently characterised the borough. But in all cases they impact on the ideas that have been at the core of urban development in the borough, and part of why people chose to live, work and play in the borough.



84 The River Thames from Plumstead towards Purfleet and beyond, Woolwich, from the west, 1939
Source: Historic England

Rural Idyll

Edwardian, pre-war and inter-war suburban housing all draw important influences from rural architecture, forms of housing that makeup the majority of the borough's urban fabric today.

Indeed, in the Red House the borough has one of the most influential pieces of architecture that demonstrates the renewed interest in pre-industrial forms of construction of late Victorian and Edwardian architects. The architect of the Red House Philip Webb was a key protagonist of a reaction to industrial society, introducing red brick and half timbering that would influence later phases of urban development albeit in cosmetic forms due to the restrictions of using timber structurally.

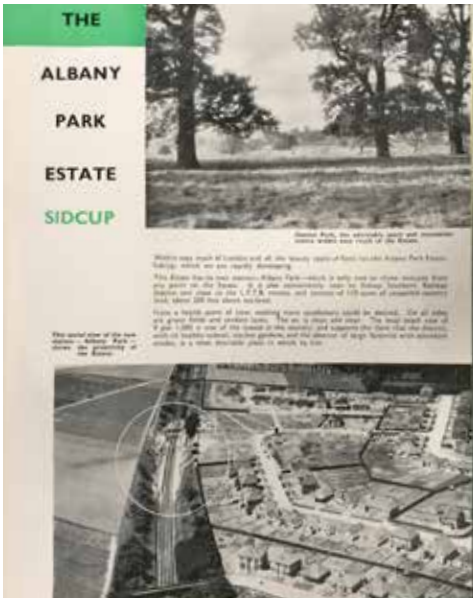
Other architects of this period such as Norman Shaw, Voysey and Lutyens developed approaches in rural projects that contained elements that were easy for speculative builders to copy, such as rough cast finishes and deep gables. These elements were also picked up by the house builders of early C20th suburbia, the Garden City movement which influenced development in Crayford and the early public sector cottage estates.

The borough's position on the edge of the city made these more widespread aspects of architecture through the late C19th/ early C20th particularly relevant to Bexley. Demand for inter- and post-war houses generally came from people who knew the areas through Sunday and Bank Holiday excursions into the countryside, and so in Bexley these people often originated in Plumstead and Woolwich. As such many of those who moved to the borough during this period of huge expansion would have rural associations with this place. Visual links to the countryside are still attractive, and still used by developers to distinguish the borough's offer.

In general the references to rural architecture in the borough are widespread, often resulting in relaxed architectural compositions containing architectural multiple elements, asymmetrical elevations, and a more horizontal emphasis than found in other parts of London.







85 Promotional hoarding, Bexleyheath, 2020

86 Red House, Phillip Webb

87 'The Albany Park Estate', extolling the virtues of the living close to the Danson Estate

87 Source: 'Albany Park Estate, Sidcup

Trade

Bexley's position within wider movements of people and goods have created a persistent east - west structure in the borough. The fact that these patterns have persisted over time is due to the enduring relationship between London, the sea, and continental Europe.

Bexley lies on one of the most important routes in Roman Britain between London and Dover, Watling Street. A ford near present day Westminster allowed the route to cross the Thames, continuing well beyond London and linking a chain of market towns as far as the areas that border present day England and Wales.

Watling Street continued to be important in the centuries following the Roman occupation. As well as trade, the route became a busy medieval route to Canterbury for pilgrims visiting the tomb of Thomas a Becket. Some of the earliest commercial activity in the borough took place along the road, in particular Inns and Public Houses.

The southern bank of the Thames has also historically been used for naval activities due its strategic position within the Thames Estuary. As early as the C16th Henry VIII founded a navy dockyard at Erith. Land along the river Thames in Bexley would later be utilised for military purposes due to its proximity to the Arsenal at Woolwich.

This land of Erith Marshes and Plumstead Marshes was used to test munitions due to the historical absence of habitation in the marshy lowlands along the river. An economy grew around these activities, eventually forming large munitions factories along the Thames and significantly in Crayford.

Today the borough continues to play an important role in the movement of goods in and out of London due to the location of major ports in the south east of the UK. These persistent structures have bought large volumes of movement of people and goods. Over history this has presented an opportunity for growth and commercial activity but also a source of pollution, opportunities and issues which will continue into the future.





88 Part of A Map of Hundred of Little and Lesnes and the Hundred of Dartford and Wilmington, 1778 showing a linear settlement to the north of the River Cray
Source: Ordnance Survey

89 Roman Britain, source

Mass Production

Whilst standardisation of construction is a process that has shaped much of the built environment in the UK, in Bexley this has more specifically related to the emergence of mass production due the era in which the majority of the borough's speculative house building occurred.

The earliest instances of this standardisation are the Victorian and Edwardian commuter estates that followed pattern books setting out specific, repeatable architectural elements.

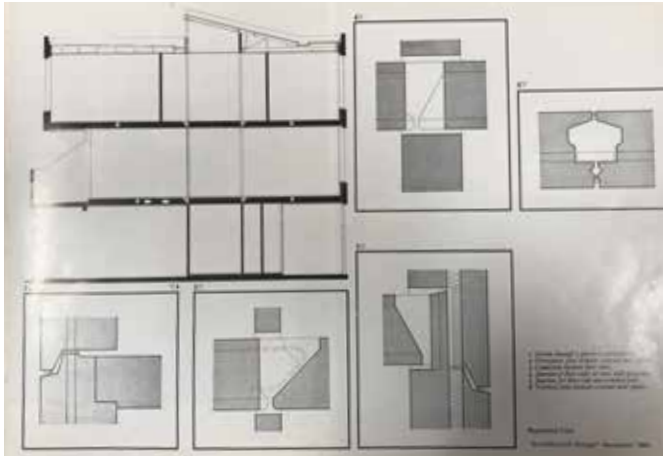
However, during the inter- and post-war housing boom in the borough, standardisation of typologies and architectural features combined with mass production, often drawing on the manufacturing capabilities that had been built up during the war to make standardised building elements.

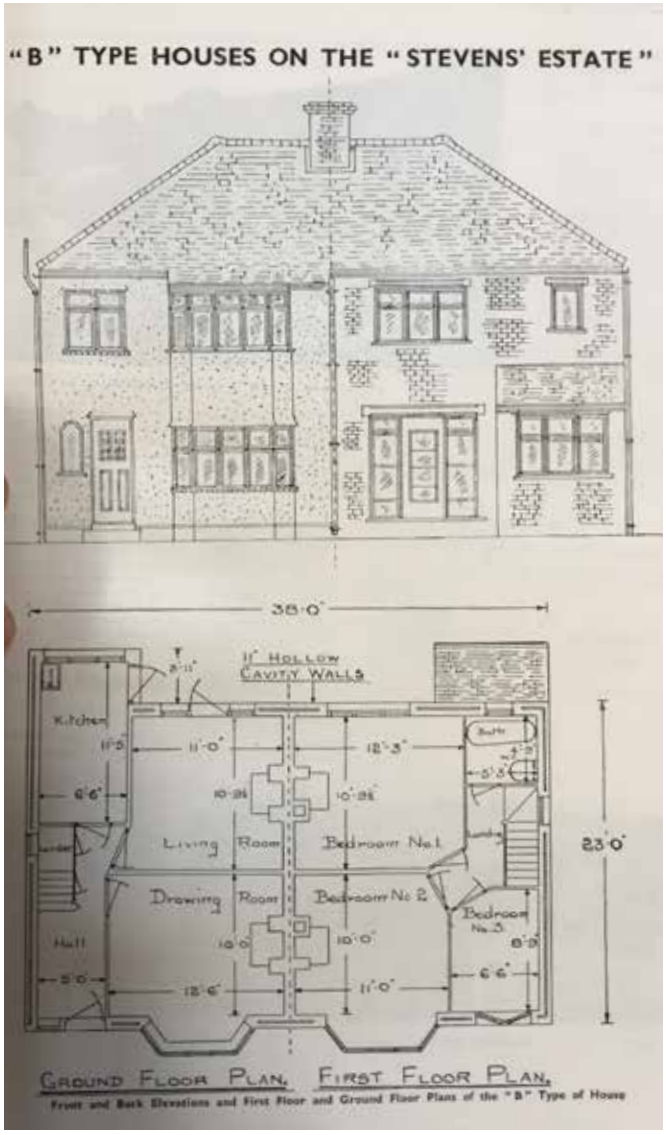
These processes made some elements much cheaper and assisted in increasing the amount of glazing on relatively cheap homes, helping establish characteristic features such as large bay windows across the borough. In addition, new types of mortgages and advertising campaigns that led to a step change in how widespread these standardised types became.

These shifts enabled a speed of development not seen before in Bexley or the country as a whole: for instance 2,500, houses were built in Albany Park within two years. The standardised houses also related to new attractive ways of living in cities.

Innovation in mass production also formed a key part of early phases of Thamesmead, where new experiments in system building also introduced a new aesthetic to the borough. This has had less impact due to poor technical performance over time.







90 Promotional material, New Ideal Homesteads

91 Pre-fabricated construction, Thamesmead

92 Promotional material, Stevens Type, New Ideal Homesteads

Health

Throughout history health and wellbeing have been central to the architecture and urban development of Bexley.

Large country estates offered the upper classes refuge from the pollution and dirt of the city. Properties a short journey from the city were alternative places to entertain and relax whilst remaining close to the economic and social opportunities offered by the city.

Some of the landscapes that these people enjoyed are still part of the borough, and in many cases now open to society as a whole, such as Danson Park and Foots Cray Meadows.

Similarly, the attraction of suburban living was seen as an alternative to the poor living conditions in the city and the heath problems associated with it that became increasingly prevalent as London industrialised. The relocation of urban populations to the suburbs often resulted in the redevelopment of victorian housing that due to its density and typology created very poor ventilation, light and sanitation.

By contrast, inter- and post-war housing presented new construction methods, house types and urban form that promoted day light, generous spaces between buildings, large gardens and internal bathrooms. Together these innovations created healthier living conditions, and a much stronger relationship between internal space and gardens.

The health benefits of green spaces also formed important ideas that shaped the development of Thamesmead, albeit at a larger scale and through public rather than private investment.

Access to the open spaces and the associated health benefits presented by its the riverside location were central concepts in the design of Thamesmead, and continue to be a special characteristic across the borough.







93 Promotional material, New Ideal Homesteads

94 Newly completed development, Thamesmead

95 Promotional material, Stevens Type, New Ideal Homesteads

Typologies

Land Use
Residential Typologies
Commercial Typologies
Town Centres
Place Identification
Sustainable Growth Areas

Land Use

This Land Use map shows the predominance of residential areas in the borough. The main source of the land use data is Open Street Map, which provides a fair understanding of the land use at borough-level resolution. Areas in white are where data was not available.

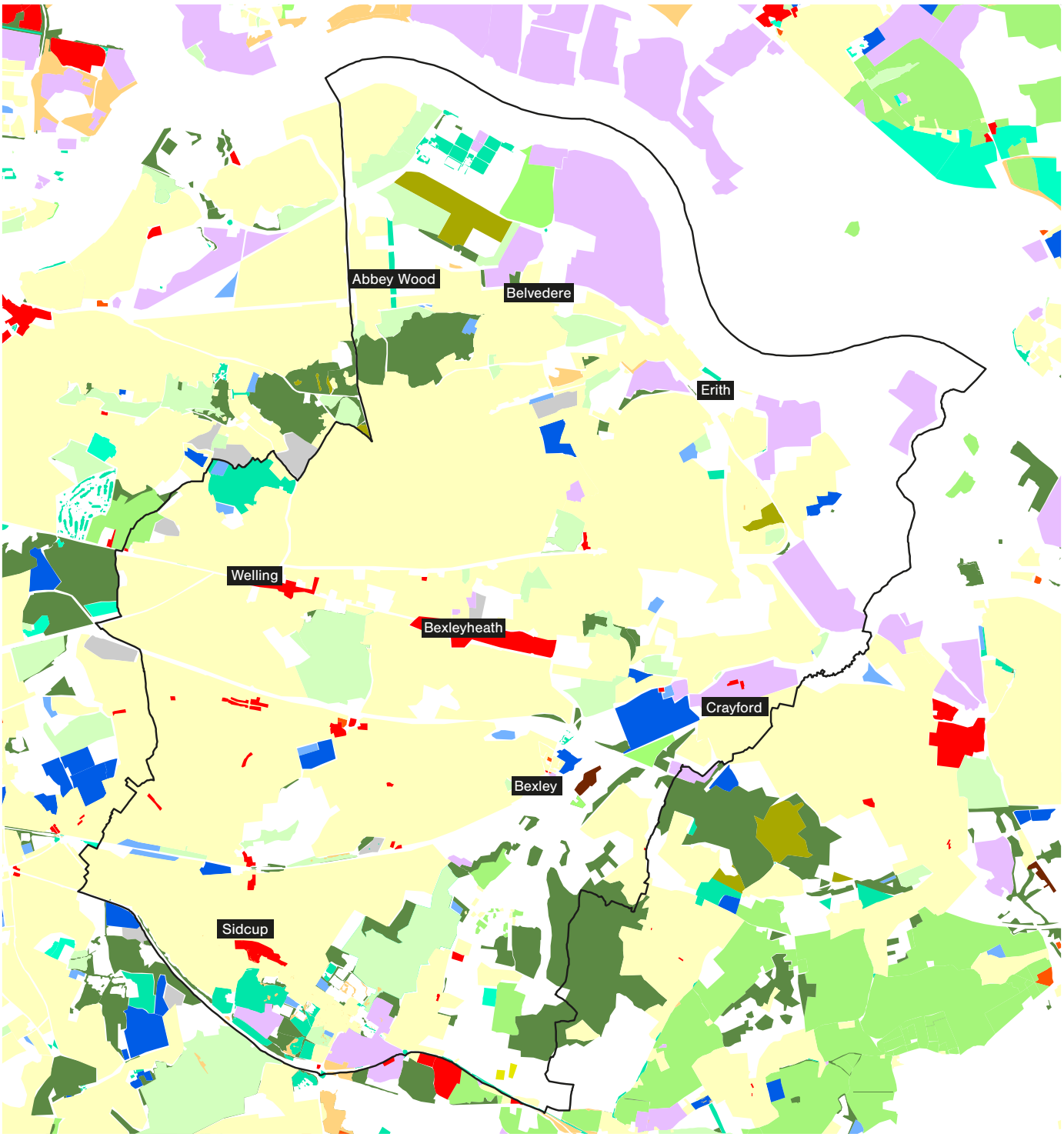
The relationship between residential and non residential uses are of particular interest. Despite the numerous town centres the commercial and retail areas are comparatively small. Industrial space is prolific in comparison to retail and commercial, which gives the impression that the borough overall is comprised of housing and large industrial areas.

Notably there is a good provision of green spaces, parks and recreation grounds. These spaces are not clustered, and are quite well spread throughout the borough.

Whilst land use provides a good overview of how character varies across the borough, its does not provide meaningful insight into the varying characters that exist within residential development, which makes up the majority of the borough and therefore is the dominant way in which spatial character is manifested in the borough.

Spatial conditions that are important in defining an areas character can be identified to describe how areas that have a similar character, and how character varies across the borough.

Spatial conditions that define character are those that describe individual buildings - their massing, architectural expression and organisation; and how individual buildings relate - their spacing, how different they are formally, their relative position.



96 Land Use
Source: Open Street Map , elaborated by We Made That and Troy Planning
Building volume shows a differentiation of residential fabric, mixed use areas and industrial areas.

Residential
Industrial
Commercial
Retail
Allotments
Cemetery
Farm
Forest
Grassland
Heath
Nature Reserve
Park
Recreation Ground

N

0 2km

Urban Typologies In Bexley

Building type and Floor to Area Ratio (FAR) are the most effective[1] parameters in describing how these spatial conditions vary across the borough.

Building Type shows both commercial and industrial use, as well as the five different residential buildings and their prevalence throughout the borough. Typology is also important in determining how buildings have been adapted and extended, and the types of streets created by development.

FAR describes the relationship between gross internal areas and the total area of the plot on which the building stands. A low FAR is indicative of sparse development, whilst a high FAR identifies denser areas. In the typology map opposite, FAR shows differentiation in residential areas as well as showing how efficiently land is occupied, and where there could be potential space for intensification.

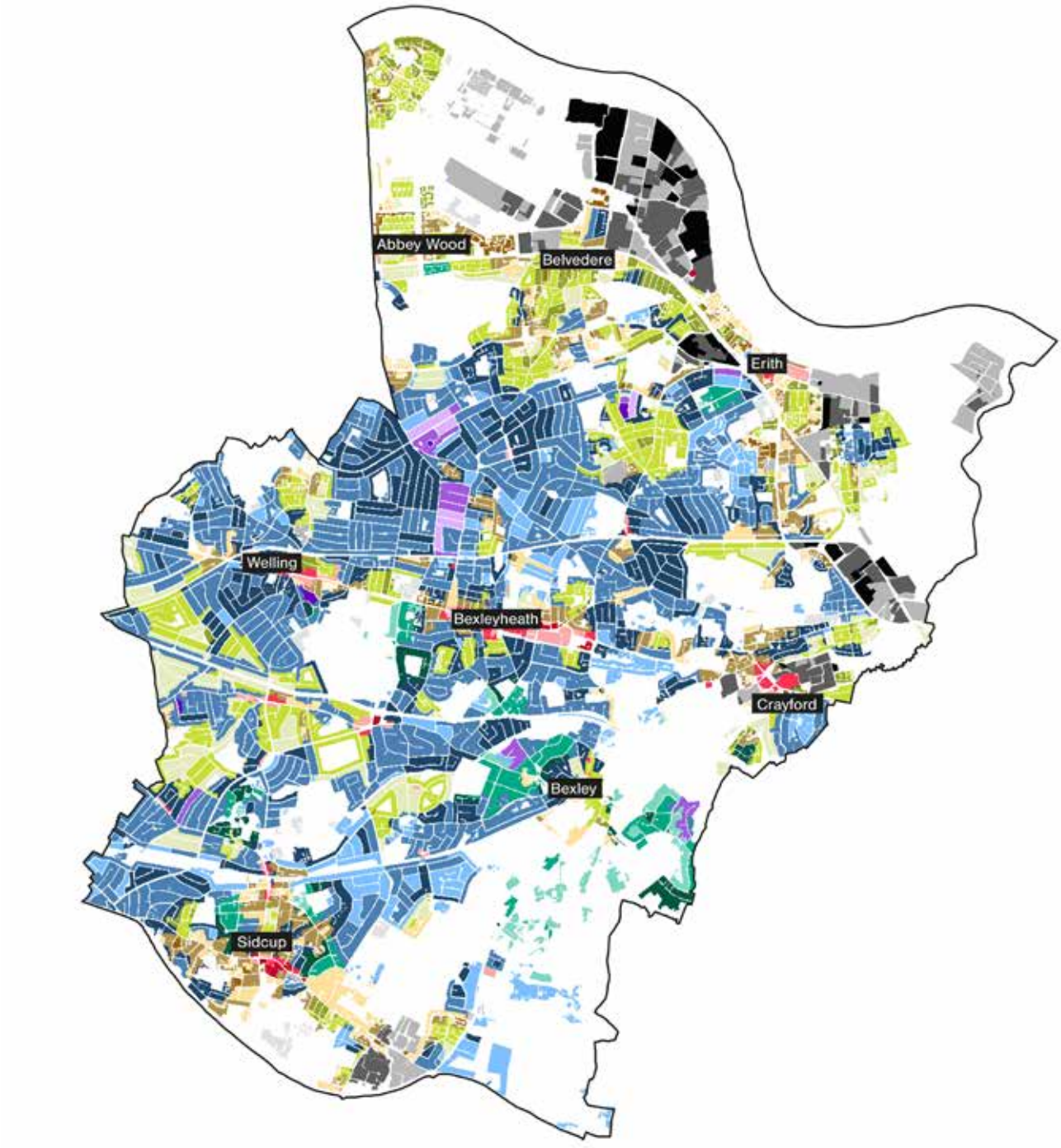
The typology map uses three ranges of FAR to break down each building type. Each boundary was determined firstly by using the 'Jenks' system which presents the natural breaks in the data, and then calibrated for each type to describe real world differences within the type.

Each residential type dwelling generally follows common principles that are constitutive of character:

- massing
- location of entrances
- fenestration
- internal organisation
- relationship to street (e.g.. size of front garden, boundary treatment)
- relationship to neighbouring buildings (e.g.. proximity, formal similarities)
- common extensions and alterations

The ways in which these characteristics varies is influenced significantly by density. For instance whether a front garden can accommodate space for parking, whether the space between buildings is sufficient to provide additional habitable rooms through side extensions, whether the distance between neighbouring houses is sufficient to allow variation in built form without appearing incoherent. Each range of FAR (sparse, medium, dense) within each typology has been defined to pick up on these characteristics.

97 Other combinations of spatial parameters were tested in the LBB Urban Morphology Study, building type and FAR provided the most effective balance between describing individual building characteristics and urban conditions.



98 Building Type for Floor to Area Ratio
LBB Urban Morphology Study, We Made That and Troy Planning

Bungalow	0.25 - 0.35	Semi-detached	0.45 - 1.25	Terraced	0.85 - 1.35	Commercial	1.32 - 1.80
	0.15 - 0.25		0.25 - 0.45		0.35 - 0.85		0.50 - 1.32
	< 0.15		< 0.25		< 0.35		< 0.5
Detached	0.50 - 1.00	Flats	1.00 - 3.00	Industrial	1.75 - 2.70		
	0.20 - 0.50		0.40 - 1.00		0.75 - 1.75		
	< 0.20		< 0.40		< 0.75		

The following pages describes each typology in greater detail, setting out where it occurs in the borough and its key spatial characteristics.

Those spatial qualities that are key in determining character within each type are defined. Development proposals and future policy should, value, protect and enhance these qualities.

Common design issues that are found across the borough are also summarised, and development proposals and policy should seek to improve these conditions wherever possible.

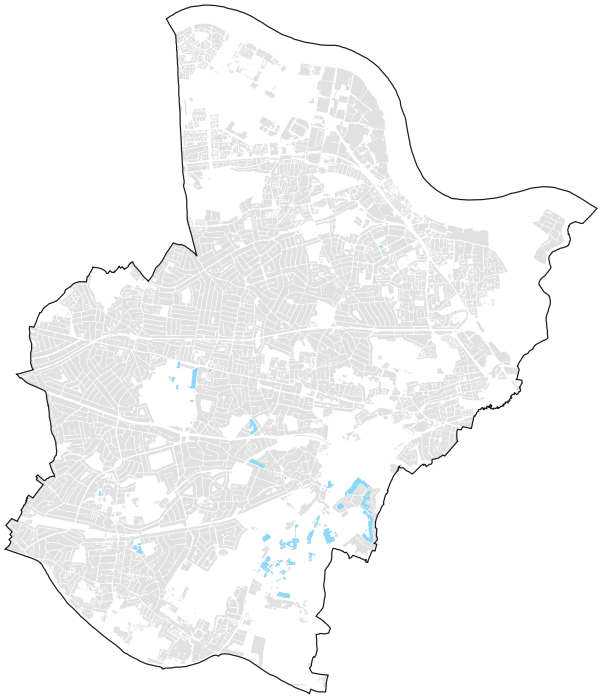
Although these typologies accurately describe certain characters, the way in which these various typologies occur and interrelate varies significantly across the borough. In some instances the change between these typologies is gradual and difficult to perceive, in other areas the transitions are abrupt and clear.

Development proposals and future policy should be mindful of how these transitions occur, as this will also impact on an areas sensitivity to change.

Areas that are likely to experience greater pressures to change in the future are therefore analysed in greater detail as sustainable growth areas. In these cases the settlement pattern of historic areas are analysed in detail, as these areas tend to be the locations for the most complexity in the transitions between different typologies.



Detached Sparse



Typical Block size	280m² x 75m²
Typical Plot size	750-1100m²
Typical Plot depth	60-70m
Typical distance to rear of opposite building	n/a
Typical storey height	1-3 storeys
Typical Street width	12-14m
Density	10-15 dph
Built period	Interwar and mid C20th

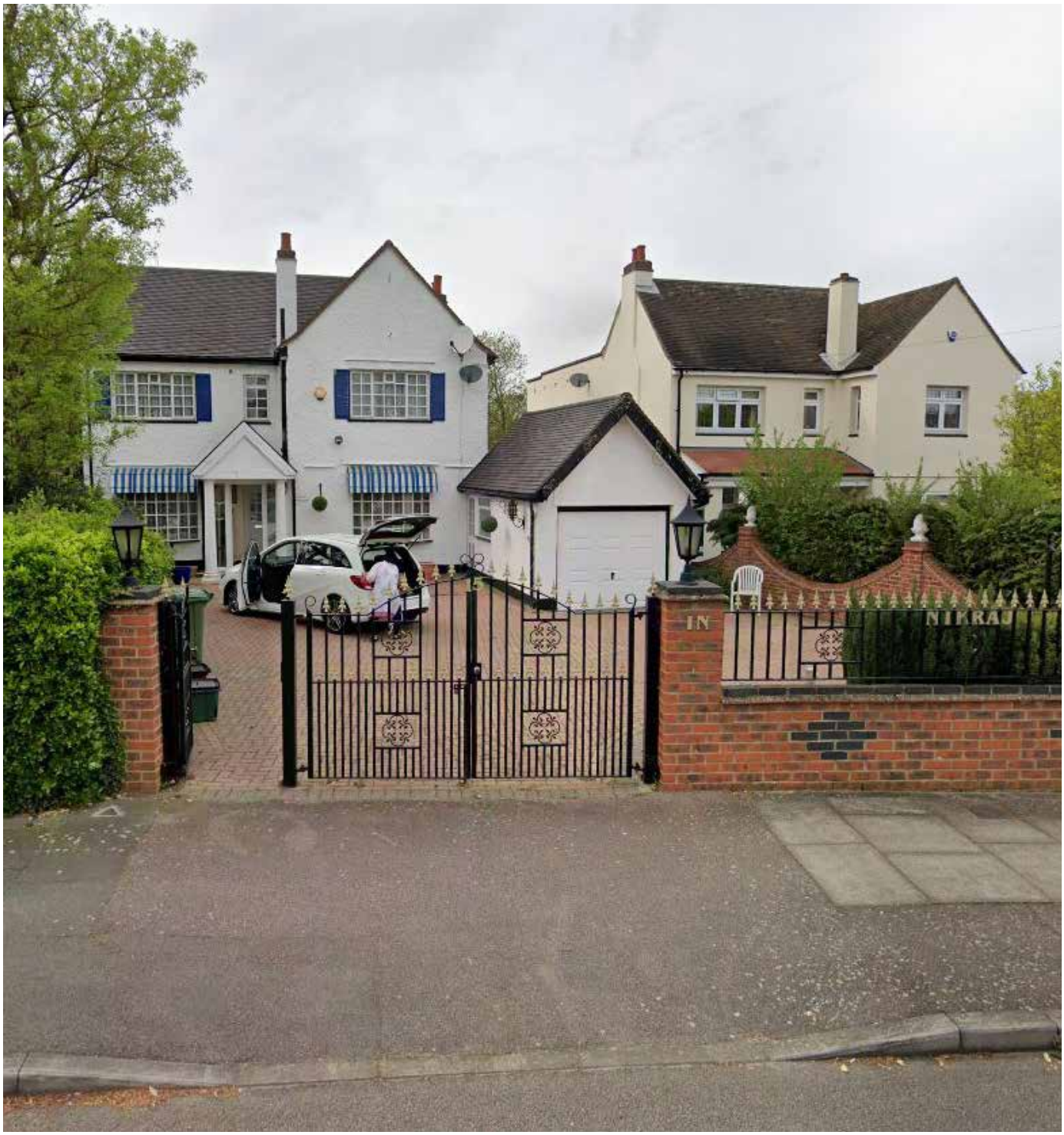
Areas of predominantly detached houses are almost exclusively in the south of the borough, and areas of sparse detached housing are particularly rare.

Where they do occur they are generally found next to parks or greenbelt and have houses set back by with deep gardens.

There are examples built in different periods. Generally older examples within this typology that date between 1919 and 1939 are found nearer the town centres, whereas newer examples built between 1939 and 1983 are found in the south east near the river Cray.

This typology occurs in poorly connected areas, with a PTAL of 1a - 2.

99 Distribution of detached sparse



100 Wansunt Road

Spatial Qualities

- Large plots - Typically each building will have a large front garden, drive and very large rear garden. Regular and well proportioned plots create well used and well defined spaces around the buildings.

- Well defined boundaries - the large front gardens are able to accommodate parking and crossovers whilst retaining a significant proportion of the plot boundary as a low wall or hedge.

- Architecturally eclectic - although often built within a similar period, these houses are generally of varying styles and types. The larger plots place fewer constraints on development and so these houses exhibit differing alterations and extensions over time. The variety of internal organisation, particularly the location of entrance, stairs and garages also leads to a variety in the ways these buildings have been extended.

- Mature vegetation - the size of front gardens and width of street accommodates mature trees and shrubs, whilst still providing plenty of parking spaces.

Design Issues

- Weak group form - Although generally a consistent height of two storeys the architectural variation of this type rarely results in repeated building elements or forms. Large detached Bungalows can often appear in the parcels within this typology.

- Building line - generally inconsistent, with some articulation of building form. Due to the large front gardens the building line is not as strongly perceived as in other areas, mature vegetation and well defined plot boundaries offer containment to the street.

- Asymmetry - alterations and extensions have often created asymmetric forms. Although this can also be a positive quality there are cases of poorly proportioned extensions creating uneasy relationships between part and whole or undermines dominant elements e.g. doors, porches or gable ends.

- Openness - alterations also create inconsistent spacing between buildings. Although wide plots can accommodate this, in some cases the openness of the street is compromised by buildings in close proximity.









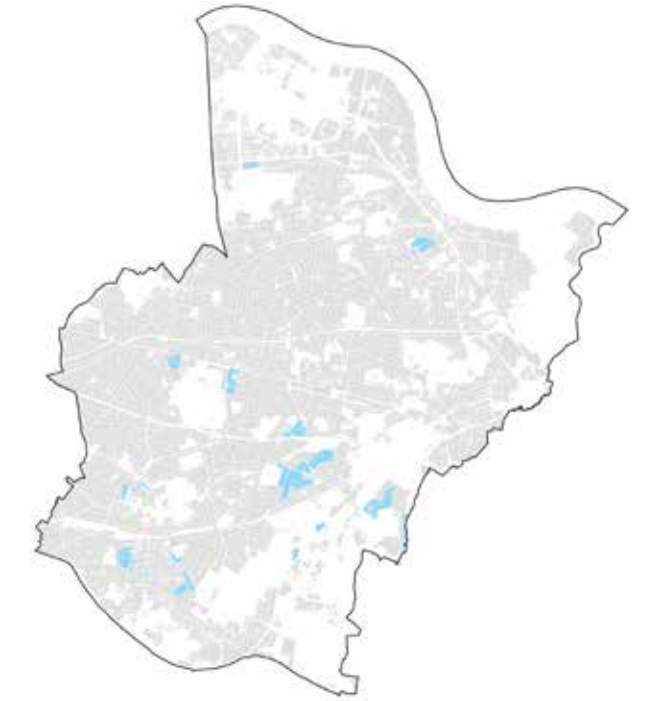
101 Danson Road - well defined plot boundaries along the street

102 Wansunt Road
Winding street follows form of open space and woodland to the rear

103 Danson Road
Large gardens backing onto park, and inconsistent building line

104 Upton Road
Variety of building types

Detached Medium



This typology is mainly found in the south of borough. This typology forms clearly defined areas of generally Edwardian houses. These areas are generally the hinterlands of older Victorian and Georgian villas on the outskirts town centres such as Bexley, Sidcup and Erith.

Due to the historical period in which these houses were built and they often form part of conservation areas, for example Christ Church and Parkhurst.

This typology occurs in very poorly connected areas, with a PTAL of 1a - 1b.

Typical Block size	400 x 140m^2
Typical Plot size	650 - 1100m^2
Typical Plot depth	60 - 80m
Typical distance to rear of opposite building	50-80m
Typical storey height	2 storeys
Typical Street width	12-15m
Density	15-20 dph
Built period	Edwardian and pre-war

105 Distribution of detached medium



106 Crescent Road

Spatial Qualities

- Large plots - Typically each building will have a front garden or drive and large rear garden. Regular and well proportioned plots create well used and well defined spaces around the buildings.

- Few alterations - this typology often retain original proportions and composition with few major alterations. This is largely due to narrower plots than sparse detached housing, allowing fewer side extensions, and some areas having conservation area designations.

- Well defined boundaries - the wide front gardens/drives are able to accommodate parking and crossovers whilst retaining a significant proportion of the plot boundary as a low wall or hedge.

- Mature vegetation - strong boundaries are often formed of large trees, verges and shrubs that contain and define the street.

- Rich variety of architectural elements - although often built within a similar period, these houses exhibit a range of architectural elements and high quality materials that have aged well over time.

Design Issues

- Dominance of parking - Front gardens are generally hard surfaces used for parking. The size of these houses in this typology and low PTAL creates a high number of cars, which form a visible part of the street scene.

- Inconsistent spacing between buildings - relatively narrow plots host large houses. The terracing effect this creates often weakens group form of buildings further as buildings don’t read as distinct forms in space.















107 Lesney Park Road, example of largely unaltered building

108 Danson Road, large buildings on narrow plots

109 Camden Road, front garden largely hard standing

110 The Drive, mature vegetation defines the quality of the street.

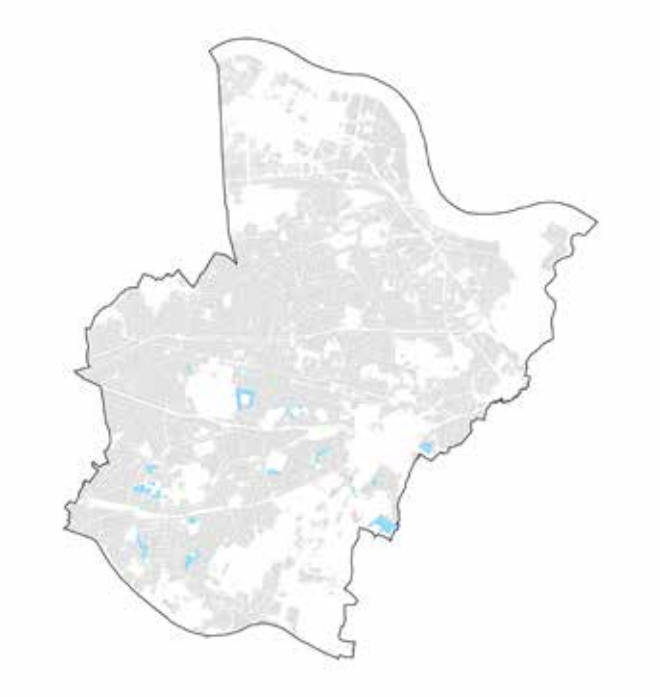
111 The Drive, architecturally rich building with mature landscaping

112 Camden Road, front garden largely hard standing

113 Hill Crescent, weak sense of openness

114 The Drive, mature vegetation defines the quality of the street.

Detached Dense



This typology is mainly found in the south of borough.

The vast majority of this housing was built 1939 - 1983, with some locations with earlier buildings.

This typology occurs away from town centres, and often borders open space such as parks or greenbelt. This transitional context often results in irregular urban form and smaller plots.

This typology occurs in very poorly connected areas, with a PTAL of 1a - 1b.

Typical block size	300 x 60m^2
Typical plot size	150 - 600m^2
Typical plot depth	22 - 50m
Typical distance to rear of opposite building	22-30m
Typical storey height	2-3 storeys
Typical street width	9-11m
Density	20-40 dph
Built period	Pre- , post war and late C20th

115 Distribution of detached dense



116 Bean Road

Spatial Qualities

- Few alterations - this typology often retains original proportions and composition with few major alterations to the front or side of buildings. This is largely due to narrower plots than sparse and medium detached housing, allowing fewer side extensions.

- Massing - consistent building height of two storeys plus roof. Few major alterations ensures that a well established ridge line is maintained.

- Well defined boundary - although the smaller gardens are often used for parking, a boundary wall or hedge is generally retained to form the edge of the pavement.

Design Issues

- Irregular urban form - examples of inconsistent relationship between buildings , orientation and boundary treatment, particularly in late C20th development.

- Small rear gardens - higher densities create smaller gardens to rear than detached medium as front garden is still provided.

- Solid/void relationship - despite being formed of discrete houses, this typology tends to create a terracing effect in areas where buildings are in close proximity. This is exacerbated by the architectural variety of this typology and leads to a weak group form.

- Parking - smaller front gardens are generally used for parking with minimal soft landscape.













117 Selbourne Road, original proportions and composition retained

118 Bean Road, consistent massing

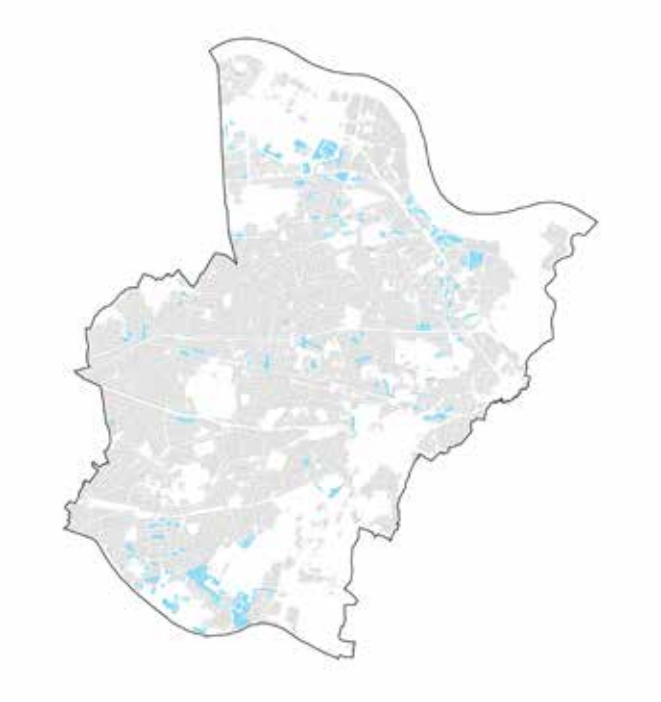
119 Tile Kiln Lane, well defined plots despite prevalence of parking

120 Larch Grove, inconsistent urban form

121 Priestlands Park Road, variety in architectural expression

122 Woodbrooke Road, dominance of parking to quality of the street

Flats Sparse



Typical block size	170 x 80m^2
Typical plot size	500 - 2500 m^2
Typical plot depth	35 - 60 m
Typical distance to rear of opposite building	30 - 75 m
Typical storey height	2 - 6 storeys
Typical street width	8 - 15 m
Density	35 - 60 dph
Built period	Post war and Mid-C20th

This typology is mainly found across the borough in three main east-west bands. One runs along the transition between higher ground and valley floor in the north, another runs through the centre of the borough, roughly following Watling Street, and a third falls between Sidcup and the A20 in the south.

This typology tends to be located in transitional areas; adjacent to woodland or open space, alongside railways or rivers or surrounding industrial areas.

Rarely earlier than 1938, although some instances where areas had been redeveloped in the mid-C20th. This typology is largely local authority built housing built during the C20th.

This typology predominantly occurs in with a PTAL of 2.

123 Distribution of flats sparse



124 Draper Close

Spatial Qualities

- Integration with low rise housing - flatted typologies providing separate doors for each flat reflect the massing, scale and composition of surrounding residential fabric, typically formed of two storey semi-detached dwellings.

- Landscape quality - where buildings are set back from street edge they generally provide good quality soft landscape, often with large mature trees. This is particularly the case in planned estates.

- Openness - generous space between buildings in non-perimeter block layouts create long views through buildings.

Design Issues

- Inconsistent relationship to streets - buildings within non-perimeter blocks set back from street edge and inconsistent logic of building fronts and backs. These conditions can make locating building entrances difficult, and the definition of public and private spheres unclear.

- Spaces without a clear role - a high quantity of residual/incidental green spaces creates areas which lack use due to unclear public/private definition of space. Where poorly maintained, these areas create a very poor environment. Where typologies mimic semi-detached houses front gardens are generally poorly maintained due to lack of clear ownership.

- Parking - large areas of surface parking and garages dominate landscape and makes weaker relationship between streets and buildings.

- Refuse - older examples often do not have sufficient space incorporated within the design of buildings to accommodate modern refuse requirements.













125 Nursery Avenue, flatted typologies follow the grain of surrounding semi-detached houses.

126 Wickham Street, mature vegetation surrounding set back building

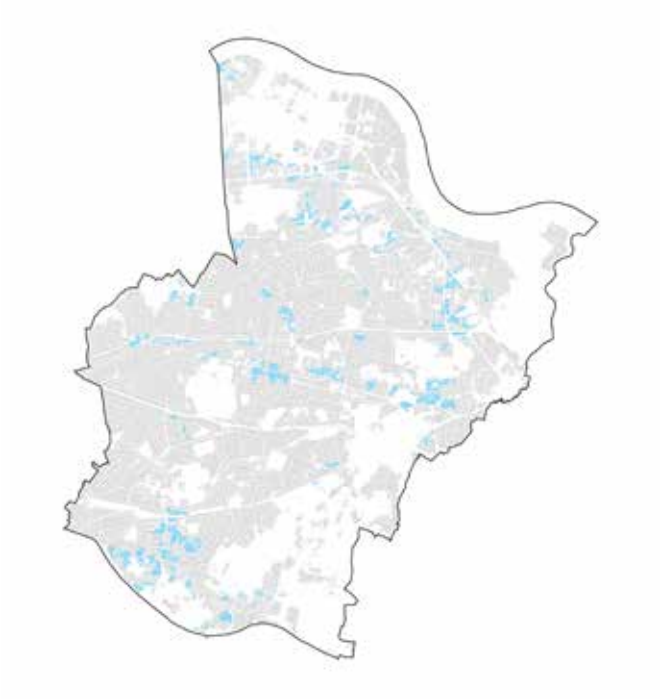
127 Ladbrooke Crescent, surface parking dominates public realm and inconsistent relationship between buildings and the street.

128 Balmoral Gardens, location of communal entrances unclear

129 Eversley Avenue, lack of use of front gardens

130 Frimley Court, flatted block with relationship of ground floor to front garden and street that follows surrounding terraced and semi detached types.

Flats Medium



This typology is mainly found across the borough although rarely in the area between Watling Street and the Sidcup railway line.

Rarely in areas developed 1910-1960, medium density flats are commonly found in transitional areas - as buffers along hostile edges, around open spaces and parkland and in areas of transitional scale.

This typology predominantly occurs in with a PTAL of 2.

Typical block size	300 x 95m^2
Typical plot size	900 - 1100m^2
Typical plot depth	40 - 60m
Typical distance to rear of opposite building	25-90m
Typical storey height	2 -6 storeys
Typical street width	8-13 m
Density	45-60 dph
Built period	Mid-late C20th

131 Distribution of flats medium



132 Elmbourne Drive, description

Spatial Qualities

- Variety - this type accommodates a variety of dwelling types including linear blocks, pavilion blocks, walk-up maisonettes and stacked maisonettes. Examples found in conservation areas tend to be formed of converted houses.

- Mixed use - some examples of this type accommodate non-residential uses at ground floor.

- Landscape quality - buildings generally set within verdant landscape, often with large mature trees.

- Transition in scale - Three and four storey buildings are found in this typology, often transitioning in scale from surrounding two storey housing.

- Distinctive character - generally planned estates, this typology tends to create a character of its own, distinct from surrounding areas in building typology and landscape.

Design Issues

- Inconsistent urban form - often within larger heterogeneous blocks, with inconsistent building line, building fronts and backs and boundary treatments. Communal entrances leading to street elevations with no entrances that do not follow the pattern of surrounding residential areas.

- Spaces without a clear role - a high quantity of residual/incidental green spaces creates areas which lack use.

- Poor landscape quality - areas of soft landscape suffer from poor maintenance and a relative absence of more mature trees and shrubs.

- Parking - large areas of surface parking and garages dominate landscape and weaken relationship between streets and buildings.

- Scale - blocks sitting within smaller scale housing often repeat some architectural elements that are not appropriate to the scale of the larger blocks, such as shallow pitched roofs, bay windows and porches.

- Mixed use - poor relationship with non-residential uses can result in poor access and legibility, waste collection issues and poor environment.















133 Wickham Street, mature trees provide landscape setting for buildings set back from the street

134 Greenwood Close, large blocks with communal entrances create street elevations with little activity

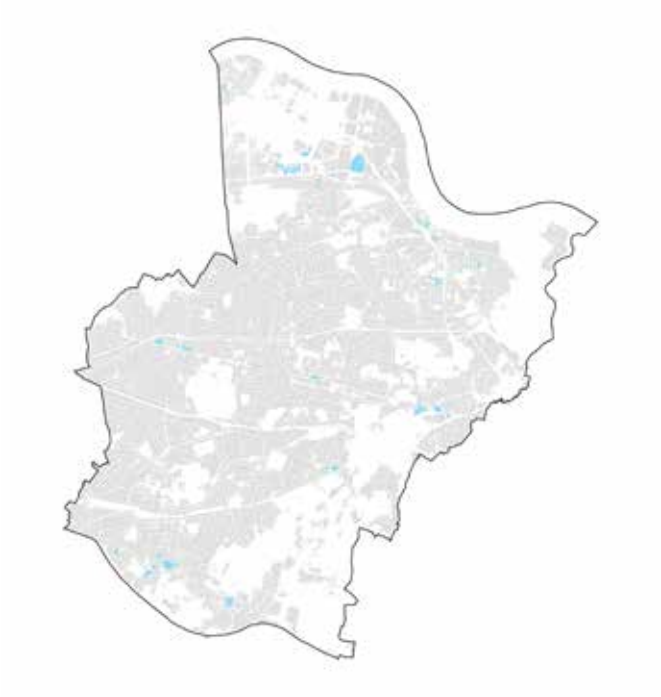
135 Bexley High Street, blocks accommodate retail at ground floor

136 Yarnton Way, flatted blocks reflect the wider terraced estate

137 Kempton Close, building set back from street edge.

138 Greenwood Close, varied urban form and boundary treatments

Flats Dense



Typical block size	75 x 160m^2
Typical plot size	200 - 4800 m^2
Typical plot depth	25-120 m
Typical distance to rear of opposite building	20-30 m
Typical storey height	3-8 storeys
Typical street width	9-13 m
Density	90-300 dph
Built period	Late C20th and early C21st

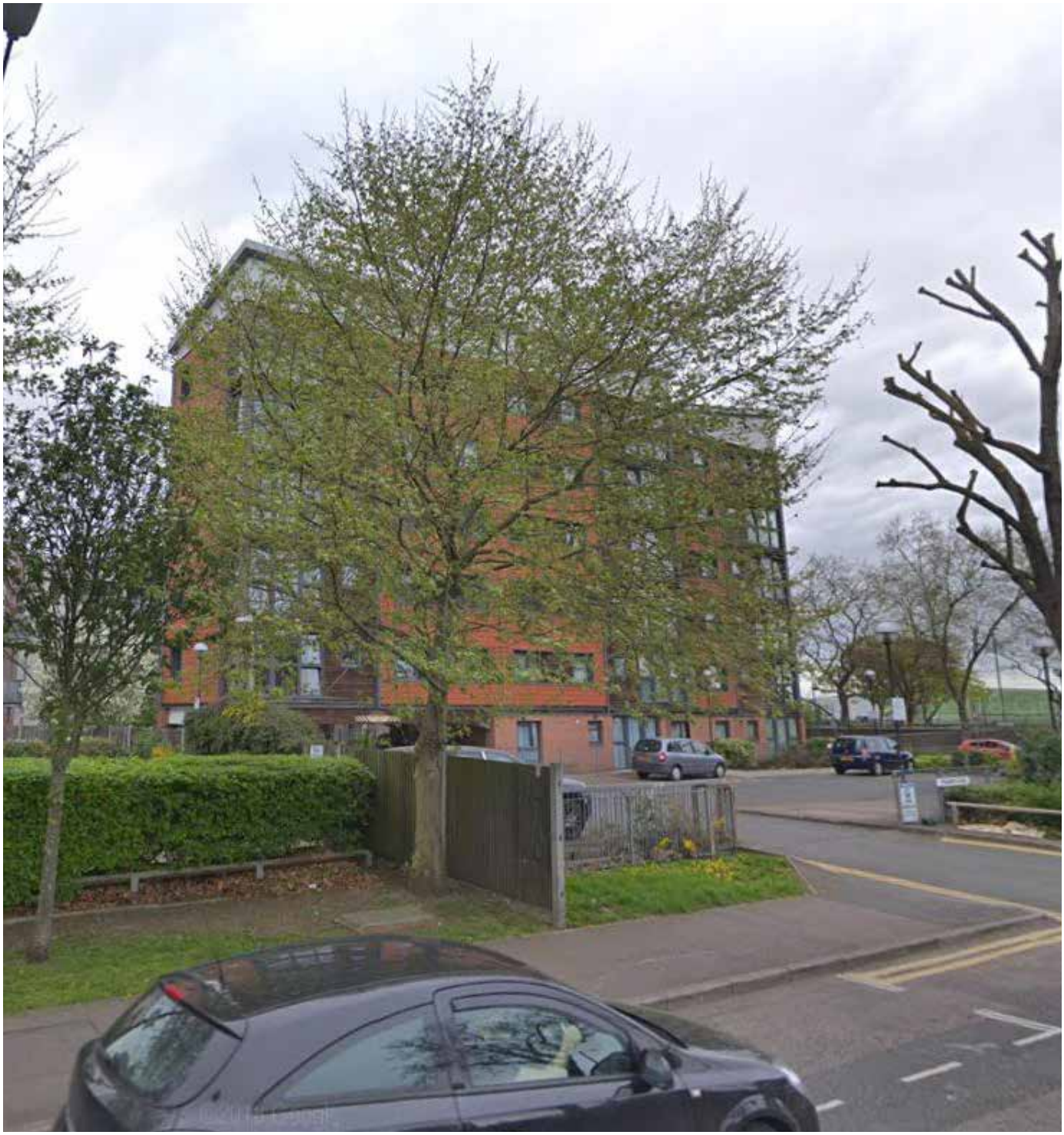
There is a very small presence of this typology in the borough. This typology is mainly found across the borough in three main east-west bands. One runs along the transition between higher ground and valley floor in the north, another runs through the centre of the borough, roughly following Watling Street, and a third falls between Sidcup and the A20 in the south.

Where this type occurs it is either in town centres, along high streets or early C21st large scale redevelopment. Edwardian examples within town centres occasionally falls within conservation areas.

These flats are also located amongst flats of a lower FAR but are found both within the town centres (for example in Erith) and on the outskirts of the town centres (for example in Belvedere represented in the adjacent picture).

This typology predominantly occurs in with a PTAL of 2.

139 Distribution of flats dense



140 West Street, linear flatted block

Spatial Qualities

- Mix - this typology accommodates other uses in some cases, particularly retail on ground floor.

- Enclosure - the scale of this typology creates strong definition to streets and a sense of enclosure. Longer blocks create consistent boundaries to street edges.

- Transition in scale - Three and four storey buildings are common in this typology in cases reaching taller, often transitioning in scale from surrounding two storey housing.

Design Issues

- Ground floor - examples of larger blocks creating poor streets through servicing, undercroft parking, poorly resolved flats at ground floor and an absence of building entrances on some elevations.

- Scale - mimicking architectural elements from smaller surrounding buildings create poorly proportioned elevations on larger buildings. This is particularly evident with poorly proportioned pitched roofs.

- Materiality - the larger buildings often require different facade treatments to surrounding buildings of a smaller scale. In cases this is poorly considered.

- Spaces without a clear role - where this type occurs in non-town centre locations a high quantity of residual/ incidental green spaces create areas which lack use.

- Mixed use - poor relationship with non-residential uses can result in poor access and legibility, waste collection issues and poor environment.















141 Sidcup High Street, mix of residential and commercial uses

142 Callendar Road, large blocks transition in scale

143 Chandlers Drive, poorly proportioned elevation caused by a replication of building elements out of scale with large block

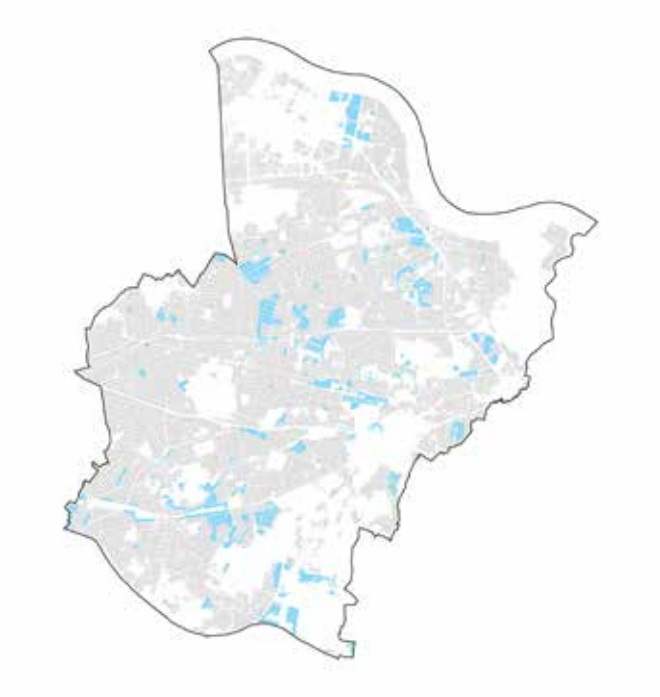
144 Leatherbottle Green, poor definition due to location of entrances.

145 Fieldfare Road, poorly defined spaces surrounding buildings

146 Station Road, transition in scale

147 Welling High Road, poorly resolved change in scale and materiality

Semi Detached Sparse



This typology is found across the borough. Although it forms part of larger areas characterised by semi-detached housing it tends to occupy the transitional areas where topography is challenging or where built form meets open spaces or infrastructure.

These transitional areas often make winding streets and blocks of varied depth, resulting in irregular block shape with larger plots. There is only one instance of this type forming a part of a conservation area.

This typology predominantly occurs in areas of a low PTAL of 1a - 2.

Typical block size	375 x 80 m^2
Typical plot size	250-450m^2
Typical plot depth	38-45m
Typical distance to rear of opposite building	45-50m
Typical storey height	2 storeys
Typical street width	9-13m
Density	30-35 dph
Built period	Interwar

148 Distribution of semi detached sparse



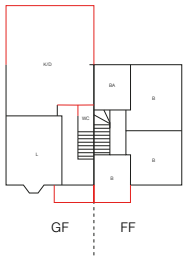
149 Long Lane, large spaces between buildings with front gardens



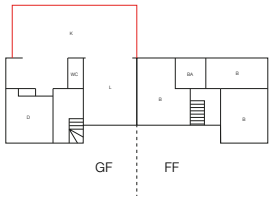




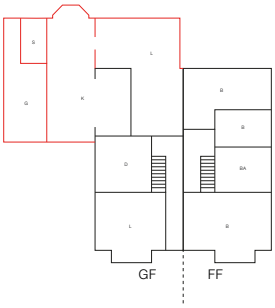




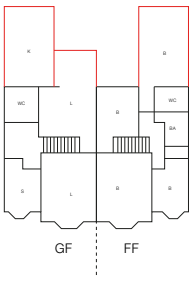
Semi detached sparse
Front central entrance



Semi detached sparse
Front central entrance



Semi detached sparse
Front central entrance



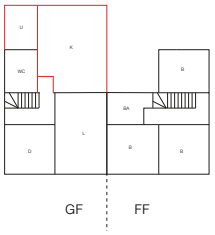
Semi detached sparse
Side entrance



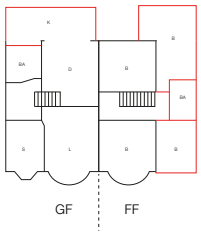




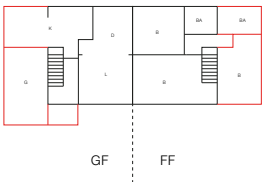




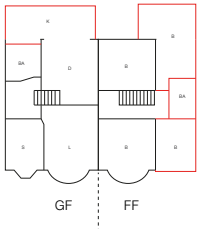
Semi detached sparse
Side entrance



Semi detached sparse
Side entrance



Semi detached sparse
Front entrance

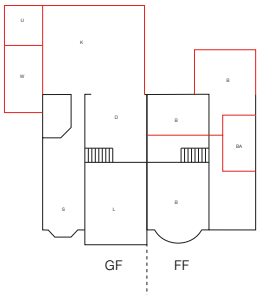


Semi detached sparse
Side entrance

150 Alterations to semi detached sparse taken from recent planning applications

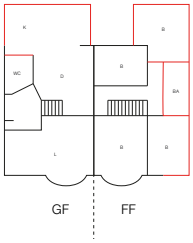
Extensions are largely to the rear of houses creating enlarged kitchens and creating a more fluid relationship between kitchen, dinind and living spaces. Side extensions are generally limited to chalet types, providing an additional bedroom at first floor. This type of extension generally follows established dimensions and form which retains a strong roof line. As such this type of extension preserves the rhythm of solid and void along the streets and maintains a strong group form.





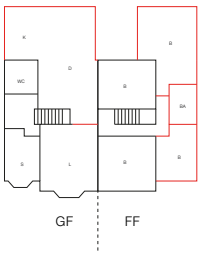
Semi detached sparse
Side entrance





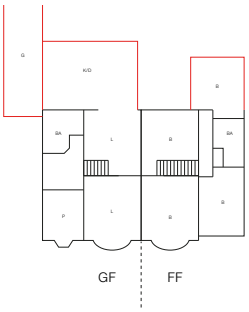
Semi detached sparse
Side entrance





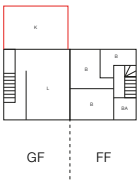
Semi detached sparse
Side entrance





Semi detached sparse
Side entrance





Semi detached sparse
Front entrance

Spatial Qualities

- Large gardens - larger plots provide generously sized and well proportioned gardens to the rear.

- Rhythm - Side door or access to a garage often results in a regular spacing of buildings and repeating rhythm of solid and void.

- Symmetry - pairs of semis generally retain their composition and proportions, or where they are extended to the side they follow standard forms, such as in the case of chalet types. Repeating typologies and building elements such as bay windows create strong group form.

- Front gardens - Space to the side of buildings allows for parking to be accommodated along side the buildings and reducing the impact on the street. Where the entrance is on the front of the house this often results in the front garden being largely soft landscaping, and a retained boundary in the form of a low wall or hedge. In areas of varied topography changes in level between the street is managed across the front gardens, generally resulting in more vegetation being retained.

Design Issues

- Ill defined space between buildings - side access to garages generally don't have plot boundaries defined and is often an area of sparse hard landscaping, this is particularly an issue on houses with side entrances.

- Inconsistent plot boundary - where the building entrance is to the side of houses the front garden is more likely to be hard standing for car parking. In these cases the boundary is often undefined.

- Non standard plots - the replication of standard house types fails to respond to plots that create non-standard challenges. This is particularly an issue on street corners, where standard house types often create baggy, ill defined space and poor street edges.















151 Longlands Avenue, few alterations create strong group form

152 Hurst Road, strong symmetry of street elevations

153 Blendon Road, well landscaped front gardens

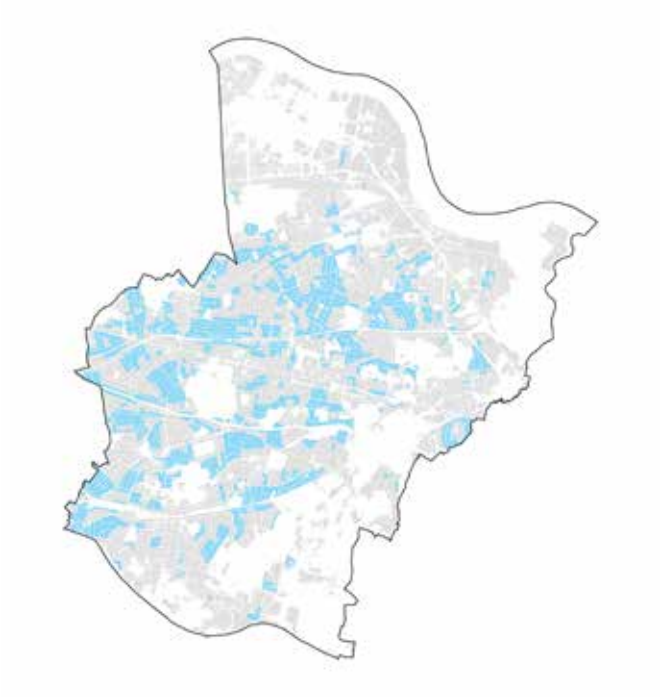
154 Melville Road, extensions follow standard forms

155 Long Lane, ill defined space between buildings and loss of front garden to hard landcaping

156 Heath Way, accommodation of parking whilst retaining planting

157 Melville Road, poor relationship between buildings and streets on corner due to standard house types

Semi Detached Medium



This typology is common across central parts of the borough. The majority of instances are inter-war with some post war examples, generally built on the higher plains of the borough.

This type very rarely forms part of conservation areas. This typology is more formally homogeneous to the west of the borough, although some areas exhibit a variety of types and styles within a consistent urban form with a consistent building line. Blocks tend to be very long and regular.

This typology predominantly occurs in areas with a PTAL of 2-4.

Typical block size	240 x 80m^2
Typical plot size	275-400m^2
Typical plot depth	40-45m
Typical distance to rear of opposite building	40-45m
Typical storey height	2 storeys
Typical street width	12-13m
Density	30-35 dph
Built period	Interwar

158 Distribution of semi detached medium



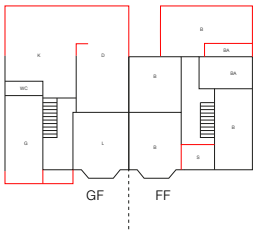
159 Carisbrook Avenue



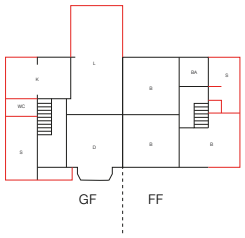




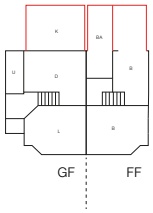




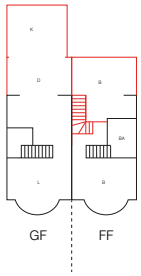
Semi detached medium
Front central entrance



Semi detached medium
Front central entrance



Semi detached medium
Side entrance



Semi detached medium
Side entrance



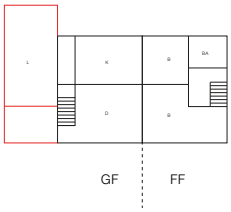




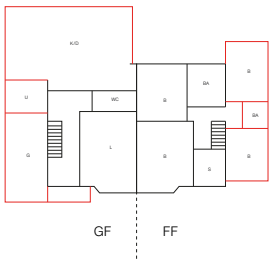




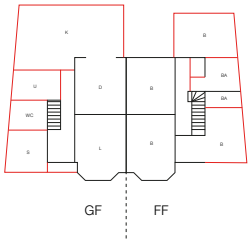
Semi detached medium
Front entrance



Semi detached medium
Front entrance



Semi detached medium
Front entrance



Semi detached medium
Front entrance

160 Alterations to semi detached medium taken from recent planning applications

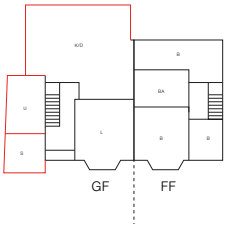
Extensions take a range of forms, both to the side and to the rear. Houses with front entrances in particularly demonstrate a wide range of extensions as the location of hall and stair enable a wider range of spatial possibilities. Extensions always create enlarged kitchens and allow a more fluid relationship between kitchen, dining and living spaces. Side extensions often incorporate a re-purposed garage that is either used for habitable rooms or utilities rooms and ground floor WCs.



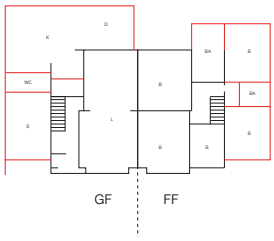




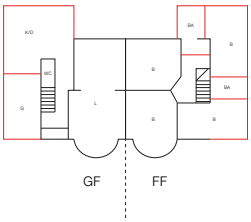




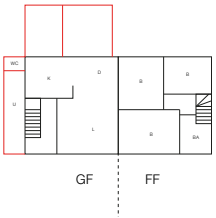
Semi detached medium
Side entrance



Semi detached medium
Front entrance



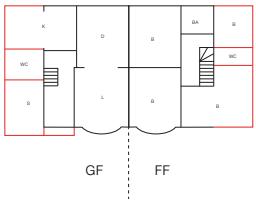
Semi detached medium
Front entrance



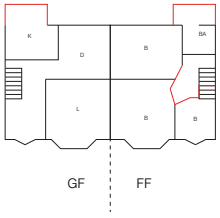
Semi detached medium
Front entrance







Semi detached medium
Front entrance



Semi detached medium
Front entrance

Spatial Qualities

- Group form - long streets emphasise repeating elements such as bay windows, porches, doorways. Bay windows often create a horizontal emphasis to streets as a whole. Where entrance is on site this is more pronounced as they are less susceptible to side extensions. Chalet types are also particularly strong as groups due to strong roof profile.

- Symmetry - pairs of semis generally retain their composition and proportions, or where they are extended to the side they follow standard forms, such as in the case of chalet types. Repeating typologies and building elements such as bay windows creates strong group form.

- Formal richness - the high degree of alterations and the articulation of the original buildings in this typology create a rich architecture. This is characterised by a depth to elevations that create light and shadow across them.

Design Issues

- Poor landscape in front gardens where plots are narrow or side entrance create minimal vegetation.

- Poorly proportioned extensions - side extensions are common in types with the entrance on the front elevation. These extensions are often insufficiently subservient to the original dwelling and create poorly proportioned buildings, especially where this extension has only been made one or a pair of semis.

- Terracing effect - side extensions close up spaces between buildings, most prevalent in areas with entrance on front of building. In some cases buildings are continuous at ground floor where garages occupy the space between buildings.

- Weak plot boundary - where the building entrance is to the side of houses the front garden is more likely to be hard standing for car parking. In these cases the boundary is often undefined.

- Non standard plots - as with the lower density types, the replication of standard house types fails to respond to plots that create non-standard challenges such as street corners.













161 Birch Grove, repetition of building type and common architectural elements creates strong group form

162 Charmouth Road, strong symmetry of street elevations

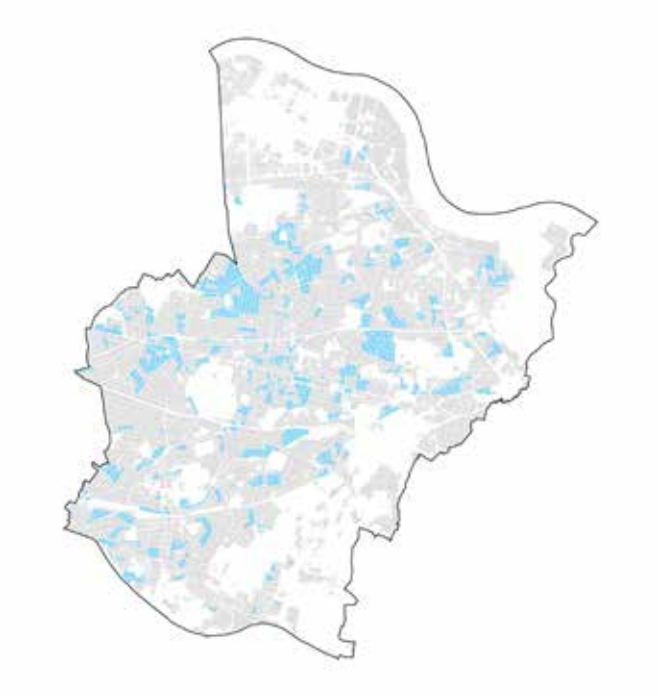
163 Longlands Park, formal articulation of entrances, bay windows and extensions create a rich architecture of light and shadow

164 The Drive, strong roof form creates a group form despite alterations

165 Hollingbourne Avenue, poorly proportioned extensions create poor elevations

166 Silverdale Road, side extensions on small plots create a terracing effect, erosion of boundary and hard surfacing to front gardens

Semi Detached Dense



This typology is found across the borough. The majority of instances form part of larger inter-war estates, with some found in post war blocks with internal cul-de-sacs, creating smaller gardens.

This typology predominantly occurs in areas with a PTAL of 2-4.

Typical block size	300 x 60m^2
Typical plot size	2250-300m^2
Typical plot depth	30-35m
Typical distance to rear of opposite building	25-30m
Typical storey height	2 storeys
Typical street width	12m
Density	30-40 dph
Built period	Inter- and post war

167 Distribution of semi detached dense



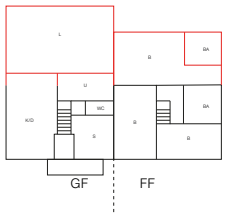
168 Gloucester Avenue, description



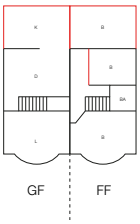




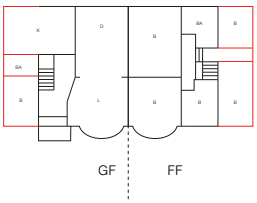




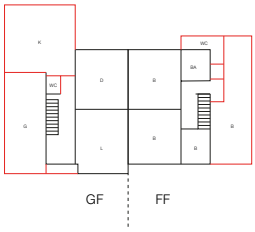
Semi detached dense
Front central entrance



Semi detached dense
Side entrance



Semi detached dense
Front entrance



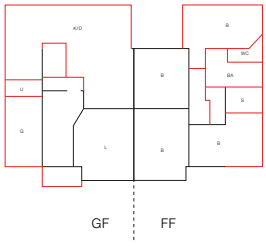
Semi detached dense
Front entrance







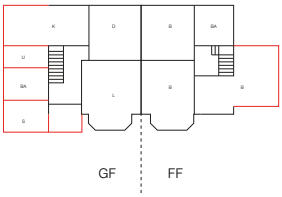




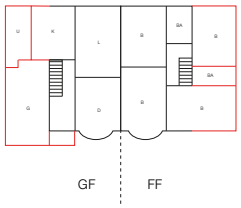
Semi detached dense
Front entrance



Semi detached dense
Front entrance



Semi detached dense
Front entrance



Semi detached dense
Front entrance

169 Alterations to semi detached dense taken from recent planning applications

Extensions tend to create additional space to the side of houses. Extensions always create enlarged kitchens and a larger associated dining space. Extensions into the garden are also possible, but less common than lower density types that have larger gardens. Side extensions often incorporate a garage as front gardens are smaller than lower density types. Utilities rooms, storage and ground floor WCs also form part of side extensions.





170 Brampton Road, description

171 Northall Road, description

Spatial Qualities

- Building line - compact arrangements of buildings with smaller front garden create good sense of enclosure to the street.

- Group form - strong architectural elements such as bay windows, gable ends and porches create a group form in many instances, although alterations and extensions weaken this group form when compared to lower density semi detached types.

- Formal richness - the high degree of alterations and the articulation of the original buildings in this typology create a rich architecture. This is characterised by a depth to elevations that create light and shadow across them.

Design Issues

- Minimal vegetation - Very poor quality landscape in front gardens where plots are narrow or buildings have a side entrance. These conditions lead to front gardens often being used exclusively for parking, compromising the quality of the street through the lack of mature vegetation.

- Poor definition of plot boundary - prevalent use of front garden for parking creates absence of any definition to the pavement edge in most areas. This creates a patchwork of different hard surface materials.

- Variety of extensions - smaller plots mean extensions and alterations have a greater impact on the street elevation and on the relationship to neighbouring buildings.

- Terracing effect - side extensions close up spaces between buildings. In some cases buildings are continuous at ground floor where garages occupy the space between buildings.

- Non standard plots - as with the lower density types, the replication of standard house types fails to respond to plots that create non-standard challenges such as street corners.















172 Ethronvi Road, building line and smaller front garden contains street

173 Park Crescent, repeating elements create group form

174 Brixham Road, repeating elements create horizontal emphasis

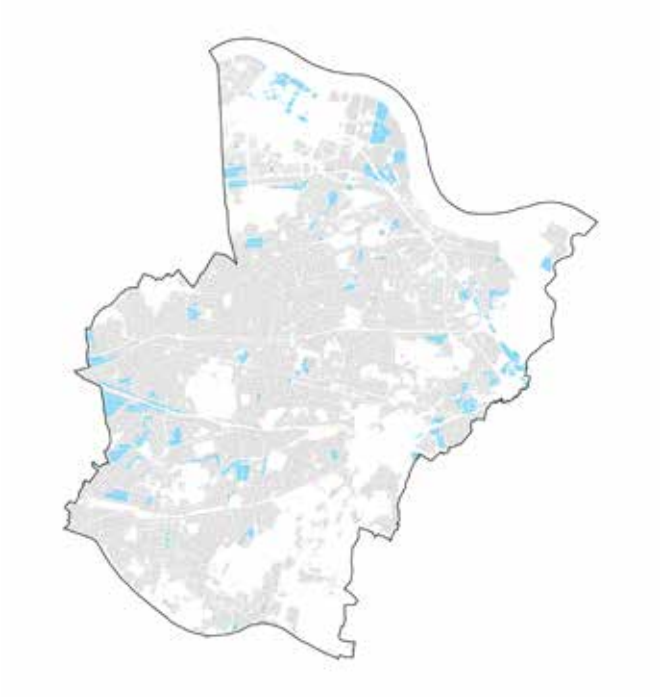
7 Gloucester Avenue, small spaces between buildings

175 Bladindon Road, terracing effect due to close buildings

176 Huxley Road, poor street environment due to dominance of parking

177 Buxton Road, variety of extensions undermines group form and patchwork of materials formed by hard standing on front gardens

Terraced Sparse



Typical block size	350 x 105m^2
Typical plot size	240 - 350m^2
Typical plot depth	50m
Typical distance to rear of opposite building	65-75m
Typical storey height	2 storeys
Typical street width	13m
Density	35-38 dph
Built period	Interwar

This typology is rare in the borough, generally in marginal areas around open space and green belt or surrounding railway lines.

Nearly all instances of this typology form part of larger inter-war estates characterised by semi-detached housing. Short terraces generally follow the formal expression of surrounding estate. In some cases short terraces for entire streets, others mix terraces with semis and bungalows in more varied forms.

This typology predominantly occurs in areas with a low PTAL of 1a-1b.

Usually perimeter blocks with large gardens, often with rear access along lanes.

178 Distribution of terraced sparse



179 Montrose Avenue

Spatial Qualities

- Integration with other typologies - This typology often occurs amongst other types, particularly semi-detached houses. This type picks up repeating elements, proportions and formal characteristics of other types and provides denser housing without a significant change in character.

- Group form - few alterations or extensions that have impact on street facing elevation retains a strong group form amongst short terraces. This is often emphasised by more expressive end of terraces that create strong symmetrical compositions

- Building line - short runs of terraces establish strong building lines, often following surrounding housing of different types.

Design Issues

- Poor streetscape - Very poor quality landscape in front gardens which are generally used exclusively for parking. Building line follows surrounding types, often semi detached, but this space doesn't have the same sense of ownership as a semi.

- Poor definition of plot boundary - prevalent use of front garden for parking creates absence of any definition to the pavement edge in most areas. This creates a patchwork of different hard surface materials.

- Change in materiality - individual houses often change materials in same plane as neighbouring houses, undermining group form and creating odd junctions when building elements or finishes suddenly terminate.















180 Amberley Road, strong end of terrace forms emphasise symmetry

181 Holmesdale Drive, formal expression follows surrounding semis

182 Elstree Gardens, continuous building line

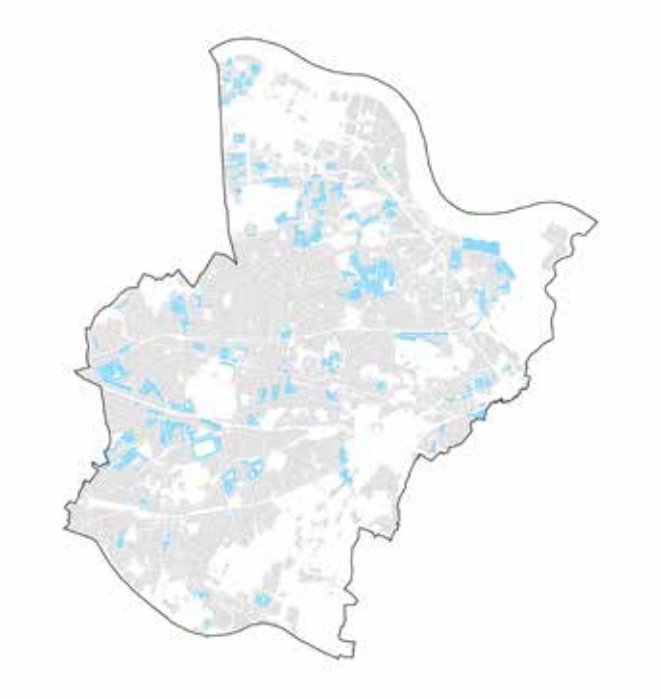
183 Montrose Avenue, repeating elements create strong group form

184 Portland Avenue, change in materiality and weak boundary definition

185 Orchard Rise West, poor street environment due to dominance of parking and weak boundary definition

186 Pinewood Avenue, inconsistent materiality and detailing

Terraced Medium



This typology is found in along the sloping areas south of Belvedere and Erith and in central parts of the borough.

Edwardian Inter- and post- war cases are usually part of perimeter blocks. Mid- and late C20th examples tend to be free form with cul-de-sacs and parking courts and weaker group form. Edwardian fabric occasionally forms part of conservation areas.

This typology predominantly occurs in areas with a PTAL of 1b-2.

Typical block size	210 x 70m^2
Typical plot size	150-220m^2
Typical plot depth	30-35m
Typical distance to rear of opposite building	30-35m
Typical storey height	2 storeys
Typical street width	11-13m
Density	40-60 dph
Built period	Edwardian, Postwar

187 Distribution of terraced medium



188 Hurst Road

Spatial Qualities

- Building line - consistent building line close to pavement edge creates a clear definition to public and private realms.
- Direct relationship between building and street - smaller front gardens make building entrances play a dominant role in the street scape, and allow a path between pavement and door often uninterrupted by parking.
- Consistency of architectural expression - repeating building elements and a consistency of materiality create a cohesive character to streets.
- Consolidated parking - small parking courts create efficient layouts and reduce on plot provision, allowing a more enclosed street.

Design Issues

- Lack of vegetation - size of front gardens and width of pavement make mature vegation rare in this typology.
- Use of front garden - size of front garden makes its utility varied, in many cases this space it poorly maintained and often dominated by bins.
- Boundary treatment - inconsistent boundary condition due to proximity of building line to pavement edge. Victorian and Edwardian examples tend to have more consistent boundaries in the form of low walls.













189 Grosvenor Road, strong end of terrace forms emphasise symmetry

190 Wellington Avenue, formal expression follows surrounding semis

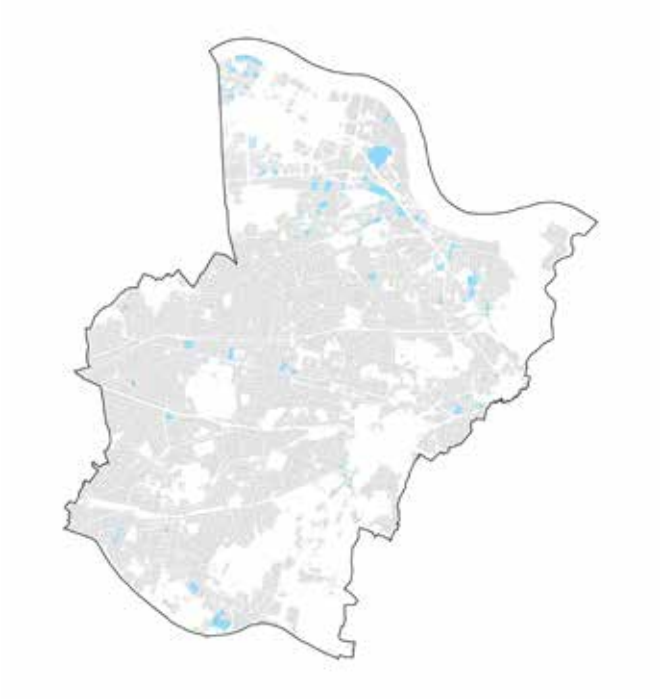
191 Manordene Road, continuous building line

192 Anthony Road, change in materiality and weak boundary definition

193 Treetops Close, poor street environment due to dominance of parking and weak boundary definition

194 Lensbury Way, inconsistent materiality and detailing

Terraced Dense



This typology is rare and mainly found in the north of the borough, particularly the area to the south of Erith.

Examples are generally either Edwardian or C21st development.

This typology predominantly occurs in areas with a PTAL of 1b-2.

Edwardian streets generally exhibit strong group form with minimal alterations.

Typical block size	155 x 55m^2
Typical plot size	120-175m^2
Typical plot depth	26m
Typical distance to rear of opposite building	20m
Typical storey height	2-3 storeys
Typical street width	9-11m
Density	60-80 dph
Built period	Edwardian

195 Distribution of terraced dense



196 Mayfield Road

Spatial Qualities

- Building line - consistent building line close to pavement edge creates a clear definition to public and private realms.
- Direct relationship between building and street - smaller front gardens make building entrances play a dominant role in the street scape, and allow a path between pavement and door often uninterrupted by parking.
- Consistency of architectural expression - repeating building elements and a consistency of materiality create a cohesive character to streets.
- Plot boundary - generally consistent boundary definition, often in the form of a low wall.
- Consolidated parking - small parking courts create efficient layouts and reduce on plot provision, allowing a more enclosed street.
- Few alterations - extensions and alterations to this typology rarely visible on street elevation.

Design Issues

- Lack of vegetation - size of front gardens and width of pavement make mature vegetation rare in this typology.
- Use of front garden - size of front garden makes its utility varied, in many cases this space it poorly maintained and often dominated by bins.
- Boundary treatment - inconsistent boundary condition due to proximity of building line to pavement edge. Victorian and Edwardian examples tend to have more consistent boundaries in the form of low walls.
- Accommodation of parking - public realm compromised by high level of parking provided on plot in modern examples of this type.











197 Ashburnham Road, strong group form created through consistent building line and repetition of typology and architectural elements.

198 Chrome Road, consistent building lines create formal clarity to street. Parking creates poor relationship between buildings and street.

199 Orchard Road, stepped form emphasises topography and boundary walls define public and private realms.

200 St Andrews Close, inconsistent use of front garden creates poor street environment.

201 Battle Road, Consistent boundary with on street parking

Bungalow Sparse



This typology is rare and mainly found in the centre of the borough. Is forms part of larger post-war estates formed largely of semi detached houses.

The majority of Bungalows were built in the period 1919-1939, although stylistically there are some variations. Typically sparse Bungalows have private parking on a front driveway as well as a small garden space, and a large garden space at the rear of the property. There is much evidence of building into the roof under permitted development, as pictured.

This typology predominantly occurs in areas with a PTAL of 2.

Typical block size	280 x 70m^2
Typical plot size	650 - 1100m^2
Typical plot depth	35-38m
Typical distance to rear of opposite building	30m
Typical storey height	1 storeys
Typical street width	11m
Density	20-25 dph
Built period	Edwardian and pre-war

202 Distribution of bungalow sparse



203 King Harolds Way

Spatial Qualities

- Integration with other typologies - despite the change in scale providing single level living, this typology generally follows formal motifs from surrounding housing, which is generally semi-detached houses.

- Roof forms - the relative dominance of roof within street elevations and common use of materials creates a consistency to streets.

Design Issues

- Lack of vegetation - despite the size of front gardens and space between buildings for parking, soft landscaping is very rare within this typology. Streets also generally have very few street trees.

- Boundary definition - inconsistent boundary to plots, where it is present it is generally a low wall. Similarly, definition of boundary between plots is largely poor.

- Containment of the street - proportion of building to street width and absence of mature vegetation creates little containment or definition to street.

- Weak group form - relative size of vertical wall and roof in elevation emphasises any alterations or extensions.









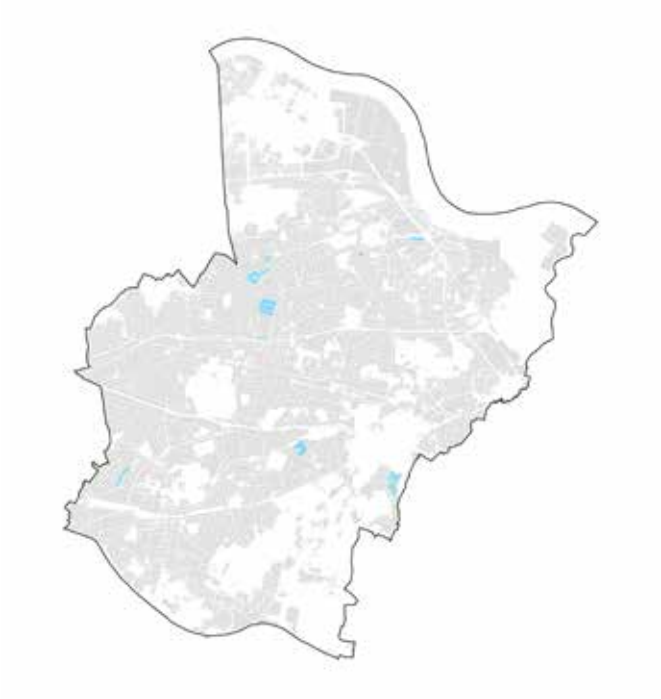
204 Albury Avenue, buildings provide weak definition to street, small extension disrupts group form

205 King Harolds Way, little definition to plot boundary

206 Oakdene Avenue, intermittent plot boundary, front gardens dominated by car parking

207 Dorcis Avenue

Bungalow Medium



This typology is rare and mainly found in the centre of the borough. Is forms part of larger post-war estates formed largely of semi-detached houses.

This typology predominantly occurs in areas with a PTAL of 1b-3.

There is a high variation in building volume in medium Bungalows, that is evenly distributed throughout the borough. Typically these Bungalows have a front drive with space enough for two cars, and a rear garden that is visibly smaller than for the sparse Bungalows.

Typical block size	275 x 80m^2
Typical plot size	650 - 1100m^2
Typical plot depth	40-45m
Typical distance to rear of opposite building	40-45m
Typical storey height	1 storeys
Typical street width	12m
Density	25-30 dph
Built period	Post war

208 Distribution of bungalow medium



209 Woodlands Avenue

Spatial Qualities

- Integration with other typologies - despite the change in scale providing single level living, this typology generally follows formal motifs from surrounding housing, which is generally semi detached houses.

Design Issues

- Boundary definition - inconsistent boundary to plots, where it is present it is generally a low wall. Similarly, definition of boundary between plots is largely poor.

- Containment of the street - proportion of building to street width and absence of mature vegetation creates little containment or definition to street.

- Weak group form - relative size of vertical wall and roof in elevation emphasises any alterations or extensions.

- Inconsistent vegetation - soft landscaping is intermittent in front gardens within this typology. The smaller front gardens than sparse bungalows are less suited to parking and easier to maintain.









210 Bowford Avenue, buildings provide weak definition to street, small extension disrupts group form

211 Woodlands Avenue, little definition to plot boundary

212 The Quadrant, intermittent plot boundary, front gardens dominated by car parking

213 Bowford Avenue

Bungalow Dense



This typology is rare and mainly found in the centre of the borough. Is forms part of larger post-war estates formed largely of semi-detached houses.

This typology predominantly occurs in areas with a PTAL of 3.

The dense Bungalows are also exclusively semi-detached properties. They have a front drive space for two cars, but the rear garden is visibly the smallest of the three Bungalow typologies.

The buildings typically are larger than the medium Bungalow typology, with a front room that extends into the drive.

Typical block size	160 x 80m^2
Typical plot size	650 - 1100m^2
Typical plot depth	35-38m
Typical distance to rear of opposite building	45-50m
Typical storey height	1 storeys
Typical street width	12m
Density	25-30 dph
Built period	Post war

214 Distribution of bungalow dense



215 St Johns Close

Spatial Qualities

- Integration with other typologies - despite the change in scale providing single level living, this typology generally follows formal motifs from surrounding housing, which is generally semi-detached houses.

- Boundary definition - the smaller front gardens that characterise this typology are retained as soft landscaping more often than lower density bungalow typologies. This absence of parking means the boundary is more continuous, generally in the form of a low wall.

Design Issues

- Building orientation - this type is often on smaller plots created by irregular urban blocks. This often characterised by curving streets or triangular blocks, and leads to an inconsistent relationship between buildings and streets.

- Lack of mature vegetation - street trees and mature vegetation in front gardens are rare within this type.

- Building line - inconsistent urban form often creates a building line that does not follow the street alignment. House typologies are also generally ‘L’ shaped. Although the dimensions of this are regular, the proportion of this element to the overall building, which is small, accentuates the way it appears to create an inconsistent building line.

- Containment of the street - proportion of building to street width and absence of mature vegetation makes poor containment and street definition.

- Weak group form - relative size of vertical wall and roof in elevation emphasises any alterations or extensions. This is compounded by the inconsistency of urban form within this type.









216 Cavendish Avenue, changing relationship between building and street with intermittent boundary definition, extensions undermine group form.

217 St Johns Close, small irregular plots with largely continuous plot boundary

218 Alexander Close, absence of plot boundary to small front gardens

219 Wavell Drive

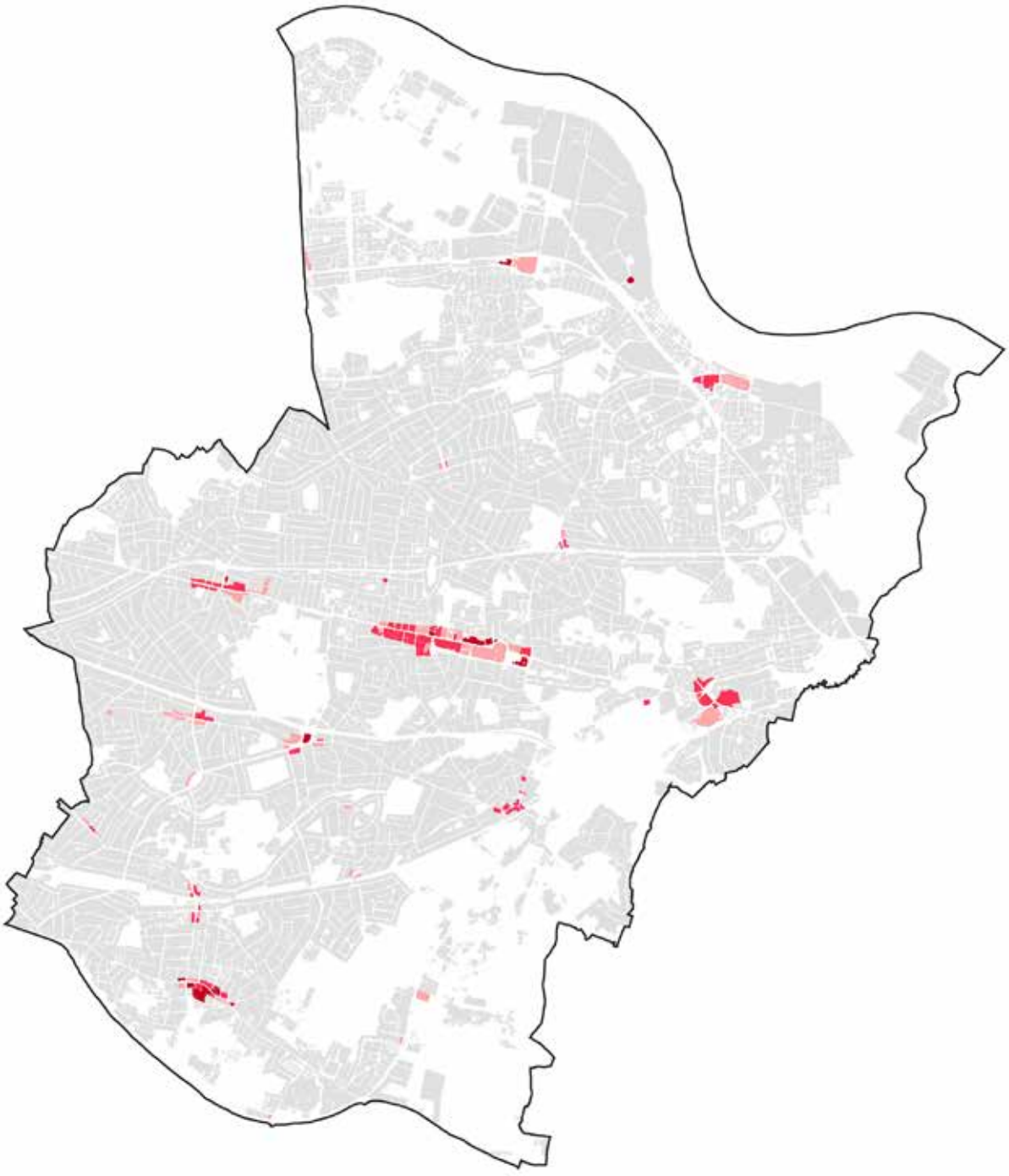
Commercial Typologies

As with residential typologies, design issues and spatial qualities of commercial typologies vary with their relative densities.

Within each of the density ranges opposite a variety of spatial configurations combine to create a wide variety of town centres and neighbourhood parades across the borough.

To describe these conditions a number of more specific typologies for commercial areas are set out on the following pages. These areas have been subject to more dynamic patterns of urban change than residential areas described above. As such the accretion of different typologies in the same location over time leads to these typologies being assembled in varied, complex ways.

As such, in addition to a description of the four commercial typologies, town centres are also analysed in their specific configurations.



220 Commercial Typologies in the Borough by FAR
LBB Urban Morphology Study , elaborated by We Made That and Troy Planning

‘Small Plot’ Shopping Parades

Distribution

This typology is found throughout the borough within every town centre.

However, as a typology, it is most dominant within those centres that provide a ‘district’, ‘local’ or ‘neighbourhood’ function.

Where these parades are purpose built they are often found as part of inter-war housing estates. A concentration of purpose-built parades therefore occurs through the centre of the borough.

On the other hand, parades that have been formed from converted dwellings tend to be found within the more historic centres in the north and south of the borough.



221 Barnehurst Road, Barnehurst Station Neighbourhood Centre, a baggy public realm is created where small plot shopping parades are set back on their plot: often these areas are used for parking and alow for a cluttered street environment.

Spatial Qualities

- Uniformity of urban grain - groups of plots with a consistently fine grain with one another.

- Shallow plots - plots are often short but varied in length with this typology being used in more constrained locations such as at junctions.

- Consistency of architectural expression - the use of a repeating building form across each plot strengthens the presence of a consistent urban grain and often results in a parade of buildings with a regular pattern of architectural detail and fenestration.

- Building line - each building within the group shares a common building line. Often, the building line is set back from the plot boundary.

- Vertical mix of uses - retail and commercial uses occupy the ground floor space of each building; each ground floor creates a 'retail unit'. Residential accommodation occupies upper floors. In larger and busier centres, the first floor of a building may sometimes be used as office space or to provide additional shop storage.

- Access - Each building has individual access through its plot to the highway. Ground floors gain access from the front of the plot. Staircases individual to each building provide separate access to upper floors.

Typical patterns of change over time

Fine grain shopping parades have typically changed over time in the following ways:

- Extensions to the rear – ground floor retail units have often been extended to the rear to provide more retail floor space. However, where upper floors gain their access from the rear of the plot, these extensions tend to be limited in their width as a result. Occasionally, access to upper floors is reconfigured to the front of the building to provide a more comprehensive rear extension.

- Extension to the roof – Where roof extensions have been undertaken they are often done on an individual plot by plot basis. This incremental approach has often meant that skylights have been the preferred method of expansion so as to not introduce additional massing and disrupt the rhythm of the parade.

- Retail to residential conversions – this typology is prone to retail to residential conversions, especially where there is a significant setback as part of the property.













222 Main Road, Marechal Niel Neighbourhood Centre.

223 Blackfen Road, Blackfen Local Centre.

224 The Oval, Neighbourhood Centre, whilst set-backs can provide space to display goods and provide seating, their success can depend on the parades location within the street network and how defended the space is from vehicle use.

225 Falconwood Parade, Neighbourhood Centre.

226 Bexley High Street, Bexley Local Centre.

227 Crayford High Street, Crayford District Centre, small plot shopping parades with less or no set back create a more direct relationship with pedestrians.

Design Issues

- Cluttered public realm - buildings that are setback from their front plot boundary create an area of privately owned space between the parade and the public highway.

- When these setbacks are deep they can create a wide and baggy public realm and bring about a cluttered and poor-quality environment.

- Deep setbacks can reduce the ability for people to experience goods within shop windows by removing shop fronts from the usual line of pedestrian movement along the pavement.

- The use of setbacks to park cars or as forecourts is particularly common where these parades are located on busy routes or occupied by uses that have a 'more than local' catchment. This can add further visual and functional clutter to the street environment, obscuring shops from view and impeding pedestrian access.

- Rear access – access to residential accommodation can often be poor. When it is from the front of the property, parking and street clutter can often make entrances unwelcoming. Where access is from the rear of the plot entrance space is often dominated by the servicing arrangements of ground floor retail units. Where retail units have been extended to the rear entrances tend to remain on the ground floor and be squeezed between a flank wall and a side boundary.

- A constrained ground floor – a shallower plot and residual access to the rear creates a constrained plot conditions that impacts the scope of rear extensions for residential units.





228 Lewis Road, Neighbourhood Parade, small plot parades showing retail to residential conversions and set-back being used for residential parking.

229 High Street, Sidcup District Centre, rear entrances to residential accommodation on upper floors is often poor quality.

‘Large Plot’ Shopping Parades

Distribution

This typology is most often found within the boroughs district centres as well as on the edges of Bexleyheath Major Centre.

Occasionally, this typology provides neighbourhood provision, typically in the form of a single medium grain parade. This is uncommon, but where it is found these medium grain parades typically form the centre of an estate.



230 The Pantiles, Neighbourhood Centre, ‘large plot’ shopping parade with communal entrances to residential accommodation above shops.

Spatial Qualities

- Urban grain - a single, wide plot, often created through site assembly and built out as a single building with often with a regular pattern plot-subdivisions on the ground floor.

- A linear building expression - buildings are often broken down into a limited number of components with massing either used to highlight a central portion of the parade or bookend it. Parades often express a linear character, with architectural detailing and materials cutting across the plot-subdivisions of the ground floor. As a result, upper storeys often appear to sit monolithically on top of a finer grained base.

- Building line and plot boundary - a consistent building line across the plot delivers clear definition to the street. Building lines often directly address the plot boundary. Where a building line is set back the space created often retains a communal nature aligned with the overall freehold of the parade.

- Vertical mix of uses - Retail and commercial uses occupy the ground floor of the parade; each plot subdivision creates a 'retail unit'. Residential accommodation typically occupies the upper floors.

- Access - Each retail unit has individual access to the highway from the front of the plot. Upper floors are typically accessed from the rear of the plot through a communal staircase.

Typical patterns of change over time

Medium grain shopping parades have typically changed over time in the following ways:

- Extensions to the rear – rear extensions are often made on sub-plots at ground floor level. These extensions can often be made across the whole width of the sub-plot as access arrangements to upper floors are achieved via communal deck access.

- Extension to the roof – where extensions have been made to the roof they have often been made across the whole width of the parade adding an additional level of residential accommodation into the roof space. Freehold ownership of the building allows for such a comprehensive approach.

- Internal alterations – retail units that are leased from a freeholder allow for the use of multiple plots to be more easily curated and attract retailers that require larger amounts of floorspace.













231 High Street, Sidcup District Centre, a larger unit as part of a ‘large plot’ shopping parade, occupied by a national retailer.

232 Blackfen Road, Blackfen Local Centre, ground floors only have access to retail units; access to residential flats is provided by a communal deck access arrangement to the rear of the building.

233 Maidstone Road, Neighbourhood Centre.

234 Crayford Road, Crayford District Centre, a ‘large plot’ shopping parade with a direct relationship provides pedestrians with more detail and a more visually rich walking environment.

235 Forest Road, Slade Green Station Neighbourhood Centre, amalgamation of units for a large convenience store.

236 Stelling Road, Neighbourhood Parade, linear architecture.

Design Issues

- Disruption of grain - larger stores are often found within this typology. To accommodate these stores, two or more neighbouring retail units are combined to form a single shop. This can disrupt the otherwise regular grain of retail frontages on the ground floor and can dilute any rhythm found in the facade at first and second floor levels. As a result, larger units within this typology can bring about a muddled facade and less variety of uses within the parade.

- Access - communal deck access to residential accommodation is nearly always from the rear of the parade. This environment is often poor and dominated by parking and servicing for ground floor retail uses.









237 Rear of Crayford Road, Crayford District Centre, rear communal deck access often competes with the servicing requirements of ground floor commercial uses and creates a messy and confusing entrance to residential accommodation.

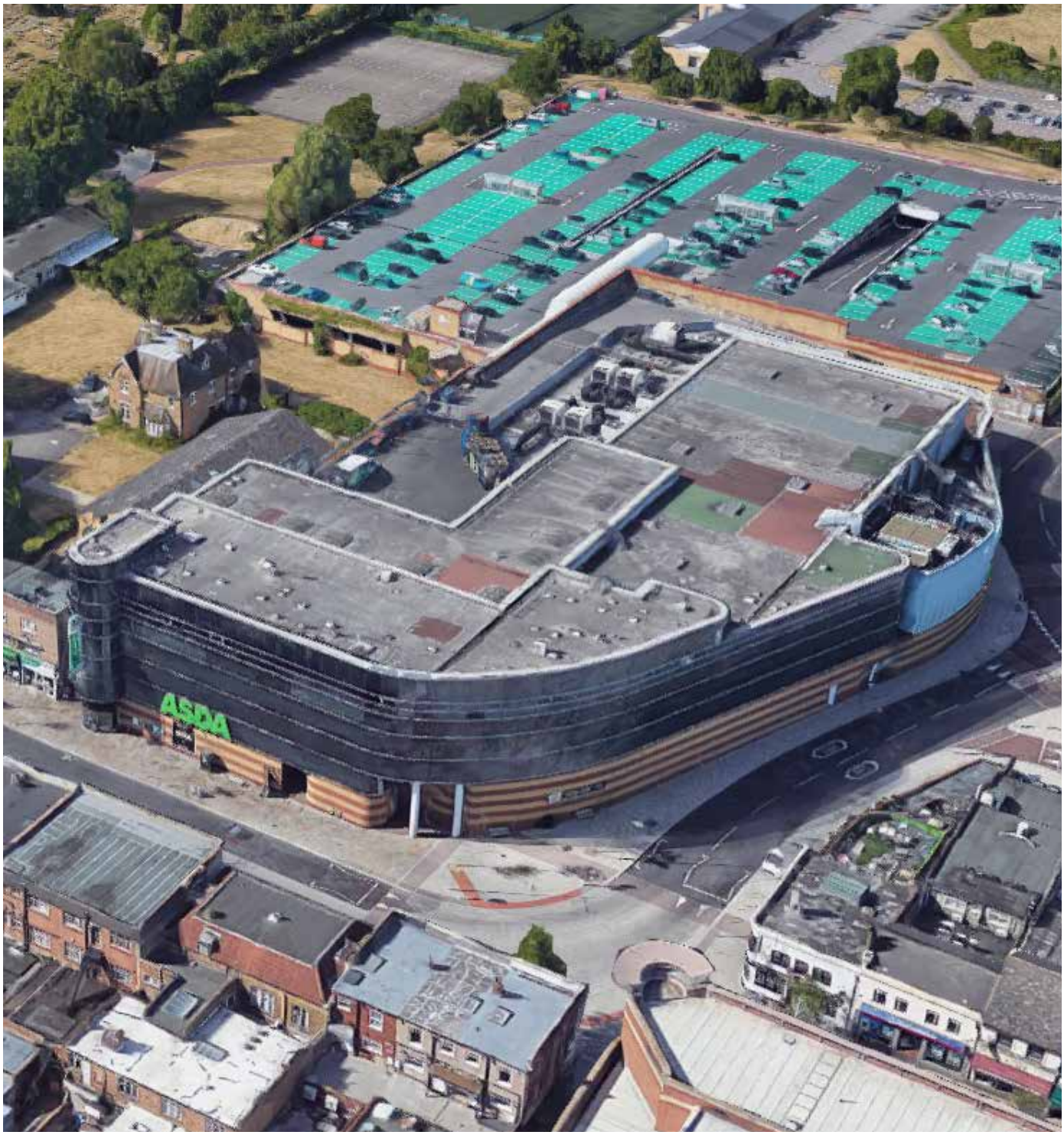
238 & 239 Crayford Road, Crayford District Centre, shop fronts of larger retail units often compete with the original architectual expression of the parade.

240 Rear of Maidstone Road, Neighbourhood Parade, deck acces communal extrance to the rear.

Big Box

Distribution

This typology is found in Bexleyheath, Welling and Erith town centres– which are in the upper levels of the borough's town centre hierarchy. They are usually located at the heart of these centres, surrounded by medium and fine grain shopping parades.



241 Asda, Bexleyheath Major Centre, big box store with a significant amount of blank inactive frontage onto one of the boroughs most prominent routes.

Spatial Qualities

- Urban grain – vary large plots or whole blocks that are often built out as a single large building. The ground floor is often subdivided into sub-plots with a coarse and mixed grain or, less often, used as a single very large plot by a single occupier.

- Building line and plot boundary – building lines are typically placed on the plot boundary, maximising the internal floorspace of the building. The relationship between the building and the public realm is therefore often direct but also blank, boring and monotonous.

- A boxy building expression – massing, materials and architectural detailing often combine to create a coarse grain of linear architecture with large amounts of blank façade being present, especially above ground floor level.

- Vertical mix of uses – retail and commercial uses often occupy the ground floor. Storage or auxiliary office space is usually found on the first floor, linked to ground floor occupier of the sub-plot. Where a ground floor occupier requires less storage space the first floor is occasionally used as a large format retail warehouse by another occupier.

- Access – many stores do not have direct access to the public highway. Whilst some stores do gain direct access this arrangement often occurs in a concentrated pocket facing a main street of a neighbouring car park. More typically, it is often the case that the sheer size of the buildings with this typology promote a layout of internalised circulation spaces which stores face and gain access from instead. Access to upper storeys is often provided internally from inside plot subdivisions, too.

Typical patterns of change over time

Big box buildings have tended to change in the following ways:

- Internal reconfiguration – larger retail units are sometimes sub-divided to provide a finer grain or retail floor space; the opposite is also true.

- Intensification – changing demands from retailers and patters of stock deliveries have brought about opportunities to intensify underused storage spaces on upper floors.













242 Broadway Shopping Centre, Market Place, Bexleyheath Major Centre.

243 Cineworld, Broadway, Bexleyheath Major Centre, inactive façades, especially above ground floor level.

244 Riverside Shopping Centre, Erith District Centre, inconsistent active frontage undermines the quality of the street.

245 Riverside Shopping Centre, Erith District Centre.

246 Broadway Shopping Centre, Albion Road, Bexleyheath Major Centre, entrances for service vehicles dominate a monotonous elevation.

247 Tesco, Welling High Street, Welling District Centre, glass frontage creating visual activity and providing a more generous environment.

Design Issues

- Inward facing development that creates a poor quality public realm - retail floor space is often focused on internally created spaces at the expense of creating active frontage to the established street network. At the same time, entry points for cars and service vehicles are often the dominant functional element within large amounts of passive façade. This creates an anonymous and functionally hostile environment and undermines the liveliness of the surrounding public realm.

- Variety - large format shops spread uses over space and time and reduce visual and functional variety.

- Car dominated environments - surrounding plots are often sacrificially used to provide large amounts of surface or multi-storey car parking. A car dominated environment is often created in the surrounding area.







248, 249 & 250 Broadway Shopping Centre, Bexleyheath Major Centre, servicing requirements facing the public realm, longer units facing the public realm reducing variety of uses and large amounts of surface car parking creating urban 'voids' at prominent central locations.

Big Box (Isolated)

Distribution

This typology tends to be found on the edge of town centres and or ‘out of centre’ locations. Where it is found in town centres, plots are often carved out from the centre of blocks.



251 Sainsbury's, Stadium Way, Crayford District Centre, big box development failing to integrate well into the town centre by turning its back to the established urban environment and isolating itself amongst a vast area of parking.

Spatial Qualities

- Urban grain - a large plot or a whole block that is partially covered by a single large building.

- Building location on plot - buildings sit on their plot in a manner that results in a significant amount of their façade being setback from the street network around them. This results in buildings that at least partially sit in space.

- A linear building expression –buildings appear linear in form with boxy architecture. Entrances are often well defined against what are mostly blank façades.

- Vertical mix of uses –surface level car parking often covers most of the plot. Retail uses often fully occupy the ground floor of the building. Occasionally, parking is provided within the building on the ground floor, with an entrance leading up to a first-floor retail space that straddles the ground floor parking. Buildings within this typology are almost always used as supermarkets.

- Access – access into the building is very often focused on the surrounding parking. Where the building does address a street, a secondary entrance is normally, but not always, also provided. Access for vehicles onto the plot is from the main highway.

Typical patterns of change over time

This typology tends not to significantly adapt over time.













252 Morrisons, Welling District Centre, integrated with the town centre through fronting the street and using the inside of an established block to mitigate the impact of surface parking on the street scene.

253 Co-op, Blackfen Local Centre.

254 Morrisons, Erith District Centre, turning its back to surrounding development and sitting isolated from the town centre.

255 Morrisons, Sidcup District Centre, isolated.

256 Asda, Belvedere (New) District Centre, isolated.

257 Lidl, Broadway, Bexleyheath Major Centre, good frontage to main road but creating a gap in the urban environment from surface parking.

Design Issues

- Gaps in the urban fabric – this typology often fails to create a positive relationship with the street. With buildings setback on their plot amongst car parking, large car dominated voids are created within the urban environment. They create illegibility, allowing for views across them but hindering movement, often forming barriers to pedestrians.





258 Belvedere, big box retail set back from the street

259 Sidcup, large visible building set amongst parking

Town Centres

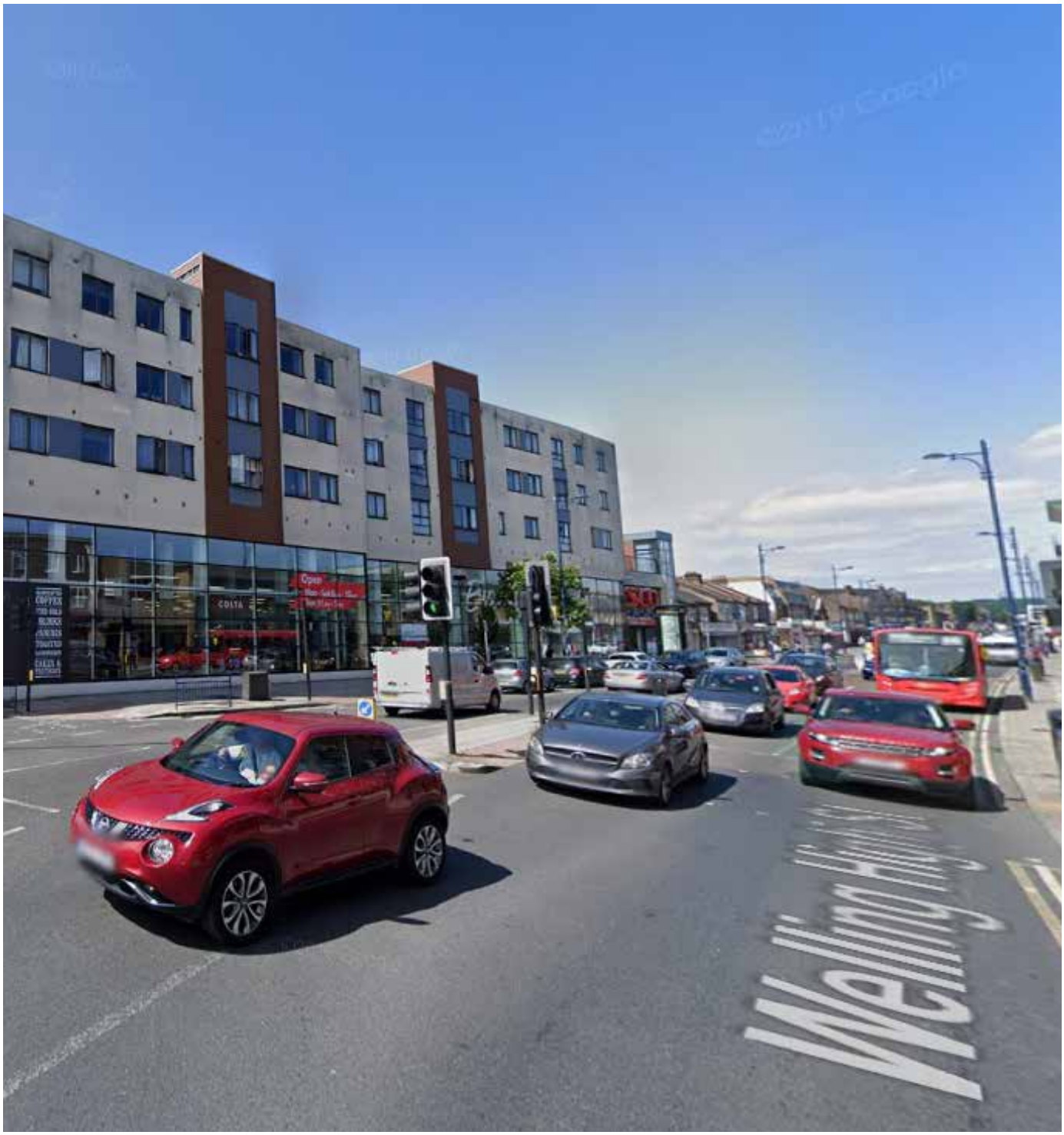
A closer examination of Bexley's town centres has been carried out to show how the different commercial typologies combine in these locations. Two maps for each town centre are presented, and in both cases the units have been decided using the Jenks system, the natural breaks given in the data.

The variation maps presented on pages 195-209 show that the highest variations in data occur in the town centres due to the high amount of mixed use buildings, which is also why a closer examination is necessary.

Town centres are a key part of the Council's overall strategy for delivering good growth in the borough as they provide central points of identity as well as places that provide employment, local services and opportunities to socialise for local residents. The Draft Town Centres Strategy (2019) proposes measures to protect the town centres and encourage economic growth.

Bexley has a hierarchy of town centres, ranging from Major Centre to Neighbourhood Parades. In the London Plan, Bexley has five main town centres – Bexleyheath is defined as a Major Centre and Crayford, Erith, Sidcup and Welling as Major District Centres. Bexleyheath has a diverse offering that includes retail, offices, leisure and entertainment facilities, while the District Centres tend to meet a more local need.

The data illustrated reflects the building and parcel-level information with the highest precision available from the OS MasterMap and OS Building Height Attribute. The volume and FAR categories were chosen based on natural break clustering methods aligned with Town Centre-level relevance.


COSTA
Open
Welling High

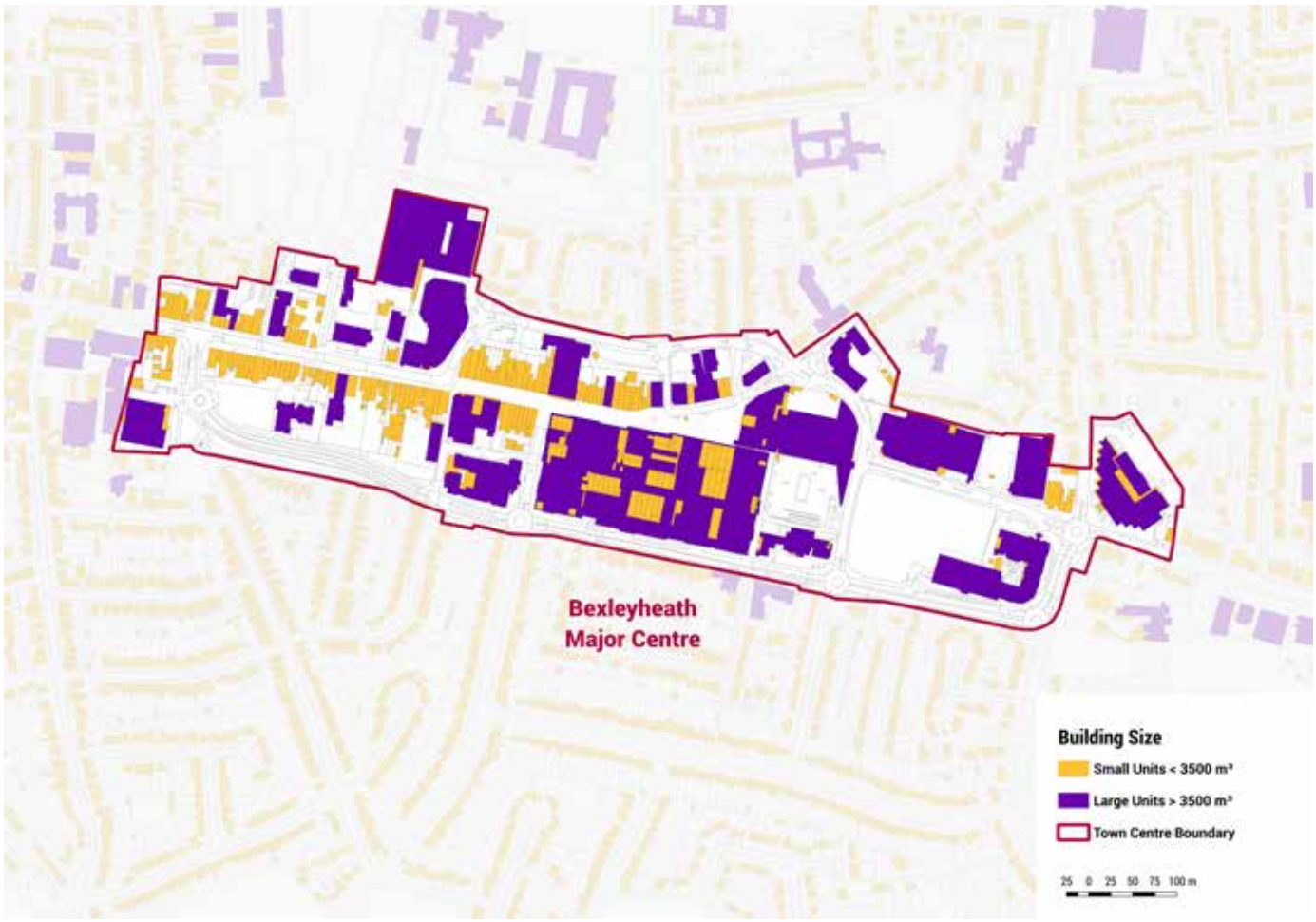
Bexleyheath

Bexleyheath is a major centre and the borough's primary shopping and service hub. It sits at the top of the borough's 'Town Centre Hierarchy', designated as a 'Major Centre'. Bexleyheath has grown along Broadway (an old Roman High Road) and consequently has a strong linear form.

Numerous town centre typologies are found within Bexleyheath. At its western edge, fine grain shopping parades are prominent, often home to independent retailers, café's and small eateries. Big box developments containing larger retail units dominate its eastern end and provide floor space for national chains and large format supermarkets.

A transition between these two contrasting extremities is provided by a mix of typologies within a central stretch of Broadway. In this central section, small plot shopping parades occupied by independent retailers sit on the north side of Broadway, bookended by medium and big box stores; on the south side, Broadway Shopping Centre, a big box development occupying the largest block in the town centre, provides floorspace to many national retailers.

A significant amount of active frontage is provided along Broadway, with fine and medium grain parades creating a regular rhythm of retail units and big box developments often responding to the primacy of Broadway with outward facing retail units in their Broadway elevation. By providing a common focus for development, Broadway helps to integrate different typologies with one another and creates a successful shopping street.





260 Unit size, We Made Thats and Tror Planning

- Small units < 3500m³
- Large units < 3500m³
- Town Centre boundary

261 FAR by plot, We Made Thats and Tror Planning

- < 0.5 (Sparse)
- 0.5 - 1.5 (Medium)
- > 1.5 (Dense)

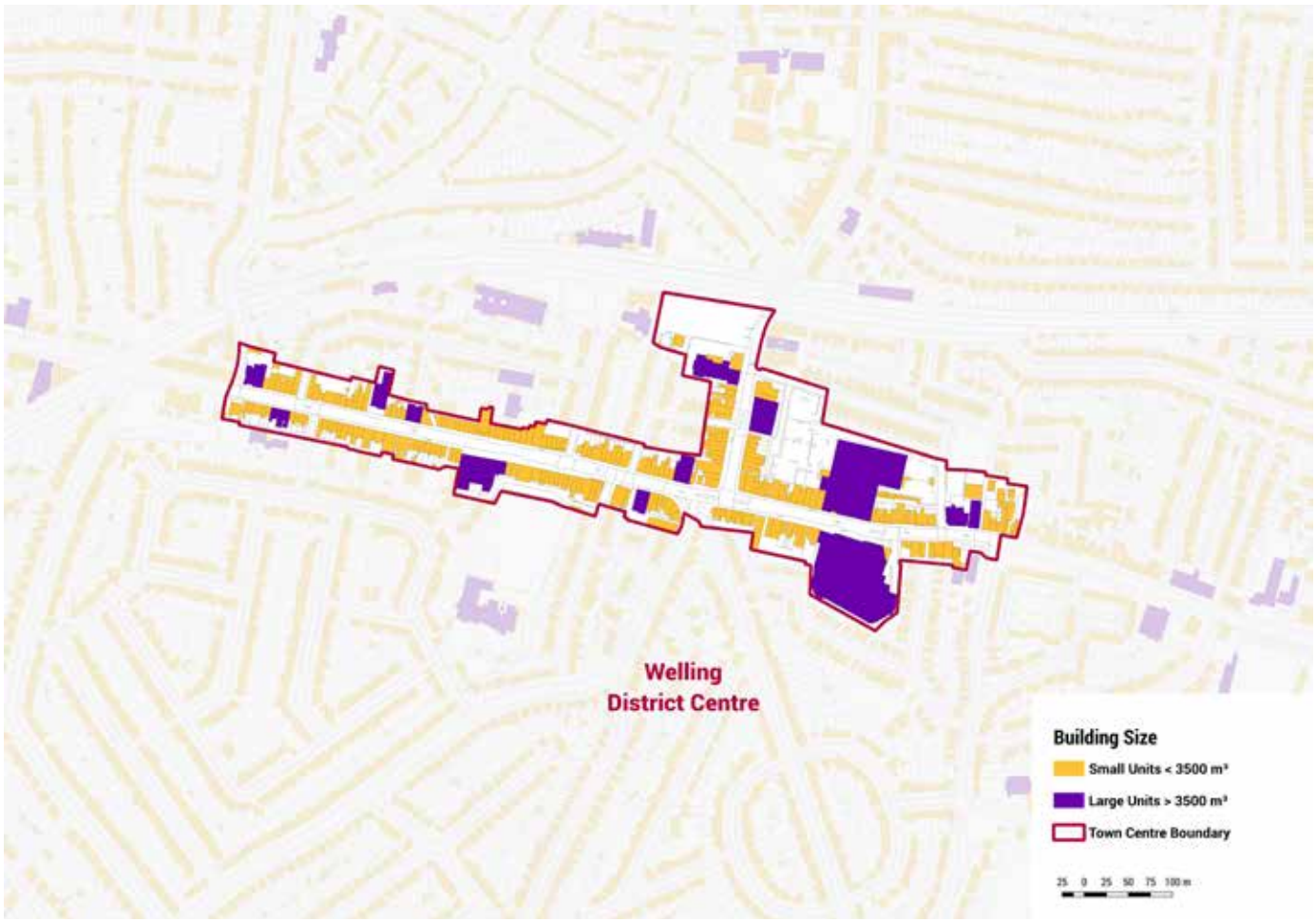
Welling

Welling is in the west of the borough and is designated as a ‘district centre’ within the borough’s ‘Town Centre Hierarchy’. It has grown along Welling High Street / Bellegrove Road (an old Roman High Road) and as a consequence has a strong linear form.

Welling is mostly formed by a mix of ‘small’ and ‘large plot shopping parades’; as a result, a regular rhythm of thin retail units exists across much of the town centre. Whilst independent retailers mostly occupy these parades, some national chains are present, often occupying larger units created from the merger of several smaller units.

At the eastern edge of the town centre, two supermarkets produce a contrasting retail format and typology. Whilst these supermarkets are both ‘big box’ developments, they create frontage to Bellegrove Road, are sized to form part of an established block and locate their parking in either an under-croft basement or behind the development within their ‘hollowed out’ urban block.

As a result, these large supermarkets both provide examples of how big box development can more successfully integrate with their surrounding town centre and mitigate the impact of common ‘big box’ design issues on the street scene such as blank façades and car dominated surface level parking.







262 Unit size, We Made Thats and Tror Planning

- Small units < 3500m³
- Large units < 3500m³
- Town Centre boundary

263 FAR by plot, We Made Thats and Tror Planning

- < 0.5 (Sparse)
- 0.5 - 1.5 (Medium)
- > 1.5 (Dense)

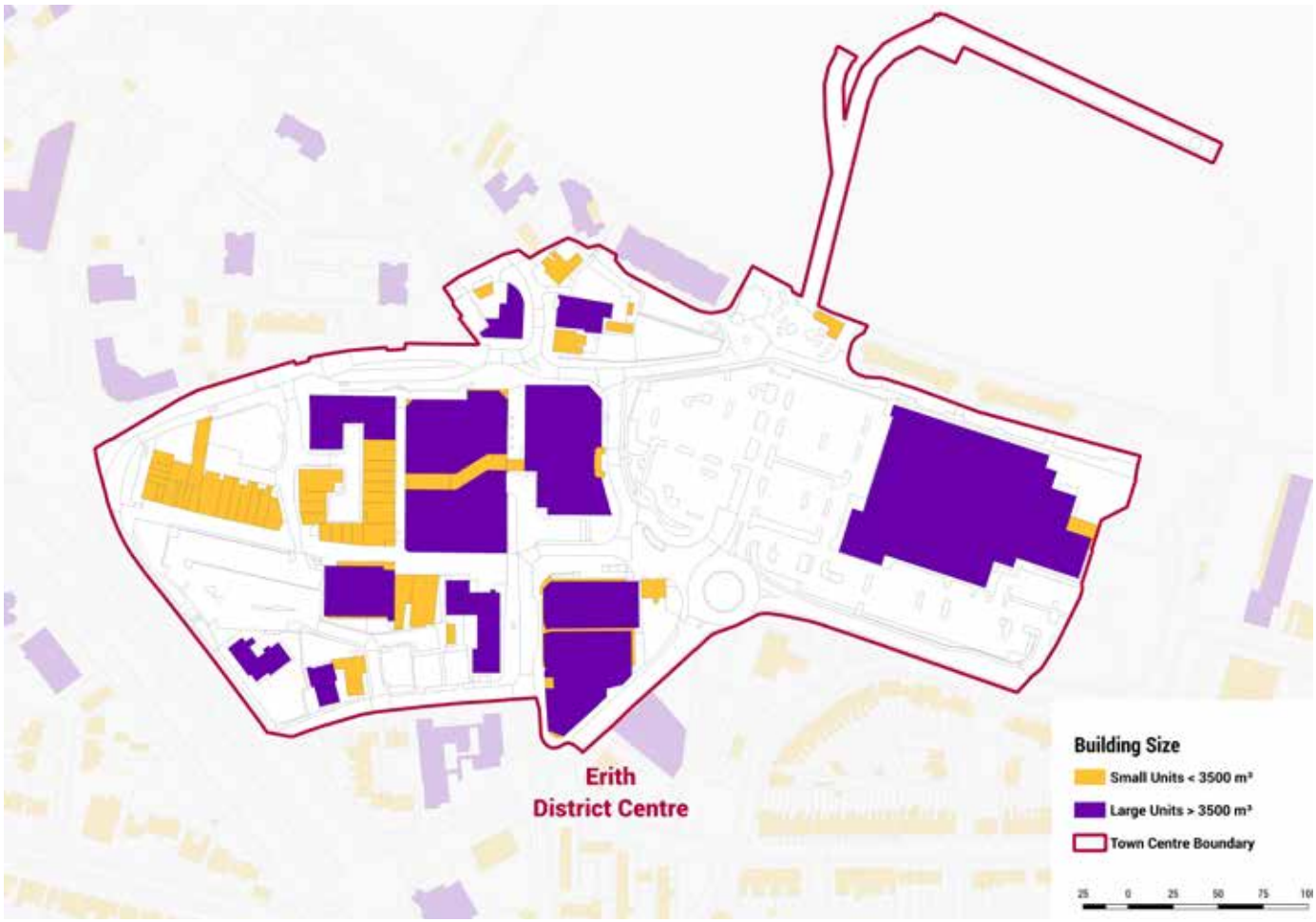
Erith

Erith is one of four district centres and provides the main shopping and service hub for the north western area of the borough.

Much of the town centre was redeveloped in the 1960s; as a result, the big box type is prevalent, creating a low-density environment comprised of an inward facing shopping centre and a large format supermarket surrounded by parking.

These buildings fail to support much of the public space within the town centre and little active frontage is created. They also relate poorly to the few elements of the town centre that remain post regeneration.

Where they exist, these fragments front established routes, provide development of a ‘small plot’ typology’ and tend to result in a higher density parcel.





264 Unit size, We Made Thats and Tror Planning

- Small units < 3500m³
- Large units < 3500m³
- Town Centre boundary

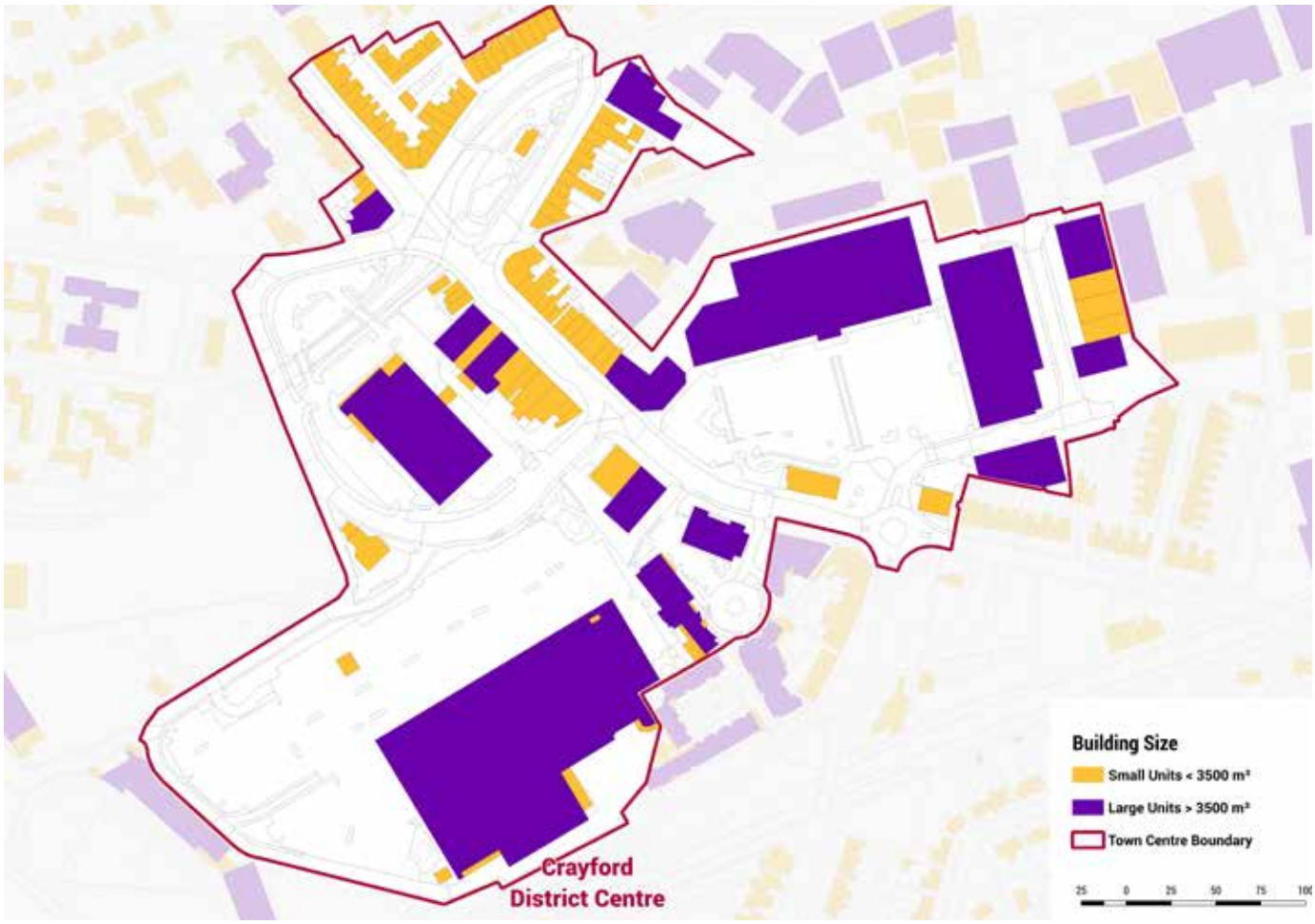
265 FAR by plot, We Made Thats and Tror Planning

- < 0.5 (Sparse)
- 0.5 - 1.5 (Medium)
- > 1.5 (Dense)

Crayford

Crayford is designated as a district centre. It contains a range of typologies. ‘Small plot’ and ‘large plot’ shopping parades create a distinctive northern part of the town centre and focus onto a public space formed around the River Cray. This northern area has dense to medium plot coverage and a character of retail units that is of a thin regular rhythm.

To the south of the river, the retail environment changes considerably: two big box isolated developments, the Tower Retail Park and Sainsbury’s dominate and provide a sparsely populated area of the town centre that is characterised by surface level parking.





267 Unit size, We Made Thats and Tror Planning

- Small units < 3500m³
- Large units < 3500m³
- Town Centre boundary

268 FAR by plot, We Made Thats and Tror Planning

- < 0.5 (Sparse)
- 0.5 - 1.5 (Medium)
- > 1.5 (Dense)

Sidcup

Sidcup is one of four 'district centres' within the borough's 'Town Centre Hierarchy' and it serves as the main shopping and service hub for the south of the borough. It has grown along Main Road / High Street (A211), at a key junction between Foots Cray, Eltham and Chislehurst.

Much of the town centre is comprised of Victorian parades. These parades fall within the 'small plot' typology and have one or two storeys of residential accommodation above ground floor shop units. They are usually located at prominent locations within the street scene and many are located on the north side of High Street.

On the south side of High Street, post-war parades falling within the 'large plot' typology now stand in place of Victorian housing. Whilst these parades have two storeys of residential accommodation above their retail components, they often result in a medium density due to their construction on generous plots of a previously residential nature.

The predominantly regular rhythm of thin retail units created by these typologies are often home to independent retailers. However, some national chains exist and Sidcup has a number of larger retail units that have either been purpose built as infill developments or have been formed through the amalgamation of two or more neighbouring smaller regular units.

The largest retail space is to the south of High Street where a large 'big box' supermarket sits within the centre of the block. Such an arrangement creates a large void of parking and isolates the store from the surrounding town centre.





269 Unit size, We Made Thats and Tror Planning

- Small units < 3500m³
- Large units < 3500m³
- Town Centre boundary

270 FAR by plot, We Made Thats and Tror Planning

- < 0.5 (Sparse)
- 0.5 - 1.5 (Medium)
- > 1.5 (Dense)

Sidcup Station

Sidcup station is functionally within the Sidcup area, although it is treated separately in the planning hierarchy.

The town centre is dominated by small units, which offer a moderate amount of paved pedestrian area at the front, and typically offer local services such as an accountants, a dry cleaners and a hairdressers.

The large unit to the west is a Premier Inn, with the other large units being local supermarkets. The second largest unit has a learning centre at street level, with eight storeys of new-build flats above.

There is medium density in the Sidcup Station area.

The high density areas are the new-build flats, as well as some mixed use small unit buildings along the high street with limited rear parking space.

The Premier Inn is listed as sparse due to the high volume of parking facilities that service the building, and the customer outside space in the centre of the building.

Medium densities in the south of the town centre typically have two storeys of residential above a commercial ground floor.





271 Unit size, We Made Thats and Tror Planning

- Small units < 3500m³
- Large units < 3500m³
- Town Centre boundary

272 FAR by plot, We Made Thats and Tror Planning

- < 0.5 (Sparse)
- 0.5 - 1.5 (Medium)
- > 1.5 (Dense)

Bexley Village

Bexley Village is designated as a ‘local centre’ within the borough’s ‘Town Centre Hierarchy’. It is an historic centre, located in the south of the borough around a junction of sinuous streets; many of the buildings were built prior to 1900 and the majority fall within the ‘small plot shopping parade’ town centre typology. As a result, a regular rhythm of thin retail units exists across much of the town centre with one or two storeys of residential accommodation found on the floors above. Retail units are predominantly occupied by independent retailers, cafés and small eateries; some national retailers are present, often occupying a slightly larger retail units formed from two smaller units.

There are no ‘big box’ developments within Bexley Village and it is the only town centre in the borough without a large format supermarket: the lack of large units (those over 350 m2) sets Bexley Village apart from all other town centres in the borough.





273 Unit size, We Made Thats and Tror Planning

- Small units < 3500m³
- Large units < 3500m³
- Town Centre boundary

274 FAR by plot, We Made Thats and Tror Planning

- < 0.5 (Sparse)
- 0.5 - 1.5 (Medium)
- > 1.5 (Dense)

Blackfen

Blackfen is a small town centre, situated south of Welling adjacent to the A2 main road.

There is a supermarket and car park dominating the north, listed as a large unit.

Small units are then found extending east and west of the crossroads. These are very typically mixed use buildings providing services, with car parking space on the street in front of the buildings rather than the rear. As a result there are few cafés or restaurants that make use of the street space.

The two large sparse units on the western side of the crossroads in Blackfen are a pub with a large rear car park and spacious outdoor seating at the front, and a large independent shop selling children's goods with parking space available on the street in front. These work together to present a very spacious feel to the crossroads.

High density then extends further west, as well as east, particularly on the southern side of the road where two storeys of residential building sit above a commercial ground floor. The northern side of the street has just one storey of residential above the ground floor commercial space.





275 Unit size, We Made Thats and Tror Planning

- Small units < 3500m³
- Large units < 3500m³
- Town Centre boundary

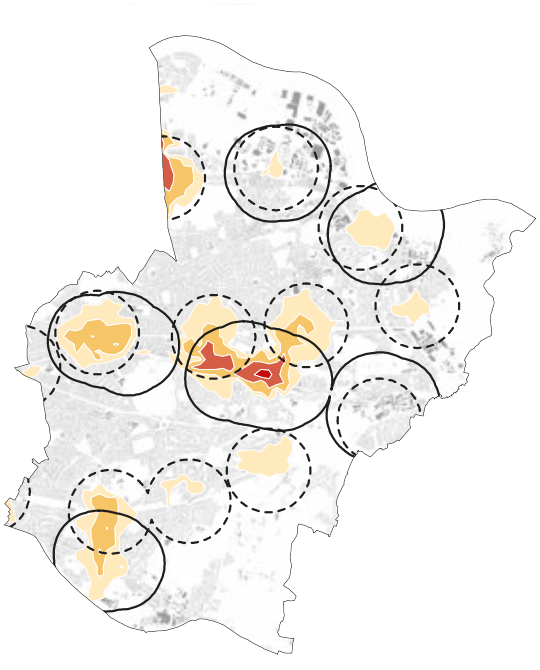
276 FAR by plot, We Made Thats and Tror Planning

- < 0.5 (Sparse)
- 0.5 - 1.5 (Medium)
- > 1.5 (Dense)

Sustainable Growth Areas

Emerging London Plan policies identify regions suitable for sustainable intensification through a combination of proximity to town centres, train stations and PTAL.

Collectively, these regions form larger sustainable growth areas.



277 Sustainable growth zones defined by 800m from town centres (solid line), stations (dashed line) and areas of PTAL 3 and above.

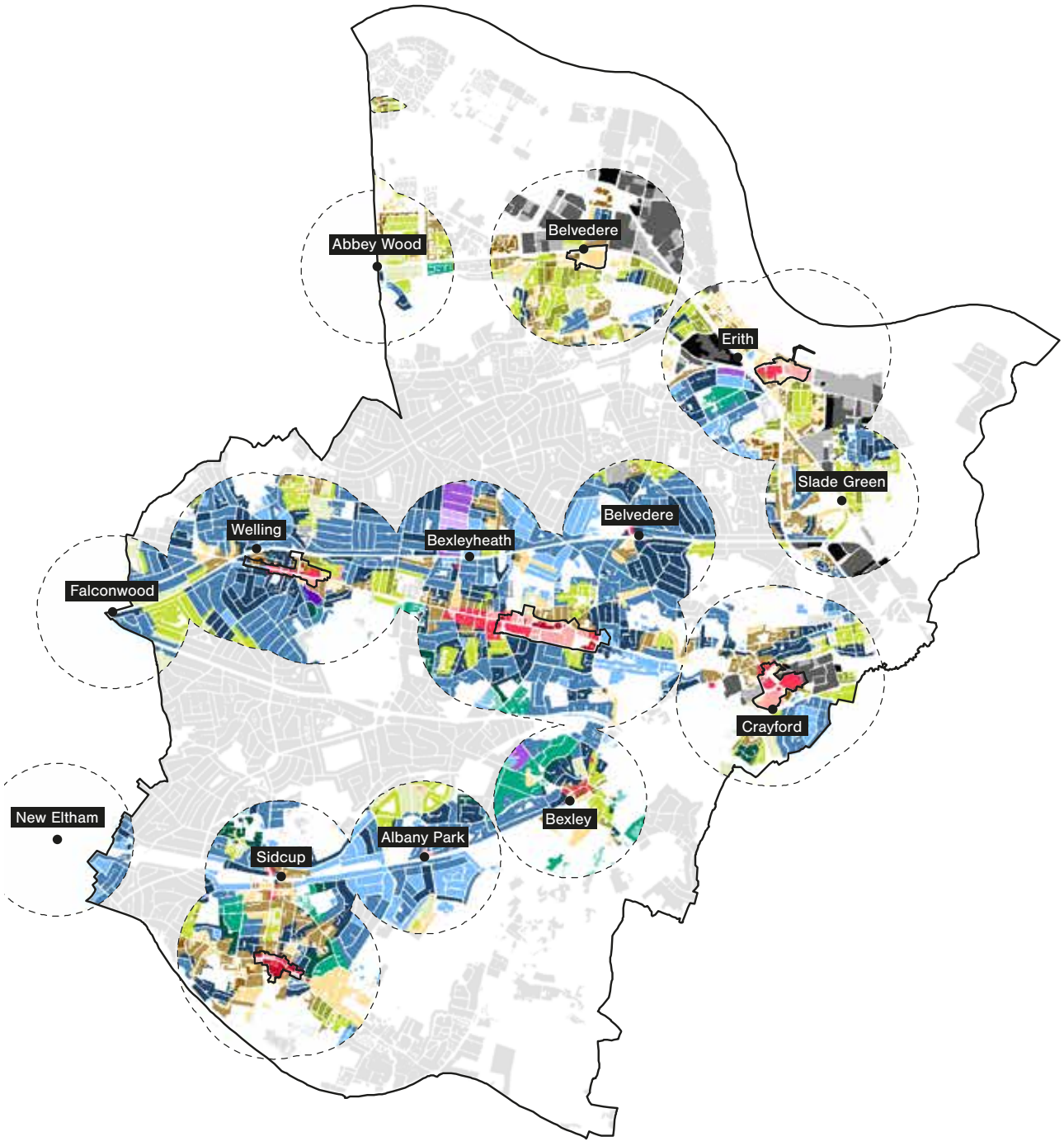
A comparative analysis of these growth areas requires a grouping based on:

- settlement pattern
- contiguous areas created by suitability for sustainable development.
- common landscape conditions
- shared potential for improvement in transport connectivity
- segregation caused by hard boundaries

Further detail about the makeup of these growth areas is given on the following pages:

- Thamesmead and Belvedere
- Erith and Slade Green
- Crayford
- Welling and Bexleyheath
- Sidcup and Bexley

The following pages set out the ways in which the character of these areas is sensitive to change. Where a historic settlement forms part of each area the pattern of development over time is explained.



278 Predominant Type
Source: Ordnance Survey Mastermap, elaborated by We Made Thats and Tror Planning
Although growth areas typically contain most types, their relative mix, distribution and transition between types varies signifcantly

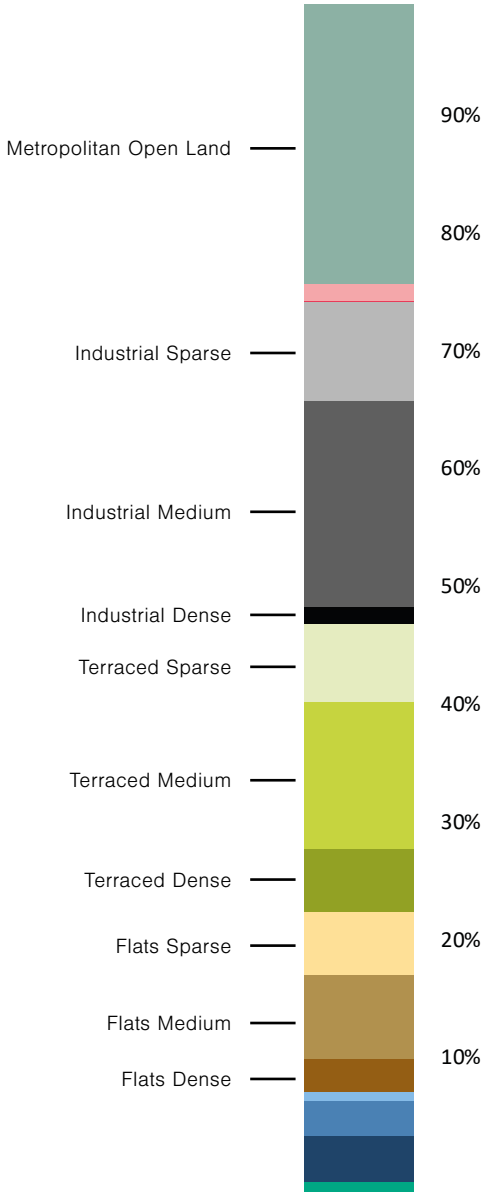
Thamesmead and Belvedere

Although not contiguous, these areas share a common landscape and geography at the point at which the valley side meet the valley floor. Their location on the potential route of C2E create a similar potential to improve connectivity.

The most common types of residential urban blocks in this area are terraced houses (24%). These blocks are consolidated in large areas which rarely mix with other types due to the separation created by the railway.

This means that terraced housing largely defines the character of these areas, although due the built period of the areas of Thamesmead and terraced housing to the south of Belvedere they have very different characters. Flats also form a large part of the urban typologies in the area.

Industrial types also form a significant proportion of built form. Again this is consolidated into two areas north of Belvedere station separated by an areas of mixed residential types between Norman Road and Picardy Manorway.



Bungalow 0.25 - 0.35 / 0.15 - 0.25 / < 0.15

Semi-detached 0.45 - 1.25 / 0.25 - 0.45 / < 0.25

Terraced 0.85 - 1.35 / 0.35 - 0.85 / < 0.35

Commercial 1.32 - 1.80 / 0.50 - 1.32 / < 0.5

Detached 0.50 - 1.00 / 0.20 - 0.50 / < 0.20

Flats 1.00 - 3.00 / 0.40 - 1.00 / < 0.40

Industrial 1.75 - 2.70 / 0.75 - 1.75 / < 0.75





279 Thamesmead and Belvedere
Predominant Type

280 Thamesmead and Belvedere
Variation in FAR (Darker colours show greater variation within each block)

Conservation Area
800m radius around station
800m raduis around town centre

N

0 1km

Historic Settlement Patterns

Belvedere, as its name suggests formed along the ridge that overlooks Erith Marshes to the north.

This position on higher ground and between Lesnes Abbey and Erith, two areas that have a long history of inhabitation give reason for its existence. An important estate slightly to the north of this ridge, Belvedere House has its origins in the C17th.

The settlement grew around the intersection of a route to Bexleyheath and Welling in the south, and a route to Belvedere House.

The transitional nature of the topography is reflected in a change in urban grain to either side of Erith Road/Woolwich Road.

To the north, the sloping topography creates a more inconsistent irregular structure, whereas a more linear, regular pattern occurs to the south.

This cruciform structure is still evident today, although the commercial activity has formed along Nuxley Road to the south, creating a more linear form.

The position of the Church, churchyard, vicarage and open spaces to the rear of the high street have maintained a degree of definition of the settlement structure, although development through the C20th around this intersection has undermined the historic nature of this place.

The persistence of topography in shaping development to the north has created a distinctive urban structure, further emphasised by rows of denser Edwardian houses perpendicular to the slope around Belvedere station.





281 Lesnes Heath urban fabric, 1870
Source: Ordnance Survey

182 Lesnes Heath urban fabric, 2019
Source: Ordnance Survey

Movement

Connectivity in the area is significantly impacted by large distributor roads and the railway, segmenting the area into isolated parts. Further boundaries are formed along the south of this area in the form of Lesnes Abbey Wood and Franks Park.

Partly in response to these hostile conditions these parts are often individually impermeable, such as large urban blocks formed by housing estates to the north of Abbey Wood station, large industrial sites to the north of Belvedere Station and the large retail park to the south.

Victorian terraces to the south of Lower Road have a more permeable, closer grained block pattern.

Open Space and Landscape Character

The area benefits from large open spaces with a strong landscape character in the form of densely forested parks of Lesnes Abbey Wood and Franks Park and views over Erith Marshes to the north. The scale of these spaces not only provide the setting for built form, and therefore define important elements within the area's character, but also provide longer views of the surrounding area. These views make visible the valley form of the wider area.

Sensitivity to Change

Although the area contains some good quality urban fabric, the built environment is generally poor. In Belvedere in particular this is compounded by the inconsistency of built form caused by the isolated nature of industrial plots and the challenging topography south of Lower Road.

This inconsistency is reflected in the high degree of variation in FAR found across the area.

As a planned estate, the mid- C20th development surrounding Abbey Wood has a strong townscape pattern, although this pattern results in generally poor quality streets. Point blocks along Yarnton Way are significant elements in the townscape.

The southern extents of Belvedere include Erith Road conservation area and a small part of Woolwich Road conservation area, which play a role in the preservation of the settlement pattern that emerged around Lesnes Heath.

The high quality of local open spaces is intimately related to surrounding built environment through the views created by the topography. These open spaces offer views over the River Thames, but are also impacted by the large buildings in industrial areas.

The urban form of residential estates and industrial buildings in addition to the scale of infrastructure leaves a significant quantity of mature vegetation that could in the future form an important element of the area's character.

Suitability for tall buildings

There are a number of existing tall structures in the area, both residential towers in Thamesmead, but also prominent industrial structures such as the gas holders and the concrete batching plant along the Thames. Tall buildings to the west in Woolwich are also visible.

The block and plot structure in the area is inconsistent but the scale of plots enables development to repair the urban fabric and create a more integrated street environment.

Erith and Slade Green

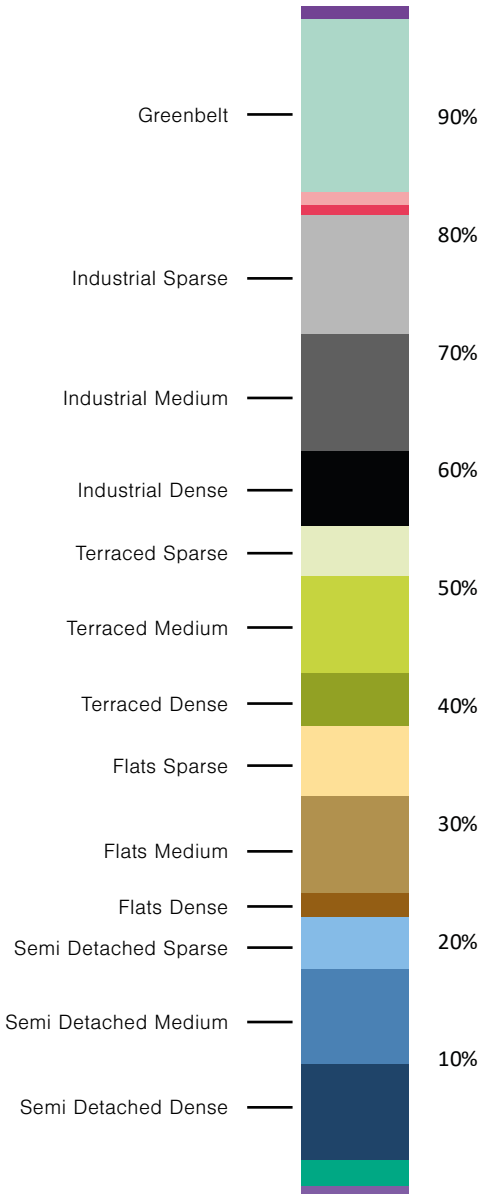
Area Definition

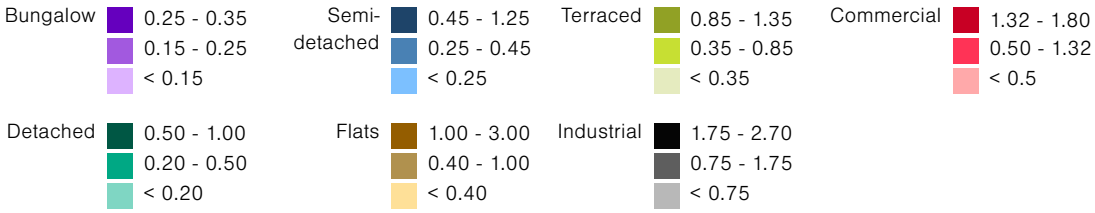
These areas share a common landscape and geography located on the valley floor. Their location on the potential route of C2E creates a similar potential to improve connectivity and the combined 800m radii around stations creates a contiguous area.

Typological Makeup

Compared to other growth areas in the borough, Erith and Slade Green comprises a more even mix of different typologies, although a higher representation of the denser typologies than average. It is also generally more developed than other areas, with less green belt and MOL making up its area.

The distribution of these types is uneven, with clear clustering of types defined by the location of major infrastructures.









283 Predominant Type
Distribution within the growth area

284 Variation in FAR
Darker colours show greater variation within each block

Conservation Area
800m radius around station
800m raduis around town centre

N

0 1km

Historic Settlement Patterns

Erith takes its form from the confluence of four routes that radiate from its privileged position as a rare point within the surrounding marshes that provides access to the river, which over much of the towns history provided more efficient means of transport than over land. Derived from the Saxon ‘Earhyth’ the name is thought to signify ‘old haven’. The earliest written evidence of Erith is in a Charter of 695.

As early as the 13th Century, Erith had attained some prominence as a fishing village and in the reign of King Henry VIII, Erith was a Royal Dockyard. This was located east of the original village on the site of the present Riverside Gardens. The centre of the village moved from the low-lying site adjacent to St. John’s Church to higher ground near the present High Street and town centre.

The geometry of these routes formed a series of irregularly shaped blocks, being relatively compact due to the river and railway that arrived relatively early as Erith grew rapidly at the end of the C19th. Aside this fine grained core, a radically different geometry persisted in Erith through large infrastructural and industrial facilities connecting to the rivers edge, as well as a brief period as a waterside resort.

As these industries eventually declined, the space they occupied has been taken up by similarly large format structures, such as retail units and associated parking.

A large scale redevelopment of the centre of the town in 1966 has had an even more dramatic impact on its form, replacing the Victorian network of streets with an internalised shopping centre and residential blocks surrounded by landscaped grounds.

Continuous streets have been removed and others are no longer addressed by built form in the same way, undermining the hierarchy of the settlement pattern.

The segmentation of the area by infrastructure and the relative development pressure each of these parcels has been exposed to create an urban pattern of clear contrasts.









285 Erith urban fabric, 1870
Source: Ordnance Survey

286 Bexley High Street, 1920
Source: Bexley Archives

287 Erith urban fabric, 2019
Source: Ordnance Survey

288 Part of A Map of Hundred of Little and Lesnes and the Hundred of Dartford and Wilmington, 1778
Source: Ordnance Survey

Movement

The network of public spaces and pedestrian routes is fragmented. The key elements of the centre – the main shopping area, heritage assets and river front are disjointed and have a weak relationship between them. The key route to the rail station is poor through underpasses. The station has no 'urban' setting as such, but does provide good access to the employment areas to the west.

The Thames Path provides a valuable pedestrian axis along the Thames, although interrupted and physically disconnected alongside Riverside Gardens by a high wall.

Slade Green is historically segregated from other urban areas by industrial land and railway. Recent redevelopment has changed this, but is largely introverted and dominated by cul-de-sacs. Despite this isolation, Slade Green has not developed an area of focus, where activity, movement and uses combine to create a specific identity. Forest Road Neighbourhood Parade provides limited convenience retail.

Open Space and Landscape Character

The landscape character of the area is largely shaped by its relationship to the river, which provides the main open natural space. The whole of Erith town centre sits in an area of deficiency in terms of open space and access to nature conservation, largely due to the barriers of Bronze Age Way, the railway and the industrial areas to the east.

Sensitivity to Change

Despite its long history, areas of historical value are rare in this area, and largely centre around two conservation areas at the centres of Erith and Slade Green and Lesnes Park Conservation Area.

Erith Riverside Conservation Area, which constitutes as the only remnants of Erith town centre as it was before the town was bombed and redeveloped in the 1930s and then 1960s. This conservation area plays a particularly important role given its proximity to the River. Detached buildings create an openness to Riverside Gardens and provides glimpses beyond the building line, towards the Thames. There are two relatively large historic buildings; the Carnegie (former library building) and the Town Hall in a strategic and prominent location, but are disjointed from the rest of the town.

To the west of Erith station, late C19th and early C20th industrial buildings with a strong utilitarian character, large amount of glazing create a distinctive architectural presence in the Europa Estate.

To the east of the town centre the scale changes and built form becomes more varied.

The whole of Erith town centre sits in an area of deficiency in terms of open space and access to nature conservation, largely due to the barriers of Bronze Age Way, the railway and the industrial areas to the east.

In Slade Green, Oak Road has a strong cohesive character and together with its proximity to open marsh countryside creates a large area with a distinctive spatial character.

The tallest buildings in Erith are the blocks of flats at Carrick and Bosworth Houses built over 40 years ago and forming of 15 storeys. More recent developments are lower rise, the highest of which being 6 storey developments at the western end of Erith High Street. Slade Green is consistently low rise, only the Arthur Street Estate to the west rising to 13 storeys.

The area's history or large redevelopment projects and the impact of large infrastructure creates an urban form that is largely varied in most areas. Variation in FAR shows a few areas of consistent urban form, notably the river front area to the north west of the town centre. Whilst the urban blocks surrounding Pier Road show as having low variation in FAR, this is due to the fact that large buildings make up these blocks in their entirety. Whilst Slade Green has little variation in building typology FAR varies considerably due to the inconsistent nature of plots created by the irregular pattern of continuous streets and cul-de-sacs.

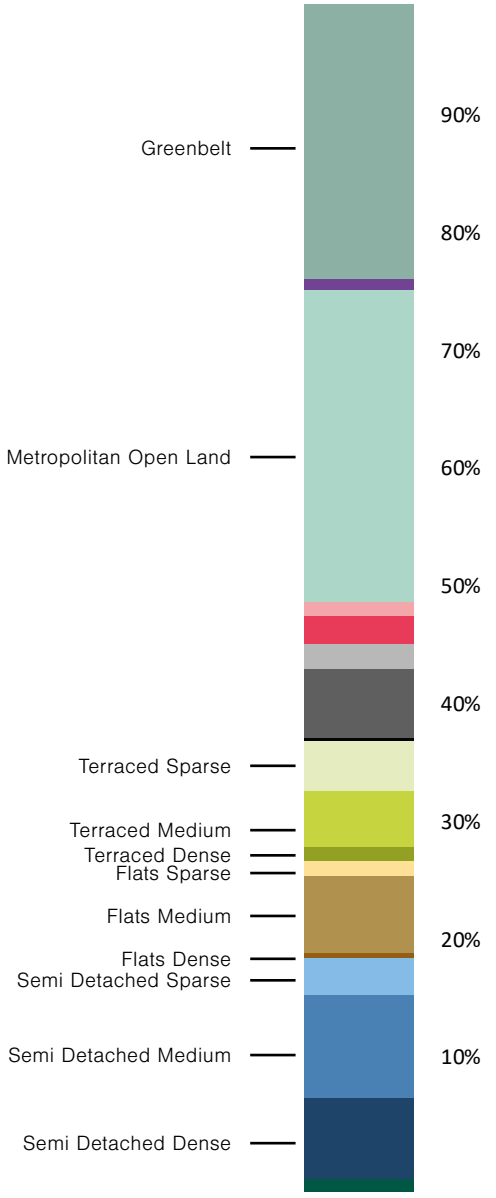
Crayford

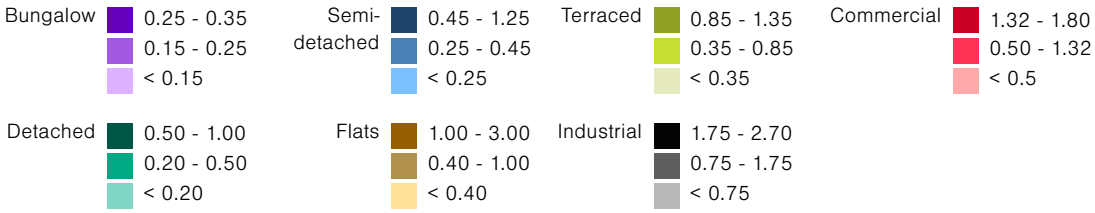
Crayford is distinct from Bexleyheath in its relationship to the landscape and the resultant settlement pattern formed within the Cray Valley. Similarly, its urban form is different to other growth areas along the Cray, such as Bexley village and is therefore analysed here as a distinct area.

Typological Makeup

Non-developed land in the form of Green Belt and MOL make up a significant proportion of this growth area. Developed area is largely made up of terraces, flats and semi-detached types, of these types the lower density typologies are more common than in other growth areas in the borough.

Industrial typologies are also present, and unlike the residential typologies it is the denser typologies that make up more of Crayford relative to other growth areas that contain significant areas of industrial land.









289 Predominant Type
Distribution within the growth area

290 Variation in FAR
Darker colours show greater variation within each block

Conservation Area
800m radius around station
800m raduis around town centre

N

0 1km

The structure of Crayford is formed around a linear spine running uphill perpendicular to a crossing of the River Cray. The oldest evidence of settlement in the area lies at the top of this spine in the vicinity of St Paulinus Church.

The river crossing was an important point on the roman Watling Street and has endured as key to the development of Crayford as a settlement.

Together with the topography of the area, the realignment of Watling Street along present day London Road in the C19th has created a distinctive block pattern of triangular plots.

Industry has been a vital component of life in Crayford since the 15th century when an Iron Mill was erected beside the River Cray on land to the east of the village. Fields by the Cray were used for calico bleaching in the late 17th century and, by the 18th Century; this had led to several textile printing works setting up on the western side of the village. During the 19th century textile printing and brick making were the main activities. With the arrival of the railway and Crayford Station in 1866 came Hiram Maxim's machine gun factory on land north of Crayford Road.

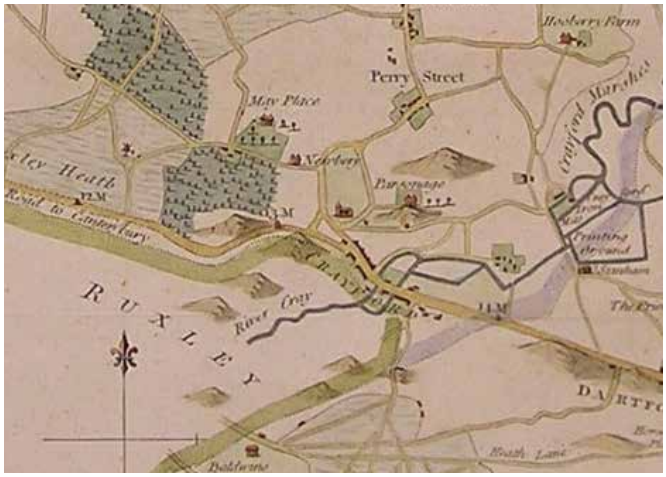
The valley floor to the south of the river Cray has been occupied by the heavy industries that have exploited the natural resource of the river, and developed a very different grain to the older settlement that occupies the hillside to the north. Although many of these industries have declined, in physical terms they have been replaced by large format retail units with a similar spatial character. This has had the effect of moving the commercial heart of the settlement down from the valley edge onto the valley floor.

The redevelopment of the southern part of Crayford is also characterised by streets of a different scale determined by the level of traffic this part of the borough must accommodate. A traffic gyratory implemented in the late C20th further accentuates the distinct character of the settlement that occupies the valley floor and that which occupies the valley side to the north.









291 Crayford urban fabric, 1870
Source: Ordnance Survey

292 Duke of Wellington Pub, 1906
A prominent corner created by the triangular urban form of Crayford.
Source: Bexley Archives

293 Crayford urban fabric, 2019
Source: Ordnance Survey

294 Part of A Map of Hundred of Little and Lesnes and the Hundred of Dartford and Wilmington, 1778 showing a linear settlement to the north of the River Cray
Source: Ordnance Survey

Movement

The scale and nature of highway infrastructure in the area creates significant severance restricts pedestrian movement. The train station is poorly integrated into the town, forming a weak relationship to areas of commercial activity and the historic assets.

The area bound by Crayford High Street, London Road and Orchard Hill is a rare example of a block structure that creates a high level of network connectivity for walking and cycling. Elsewhere in the area blocks are generally large and therefore create a low level of network connectivity.

This is particularly true in the residential areas to the north of the River Cray. Here the roads tend to go along the contours, creating large long blocks with few routes perpendicular to the slope.

Open Space and Landscape Character

The majority of the town centre is in an area of open space deficiency, which further elevates the importance of the Crayford Waterside Gardens within the town centre.

Whilst Rivers Cray and Wansunt run through the town centre their visibility and hence contribution to character are limited.

Sensitivity to Change

There are a number of important buildings, including St Paulinus Church, a Grade II* listed building outside the town centre, and other listed buildings in the vicinity, which contribute towards the historic townscape at the northern end of the high street. Additionally, the area just north of the town centre is within the Iron Mill Lane Conservation Area, emphasising the historical feel of this end of the town centre.

The historic settlement pattern has remained largely intact, due to the focus of development over the course of the C20th in the area south of the river.

The relationship of the centre to the river, the low level character of the surrounding area together with the limited public transport accessibility and road congestion are important considerations in the densification of the town centre.

Furthermore the town centre is crossed by elevated high voltage power cables supported by tall pylons. These both dominate the skyline and would affect the height and location of potentially higher development.

The plot structure to the south of the river offers the potential for intensification whilst enabling heights to be increased

incrementally. The tighter grain of plots to the north of the river make denser development more challenging, as increases in height will occur across shorter distances and therefore cannot be increased substantially above the existing prevailing heights.

The relationship between typologies, and therefore the way in which character changes across Crayford is more complex than in other growth areas. Typologies are found in smaller areas and mixed amongst others. Moreover the transitions between these typologies occurs across shorter distances in the area north of the River Cray and south of the railway, and are less likely to be separated by large roads or open spaces.

As such, character can be understood as changing more gradually in these parts of Crayford.

There is a relatively high level of variety in urban form in areas adjacent to the river and extending up the valley side to the north, as shown in the variation of FAR.

This also demonstrates how character is less defined, and hence how the edges between different typologies are less clear. This variety in FAR is a product of both slight variations in building type but also the variety of plot structure that is created through building on areas of sloping ground. This is further exaggerated by areas of non-perimeter blocks with internal cul-de-sacs that create inconsistent urban form.

Welling and Bexleyheath

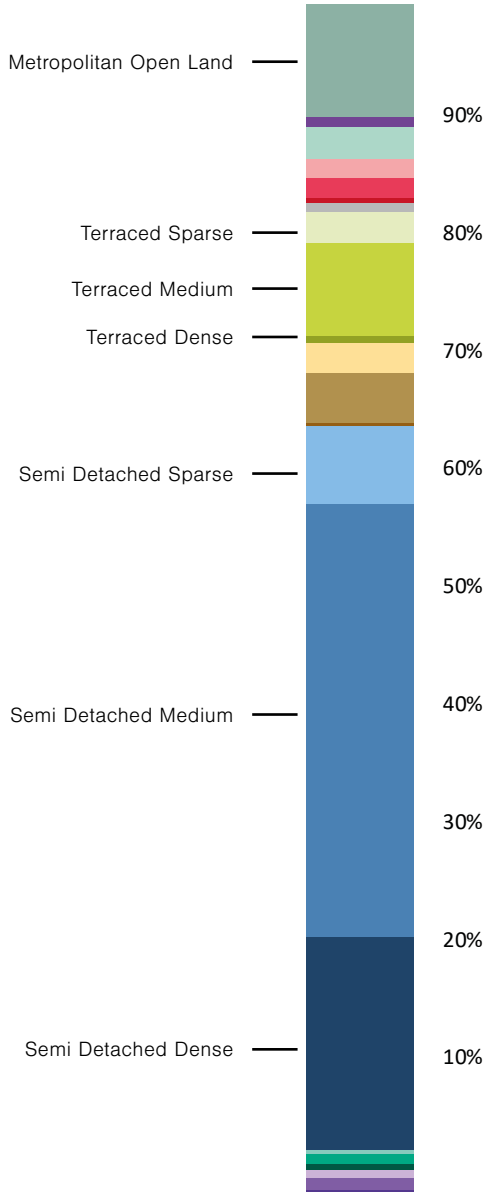
Together the scale and orientation of linear town centres and the locations of train stations create a contiguous area between Welling and Bexleyheath. The spatial characteristics of this area - the typologies that are represented and the way character transitions - in this area are similar.

Typological Makeup

This area is dominated by the presence of semi-detached typologies, with a higher representation of the medium and dense variants. Terraced typologies also represent a significant proportion.

Although not representing a significant proportion relative to residential typologies, commercial typologies are also present in considerable quantums, particularly relative to other growth areas.

Generally there is a lower representation of the sparse typologies, relative to other growth areas.



Bungalow 0.25 - 0.35 / 0.15 - 0.25 / < 0.15

Semi-detached 0.45 - 1.25 / 0.25 - 0.45 / < 0.25

Terraced 0.85 - 1.35 / 0.35 - 0.85 / < 0.35

Commercial 1.32 - 1.80 / 0.50 - 1.32 / < 0.5

Detached 0.50 - 1.00 / 0.20 - 0.50 / < 0.20

Flats 1.00 - 3.00 / 0.40 - 1.00 / < 0.40

Industrial 1.75 - 2.70 / 0.75 - 1.75 / < 0.75





295 Predominant Type
Distribution within the growth area

296 Variation in FAR
Darker colours show greater variation within each block

Conservation Area
800m radius around station
800m raduis around town centre

N

0 1km

The settlement pattern of Bexleyheath is a product of both the Roman Watling Street's enduring importance at a territorial scale and Mayplace Road (formerly Mill Road) which connected this important thoroughfare to Erith.

The alignment of Mayplace Road is rare along the historic route of Watling Street in its oblique alignment (unlike almost all other streets which are more perpendicular), which created a broadened area which developed as the town's market square. The formal arrangement of two intersecting axis was further strengthened in 1912 through the construction of the clock tower.

A fine pattern of long thin plots developed around this intersection and grew quickly in the late C19th, unimpeded by areas of economically productive woodland or high value agricultural land.

Despite this granularity, relatively few routes north and south from Broadway formed due to the locations of schools and cemeteries within blocks.

This pattern of development was significantly altered in the mid C20th through the separation of vehicular through traffic from Broadway. The new street geometries determined by vehicular movements created large plots surrounding new roads which introduced a larger format of building footprint. This exacerbated the severance between Broadway and suburban hinterlands further through the construction of the Broadway shopping centre to the south of Market Place and an increase in the speed of through traffic along Albion Road.

Today these large blocks create a sharp distinction between Broadway and residential hinterlands, often characterised by open blocks with little definition to the backs of urban blocks.









297 Bexleyheath urban fabric, 1870
Source: Ordnance Survey

298 Opening of Bexleyheath clock tower, 1912
Source: Bexley Archives

299 Bexleyheath urban fabric, 2019
Source: Ordnance Survey

Welling owes its existence to Watling Street, the importance of this historic route determines Welling's linear structure. The nucleus of the settlement formed between Danson Lane, which branches to the south, and Wickham Lane, which leads to the north, connecting to Lesnes Abbey and Erith. With Danson Park to the east and the arrival of a new station to the west, this nucleus has tended to shift to the west over time.

Welling originally formed part of the ancient manor of East Wickham to the east of the present Upper Wickham Lane. Welling grew as a village on the main road between London and Dover (Watling Street, the old Roman Road) where it became a traditional staging post for coaches. The presence of three inns along the main road is the result of that period.

A pattern of fine grained development had emerged around these routes by the late C19th. Narrow buildings and plots fronted onto Watling Street with small lanes and alleys providing access to small agricultural plots and orchards to the rear. This pattern has been largely lost through the course of the C20th.

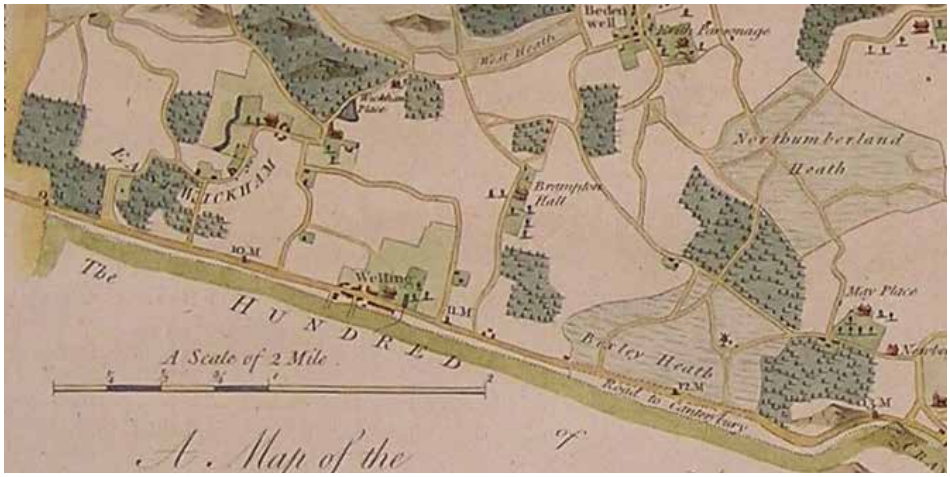
In 1895 the Bexleyheath railway line opened with services to London and Dartford. With the station located at the west end of the centre, off Central Avenue, the High Street extended westwards from Upper Wickham Lane, particularly during the inter-war period when a number of parades of shops were added to the centre. The reason for the centre's expansion was to serve the needs of the surrounding area that was being transformed from fields and orchards into suburban housing by Welling Urban.

Two large format retail buildings and a local authority estate at the junction of Danson Lane in particular have had a significant impact in changing the nature of the settlement.

To the north of Welling High Street the pattern of development is very inconsistent, whereas to the south the linear high street quickly transitions into suburban hinterlands with a more regular, albeit much looser grained, block structure.







300 Welling urban fabric, 1870
Source: Ordnance Survey

301 Part of A Map of Hundred of Little and Lesnes and the Hundred of Dartford and Wilmington, 1778
Source: Ordnance Survey

302 Welling urban fabric, 2019
Source: Ordnance Survey

Movement

Parts of Bexleyheath town centre are the most connected to public transport in the borough. Levels are related to the availability of buses as the main mode of public transport, and the relatively distant location of Bexleyheath and Barnehurst train stations in relation to the town centre's core pedestrian retail heart.

The pedestrianised segment of the Broadway up to the Broadway Centre on the south side and up to Woolwich Road on the north side is the quietest and most amenable part of the town centre for pedestrians.

In Welling and western parts of Bexleyheath town centre, the quality of environment and ease of pedestrian movement is compromised by the traffic generated through the distributor road running west to east across the borough. In Welling north-south routes crossing the High Street at the junctions with Central Avenue and Upper Wickham Lane further impact on the street environment.

The area bound by Welling High Street/ Broadway and the railway line to the north has an urban grain that creates a good network of permeable streets. To the north of the railway and to the south of Welling High Street/Broadway block tend to be much longer, and therefore create a movement network less suited to pedestrians and cyclists. This is also evident in the eastern part of Bexleyheath town centre, where the plot and block size is a different grain to surrounding residential areas.

Open Space and Landscape Character

The majority of Bexleyheath and Welling town centres suffer from an identified open space deficiency. The feel of Welling town centre is very urban, with public spaces limited to the pavements. All significant green areas located adjacent to the town centre are school grounds. The closest publicly accessible open space is Danson Park.

Sensitivity to Change

The scale of development during the late C20th/early C21st mean that most of the central and eastern part of Bexleyheath town centre lacks historic buildings.

There are a number of statutory and locally listed buildings along the Broadway, They make an important contribution to the street scene, particularly on the north side of Broadway from the intersection of the Broadway/Arnsberg Way towards the western end of the town centre.

Bexleyheath town centre includes three Grade II statutory listed buildings which

are the Clock Tower, Christ Church and the Vicarage. The prominence of the Church in relation to the Broadway makes a significant contribution to the character of the town centre.

There are a number of locally listed buildings in Welling, and form part of an ensemble of 1930's buildings which use a similar style of brick features inspired by the art deco style. Either side of the old Roman road of Watling Street (an area of significant archaeological potential).

The eastern end of Welling Town centre has seen more recent large scale redevelopment which includes large format retail and substantial car parking provision. Similarly, the redevelopment is focussed on eastern extent of Bexleyheath Town Centre, particularly the Former Civic Offices site.

Bexleyheath and Welling sit on a ridge which runs from east to west, meaning taller buildings are prominent in the wider urban context. This is particularly the case for the eastern part of Bexleyheath.

The tallest buildings in both town centres at present are the equivalent of about four to five storeys, although Bexleyheath will soon have taller buildings on the Former Civic Offices site at 13 storeys. Welling is dominated by 2/3 storey buildings. The tallest buildings include the cinema on Upper Wickham Lane and the Tesco both the equivalent of 5 storeys.

The linear nature of the town centres means character changes very quickly into areas of relatively uniform semi-detached housing. Arnsberg Way and Albion Road in particular create sharp transitions in character around Bexleyheath town centre.

In both town centres, to the rear of the 2/3 storey parades are a number of servicing and car-parking areas, and some of the parades have flats to the rear.

Although typologically the transition is abrupt, the variation in FAR shows that urban form is still relatively varied in transitional areas north and south of the town centres, with the exception of the area south of Welling which turns into very uniform housing with a well defined character.

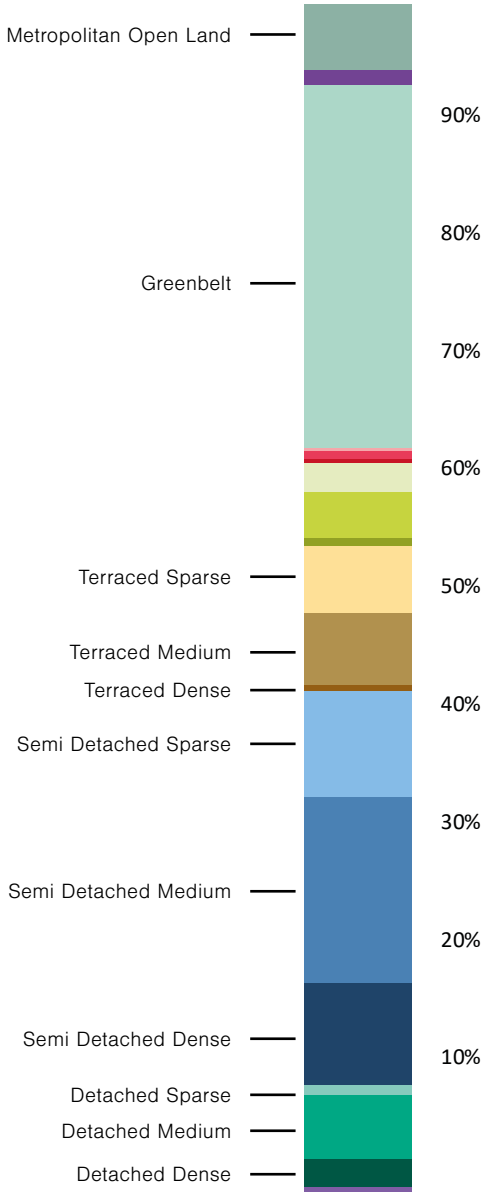
The area of varied FAR, and therefore less well defined character extends north to the railway line, after which urban form and character become a lot more consistent, and hence more sensitive to change.

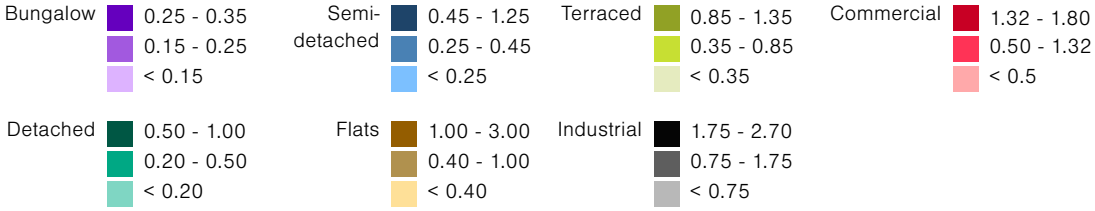
Sidcup and Bexley Village

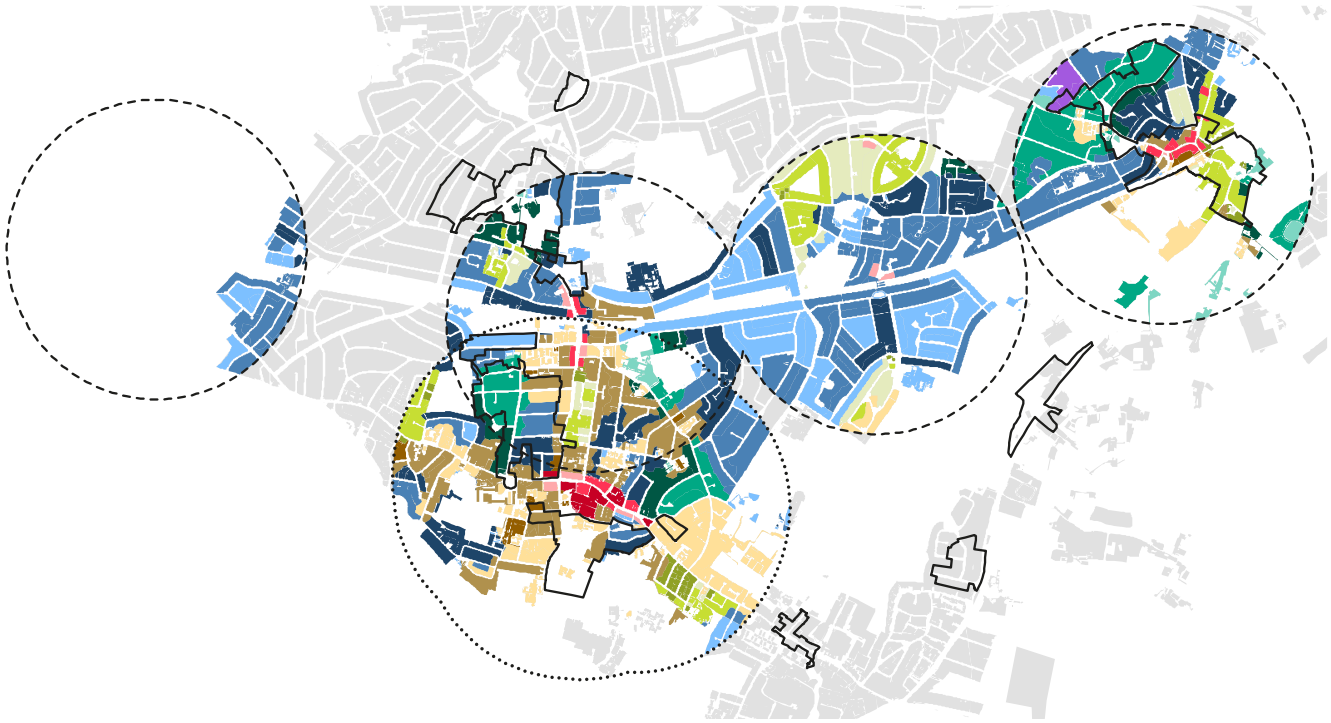
The concentric urban structure of town centres in this part of the borough is distinct from other growth areas, and also share a common pattern of historic development.

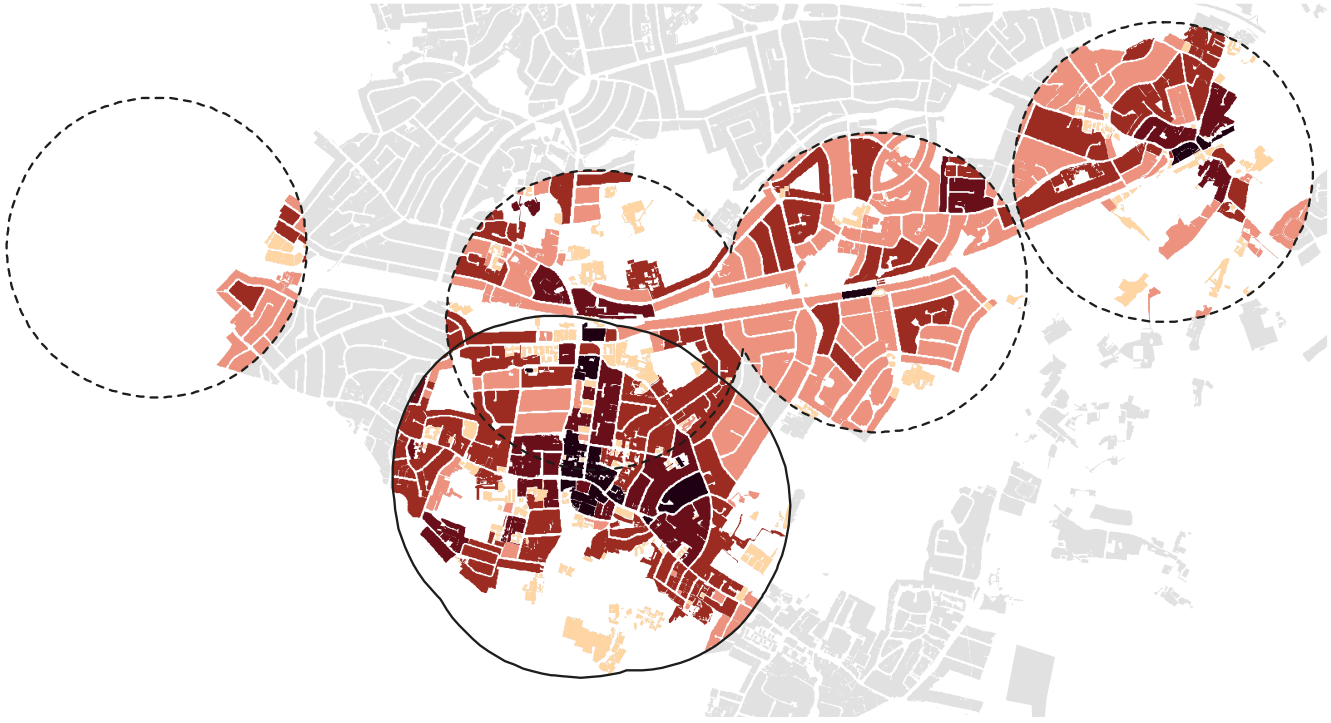
Although not spatially contiguous, these areas have common spatial characteristics and potential growth is linked through the connectivity offered by the Dartford Loop Line.

Typologically these areas are defined by a high degree of non-built area in the form of greenbelt and MOL, as well as a high proportion of semi-detached housing. Lower density typologies and detached typologies of all densities are more common in these areas relative to the rest of the borough.









303 Predominant Type
Distribution within the growth area

304 Variation in FAR
Darker colours show greater variation within each block

Conservation Area
800m radius around station
800m raduis around town centre

N

0 1km

Sidcup

Sidcup formed around an east-west route between Foots Cray and x. The form of the settlement reflects this linearity and the presence over history of large estates owned by wealthy members of the upper classes.

As a place of stopover rather than any clear relationship to natural resources or agriculture, the settlement grew very slowly until the arrival of the railway north of Sidcup in 1866 as part of the Dartford Loop Line.

The early form of the settlement extended along the High Street through small plots with narrow fronts, a pattern of development that still largely survives.

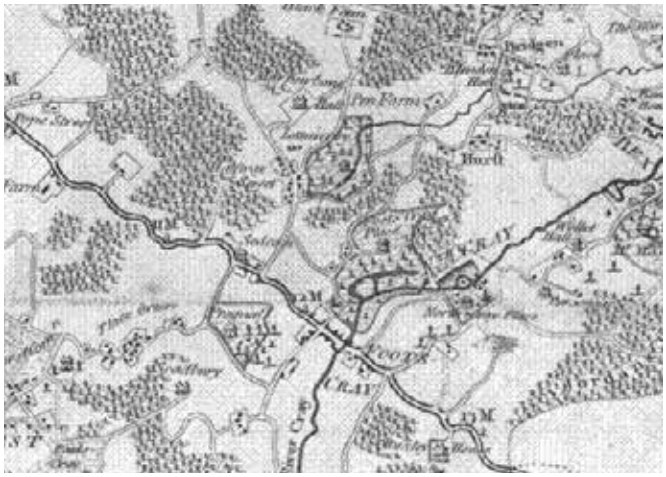
Sidcup grew around large properties for the wealthy, leaving a constellation of significant buildings and their grounds such as Sidcup Manor House and Sidcup Place.

With the arrival of a new railway station the linear pattern of dense development extended towards Station Road. Lower density speculative development in a regular form extended to the north behind this dense high street. To the south the pattern is more complex due to the exclusion of large houses set within landscaped grounds and churches.

The High Street area changes in nature from west to east in broadly four areas. The western part is more spacious, with generous public realm, this narrows east of Nisbett Walk, mainly formed of retail. The road broadens again and becomes more inconsistent in boundary, with a looser less defined area around Morrisons.







305 Sidcup urban fabric, 1870
Source: Ordnance Survey

306 Sidcup urban fabric, 2019
Source: Ordnance Survey

307 Part of A Map of Hundred of Little and Lesnes and the Hundred of Dartford and Wilmington, 1778
Source: Ordnance Survey

Foots Cray

The urban fabric of Foots Cray grew in a cruciform shape around the intersection of present day Rectory Lane and Foots Cray High Street.

Although this pattern became consolidated through a grid of terraces of houses to the south of Foots Cray High Street, to the north this remained largely one plot deep due to the proximity to the river, which attracted industrial activities into the centre of the block.

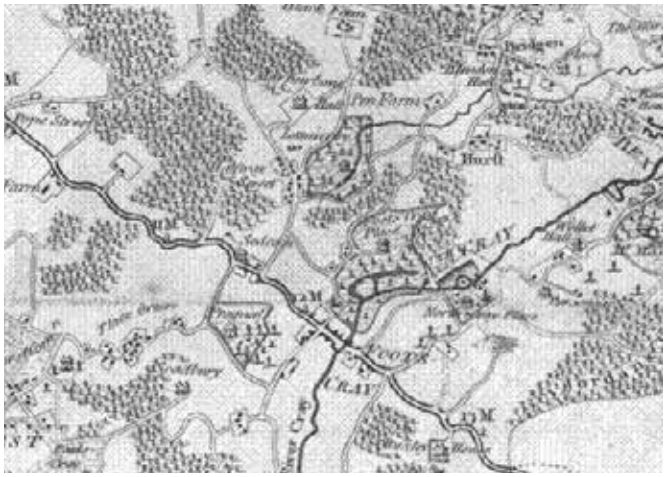
The integrity of this settlement pattern has been significantly altered over the course of the C20th. Development along the High Street has widened the street, in particular the plots surrounding the intersection of Cray Road and Foots Cray High Street.

The grid pattern that emerged around the cruciform has been undermined by mid-C20th housing in the form of a non-perimeter block estate.

As with other settlements along the River Cray, the river forms a dividing line where the pattern of development changes dramatically. In Foots Cray this is characterised by a change in scale and use, with the land to the east of the river being occupied by large industrial and office buildings sitting back from the plot boundary.







308 Foots Cray urban fabric, 1870
Source: Ordnance Survey

309 Foots Cray urban fabric, 2019
Source: Ordnance Survey

310 Part of A Map of Hundred of Little and Lesnes and the Hundred of Dartford and Wilmington, 1778
Source: Ordnance Survey

Bexley Village

Like Crayford, Bexley owes its existence to the strategic position it occupies on the River Cray. Both settlements take their form from the point at which relatively few routes across the marshland to the east split to connect the historically more populated areas to the west.

In Bexley this creates a tight meandering geometry where three routes meet along present day Bexley High Street and Bourne Road. Unlike other settlements in the borough, this structure has endured without significant change in morphology to accommodate cars through the course of the C20th.

Plots exhibit the narrow fronts that characterised Bexley in the C19th, Unlike other areas of the borough that emerged with a close relationship between buildings on high streets and horticultural areas beyond, plots in Bexley are relatively short due to the economy of the settlement being based around the mill and industries associated with the river.

The river marks a divide between the settlement to the north that has become integrated within a continuous surrounding urban fabric throughout the course of the C20th and the area to the south that retains its linear urban fabric tightly constrained to roads out of the settlement towards Foots Cray and Dartford.

Large sites immediately to the north and south of the railway have been redeveloped in recent decades. The complex historic urban structure surrounding these developments result largely in areas that follow the pattern of the industrial plots they replaced.







311 Bexley village urban fabric, 1870
Source: Ordnance Survey

312 Bexley village urban fabric, 2019
Source: Ordnance Survey

313 Part of A Map of Hundred of Bromley and Bexenham and the Hundred of Ruxley, 1778 showing the position of Bexley relative to the river and Dartford Marshes

Movement

The pattern of urban blocks developed in this area creates very different levels of integration. Historic centres of Sidcup and Bexley Village are defined by a dense network of streets and alleys that make a very permeable urban fabric. Late C19th and early C20th suburbs have a very different nature, defined by much larger urban blocks with fewer connections.

The fact that this type of urban fabric developed around stations, particularly Albany Park and Sidcup stations, means higher connectivity in these areas is undermined by this urban fabric. The barrier to movement created by the train line itself exacerbates this further.

The intersection at Station Road/Sidcup High Street is the crossing of major north/south and east/west traffic routes and a major public transport node.

The area benefits from relatively good PTAL reaching 4 in Sidcup and 3 around the other stations in the area. As Sidcup station is situated approximately 700m north of the town centre, the residential areas to the south of the station benefit from this PTAL. Sidcup High Street is a busy bus and vehicle corridor and as such provides a considerable barrier to free flowing pedestrian movement and raises safety concerns.

Open Space and Landscape Character

The area benefits from access to large, high quality open spaces due to its position on the edges of the Cray Valley.

The town centre occupies an elevated topography on Sidcup Hill which gives a strong visual connection with the wider landscape. Sidcup retains many parks and open spaces as a result of the large estates that formed this area.

Sensitivity to Change

Sidcup and Bexley town centres contain many buildings and structures of historic interest; a mixture of large Victorian and Edwardian properties alongside typical late C19th and early C20th suburbia. Aside the historical core of these settlements, the suburban hinterlands often have a strong spatial quality.

There are five statutorily listed and 20 locally listed buildings in Sidcup. There are also three conservation areas of 1890's, 1930's cottage estate and one defined by distinctive parkland setting.

The built fabric is complex and more varied than other growth areas, particularly around Sidcup which has a relatively high degree of variation in FAR. The suburban hinterlands that are generally characterised by semi-detached typologies are much

more consistent and have a very uniform urban form.

Transitions between typologies occurs across a wide area, the concentric form of settlement centres creating areas with a weak definition of character. This is particularly evident in the area to the east of Station Road in Sidcup.

The area is largely characterised by 2/3 storeys, with the majority of three storey buildings located close to stations and town centres.

Sidcup has greater variation in building heights. Although the High Street is dominated by two/three storey buildings, there is also a cluster of taller buildings up to 16 storeys to the south of the station. Instances of four storey buildings are also found on Station Road and its immediate surroundings.

Whilst the area is well served by public transport, it is generally sensitive to taller buildings. The character of the centres, particularly the narrowness of the streets and the proximity of the conservation areas, make changes in height challenging whilst protecting character.

Conclusion

Defining Character
Protecting Character
Landscape

Conclusion

Defining Character

A number of identifiable urban typologies exist in the borough. These typologies should be used to inform discussions with applicants through the development management process. Applicants should be encouraged to reference these typologies in character and context appraisals that form part of development proposals.

In interpreting these typologies, particular attention should be paid to how areas transition between these types. For example some transitions between typologies will be abrupt and easy to locate spatially, whilst others are more gradual. Suitable responses to character and context should reflect this site specificity which is not evident in the graphical representation of discrete typologies used in this report.

A number of characteristics and conditions are important in defining character in the borough:

- dominant type
- degree of variation in built form in the wider area
- appropriate response to built heritage
- how landscape and built form combine in particular ways
- large scale landscape conditions

In order to reflect these conditions appropriate design guidance should cover:

Massing

- spatial hierarchy
- building height
- openness

Ground Plane

- privacy and daylight
- amenity space

Appearance

- character
- strategic approach to appearance of buildings
- resolution
- materials
- details

Protecting Character

The persistence topography and landscape in influencing development means that development opportunities in the borough vary greatly, reflecting the varied urban history of the borough. Whilst there is inevitable focus of development in certain areas in the coming years due to the availability of sites, this development should be utilised to overcome the socio-economic disparities identified in the communities chapter of this report.

The urban history of the borough means consistency of urban form is critical to the sensitivity of certain areas to development. Variation in FAR and variation in building volume should be critical parameters in assessing development proposals and preparing area strategies and masterplans.

There are areas where variation in these parameters are high and where transitions in urban typology are potential areas for intensification. In these areas character is often less defined and so high quality development can play an important role in strengthening character.

Areas of greater consistency and the landownership patterns that characterise such areas means the quality of householder extensions and alterations are key to ensuring spatial qualities are not gradually eroded over time.

A close analysis of areas which appear to have experienced little change shows a dynamic built environment that changes through many small alterations over time. This evolution of suburban parts of the borough is an important quality that shows how the built fabric has adjusted to reflect changing social conditions.

The aggregate effect of these small alterations has a detrimental impact on some types more than others, and design guidance for householder extensions should reflect these specific cases.

The replication of standardised building typologies over large areas should be further examined to identify where development may improve the quality of the built environment, such as corner plots where standard house types create poor spatial relationships to the street.

Whilst the distribution of urban typologies across the borough demonstrates how prevalent semi-detached and detached

housing types are, the analysis shows that morphologically these types vary significantly. As such these areas will have a varied susceptibility to change over time through incremental development. Moreover, critical parameters such as plot size and plot depth determine their suitability for sensitive infill development, subject to appropriate levels of infrastructure provision.

The majority of urban typologies in the borough have typical dimensions that create densities unsuitable for the demands of the C21st century. Separation distances in particular should be interrogated through design guidance to ensure preservation of the borough's character is consistent with building at sustainable densities in the future. The spatial qualities of large separation distances that characterise the borough – good access to daylight, ventilation and privacy – should be the focus of design guidance, rather than fixed numerical rules.

The heritage themes identified in this study should be interpreted in future area strategies and design policies, reflecting how these persistent themes are relevant for contemporary development and the challenges of the C21st.

The non-alignment of local centres, rail stations and levels of accessibility in many parts of the borough means establishing areas for higher density development is complex. Many local centres have a very consistent urban form that is similar to their hinterlands and hence may not be suitable for significant increases in density.

As might be expected, the built form in the main town centre areas is quite varied, including small, fine grained units as well as larger footprint stores, but where the floor area ratio of these is relatively low. This would suggest potential may exist in the centres for intensification of the larger units: an approach that breaks these into small, more flexible and manageable plots may allow for greater change over time, enabling more people to live in the centre and other mixed uses to locate here. The Belvedere station area, Bexleyheath town centre, Crayford and Erith, for example, show great variety and potential for intensification.

Landscape

The quality of large open space in the borough is a unique aspect of the borough. The open quality of these spaces should be carefully considered, particularly in developing tall building policies.

The industrial legacy of the areas along the Thames, with a mix of densities, may present opportunities for intensification either for additional employment space or other uses. Landscape will play a critical

role in these areas, both due to the spatial quality created by the landscape here but also due to the higher flood risk in these areas.

The key role played by landscape and vegetation in the borough's urban typologies should be the focus of design guidance. The increasing importance of landscape and vegetation in confronting the challenges of a changing climate are an opportunity to embed this as a defining quality of Bexley's urban environment in coming decades, building upon its existing verdant quality.

Where intensification is in the areas surrounding the borough's rivers, new development should aim to strengthen the relationship to the river, a quality that has been important to the unique character of the borough throughout its history.