ROYAL BOROUGH OF GREENWICH

CHARACTERISATION AND INTENSIFICATION STUDY

MARCH 2023

URBAN INITIATIVES STUDIO

ROYAL borough of GREENWICH

4239

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Image 1.1: View of Queen's House and Canary Wharf from Greenwich Park

1 INTRODUCTION

1.1 PURPOSE OF THE STUDY

The Royal Borough of Greenwich must identify how it will accommodate London's growth through development on larger and smaller sites. Greenwich is fortunate in that it has many brownfield sites, primarily located within opportunity areas, where significant new development can be accommodated. The majority of Greenwich's 10 year housing target of 32,040 units will be accommodated on larger sites. Nevertheless, the draft New London Plan requires Boroughs to support the delivery of housing on small sites. The 10-year target for Greenwich is for 3,010 units to be delivered on small residential sites below 0.25ha with developments of up to 25 units.

The planning context from both the NPPF and Adopted London Plan (2021) put the onus on Local Authorities to proactively plan for intensification and increased housing delivery especially on smaller sites. The challenge will be to identify where and how this intensification can take place.

The NPPF and the London Plan emphasise the need to "make best use of land" and to "optimise density". Yet opportunities to increase density derive from the capacity of urban areas and their characteristics to accommodate change.

London Plan Policy D1 *"London's form, character and capacity for growth" states that, "Boroughs should undertake area assessments to define the characteristics, qualities and value of different places within the plan area to develop an understanding of different areas' capacity for growth."*

Paragraph 3.1.2 goes on to say that: *"Understanding the existing character and context of individual areas is essential in determining how different places may best develop in the future. An evaluation of the current characteristics of a place, how its past social, cultural, physical and environmental influences have shaped it and what the potential opportunities are for it to change will help inform an understanding of an area's capacity for growth and is crucial for ensuring that growth and development is inclusive."* This policy creates a platform to guide new development to respond to character and establishes the important role that the Character Study must play in shaping RB Greenwich and its places.

Policy H2 on small sites creates an important new policy initiative to promote smaller scale incremental intensification of the urban fabric and housing development on smaller sites. The policy promotes the development of small housing development (up to 25 homes) on small brownfield sites, residential conversions, extensions or infill development within the site curtilage in higher PTAL areas, and upward extensions of flats, non-residential buildings and garages.

The London Plan has an expectation that London's character and that of its sub-areas is "evolving" in response to this intensification. It expects Local Authorities to plan for this change.

The undertaking of this Characterisation Study is a first and important step in this process, as it provides an understanding of the characteristics and the physical make-up of the Borough, its places and typologies, as well as its inherent potential development opportunities, as a solid evidence base for future policy formulation and guidance.

Image 1.2: Old Royal Naval College

1.2 FORMAT OF THE STUDY

This document forms part of a suite of documents prepared as part of the RB Greenwich Characterisation Study and Tall Buildings Assessment project.

Other documents include:

- Tall Building Assessment – this establishes the tall buildings baseline, maps existing and planned tall buildings, and identifies areas where tall buildings may be appropriate in the Royal Borough;
- Intensification Appendix – prepared by Burrell Foley Fischer Architects, this study looks at principle intensification opportunities within the Royal Borough;
- Heritage Study Appendix – this study provides an overview of designated heritage assets and views in the borough to inform the characterisation and tall buildings work.

The findings from the Tall Building Assessment and the Intensification Study have informed the recommendations included in the Characterisation Study Document. The Characterisation report is structured as follows:

- **Chapter Two** provides a portrait of the borough, its historical development, topography, landscape and open spaces, its movement networks, and land uses, and a brief overview of its built form, heritage assets and population and housing densities;
- **Chapter Three** provides an understanding of the character of the borough based on a categorisation of Districts, Places and character typologies. Detailed descriptions of each urban typology are provided together with identification of their locations within the borough. The chapter finishes with a discussion of the levels of coherence and sensitivity to change of character typologies across the Royal Borough;
- **Chapters Four to Six** presents the detailed spatial and character analysis of the West, East and South Districts in turn and their Places. A profile is provided for each District documenting its historic development, topography, landscape and open spaces and heritage. Each District is sub-divided into a number of 'Places' defined by character and geographical boundaries. Each Place is then described and a summary provided on the scope for intensification and potential for tall buildings.

Figure 2.1: Context of the borough

2 PORTRAIT OF THE BOROUGH

This chapter provides a strategic overview of the borough as a whole, exploring its historic development, physical setting, patterns of movement and land use, environmental quality and human geography.

2.2.1 This chapter sets the scene for this character study of the Royal Borough by placing its development in a wider historical, social and physical context to generate a thematic analysis.

2.2.2 The first section provides a chronological overview of the growth of the borough, drawing attention to the historic drivers of change in different eras, as well as identifying some important buildings and places which are now lost but persist in local memory.

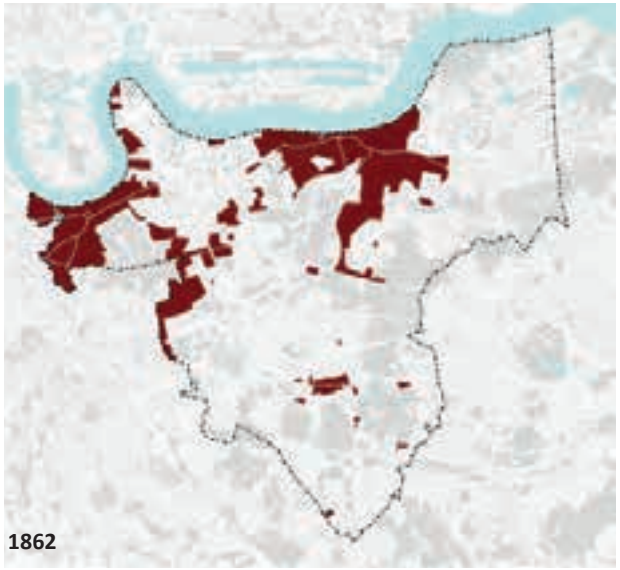
2.2.3 The second section presents relevant contemporary census and statistical data to understand key aspects of the social makeup of the borough, in particular how uneven geographic development has shaped the borough's neighbourhoods and communities in the present day.

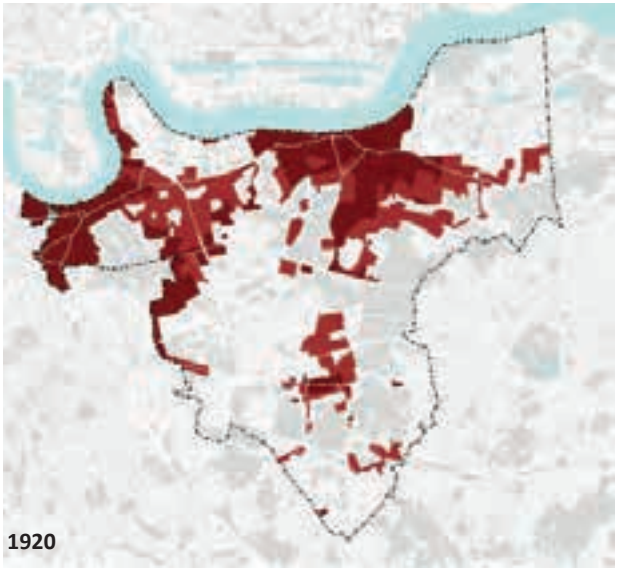
2.2.4 The third section illustrates the physical characteristics of the borough today, ranging from its physical geography to its landscape, infrastructure and architecture, as well as historic assets and contemporary land use.

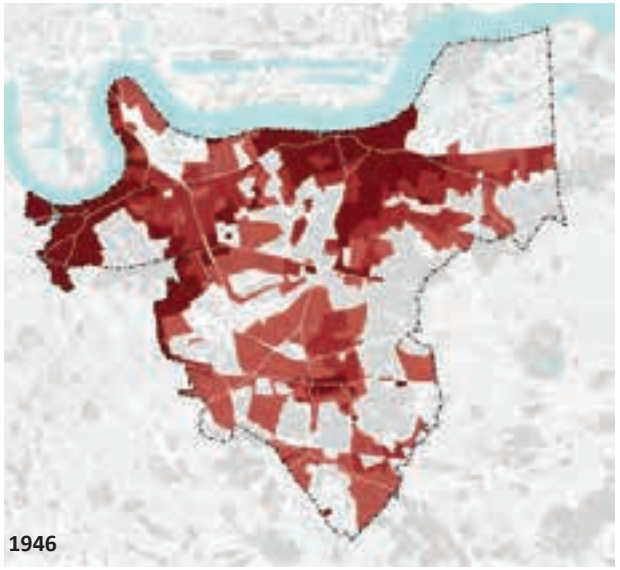
2.2.5 The concluding section draws together the historical, social and physical evidence into a thematic analysis of the borough, to focus on key characteristics that have emerged and endured over time and which can guide the detailed character assessment of each of the borough's neighbourhoods.

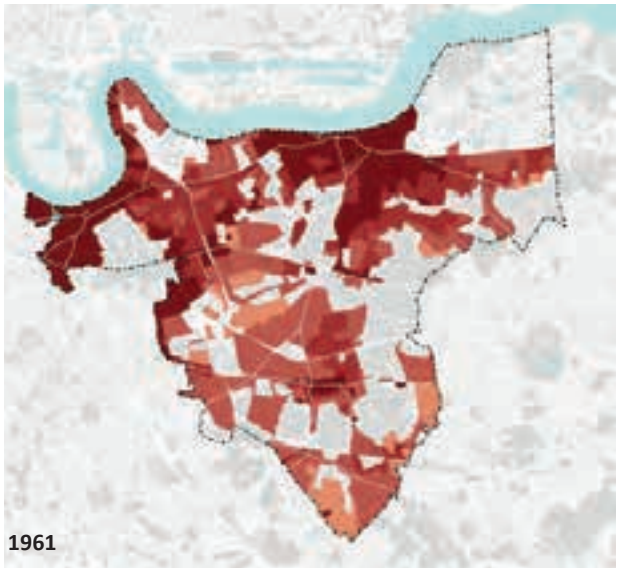
2.1 HISTORICAL DEVELOPMENT

2.1.1 This section provides a chronological overview of the growth of the borough, examining in turn its pre-1700 origins and subsequent development through the Georgian, Victorian, Edwardian, wartime, postwar and contemporary eras.









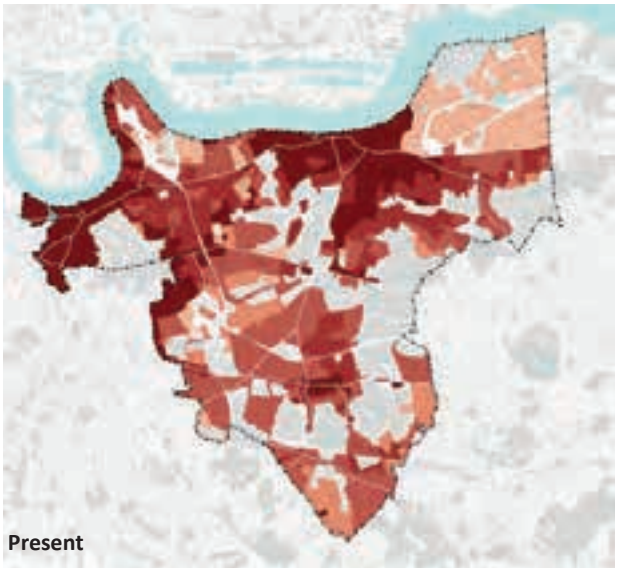


Figure 2.2: Historical development of the borough

ORIGINS

2.1.2 The Royal Borough occupies a strategic position where higher ground closes on the low-lying Thames on its final meandering approach to London. Along the higher ground runs the route between Canterbury and Saint Alban's, established by Celts and later developed by the Romans as Watling Street, which is still in use today as the A207. Below on the riverside, a settlement was founded by Celts at Woolwich, the only waterfront location in the area that lies above the floodplain. A ferry was already established here by 1307 and its successor is still in operation to the present day. Saxons, Vikings and Normans later elaborated on this urban structure. This gradual east-west convergence of maritime and hinterland is key to understanding the borough's strategic position and thereby also its history and character.

2.1.3 A first recorded royal connection was established in the area in 13th century, a hunting lodge. Edward II was gifted a palace at Eltham in the 14th Century; Greenwich Park was later enclosed by a Plantagenet regent and a first palace completed by Edward IV on the riverside at Greenwich. The Tudors continued this patronage of both sites, and established a naval dockyard at Woolwich. Later, the Stuarts concentrated their interest at Greenwich, commissioning Inigo Jones' Queen's House and Wren's Royal Hospital, as well as founding the Royal Observatory. Both Henry VIII and Elizabeth I born at Greenwich, this part of London was both royal and strategically important ever before its governance was formalised as a borough.

GEORGIAN ERA

2.1.4 In the 18th century the basic structure of the area was elaborated into a network of routes and places. Woolwich expanded along the river in a series of dockyards both naval and privately-run. Greenwich developed around the Royal Hospital, centred along Church Street between Hawksmoor's St. Alfege Church and the riverside—though it was still smaller than Deptford further west. Beyond these main settlements a number of private estates were established at Charlton Park, Westcombe, Blackheath and Eltham, and extensive woodlands around Charlton and Mottingham. Otherwise the area remained largely undeveloped farmland; there was common land at Blackheath and Shooters Hill, and extensive marshland along the banks of the Thames south and north—though areas such as the Greenwich peninsula of had already been reclaimed for pasture.

VICTORIAN ERA

2.1.5 In the 19th century, a series of major investments in infrastructure, institutions and industries transformed the area whilst retaining extensive open spaces between its different settlements. Roads were laid out across the area and the first Blackwall Tunnel was opened in 1897 connecting to North Greenwich. Local government was thoroughly reorganised with London County Council established in 1889, and in 1900 its most distant metropolitan boroughs of Greenwich and Woolwich (including North Woolwich). A major power station was constructed at Woolwich in 1887, fuelled by Newcastle coal landed directly on the wharf. Most importantly, a series of railway lines was constructed, firstly near the waterfront with the North Kent line linking Woolwich and Greenwich to London Bridge, and subsequently inland with the Dartford Loop line designed to reduce congestion and the Bexleyheath line in between these two to provide access to development land. Further north, the elevated Southern Outfall Sewer connected the Deptford Pumping Station to the outfall works at Crossness, which today lies in the neighbouring borough of Bexleyheath. However, these infrastructural investments would take time to stimulate development across the wider area. Indeed in some cases the infrastructural elements themselves imposed severance which would inhibit development; in particular, Plumstead Marshes were gradually cut off from the south by the combination of the royal arsenal precinct, the North Kent Line and the Southern Outfall Sewer.

2.1.6 In parallel to these major investments, wider global economic and political changes drove more immediate change in this area. Whilst north of the river an extensive series of trading docks were constructed to serve Britain's colonial mercantilism, south of the river it was imperial expansion that drove the intensification of the navy and armaments manufacture at Woolwich. This involved not only the extension of the Royal Dockyards to the west of Church Hill and the Royal Arsenal to the east, but also the nearby construction of large military barracks and a dense network of streets for workers' housing.

2.1.7 Drawing on the stability provided by such large employers, The Royal Arsenal Cooperative Society (RACS) was established in 1872 providing a wealth of social, educational and consumer services to local people. Meanwhile Greenwich peninsula was steadily industrialised with a series of wharves and works producing armaments, chemicals, cables, boat, iron and steel, as well as Europe's largest gas works; similarly a dense network of residential terraces was developed nearby in northeast Greenwich.

2.1.8 Further inland, Charton, Eltham, Mottingham and Abbey Wood grew more slowly due in part to poor access, though a series of hospitals, infirmaries and cemeteries was established at Shooters Hill. South and west of Greenwich and Blackheath, grand streets of detached and semi-detached mansions were laid out on large plots, yet there remained extensive undeveloped farmland, woods and commons across the inland parts of the borough. By the end of the century, Greenwich and Woolwich were by most measures of the time considered successful; in 1889 Charles Booth identified large parts as 'mixed', 'comfortable', 'middle-class' or 'upper-class', with only limited areas near Church Street and Trafalgar Road in Greenwich and near Woolwich Arsenal identified as 'very poor' or 'lowest class'.

EDWARDIAN & WARTIME ERA

2.1.9 Whilst development in the Victorian era was concentrated in the riparian parts of the borough, the Edwardian focus shifted inland. The east-west Bexleyheath railway line in particular provided access to extensive lands, which were then privately developed for generous suburban streets of detached and semi-detached houses; estates such as Eltham Park offered substantial villas with their own servant annexes. Meanwhile, lands between the railways were developed for more modest semi-detached and terraced housing, served by electric tram routes north-south to Woolwich; for example the RACS purchased Progress Estate in Well Hall to relocate munitions workers from the Royal Arsenal, and also developed the Bostall Estate garden suburb at Abbey Wood. These new neighbourhoods from Woolwich to Mottingham and Greenwich to Eltham established a patchwork of communities of very different classes and movement patterns across the borough, leading to tensions between councils and developers at the time.

2.1.10 Schools, hospitals and local centres were developed around existing settlements, and parks were developed with sports facilities, as at Well Hall Pleasaunce and Woolwich Stadium. The extensive common lands and woodlands were retained, giving this 'inner London' area its unique 'outer London' character. In this period of art deco, Eltham Castle gained its remarkable 'high society' extension, and Woolwich the similarly grand Granada and Odeon cinemas.

2.1.11 The railways also provided access for new institutional sites such as RAF Kidbrooke, and industrial uses gradually filled in the remaining land reclaimed from riverside marshes between the Greenwich peninsula and Woolwich. This area became the national centre for the production of undersea telegraph cables, as well as other heavy (and heavily polluting) industries including paint, plaster, glass, chemicals, tanning and milling—all typically produced by large firms with large locally-based workforces. Access to the military lands of Plumstead Marshes was still constrained by the North Kent line, however, and this area remained largely undrained and undeveloped; its artillery testing ground was both noisy and grossly contaminating.

POSTWAR ERA

2.1.12 In common with much of the Thames estuary along its London reaches, the area suffered particularly badly from bomb damage during the Second World War. Postwar clearance extended beyond the strictly necessary and encompassed wider clearance to address poor housing conditions. This enabled large-scale public-sector led redevelopment along modernist planning principles of transport and land use. Strategic transport infrastructure included a second Blackwall Tunnel, opened in 1967, and dual carriageways constructed through Eltham (A2) and Mottingham (A20). From the late 1960s a network of new access roads and bridges was constructed over the North Kent Line and Southern Outfall Sewer to enable access to the Plumstead and Erith Marshes. The disastrous North Sea flood of 1953 exposed the vulnerabilities of these low lying estuary lands, setting in train a co-ordinated investment in flood protection walls along both banks of the river, culminating in 1982 with the completion of the Thames Barrier extending from New Charlton to Silvertown.

2.1.13 Early postwar estates followed low-density low-rise garden city principles as at 1940s Coldharbour Farm in Mottingham, a greenfield development on the last working farm in the county of London, and the more modernist-influenced 1950s Abbey Estate northwest of Abbey Wood Station. After the establishment of the Greater London Council (GLC) in 1965, the approach changed radically, and major mid- and high-rise housing estates were constructed in Woolwich (Cardwell, Connaught, Maryon and Morris Walk Estates) and on the former RAF lands at Kidbrooke (Ferrier Estate). In this period a huge quantity of new housing was delivered and overcrowding reduced; by 1981, council housing accounted for almost half of all stock in the borough, while the private rental sector declined from a third to a tenth. However while the quality of accommodation was dramatically improved, the quality of these neighbourhoods deteriorated in large part due to poor urban design. Later large-scale housing estates (Woolwich Common, Cambridge Barracks and Abbey Estate) were low- and mid-rise with a more structured approach to public space, but often with similarly unsatisfactory results due to the reliance on ‘Radburn’ type arrangements separating pedestrian and vehicular movement.

2.1.14 In parallel to this housing redevelopment, the centuries-old docks, armaments and other heavy industries declined, and along with them the area’s employment base and the stability provided by large employers—the Royal Ordnance and Siemens in particular—and the associated labour organisations. This left extensive riverside areas underused and vacant from the Royal Naval College westwards as far as and including the Royal Arsenal—almost the entire borough’s Thames frontage.

CONTEMPORARY ERA

2.1.15 By the end of the eighties, the balance between industry and residential uses in the borough had shifted so decisively that unemployment had grown to over 40% of heads of household, and a majority of those residents who were working were commuting outside the borough. This pattern was comparable to similar East London docklands boroughs, though when the London Docklands Development Corporation (LDDC) was established in 1981 it did not include any part of the borough. However it was to affect Greenwich profoundly nonetheless, harnessed by the activities of the council-led Greenwich Waterfront Development Partnership. While the redevelopment of Canary Wharf visibly impacted on views from Greenwich Park, it was the major new transport infrastructure associated with it that more strategically tied the borough into the economic development of the docklands. The Docklands Light Railway, the Jubilee Line Extension, the integration of London Transport ticketing, the increase of service frequencies and latterly the cable-car and clipper services all served to integrate the north-eastern parts of the borough with surrounding regeneration areas. Similarly, the borough's role in the Thames Gateway and the imminent opening of Crossrail has stimulated major regeneration in the north-west of the borough at Woolwich and Abbey Wood, while the recently-confirmed Silvertown Tunnel will offer a new opportunity for cross-river bus routes.

2.1.16 Over the past decades, these infrastructural investments have stimulated regeneration across the disused and underused northern parts of the borough. Each new investment has accelerated the pace of development, such that the character of these areas has diverged rapidly not only from that of the surrounding areas but also from each other. For example the development of Plumstead marshes for the later phases of Thamesmead is strongly predicated on movement by private car rather than public transport, with houses and monumental mid-rise apartment blocks in a strong landscape setting, and a large peripheral retail park rather than a centrally-located local centre. Meanwhile development at North Greenwich has taken shape around the Greenwich Dome and Millenium Village, in a street-based arrangement with high-quality public realm and high residential densities. Development at Woolwich Arsenal is following a similar pattern, strongly integrating its historic buildings and bringing a substantial new population to the town centre.

2.1.17 In the same period, many of the large GLC- and council-built modernist estates across the interior of the borough were comprehensively redeveloped in an effort to address intractable design flaws and meet contemporary needs. Again this resulted in quite different outcomes in different places. Redevelopment of the monumental Cardwell Estate in Woolwich took the form of low-rise townhouses in a tight and labyrinthine street pattern. In contrast, comprehensive regeneration of the Ferrier Estate in Kidbrooke and the Connaught Estate in Woolwich resulted in a more urbane, high-density mixed-use street-based arrangement with high-quality public realm.

2.1.18 In 2012 the borough was granted royal status, renewing the link not only with the monarchy but with its heritage as an area of strategic importance to London.

2.2 PEOPLE AND SOCIETY

INTRODUCTION

2.2.1 This section presents a range of relevant socio-economic information on the borough's population including its demography, ethnicity, density, housing type and tenure, access, employment, deprivation and consumer profile.

2.2.2 Note that this is based on the most recent data available from a range of different primary and secondary sources at different points in the past decade, including:

- 2011 Census (the next is due in 2021);
- 2015 Mosaic Public Sector Data;
- 2017 GLA Strategic Housing Land Availability Assessment (SHLAA);
- 2017 Joint Strategic Needs Assessment (JSNA); and
- 2019 Indices of Multiple Deprivation.

2.2.3 This data is collated and presented at the Lower Super Output Areas (LSOA) level, which is a geographical unit containing around 1500 residents, approximating to a neighbourhood. Note however that the boundaries of LSOAs are for statistical reasons often somewhat circuitous and sometimes do not coincide with what might be understood as a 'natural neighbourhood' perceived by residents.

2.2.4 Also, given the rapid pace of change in some parts of the borough this data is likely in some respects to be behind the facts-on-the-ground. For all of these reasons, this portrait of the social development of the borough should be understood as interpretive rather than definitive.

DEMOGRAPHY

2.2.5 The 2011 Census found a population of 255,000 in the borough; the JSNA predicts that by 2026 this will have increased to 322,000. This corresponds to an increase of over a quarter over fifteen years or around 4,500 people per year, with the greatest increases concentrated in the Peninsula (103%) Woolwich Riverside (58%) and Eltham West (37%) wards. This growth is distributed across all age-groups, with the highest increase in the over-65s. Population mapping indicates that the proportion of over-65 year olds is greater in neighbourhoods in the south of the borough, while the proportion of children 0-15 years old is greater in the north-east.

2.2.6 Life expectancy and healthy life expectancy in Greenwich are both significantly shorter than the national average for both women and men, whilst the general fertility rate is significantly higher than the English and London averages.

2.2.7 The borough's population turnover in 2014-15 was estimated at 168 per 1000. This is lower than than the London average of 181 per 1000, and considerably lower than comparator Inner London boroughs of Westminster (254), Hammersmith & Fulham (263) and Camden (271), indicating a relatively settled population.

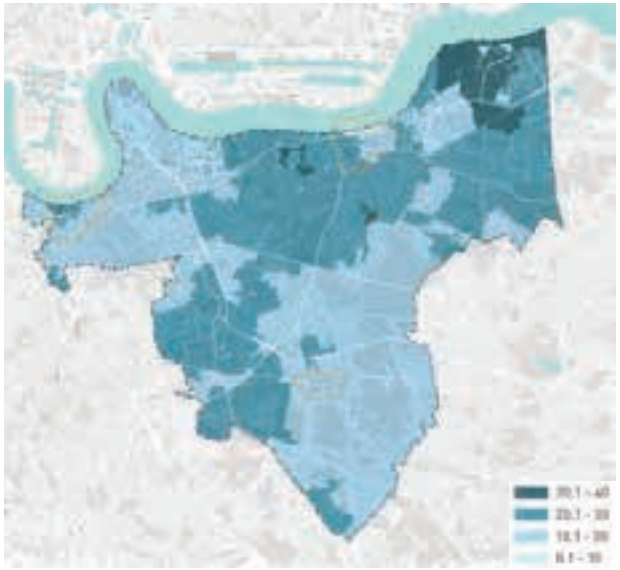


Figure 2.3: Population aged 0-15 years (%)

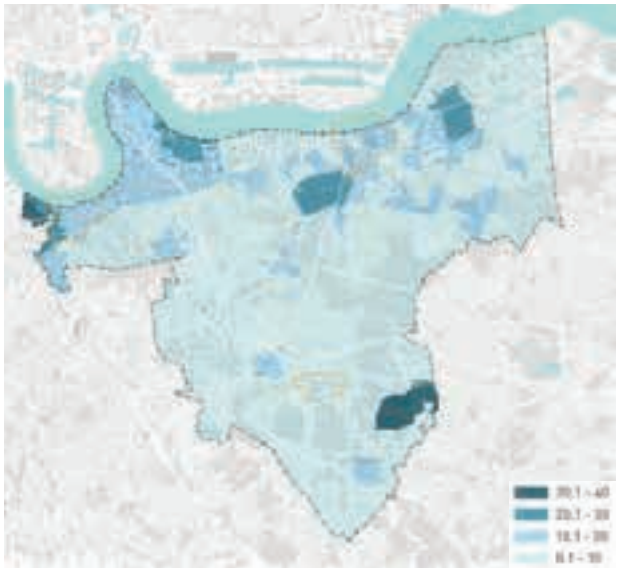


Figure 2.4: Population aged 16-29 years (%)

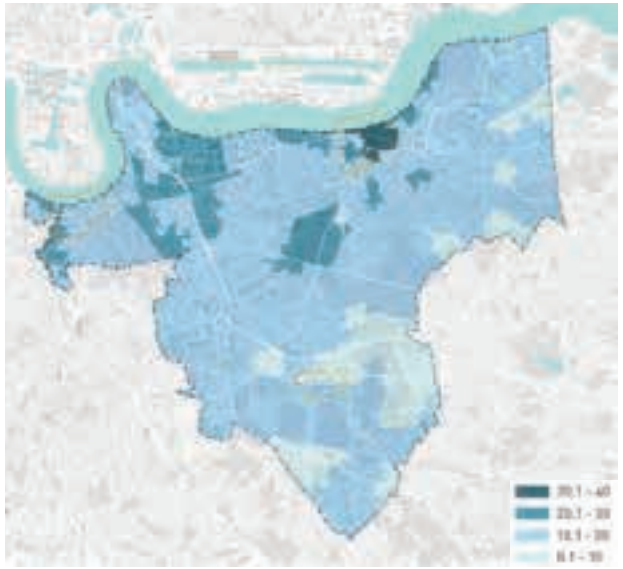


Figure 2.5: Population aged 30-44 years (%)

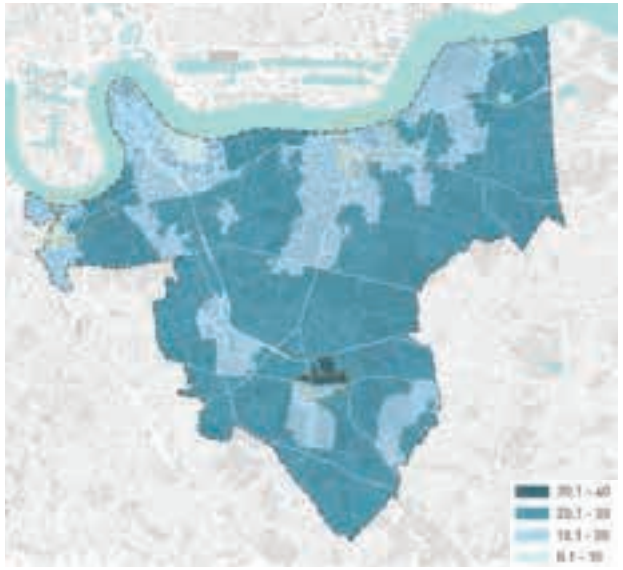


Figure 2.6: Population aged 45-64 years (%)

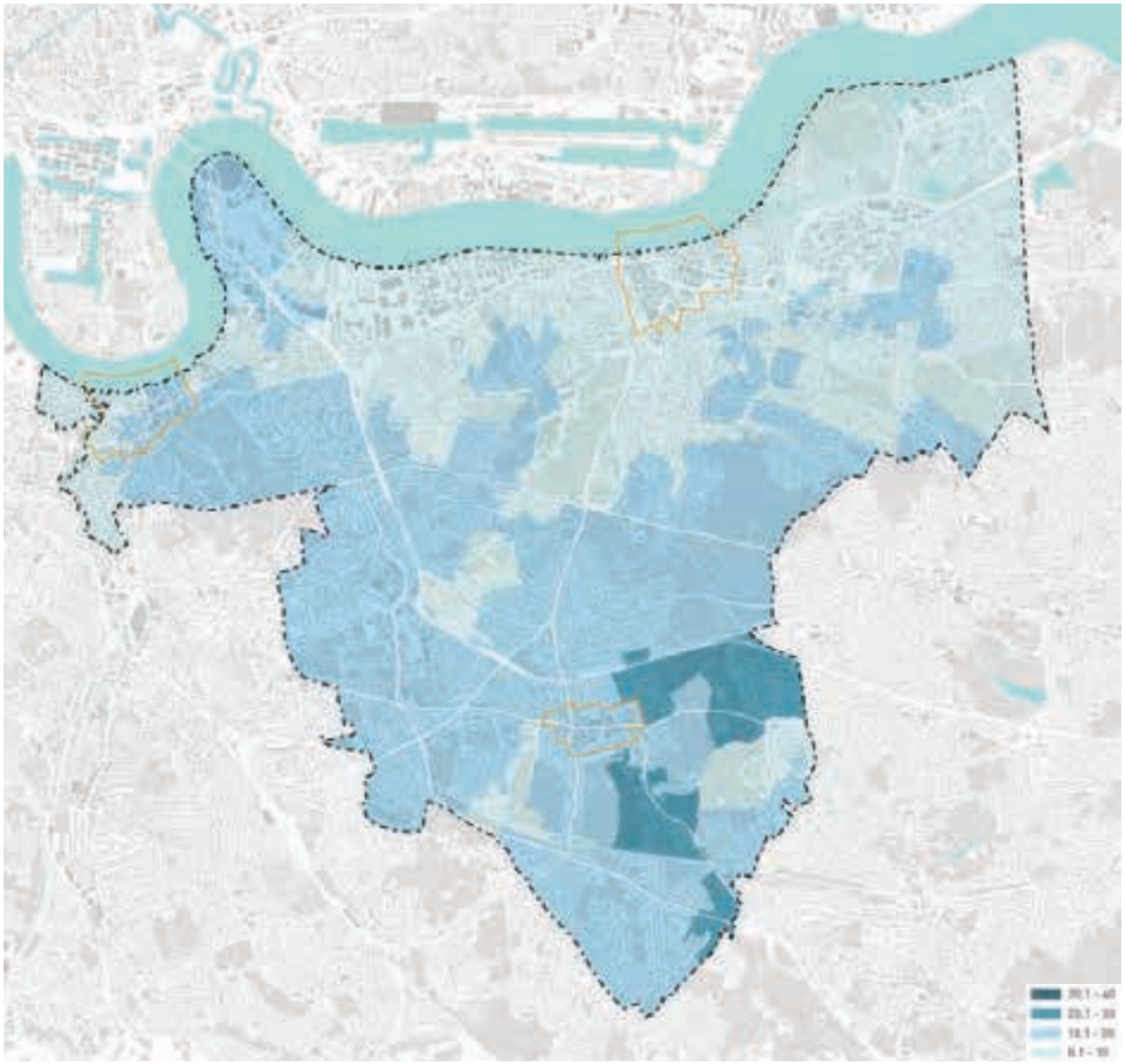


Figure 2.7: Population aged 65+ years (%)

ETHNICITIES AND COUNTRY OF BIRTH

2.2.8 The borough is highly multicultural. The 2011 Census found over one third of the population is of minority ethnic background, with 23% Black, 14% Asian and 3% Other. Since 2001, Black African, White Other and Asian Other populations have experienced the greatest growth, while the White Irish, Asian Indian and White British populations have experience the most decline. In general the north of the borough is more ethnically diverse—in particular the north-east—while the south is more predominantly White.

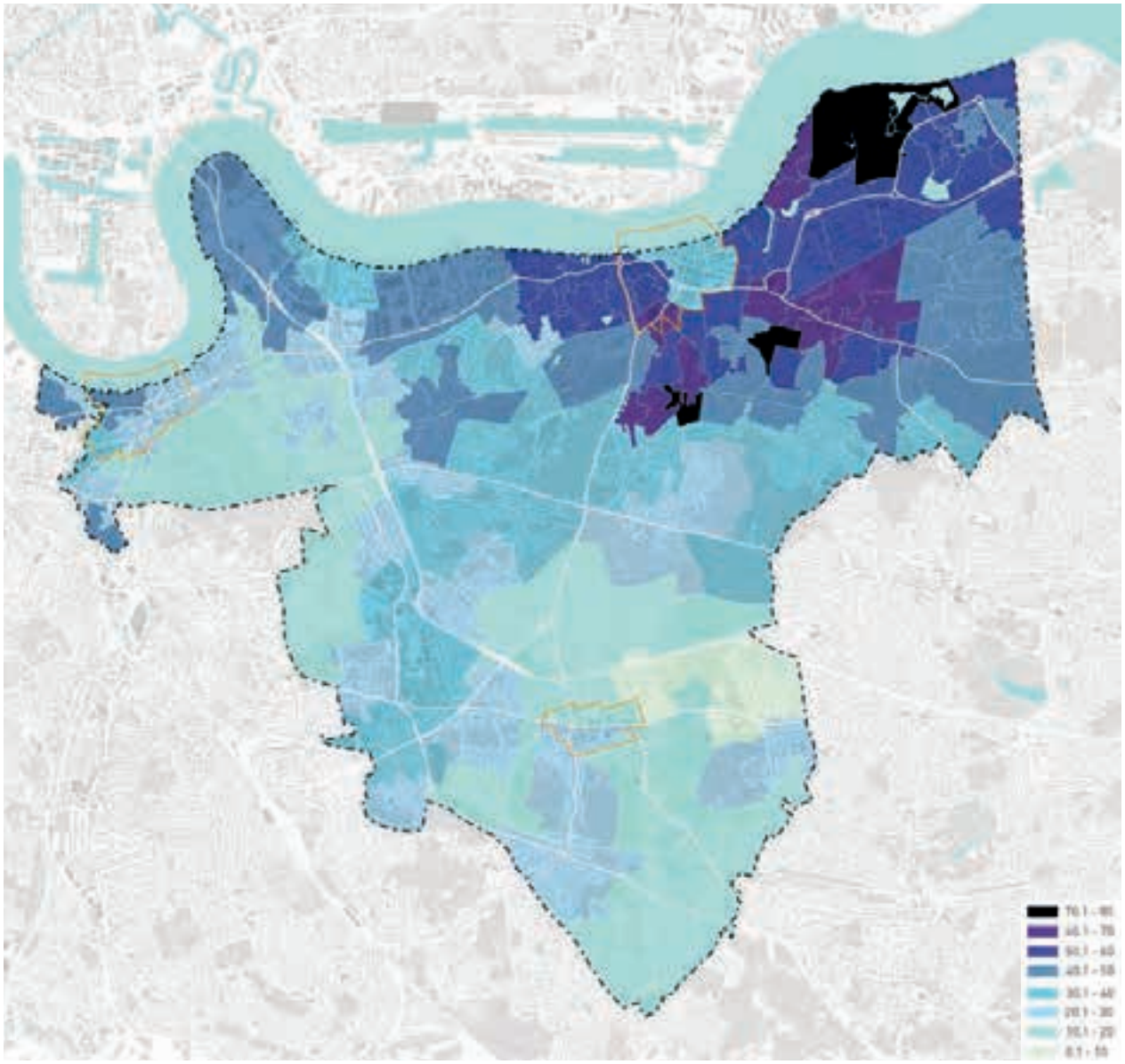


Figure 2.8: Ethnic Diversity (%) (BAME) **(Census 2011)**

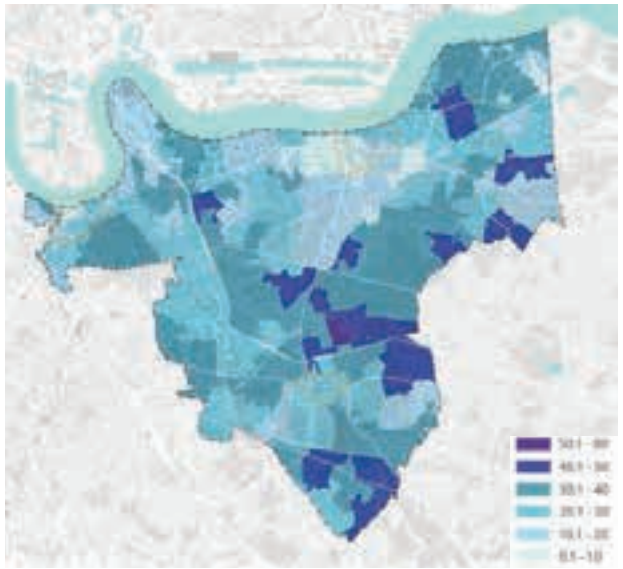


Figure 2.9: Tenure owned with loan or mortgage (%)

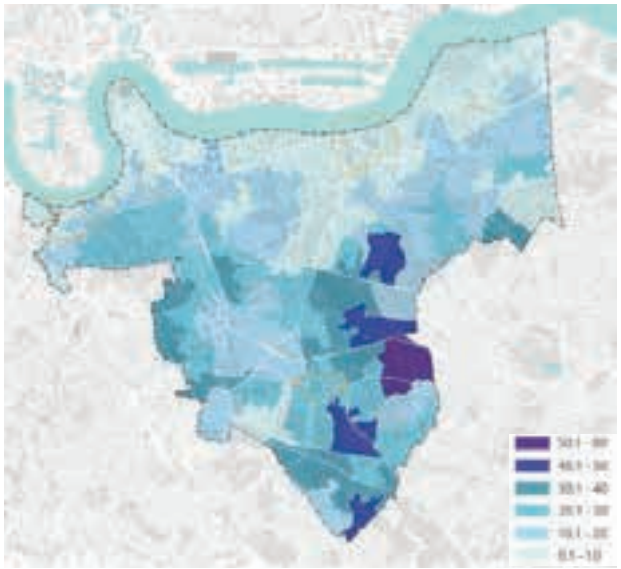


Figure 2.10: Tenure owned outright (%) (Census 2011)

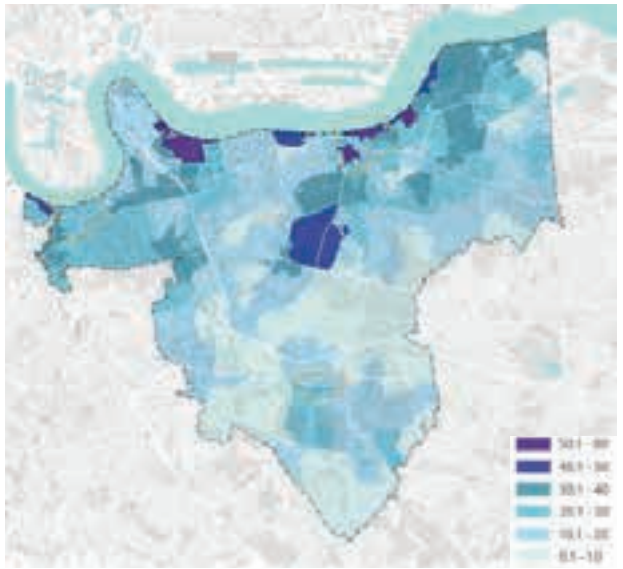


Figure 2.11: Tenure private rented (%) (Census 2011)

HOUSING TENURE

2.2.9 The borough has experienced considerable physical change since the turn of the millennium, with major brownfield regeneration areas such as the Royal Arsenal and Greenwich Peninsula as well as major estate regeneration projects at the Ferrier and Connaught estates for example. Over the next 20 years this process is planned to continue with over 40,000 new residential units projected to be built in the borough.

2.2.10 While regeneration involves significant change in housing tenure, this is a process that has been ongoing in the borough (and the city as a whole) since 1945. The postwar era saw extensive clearance and redevelopment for council housing, which by 1981 accounted for 47% of the stock, while private rented housing declined from 32% to 8% in the same period. With the implementation of the right-to-buy policy the proportion of council housing reduced over the subsequent decades, turning tenants into owner-occupiers and, latterly, landlords. With major estate regeneration and brownfield construction in recent years, the private rented sector has expanded and professionalised.

2.2.11 This process continues apace since the last Census, with owner-occupiers concentrated in the south of the borough and private tenant concentrated in the north—particularly in waterfront neighbourhoods in Greenwich Peninsula and Woolwich Arsenal. Social housing tenants are distributed across the borough, with concentrations in Woolwich, Greenwich Peninsula, Mottingham and Abbey Wood.

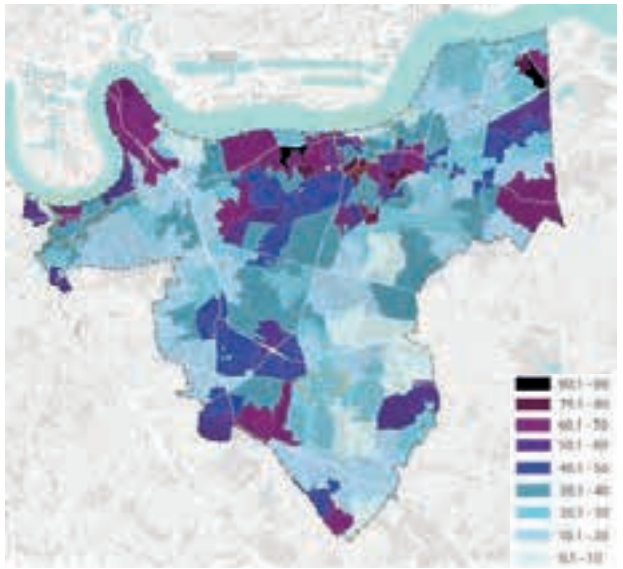


Figure 2.12: Tenure social rented (%) (Census 2011)

DEPRIVATION

2.2.12 The Indices of Multiple Deprivation (IMD) are the most common method of examining deprivation levels both nationally and locally. IMD is based on 37 individual indicators, which are organised over seven domains of deprivation. The IMD score is calculated by combining the seven domains at the Lower Super Output Areas (LSOA) level, applying appropriate weighting and then ranking relative to other LSOAs.

2.2.13 In the 2019 Indices of Multiple Deprivation, the borough as a whole ranks on average 60th most deprived of the 317 local authority areas in England and Wales, equivalent to 20% most deprived. In London, Greenwich is the 11th most deprived borough, with neighbouring boroughs Tower Hamlets 4th, Newham 6th, Lewisham 7th, Bromley 22nd and Bexley 23rd.

2.2.14 However within the borough there is considerable variation, with the most deprived neighbourhood (part of Abbey Wood) in the first decile nationally and the least deprived (part of Eltham North) in the ninth. Nevertheless almost one quarter of the borough's neighbourhoods are in the top 20% most deprived nationally; these are concentrated in central and northern wards.

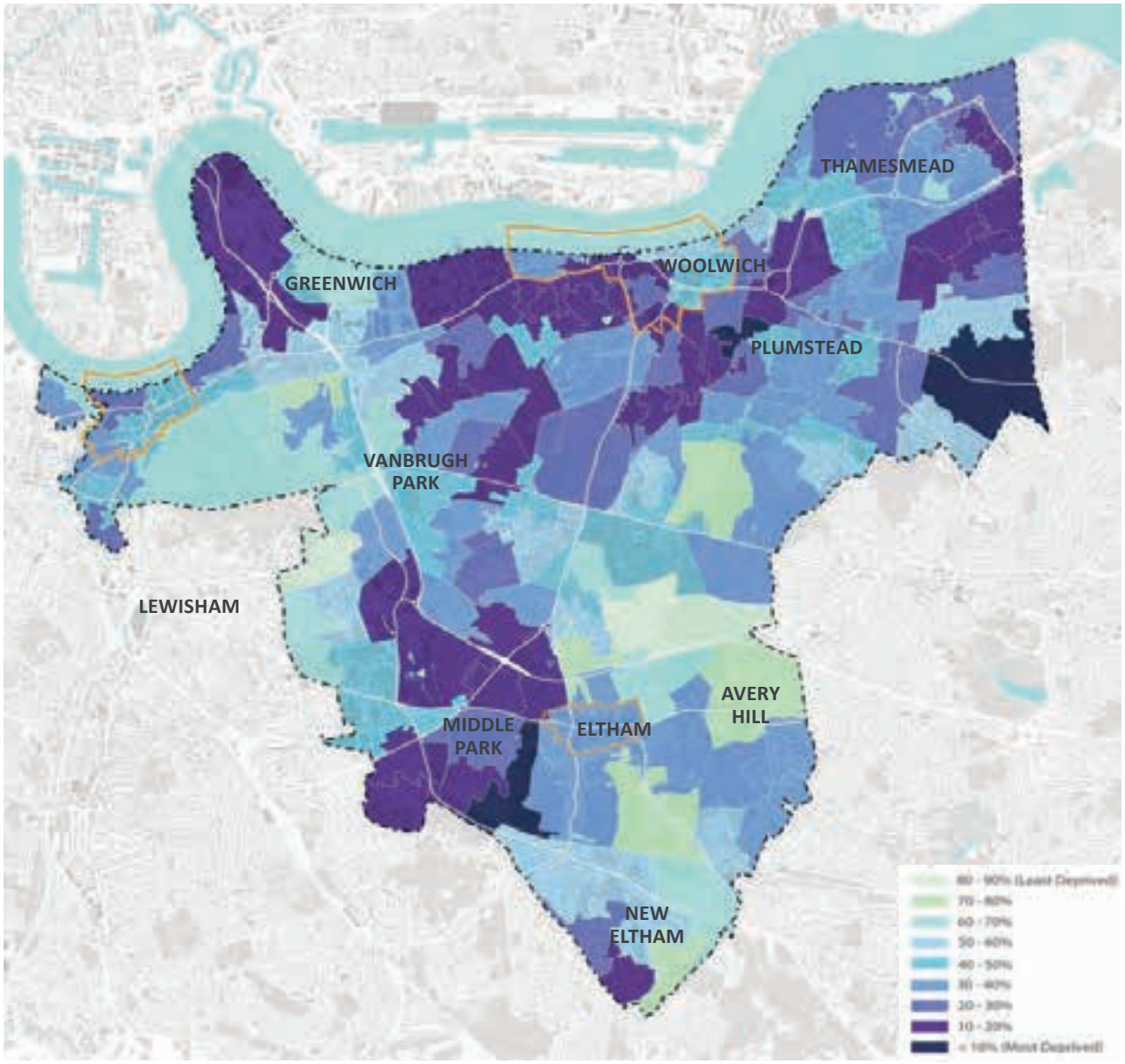


Figure 2.13: Indices of multiple deprivation **(IMD 2019)**

CONSUMER PROFILE

2.2.17 Aggregated household consumer profiles offer another way to understand the social development of the borough. This social segmentation map, based on the 'Mosaic' Public Sector data for 2015, identifies the most dominant 'Mosaic' household type residing in each of the borough's LSOA neighbourhoods.

2.2.18 The west, central and south of the borough are predominantly home to better-off household types with higher incomes and living in sought-after locations. The north and east of the borough are predominantly home to lower-income households, council tenants and other residents receiving state support.

2.2.19 The three most common 'Mosaic' profiles in the borough as a whole are:

- 'City Prosperity'-type households, with young, well-educated city-dwellers (22.5%);
- 'Urban Cohesion'-type households with lower-income workers in urban terraces in often diverse areas (21.7%); and
- 'Rental Hub'-type households, with young people renting flats in high-density social housing (19.8%).

ACCESS

2.2.15 The borough benefits from an extensive range of public transport infrastructure and services including mainline train, underground, DLR, bus, riverbus and cablecar. However, access to these services is geographically uneven, with the north and north-west of the borough enjoying some of the highest accessibility in London, while areas in the north-east, central and south of the borough suffering some of the lowest.

2.2.16 Public transport accessibility often has an inverse relationship with car ownership; access issues are most significant where households have neither. The areas of most concern are those with relatively low public transport accessibility and low proportions of households with access to a car, specifically parts of the following wards:

- Thamesmead Moorings;
- Shooters Hill;
- Coldharbour and New Eltham; and
- Middle Park and Sutcliffe.

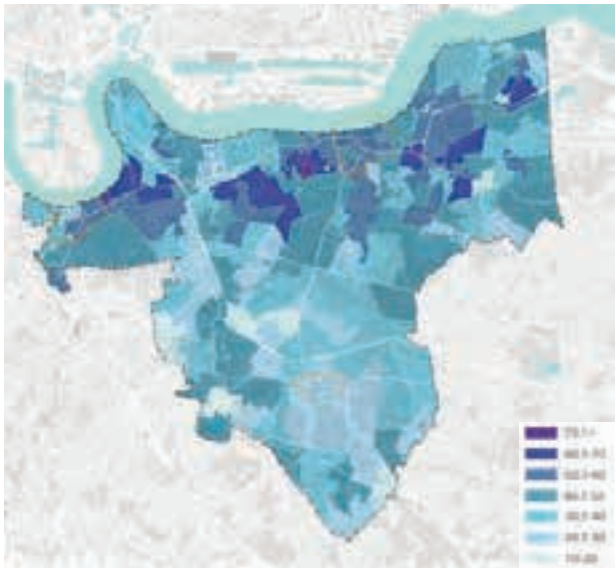


Figure 2.14: Households with no car (%) (Census 2011)

2.3 TOPOGRAPHY, ENVIRONMENT AND OPEN SPACE

TOPOGRAPHY AND HYDROLOGY

2.2.20 The character of the borough is strongly shaped by its topography. Apart from central Woolwich, all its northern riverfront areas are low-lying within the Thames floodplain. Historically this was extensive marshland, some of which endured into the late twentieth century as at Thamesmead in the north east corner of the borough. At the north-west corner lies the mouth of the Ravensbourne river, around which the early settlement of Deptford grew.

2.2.21 The southern edge of this floodplain closely corresponds to the northernmost route continuous across the borough, west to east, comprising Trafalgar Road, Woolwich Road, Church Street, Beresford Street and Plumstead High Street—today unified as the A206. From this line, the land rises steeply towards the centre of the borough and one of London's highest points, Shooters' Hill.

2.2.22 Further south, the land falls away again to the valley of the River Quaggy at Mottinham, before rising again towards White Horse Hill, just beyond the southern apex of the borough boundary. To the south east at New Eltham, the land drains eastwards via the River Shuttle, a tributary of the Cray which meets the Thames at Dartford.

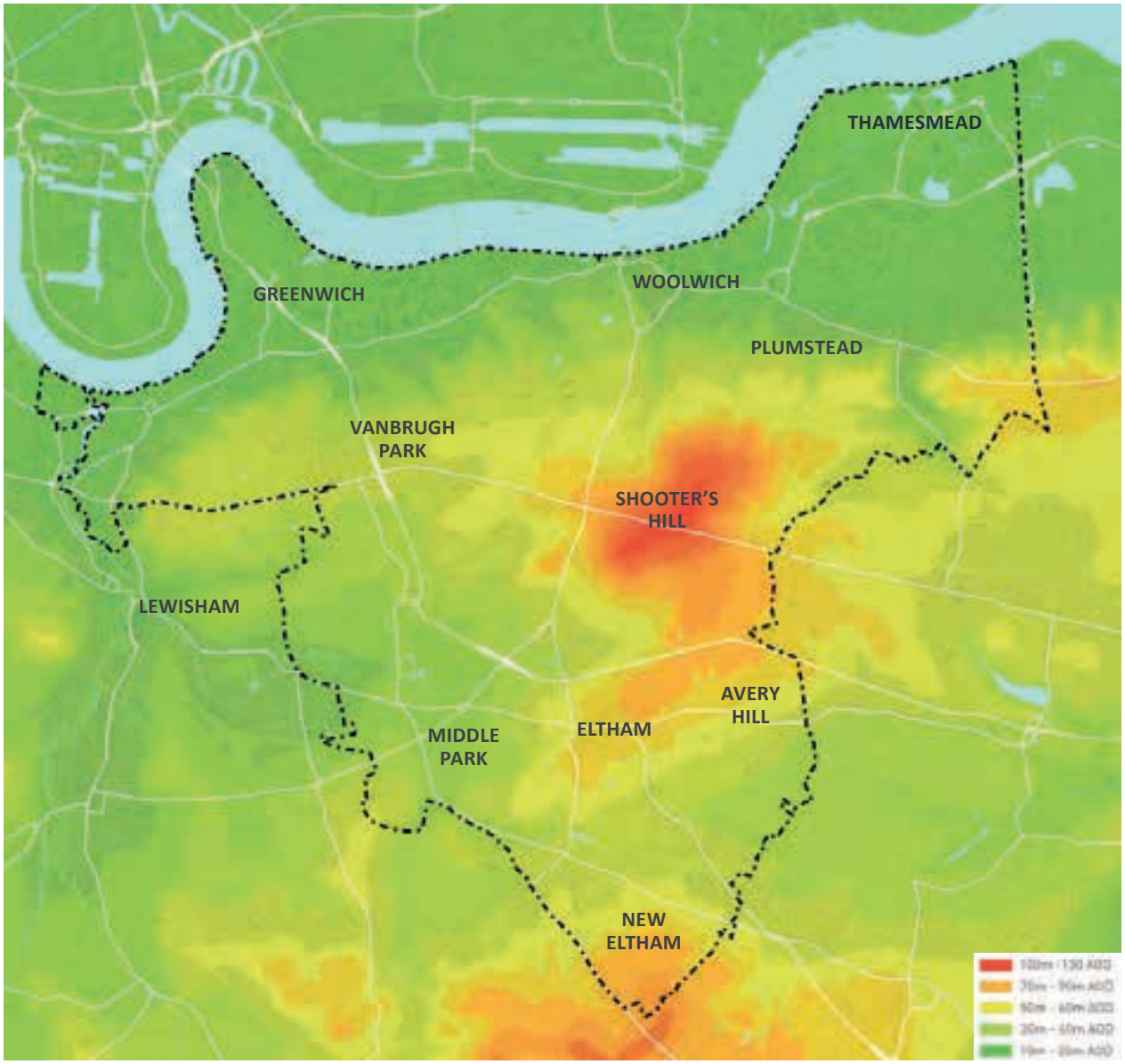


Figure 2.15: Topography

FLOOD RISK

2.3.1 Areas in Flood Zone 2 have between 0.1 and 1% of flooding. These are commonly referred to as 1 in 1000 year and 1 in 100 year flood events. Areas in Flood Zone 3 have a greater than 1% chance of flooding, meaning that they are likely to flood more often than once every 100 years.

2.3.2 Much of the land in the north of the borough is in the natural floodplain for the River Thames and so is classified as Flood Zone 3. The low lying topography of Greenwich Peninsula and Thamesmead make these areas particularly susceptible to flooding. However, these areas are protected by flood defences along the River Thames, including the Thames Barrier, which greatly reduce the chance of flooding.

2.3.3 On the north-western edge of the borough, there is flood risk associated with the Ransbourne River. The River Quaggy poses a risk too, with parts of Eltham and Kidbrook within Flood Zones 2 and 3. These areas do not benefit from flood defences, making them more vulnerable.

2.3.4 The NPPF explicitly states that development should be directed away from areas of "highest risk" of flooding. However, "where development is necessary in such areas", it should be designed to be safe from flooding without increasing flood risk elsewhere (NPPF, 2019, para. 155). Furthermore, development should only be permitted in flood risk areas if no alternative low risk sites are available and the development would provide wider sustainability benefits and be safe for its lifetime.

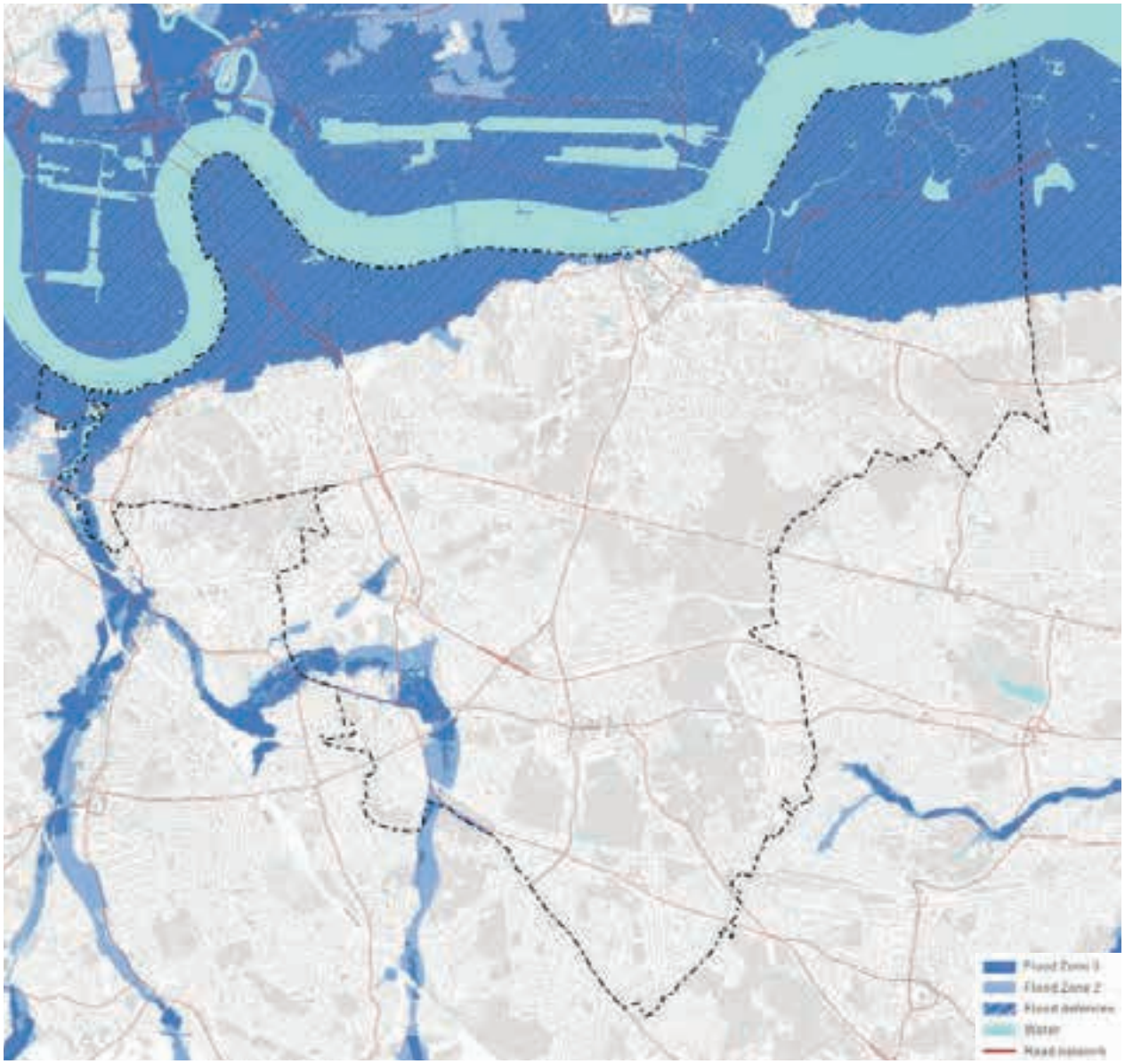


Figure 2.16: Flood risk

LANDSCAPE AND OPEN SPACE

2.3.5 Greenwich is particularly rich in open space, with many of its spaces of local, regional or national significance in terms of their historic, natural and/or amenity value. Almost a third (30%) of the entire area of the borough is open space, and almost a quarter (23.3%) is designated Metropolitan Open Land. In addition, the borough benefits greatly from the open space of the Thames along its entire northern edge.

2.3.6 Nevertheless there are some challenges facing the borough. The distribution of open space is uneven, particularly in the more densely developed areas in the north of the borough where provision is inadequate to the current population. This will only be exacerbated with the increase in population projected for Greenwich Peninsula, Woolwich and Thamesmead Moorings wards over the coming decade, notwithstanding the creation of new local parks within these plans. Throughout the borough there are also challenges with the accessibility of open space, both physically in terms of enclosure but also economically in terms of fee-paying open spaces such as golf clubs.

2.3.7 In terms of quantity of open space the borough has good provision. There are 53 parks across the open space hierarchy including Greenwich Park (Metropolitan, 60+ha), Charlton Park (District, 20-60ha), Sutcliffe Park (Local, 2-20ha,) and Barrier Park (Small Local, <2ha). Thirteen of these sites hold Green Flag status. Similarly it has good provision in terms of natural and semi-natural greenspace including Bostall Woods, Oxleas Woods, Castle Wood and

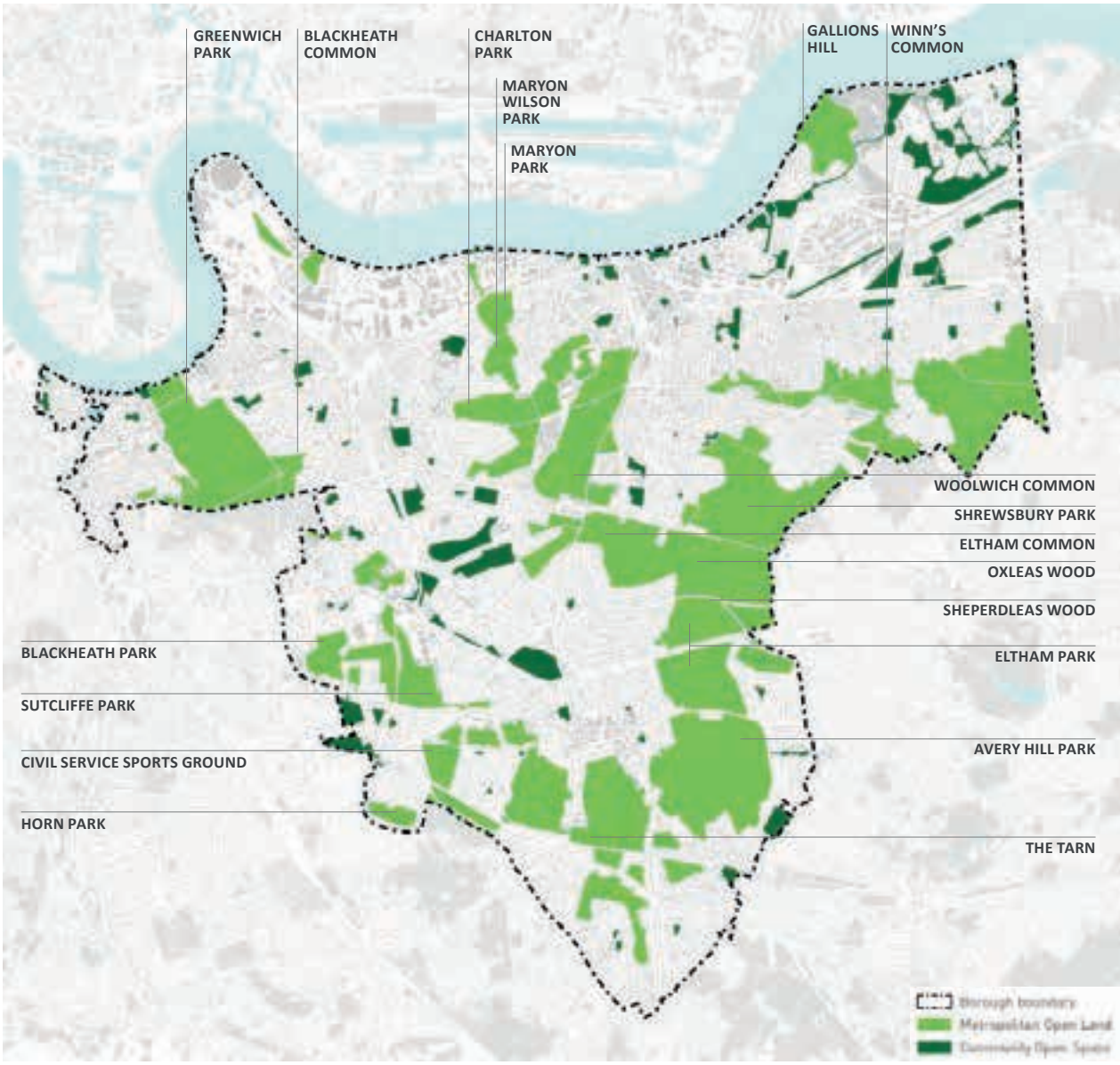


Figure 2.17: Public open space

Bridbrook Road Nature Reserve respectively. The borough is well-served in allotment land, and also accommodates some agricultural land in the south of the borough.

GREEN INFRASTRUCTURE

2.3.8 As well as serving local residents, the green spaces in RB Greenwich also play an important role for biodiversity. The borough's public open spaces host a large number of Nature Conservation Sites and Local Nature Reserves such as Woolwich Common, Sheperdleas Wood and Winn's Common.

2.3.9 Informal natural spaces also play a critical role for wildlife, which is evident in the designation of parts of the rail lines as Nature Conservation Sites. The borough's blue spaces are also protected, where they are are important for local wildlife. This includes the river Thames and the ponds and lakes in Thamesmead.

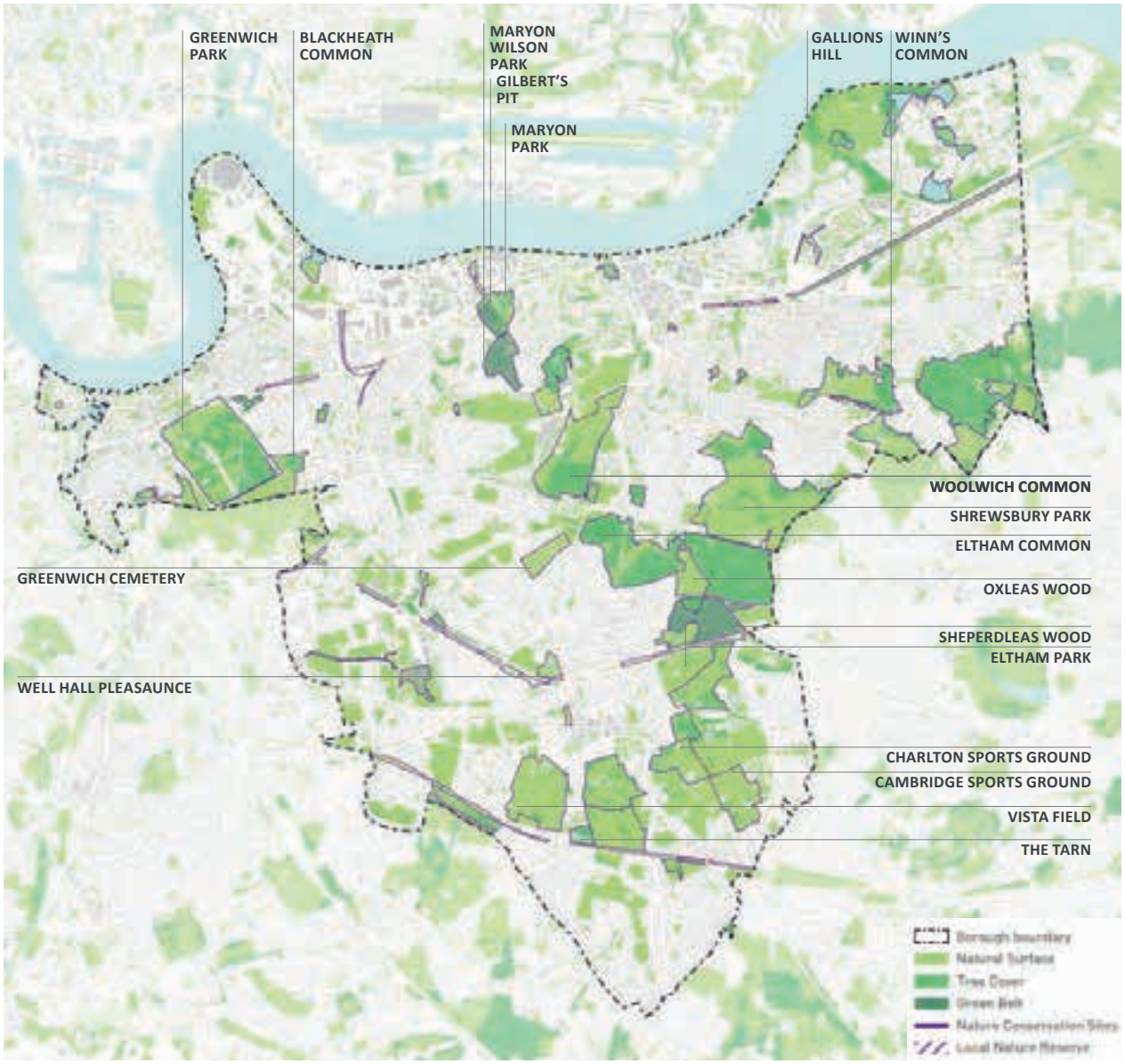


Figure 2.18: Green infrastructure

2.4 SPATIAL STRUCTURE

BOROUGH STRUCTURE

2.3.10 RB Greenwich is anchored around three main town centres; Woolwich in the north, Greenwich in the east and Eltham in the south. Woolwich is the largest of these, and serves a wide catchment of local residents. However, Greenwich town centre draws people from across London because of its cultural and historical destinations, such as Cutty Sark, University of Greenwich and the Royal Observatory.

2.3.11 Residential areas are supported by established district centres such as Thamesmead and Plumstead. A new district centre is being established at Greenwich Peninsula, supported by the Millennium Dome, which serves the emerging residential development here.

2.3.12 Figure 2.19 illustrates the spatial spread of centres as being focused in the north of the borough. There is a clear lack of a local centre to support residents at the centre of the Borough, around Shooters hill.

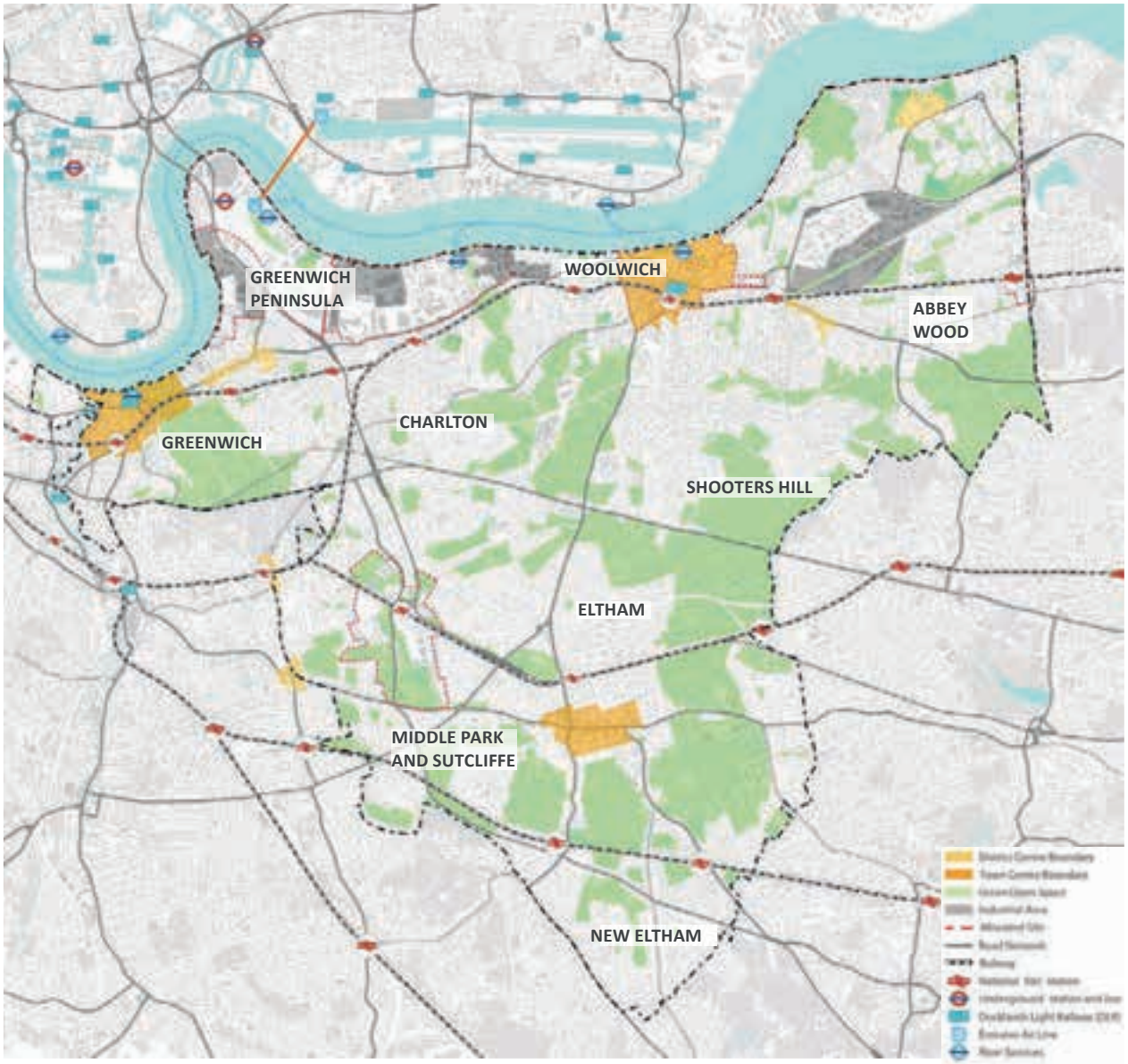


Figure 2.19: Urban structure

BUILDING USES

2.4.1 Figure 2.20 shows the use of every building in RB Greenwich, split into general categories:

- **Residential** - Unsurprisingly, the dominant use throughout the borough is residential.
- **Commercial** - This category covers all commercial uses, including shops, offices, entertainment and industry. There is a concentration of commercial uses in the town centres of Woolwich, Greenwich and Eltham, but also on the Thames riverside, where industrial uses and clustered. Strategic Industrial Locations (SILs) are denoted with a black outline.
- **Mixed Use** - Buildings that contain more than one use are shown as mixed use. These are mainly located in town and district centres, and typically contain a commercial use at ground floor with residential use in upper floors.
- **Education** - Schools are located evenly throughout the borough to serve local catchments. This category also includes colleges and universities.
- **Place of Worship** - These important community hubs are located throughout the borough, but are especially present in historical centres, such as Greenwich town and Eltham.
- **Public Building** - Buildings in this category include local government offices and facilities, such as the Crown Court in Thamesmead.
- **Other/no data** - This category is for specialist uses, or where no data is available.

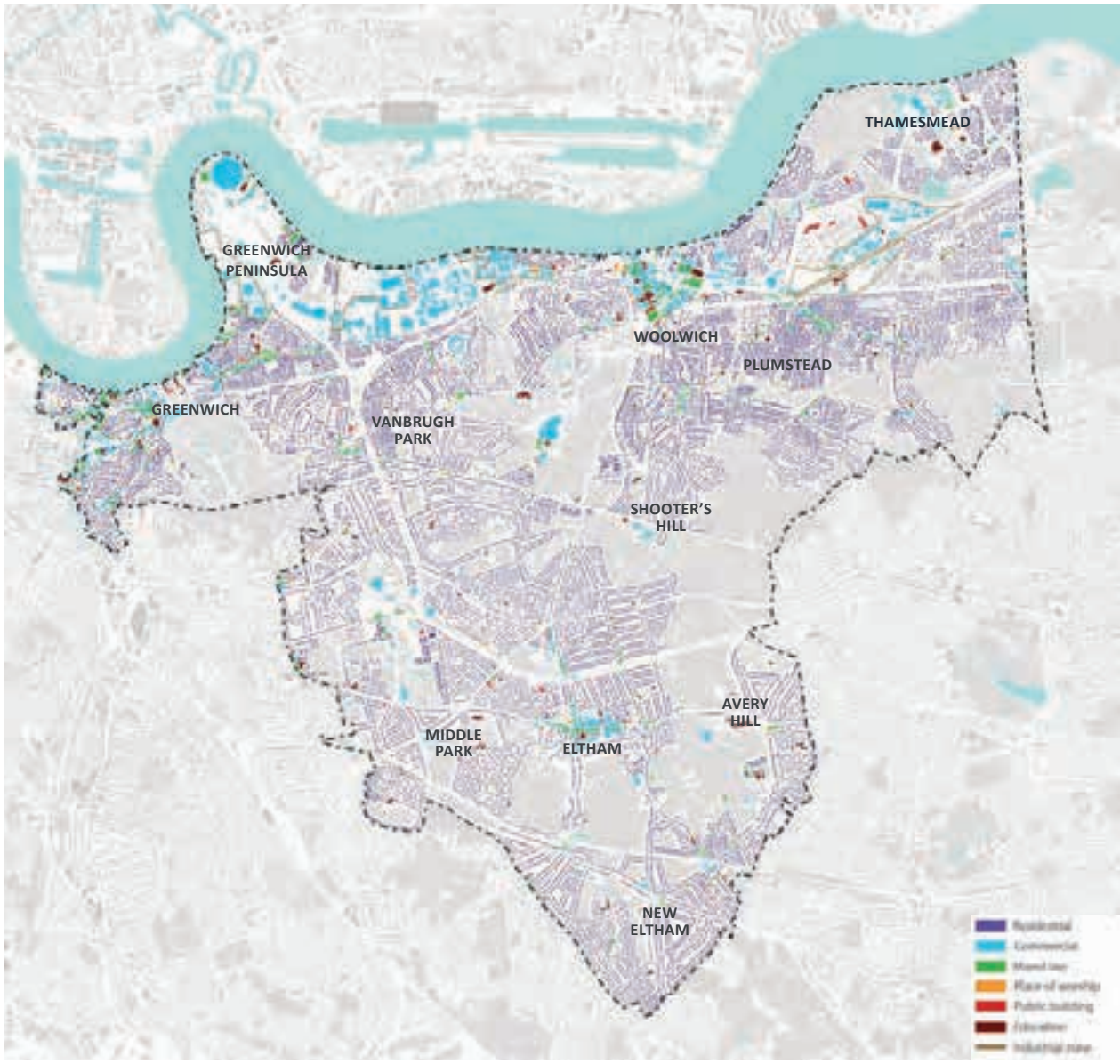


Figure 2.20: Building uses

MOVEMENT AND TRANSPORT

Road Network

2.4.2 The Royal Borough of Greenwich is well served by the primary road network. A series of 'A' roads cross the borough, providing strategic links for wider London.

2.4.3 There are two vehicle crossings of the river Thames in the borough, one via the Blackwall Tunnel at Greenwich Peninsula and the other linking the A205 to North Woolwich via the Woolwich Ferry.

2.4.4 The presence of the strategic road network allows for efficient road travel for private and commercial vehicles. However, it comes at a cost to the environment for residents. Many of the borough's primary roads act as physical barriers to local movement, which discourage walking and cycling. They are also the source of noise and air pollution, harming the health of those that live adjacent to them.

Figure 2.21: Road network

Public Transport

2.4.5 The borough is served by three historic rail lines, which connect the local centres in RB Greenwich to London Bridge station and to the wider south-east of England.

2.4.6 The northern part of the borough, along the Thames, is well served by rail, DLR and river boat services, connecting westwards to central London. There are DLR stops in Greenwich town and Woolwich, linking to Canary Wharf, London City Airport and Bank. The 'Emirates Air Line' cable car provides a pedestrian crossing of the Thames. However, figures show that it is generally not used for commuting and is more of a recreational form of transport, experiencing high demand on weekends and holidays[1].

2.4.7 There is only one underground station in the Royal Borough, the North Greenwich Jubilee line station, which connects the Milennium Dome and Greenwich Peninsula to Stratford and Westminster.

2.4.8 Crossrail (Elizabeth Line) stations are being delivered at Woolwich and Abbey Wood, which will greatly improve travel times into central London.

2.4.9 In general, the north and south of the borough is well served by public transport. However, the communities at the centre of the borough, which lacks a historical centre such as Woolwich and Eltham, are only served by bus services, which are discussed on the following page.

1 https://londonist.com/2015/12/cable-car-still-has-no-regular-users

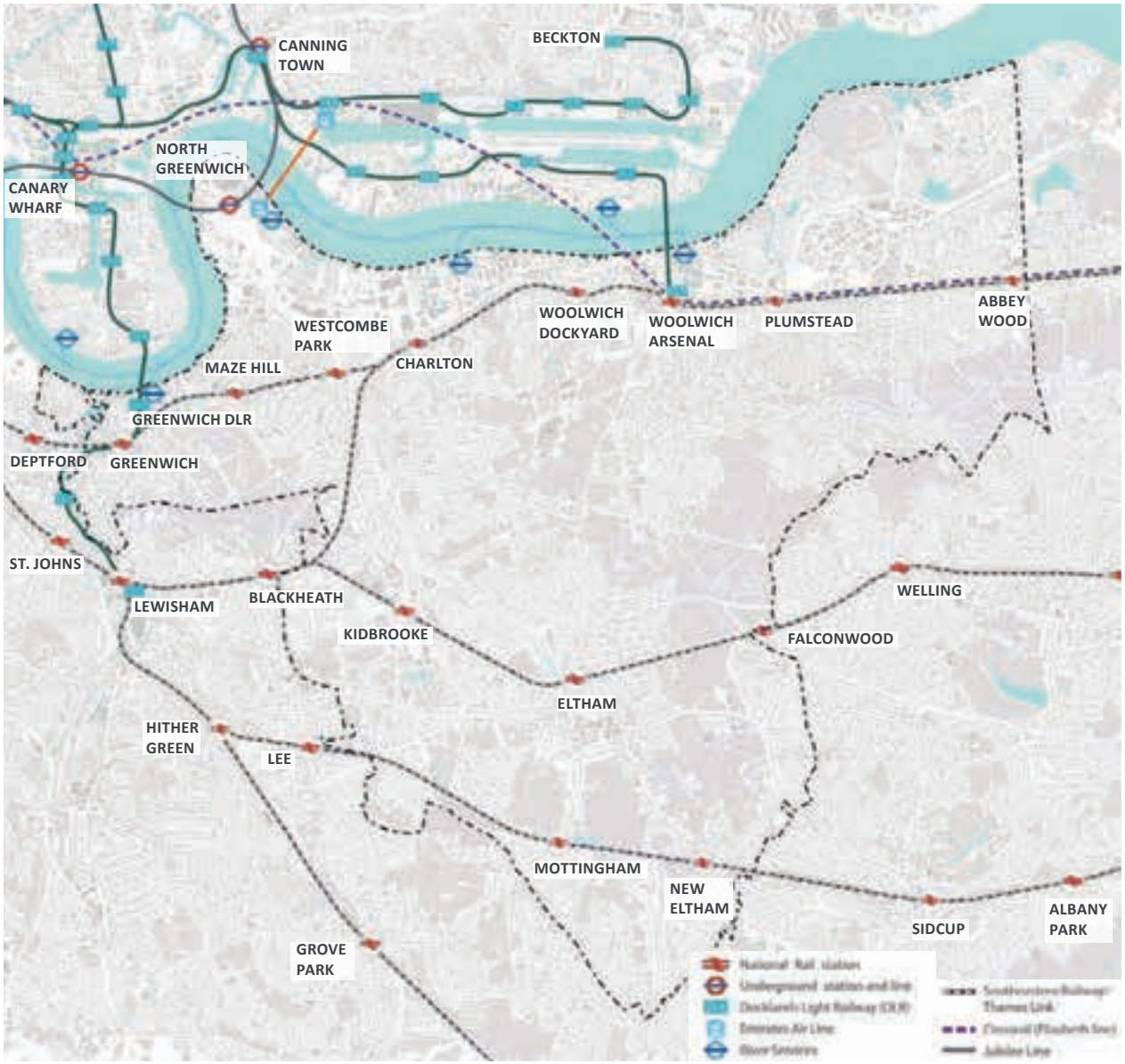


Figure 2.22: Public transport network

Figure 2.23: Bus services

Figure 2.24: Cycle network

Bus Network

2.4.10 RB Greenwich enjoys an extensive TfL bus network, which caters for local trips into district and town centres, providing access to services and interchange with rail and DLR stations. This interchange function is particularly important for the parts of the borough which do not have their own rail stations, such as Shooters Hill.

Cycle Network

2.4.11 The network for cycling in RB Greenwich is patchy and inconsistent. Although many of the borough's open spaces contain cycle lanes, these generally do not continue onto roads. Only a small number of roads have separated cycle routes and these are concentrated around Greenwich town centre.

2.4.12 The presence of heavy traffic on primary roads and the lack of high quality cycle infrastructure, likely discourages many people from cycling short trips.

PTAL

2.4.13 Public Transport Access Level (PTAL) is a measure of connectivity of public transport used in London. It provides a simple scaled measure of how well connected a place is to public transport, with 0 being the lowest connectivity and 6b being the highest. According to TfL[2], "a location will have a higher PTAL if:

- It is at a short walking distance to the nearest stations or stops
- Waiting times at the nearest stations or stops are short
- More services pass at the nearest stations or stops
- There are major rail stations nearby
- Any combination of all the above. "

2.4.14 Woolwich has the highest PTAL in the borough, of 6b. With the opening of the Elizabeth Line in the future, this will increase further, making it one of the best connected locations in London.

2.4.15 Greenwich town, Greenwich Peninsula and Eltham also score highly. However, parts of the borough have very low PTAL scores of 1a and 1b, as they rely only on bus services. These include Thamesmead and Shooters Hill. This lack of connectivity means residents must be reliant on private car use.

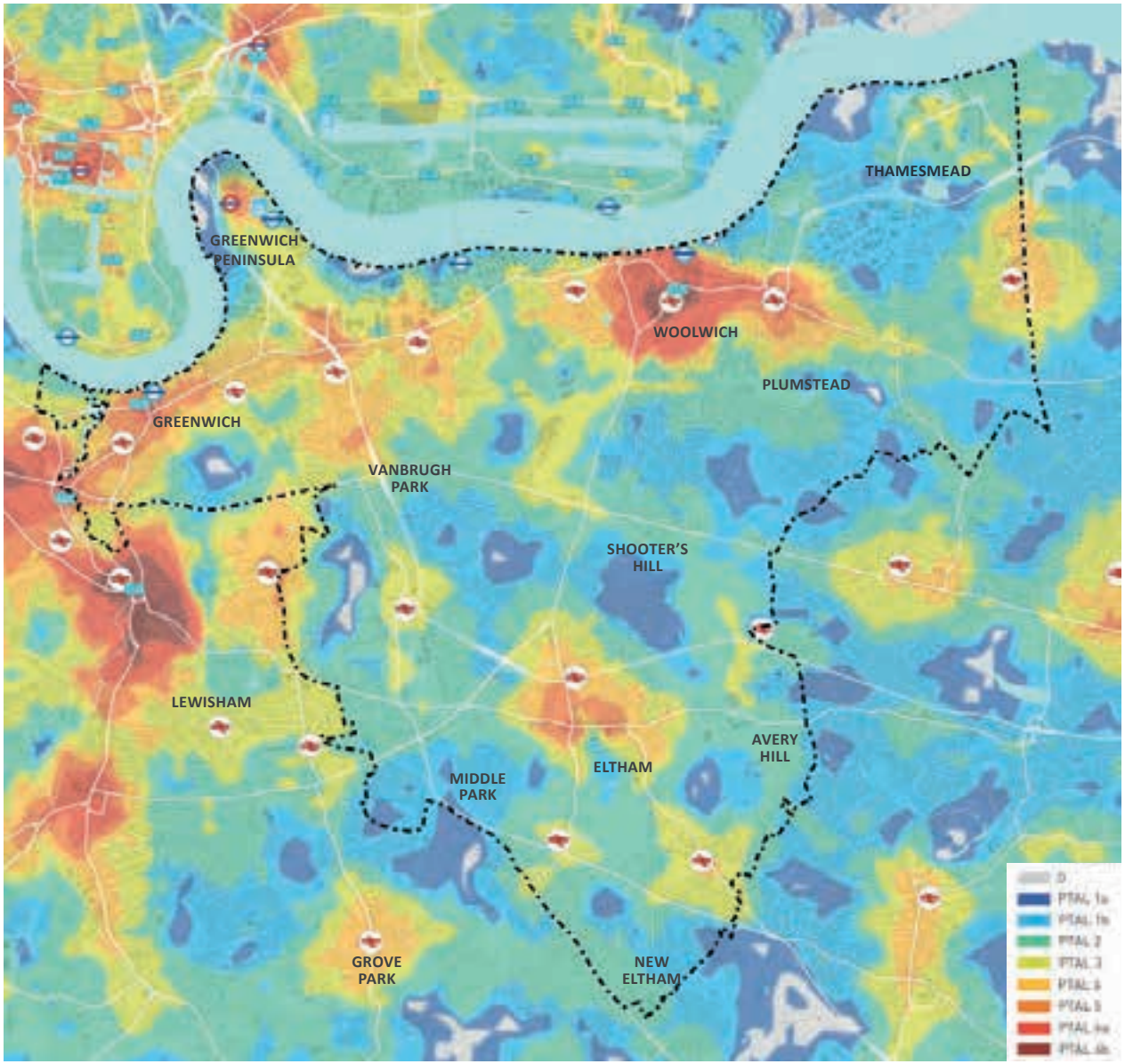


Figure 2.25: Public transport accessibility (PTAL)

2 TfL (2015) Assessing transport connectivity in London

2.5 QUALITY OF THE BUILT ENVIRONMENT

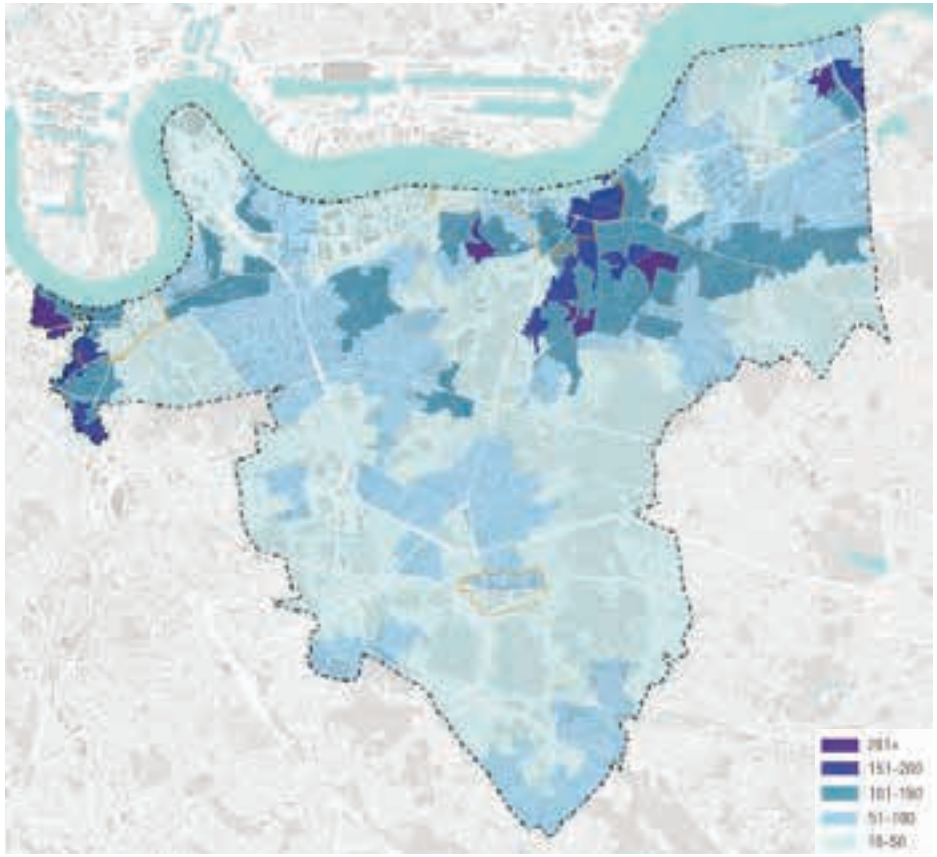


Figure 2.26: Persons per hectare (2018 estimate)

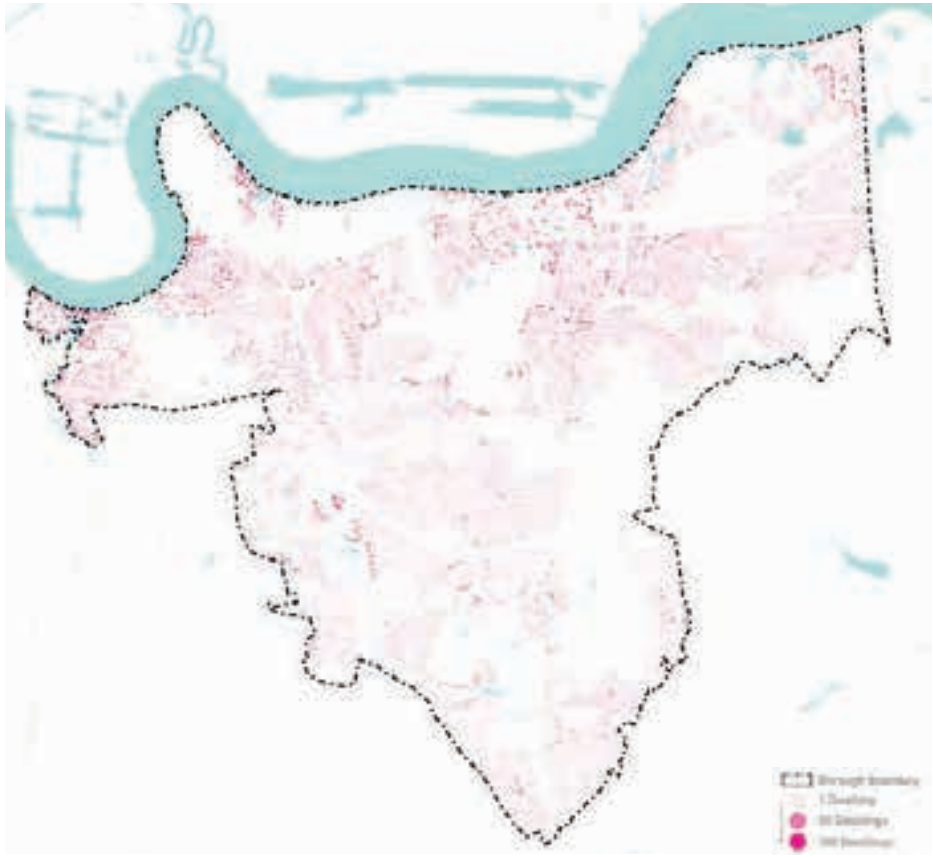


Figure 2.27: Address density

DENSITY

Residential Density

2.5.1 Population density at a local scale is difficult to determine from Census data, as some LSOA areas include significant areas of public open space whereas other do not—particularly in Greenwich where there are many large green spaces, and the boundaries of some LSOAs extend to the mid-point of the Thames (Figure 2.26).

2.5.2 A more faithful rendering of population density—if somewhat illustrative—can be produced by using address density as a proxy, plotting the location of each dwelling's 'address point'. Each takes the form of a translucent pale dot as shown in Figure 2.27; locations where 'address points' overlap (for example, apartment blocks) render as dark dots. In this way one can read the 'colour density' of the map as an indication of relative density.

2.5.3 Immediately apparent are the extensive open spaces and non-residential areas across the borough, visible as blank areas in this map.

Overall the colour-density is significantly greater in the north and west, and less in the south and east. Clusters of dark dots are visible across the whole borough, indicating groups of denser and/or taller buildings. These include postwar council estates in Woolwich Common ward, and contemporary high-density waterfront development such as around the Millenium Village in Greenwich Peninsula. Clusters are also visible even in apparently less dense areas, such as in the north-east corner at Titmuss Avenue in Thamesmead Moorings ward, and in the south-east corner at Perpins Road in Eltham South ward.

Homes Per Building

2.5.4 Another way of displaying residential density is by counting the number of residential addresses within each building, as shown in Figure 2.28. It is clear that most of the dwellings in RB Greenwich contain one household (shown in blue). However, there is variation throughout. Many older houses have been subdivided into 2-5 flats (shown in green).

2.5.5 Interestingly, generally low density areas are often punctuated by extremely high density single developments, such as the post-war estates around Woolwich, and the more contemporary apartment buildings at Kidbrooke.

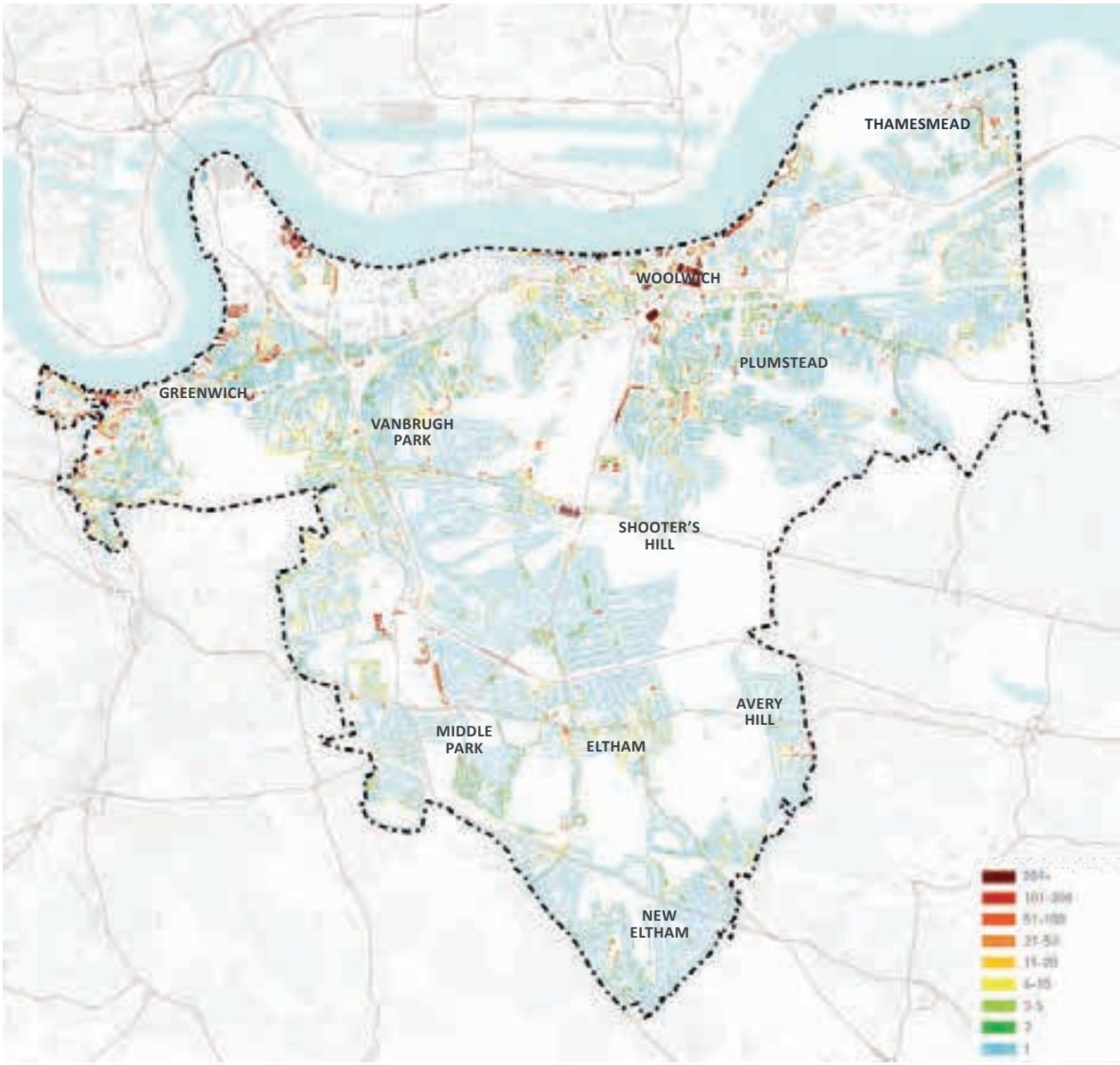


Figure 2.28: Homes per building

BUILDING HEIGHTS

2.5.6 Figure 2.29 illustrates the maximum heights of all the buildings in RB Greenwich. Building heights are presented in metres above ground, based on the best available Lidar data. Some small parts of the borough have no Lidar data available and so are shown in grey as the building heights here are unknown. The number of storeys is provided alongside the metre range based on a standard of 3m per storey, which is typical of residential buildings. This is included for the benefit of the reader as using metres alone is difficult to visualise. In reality, the number of storeys each building has may differ depending on the floor to ceiling heights or the presence of tall elements such as spires.

2.5.7 Generally, the majority of buildings are low-rise, being 1-4 storeys in height. Height increases at Woolwich, Greenwich town and, to a lesser extent, Eltham. Greenwich town and Woolwich display a wide variety of building heights, from 1-2 storeys up to the equivalent of 20 storeys. Greenwich Peninsula is emerging as a cluster of taller buildings, with towers of roughly 30 storeys and mid-rise block development

2.5.8 Outside of the centres, local high points can be seen at churches, post-war estates and contemporary high rise apartment buildings. The Millennium Dome stands out as a high point and landmark for the borough.

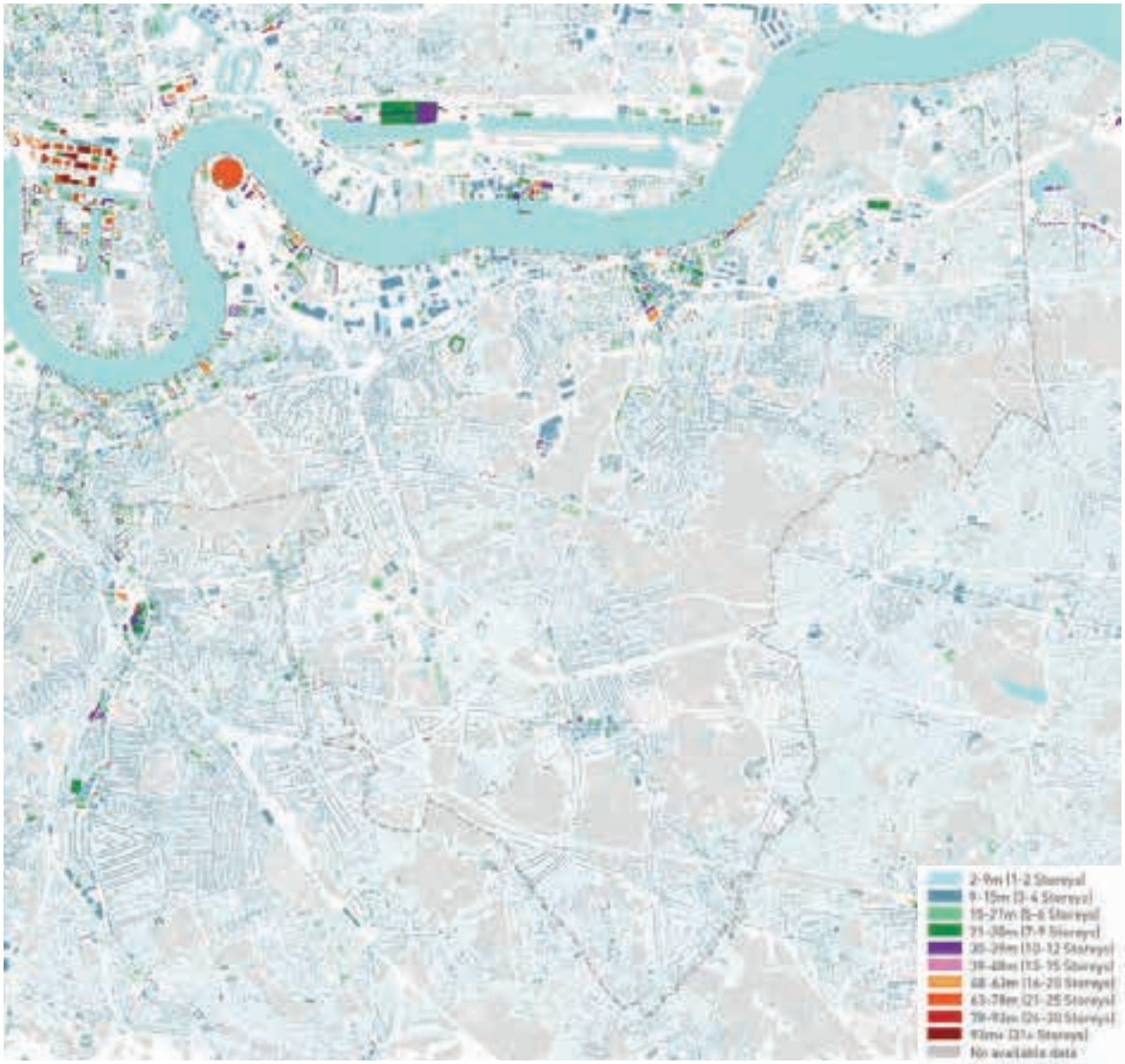


Figure 2.29: Existing building heights

BUILDING HEIGHTS ABOVE ORDNANCE DATUM

2.5.9 Figure 2.30 displays the height of buildings in RB Greenwich above ordnance datum (AOD).

2.5.10 Height above ordnance datum (AOD) essentially means the height of an object or area above the standard mean sea level. This can be used to express the “true height” of a building taking into account the underlying topography. This is key to understanding the skyline of a place and how topography makes some buildings more prominent and others more hidden.

2.5.11 The topography of the borough means that the highest buildings above sea level are in fact the modest 2 storey houses and Memorial Hospital at Shooter’s Hill, which rise to approximately 140m AOD.

2.5.12 In contrast, the much taller buildings on the banks of the Thames appear much lower due to the topography sloping down towards the river.

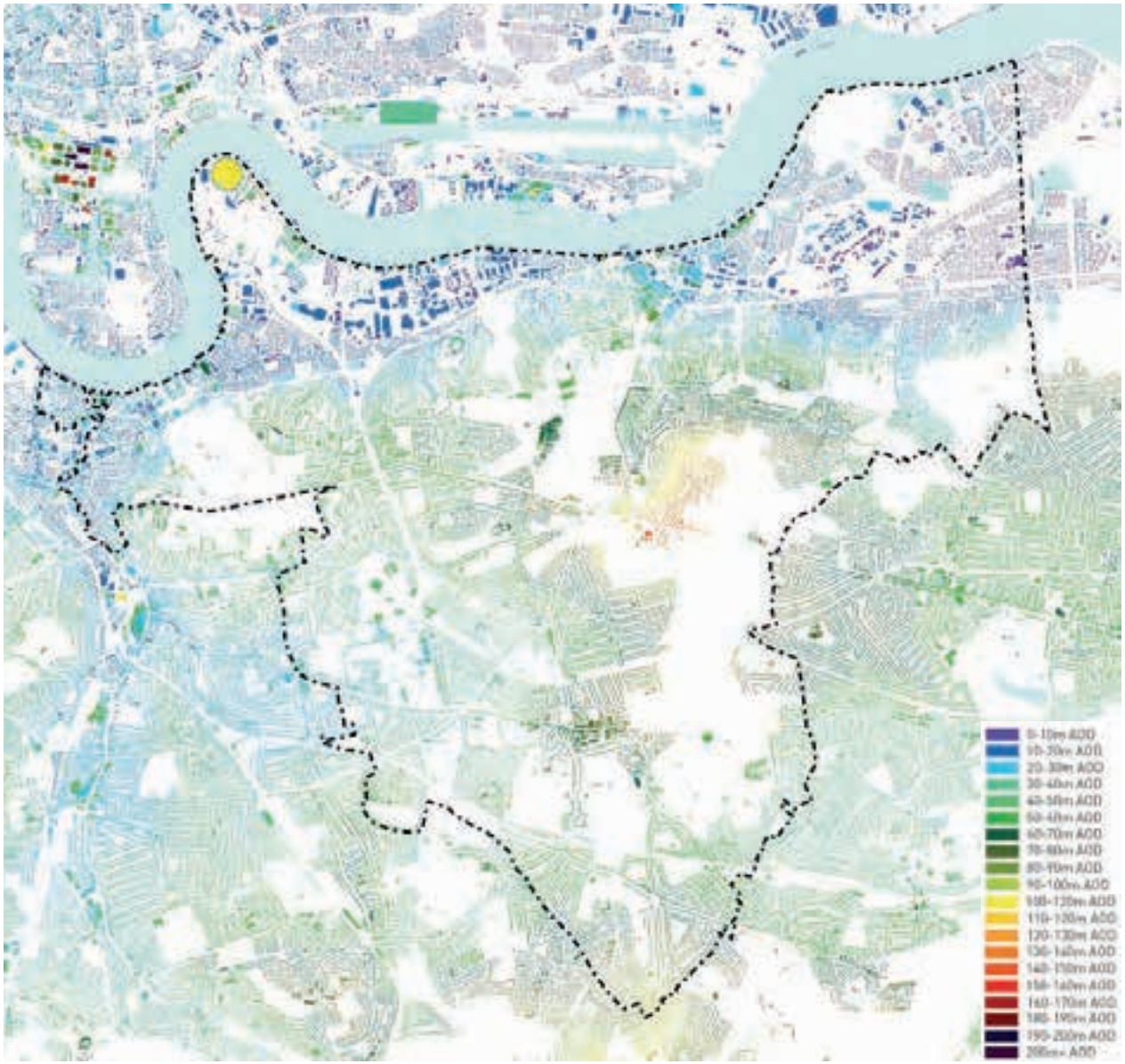


Figure 2.30: Existing building heights above ordnance datum (AOD)

HERITAGE ASSETS

2.5.13 RB Greenwich is a historic place and this history can be read in the rich heritage assets that survive across the borough.

World Heritage Site

2.5.14 The Maritime Greenwich World Heritage Site is an asset of the highest significance. It includes Greenwich Park, the Royal Observatory, Old Royal Naval College and Greenwich Market, as well as other listed and unlisted historic buildings. It's buffer zone extends to Blackheath, part of Greenwich town and across the River Thames to the north. It's Outstanding Universal Value is conveyed through eight key attributes[1]:

- Architecture
- Masterplan of buildings and designed landscape
- The Grand Axis
- The Royal Observatory
- Town Centre and St Alfege Church
- Royal Patronage
- Relationship with the River Thames
- Silhouettes

1 http://www.greenwichworldheritage.org/maritime-greenwich/outstanding-universal-value

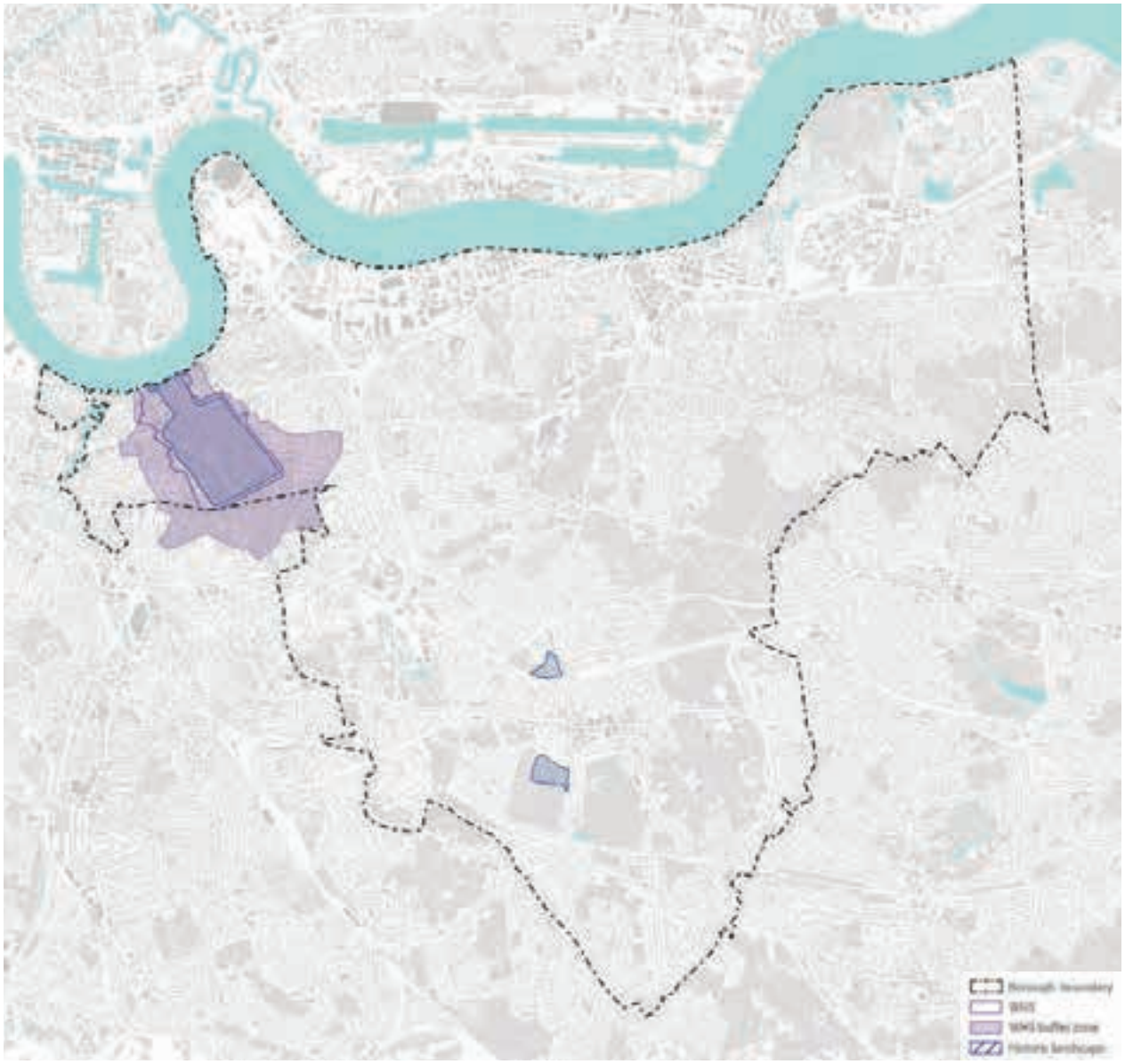


Figure 2.31: World Heritage Site (WHS) and Historic Landscapes

Listed Buildings

2.5.15 A wide variety of listed buildings exist across the borough, with concentrations at Greenwich town and Woolwich. Grade I listed buildings include the Royal Brass Foundry at Woolwich, The Royal Naval College at Greenwich and The Great Hall of Eltham Palace.

2.5.16 Other key listed buildings include the Grade II* listed Royal Artillery Barracks, Royal Military Academy and Woolwich Town Hall.

Conservation Areas

2.5.17 There are 23 Conservation Areas in RB Greenwich, which provide an additional layer of protection for historic townscapes and landscapes. Much of Greenwich town and the surrounding areas, as far south as Kidbrooke, are covered by Conservation Area designations, highlighting their intact historical urban form. Woolwich town centre, Eltham Palace and Eltham Green, Woolwich Common, Plumstead Common and Winn's Common all enjoy Conservation Area status.

Scheduled Ancient Monuments

2.5.18 Scheduled Ancient Monuments are typically archaeological sites or ruins, which are formally protected from unauthorised change. 11 of these assets are located within the borough, with a concentration at Greenwich Park/Greenwich Palace.

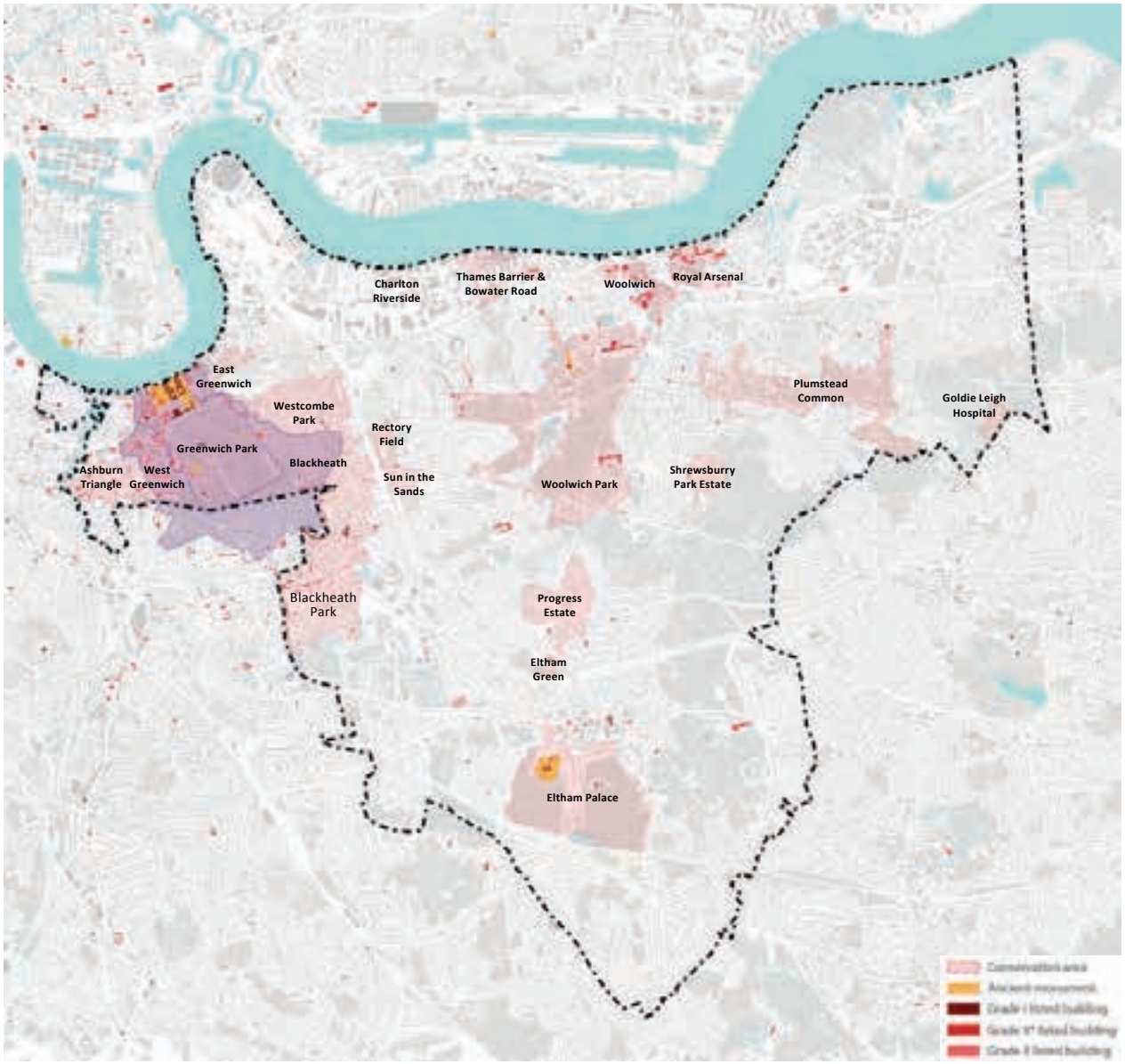


Figure 2.32: Conservation Areas, Scheduled Ancient Monuments and Listed Buildings

Registered Parks and Gardens

2.5.19 Registered Parks and Gardens are designed landscapes that are protected due to their special character. There are four of these assets in the borough:

- Greenwich Park (Grade I) is a royal park, formally laid out in the 1660s. It is part of the Maritime Greenwich World Heritage Site and contains many listed buildings, including the Royal Observatory.
- Eltham Palace (Grade II*) has been the site of a royal palace and formal grounds since 1305.
- Well Hall Pleasaunce (Grade II) is a historic public open space.
- Repository Woods (Grade II) was a military training facility and a publicly accessible pleasure ground with formal paths and planting.

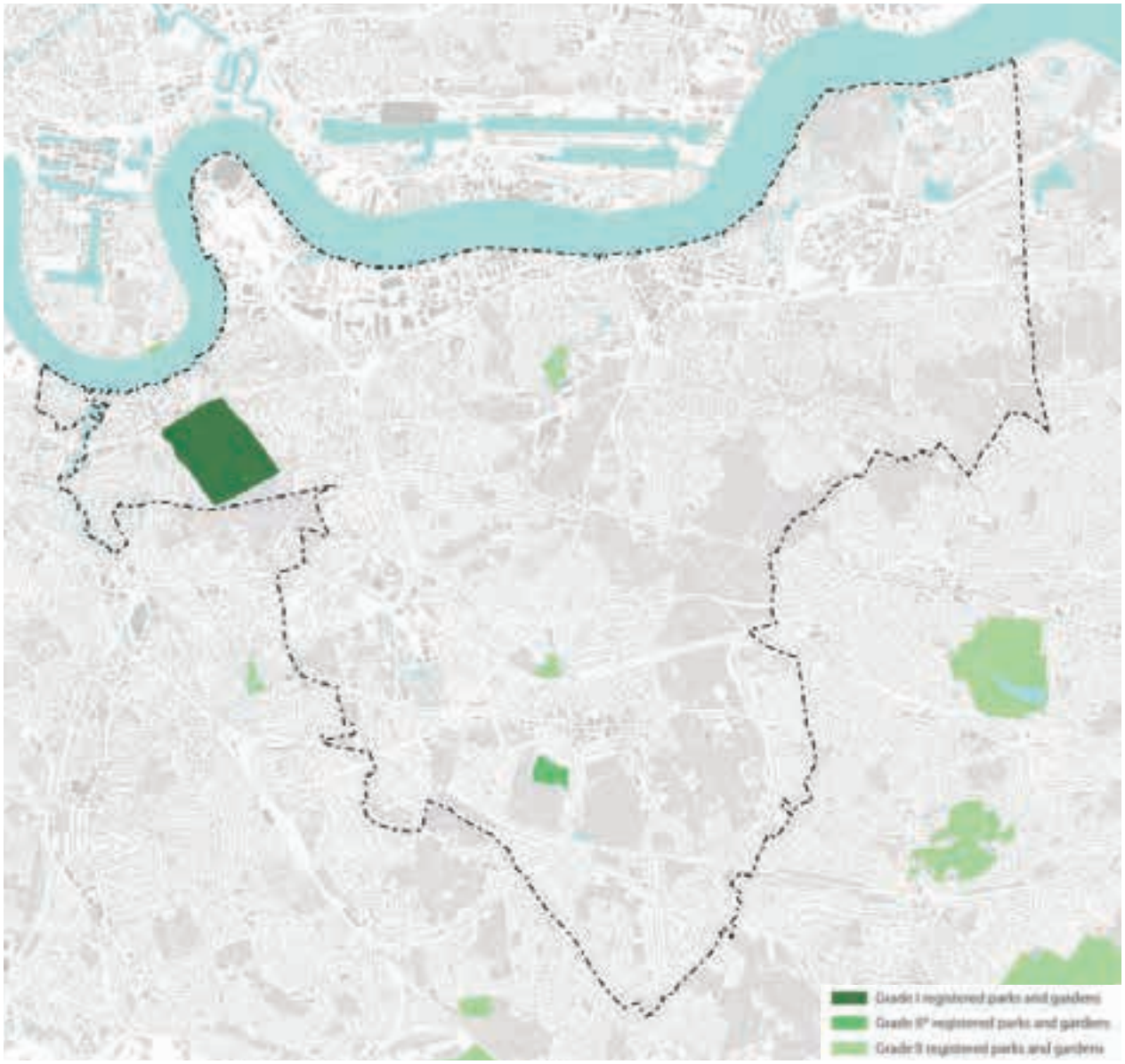


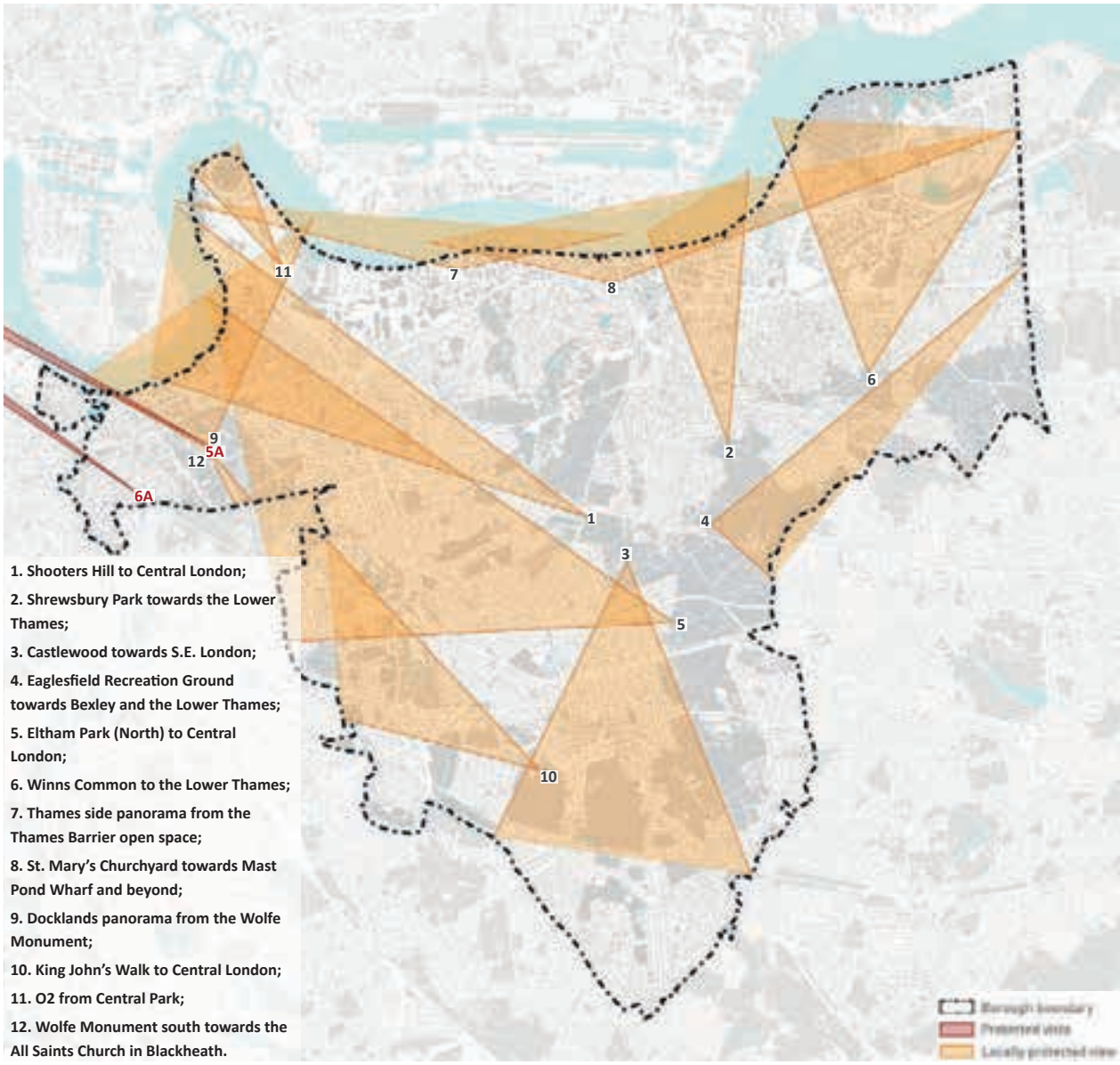
Figure 2.33: Registered parks and gardens

PROTECTED VIEWS

2.5.20 The RB Greenwich Core Strategy identifies 12 Local Views (shown in Figure 2.34), protected under policy DH(g), which states, "Planning permission will only be given for development which would not have a materially adverse effect on the overall perspective and essential quality of the Local Views..."

2.5.21 Within RB Greenwich is the viewpoints of two of the London View Management Framework (LVMF) views. View 5A is from the General Wolfe stature in Greenwich Park to St Paul's Cathedral and View 6A is from Blackheath Point to St Paul's Cathedral. Development in the foreground must not block the views.

2.5.22 Additional views are identified in Conservation Area Appraisals. However, these have not been mapped here as they are less relevant on the strategic level.



1. Shooters Hill to Central London;
2. Shrewsbury Park towards the Lower Thames;
3. Castlewood towards S.E. London;
4. Eaglesfield Recreation Ground towards Bexley and the Lower Thames;
5. Eltham Park (North) to Central London;
6. Winns Common to the Lower Thames;
7. Thames side panorama from the Thames Barrier open space;
8. St. Mary's Churchyard towards Mast Pond Wharf and beyond;
9. Docklands panorama from the Wolfe Monument;
10. King John's Walk to Central London;
11. O2 from Central Park;
12. Wolfe Monument south towards the All Saints Church in Blackheath.

Figure 2.34: Protected views

Image 3.1: View of Old Royal Naval College and the Queen's House from Isle of Dogs

2.6 DISTRICTS AND PLACES

The Royal Borough of Greenwich covers an area of 47 Square Kilometres and array of different sub-areas and characters. The character study divides the Borough into fourteen different places that are organised into three districts.

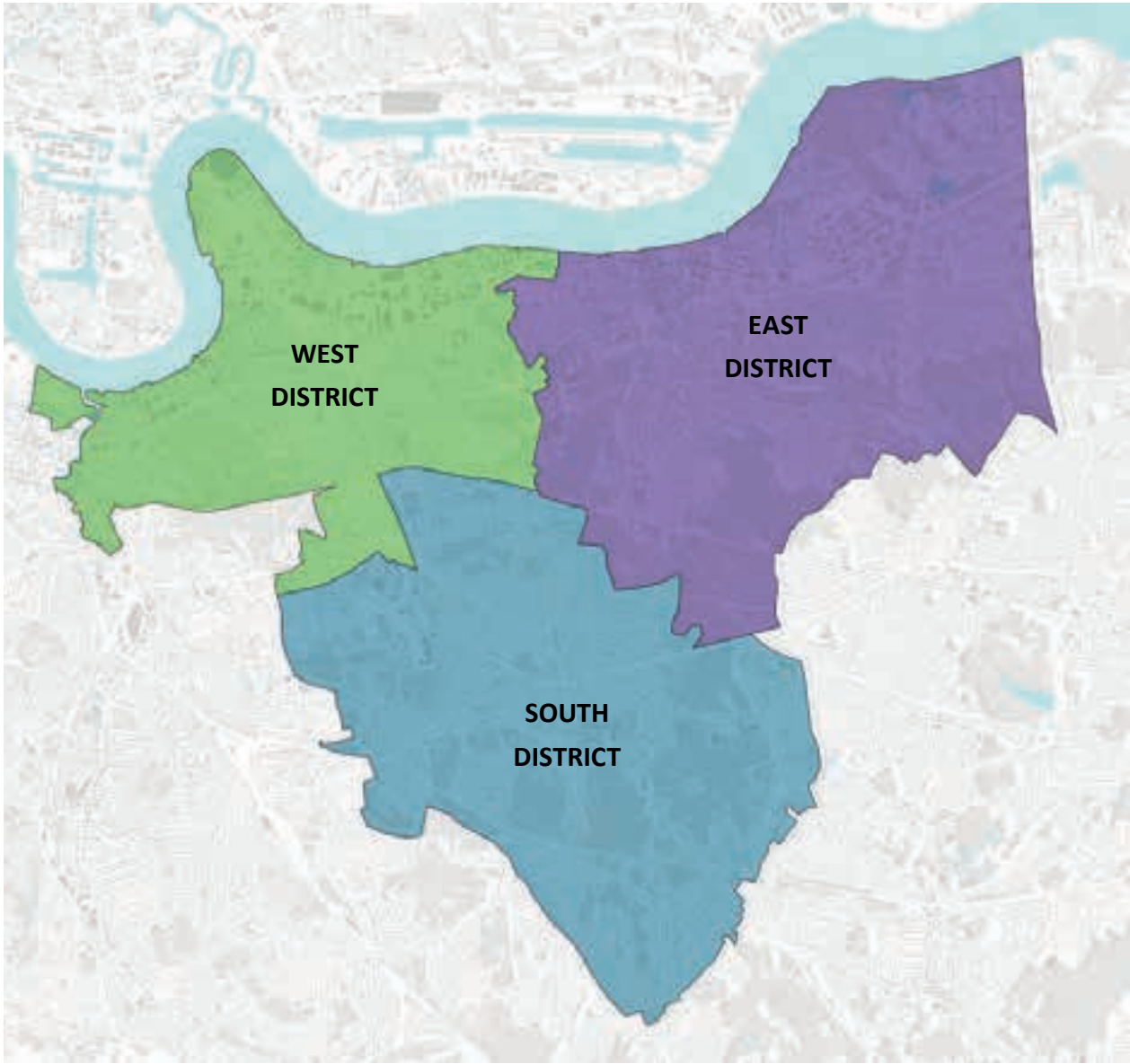


Figure 3.1: Royal Borough of Greenwich's Districts

West District

The West District incorporates the northern riverside area from Greenwich town centre to the edge of Woolwich. It comprises four distinct Places:

- **Greenwich** – includes Greenwich town centre, the World Heritage Site and historic housing/ mixed use areas;
- **Greenwich Peninsula** – industrial riverside area currently undergoing regeneration, focused on the Millennium Dome;
- **Blackheath/Westcomb Park** – historic residential area with attractive terraces, adjoining Greenwich Park and Blackheath to the east;
- **Charlton** – includes the riverside industrial area and residential area to the south, which expanded from Charlton House and high street.

East District

The East District stretches from the northern riverside of Woolwich and Thamesmead to Shooters in the south. It includes five distinct Places:

- **Woolwich** – a busy town centre that is the focus of recent new development and adjoining Royal Arsenal, which has undergone significant regeneration;
- **Thamesmead** – expansive post-war housing area featuring modernist housing with ample green space and artificial lakes;
- **Abbey Wood** – town centre with new Crossrail station supported by a mix of post-war and older terraced housing;
- **Plumstead** – a historic high street with attractive terraced streets and popular green space, Plumstead Common;
- **Shooters Hill** – suburban housing area on sloping land that rises to a popular open space, which provides views across the Borough and beyond;

South District

The South District stretches from the centre of the borough to the southern boundary, with Eltham sitting at the centre. It comprises five Places:

- **Eltham** – residential community centred around the historic high street and Eltham House;
- **Kidbrooke** – suburban residential community bordered to the south by the A2 road;
- **Kidbrooke Village and Middle Park** – high density Kidbrooke Village regeneration site contrasts with older suburban and terraced housing, supported by ample open spaces;
- **Avery Hill** – extensive sports fields and park space with low-rise suburban housing;
- **Coldharbour/New Eltham** – low rise, green residential area dissected by the A20 road.

Each of the places has been defined by its historic development and associations, as well as physical boundaries and development edges. In some areas the boundaries between places align with clear physical features while in others the association with one or another place is more gradual and boundaries are less defined. Here the study makes reference to local features and follows the outline of typological character areas. In some areas place boundaries align with ward boundaries, however, not everywhere were these boundaries found to related to place characteristics.

The character study looks at each place in detail and describes their history, urban structure, character features and detractors, building heights and heritage assets. It further provides an indication of the potential of sub-areas for change.

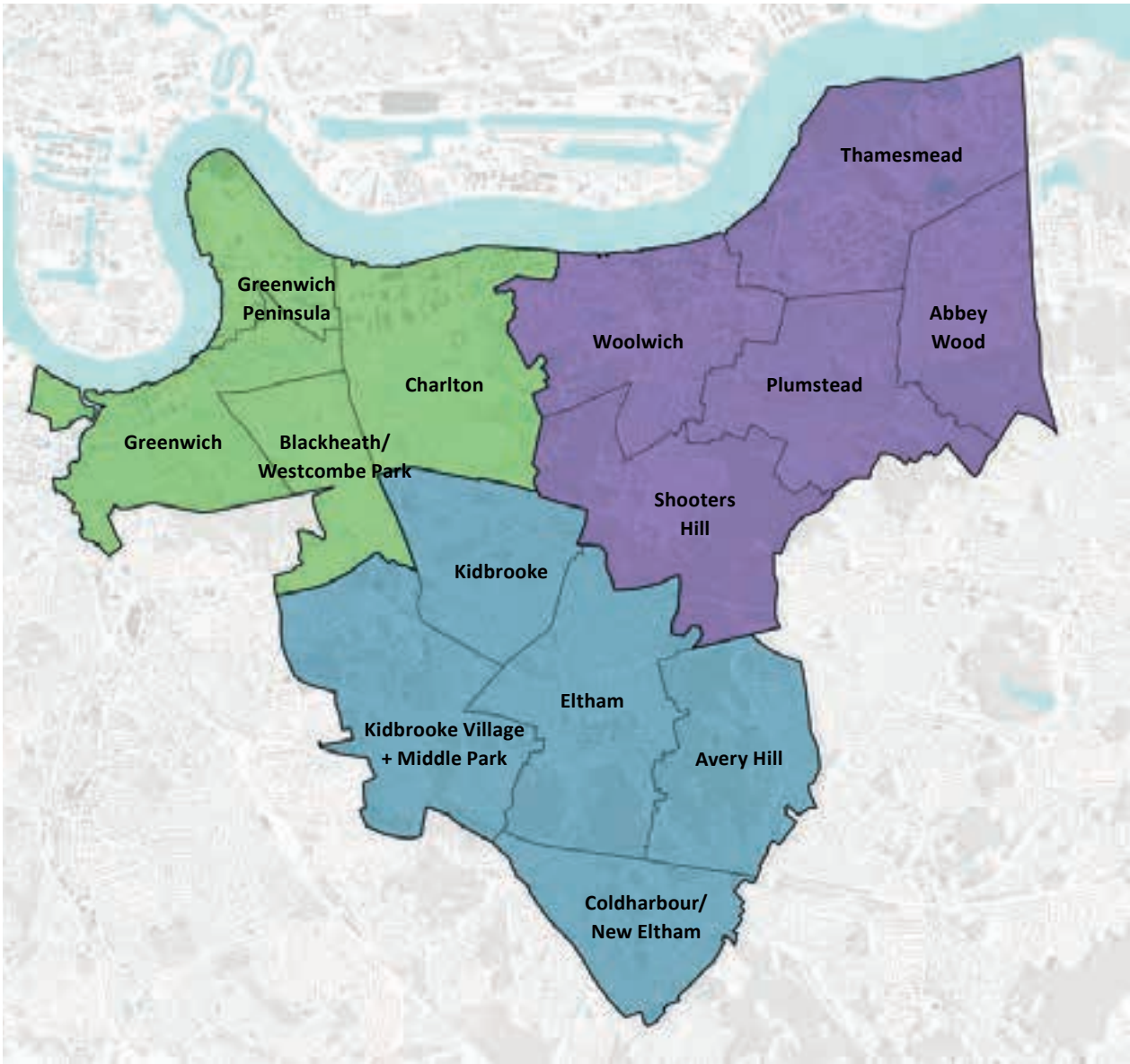


Figure 3.2: Royal Borough of Greenwich's Places

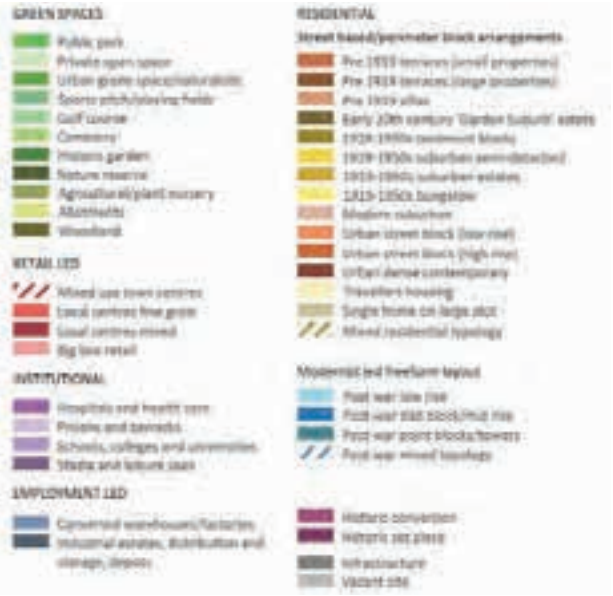


Figure 3.3: Composite typologies

2.7 CHARACTER TYPOLOGIES

The Character Study has undertaken a detailed typological analysis of the urban fabric of the Borough (Figure 3.3 on page 44). This identifies functional typologies covering urban mixed-use, residential, institutional and commercial uses and their respective typologies. Typologies often derive from different periods of development and display common characteristics in respect of their layout, building typology and form, organisation and height, densities and their inherent place qualities.

Whilst they may differ in the way they have responded to the specifics of a place, they usually share common design principles and characteristics, including issues or opportunities for change. The typological mapping provides the most detailed spatial assessment undertaken for the Royal Borough and provides a robust basis for character-specific guidance on enhancement or change in Greenwich.

Typological areas were identified and mapped based on desktop analysis of ordnance survey, historic and topographic maps, 3d oblique views (Google Earth) and Street View images (Google Street View), and supplemented by site visits. The objective of this analysis was to identify larger areas whose character is broadly determined by a common development approach.

Many areas are not totally coherent and include other buildings or institutions that are different. Where these do not establish a significant character area of their own they are included in the prevailing larger character typology areas. The character of some areas is as such that they comprise a mix of different scale buildings of varied heights and from different periods, resulting in little overall coherence in the built form. In these instances the variety of forms was recognised as a characterising feature and used to determine the extent of such 'mixed' areas (mixed use town centre, mixed residential typology and mixed post-war typology).

The character mapping has also identified and mapped landscape character areas across the Royal Borough.

An overview of each functional typology and their respective character typologies are provided on the following pages. This provides a short description of their character, a photograph of a typical example, and a location map that identifies where a typology has been identified within the Royal Borough.

The character areas assessment has established average densities for each area, their level of coherence and sensitivity of change (see section 3.3 for more detail) and indicated the types of intensification strategies that in theory may be applicable in each character typology area (see section 3.4 for more detail). The findings of these assessments are summarised for each of the typologies to provide an overview and allow for comparison. They do not constitute recommendations on an appropriate means for intensification within typological areas. Area specific recommendations are provided in the place sections.

Image 3.2: Powis Street, Woolwich

RETAIL-LED TYPOLOGIES

Retail-led typologies are areas whose predominant function is to offer shopping and services to residents and visitors. Their urban form varies from historic high streets to modern, large footprint stores. These typologies often act as the focal point or local centre to a wider catchment of residents and visitors. The study identifies four retail-led typologies:

- Mixed use town centres;
- Local centres fine grain;
- Local centres mixed; and
- Big box retail.

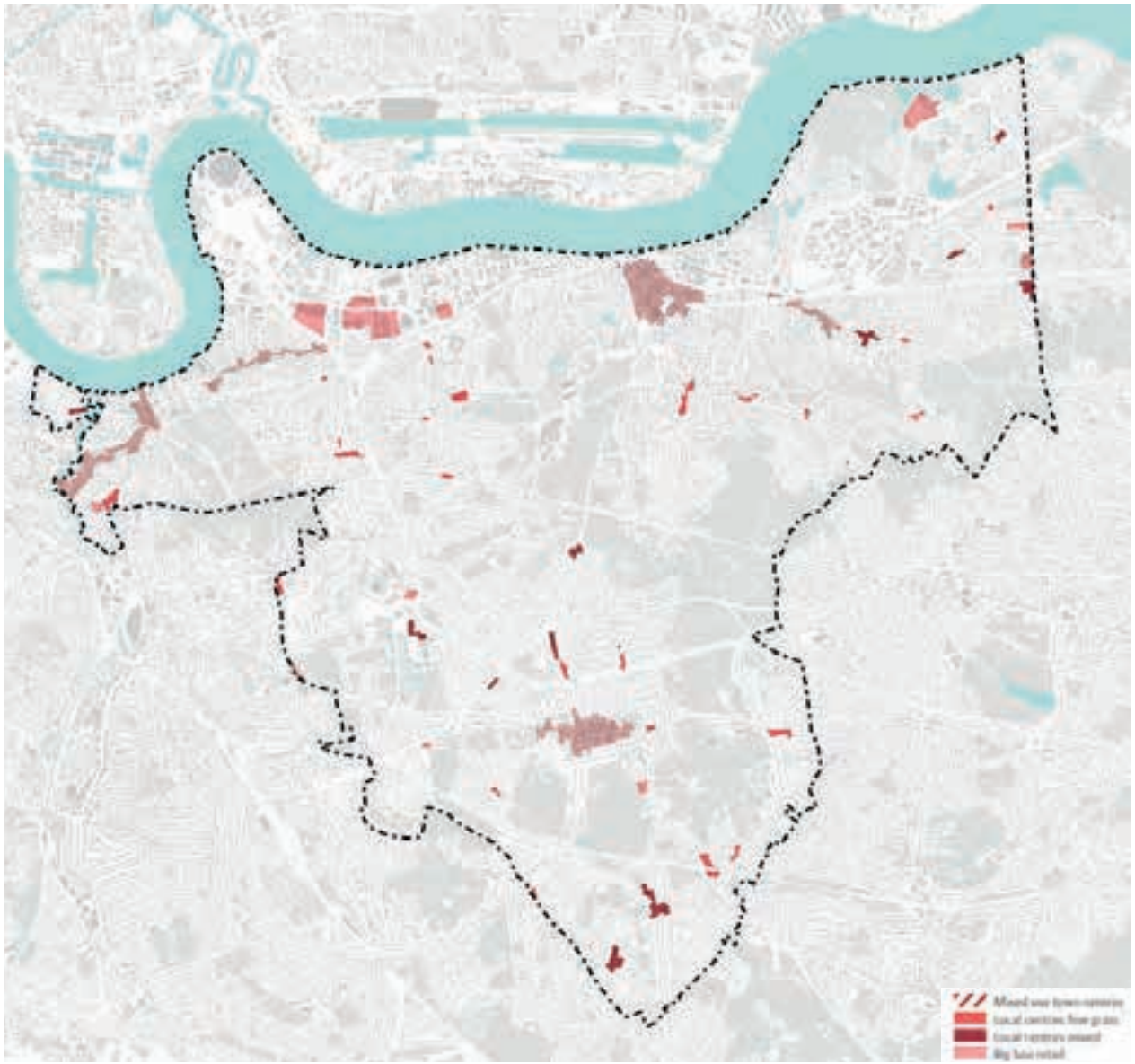


Figure 3.4: Retail-led typologies

Mixed Use Town Centre

Image 3.3: Eltham high street (Google street view)

Figure 3.5: Mixed use town centre

Historic town centres that offer services to local residents such as shops, pubs, cafes and leisure activities. Typically town centres are characterised by a range of buildings from different areas including postwar, that break with the earlier fine grain pattern and more recent development that often introduce a new scale and height, and affect the overall coherence of these areas.

Typical Residential Density

26-75 Units/Ha

Typical Coherence

Moderately Coherent

Fragmented

Typical Sensitivity to Change

Moderately Sensitive

Low Sensitivity

Potential Intensification Strategy

Block Consolidation / Infill

Adaptation + Extension

Additional Storey(s)

Local Centre Fine Grain

Image 3.4: Footscray road (Google street view)

Figure 3.6: Local centre fine grain

Local centres that offer services to local residents such as convenience shops, post offices or doctor's surgeries. Different local centres present different architectural styles and forms, but are all characterised by a distinct centre function and fine grain, historic urban form.

Typical Residential Density

0-250 Units/Ha

Typical Coherence

Varied

Typical Sensitivity to Change

Varied

Potential Intensification Strategy

Block Consolidation / Infill

Adaptation + Extension

Additional Storey(s)

Local Centre Mixed

Image 3.5: Earlswood street (Google street view)

Local centres that offer services to local residents but are comprised of a mix of architectural styles and may be relatively fragmented.

Typical Residential Density
- 0-150 Units/Ha

Typical Coherence
- Moderately Coherent
- Fragmented

Typical Sensitivity to Change
- Moderately Sensitive
- Low Sensitivity

Potential Intensification Strategy
- Block Consolidation / Infill
- Adaptation + Extension
- Additional Storey(s)

Figure 3.7: Local centre mixed

Big Box Retail

Image 3.6: Commercial way (Google street view)

Out-of-town retail parks with large floorplate retail units including supermarkets and supporting food and drink uses. Generally designed to be visited by car, with large amounts of surface car parking.

Typical Residential Density
- NA

Typical Coherence
- Moderately Coherent
- Fragmented

Typical Sensitivity to Change
- Moderately Sensitive
- Low Sensitivity

Potential Intensification Strategy
- Comprehensive Redevelopment

Figure 3.8: Big box retail

INSTITUTIONAL TYPOLOGIES

Institutional typologies are large sites that are operated by a single entity and offer a distinct and specialised function. These areas have a strong presence in the borough. In some cases, such as schools and leisure uses, they act as focal points within the urban fabric. In other cases, such as prisons and some large hospital sites, they act as barriers and disrupt permeability. The institutional typologies identified in this study are:

- Hospitals and healthcare;
- Prisons and barracks;
- Schools, colleges and universities;
- Stadia and leisure uses.

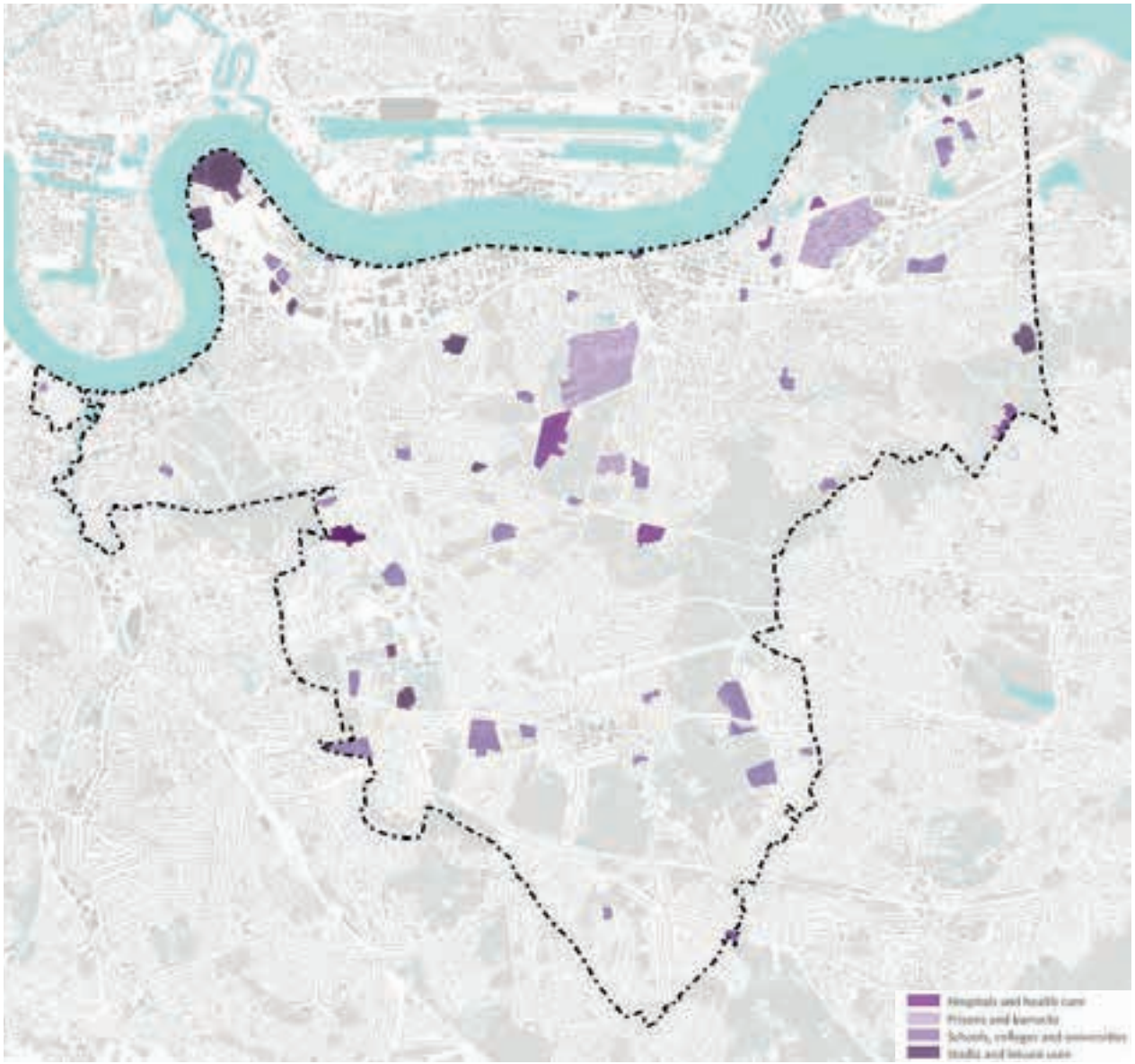


Figure 3.9: Institutional typologies

Hospitals and Healthcare

Image 3.7: Queen Elizabeth Hospital (Google street view)

Large, purpose-built hospitals, surgeries and care homes, typically on inward-looking sites with associated car parking and landscaping. This typology exhibits a wide range of architectural styles from Victorian to contemporary.

Typical Residential Density
0-25 Units/Ha

Typical Coherence
Varied

Typical Sensitivity to Change
Moderately Sensitive
Low Sensitivity

Potential Intensification Strategy
Comprehensive Redevelopment
Block Consolidation / Infill
Adaptation + Extension

Figure 3.10: Hospitals and healthcare

Prisons and Barracks

Image 3.8: HM Prison Thameside (Google street view)

Prisons and barracks are inward-looking complexes, characterised by their large footprints and specialised use. They are not accessible to the public and generally act as barriers in the urban form. Architectural styles vary from historic listed buildings to highly functional and unattractive structures.

Typical Residential Density
0-75 Units/Ha

Typical Coherence
Varied

Typical Sensitivity to Change
Moderately Sensitive
Low Sensitivity

Potential Intensification Strategy
Comprehensive Redevelopment
Adaptation + Extension

Figure 3.11: Prisons and barracks

Schools, Colleges and Universities

Image 3.9: St. Paul's Academy (Google street view)

Large educational campuses and grounds displaying a mix of architectural styles. Typically these sites have limited access for the public and are accompanied by playing fields, car parking and other outdoor spaces.

Typical Residential Density
0-25 Units/Ha

Typical Coherence
Varied

Typical Sensitivity to Change
Varied

Potential Intensification Strategy
Comprehensive Redevelopment
Adaptation + Extension

Figure 3.12: Schools, colleges and universities

Stadia and Leisure

Image 3.10: Sutcliffe Park Sports Centre (Google street view)

Purpose built structures for leisure and cultural uses, such as leisure centres, football stadiums and event venues.

Typical Residential Density
NA

Typical Coherence
Varied

Typical Sensitivity to Change
Varied

Potential Intensification Strategy
Comprehensive Redevelopment
Adaptation + Extension

Figure 3.13: Stadia and leisure

EMPLOYMENT-LED TYPOLOGIES

Employment-led typologies are areas with an urban form specialised for workspaces. In RB Greenwich, these are largely industrial estates comprised of low-rise, large footprint buildings with accompanying car parking and service yards. The employment-led typologies identified in this study are:

- Converted warehouse/factories; and
- Industrial estates, distribution and storage, depots.

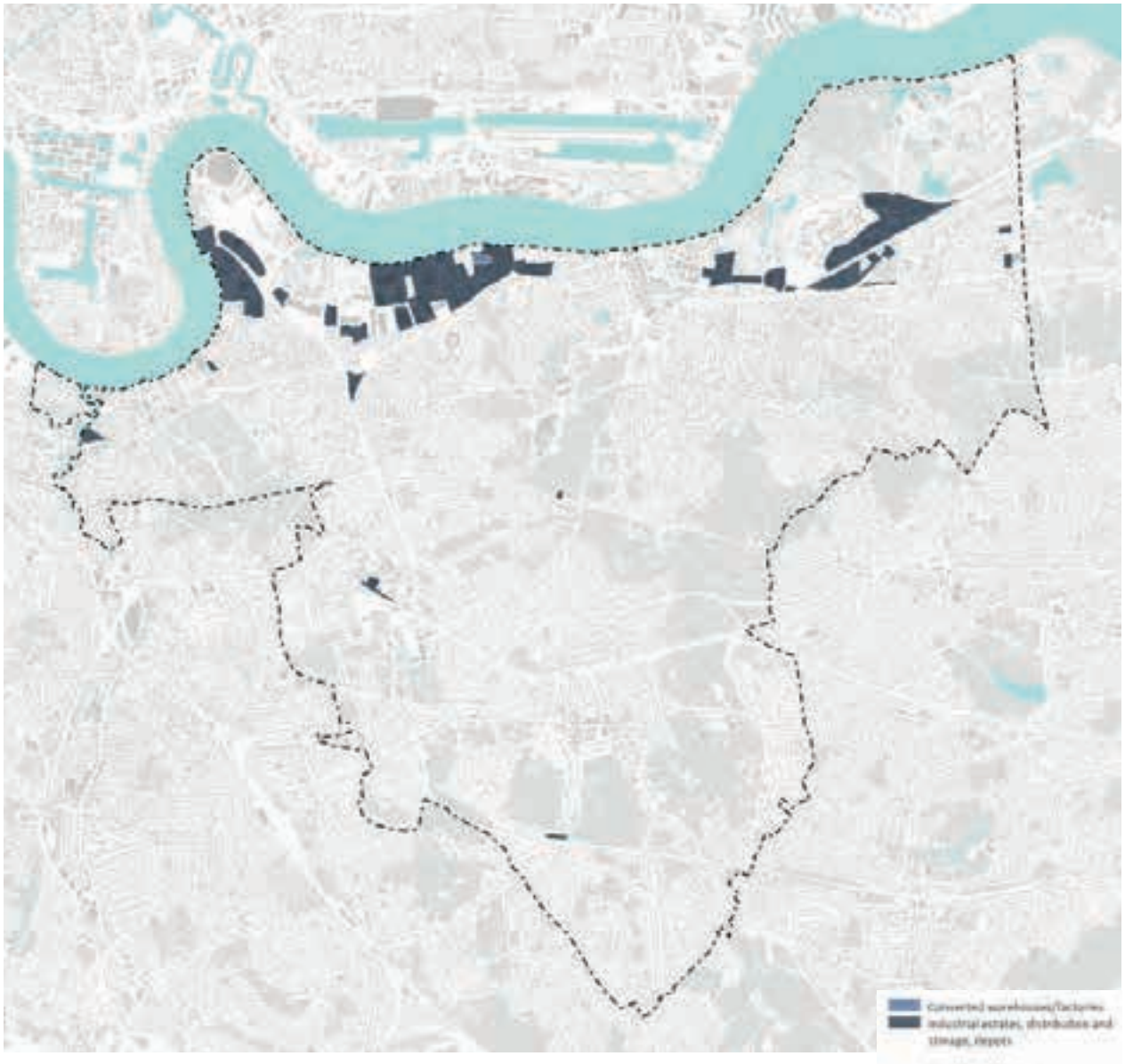


Figure 3.14: Employment-led typologies

Converted Warehouses / Factories

Image 3.11: Unity way (Google street view)

Former warehouse and factory buildings, mostly dating from the 19th and early 20th century, that have been converted to provide employment space.

Typical Residential Density
NA

Typical Coherence
Moderately Coherent
Fragmented

Typical Sensitivity to Change
Moderately Sensitive
Low Sensitivity

Potential Intensification Strategy
Comprehensive Redevelopment
Adaptation + Extension

Figure 3.15: Converted warehouses / factories

Industrial Estates, Distribution and Storage, Depots

Image 3.12: Depot (Google street view)

Sites for industrial uses with large footprint building, such as factories, warehouses and storage facilities and large amounts of supporting car parking and outdoor space for loading/deliveries.

Typical Residential Density
0-25 Units/Ha

Typical Coherence
Moderately Coherent
Fragmented

Typical Sensitivity to Change
Moderately Sensitive
Low Sensitivity

Potential Intensification Strategy
Comprehensive Redevelopment
Block Consolidation / Infill
Adaptation + Extension

Figure 3.16: Industrial estates, distribution and storage, depots

RESIDENTIAL TYPOLOGIES

The character of the Royal Borough's dwellings and the neighbourhoods within which they are located varies considerably. Character derives from the building typology itself, from how these typologies are combined and laid out, and from the spaces they create between them. This is hugely influenced by the period from which the buildings originate. In parts of the borough there are extensive areas where connected streets are lined with Georgian and Victorian houses; elsewhere post-war flatted estates are more prevalent.

Through history the development form has changed, reflected in the different residential typologies. On the following pages, they are grouped into four broad categories:

- Pre-1919 Housing
- 1919-1950s Housing
- Post-War Estates
- Post-1970s/Contemporary Housing

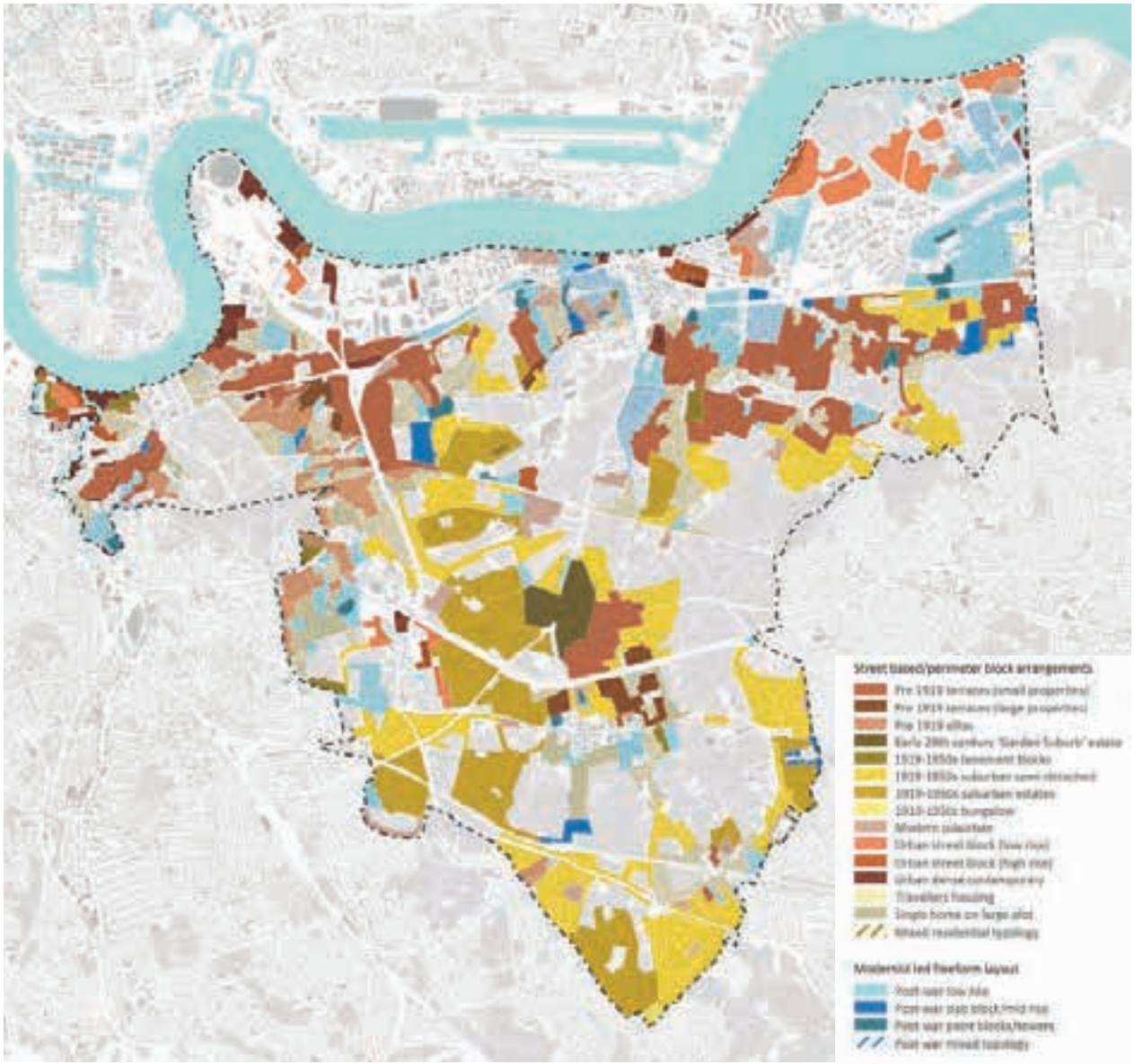


Figure 3.17: Residential typologies

RESIDENTIAL TYPOLOGIES

PRE-1919 HOUSING

Pre-1919 development in the Georgian and Victorian eras accounts for a large proportion of development across the borough. Much of the highest quality development is located within Conservation Areas and forms much of the basis of such designations. Outside Conservation Areas, pre-1919 development may be more modest in character but nevertheless provides a robust form that provides both attractive and adaptable homes and a strong character. Properties are usually laid out in terraces or as semi-detached pairs. These typologies are:

- Pre-1919 terraces (small properties);
- Pre-1919 terraces (large properties); and
- Pre-1919 villas.

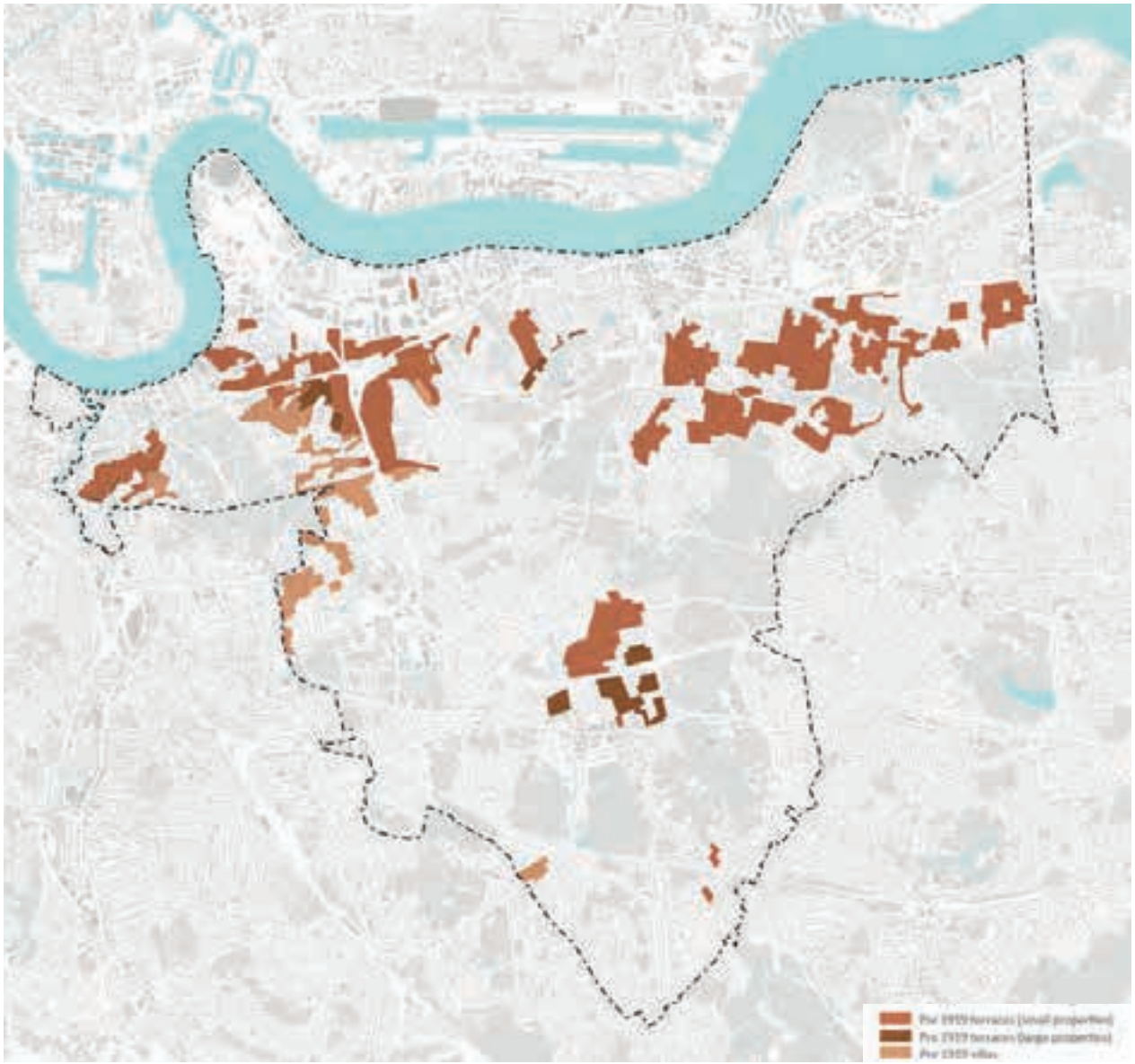


Figure 3.18: Pre-1919 housing

Pre 1919 Terraces (small properties)

Image 3.13: Small-property terraces (Google street view)

Small residential properties that are normally arranged as part of a terrace from the pre-1919 era forming a tight urban block and attractive streets.

Typical Residential Density
26-75 Units/Ha

Typical Coherence
Highly Coherent
Broadly Coherent

Typical Sensitivity to Change
Highly Sensitive
Sensitive

Potential Intensification Strategy
Block Consolidation / Infill
Adaptation + Extension

Figure 3.19: Pre 1919 terraces (small properties)

Pre 1919 Terraces (large properties)

Image 3.14: Large-property terraces (Google street view)

Substantial residential properties that are normally arranged as part of a terrace from the pre-1919 era forming a tight urban block and attractive streets. Buildings often set back behind a small front garden or yard.

Typical Residential Density
26-75 Units/Ha

Typical Coherence
Highly Coherent
Broadly Coherent

Typical Sensitivity to Change
Highly Sensitive
Sensitive

Potential Intensification Strategy
Block Consolidation / Infill
Adaptation + Extension

Figure 3.20: Pre 1919 terraces (large properties)

Pre 1919 Villas

Image 3.15: Villa (Google street view)

Substantial residential properties on large sites, often sub-divided into a number of apartments. They form attractive, leafy streets and are generally well set back from the street.

Typical Residential Density
26-75 Units/Ha

Typical Coherence
Highly Coherent
Broadly Coherent

Typical Sensitivity to Change
Highly Sensitive
Sensitive

Potential Intensification Strategy
Block Consolidation / Infill
Adaptation + Extension

Figure 3.21: Pre 1919 villas

RESIDENTIAL TYPOLOGIES

1919-1950S HOUSING

This era saw large swatches of the south of the borough developed with lower density suburban housing, a pattern reflected across much of outer London at this time. Large estates of housing were developed using standard house types, with whole neighbourhoods comprising semi-detached houses, tenement blocks or, in the case of the Progress Estate, the Garden Suburb style. Layouts are street-based blocks with buildings set back behind a front garden or porch, and generous rear gardens. These typologies are:

- Early 20th Century 'Garden Suburb' estate;
- 1919-1950s tenement blocks;
- 1919-1950s suburban semi-detached;
- 1919-1950s suburban estates;
- 1919-1950s bungalow; and
- Single home on large plot.

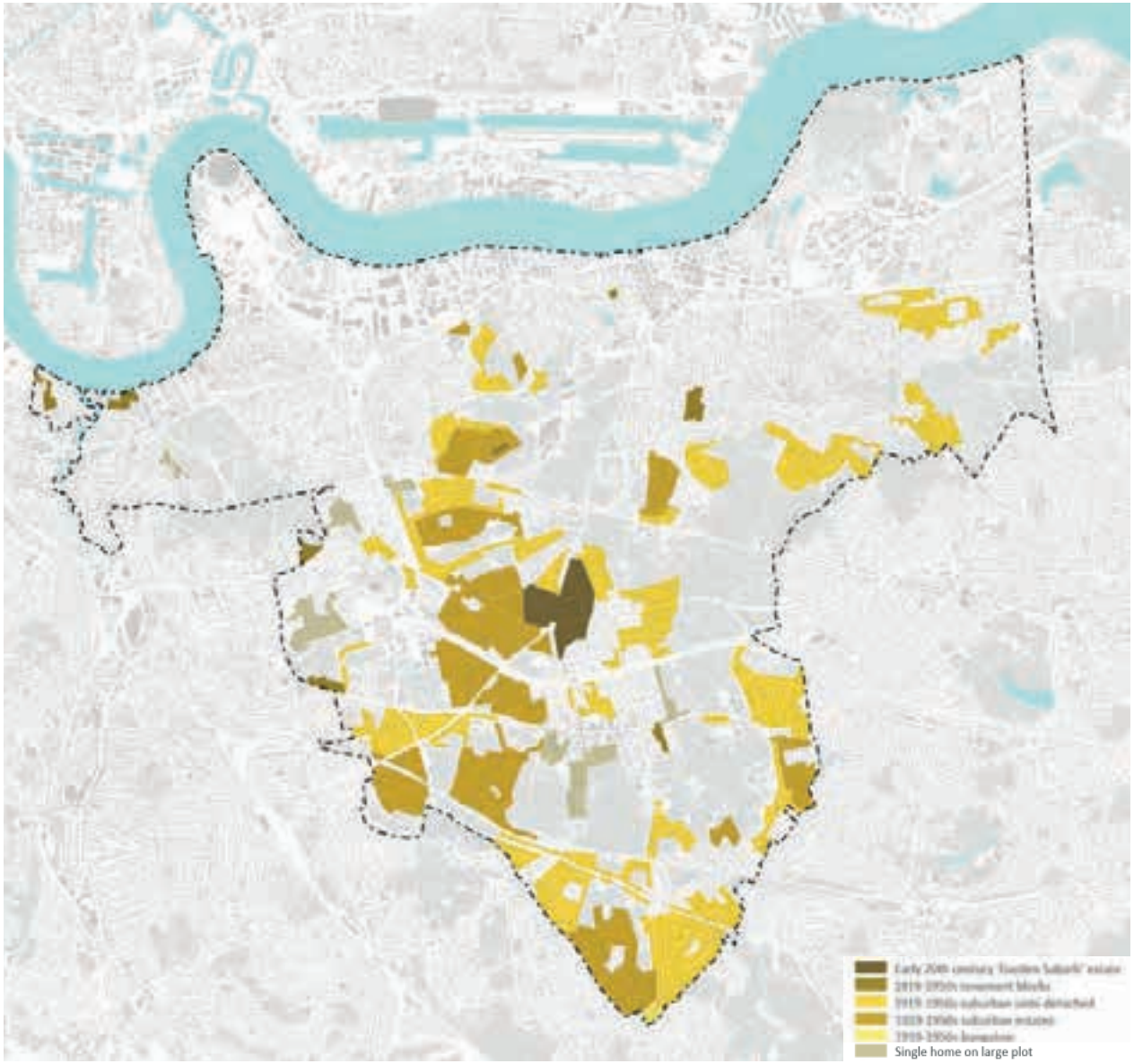


Figure 3.22: 1919-1950s housing

Early 20th Century 'Garden Suburb' Estate

Image 3.16: Garden Suburb Estate (Google street view)

This typology relates to the Progress Estate, a distinct, low-rise suburban residential area built on the Garden Suburb principles.

Typical Residential Density
26-50 Units/Ha

Typical Coherence
Highly Coherent
Broadly Coherent

Typical Sensitivity to Change
Highly Sensitive
Sensitive

Potential Intensification Strategy
Adaptation + Extension

Figure 3.23: Early 20th Century 'Garden Suburb' Estate

1919-1950s Tenement Blocks

Image 3.17: Tenement block (Google street view)

Substantial residential blocks that front the street and either enclose a courtyard space or are located within a more generous landscaped space.

Typical Residential Density
50-200 Units/Ha

Typical Coherence
Highly Coherent
Broadly Coherent

Typical Sensitivity to Change
Highly Sensitive
Sensitive

Potential Intensification Strategy
Block Consolidation / Infill
Adaptation + Extension
Additional Storey(s)

Figure 3.24: 1919-1950s tenement block

1919-1950s Suburban Estates

Image 3.18: Suburban Estate

Suburban, semi-detached homes within large development areas.

Typical Residential Density
26-50 Units/Ha

Typical Coherence
Highly Coherent
Broadly Coherent

Typical Sensitivity to Change
Varied

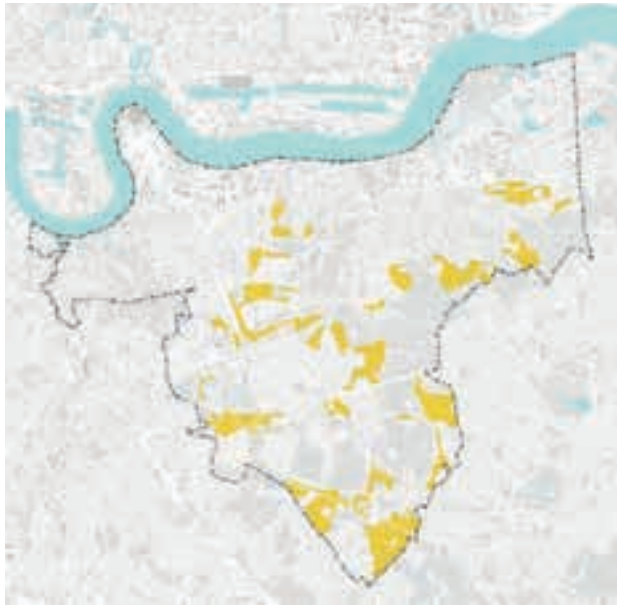
Potential Intensification Strategy
Block Consolidation / Infill
Adaptation + Extension

Figure 3.25: 1919-1950s suburban estate

1919-1950s Suburban Semi-Detached

Image 3.19: Suburban semi-detached (Google street view)

Small suburban residential properties usually arranged as part of a terrace.



Typical Residential Density
0-50 Units/Ha

Typical Coherence
Highly Coherent
Broadly Coherent

Typical Sensitivity to Change
Varied

Potential Intensification Strategy
Block Consolidation / Infill
Adaptation + Extension

Figure 3.26: 1919-1950s suburban semi-detached

1919-1950s Bungalow

Image 3.20: Bungalows (Google street view)

Small, single story detached suburban homes.

Typical Residential Density
0-50 Units/Ha

Typical Coherence
Highly Coherent
Broadly Coherent

Typical Sensitivity to Change
Highly Sensitive
Sensitive

Potential Intensification Strategy
Adaptation + Extension

Figure 3.27: 1919-1950s bungalow

Single Home on Large Plot

Image 3.21: Large detached homes (Google street view)

Large detached homes on generous plots with gardens.

Typical Residential Density
0-50 Units/Ha

Typical Coherence
Highly Coherent
Broadly Coherent

Typical Sensitivity to Change
Highly Sensitive
Sensitive

Potential Intensification Strategy
Block Consolidation / Infill
Adaptation + Extension
Additional Storey(s)

Figure 3.28: Single home on large plot

RESIDENTIAL TYPOLOGIES

POST-WAR ESTATES

In the post-war period many pre-1919 homes were regarded as sub-standard and replacing them with clean, bright and innovative new homes was promoted.

Post-war housing moved away from the conventional block and plot and the street facing individual dwellings to explore different spatial arrangements that separated vehicular and pedestrian movements. These new developments also promoted communal space shared between residents over private gardens.

Post-War Estates are often a more inward looking development pattern that places buildings in space rather than to address movement routes. Development does not address or respond to the surrounding context and is often confusing or disorientating to move through. Some estates include taller elements such as point blocks, slab blocks and tower blocks. Their impact extends beyond the immediate character area and often they are located within predominantly low-rise estates.

These typologies are:

- Post-war low rise;
- Post-war slab block/mid rise;
- Post-war point blocks/towers; and
- Post-war mixed typology.

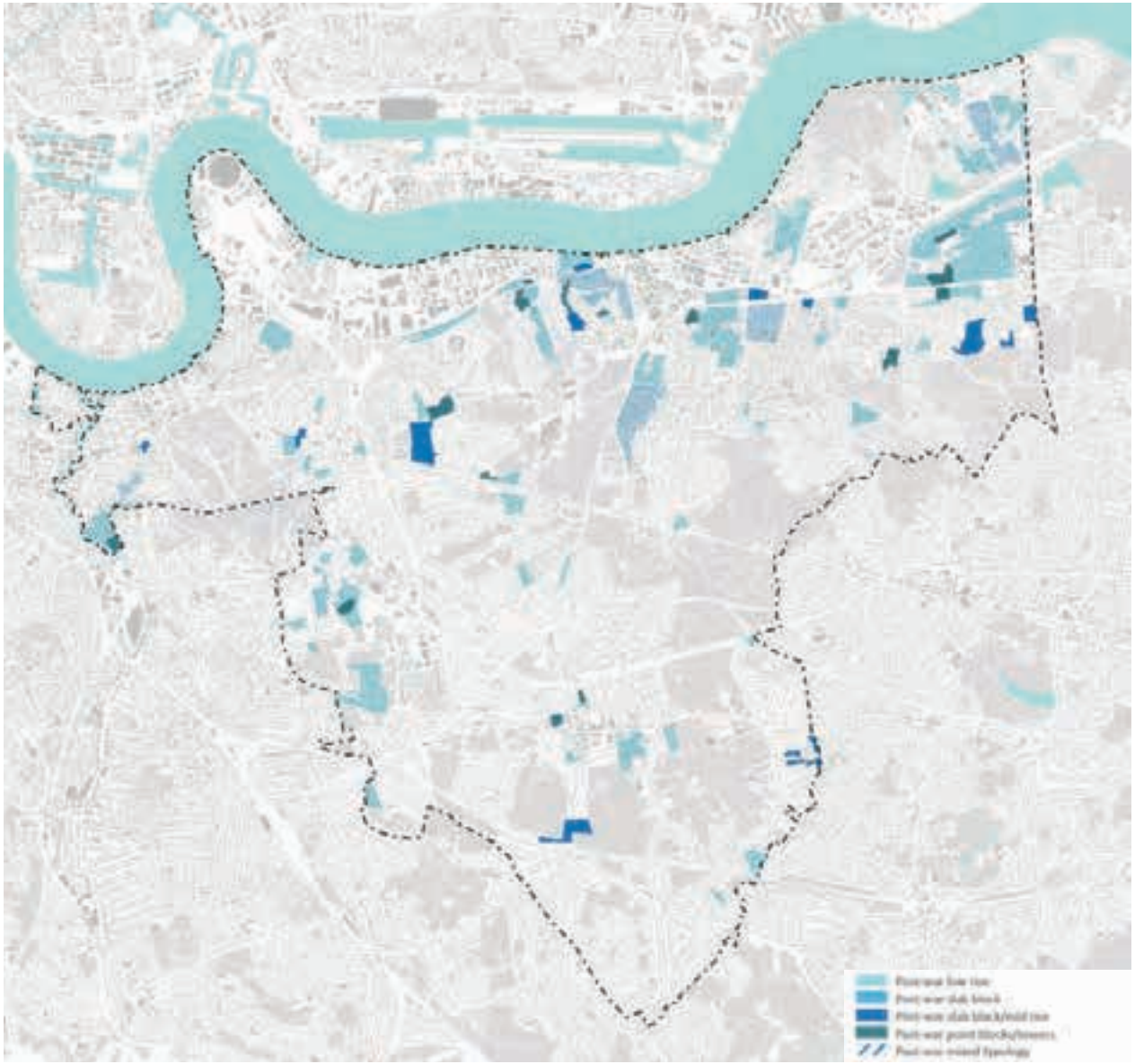


Figure 3.29: Post-war estates

Post-War Low Rise

Image 3.22: Low-rise homes (Google street view)

Residential estates developed in a range of forms in the post-war years and that are predominantly low-rise (i.e up to four stories). Provide a mix of apartment, maisonette and house typologies.

Typical Residential Density
26-50 Units/Ha

Typical Coherence
Varied

Typical Sensitivity to Change
Varied

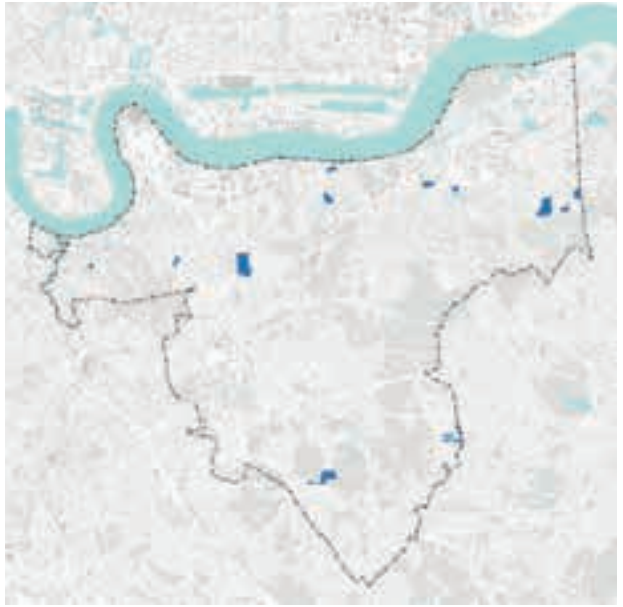
Potential Intensification Strategy
Comprehensive Redevelopment
Block Consolidation / Infill
Additional Storey(s)

Figure 3.30: Post-war low rise

Post-War Slab Block/Mid-Rise

Image 3.23: Slab block / mid rise home (Google street view)

Residential estates developed in long, slab buildings and typically up to 6 storeys in height.



Typical Residential Density
51-200 Units/Ha

Typical Coherence
Varied

Typical Sensitivity to Change
Moderately Sensitive
Low Sensitivity

Potential Intensification Strategy
Comprehensive Redevelopment
Block Consolidation / Infill
Additional Storey(s)

Figure 3.31: Post-war slab block / mid-rise

Post-War Point Block/Towers

Image 3.24: Point block (Google street view)

Post war estates developed with high rise, point block towers, typically arranged within open landscape areas.

Typical Residential Density
51-200 Units/Ha

Typical Coherence
Varied

Typical Sensitivity to Change
Moderately Sensitive
Low Sensitivity

Potential Intensification Strategy
Comprehensive Redevelopment
Block Consolidation / Infill
Additional Storey(s)

Figure 3.32: Post-war point block / towers

Post-War Mixed Typology

Image 3.25: Mixed typology (Google street view)

Post war estates developed using a mixture of building typologies and displaying no distinct or coherent character.

Typical Residential Density
76-100 Units/Ha

Typical Coherence
Moderately Coherent
Fragmented

Typical Sensitivity to Change
Moderately Sensitive
Low Sensitivity

Potential Intensification Strategy
Comprehensive Redevelopment
Block Consolidation / Infill
Additional Storey(s)

Figure 3.33: Post-war mixed typology

RESIDENTIAL TYPOLOGIES

POST 1970S/CONTEMPORARY HOUSING

By the 1970s, most of the Royal Borough had been built out. Housing development since then has been largely on smaller sites or through regeneration of existing ones. In this period, perimeter blocks fronting streets and public spaces became the norm, firstly in lower-density development of housing estates, and in the 21st century increasingly in higher-density development. In some cases, these developments integrate well with the pre-1919 urban fabric. At the same time, higher-density gated developments also emerged, often with taller tower elements. These often utilised new construction materials and methods, which often create a very different kind of urban form and experience, and one which is more difficult to successfully integrate with the historic setting of the borough.

These typologies are:

- Urban street block (low rise);
- Urban street block (high rise);
- Urban dense contemporary;
- Traveller's housing; and
- Mixed residential typology.

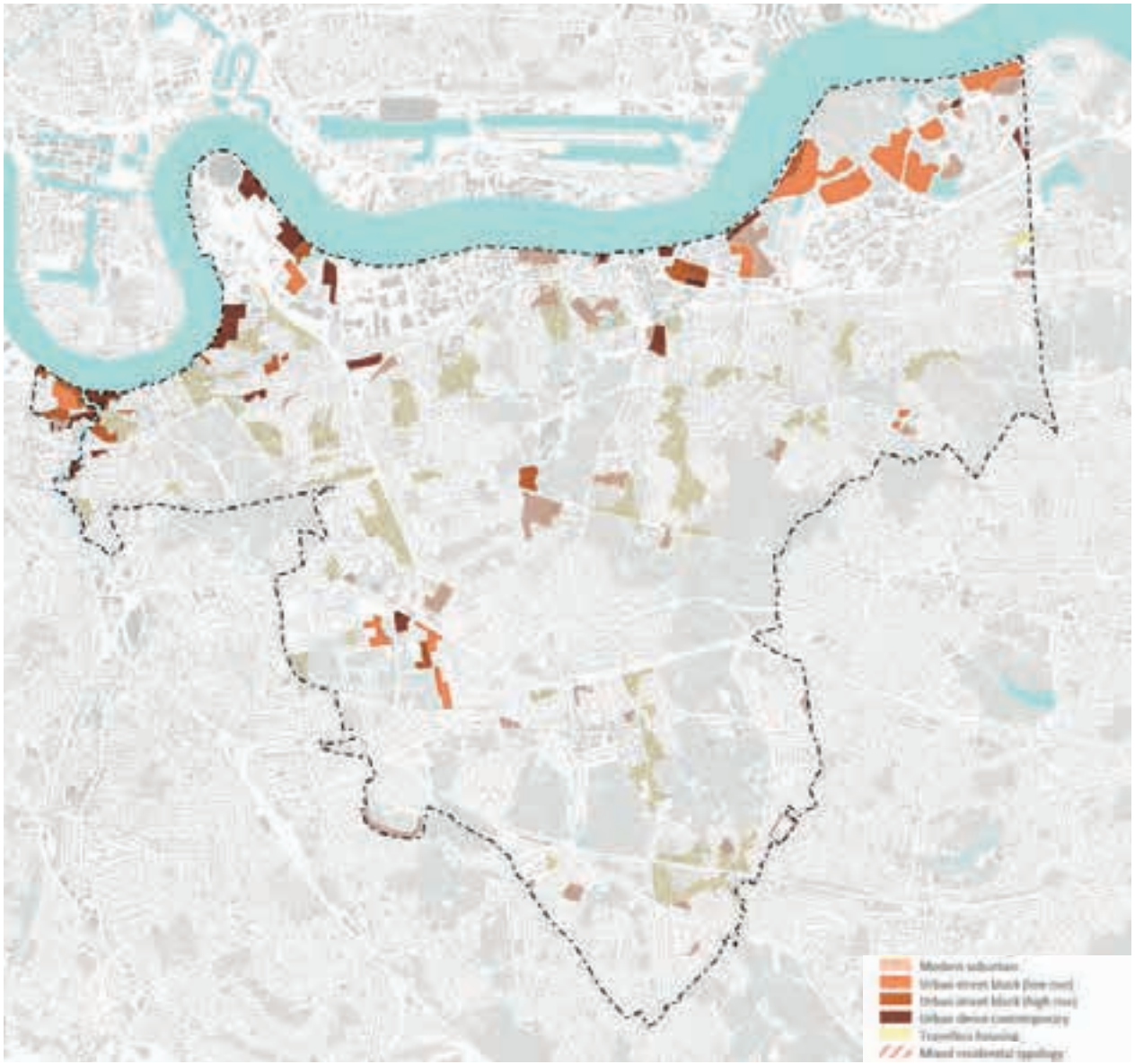


Figure 3.34: Post 1970s / contemporary housing

Modern Suburban

Image 3.26: Modern suburban home (Google street view)

Suburban housing developed post-1970s, typically displaying a mix of semi-detached and terraced homes.

Typical Residential Density
26-100 Units/Ha

Typical Coherence
Highly Coherent
Broadly Coherent

Typical Sensitivity to Change
Varied

Potential Intensification Strategy
Block Consolidation / Infill
Adaptation + Extension

Figure 3.35: Modern suburban

Urban Street Block (Low Rise)

Image 3.27: Low-rise urban street block (Google street view)

Modern housing development arranged in street-based blocks, typically up to five storeys in height.

Typical Residential Density
51-150 Units/Ha

Typical Coherence
Highly Coherent
Broadly Coherent

Typical Sensitivity to Change
Highly Sensitive
Sensitive

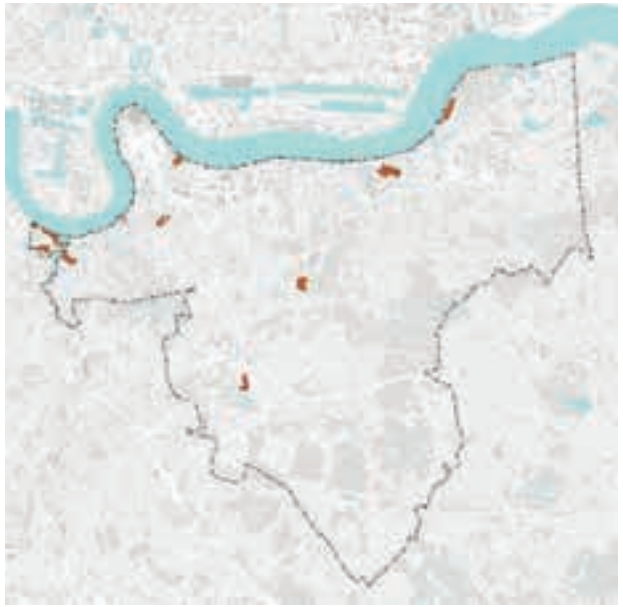
Potential Intensification Strategy
Block Consolidation / Infill
Additional Storey(s)

Figure 3.36: Urban street block (low rise)

Urban Street Block (High Rise)

Image 3.28: High-rise urban street block (Google street view)

Modern housing development arranged in street-based blocks, typically greater than five storeys in height.



Typical Residential Density
100-200 Units/Ha

Typical Coherence
Highly Coherent
Broadly Coherent

Typical Sensitivity to Change
Highly Sensitive
Sensitive

Potential Intensification Strategy
NA

Figure 3.37: Urban street block (high rise)

Urban Dense Contemporary

Image 3.29: Urban dense development (Google street view)

Residential apartment development from the past c.20 years in a high density format, often with high rise elements.

Typical Residential Density
>150 Units/Ha

Typical Coherence
Highly Coherent
Broadly Coherent

Typical Sensitivity to Change
Highly Sensitive
Sensitive

Potential Intensification Strategy
NA

Figure 3.38: Urban dense contemporary

Travellers Housing

Image 3.30: Travellers' housing (Google street view)

Purpose built sites for mobile homes and Traveller's accommodation.

Typical Residential Density
- 0-25 Units/Ha

Typical Coherence
- Moderately Coherent
- Fragmented

Typical Sensitivity to Change
- Moderately Sensitive
- Low Sensitivity

Potential Intensification Strategy
- Adaptation + Extension

Figure 3.39: Travellers housing

Mixed Residential Typology

Image 3.31: Mixed residential typologies (Google street view)

Residential areas that display a variety of different residential typologies. These areas typically contain pockets of distinct typologies, which as a whole present a highly mixed and incoherent character.

Typical Residential Density
- 0-100 Units/Ha

Typical Coherence
- Moderately Coherent
- Fragmented

Typical Sensitivity to Change
- Moderately Sensitive
- Low Sensitivity

Potential Intensification Strategy
- Block Consolidation / Infill
- Adaptation + Extension
- Additional Storey(s)

Figure 3.40: Mixed residential typology

OTHER TYPOLOGIES

Historic Conversion

Image 3.32: Converted historic building (Google street view)

Historic buildings and ensembles that have been refurbished/ redeveloped for a new use that is different to their original purpose.

Typical Residential Density
50-100 Units/Ha

Typical Coherence
Highly Coherent
Broadly Coherent

Typical Sensitivity to Change
Highly Sensitive
Sensitive

Potential Intensification Strategy
NA

Figure 3.41: Historic conversion

Historic Set Piece

Image 3.33: Significant historic building (Google street view)

A purpose built/planned ensemble of significant historic buildings with a special role and function.

Typical Residential Density
0-150 Units/Ha

Typical Coherence
Highly Coherent
Broadly Coherent

Typical Sensitivity to Change
Highly Sensitive
Sensitive

Potential Intensification Strategy
NA

Figure 3.42: Historic set piece

OTHER TYPOLOGIES

Infrastructure

Image 3.34: Infrastructural site (Google street view)

Specialist, physical infrastructure necessary for the functioning of the Borough. Typically these sites are inaccessible and act as barriers within the urban fabric.

Typical Residential Density
NA

Typical Coherence
NA

Typical Sensitivity to Change
NA

Potential Intensification Strategy
Comprehensive Redevelopment
Block Consolidation / Infill
Additional Storey(s)

Figure 3.43: Infrastructure

Vacant

Image 3.35: Vacant site (Google street view)

Urban brownfield sites that are currently vacant and in need of regeneration. Typically empty or containing out of use or dilapidated structures.

Typical Residential Density
NA

Typical Coherence
NA

Typical Sensitivity to Change
NA

Potential Intensification Strategy
Comprehensive Redevelopment
Block Consolidation / Infill
Additional Storey(s)

Figure 3.44: Vacant

Image 3.36: Public park

Image 3.39: Cemetery

Image 3.42: Agricultural / plant nursery

Image 3.37: Sports pitch / playing field

Image 3.40: Historic garden

Image 3.43: Allotments

Image 3.38: Golf course

Image 3.41: Nature reserve

Image 3.44: Woodland

GREEN SPACES

A large proportion of RB Greenwich is covered in green open spaces of a variety of functions and characters. This study identifies eleven green space character typologies:

- Public park
- Private open space
- Urban green space/naturalistic
- Sports pitch/playing fields
- Golf course
- Cemetery
- Historic garden
- Nature reserve
- Agricultural/plant nursery
- Allotments
- Woodland

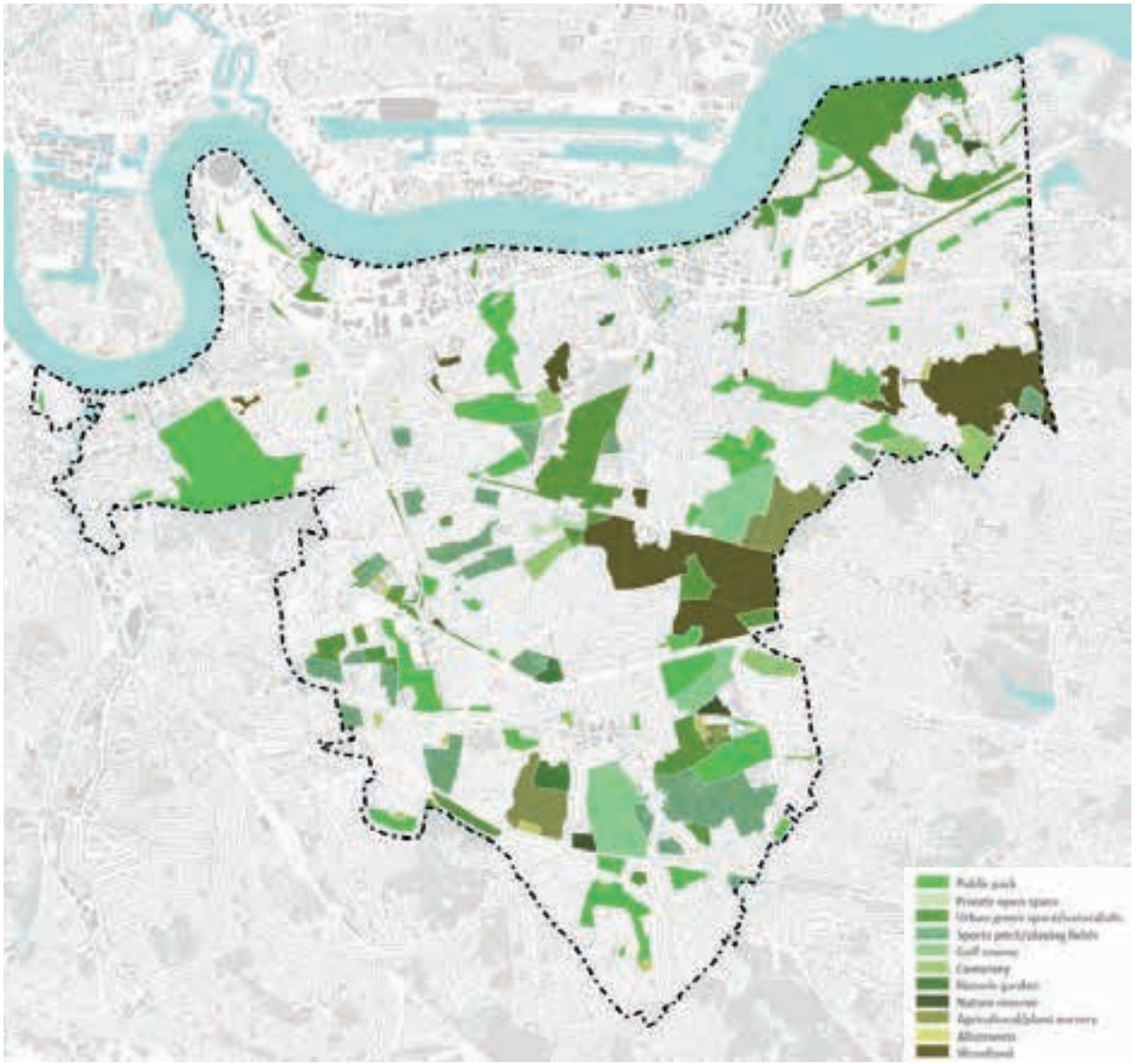


Figure 3.45: Green Spaces

Image 3.45: Broadly Coherent area in Abbey Wood

2.8 TYPOLOGICAL ASSESSMENT

INTRODUCTION

As part of the character typology analysis each typological area was assessed in respect of its coherence and its sensitivity to change. Whilst common typological areas share many built environment characteristics, they may still differ from each other in respect of the quality of the environment, the coherence of its character elements and ultimately the strength and distinctiveness of their character.

COHERENCE

The measure of coherence is based on a qualitative assessment of the consistency of character features in the built environment including the pattern and layout of development, the typology, the orientation, form, architecture, appearance, materiality and colour treatment of buildings, the massing, height and roof form, the mix of uses, the organisation of gardens and communal spaces, the landscape elements and tree-planting, the interface design between buildings and the street, and the quality and coherence of the public realm.

Four degrees of coherence are identified and explained on the following pages.

The measure of coherence at the level of a character typology is a simple and effective means to differentiate between areas of stronger and weaker character and informs the recommendations of this study on the type of change that would be appropriate.

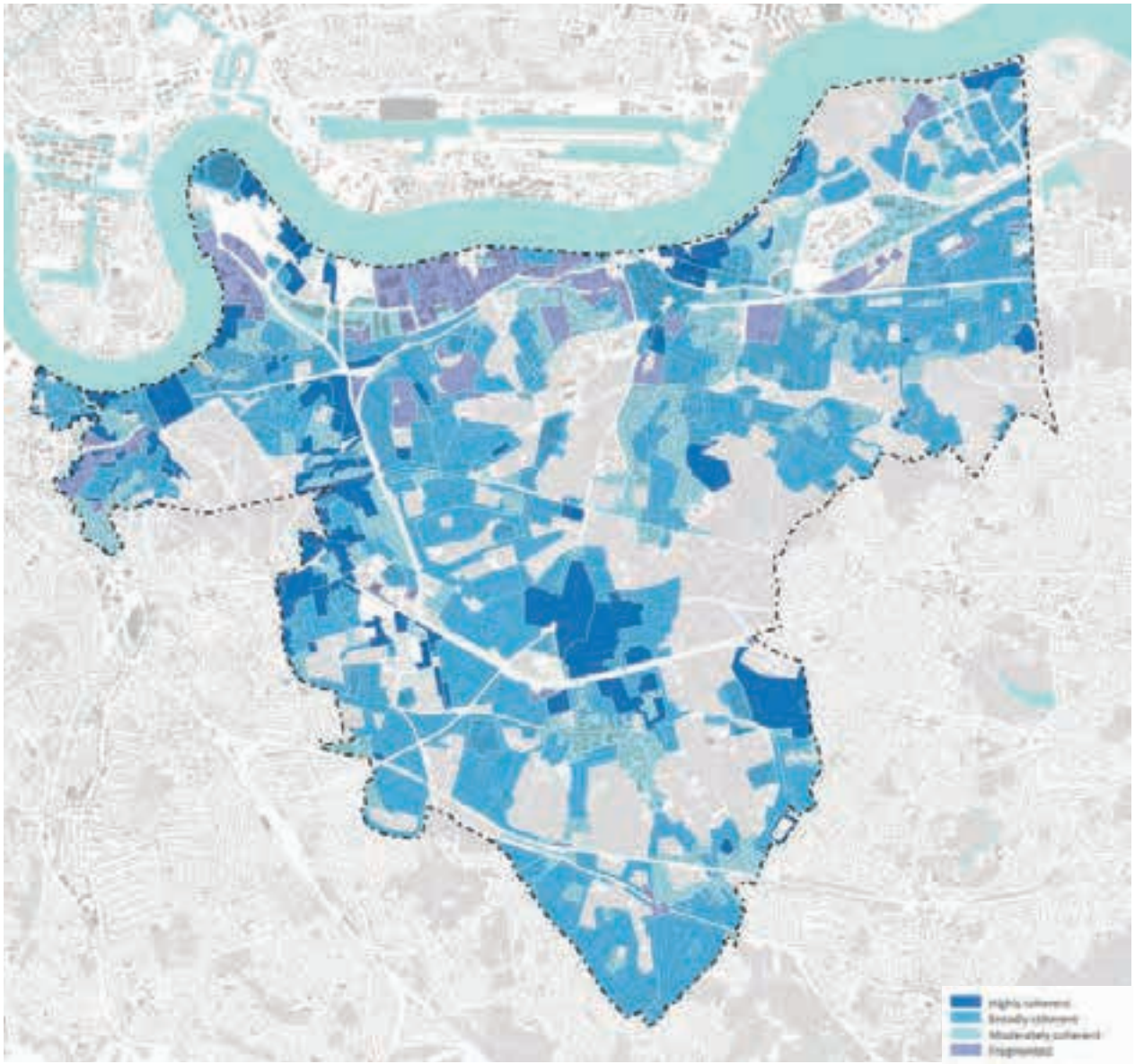


Figure 3.46: Coherence

Highly Coherent

Image 3.46: Residential area with high coherence

A harmonious interplay of a highly consistent set of character features with a strong level of distinctiveness.

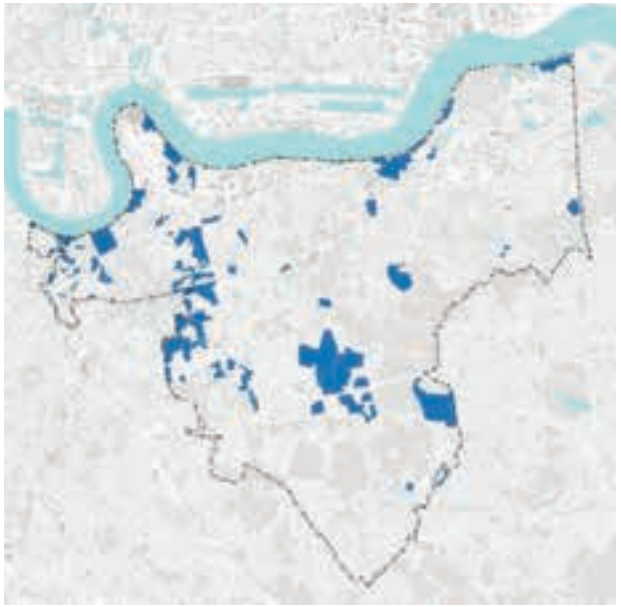


Figure 3.47: Highly coherent

Broadly Coherent

Image 3.47: Residential area that is broadly coherent

Prevailing level of consistency of principal characteristics such as the height and massing of buildings, the typological mix and the spacing between buildings, but with some minor variations or exceptions, or more variation in or a lesser quality of the street space and building interfaces.

Figure 3.48: Broadly coherent

Moderately Coherent

Image 3.48: Moderately coherent area

Figure 3.49: Moderately coherent

Buildings broadly express common characteristics in respect of their relationship to the street, the broad level of enclosure they offer to the street with some variation in height, but there is notable variation in building typologies, architecture, roof-form, interface design and an overall less coherent street scene. Areas in this category often have seen development over a prolonged period of time, creating an assemblage of building typologies from different periods, or they are the result of significant and insensitive alterations to a previously more coherent building stock. In some areas a redeeming feature is the coherence of the public realm that prevents them from slipping into the next category of fragmented area.

Fragmented

Image 3.49: Fragmented area

Figure 3.50: Fragmented

Areas that largely lack common character features, comprising of buildings of different scale, form and use, varying building lines and orientation, displaying little coherence at the street interface. The quality of the street space will have a bearing on the overall sense of fragmentation in these areas. Regular tree planting, landscaping and a quality public realm can act as significant remediating features. However, fragmented areas often also suffer from a poor street design that exacerbates their fragmented character.

Image 3.50: The Royal Arsenal, Woolwich is highly sensitive to Change

SENSITIVITY TO CHANGE

The second qualitative assessment undertaken during the typological analysis was to determine the level of sensitivity of a character area to change. Change here was considered as an intervention that departs from the prevailing characteristics of an area.

In areas with greater sensitivity to change even a small change may be harmful to the coherence of a character area. Conversely in areas with low sensitivity substantial change may not have an adverse impact on the coherence of character areas or indeed may help or be necessary to enhance it.

In many places the sensitivity to change relates closely to the level of coherence but not always. Some areas may display reasonable levels of coherence in their character, for example an industrial estate or a post-war housing area, however they may not be very sensitive to change, or often change may be welcome or needed to improve these areas.

Four degrees of sensitivity are identified and are explained on the following pages.

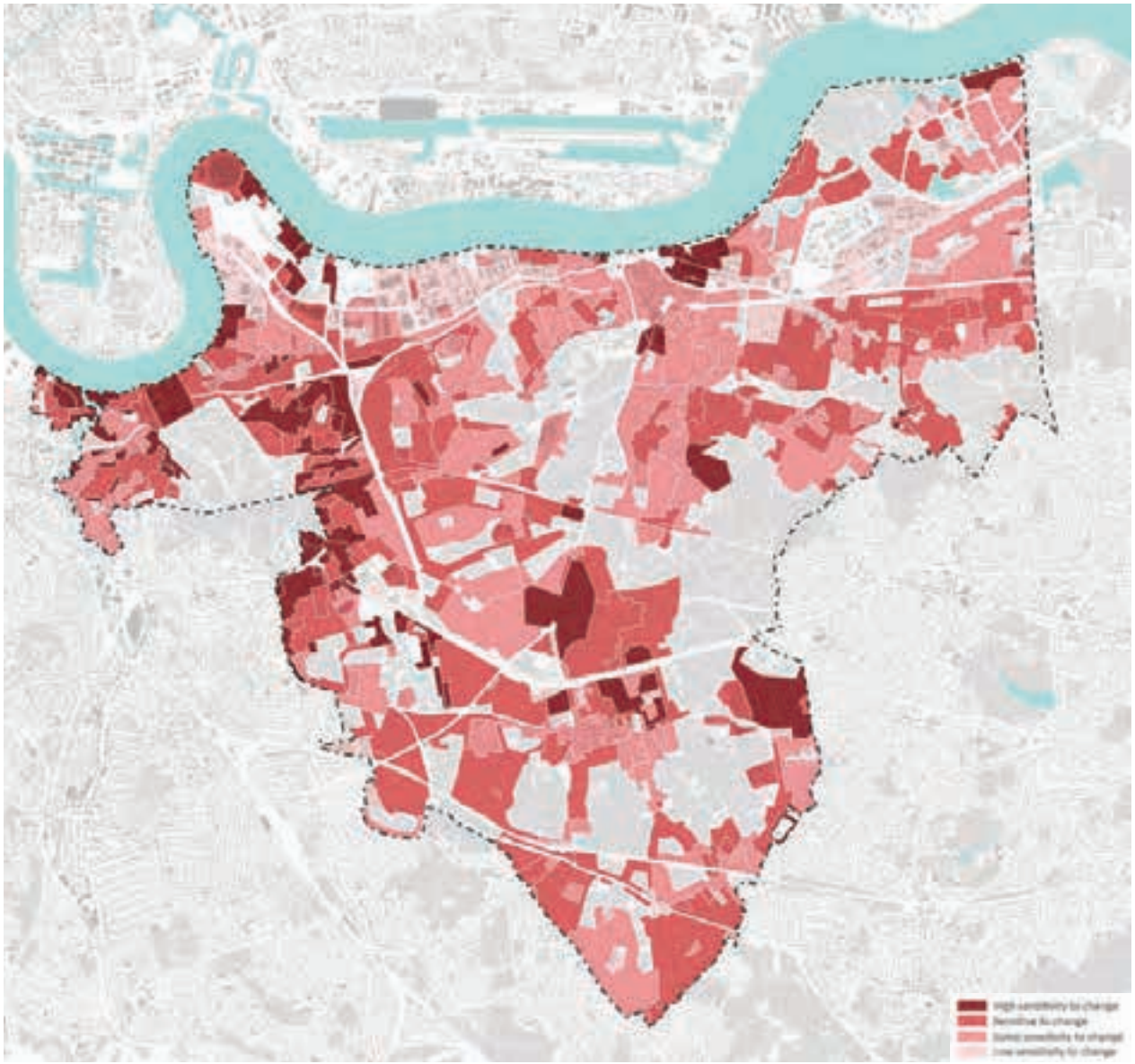


Figure 3.51: Sensitivity

Highly Sensitive to Change

Image 3.51: Residential area that is highly sensitive to change

The high level of coherence of an area means that even a small departure from the set of common character features, for example by notable changes in roof form, bulk or colour of a building, may stand out, detract and harm the overall coherence of a character.

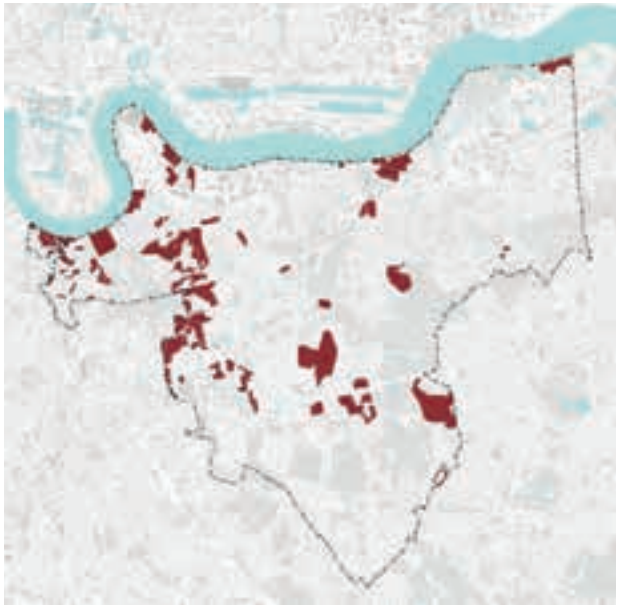


Figure 3.52: Highly sensitive to change

Sensitive to Change

Image 3.52: Residential area that is sensitive to change

The broad levels of coherence in these areas are valued parts of the character. Change that goes notably against the grain, for example a local and unprecedented increase in building height or a building set away from the common building line, would be damaging to the coherence of a character, whilst changes to minor aspects of the façade, appearance, detailing, interface design or extensions to the rear to buildings may have a lesser impact and can be assimilated by the overall character of an area.

Figure 3.53: Sensitive to change

Some Sensitivity to Change

Image 3.53: Residential area somewhat sensitive to change

Figure 3.54: Some sensitivity to change

The character in these areas is often less coherent or, despite coherence, their character may not be as sensitive to larger scale change. The type of change that may be acceptable in moderately sensitive area cannot be generalised and will depend on the actual characteristics of an area, but it may include (moderate) increases in height, the replacement of smaller buildings with larger buildings, or more structural changes in the built form, affecting openness of character and the position of buildings in the street space. Some areas identified in this category may be affected by other issues that detract from their character, such as traffic or poor levels of surveillance, and in effect would benefit from enhancement or more radical intervention.

Low Sensitivity to Change

Image 3.54: Area with low sensitivity to change

Figure 3.55: Low sensitivity to change

These areas are often fragmented or places where, for other reasons, change would be welcome. An area identified as having low sensitivity to change is often an indicator that they should be targeted for significant improvements or intensification.

2.9 A CHARACTER LED APPROACH TO CHANGE

In line with London Plan this study policy promotes an approach to growth that looks at the capacity of areas to accommodate different levels of change in respect of their character, public transport accessibility, density and other strategic considerations (such opportunity and regeneration objectives).

Based on the measures of coherence and sensitivity and through individual review of typological areas the character study provides recommendations on a character led approach to development, enhancement and intensification for each character typology area.

It identifies three principal approaches to urban change:

1. Transformation and Placemaking

2. Transition

3. Reinforcement

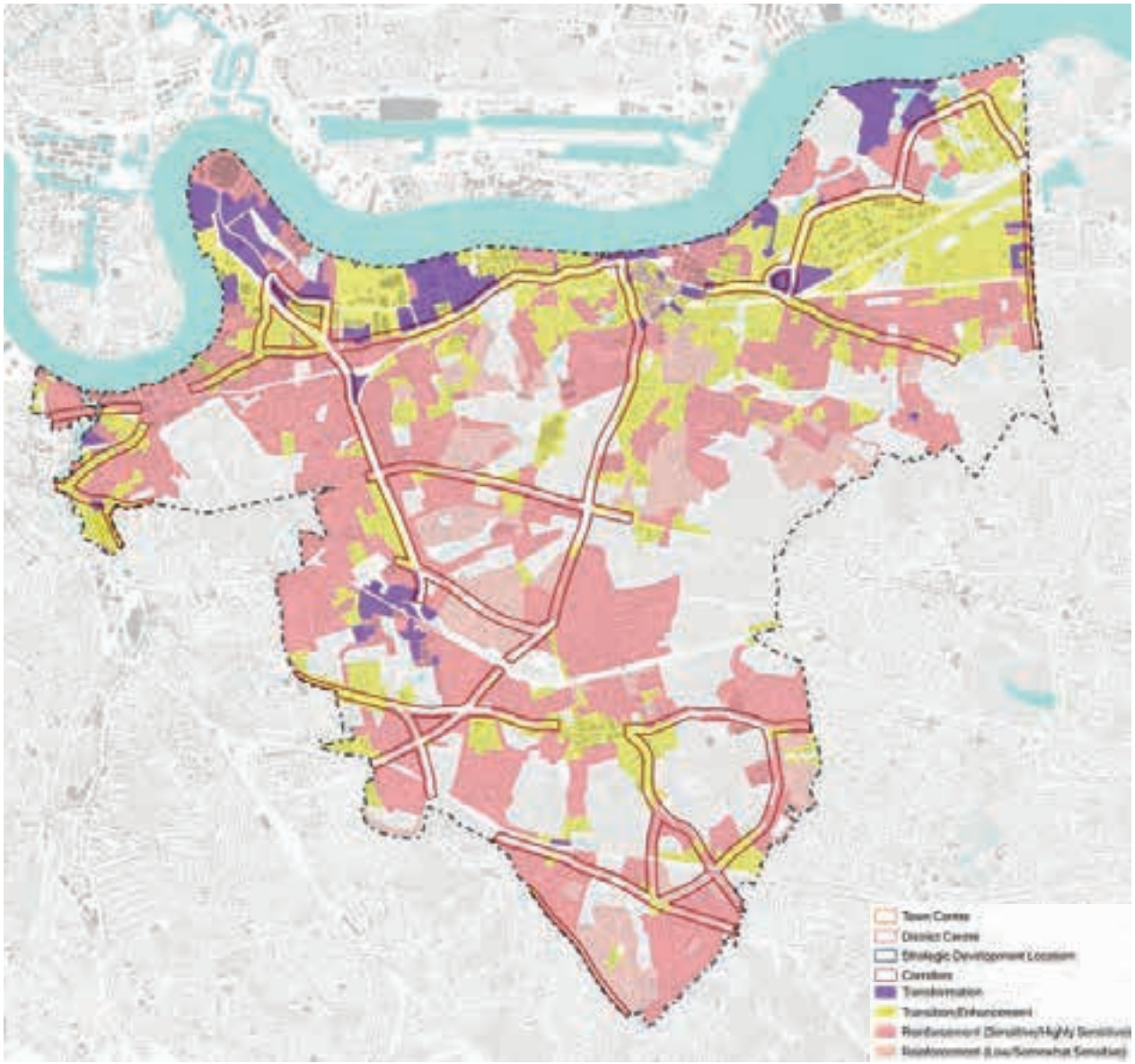


Figure 3.56: Intensification strategy

Transformation and Placemaking

The Transformation and Place Making Approach targets areas identified for transformational change, such as regeneration or redevelopment areas. Typically these area have many vacant or underused sites, have low character sensitivity, often are fragmented and have little heritage significance. Change in these areas will be expected to deliver a place making approach and establish a new character in its own right. This process cannot happen in isolation but must be driven through engagement with a wide range of stakeholders that establishes a vision and approach to development. Often this requires a masterplan led approach to development.

Image 3.55: Transformation and placemaking (Example from outside Royal Borough of Greenwich)

Transition

The Transition Approach targets areas that would benefit from a greater degree of change and often comprise substantial opportunities for intensification. This category covers a wide range of areas including centres where change could help to increase density in response to higher PTAL, areas of poor urban design or weak character (such as in many of the post war housing estates), where change could enhance the area or bring greater levels of coherence, or on road corridors where development could bring more appropriate development forms and intensification. The character study provides area specific high-level guidance for change in transition areas within each place. Some of the identified areas may be in single ownership, such as in housing estates, and change here is likely to be guided by a comprehensive approach to estate renewal. In other places there are opportunities for incremental change by different owners and developers that bringing forward smaller sites.

Image 3.56: Transition (Example from outside Royal Borough of Greenwich)

Reinforcement

The Reinforcement Approach focuses on areas that have already a broadly or strongly coherent character, and development here should aim to enhance or strengthen existing characteristics and fit in. In these areas this may mean development should be highly contextual. Some moderately coherent areas are also included in this category. Here the scope for change may be a bit broader whilst retaining important structuring characteristics of this area.

Opportunities for change are described for each place, making reference to these three categories and identifying place specific principles and sensitivities to be considered by development.

Image 3.57: Reinforcement (Example from outside Royal Borough of Greenwich)

INTENSIFICATION STRATEGIES

A number of different strategies for intensification are identified that may be applied to bring urban change. These are:

Comprehensive redevelopment – this includes the holistic redevelopment of larger sites often in single ownership, such as large brownfield sites, institutional redevelopment sites, estate redevelopment and other large vacant site. This approach is principally appropriate in transformation and place making areas and will need to be led by a masterplan and visioning process undertaken with stakeholders and the community.

Infill and block consolidation – this comprises the infilling of vacant or under used sites, such as open corners, gap sites, surface car parks or garage sites. It also can include the selective redevelopment of parts of a street block, sometimes involving demolition. This approach will not only deliver intensification but also can help to

repair the urban fabric and enhance the definition of streets and spaces, which is particularly pertinent in some postwar housing estates. This strategy can also be applied in areas such as high streets or corridors where there may be the opportunity to redevelop older low value terraced or semi-detached housing with apartment buildings that can better respond to the context and make better use of a site. This approach can be suitable for both the transition or reinforcement of character. Interventions can be undertaken by larger landowners for example in estate regeneration or on smaller individually owned sites.

Adaptation + extension – this approach works with existing buildings and adapts and extends them for a new use, to deliver additional space or new homes. This can include the addition of a storey to a post war slab block or the upward extension to an individual house, as well as side or rear extensions. This approach can be applied both for the transition or reinforcement of character, although the scope for change may differ subject to the sensitivity of areas to change. Usually this approach is undertaken by individual landowners or householders and should be guided by clear design principles that reflect the characteristic and coherence of an area.

The separate RB Greenwich intensification study that complements this report provides more detail on typical approaches for intensification in the Royal Borough including example projects. It provides examples and more detail on the different means of interventions by which change and intensification can be delivered and what are common constraints and opportunities. The purpose of the intensification study is to provide principle solutions that can inspire change and highlight opportunities and benefits of different intensification approaches.

For each place the character study provides an overview on where transformation, transition or reinforcement approaches can take place and provides area or typology specific recommendation on the type of change that may be appropriate as well as specific sensitivities that will need to be considered by development.

Image 3.58: View from Charlton riverside

Character typology key as reference to be used for all diagrams with character typologies

3 WEST DISTRICT

The West District is the home of the Greenwich Park and Observatory, the Cutty Sark and the old town of Greenwich with its popular market. It also includes the major growth area of Greenwich Peninsula with the O2 Arena and the industrial riverside of Charlton, which is targeted for transformation.

This section comprises two parts. The first part presents a profile of the 'district' as a whole in terms of its urban structure, community, heritage, environment, infrastructure and density. The second part defines the specific 'places', details their character, and examines their capacity and opportunity for further development.

Image 4.1: Greenwich Market

3.1 PROFILE OF THE DISTRICT

The West District comprises the wards of Greenwich West, Peninsula, and Blackheath Westcombe in full, as well as parts of Woolwich Riverside, Charlton and Kidbrooke with Hornfair. Accordingly it is covered by the Greenwich and Woolwich & Thamesmead Area Planning Committees, and includes Greenwich town centre, the historic open spaces of Greenwich Park and Blackheath, residential Conservation Areas citywide amenities such as the O2 arena and The Valley football stadium, major transport infrastructure including Blackwall Tunnell, and dockside regeneration areas along most of its river frontage. While the district is the borough's most densely developed and accommodates the widest range of land uses, its extensive industrial areas are undergoing a long-term process of regeneration for mixed-use development.

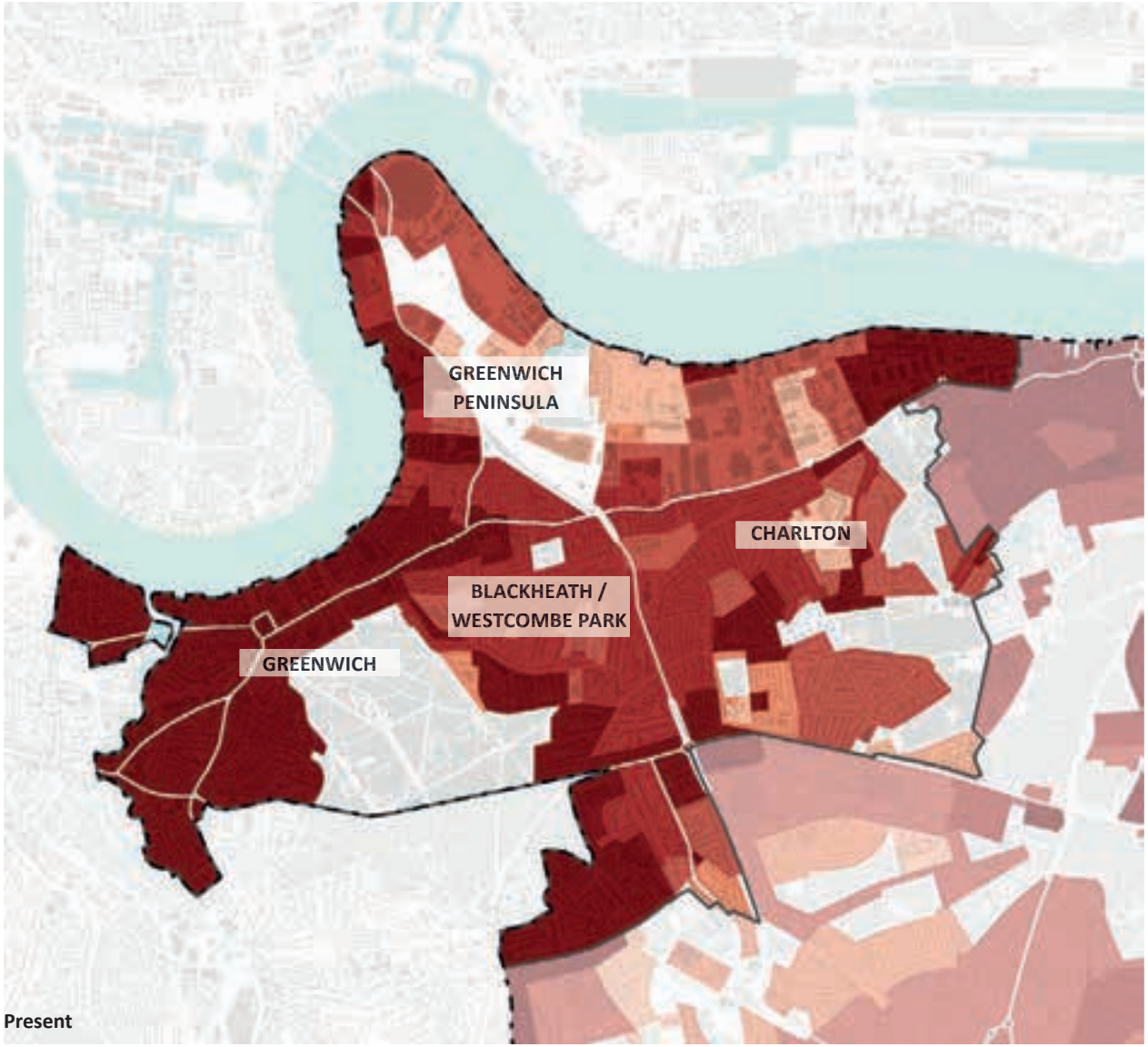


Figure 4.1: West District - Historic Development

HISTORICAL DEVELOPMENT

The West District initially developed on its Thames waterfront at Greenwich and Woolwich. In the Georgian era Greenwich gained its Royal Hospital and the commercial artery of Church Street, while Woolwich extended its dockyards. Inland private estates were established at Charlton Park, Westcombe and Blackheath, with extensive woodlands around Charlton. In the 19th century, a network of railway lines extended eastwards from Greenwich, while the marshland of the Greenwich Peninsula was industrialised and the first Blackwall Tunnel constructed (1897). Terraced housing for workers was constructed to the north of the district, while grander residential suburbs were laid out to the south. In the 20th century the district suffered heavy war damage. Postwar, extensive areas were cleared and redeveloped for a series of modernist housing estates, with major new road infrastructure and flood protection. Later, the Docklands Light Railway and Jubilee Line Extension integrated the district with the docklands regeneration cross-river. In the early 21st century, this process has accelerated with the comprehensive regeneration of riverfront sites (particularly on the peninsula), extensive estate regeneration inland, and major new infrastructure including Crossrail soom to arrive at Woolwich.

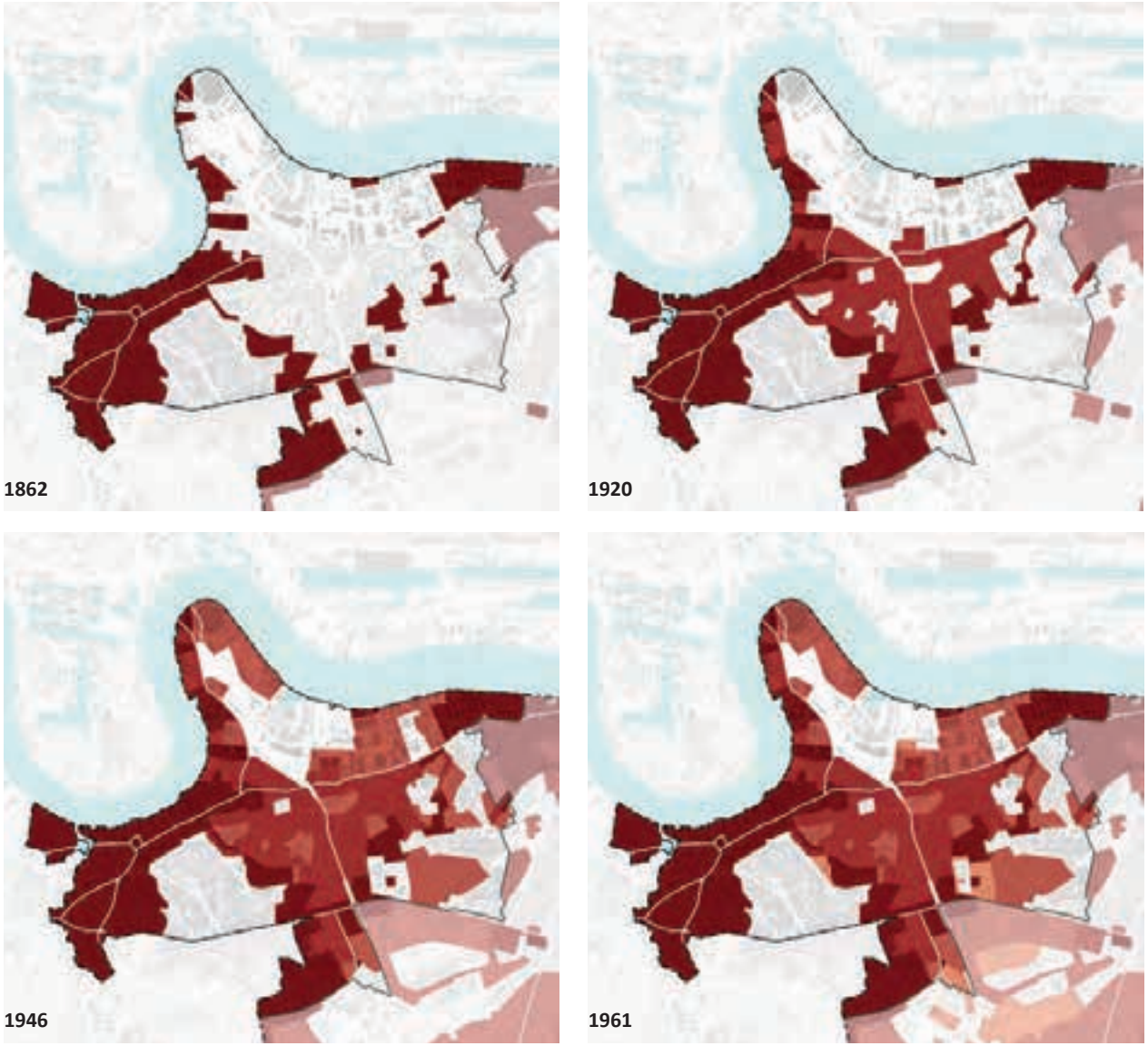


Figure 4.2: Historical development

PEOPLE

The accompanying plans illustrate how household formation differed across the district when last measured in the 2011 Census. In Deptford Creek young adults predominated, Greenwich was largely middle-aged, and the areas of Charlton, Hornfair and Woolwich mainly accommodated families with children.

The 2017 Joint Strategic Needs Assessment (JSNA) predicted over 25% increase in the population of the borough as a whole by 2026, with the greatest increase concentrated in Peninsula ward (103%), an area of major redevelopment and regeneration.

The borough as a whole is highly multicultural, though the 2011 Census found the district varied spatially in terms of ethnic diversity. Central parts of Greenwich, Blackheath and Westcombe were predominantly White British, while most of the rest of the district was highly diverse with over half of the population of Black, Asian or Minority Ethnic (BAME) background—particularly in Deptford Creek, Peninsula ward, and parts of Woolwich, Charlton and Hornfair.

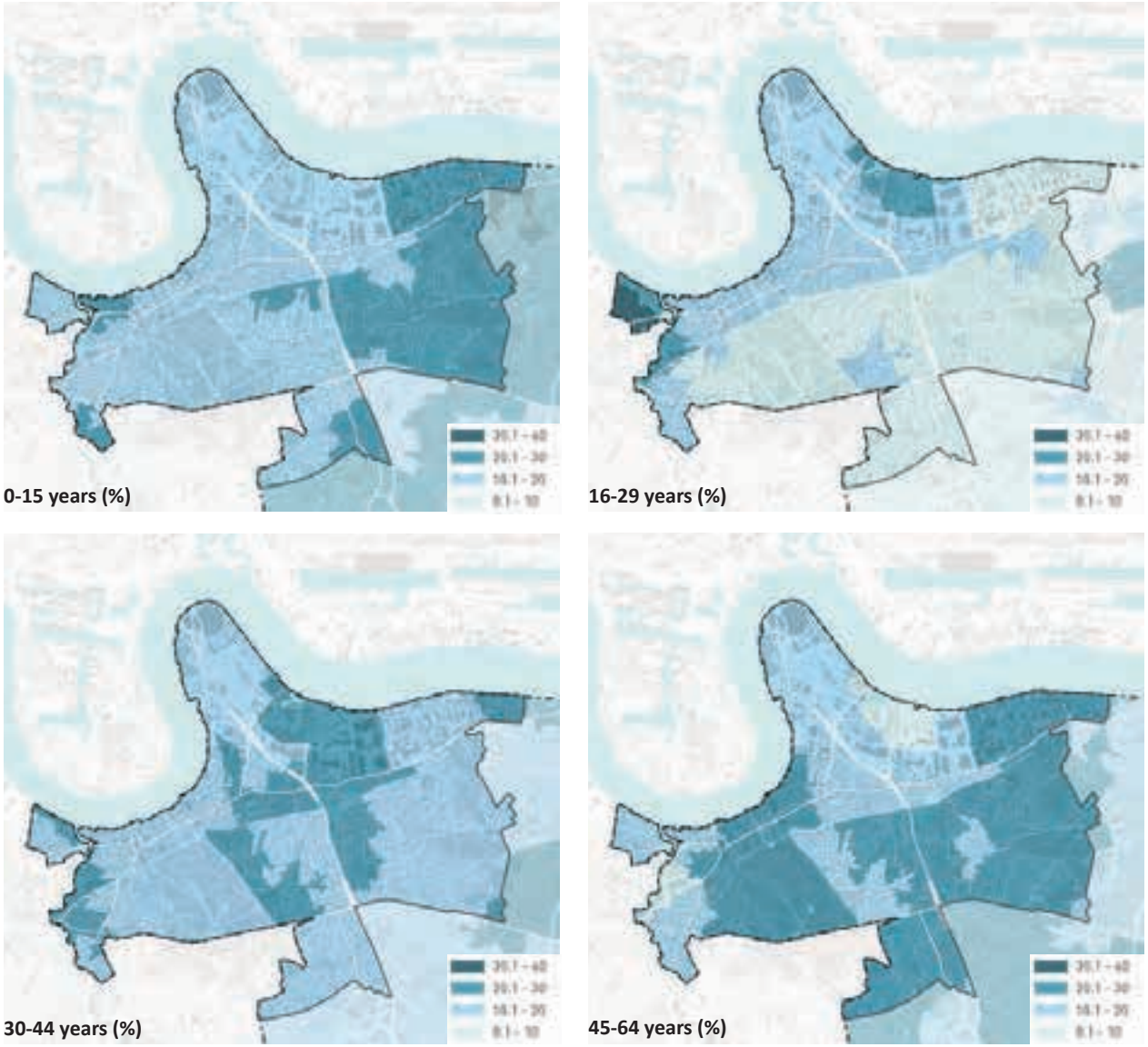


Figure 4.3: Population age

The 2011 Census also found that residential tenure varied considerably across the district, though in a different pattern. Social and private rented tenures predominated in all the riverside areas, much of which has been redeveloped since the millennium, as well as inland in the older housing stock towards the east of the district in Charlton and Hornfair. Elsewhere inland, from Greenwich to Kidbrooke, home ownership predominated, with a particularly high concentration of outright ownership in Kidbrooke.

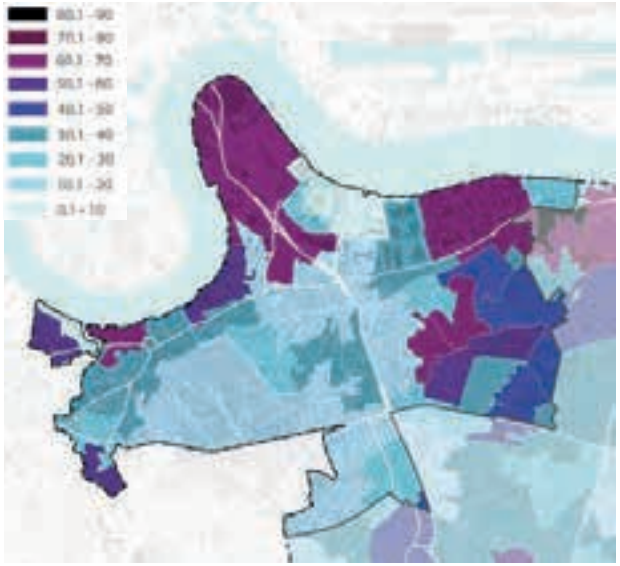


Figure 4.5: Tenure social rented (%)

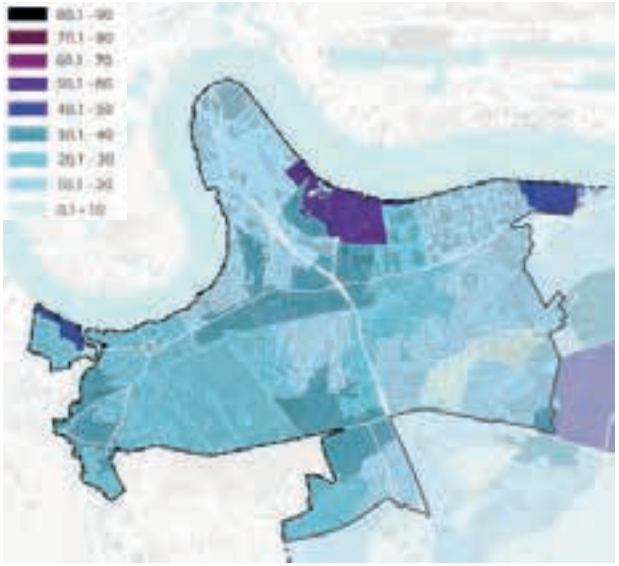


Figure 4.6: Tenure private rented (%)

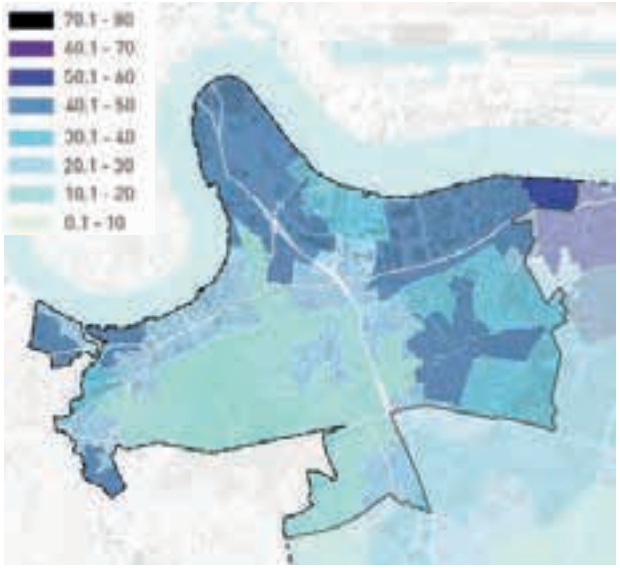


Figure 4.4: Ethnic Diversity

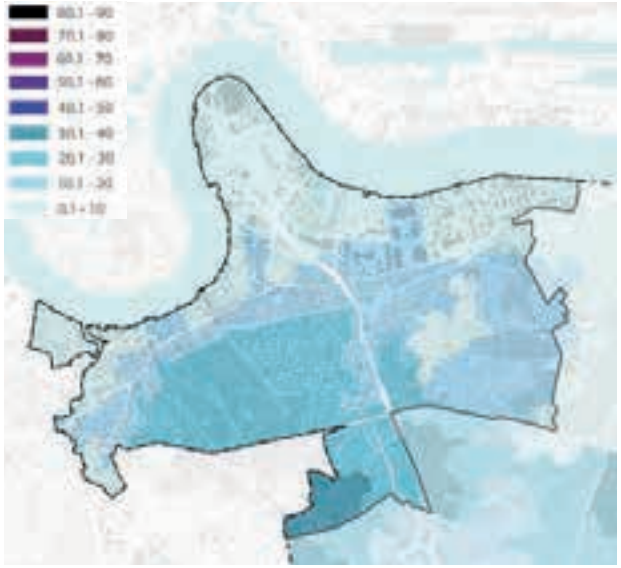


Figure 4.7: Tenure owned with loan or mortgage (%)

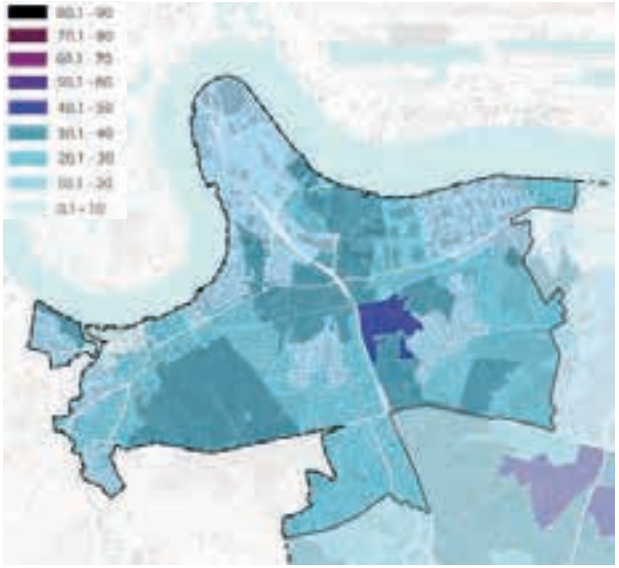


Figure 4.8: Tenure owned outright (%)

SOCIETY

Life expectancy and healthy life expectancy in the borough generally are both significantly shorter than the national average for both women and men, whilst the general fertility rate is significantly higher than the English and London averages. Spatially, the 2011 Census found health outcomes to be highly localised, with particular concentrations of people with poor health in the centre and east of the district in parts of Peninsula, Charlton and Woolwich Riverside wards. This pattern coincides partly with the findings of the 2019 English Indices of Deprivation, which indicated that extensive areas of the same wards are amongst the 20% most deprived in the country.

Education and employment outcomes are spatially distributed in a comparable way. The 2011 Census found that areas to the south and west of the district had significantly higher concentrations of educational attainment, while areas to the north and east had somewhat higher concentrations of unemployment.

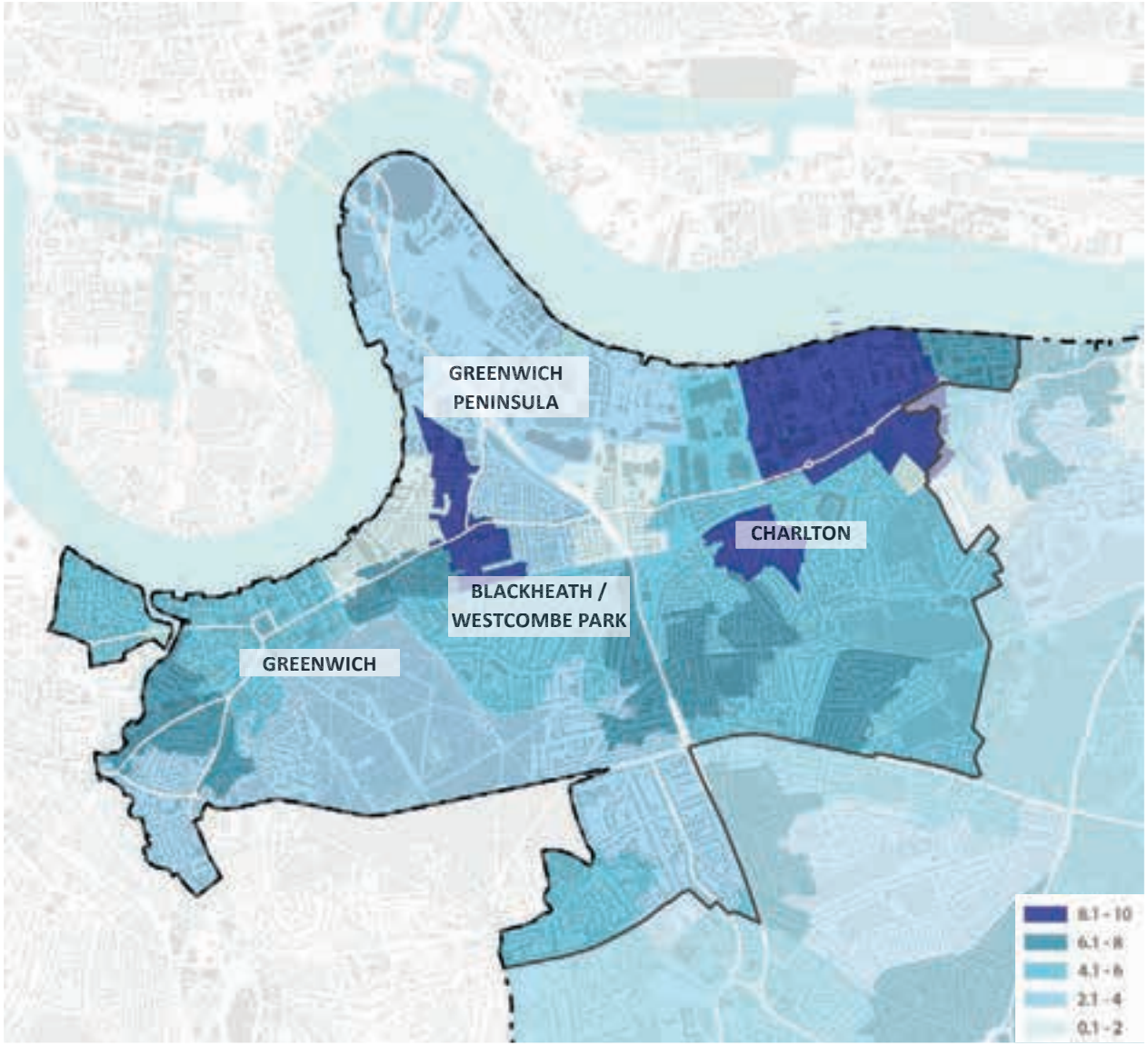


Figure 4.9: % Bad or Very Bad Health

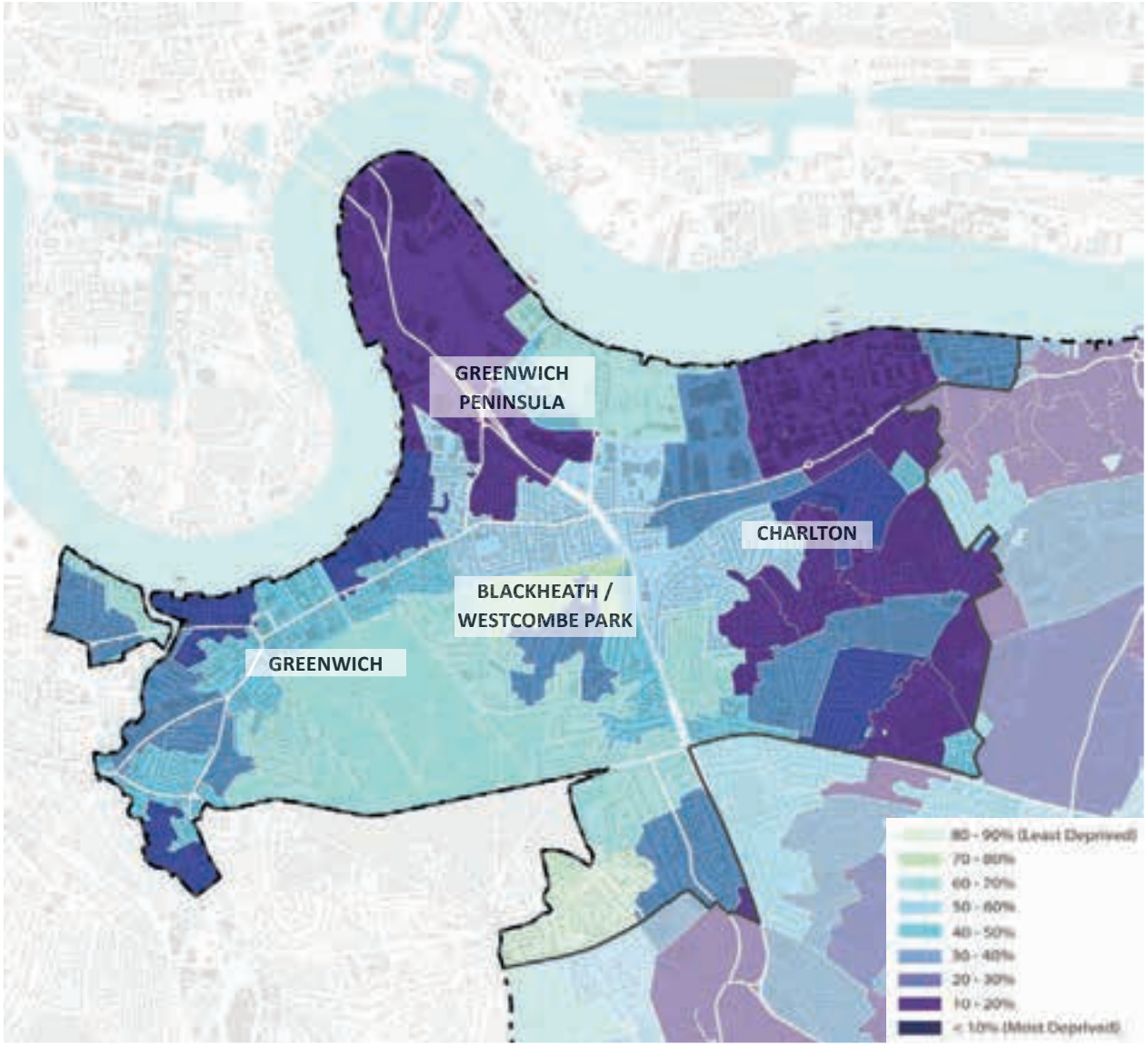


Figure 4.10: Deprivation

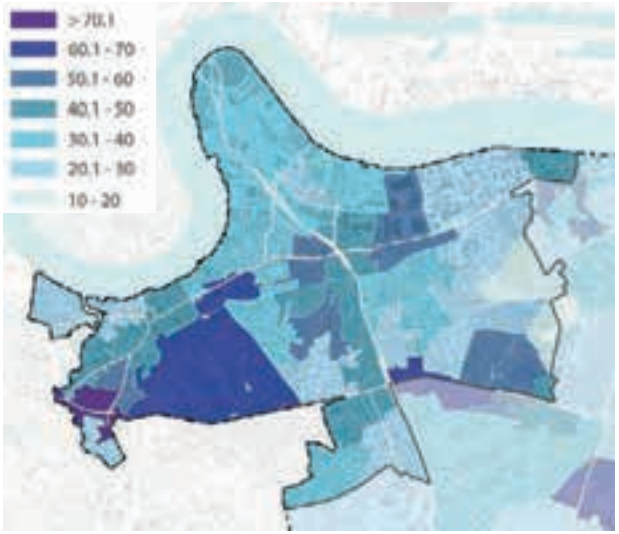


Figure 4.11: % Qualification Level 4+

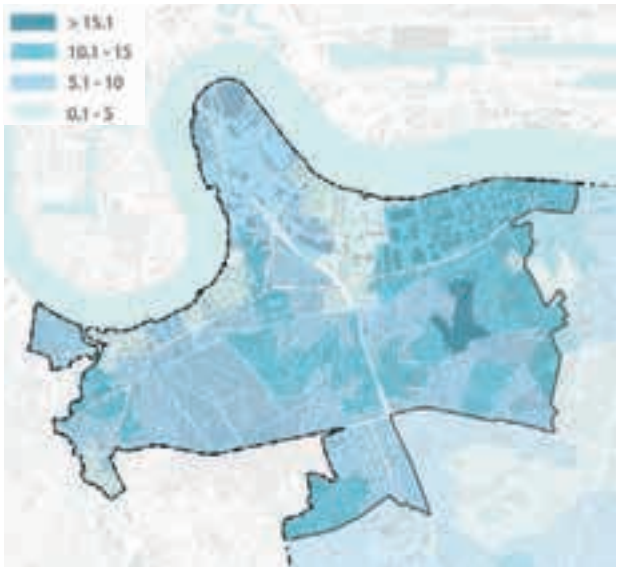


Figure 4.12: Unemployment rate

STRUCTURE

The West District is strongly shaped by its topography. The areas north and west of Greenwich Street / Trafalgar Road / Woolwich Road (A206) are all low-lying within the floodplains of the Thames and Ravensbourne Brook. Historically this was extensive marshland; to the west grew the settlement of Greenwich with its commercial centre and tight residential terraces, whereas Deptford Creek, the Peninsula and Woolwich were initially developed for industrial, port and naval uses.

To the south of the A206, the land rises steeply to Blackheath and Kidbrooke, which were laid out for more generous residential development and open spaces. This pattern remains in evidence today, with land uses and development form markedly different according to topographic elevation. This historic east-west corridor is flanked by the North Kent rail line; together these provide public transport services parallel to the river and a focus for mixed-use and linear commercial development. This lies in stark contrast to the modern north-south road artery of the Blackwall Tunnel and Southern Approach (A102), providing a strategic road link of city-regional importance, but imposing considerable severance on the surrounding areas up to the District Centre at the tip of the peninsula.

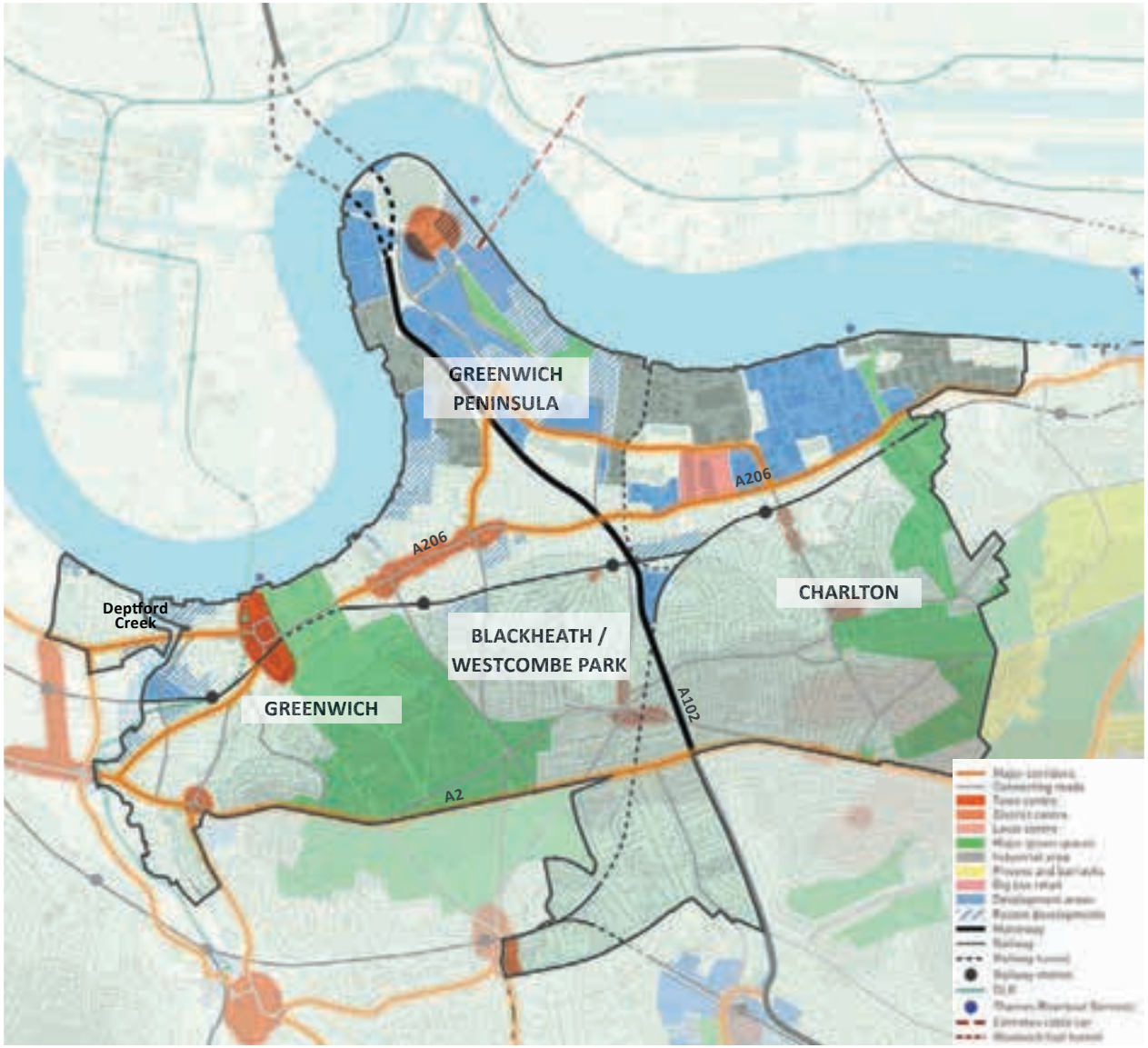


Figure 4.13: Place structure

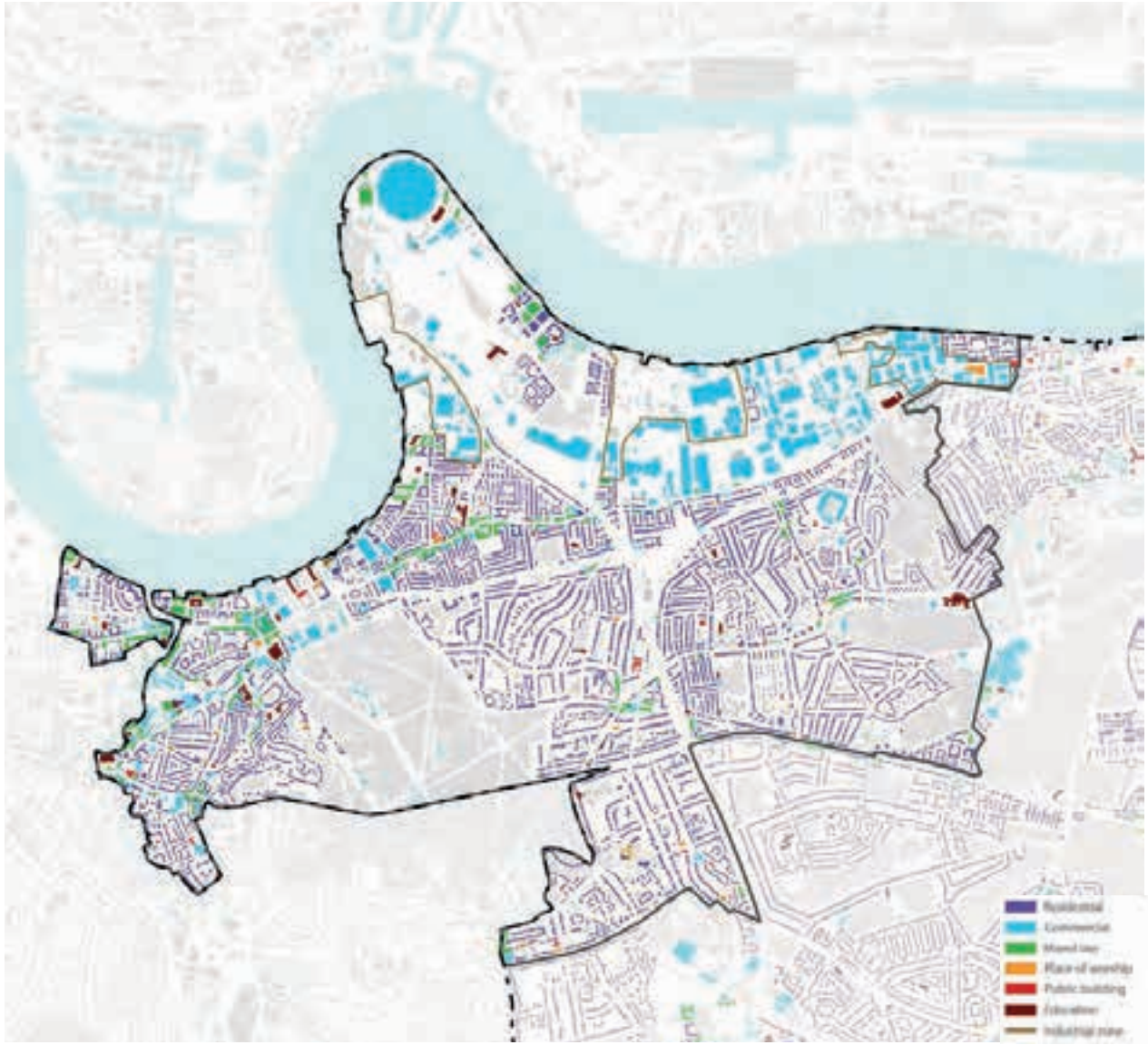


Figure 4.14: Land use

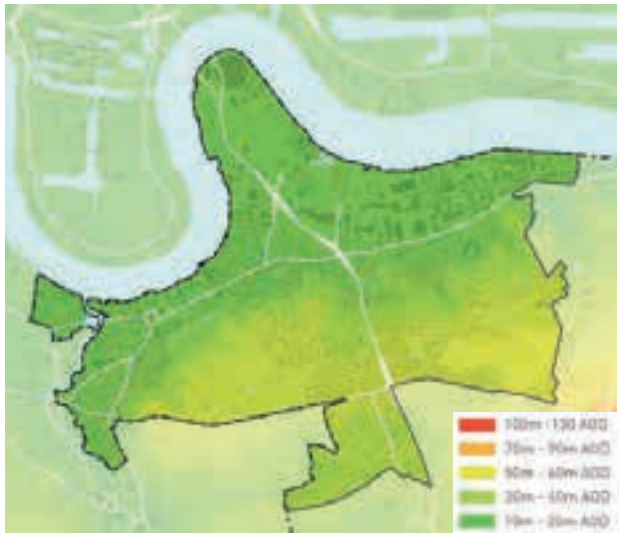


Figure 4.15: Topography

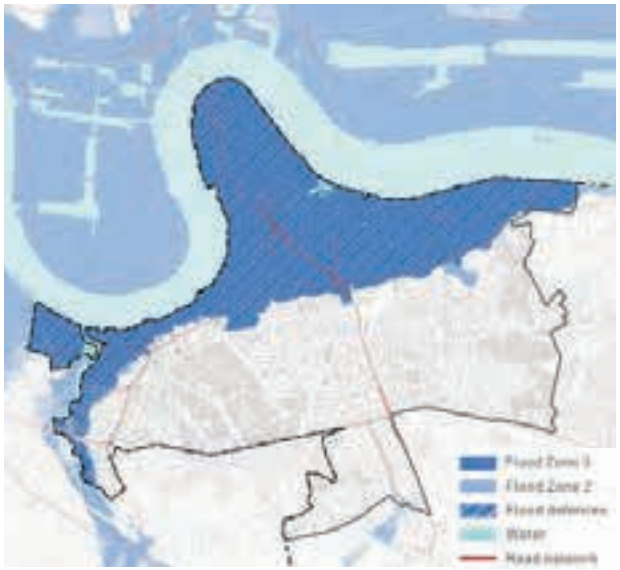


Figure 4.16: Hydrology

ENVIRONMENT

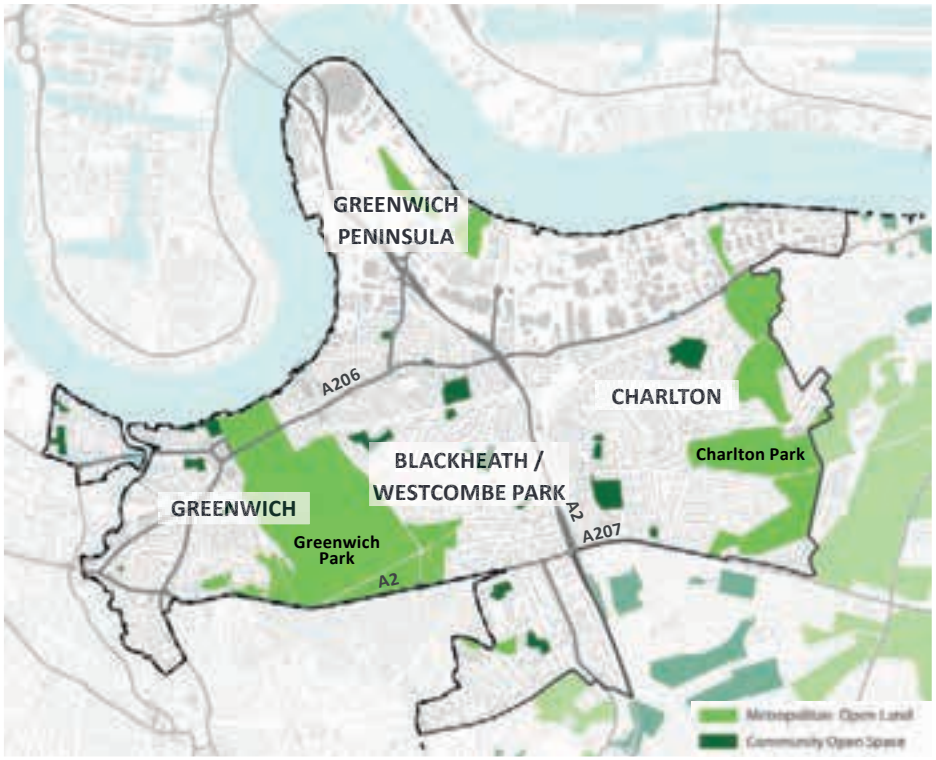


Figure 4.17: Open Spaces

Figure 4.18: Landscape character

Towards a Greener Greenwich (2017) provides the most recent evidence base for discussion of the borough's open spaces. While the borough as a whole is particularly rich in open space, its distribution is uneven, particularly in the areas overseen by the Greenwich and Woolwich & Thamesmead Area Planning Committees, that is, the West District. While this district includes the borough's only metropolitan-level open space, Greenwich Park, as well as Charlton Park, one of only three district-level open spaces, it is less well provided at a local level. The study specifically identifies the Greenwich Peninsula as amongst the borough's greatest open space deficiencies, which will only be exacerbated in the coming years with its projected increase in population.

Noise impacts and air quality are poorest along the main arteries of the east-west A206 and A207, and in particular the north-south A2 leading to the Blackwall Tunnel. The relatively open and low-lying Peninsula ward is most exposed to these impacts. The lack of open space and the considerable capacity for regeneration in this area, combine to present a significant opportunity to address these major deficiencies and risks in an integrated way.

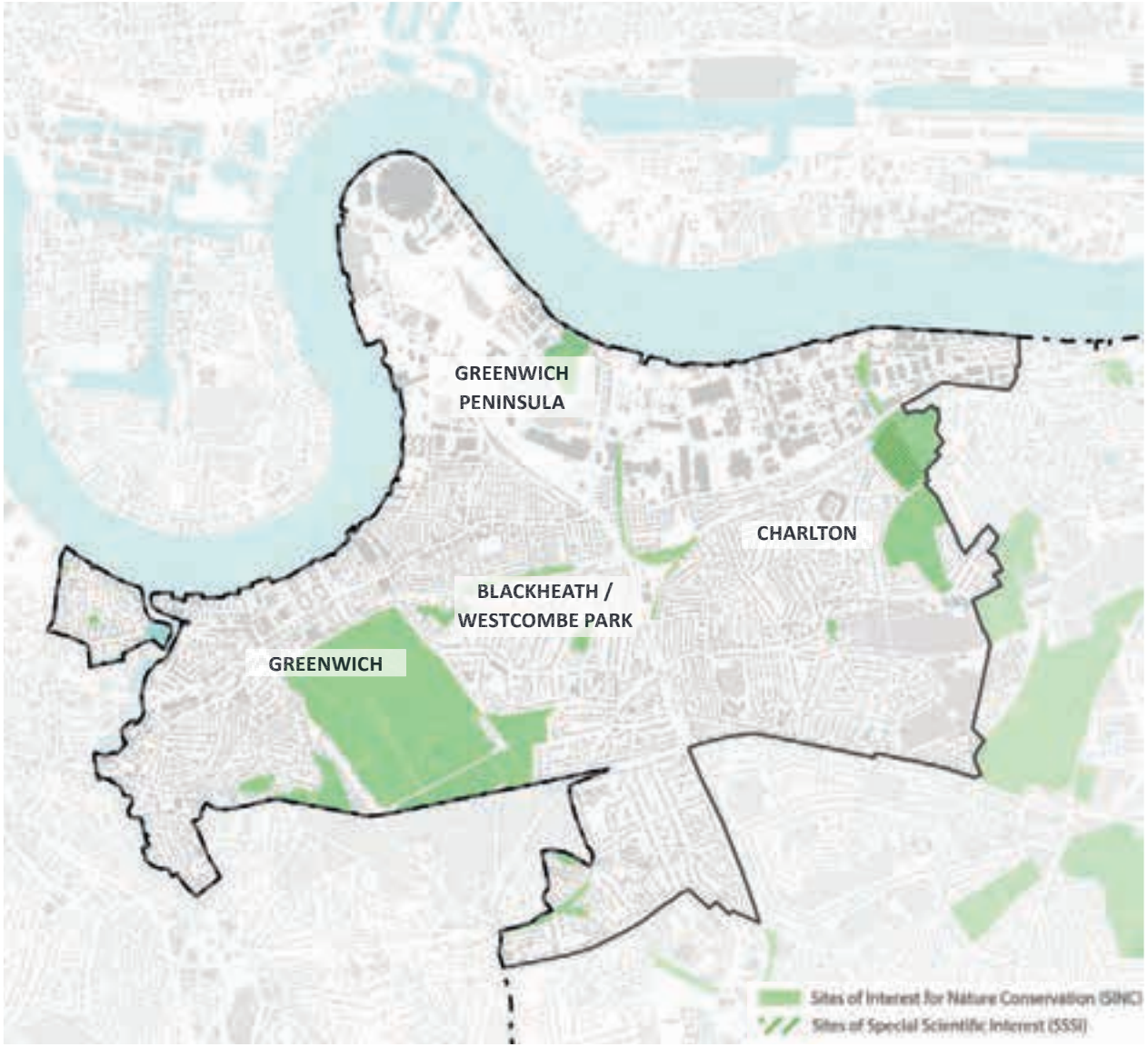


Figure 4.19: Biodiversity

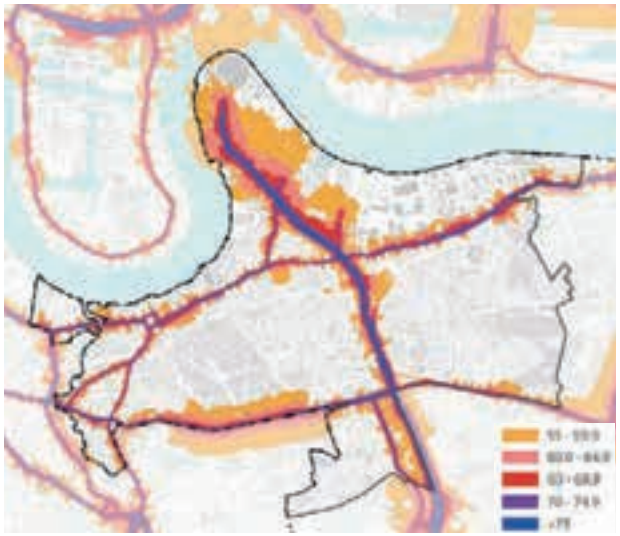


Figure 4.20: Road Noise db(A)

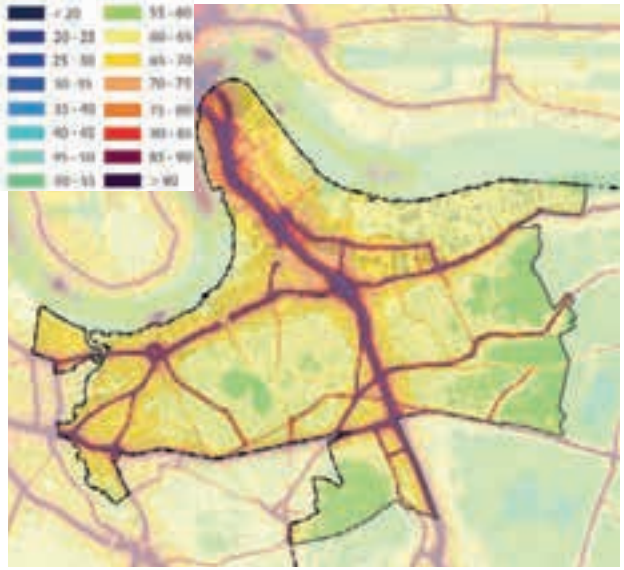


Figure 4.21: Air quality

HERITAGE

The West District has the greatest concentration of heritage sites and features in the Royal Borough. Greenwich town's long historic royal, naval and scientific association has given the district a rich heritage of institutional buildings. There is a landscaped royal park containing ancient archaeological sites and an open heath flanked by high quality urban developments from the 17th century to the 19th century, frequently encompassing important buildings settings and views.

The Blackheath/Westcombe Park Place is characterised by an open heath with long views. This contrasts with the domestic development of Westcombe Park, a local high point, where the road layout is orientated north/south following the topography of the area.

To the east, Charlton Place contains Charlton Village on an elevated site and retains a village character centred on historic Charlton House and Park.

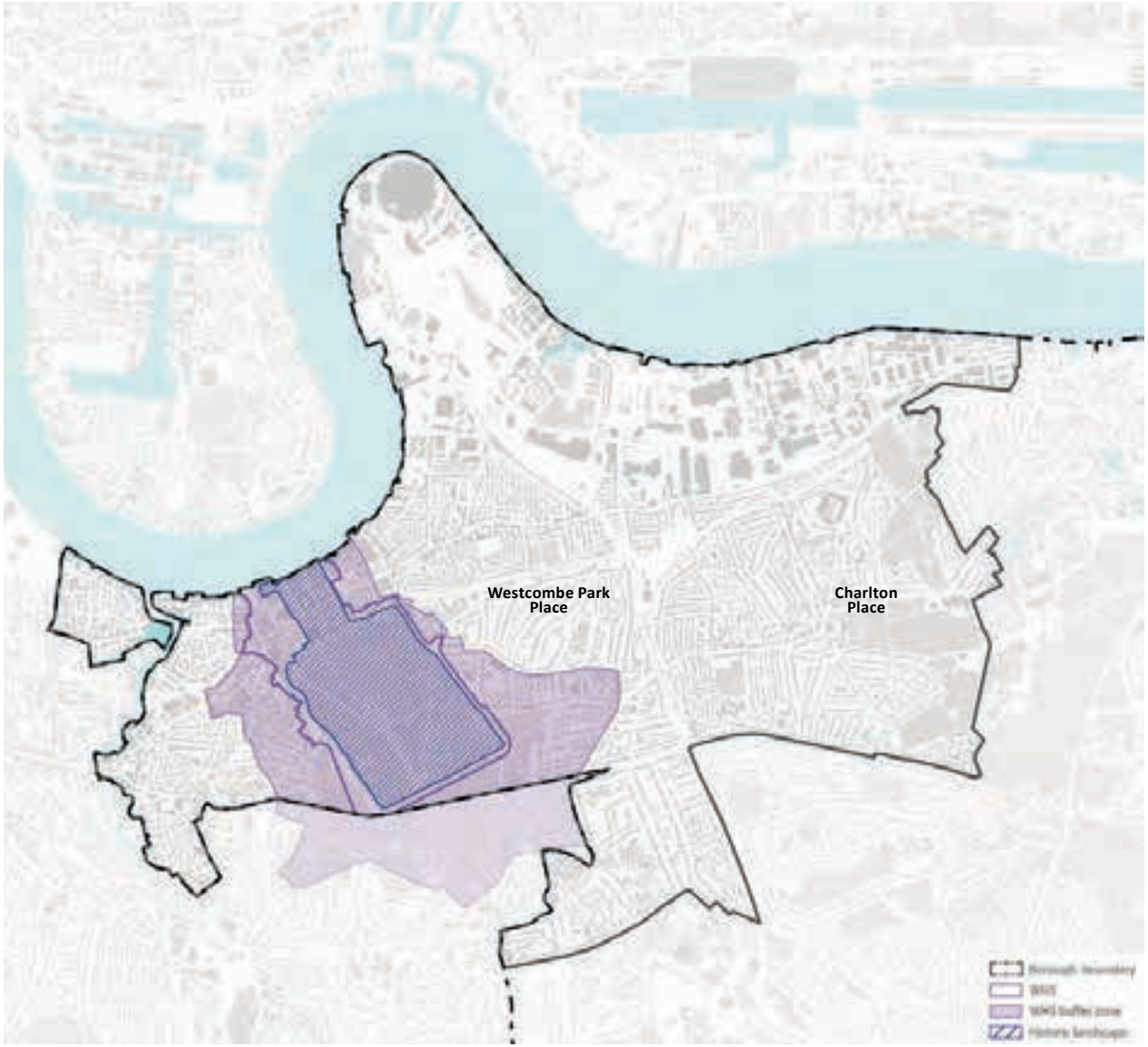


Figure 4.22: World Heritage Site (WHS) and historic landscapes

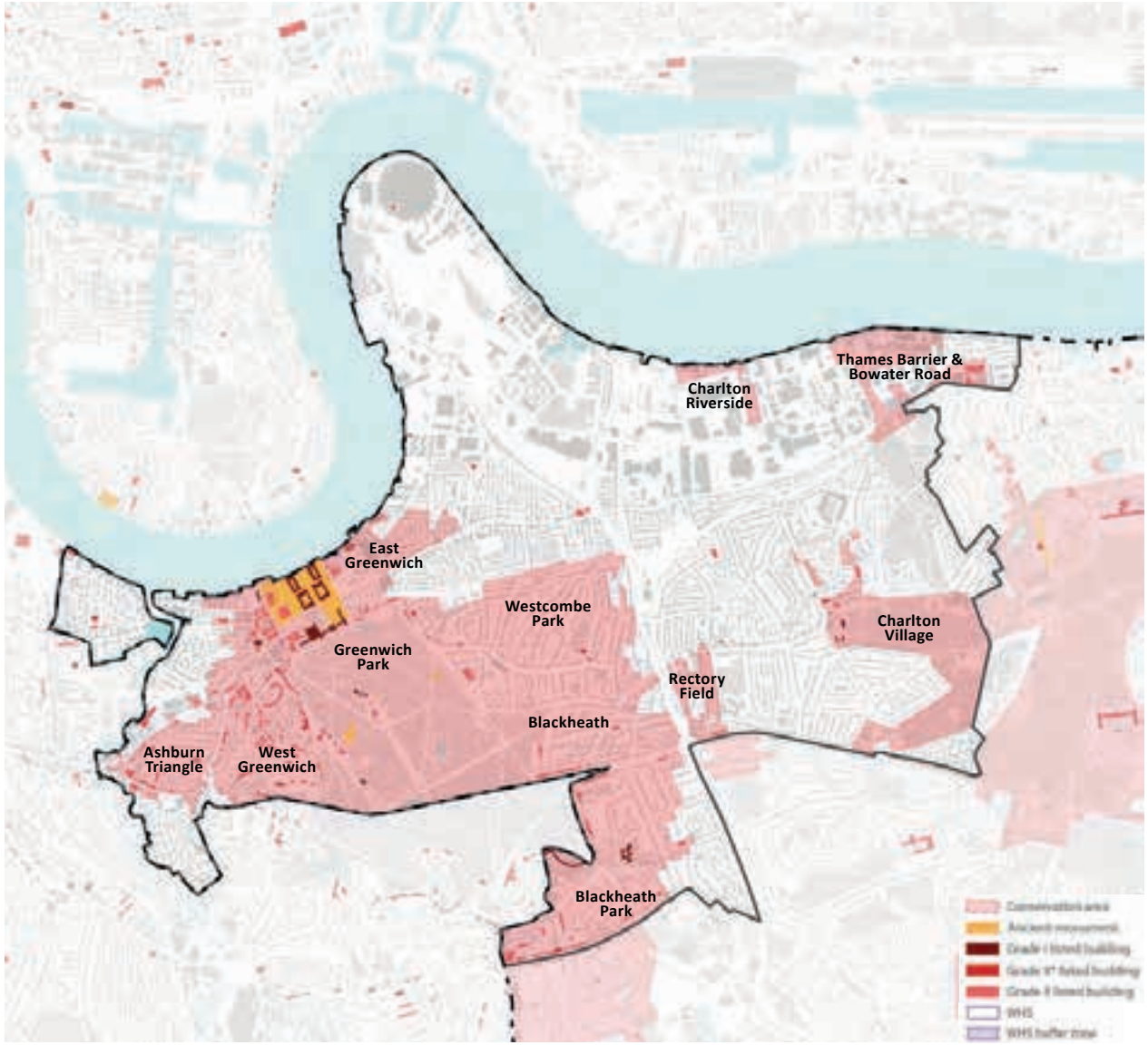


Figure 4.23: Conservation areas and listed buildings

Figure 4.24: Registered parks and gardens

Figure 4.25: Protected views

MOVEMENT

At the top of the movement hierarchy, the West District has a number of strategic long-range walking routes including the riverside Thames Path and the Greenwich foot tunnel linking to the Isle of Dogs. National Cycle Route 1 follows much of the Thames Path, and cycle lanes are provided on much of the A206 linking east-west across the borough as well as through the Greenwich Peninsula, Greenwich Park and Blackheath, though the south of the district is less-well served. Bicycle parking is provided at train stations on the North Kent line.

The district has particularly good public transport accessibility, with parts of Greenwich Town Centre, Peninsula District Centre and Charlton enjoying a metropolitan PTAL 6a/6b. Nevertheless more peripheral areas along the waterfronts of Deptford, Peninsula and Woolwich as well as Kidbrooke are poorly served with PTAL 1a/1b. This reflects a reliance on the linear east-west services on the North Kent heavy rail and A206 bus services, both of which are located considerably inland. Where additional services are provided by the Jubillee Line and DLR the accessibility is enhanced, such as at Greenwich and the peninsula. Novel services including the Clipper and Emirates Air Line enhance the mix.

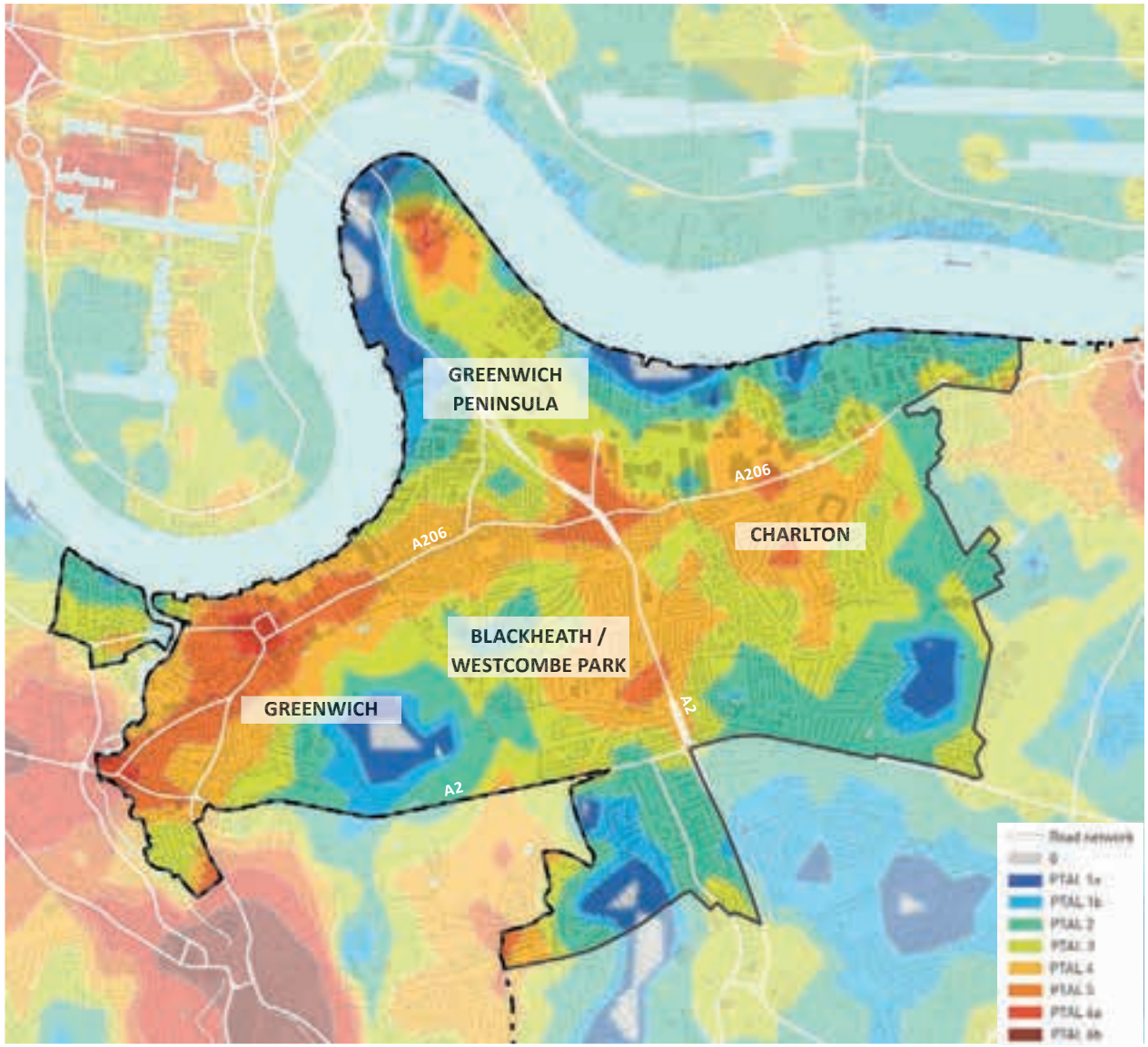


Figure 4.26: PTAL

The strategic road network in the district has a cruciform structure. The historic east-west A206 artery along the edge of the floodplain links Greenwich, Charlton and Woolwich, alternating in character from high street to highway, linking the areas on both sides and providing a focus for commercial and community uses. By contrast the more modern north-south A2 artery bisects the district from Blackheath to Greenwich Peninsula and links to the Blackwall Tunnel, imposing considerable severance on the adjacent areas due to its configuration as a high-capacity dual carriageway, often grade-separated, flanked by walls and crossed by bridges. Both arteries impose considerable negative impacts on the surrounding areas in terms of noise and air quality.

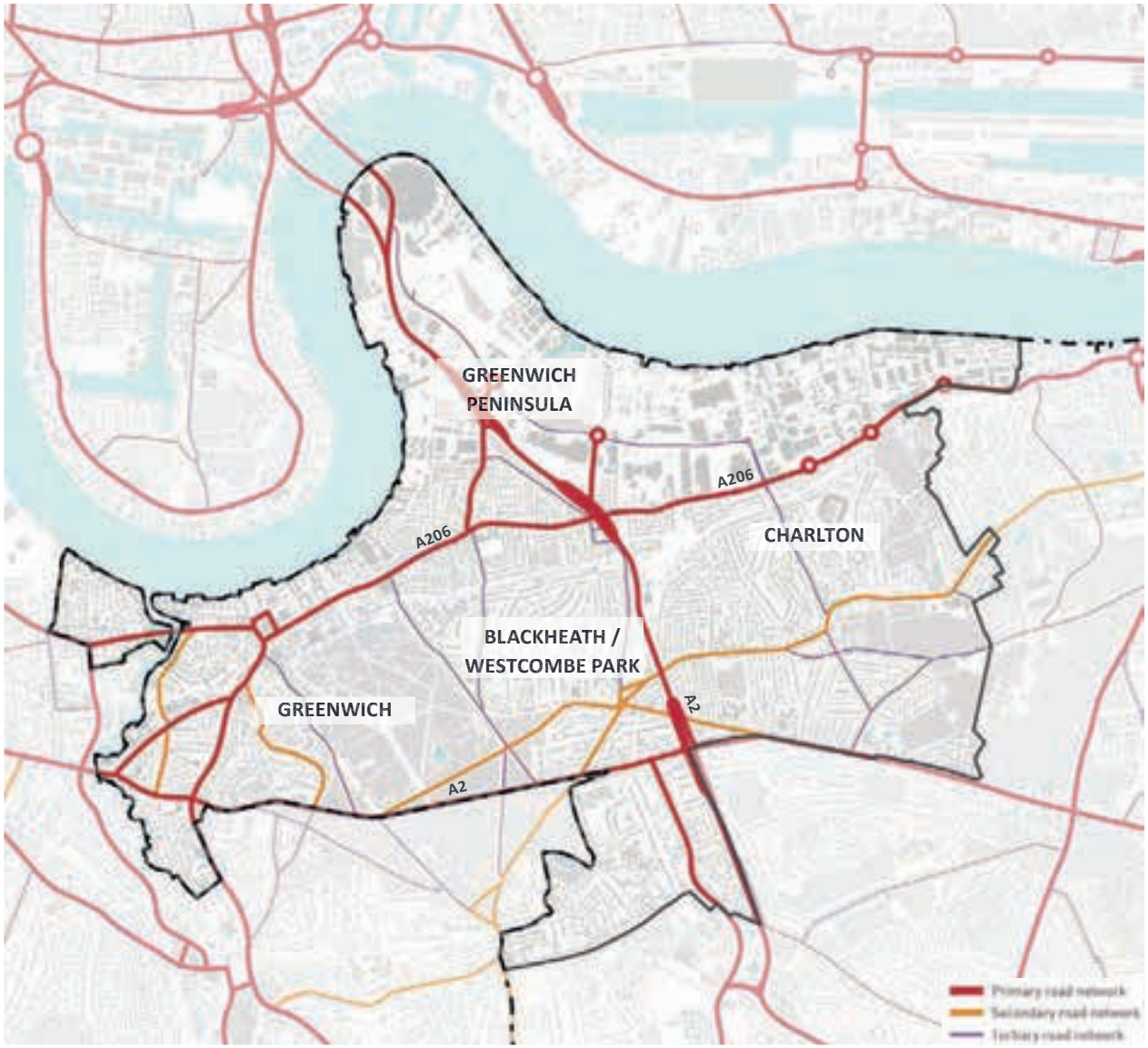


Figure 4.27: Road network

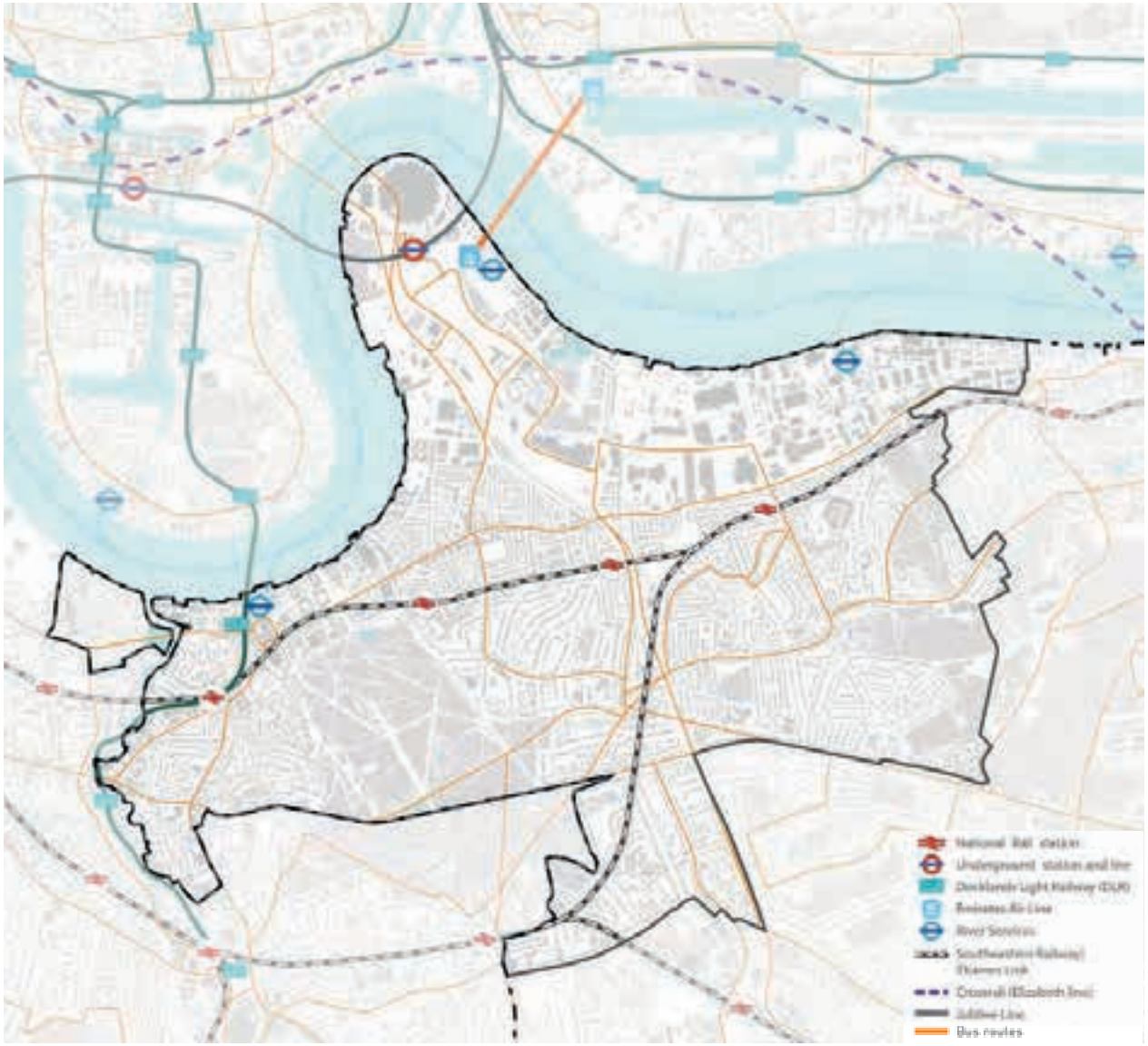


Figure 4.28: Public transport network

Figure 4.29: Cycling routes

DENSITY

While the West District is highly developed, its density varies considerably from place to place, often in highly-localised ways due to the legacy of previous industrial land uses as well as recent and ongoing regeneration. The 2011 Census found moderate residential densities in inland areas of Blackheath and Hornfair, associated with Victorian and Edwardian suburban development in villas and terraces. Densities were consistently higher in Greenwich town centre and along the east-west A206, while restricted pockets of recent development on the waterfront at Deptford Creek, Greenwich Peninsula and Woolwich reached much higher levels, also reflected in larger building footprints.

The 2011 Census found a corresponding but more nuanced pattern in population density, with Greenwich town centre emerging as a density hotspot moreso than the waterfront areas of the peninsula, likely reflecting smaller household size in new developments. The complexity of this pattern is likely to have increased in recent years with the expansion of regeneration in Peninsual and Woolwich wards.

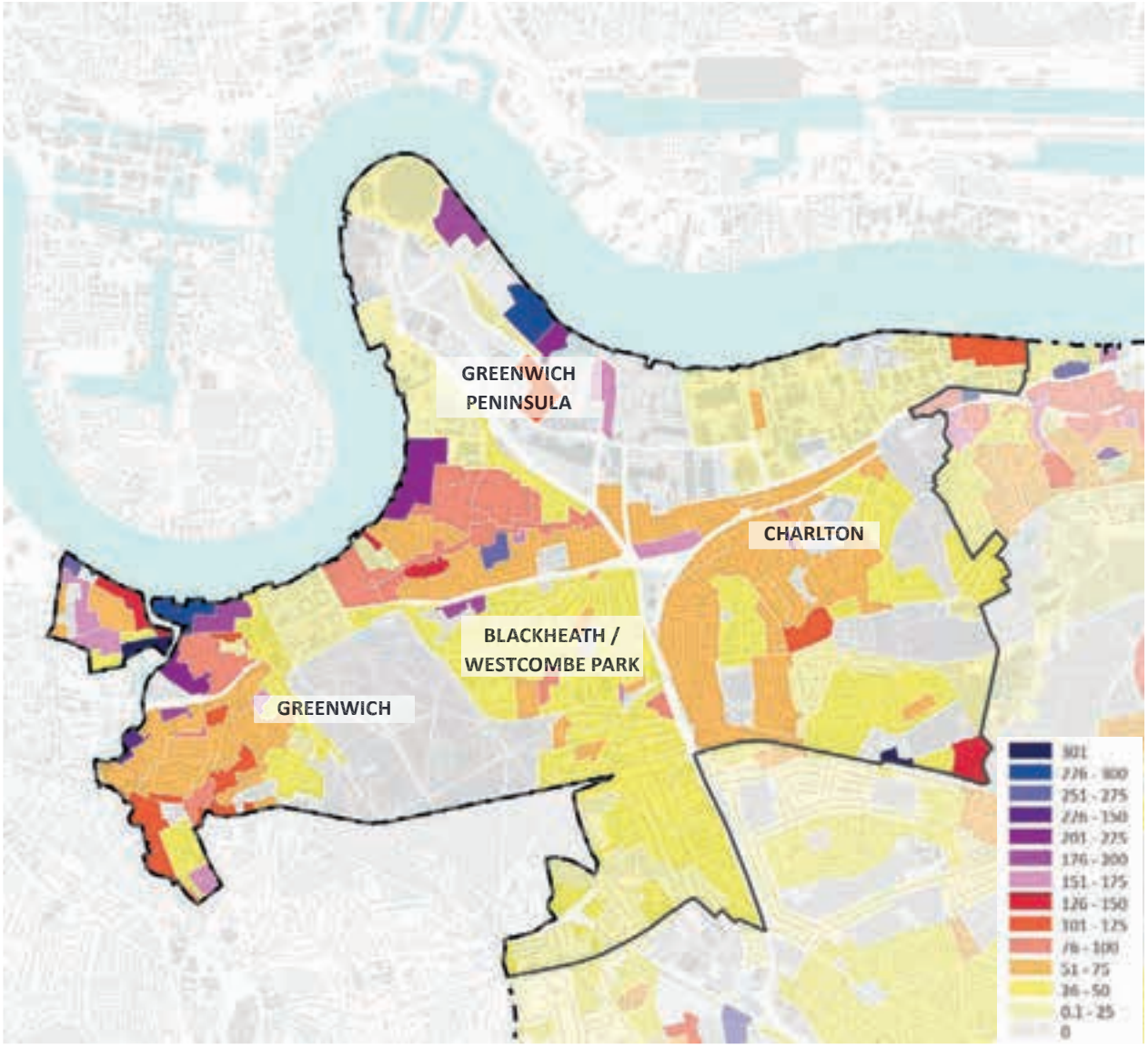


Figure 4.30: Dwelling Density units/ha

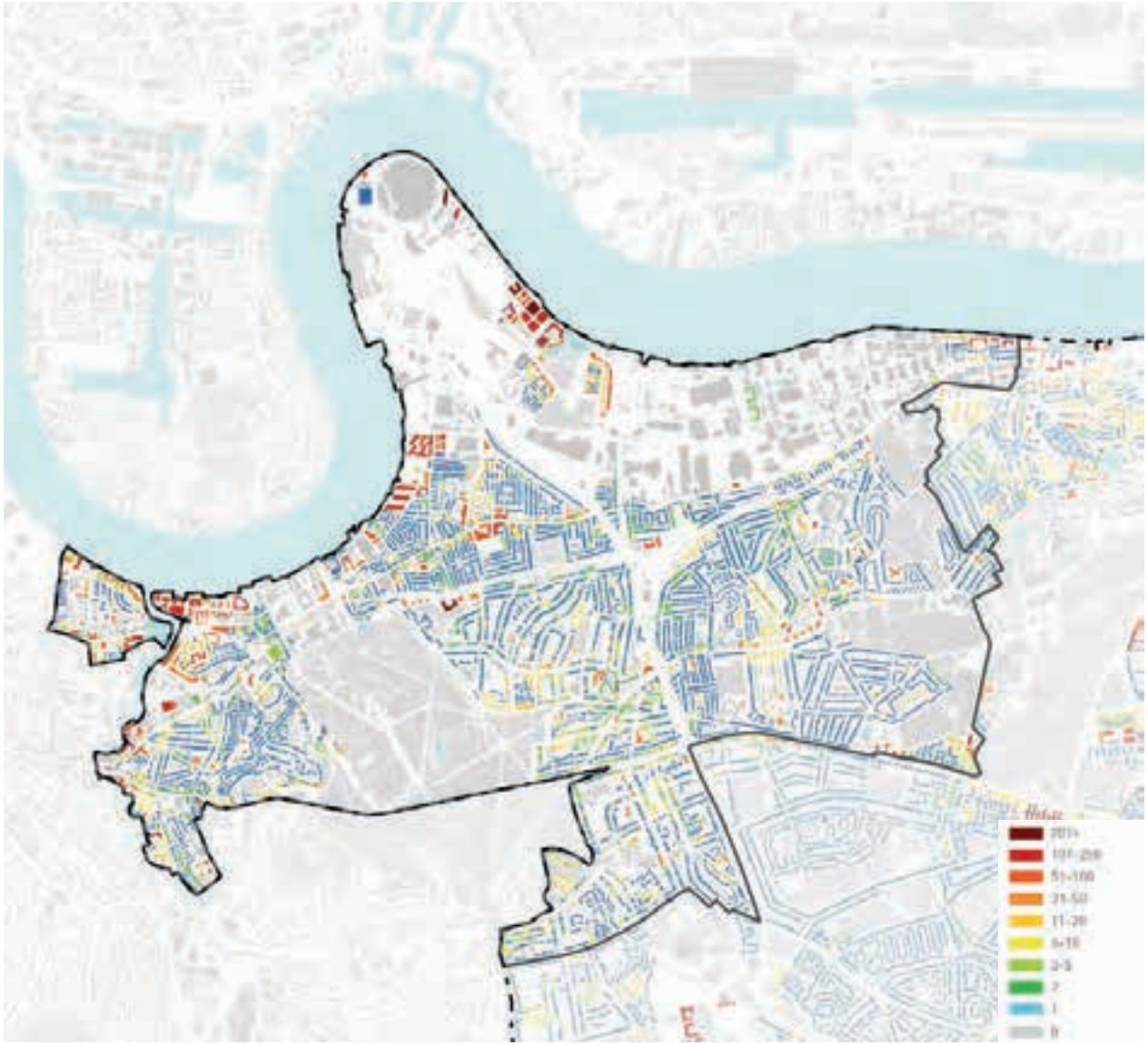


Figure 4.31: Household density (by building)

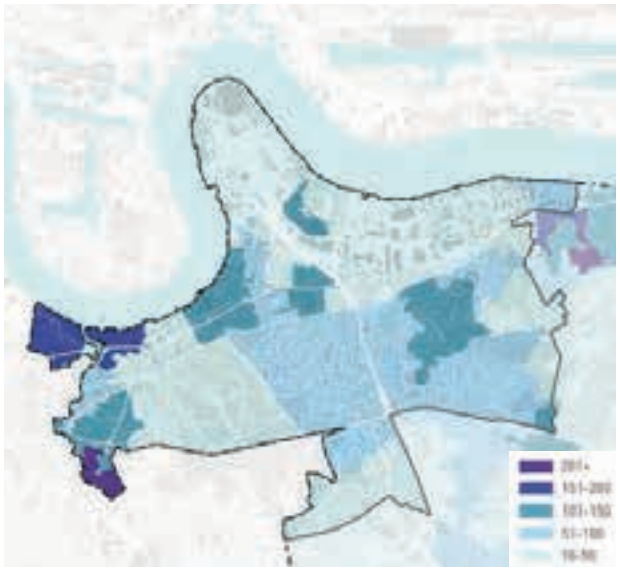


Figure 4.32: Population density (persons/ha)

3.2 CHARACTER

This study has identified four distinct 'places' in the west district as follows:

1. GREENWICH

This place includes all of Greenwich West ward, plus the south-western parts of Peninsula ward.

2. GREENWICH PENINSULA

This place includes northern parts of Peninsula ward only.

3. BLACKHEATH/WESTCOMBE PARK

This place coincides exactly with Blackheath Westcombe ward.

4. CHARLTON

This place includes all of Charlton ward, plus those parts of Kidbrooke with Hornfair ward north of Shooters Hill Road, as well as western parts of Woolwich Riverside ward and southern parts of Peninsula ward.

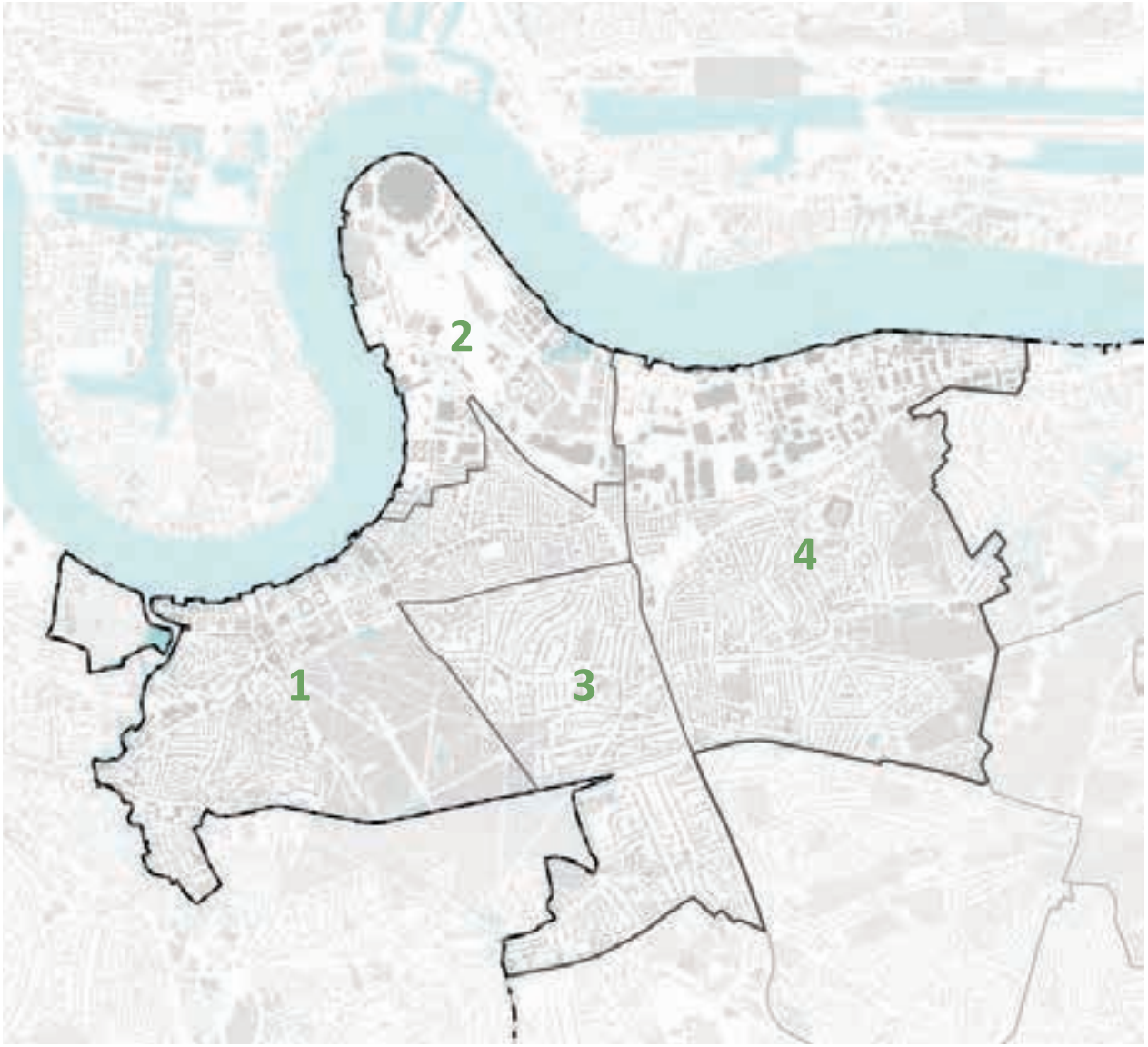


Figure 4.33: West district's places

Image 4.2: Greenwich Park

1. GREENWICH

PRESENT DAY CONTEXT

As a place, Greenwich can be understood as centred on the Old Royal Naval College and Greenwich Park. To the west it includes the historic Thamesside settlement and town centre of Greenwich between Deptford Creek and Church Street. To the east it extends in a linear corridor of mixed-use and residential development flanking Trafalgar Road (A206).

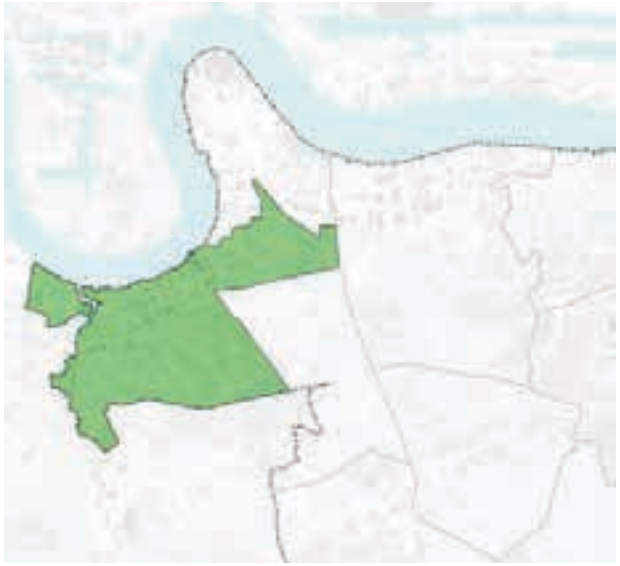


Figure 4.34: Location map

Image 4.3: Greenwich **(copyright Google)**

HISTORIC DEVELOPMENT

The World Heritage Site (WHS) is centred on the Royal Greenwich Park, first enclosed in the 15th century as a hunting park. A central defining feature is the Grand Axis from the elevated Royal Observatory Flamsteed House, north through Inigo Jones' Queen's House through the courtyards of Royal Naval Hospital to the River Thames and Island Gardens beyond. An exceptionally grand processional way is marked by buildings of the highest heritage significance, forming the central hub from which there is a series of protected views and vistas identified by Maritime Greenwich, the Mayor of London's View Management Framework and Greenwich Park Conservation Area Appraisal. As well as the Royal Park, the WHS includes a buffer zone to protect the WHS from development that would impact on its setting.

Image 4.4: Greenwich Park in rural splendour, as depicted in John Roque's map of 1746. Westcombe Park to the east is undeveloped. Wricklemarsh House, a now vanished great house south of Blackheath, is part of the present-day Cator Estate.

Image 4.5: Greenwich Park in the 18th century – a bucolic setting with the dome of St Paul's visible on the distant horizon.

Image 4.6: Present- day view looking north from the Queens House to Canary Wharf. Tall development threatens the setting, views and vistas of the WHS.

West of the WHS is Greenwich town centre. From its origins as a medieval fishing village, Greenwich town grew in parallel with the royal presence in Greenwich Park. Characterised by a tight informal medieval street plan—seen typically in Greenwich Church Street—the town centre was transformed by the early 19th century neo-classical planning of Joseph Kay who introduced more neo-classical formality in the market, Nelson Road and College Approach. This provided distinctive formal views on axis with the Old Royal Naval College.

Nicolas Hawksmoor's St Alfege parish church (consecrated in 1718) is a Portland stone Baroque replacement for the ancient parish church whose roof collapsed in 1710. Hawksmoor's tower is a local landmark and important in the views westwards from Trafalgar Road. Additional important local views and landmarks include the slim Scandinavian simplicity of the landmark Greenwich Town Hall tower (Clifford Culpin 1939).

In contrast to the urban complexities of the town centre, the more open riverside contains dramatic and important views from the WHS looking west. The evocative presence of the Cutty Sark and the dark web of the ship's rigging against the sky provide memorable views from the portico of St Alfege Church. Further west of the town centre, the Ashburnham Triangle Conservation Area encompasses an inward-looking network of mid- to later-19th century housing.

Image 4.7: Mid 19th Century Greenwich

PLACE STRUCTURE

As a place, Greenwich is effectively a linear settlement whose principal artery skirts the flood plain of the River Thames running west-east through two distinct areas separated by the historic ensemble of the Old Royal Naval College and Greenwich Park.

To the west, the town centre is centred on the junction of two rather fragmented street corridors, one of which continues parallel to the Thames through Deptford, and the other which turns inland towards Lewisham. The town centre is served by DLR and rail services, but its street setting is heavily impacted by vehicular traffic on a gyratory system. Further west, lands fronting Deptford Creek have been transformed with contemporary high-density development, a process still ongoing with a major industrial site awaiting development.

To the south, a tight network of residential streets extends to the boundary of the borough. There is a lack of coherence due to the variety of housing types including tenement blocks and postwar housing blocks, as well as terraced and detached houses in the Ashburnham Triangle and Royal Hill Conservation Areas. Blackheath Hill rises eastwards along the borough's southern boundary, with a local centre at the intersection with Lewisham Road, and new higher density development towards Lewisham.

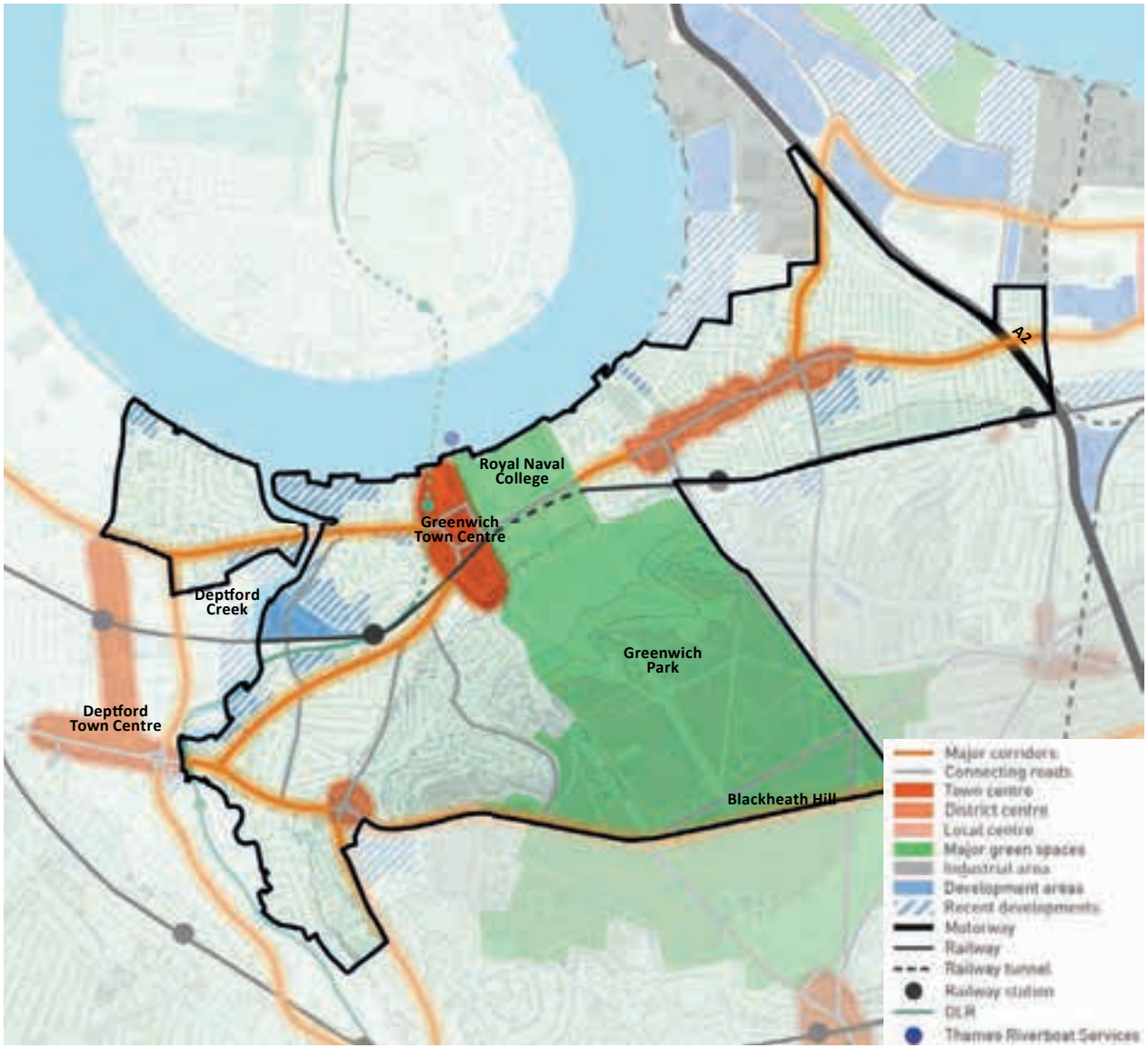


Figure 4.35: Place structure

To the east, the Trafalgar Road corridor is an arterial high street leading further east to Woolwich and north to the peninsula, and flanked on both sides by a tight network of streets with modest terraced housing and cottages, as well as postwar housing to the north and high density contemporary development at the intersection with Vanbrugh Hill.

To the north this area is bounded by industrial and port-related activities on the peninsula; to the east it is bounded by the Blackwall Tunnel Southern Approach (A2), and to the south by the North Kent rail line cutting—two major infrastructural boundaries.

Greenwich's central focus is the formal ensemble of the Queen's House with the Naval College to the north and, on higher ground to the south, the Royal Observatory—all Grade I Listed. These are set within the wider Maritime Greenwich World Heritage Site and a contiguous series of Conservation Areas: East Greenwich, Greenwich Park (part), Blackheath (part), Ashburnham Triangle and West Greenwich—with a high concentration of listed buildings in the last. Views to St. Paul's Cathedral from Greenwich Park and Blackheath Point are protected by the London View Management Framework. Views from Greenwich Park to the docklands panorama and to All Saints Church are locally protected.

Image 4.8: Old Royal Naval College

Image 4.9: Greenwich Park

Image 4.10: Woolwich Road / Greenwich District Centre

Image 4.11: Cafe Rouge

CHARACTER AND TOWNSCAPE FEATURES

The unique urban character of Greenwich is shaped by its strategic setting on the Thames and a range of features and landmarks many of which are of international significance. The historic ensemble of the Queen's House, Old Royal Naval College, National Maritime Museum and Greenwich Park provides a highly formal, coherent, axial and sensitive set-piece around which Greenwich is structured and through which views are focussed. To the south, the Royal Observatory affords view over meadows towards this ensemble and beyond to the river, Greenwich town centre and the wider backdrop of Canary Wharf and the City of London including St. Paul's Cathedral. All of these views are of course of great value in reverse, when seen from the river. To the west along Greenwich High Road is the fine-grain town centre, stretching from the river uphill alongside the park; it is of coherent height with St Alfege Church the only landmark. Greenwich's Covered Market is a vibrant destination, and there are classical 'parades' on Nelson Road and College Approach. There is a fine prospect up- and downstream along the Thames from the riverside promenade and public spaces, including the arrival space for Thames clippers, the Thames tunnel entrance, and the iconic Cutty Sark whose tall masts are widely visible. There is a charming juxtaposition of the park with picturesque village-style housing, mature trees, and streets wending up Royal Hill, punctuated by the towers of our Lady Star of the Sea church and of Old Greenwich town hall, a prominent art deco landmark.

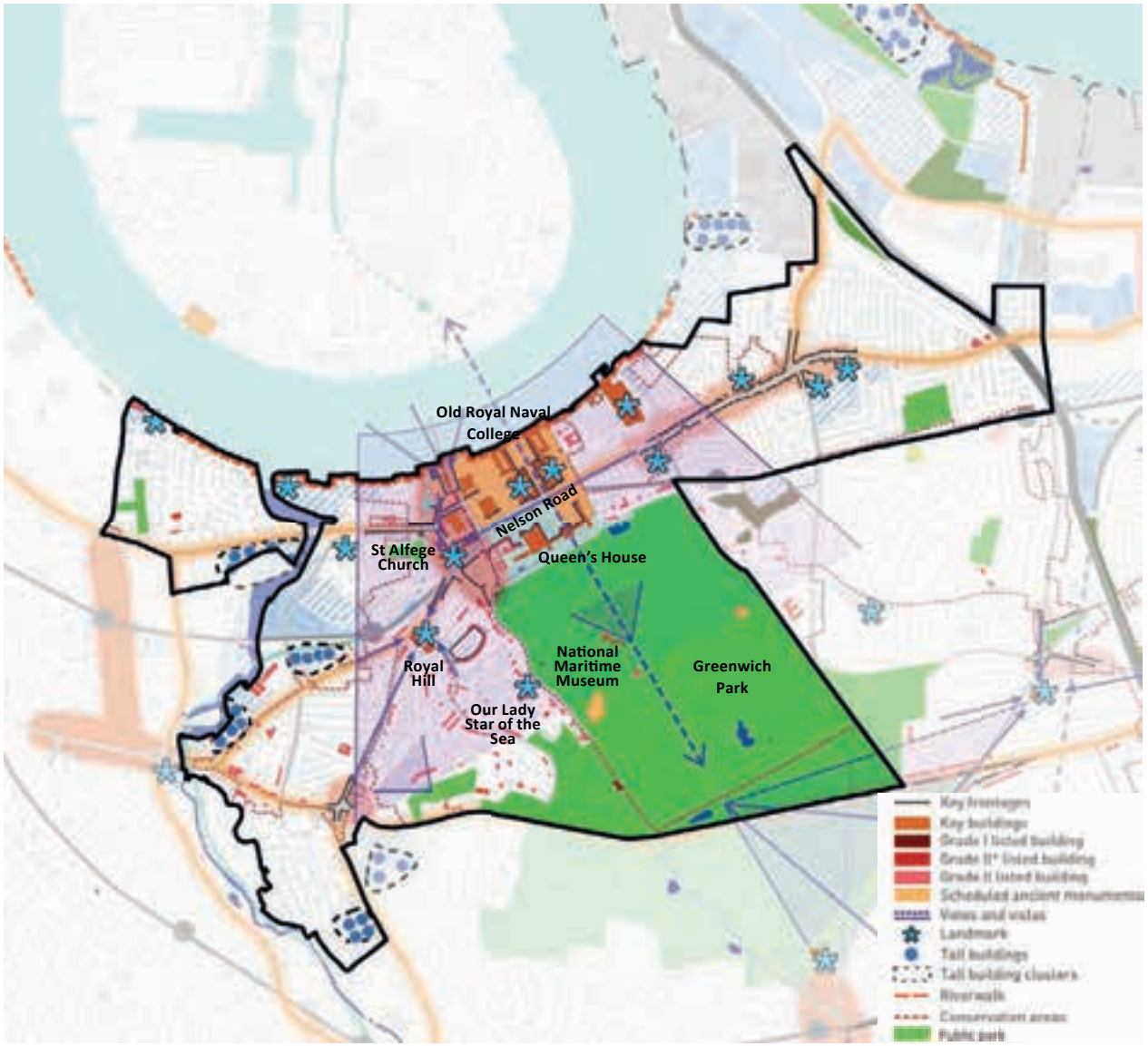


Figure 4.36: Character and townscape

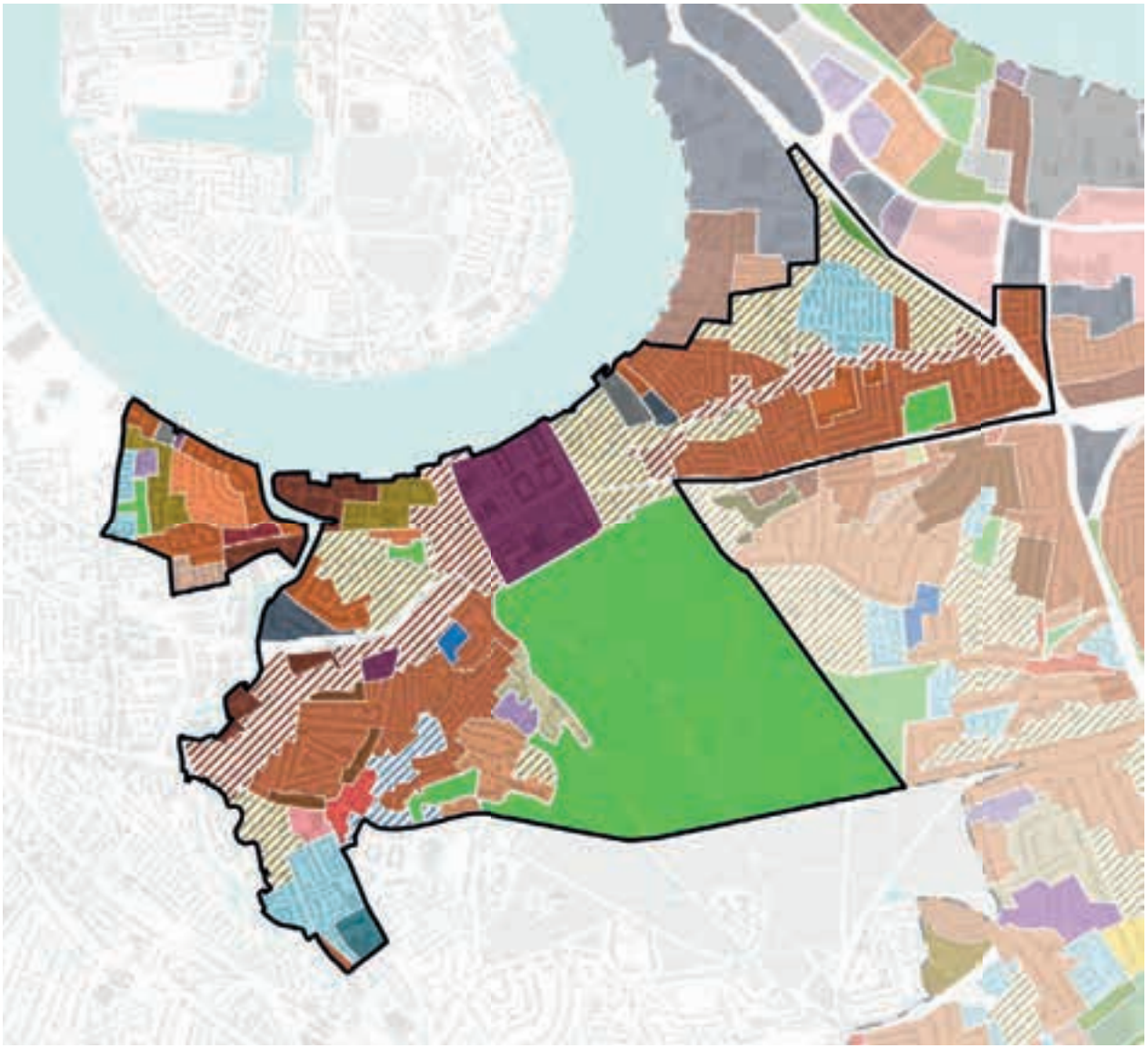


Figure 4.39: Urban typologies

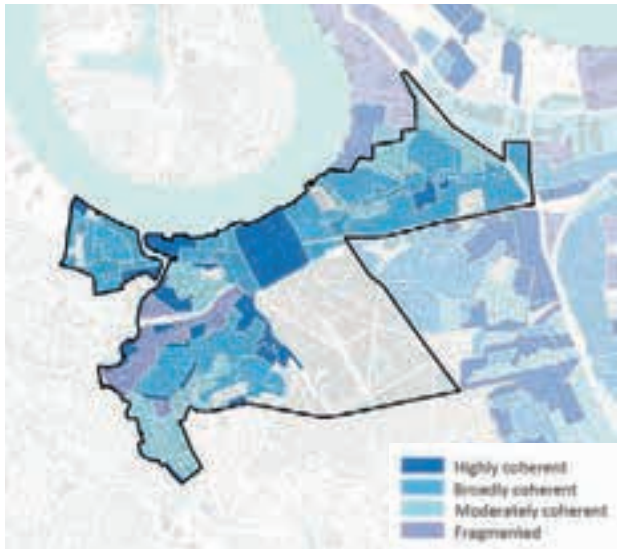


Figure 4.37: Coherence

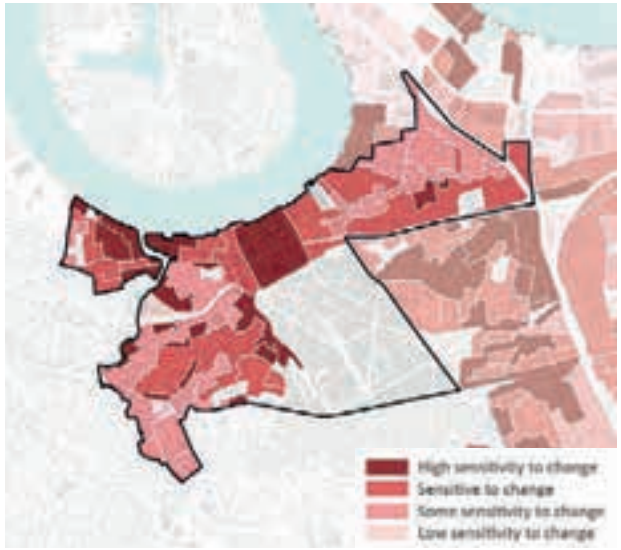


Figure 4.38: Sensitivity

Around Ashburn Triangle is a coherent area of terraced housing in a leafy street environment, with Point Hill park offering views over West Greenwich and towards Deptford. Collier Point on Creek Road and Distillery Tower provide imposing landmark buildings at crossings over the creek into Lewisham. To the east of the Old Royal Naval College, Greenwich Power Station is an imposing landmark on the river with four chimneys. Adjacent, Trinity Hospital is dwarfed by the power station but visible from the river. Visual focus along Trafalgar Road is provided first by Christ Church and then the locally-tall Greenwich Square development further east at the bend of the road.

There are however a number of features which detract from the townscape quality. The majority of corridors are traffic dominated and the air consequently of poor quality; their frontage properties often suffer from low investment in and fragmentation in continuity. The gyratory system in Greenwich town centre detracts from the quality of the street setting; there is poor access to and prominence of Greenwich Station from the north and south. The corridors westwards and southwards from the town centre are fragmented. Greenwich High Road in particular lacks a coherent townscape and suffers from poor integration of development from different eras. New development lacks a coordinated approach to the location and height of taller buildings withing the urban form. Industrial pockets undermine the continuity of the built fabric. To the east, the partially elevated Blackwell Tunnel Approach is a major barrier to movement, and impacts negatively on noise and air quality.

Image 4.12: The Queen's House

Image 4.14: The Royal Observatory

Image 4.13: Cutty Sark Pub

Image 4.15: View towards St. Alfege Church

BUILDING HEIGHTS

Greenwich is a predominantly low-rise place, with the majority of buildings in the range of 2-3 storeys. Notwithstanding their modest height, the configuration of buildings in a relatively tight network of streets often provides strong continuity and enclosure to public spaces.

Greater building heights of 4-12 storeys are found in the historic ensemble of the Naval College, in spires, towers and chimneys on or near the main routes through the area (including at Greenwich Power Station), in postwar housing developments, and on the Thamesside waterfront. A cluster of taller point blocks over 12 storeys at Deptford Creek have established a new precedent for development height in the district.

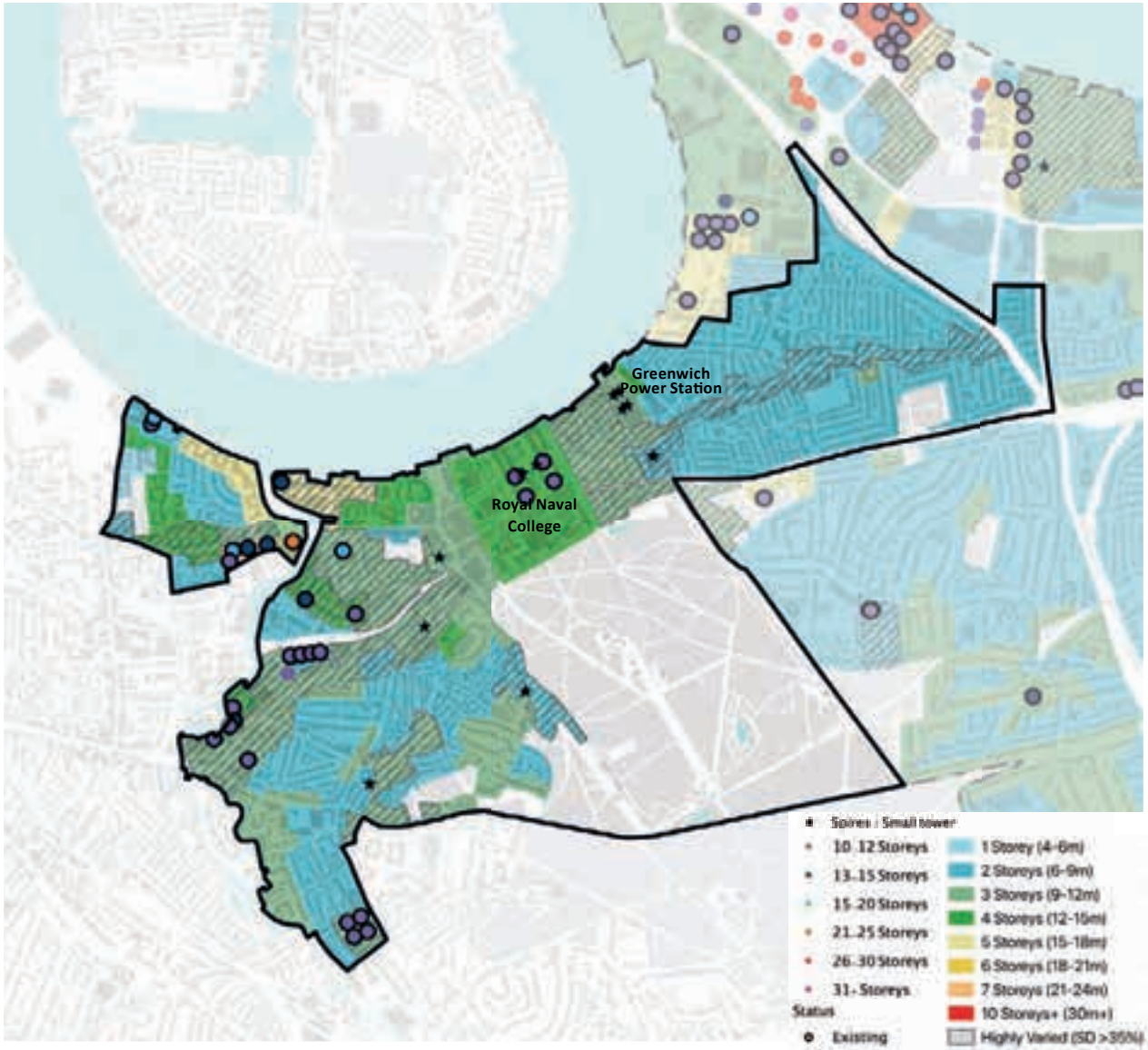


Figure 4.40: Building heights

HERITAGE, CONSERVATION AND VIEWS

This is the most historically important area in the Borough, with heritage assets recognised by inscription as a UNESCO World Heritage Site (WHS) in 1997 under the name Maritime Greenwich.

The WHS includes the Old Royal Naval College, The National Maritime Museum, the Royal Park including the Queen's House, the Royal Observatory and Greenwich Town Centre. There is also a buffer zone of surrounding areas providing further protection for the setting and views associated with the WHS. Included within the WHS and buffer zone are parts of West Greenwich Conservation Area, Greenwich Park Conservation Area and Blackheath Conservation Area.

The international heritage significance of the WHS and the buffer zone is underscored by the designation of 27 Grade I & Grade II* listed buildings, which are frequently also Scheduled Ancient Monuments. The Royal Park is a Registered Park and Garden and a Conservation Area (CA). The most significant ensemble of listed buildings is of those forming the Royal Naval College (Grade I). Adjoining the WHS is West Greenwich CA, which encompasses the ancient town centre of Greenwich, part of the Thames riverfront, and historic residential areas to the south. The CA deserves protection in its own right but also because it acts as a setting and backdrop to the WHS, and is largely within the WHS buffer zone.

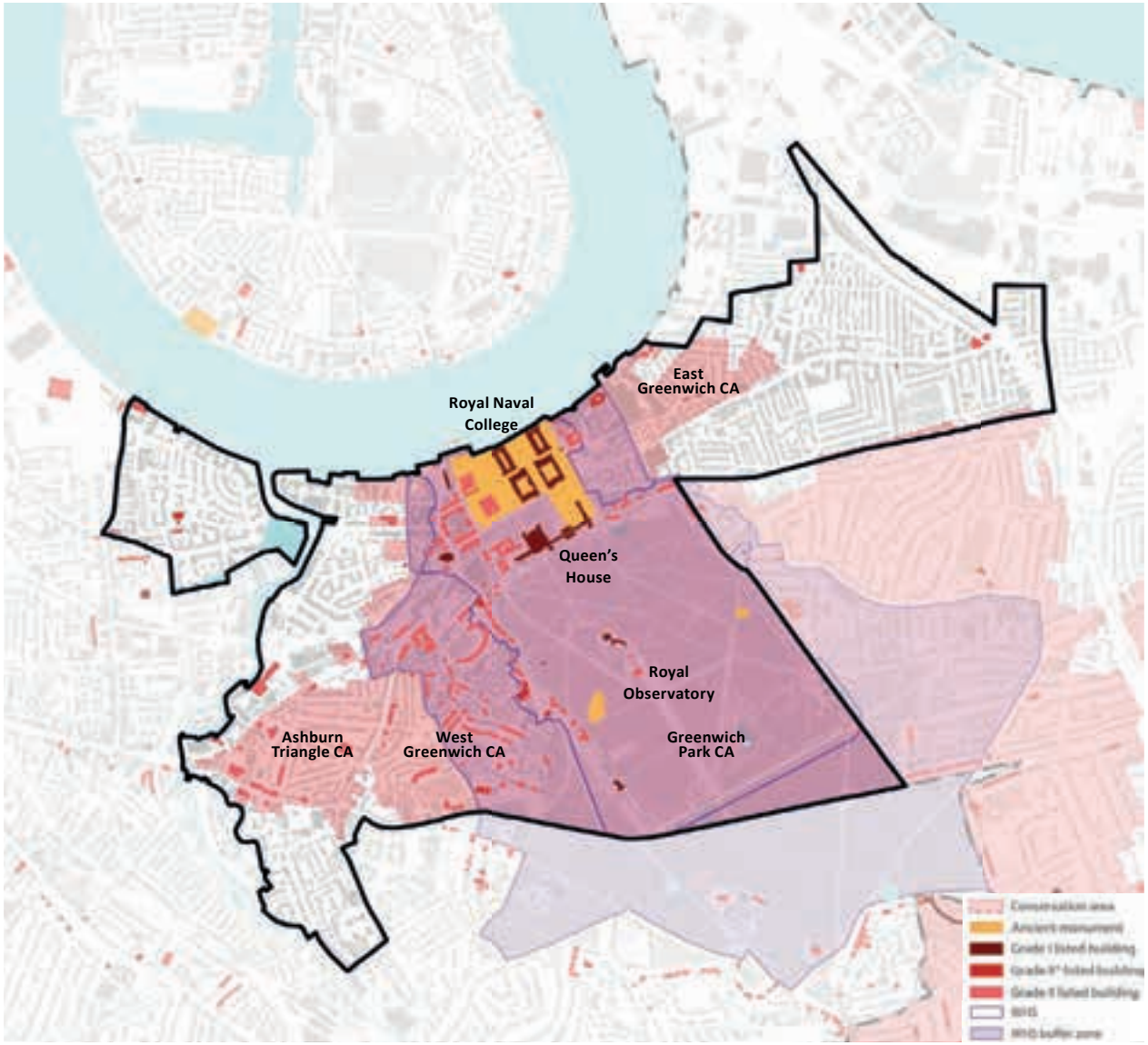


Figure 4.41: Heritage and conservation

West of here is Ashburnham Triangle CA, whose character is of tightly planned streets of two and three storey houses, bounded by the busy three boundary roads. This emphasises the contained nature of the conservation area, which has a characteristic enclave quality formed by the domestic scale and tightly planned townscape.

East Greenwich Conservation Area has a dramatic river frontage and a variety of building and townscape types, from early 19th century cottages and terraces to the Gothic Revival (and earlier) Trinity Hospital and the landmark chimney of the Greenwich Power Station.

Greenwich contains a high concentration of mostly Grade II Listed Buildings but with a notably high number of Grade I structures, including Cutty Sark, Royal Observatory, National Maritime Museum and Royal Naval College ensemble.

Within Greenwich are some of the most important, sensitive and cherished views, not only within the borough but also within London. The most significant view in Greenwich is the 'Grand Axis' from the Royal Observatory looking north through Greenwich Park, The Queen's House and the Old Royal Naval College and southwards from Island Gardens (the 'Canaletto view'). The Grand Axis is identified as the Outstanding Universal Value Attribute No.3 in the WHS. From outside the Royal Observatory are panoramic views over London and most notably of St Paul's Cathedral, which is protected under the London View Management Framework. Throughout the conservation areas are many other local vistas and views that contribute to our experience of the historic environment.

Other highly significant views occur towards the World Heritage Site from river approaches. There are a variety of important local views within Greenwich's historic core and conservation areas, most notably towards St Alfege's Church and Cutty Sark.

Full details on significant views are provided in the Heritage Appendix.

Image 4.16: Asburnham Triangle

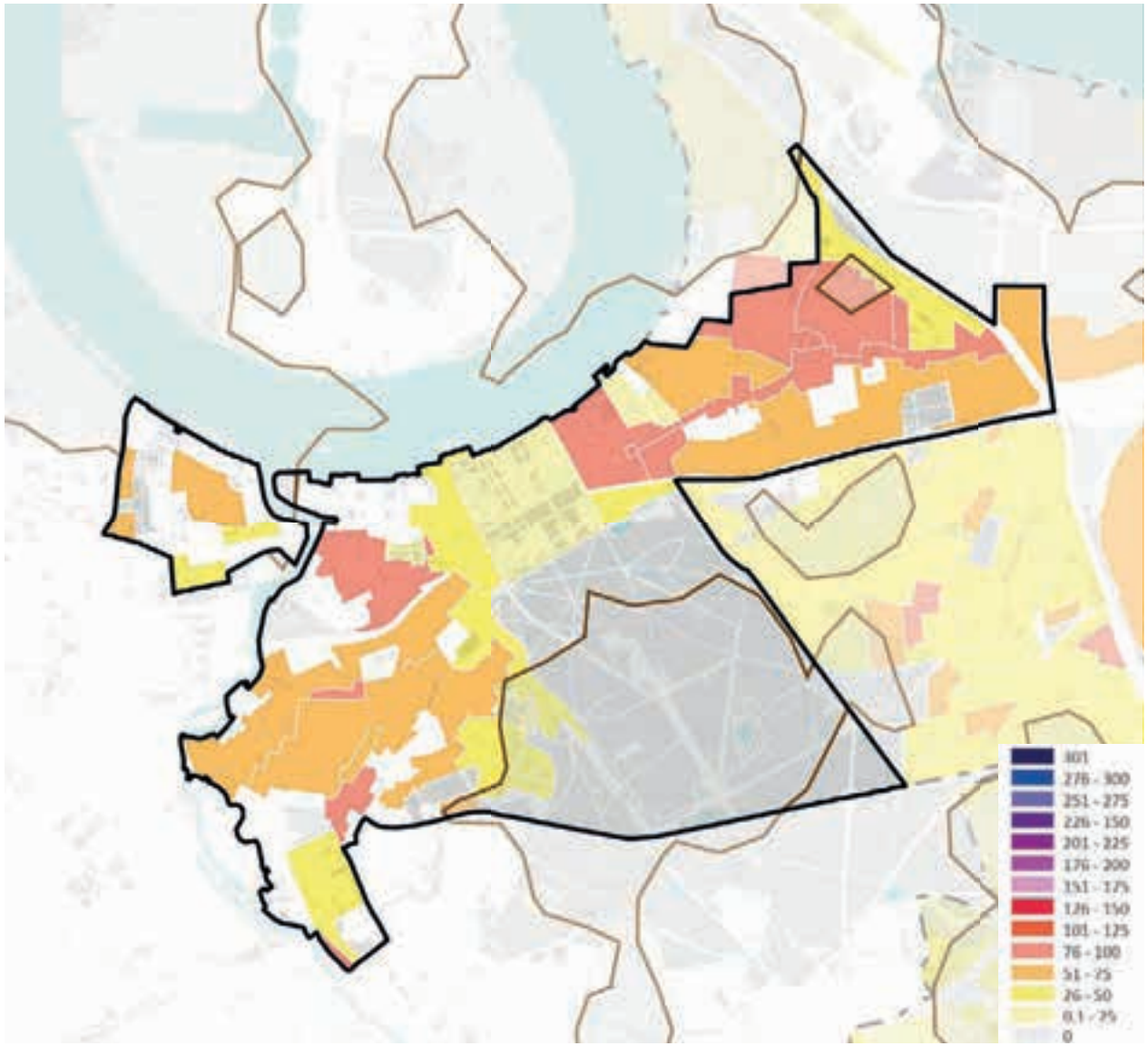


Figure 4.42: Dwelling density units/ha + PTAL 3+

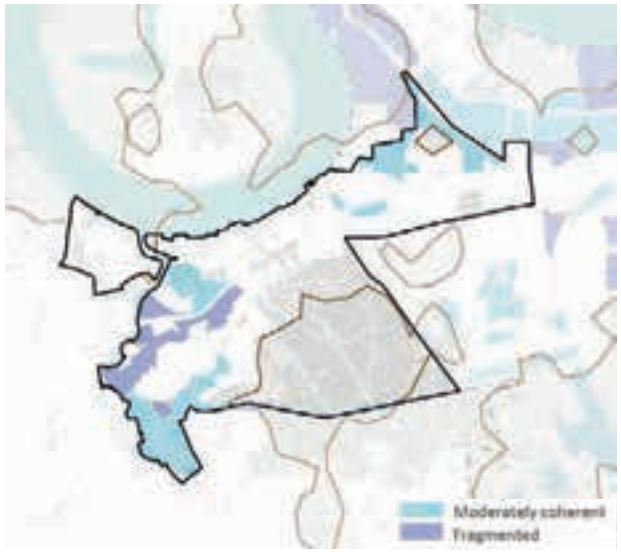


Figure 4.43: Coherence + PTAL 3+

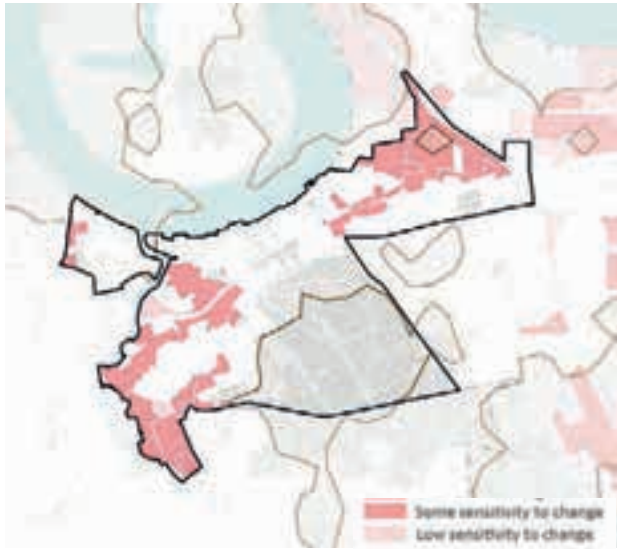


Figure 4.44: Sensitivity + PTAL 3+

CAPACITY FOR GROWTH

Virtually all of Greenwich has a PTAL score of 3 or higher, making it highly accessible. The residential areas and mixed use centres on the eastern and western edges of Greenwich are of lesser sensitivity and coherence, indicating some capacity for change. These areas range in density from 26–125 homes per hectare, meaning there is likely greater capacity for intensification in more peripheral residential areas.

OPPORTUNITY FOR CHANGE

Within Greenwich are two small areas with opportunity for Transformation, one along Deptford Creek and the other to the south on Blackheath Road. There is some opportunity for Transition/Enhancement along corridors and in peripheral areas, as identified in the Capacity for Growth section.

However, because of the highly historic context, most of Greenwich is suitable only for Reinforcement. Each of these areas is discussed in detail on the following pages.

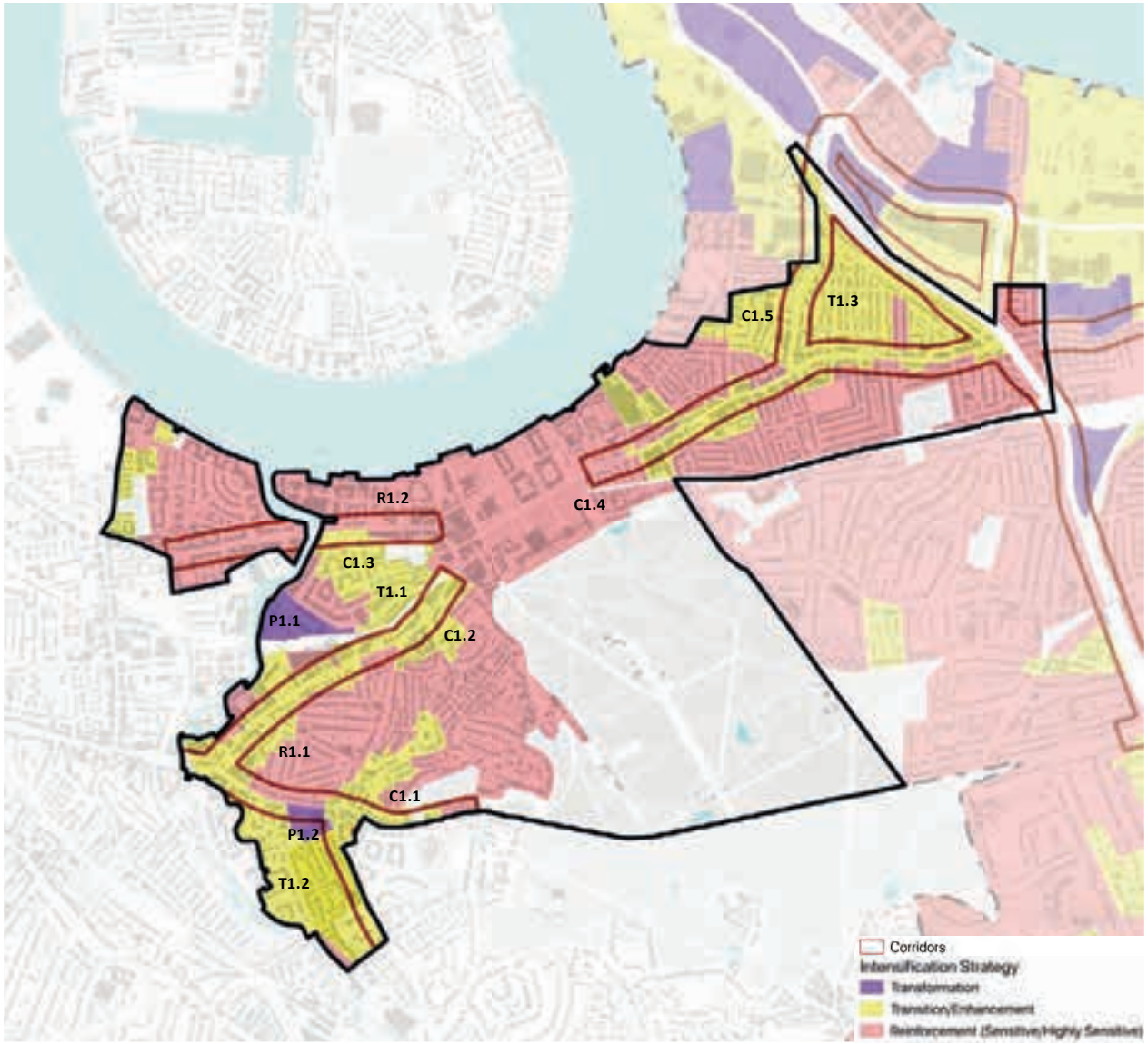


Figure 4.45: Intensification strategy

Transformation/ Placemaking	Principles	Sensitivities
· Small triangle of industrial development at Deptford Creek (P1.1)	· Development to establish coherent urban character with permeable blocks; · Maximising the opportunity of the waterfront setting; · Responding to neighbouring development; · Fronting onto Norman Road;	· Protected views · WHS buffer zone · Local views
· Wickes site on Blackheath Road (P1.2)	· Mixed use development with consistent frontage onto main road; · Shoulder height massing to reflect development opposite; · Creating a permeable layout and new connection with John Penn Street to rear; · Opportunity for central green space;	· West Greenwich CA · Ashburn Triangle CA · Setting of listed buildings

Figure 4.46: Transformation / placemaking

Corridor Improvements	Principles	Sensitivities
· Blackheath Road (C1.1) · Greenwich High Road (C1.2)	· Infill development; · Selective redevelopment; · Consolidation of small plots to enable co-ordinated redevelopment; · Modest increase in heights and street enclosure, with use of set-backs on upper floors;	· West Greenwich CA · Ashburn Triangle CA · Views towards tower of former Town Hall
· Creek Road (C1.3)	· Infill development; · Selective redevelopment; · Avoid creation of canyon along street; · Create appropriate urban grain;	· Views from river

Corridor Improvements	Principles	Sensitivities
· Trafalgar Road / East Greenwich Centre (C1.4)	· Infill development; · Selective redevelopment; · Consolidation of small plots to enable co-ordinated redevelopment; · Modest increase in heights and street enclosure, with use of appropriate set-backs on upper floors; · Respond appropriately and step down to lower scale of neighbouring development	· East Greenwich Conservation Area · WHS buffer zone · Views to local landmarks
· Blackwall Lane (C1.5)	· Improve definition and natural surveillance of street corridor through infill development, selective redevelopment and · consolidation of plots; · Potential to modestly increase building heights without excessive enclosure; · Respond appropriately and step down to lower scale of neighbouring development;	· Low rise neighbouring development

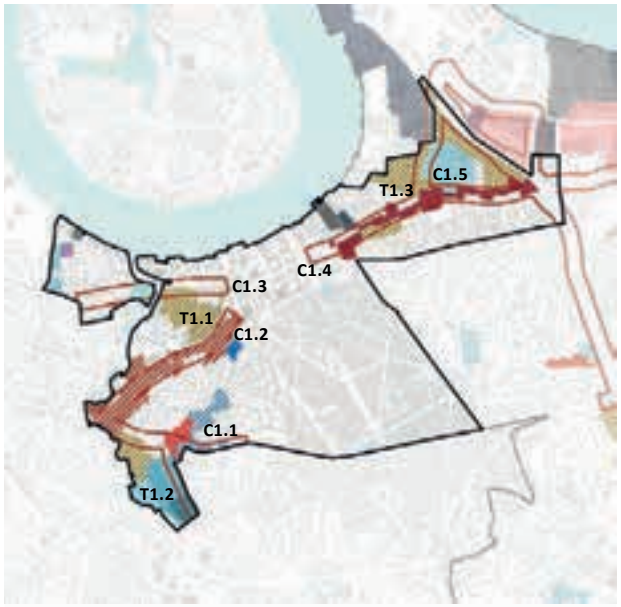


Figure 4.47: Corridor Improvements / transition

Transition	Principles	Sensitivities
· Council estates west of the town centre (T1.1)	· Potential to better integrate development, define streets and deliver additional homes; · Comprehensive estate regeneration where appropriate with potential for one (or exceptionally, two) additional storeys and infill development;	· WHS buffer zone · West Greenwich CA · Views from the river · Listed buildings
· Area to south of Blackheath Road and west of Lewisham Road (T1.2)	· Potential for coherent masterplan-led regeneration to deliver improved environment, defined spaces, permeability, legibility and increased housing numbers; · Sensitive response to low-rise neighbouring development;	· Views from river

Transition	Principles	Sensitivities
· Area north east of Trafalgar Road (T1.3)	· Potential for improvement of connectivity, permeability and street definition, and delivery of additional homes; · Comprehensive estate regeneration where appropriate; · Infill development and selective redevelopment; · Sensitive response to low-rise neighbouring development; · Appropriate response to noise and air pollution from Blackwall Tunnel Approach;	· Low-rise housing nearby

Reinforcement	Type of Intensification	Sensitivities
· South of Greenwich High Road up to Black Heath Road (R1.1)	· Contextual development (infill, selective redevelopment and extensions); · Respond appropriately to grain, massing and roof form, building line and material quality of existing development;	· WHS buffer zone · West Greenwich CA · Ashburn Triangle CA
· From Trafalgar Road northwest to river and south to railway (R1.2)	· Contextual development (infill, selective redevelopment and extensions); · Respond appropriately to grain, massing and roof form, building line and material quality of existing development;	· WHS buffer zone · East Greenwich CA · Views from river · Views to local landmarks

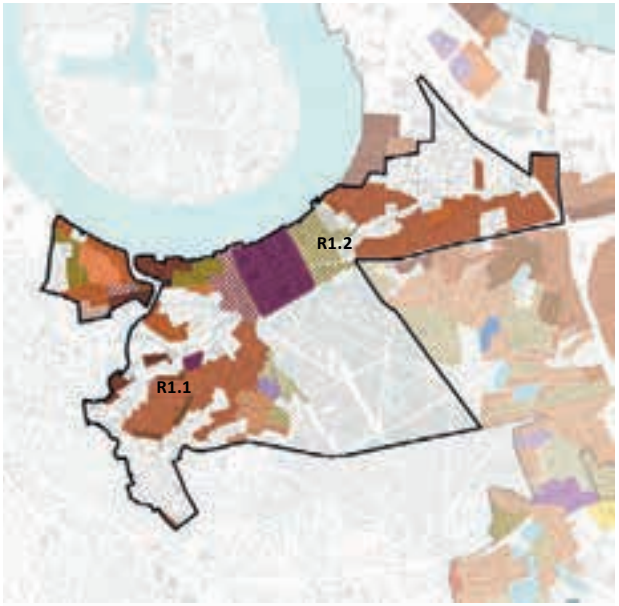


Figure 4.48: Reinforcement

TALL BUILDING POTENTIAL

The adjoining plan illustrates the tall building recommendations for Greenwich and the table on the following page provides full details.

There is potential for one tall building zone in the south west of the Place and for two small tall building clusters along Deptford Creek. A tall building could be justified to act as a landmark for Westcombe Park station.

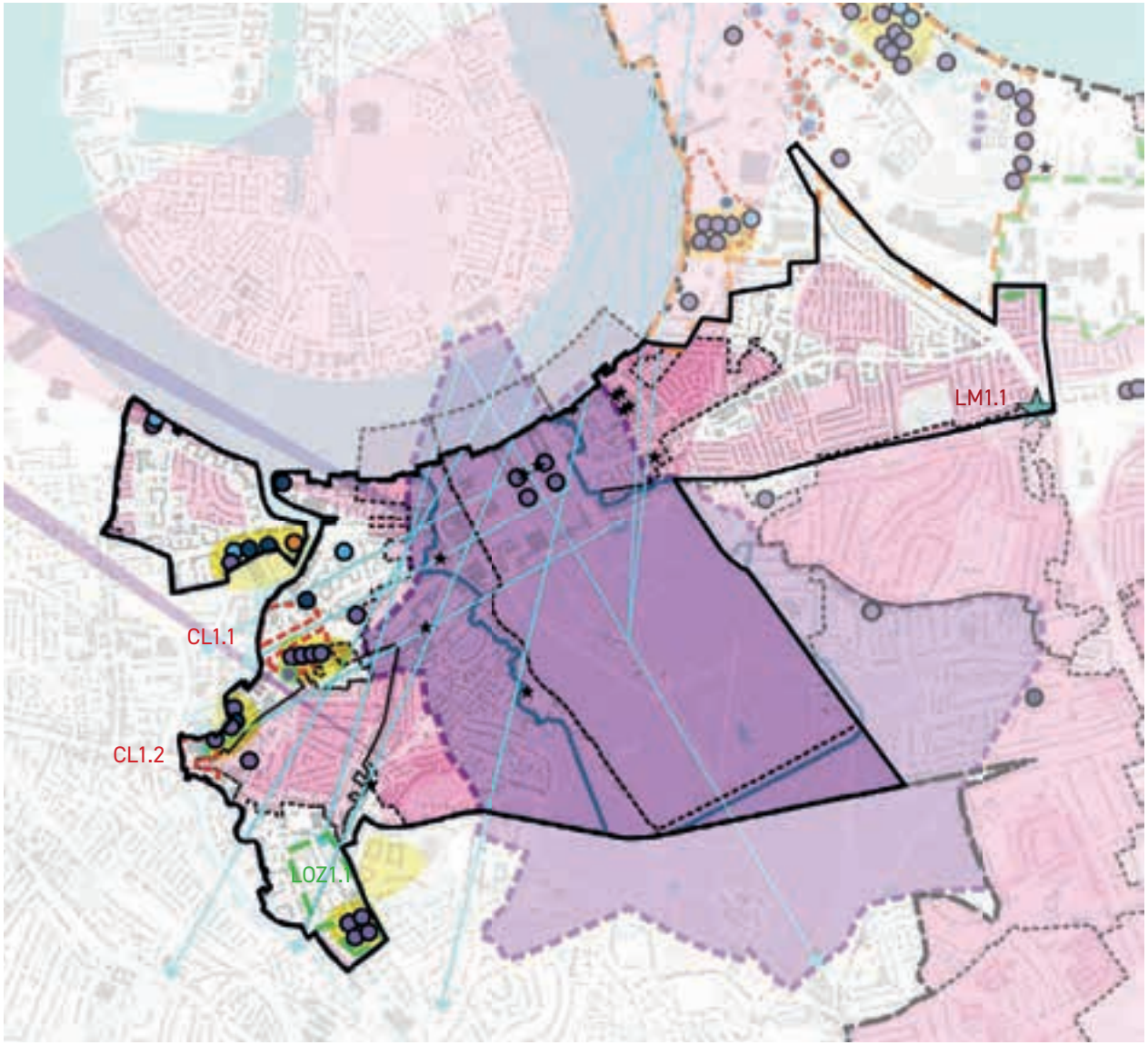


Figure 4.49: Tall building opportunities and sensitivities

Code	Promoting Factors	Context Height	Recommendations	Sensitivities
CL1.1	• Intensify Town centre with high PTAL and facilities	• 2-3 storeys (varied)	Potential for small cluster of buildings of up to 42m AOD (approximately 12 storeys) with the exception of buildings located in the view cone from the eastern end of Romney Road, where they should be no more than 36m AOD (up 10 storeys) in the Brookmarsh Industrial Estate as part of a comprehensive development, subject to: • avoiding any intrusion into the view along Romney Road (eastern end) towards St Alfege Church • avoiding adverse impact on heritage assets and other strategic or local views • creating a varied skyline with different heights • Avoiding creating a wall of tall buildings along the Creek	• WHS Buffer Zone • WHS Grand Axis view • View along Romney Road towards St Alfege Church • View along College Way towards town centre • View from Herbaceous Border towards town hall tower • West Greenwich Conservation Area • Ashburn Triangle Conservation Area • Proximity to WHS • Proximity to Registered Park and Garden • Proximity to LVMF view cone
CL1.2	• Intensify central location around Rail station in area of high PTAL	• 3 storeys (varied)	• Opportunity for limited number of midrise buildings of up to 40m AOD (approximately 10-11 storeys) to enhance density around station node without undermining the landmark function of the Distillery tower, subject to avoid adverse impact on the Ashburnham Triangle Conservation Area and low rise development on Greenwich High Road	• Ashburn Triangle Conservation Area • Proximity to WHS
LOZ1.1	• Support regeneration of post war estate	• CH: 3 storeys (varied)	• Estate development could explore a modest number of midrise buildings, subject to avoid visual impact onto the WHS and views towards Maritime Greenwich from downriver • Development to respond sensitively to low-rise context • Heights of up 10 storeys (3x context height)	• Proximity to low-rise residential area • Located on rising and visually prominent land • Proximity to WHS
LM1.1	• To enhance legibility of rail station and intensify area of higher PTAL	• CH: 2 storeys	• Opportunity for a singular local landmark building of up to 3x context height (up to 6 storeys) to mark the station approach on the A2 to enhance wayfinding and deliver improved station environment, subject to avoiding adverse impact on neighbouring low rise buildings, Greenwich Park Conservation Area and local views.	• Low-rise residential area • Greenwich Park Conservation Area

Table 3.1: Tall building recommendations - Greenwich

Image 4.17: Greenwich Park

Image 4.18: View towards O2 Arena and Peninsula

2. GREENWICH PENINSULA

PRESENT DAY CONTEXT

As a place, Greenwich Peninsula comprises those areas of the peninsula with a strong legacy of industrial and port-related land uses. Since the late 1990s it has been an area of major urban transformation of national importance. It includes all parts of the district centre clustered around the O2 Arena, as well as the various areas of mixed-use and housing regeneration on former 'brownfield' lands. Its southern boundary differs from the Peninsula ward boundary and excludes most of the ward's older terraced and postwar housing, which are of smaller scale and tighter grain.

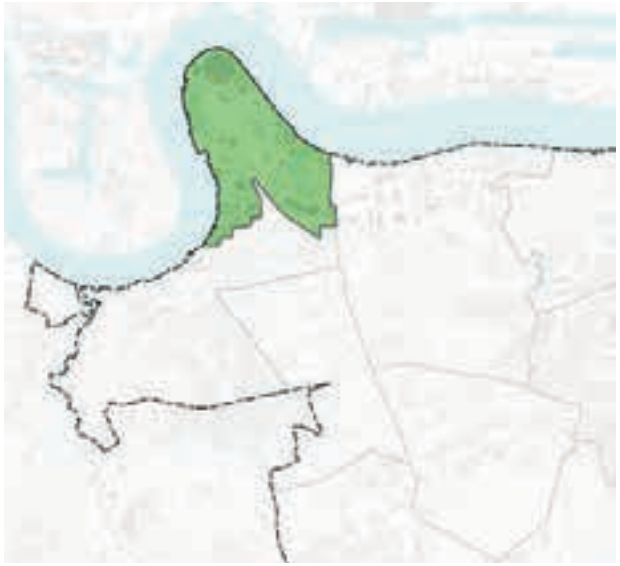


Figure 4.50: Location map

Image 4.19: Greenwich Peninsula **(copyright Google)**

HISTORIC DEVELOPMENT

Until the later 19th century, Greenwich Peninsula and the areas that are now known as Charlton Riverside, Thames Barrier and Bowater Road were empty riverside marshland. By the early 20th century, the peninsula was occupied by a gas works and other industries. This area has been substantially redeveloped for residential uses with the O2 Arena the north promontory of the peninsula.

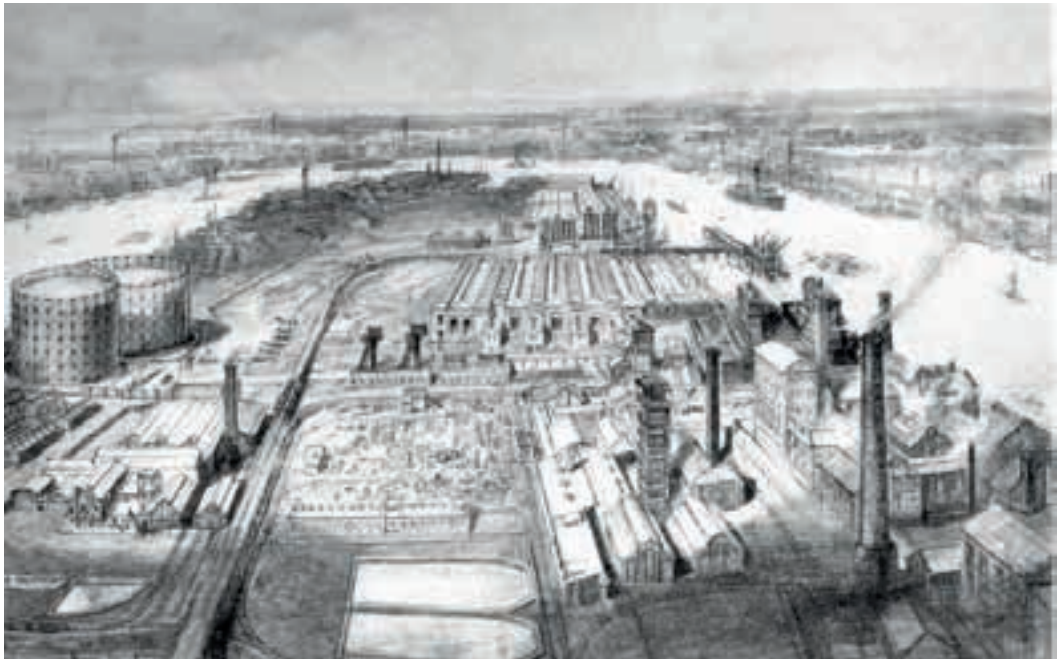


Image 4.20: Greenwich Peninsula in the early 20th century.

Image 4.21: John Wyld map of 1872 showing the peninsula devoted to brick fields with New Charlton marsh to the east. The relatively isolated area also accommodated a powder magazine, probably for safety reasons.

PLACE STRUCTURE

The configuration of Greenwich Peninsula is unique in London. Less than a kilometre wide at its narrowest, ribbon-like development stretches along the riverfront on its three sides—relating to it with varying degrees of formality—whilst the inland centre of this low-lying area is dominated by infrastructure and open space. The main access into the area is via Blackwall Tunnel Approach from the south and Blackwall Tunnel from the north, via Bugsby Way from the east and Blackwall Lane from west. The district centre is located to the north, adjacent to the O2 Arena, which has a dominant position at the head of the peninsula. Here there has been considerable investment in the public domain, in landscape and public art, including the riverside promenade, river piers for Thames Clipper services, as well as the distinctive infrastructure of the Emirates cable car linking across the river to the Royal Docks. This provides a high quality setting for the mixed uses from leisure to education.

Inland is an extensive surface carpark serving the North Greenwich Jubilee Line station, bus interchange and district centre. This is flanked to the east by Central Park and to the west by the Blackwall Tunnel approach, which effectively severs the two sides of the peninsula into a larger eastern area and a smaller western.

The west side accommodates the majority of the remaining industrial and port-related uses, though its southern parts adjacent to Greenwich have recently been redeveloped for high-density mid-rise residential use, accessed via local streets from Blackwall Lane.

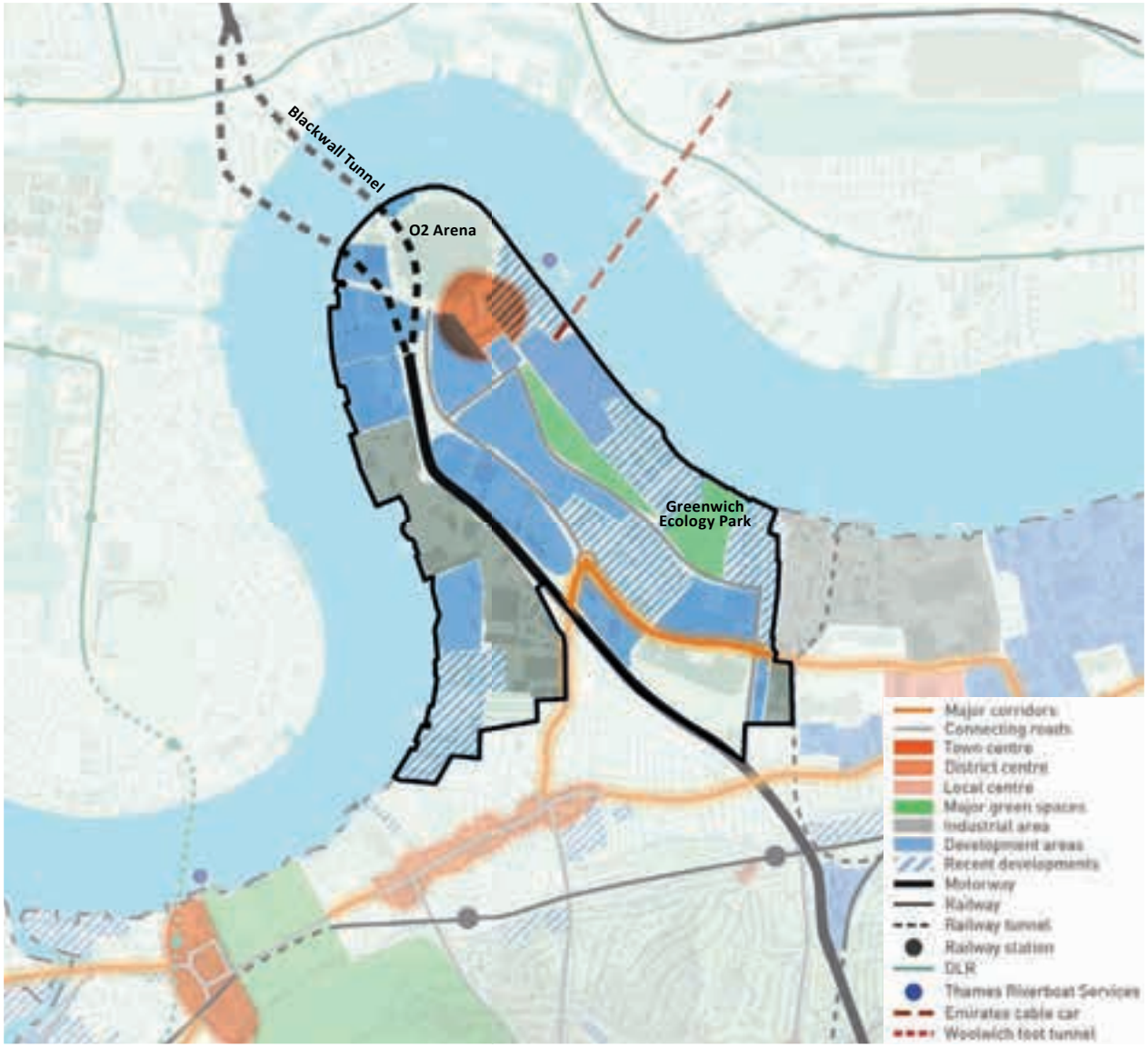


Figure 4.51: Place structure

On the east side this process is largely complete, having begun at the Millennium Village and extended north and south along the waterfront esplanade with comprehensive high-density residential development overlooking Central Park and the river, and accessed via Millennium Way. Historic fragments have been retained at River Way terrace, as well as the green space of Greenwich Ecology Park opening to the river. A small number of industrial sites and big-box retail and leisure uses remain to the south, adjacent to Blackwall Tunnel Approach.

Image 4.22: Blackwall Tunnel Approach

Image 4.25: River boat services

Image 4.23: Central Park

Image 4.24: Greenwich Ecology Park

CHARACTER AND TOWNSCAPE FEATURES

The Peninsula has a strong landscape character by virtue of its level topography, river frontage to three sides, and open aspect both from the Central Park as well as along the riverside promenade looking downstream to the estuary.

The historic low-intensity port- and industrial uses common in the area are now largely confined to the west side of the peninsula, where they are fragmented and of low sensitivity. These are now effectively screened by new development, which extends across the north, east and south-west of the peninsula in the form of contemporary high-density mixed-use, institutional and residential development. This is completely reshaping the character of the place, with clusters of tall and high-rise building along the river front. These new parts are broadly coherent and sensitive due the continuity of frontage and enclosure to open spaces, albeit of a rather loose structure. Central Park and Greenwich Ecology Park open up to the river, but the centre of the peninsula is occupied by a fragmented array of surface car parking, big box development and, institutional and infrastructural uses, which currently have a weak relationship with the surrounding development.

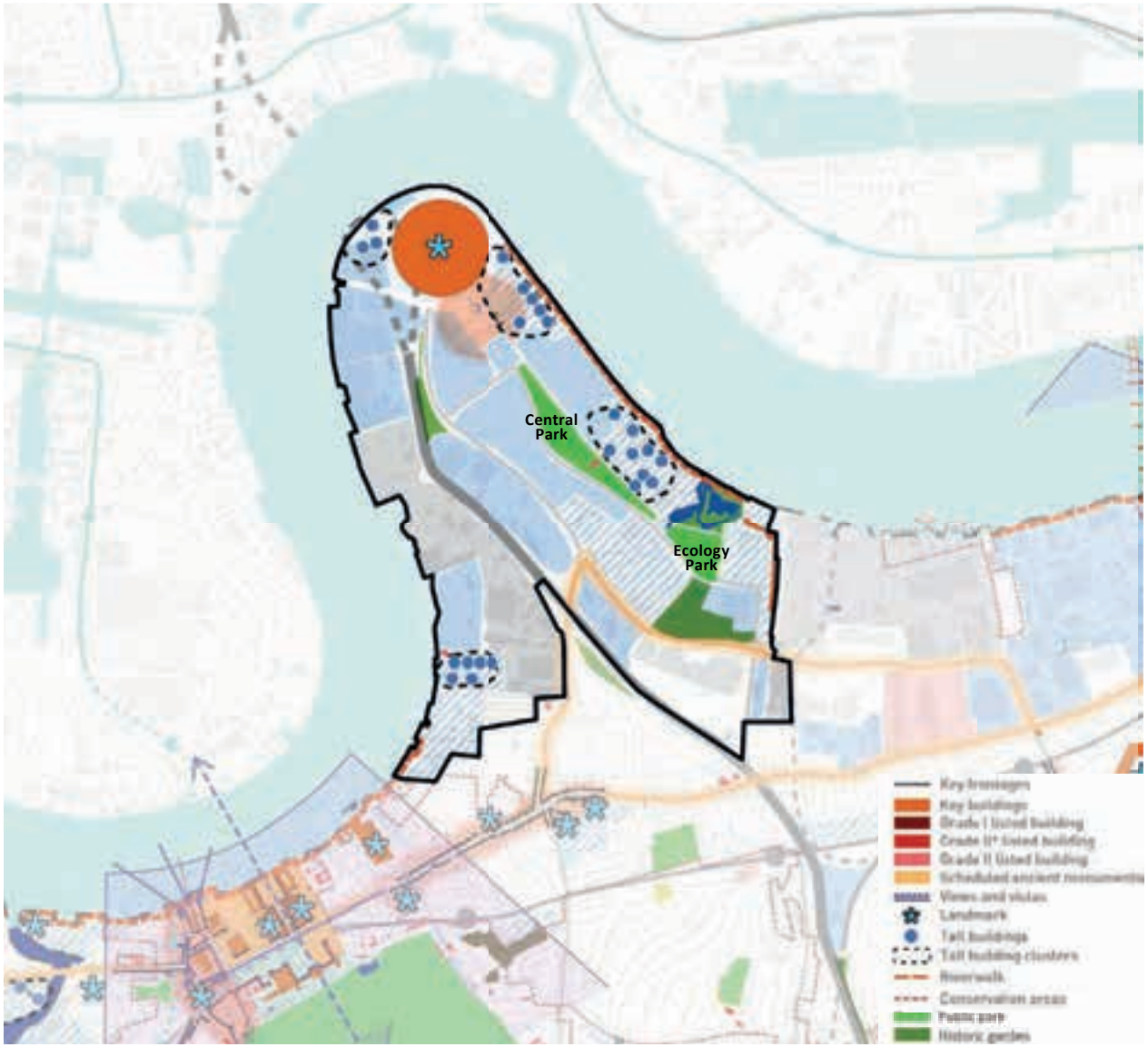


Figure 4.52: Character and townscape

Figure 4.53: Urban typologies

Figure 4.54: Coherence

Figure 4.55: Sensitivity

The peninsula is also strongly characterised by its distinctive infrastructural elements. At the tip of the peninsula, the O2 Arena is one of London's most recognisable landmarks, visible across docklands and responding successfully to the scale of the estuary. Adjacent are the Grade II listed Blackwall Tunnel Southern Ventilation Shaft, the cross-Thames cable car, and the elevated walkway of The Tide with its monumental public art collection. Together these comprise an infrastructural ensemble of distinctive design and character.

A number of characteristics detract from the townscape quality. There are considerable air quality and noise impacts from the Blackwall Tunnel Approach, and the area's main access corridors of Blackwall Lane and Bugsby Way are traffic dominated, with consequent air quality and noise impacts, as well as lacking enclosure and frontage development. The western part of the peninsula is somewhat isolated and poorly connected to east, and there is poor urban definition of the southern 'gateway' onto the peninsula. The height of tall buildings is somewhat uncoordinated; there is a risk of creating the effect of a 'wall' along the river. Similarly the high-rise areas around O2 arena lack a sense of urban life due to the quality of the interface with the public domain at ground floor level. With many sites remaining open and undeveloped, the loose urban structure of the area lacks intensity at the district centre and tends to fragmentation at its periphery.

Image 4.27: Tall building clusters

Image 4.29: View from Peninsula

Image 4.26: View from Peninsula

Image 4.28: Greenwich Peninsula from Emirates Cable Car

BUILDING HEIGHTS

Greenwich Peninsula is an area of major change, and this is reflected in the building height and form. Its legacy of industrial uses includes large-span warehouses and factories surrounded by extensive areas of hard standing, combined with the low-lying and flat terrain to give a somewhat scale-less quality to the place. This quality persists on the west side of the peninsula, though the predominant height of the industrial buildings here is 3-4 storeys. At the southern edge of this side, the form, use and height of buildings changes abruptly, with a close cluster of high-density large-footprint mid-rise residential blocks of 8-21 storeys. On the east side of the peninsula this pattern continues in the environs of the arena, with the tallest buildings rising to 30 storeys. To the south east, the network of streets is of more conventional layout and the building footprints more modest; consequently the buildings appear more slender yet here too the building heights are in the same range. Inland towards the centre of the peninsula, clusters of recent housing adjacent the Millennium Primary School are of more conventional scale and layout, with perimeter blocks combining 3-storey houses and apartment buildings up to 8 storeys.

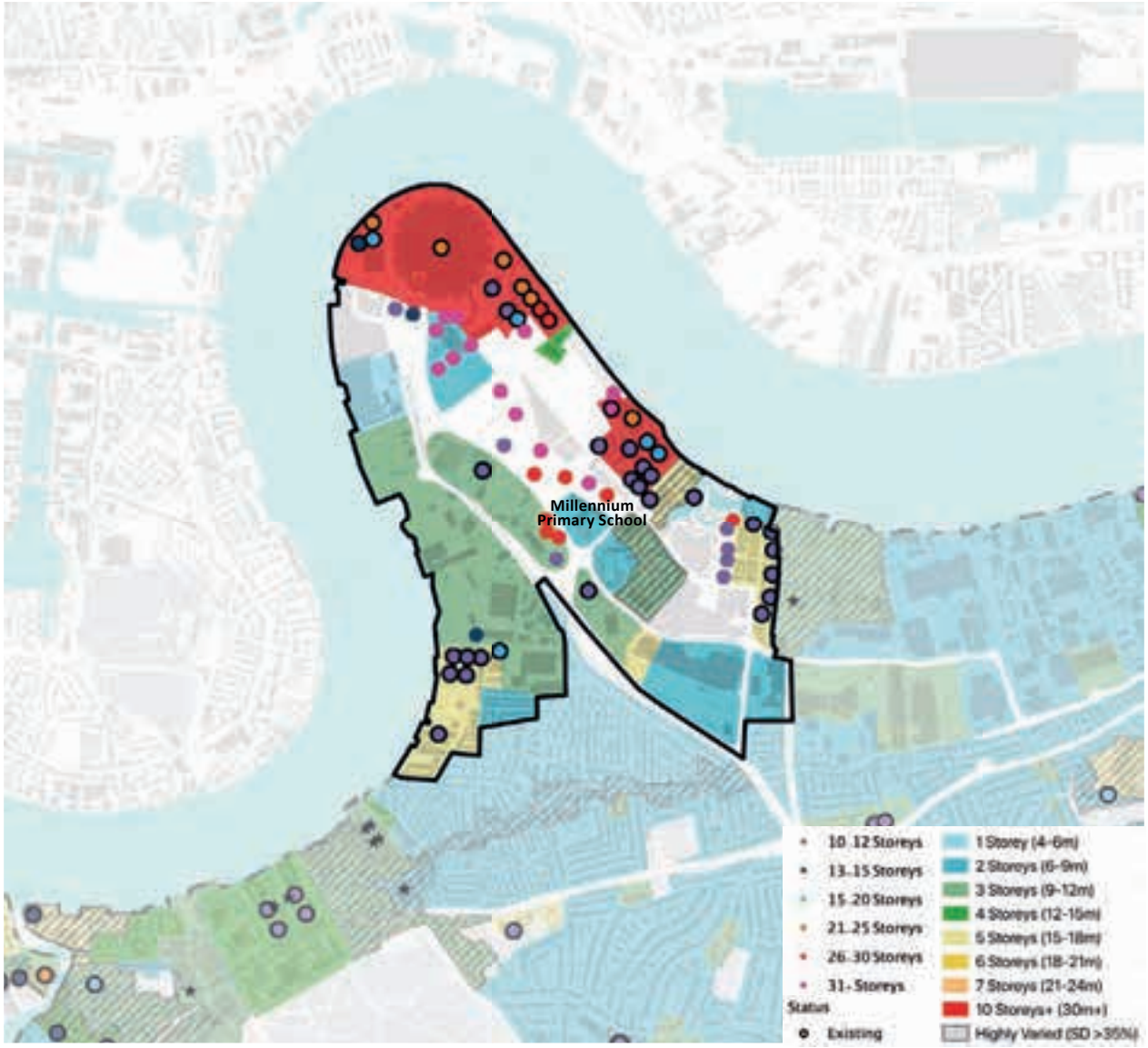


Figure 4.56: Context heights and Tall Buildings (existing shown with black outline, permitted shown with no outline)

HERITAGE, CONSERVATION AND VIEWS

There are no Grade I or Grade II* listed buildings, Scheduled Ancient Monuments or Conservation Areas on the Peninsula, nor any protected views from within its area. The residential terrace and pub at River Way (formerly Ceylon Place) is the only substantial fragment of urban fabric remaining from the 19th century.

The panoramic view from the General Wolfe statue within Maritime Greenwich World Heritage Site allows views over the Peninsula and of the O2 Arena.

Full details on significant views are provided in the Heritage Appendix.

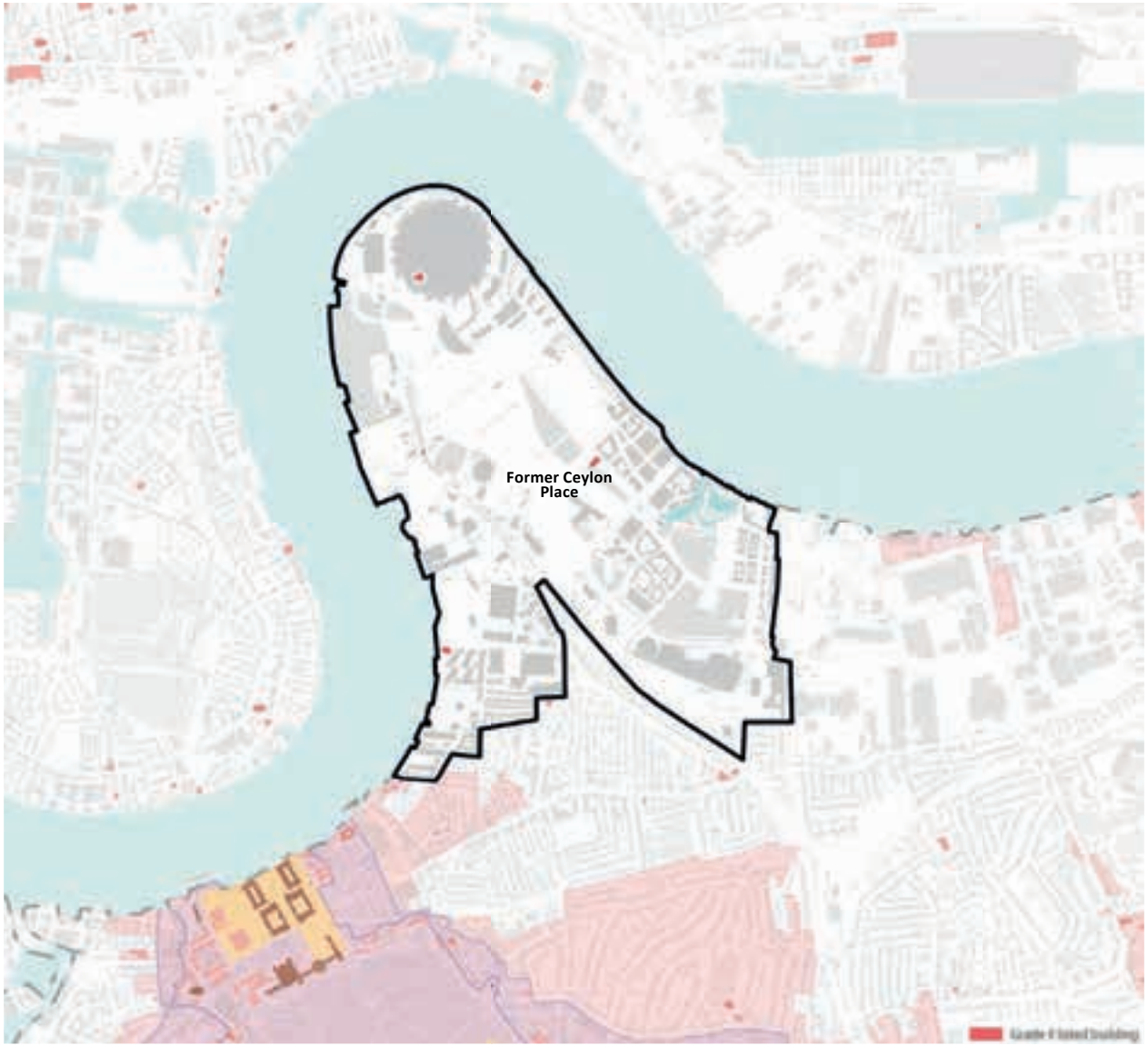


Figure 4.57: Heritage and conservation

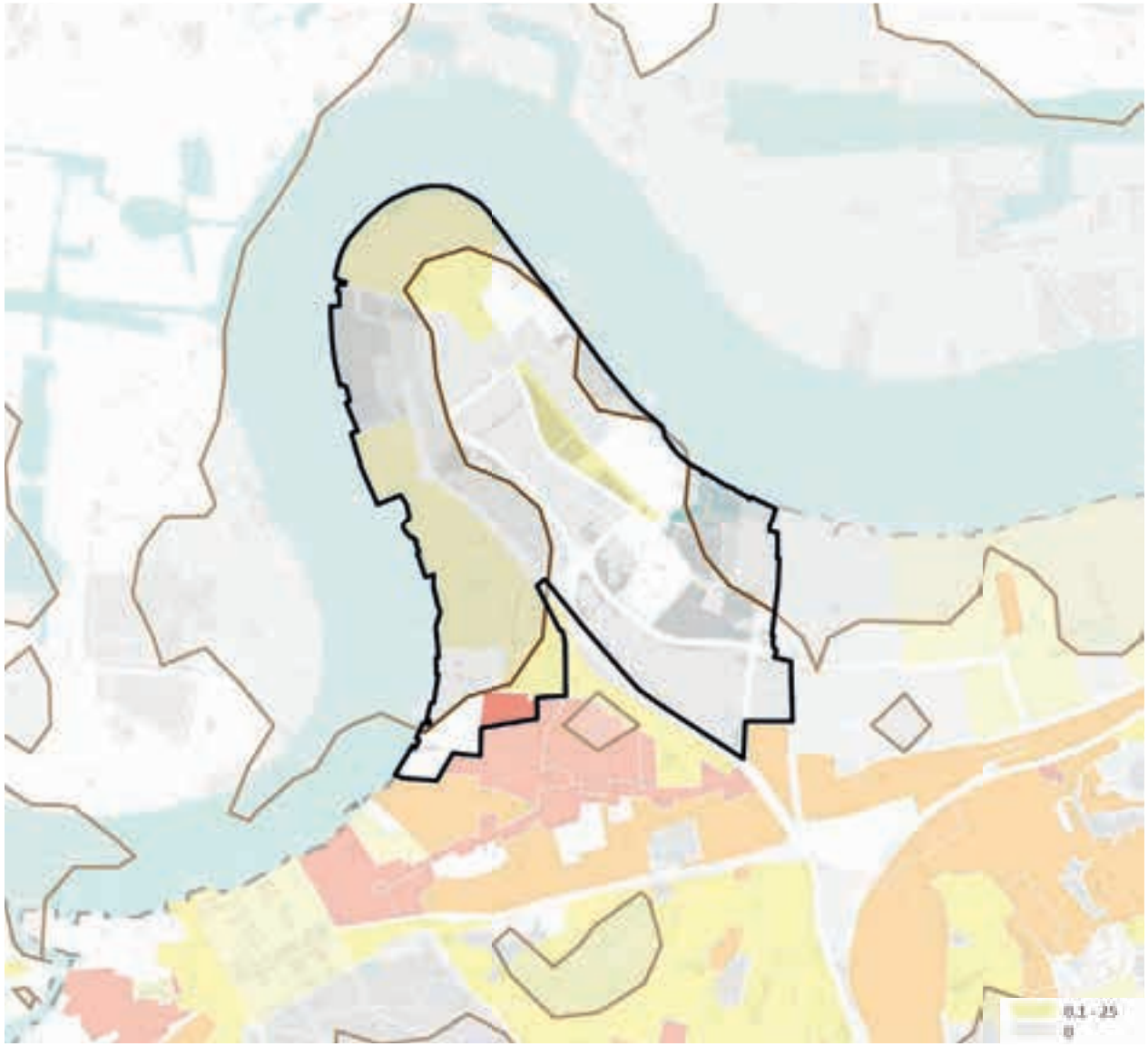


Figure 4.58: Dwelling density units/ha + PTAL 3+

Figure 4.59: Coherence + PTAL 3+

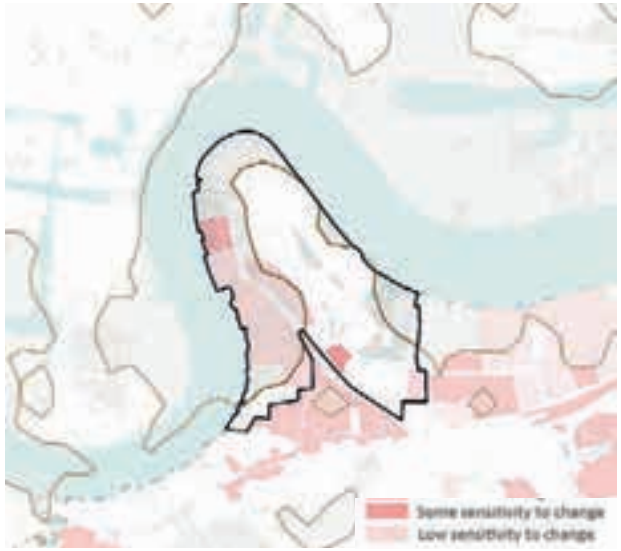


Figure 4.60: Sensitivity + PTAL 3+

CAPACITY FOR GROWTH

Much of the Peninsula is in a state of transition, with large vacant sites and industrial uses interspersed with new, high density mixed use development. The eastern and central parts of the Peninsula generally have good transport accessibility.

OPPORTUNITY FOR CHANGE

The Peninsula in general is in a state of transition from industrial uses to a dense, mixed use neighbourhood. Areas that are newly established with mixed use, contemporary development will only see further reinforcement of that character. However, large areas at the centre of the peninsula are ready for Transformation through masterplanning. Other sites in the south and east of the Place have potential for Transition and Corridor Improvements. Each of these areas is discussed in detail on the following pages.

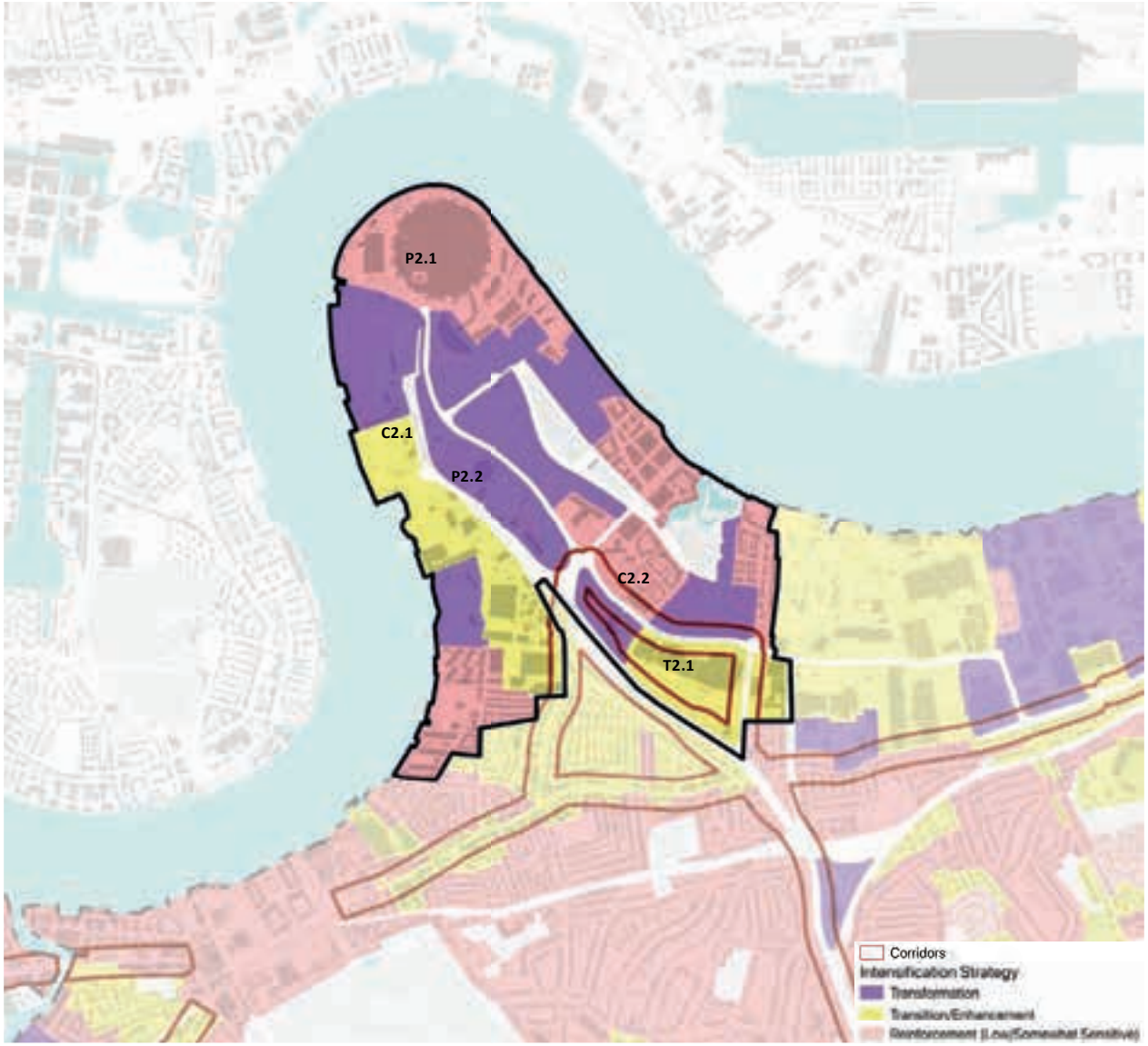


Figure 4.61: Intensification strategy

Transformation/ Placemaking	Principles	Sensitivities
· East of Blackwall Tunnel Approach and the tip of Pensinsula P2.1 · West of Blackwall Tunnel Approch (north and south of strategic industrial area) P2.2	· Need for masterplanned approach for the coherent development of the Peninsula as a well connected, permeable and street-based new district; · Provide high quality pedestrian and cycling connections between east and west of peninsula; · Mitigate the traffic impact of the Blackwall Tunnel Approach; · Open up frequent views to the river from the centre of the peninsula; · Development to join up with neighbouring development on the western riverfront; · Establish a coherent approach to building height and tall buildings that creates a legible skyline, avoids a wall of towers along the river and minimises adverse impacts on views from Central London to Tower Bridge and Canary Wharf;	· Backdrop to views from central London to Tower Bridge · In views to Canary Wharf, avoid visually coalescing with Canary Wharf cluster · Overshadowing of Central Park and riverwalk

Figure 4.62: Transformation / placemaking

Corridor Improvements	Principles	Sensitivities
· Blackwall Tunnel Approach C2.1	· Erect noise barriers to limit impact of road;	
· Bugsby Way and Blackwall Lane C2.2	· Establish urban frontage and change nature of road into green urban boulevard; · Infill development along frontage;	

Transition	Principles	Sensitivities
· Retail park (IKEA) T2.1	· Potential to intensify surface carparking site with mix of uses and multi-storey car park development; · Development to shield from impact of Blackwall Tunnel Approach;	

Figure 4.63: Corridor improvements / transition

TALL BUILDING POTENTIAL

The adjoining plan illustrates the tall building recommendations for Greenwich Peninsula and the table on the following page provides full details.

The entire Peninsula is categorised as a tall buildings zone, with five distinct locations identified for tall building clusters.

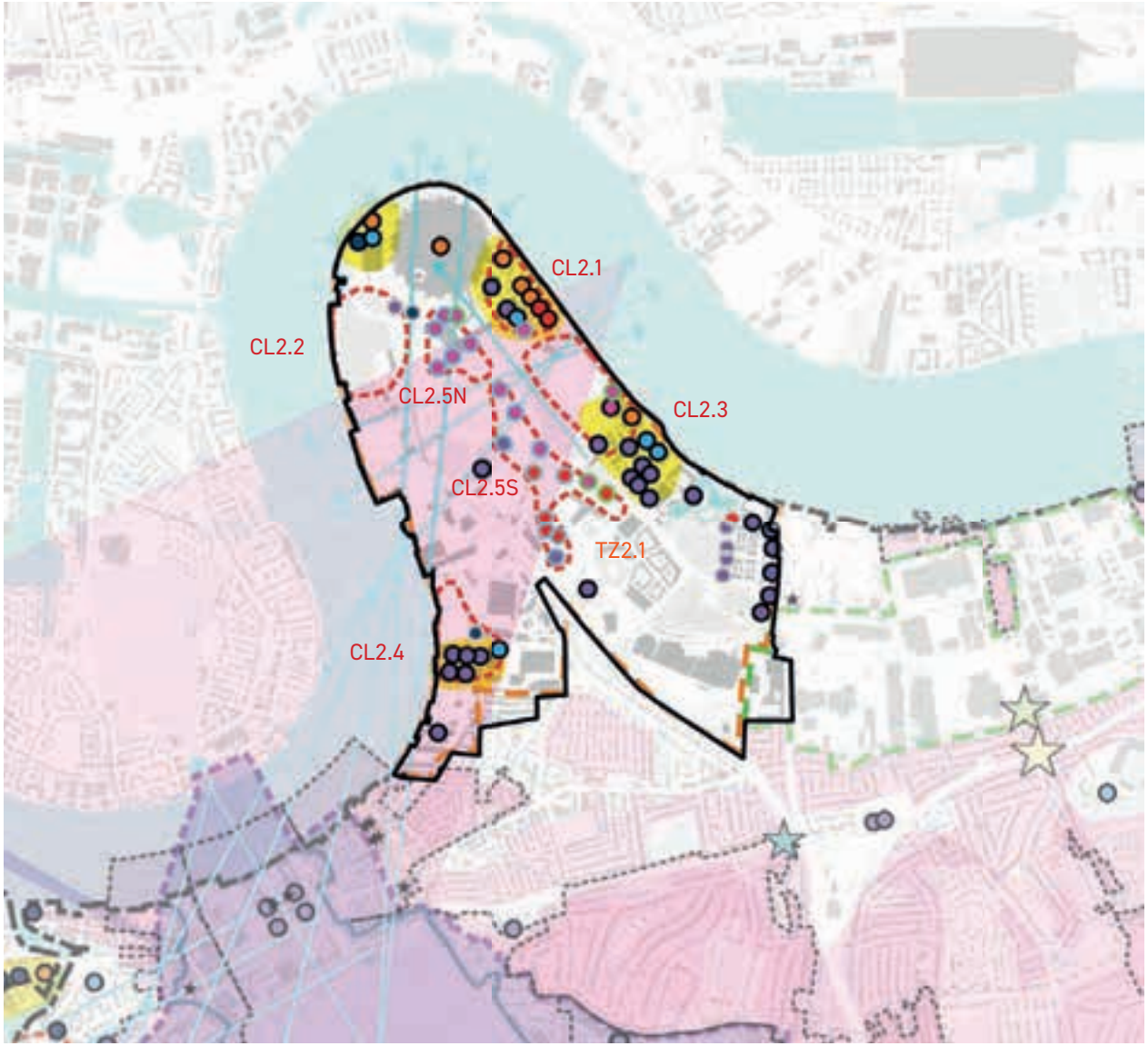


Figure 4.64: Tall building opportunities and sensitivities

Code	Promoting Factors	Context Height	Recommendations	Sensitivities
TZ2.1 CL2.1 CL2.2 CL2.3 CL2.4 CL2.5	• To optimise development of Strategic Development Location, deliver place making and intensify in areas of high PTAL	• CH: 2-10 storeys (varied)	Peninsula generally suitable for tall buildings, subject to a masterplan led approach where tall buildings are an integral part of a coherent place making approach. Tall Building General Principles (notwithstanding outline permission 19/2733/O): • Protect views and the prominence of the London wide landmark of the O2 Arena: - Retain open views from the river curving around the O2 to appreciate the dome and pylons against the sky, so that its scale and architecture can be fully appreciated - Retain open views from WHS Grand Axis View (minimum central part of dome with four pylons clearly visible against sky) - Retain open view from northbound A102 behind gate house towards the O2 arena • Prevent a wall of towers lining the river front and retain visual open corridor across the peninsula from east to west • Establish a few discrete clusters of tall buildings that are clearly separate from each other. Tall buildings clusters at the peninsula should be clearly sub-ordinate in their height to the central Canary Wharf cluster. Heights of tall buildings should notably vary to deliver a lively skyline and not normally exceed 5x context height. Clusters should have their own visual distinctiveness and with their height clearly express the hierarchy of places on the skyline: - Highest order place - northern end of the central cluster at Jubilee Line station (**CL2.5N**) - Medium order place - south east and south west of the O2 (**CL2.1** and **CL2.2**) and southern end of central cluster (**CL2.5S**) - Lower order place - Enderby Wharf (**CL2.4**) and Central Park South (**CL2.3**) • Potential for singular local scale tall buildings of up to 12 storey to mark places of visual significance, such as main gateways or important street where they do not undermine above strategic principles	• WHS Grand Axis view • Metropolitan City Image Landmark – O2 Arena • City Image River views

Table 3.2: Tall building recommendations - Greenwich Peninsula

Image 4.30: View of St. John's Blackheath

3.BLACKHEATH / WESTCOMBE PARK

PRESENT DAY CONTEXT

Blackheath / Westcombe Park coincides exactly with Blackheath Westcombe ward. It is a predominantly residential area, clearly bounded to the west by Greenwich Park, Blackheath and the borough boundary, and to the north and east by major transport infrastructure—the North Kent rail line and Blackwall Tunnel approaches respectively. To the south its boundary runs along the centre of Blackheath Park, beside Kid Brook, and behind Susan Road.

Figure 4.65: Location map

Image 4.31: Blackheath / Westcombe Park **(copyright Google)**

HISTORIC DEVELOPMENT

This area initially developed around the fringes of Blackheath, though only a part of the extensive open green space of Blackheath is within the Greenwich Borough boundary proper. On the south side of the Heath, Vanbrugh Castle (1717 Grade I), Morden College (17th century, Grade II*) and The Paragon (Late 18th century Grade II*) are important heritage assets which appear in important views across Blackheath. This is a key characteristic of other heath-edge heritage groups where an aesthetically romantic relationship with the Heath and long views contribute to their significance.

Further south Blackheath Park, now a Conservation Area, is a residential area where development began circa 1820. The area is characterised by a diversity of house types from Georgian terraces and high-quality Victorian houses set in mature gardens and tree-lined streets. The slim spire of the Church of St Michael—"the Needle of Kent"—is a distinctive landmark.

To the north, the ridgeway of Westcombe Park Road marks the high point of the landscape, which then falls away towards the river. The mostly 19th and 20 century residential development here follows the contour lines of the terrain. In addition to some London County Council housing and later point blocks, the area is distinguished by some gentle and graceful mid-20th century Span housing on the Cator Estate.

Figure 4.66: A 19th century view of Vanbrugh Castle, built for himself by Sir John Vanbrugh, 1718

Figure 4.67: Mid-19th Century Blackheath / Westcombe Park

PLACE STRUCTURE

This predominantly residential area is effectively bounded by transport infrastructure to the north and east, with rail tunnelled beneath, and bisected by the artery of Shooters Hill Road. Much of the area enjoys an elevated position, with the topography rising towards Blackheath in the south west of the area.

To the north is the grand residential suburb of Westcombe Park, comprising Victorian and Edwardian villas in generous mature gardens. This extends to Vanbrugh Park and the Angerstein Estate which also includes 20th century housing development in a variety of modernist arrangements, but retaining the broad suburban street pattern. There are local centres at Batley Park and Old Dover Road.

To the south, this pattern continues into St Germans and Kidbrooke Park, which is of more consistently 20th century provenance. Morden Road and the northern part of Blackheath Park is more distinctive and eclectic in building form and use.

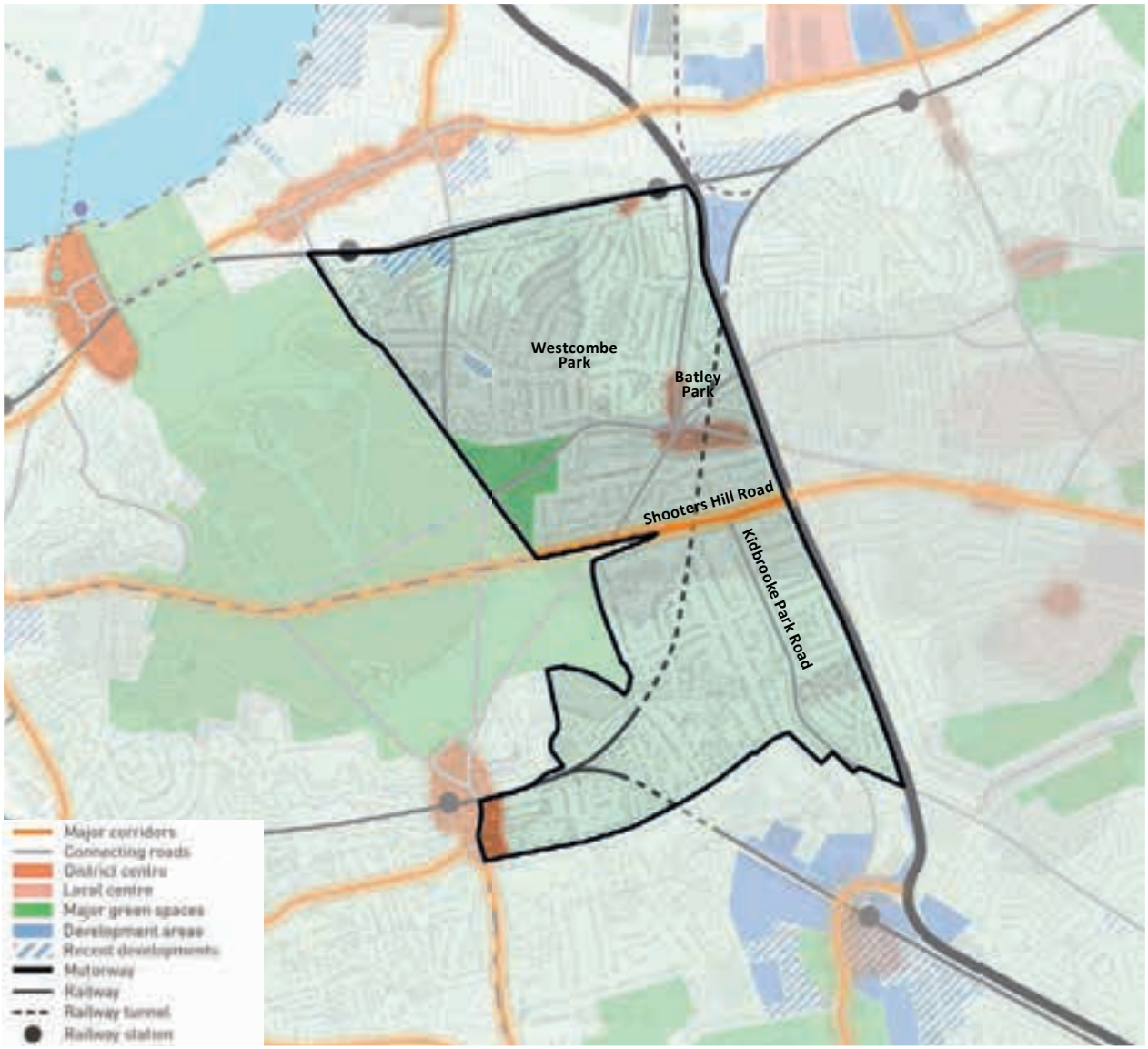


Figure 4.68: Place structure

Image 4.32: Blackheath Village

Image 4.34: Montpelier Row

Image 4.33: View towards St. John's Blackheath

Image 4.35: Maze Hill

CHARACTER AND TOWNSCAPE FEATURES

This is a mature landscaped suburb of strong character by virtue of its diversity of residential typologies from different eras and their common good quality of construction.

The northern half comprises the grand residential suburb of Westcombe Park. Here there are highly-coherent and sensitive streets of free-standing and semi-detached Victorian and Edwardian villas in generous gardens. Integrated within this street pattern are several small low-rise postwar estates, terraced streets, and areas of mixed residential development of broad and moderate coherence and sensitivity.

To the south, this pattern continues into St Germans and Kidbrooke Park, which is of more consistently 20th century provenance but a similar mix of housing types. Morden Road and the northern part of Blackheath Park is more distinctive and eclectic in building form and use, ranging from the highly coherent and sensitive the postwar neo-Georgian LCC flatted blocks at Fulthorp Road, to the broadly coherent and sensitive landscaped 'Span' estates of modernist 'flat-fronted' houses.

The set-pieces of The Paragon, Morden College, St. John's Blackheath, and Blackheath Village generally all provide local landmarks, mixed uses and an urban focus to the ward as a whole. Blackheath / Westcombe Park as whole can be characterised as highly coherent and highly sensitive.

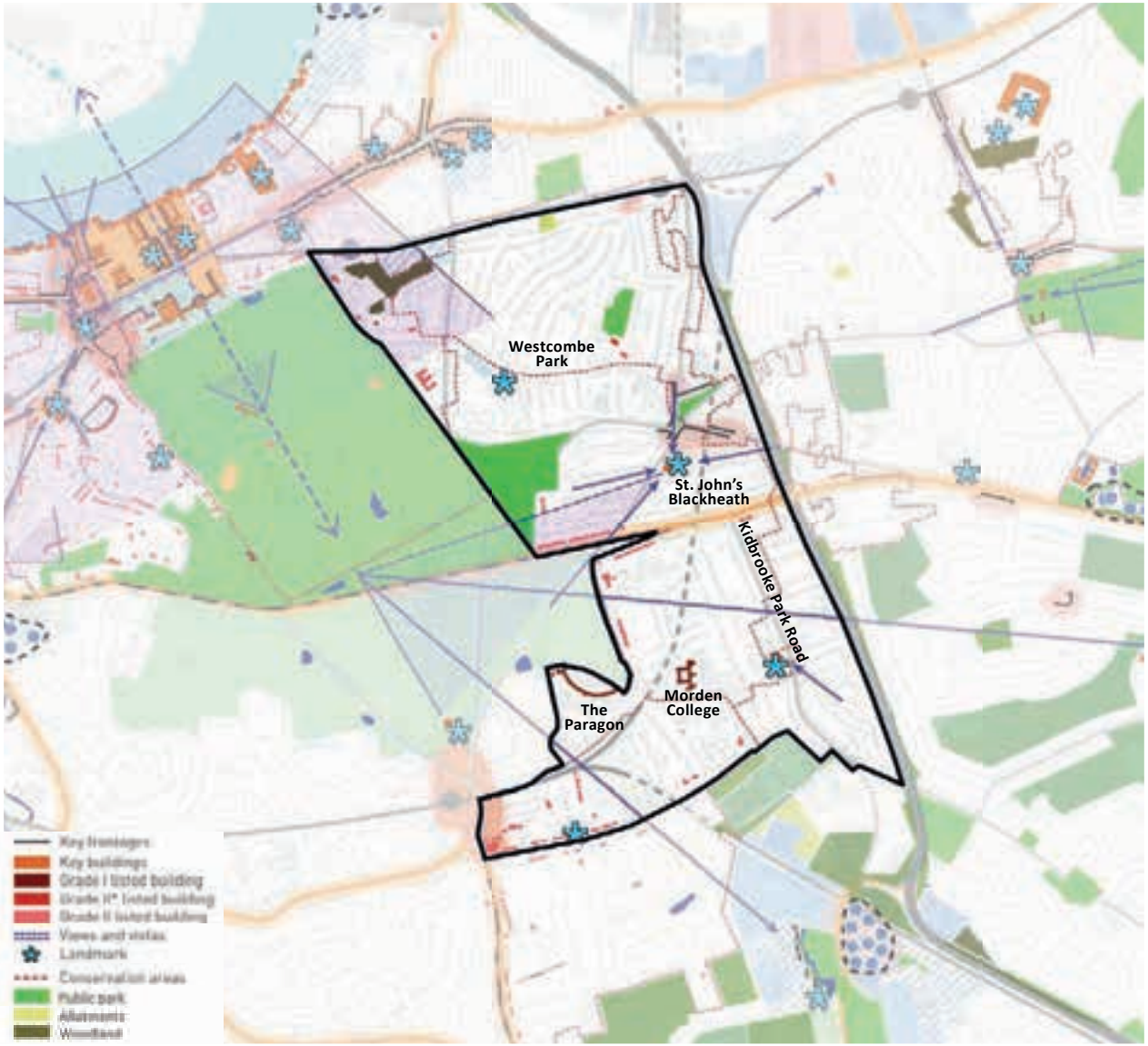


Figure 4.69: Character and townscape

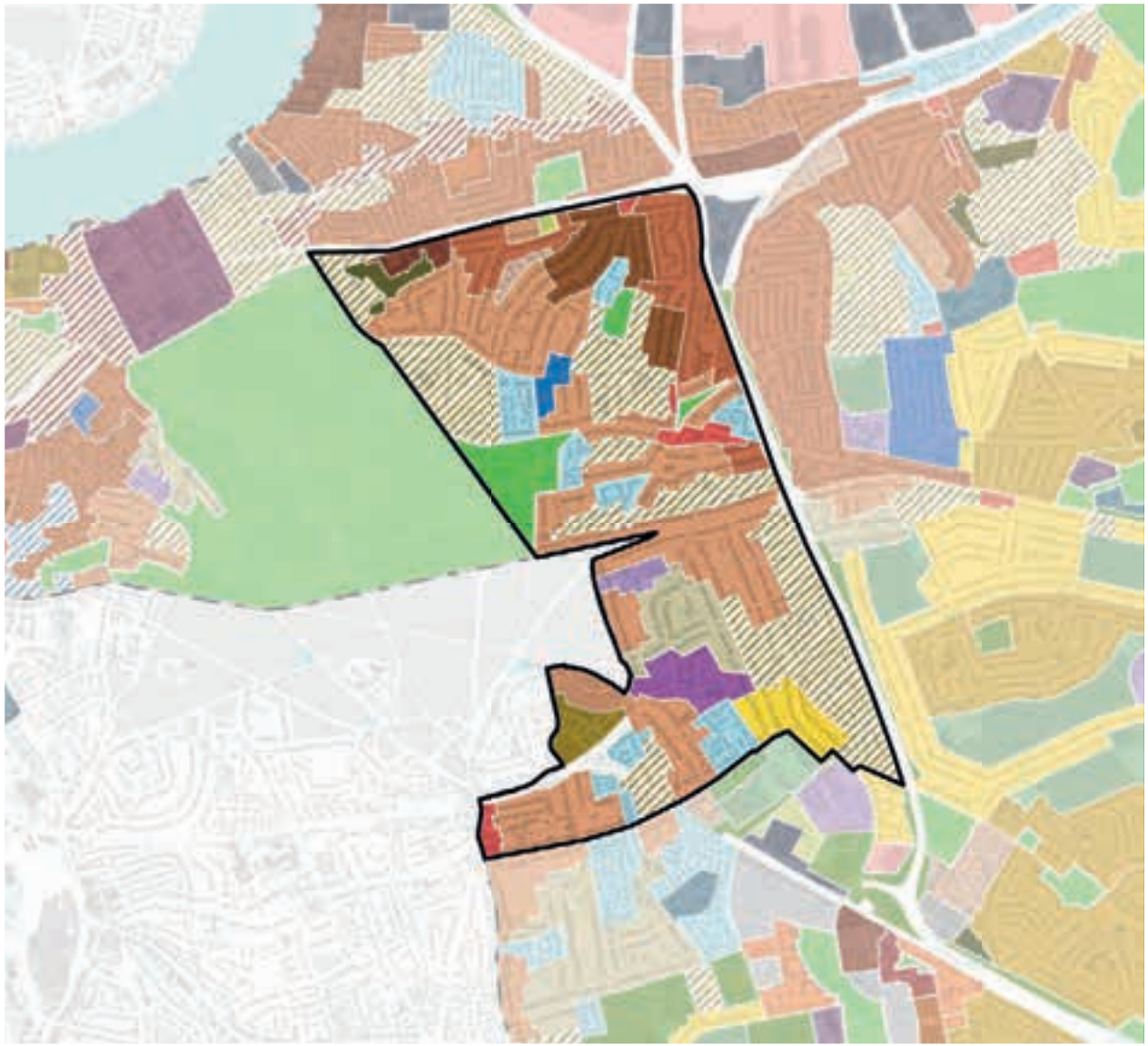


Figure 4.70: Urban typologies

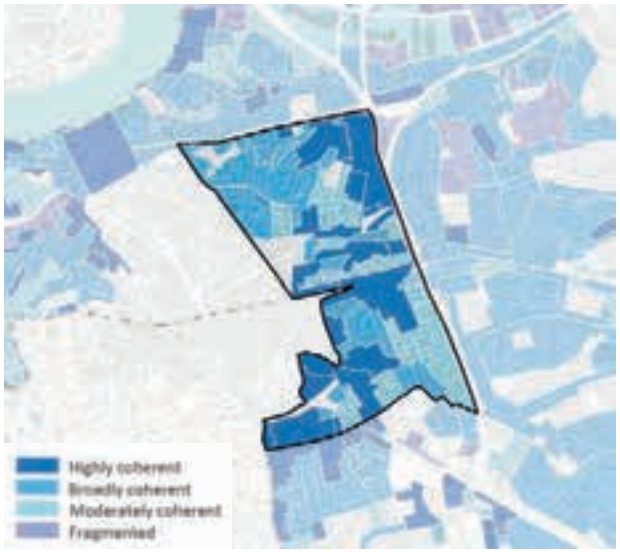


Figure 4.71: Coherence

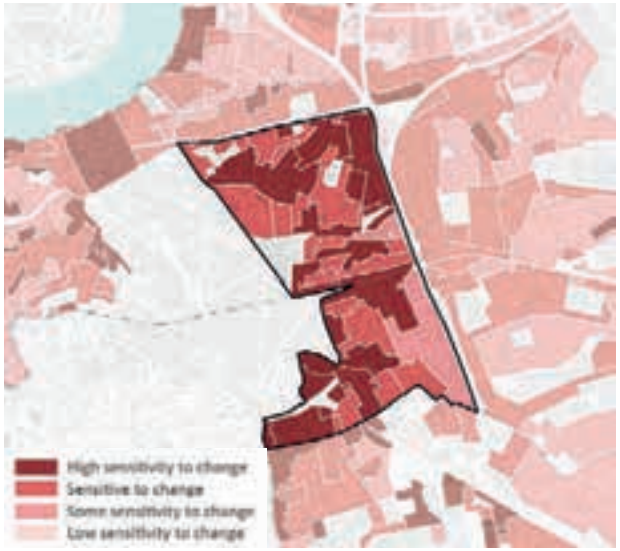


Figure 4.72: Sensitivity

BUILDING HEIGHTS

Blackheath / Westcombe Park is a predominantly low-rise place, with the majority of buildings in the range of 2-4 storeys including The Paragon at Blackheath and the corner ensemble of buildings at Blackheath Park and Lee Road. There are a number of free-standing institutional buildings, residential terraces and slab blocks of up to 6 storeys in height including at Brooke Lane and Fulthorp Road.

Greater building heights are seen in the two Grade II* listed churches, St. John's Blackheath in Vanbrugh Park and St. Michael & All Angels on Blackheath Park, as well as in a small number of free-standing apartment buildings up to 8 storeys and point blocks up to 12 storeys at Seren Park Gardens, Vanbrugh Park

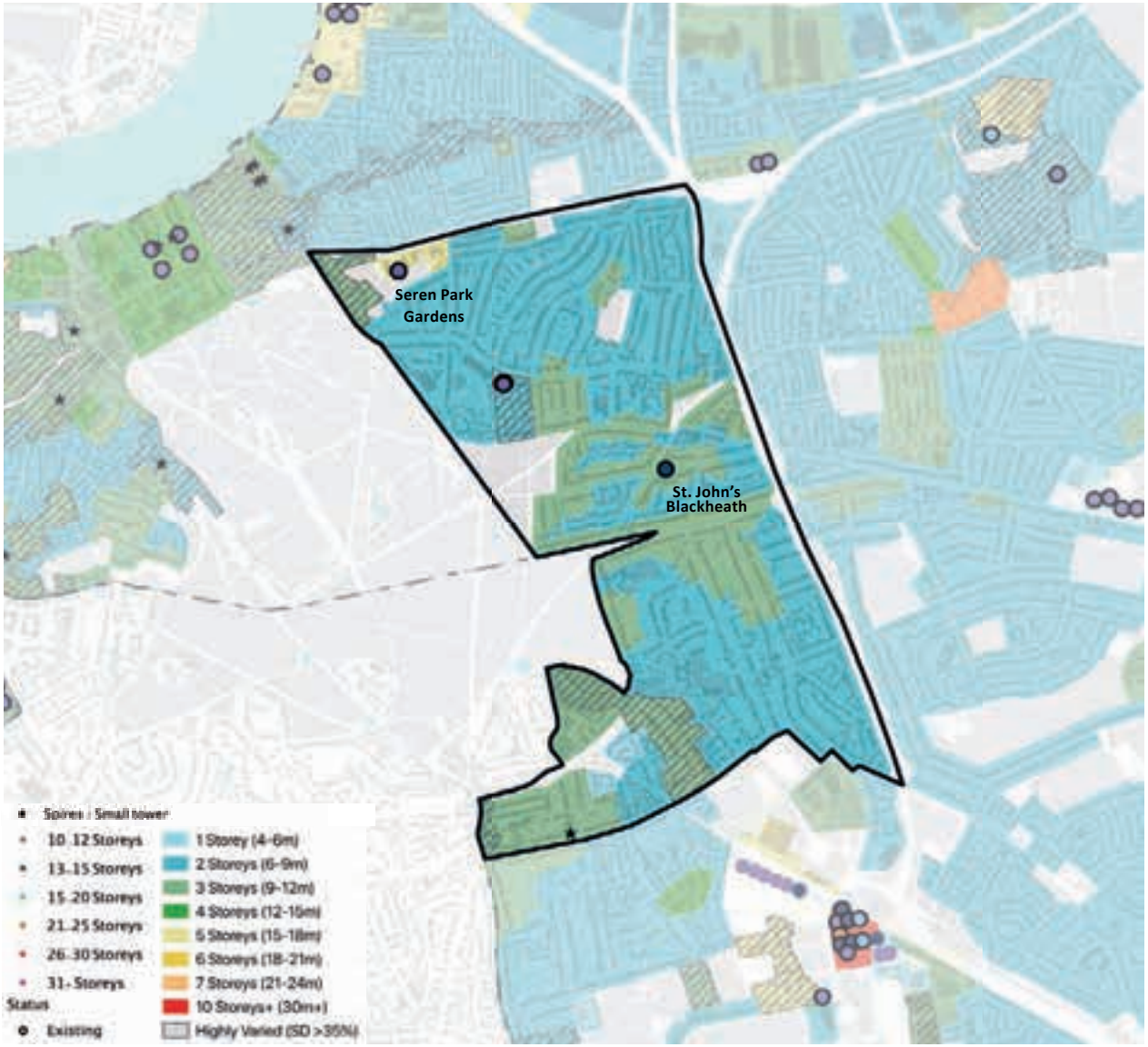


Figure 4.73: Context heights and Tall Buildings (existing shown with black outline, permitted shown with no outline)

HERITAGE, CONSERVATION AND VIEWS

Four contiguous Conservations Areas—Westcombe Park, Greenwich Park (part) Blackheath (part), Blackheath Park (part)—extend across this part of Greenwich, covering almost its entire area. Several terraces and public buildings are listed, including the Grade I collonaded crescent of The Paragon and Morden College, which together form a Georgian ensemble fronting Blackheath. A further cluster of listed buildings is located at Blackheath Park and Lee Road. None of the views from this area are protected.

The spires of St James Church, St John's Church and Verburgh Castle are visible in many views above the rooftops of 2-3 storey terraced buildings within and into Blackheath. There are long open views across the Heath and from Greenwich Park looking east. The Paragon, a curved street of 18th Century villas is highly visible in views across the heath.

Full details on significant views are provided in the Heritage Appendix.

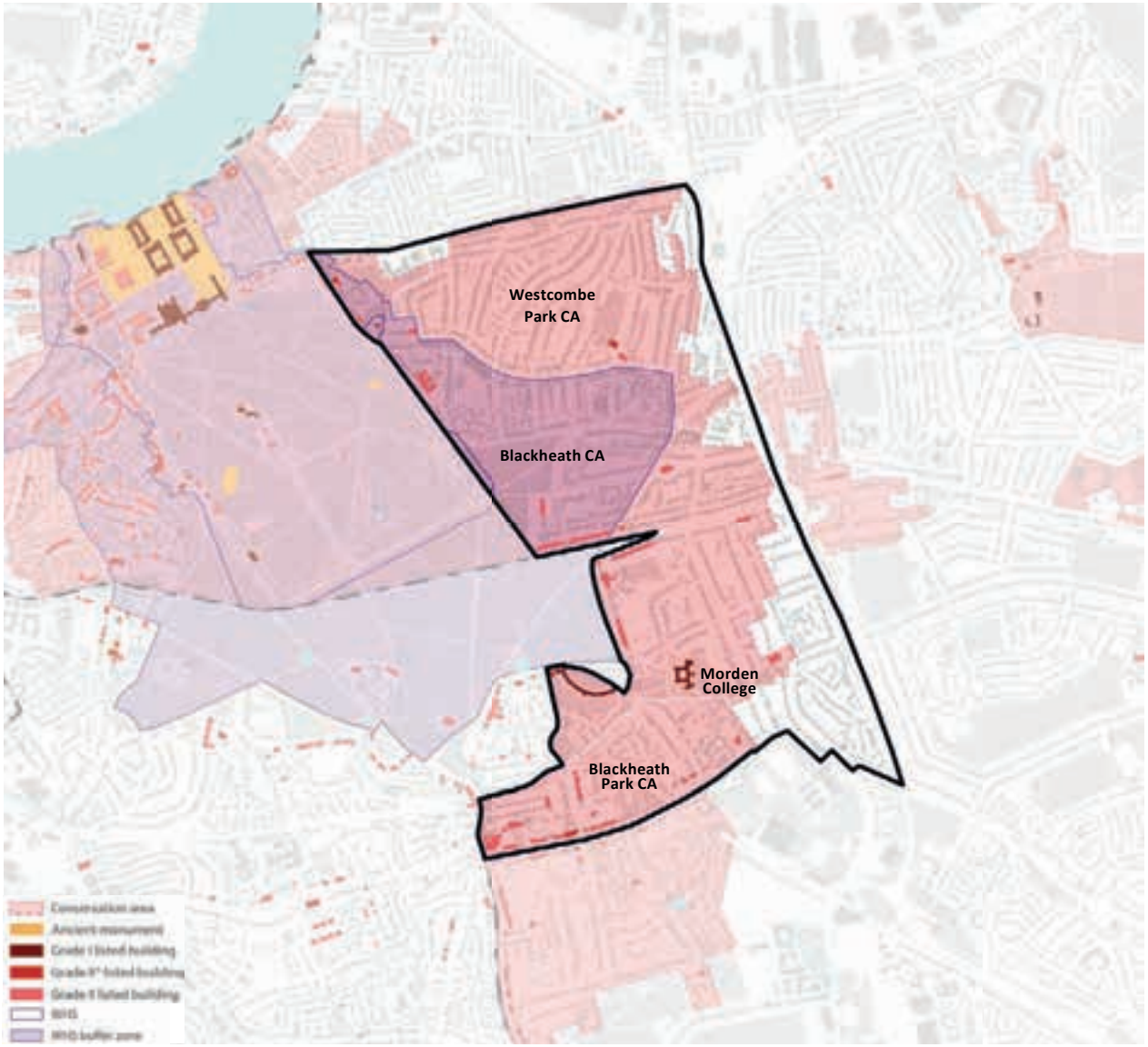


Figure 4.74: Heritage and conservation

Image 4.38: Paragon

Image 4.36: Morden College

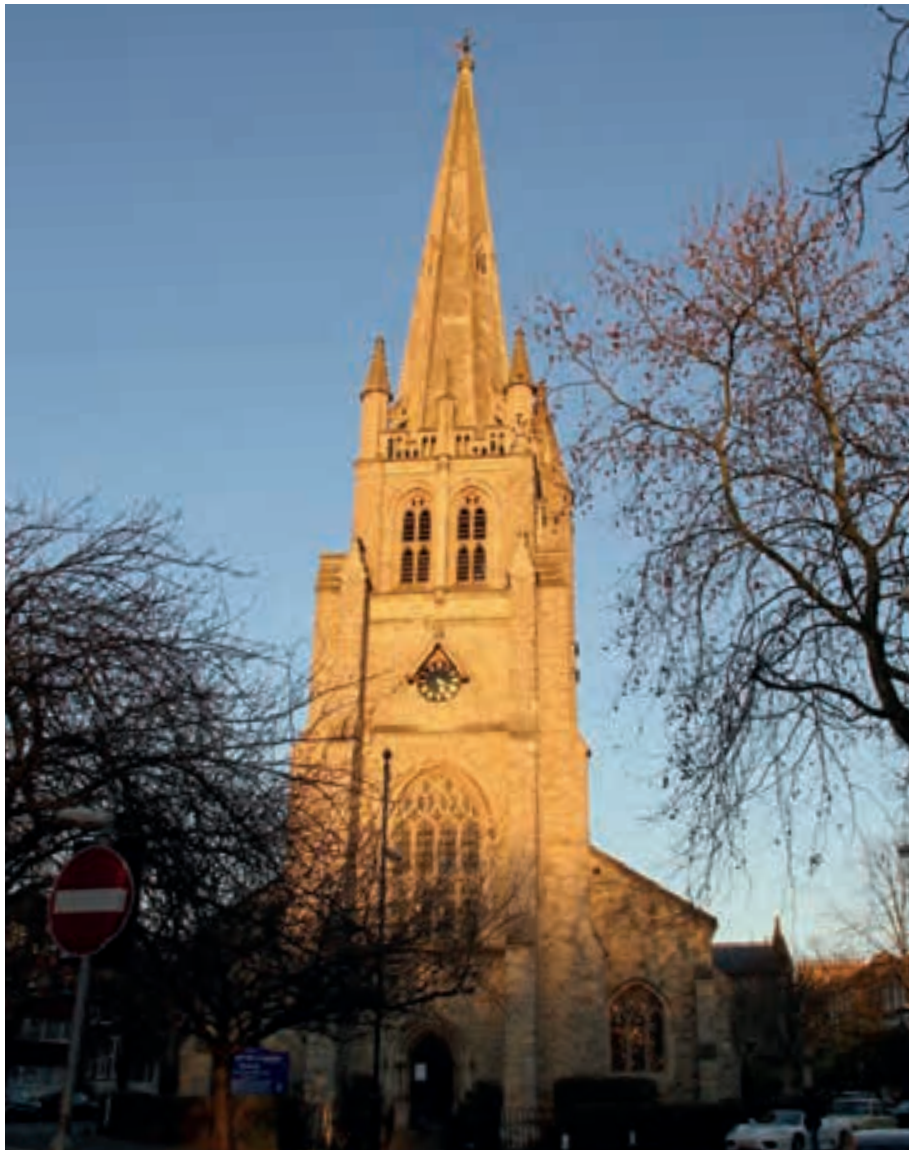


Image 4.37: St. John's Blackheath

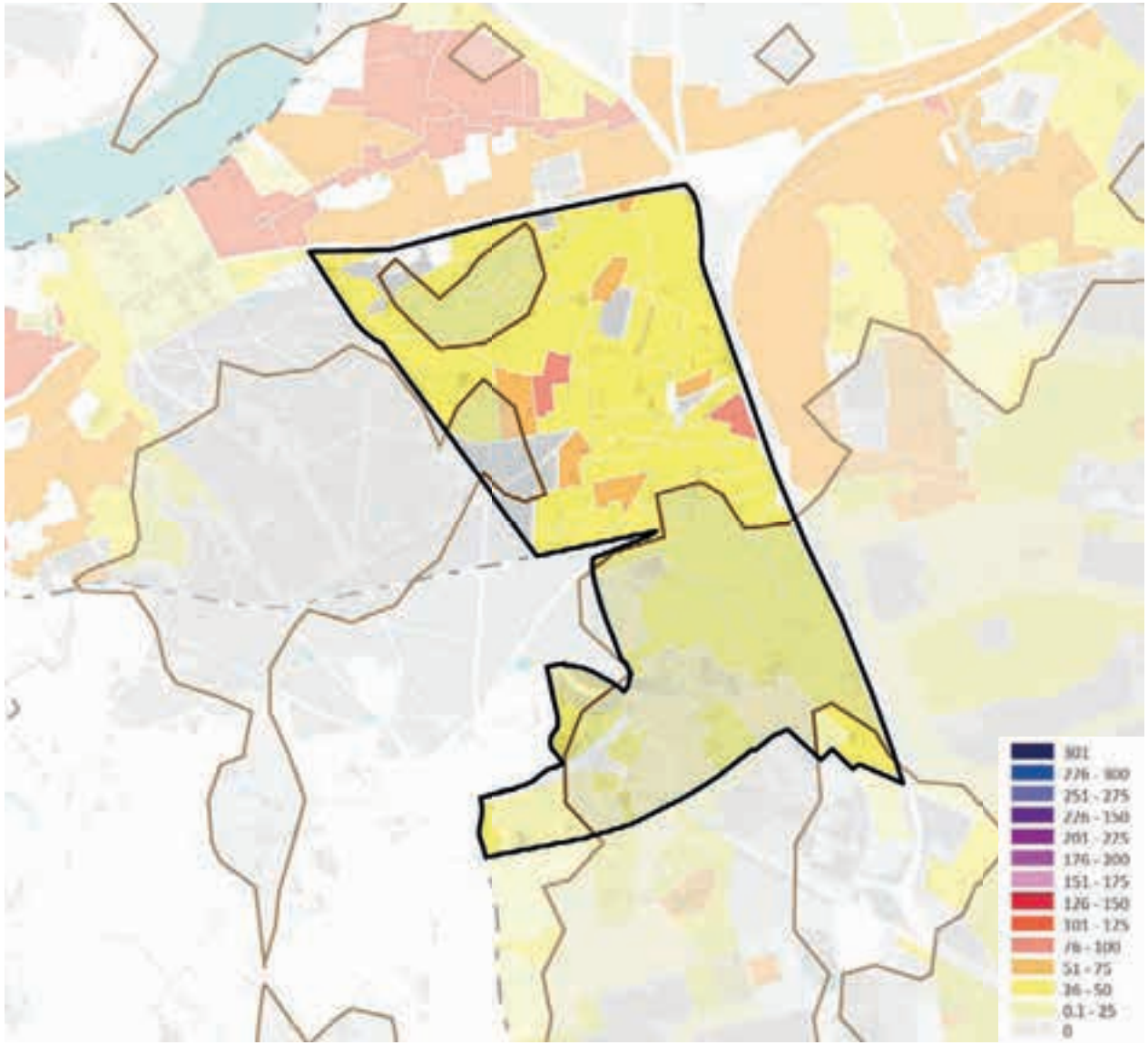


Figure 4.75: Dwelling density units/ha + PTAL 3+

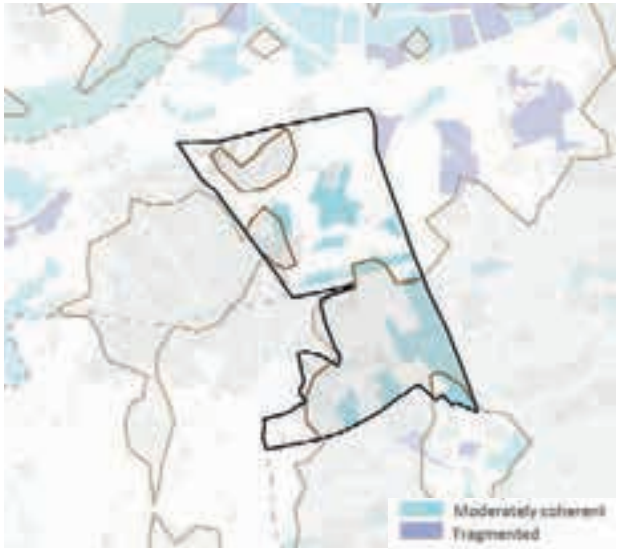


Figure 4.76: Coherence + PTAL 3+

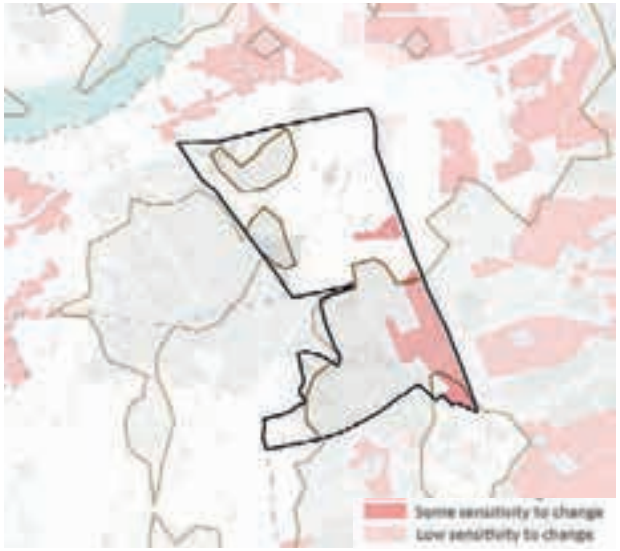


Figure 4.77: Sensitivity + PTAL 3+

CAPACITY FOR GROWTH

The northern half of this Place has generally good public transport accessibility (PTAL of 3 or greater) and is a relatively low density of 26-50 homes per hectare. However, the highly sensitive and coherence nature of urban form means that capacity for change will be limited.

OPPORTUNITY FOR CHANGE

Due to the historic and coherent character of this place, future development should reinforce its existing character through gentle densification and a contextual approach. However, three sites are identified with potential for a Transition in character through estate regeneration and the redevelopment of fragmented sites. There is also opportunity for intensification along the A102 corridor. Each of these areas is discussed in detail on the following pages.

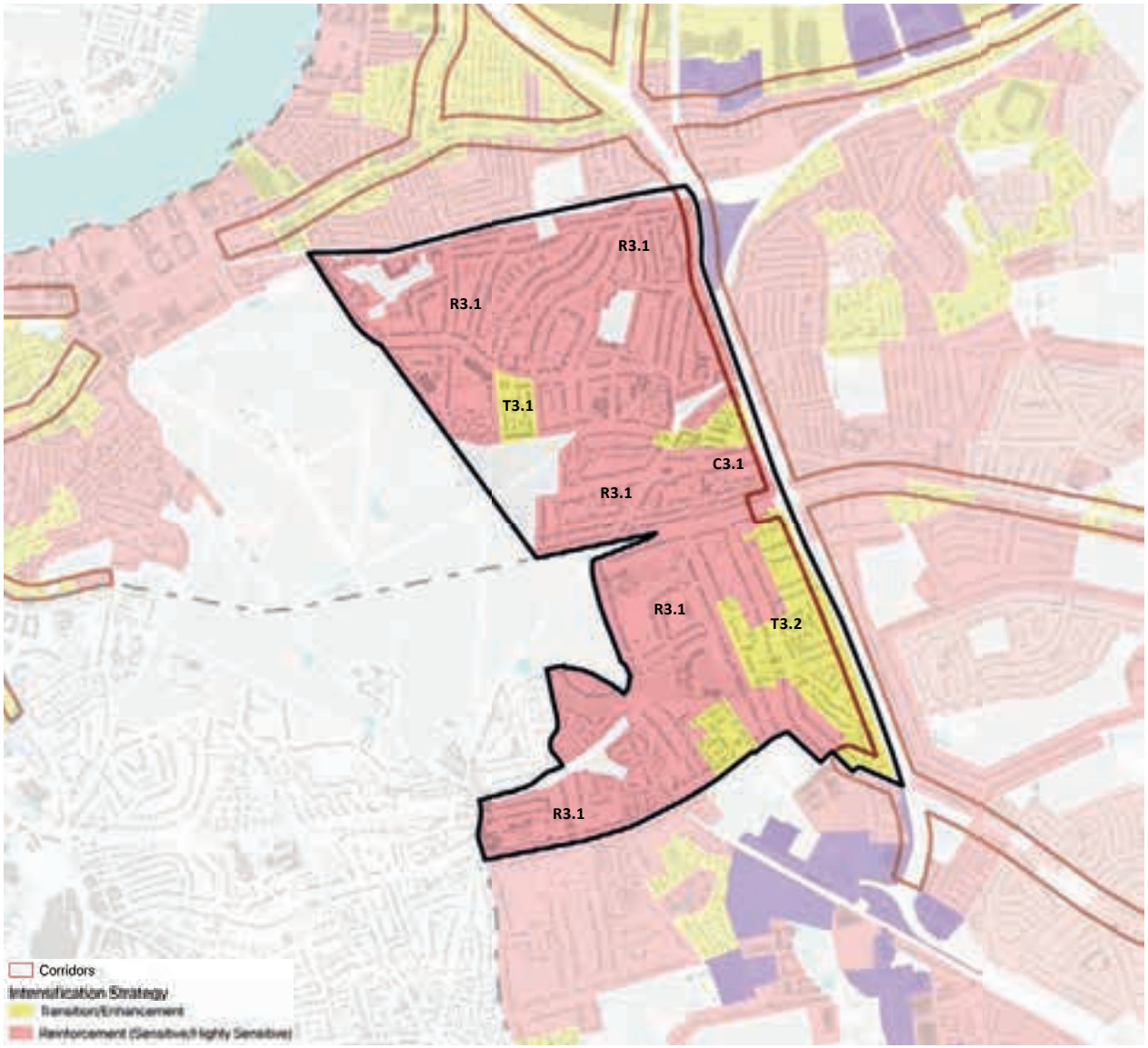


Figure 4.78: Intensification strategy

Corridor Improvements	Principles	Sensitivities
· Blackwall Tunnel Approach (C3.1)	· Enhance relationship between road corridor and adjacent neighbourhoods; · Potential for development to respond to road corridor and to establish a positive edge and sound barrier; · Potential for development to modestly increase height (1-2 storeys) above context height subject to responding sensitively to context;	· Westcombe Park CA · Blackheath CA

Transition	Principles	Sensitivities
· Housing Estates (T3.1)	· Potential for enhanced development that provides a more sympathetic response to the layout, grain and the overall green character of area; · Comprehensive estate regeneration where appropriate; · Infill and selective redevelopment; · Improve relationship and definition between development and street space; · Development should respect contextual height, scale and massing;	· Westcombe Park CA · Blackheath CA
· Fragemented area along Blackwall Tunnel Approach / Kidbrooke Park Road (T3.2)	· Potential to enhance the coherence of urban character within the area, deliver more homes and improve the relationship of development with Kidbrooke Park Road and Blackwall Tunnel Approach; · Infill development; · Plot consolidation of individual houses and redevelopment with larger apartments; · Potential to increase heights by one storey above context height;	· WHS buffer zone · Westcombe Park CA · Blackheath CA · Setting of listed buildings · Views to Local Landmarks · Structure and height of adjacent areas

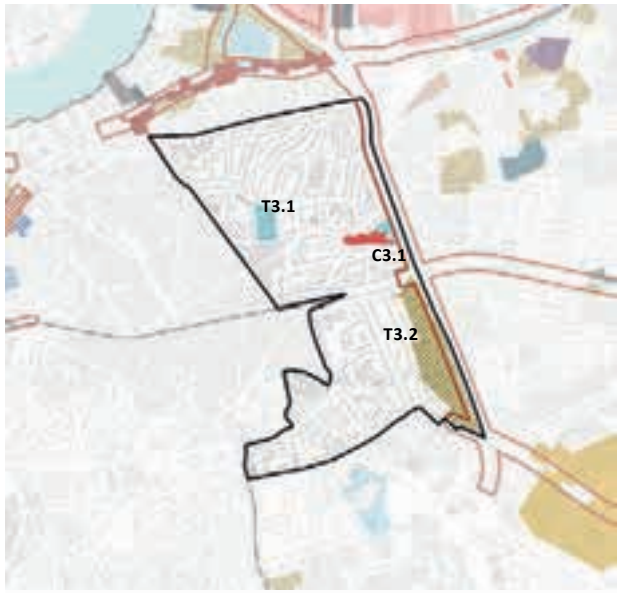


Figure 4.79: Corridor improvements / transition

BLACKHEATH / WESTCOMBE PARK

Reinforcement	Principles	Sensitivities
· All indicated areas (R3.1)	· Opportunity to intensify area by making more efficient use of lands and plots; · Opportunity for highly contextual development, applying infill, plot consolidation, selective redevelopment, backland development and extensions; · Heights, massing, orientation and building line to be consistent with surrounding area; · Backland development to be subordinate both in height and form to development at street front, and not result in a significant change in the green and open character of the overall area nor significant loss of garden space and greening;	· WHS buffer zone · Westcombe Park CA · Blackheath CA · Setting of listed buildings · Views to Local Landmarks · Detailed characteristics of context in terms of grain, layout, height, massing, materiality, greening

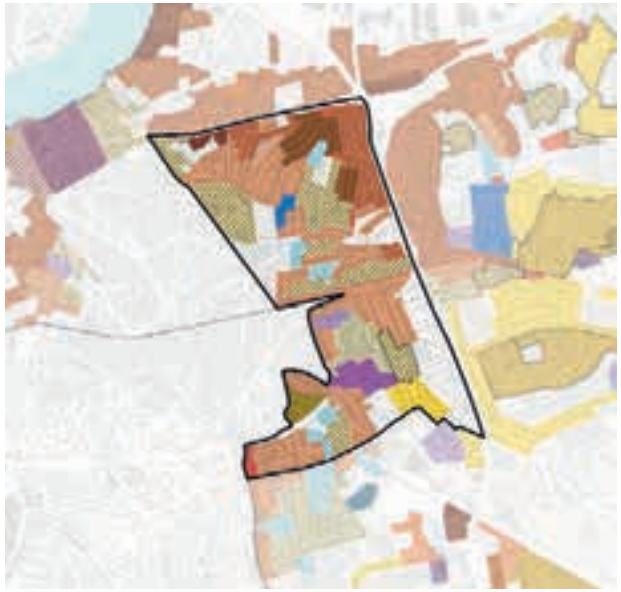


Figure 4.80: Reinforcement

TALL BUILDING POTENTIAL

There are no opportunities for tall buildings within Blackheath and Westcombe Park.

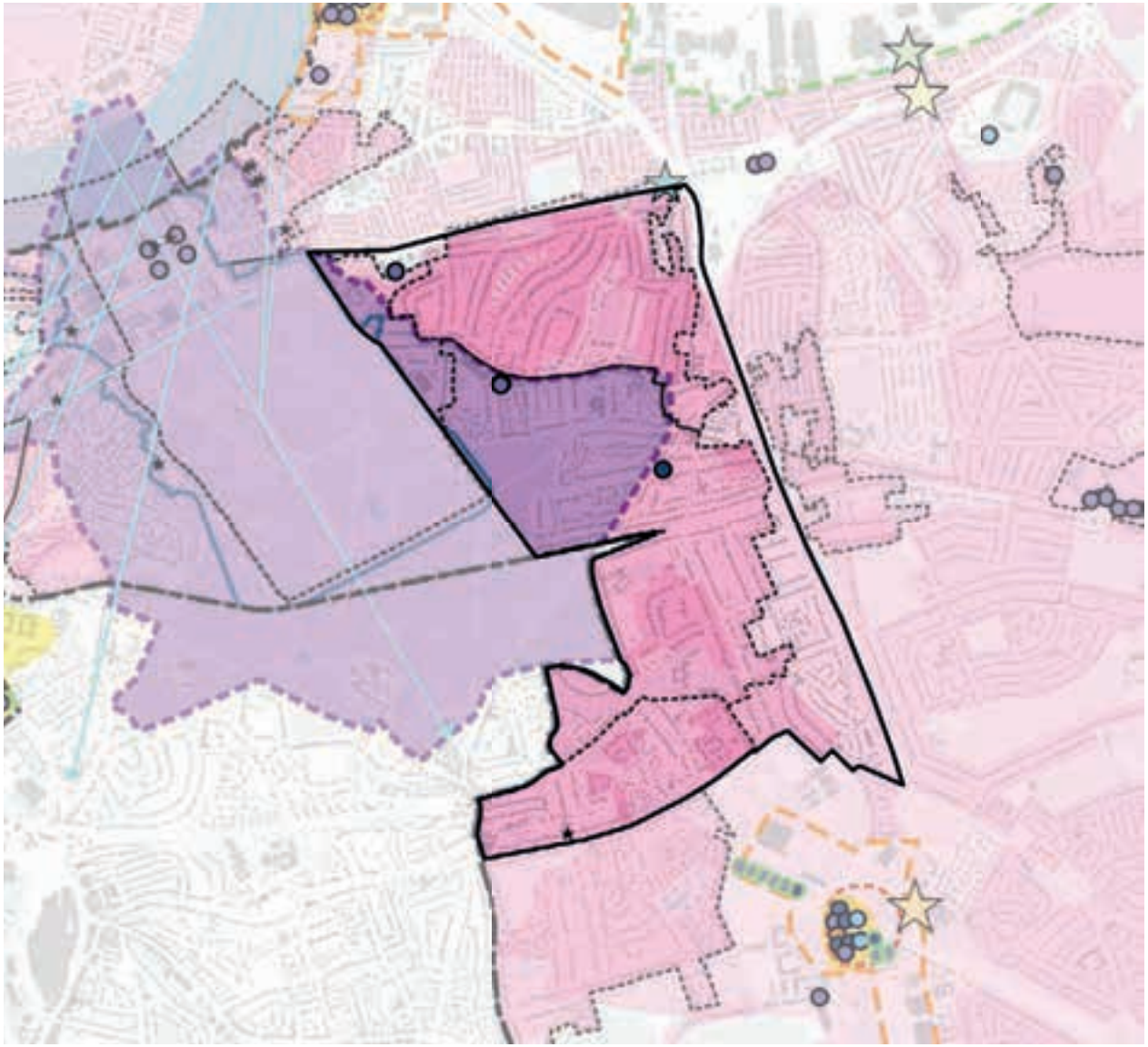


Figure 4.81: Tall building opportunities and sensitivities

Figure 4.82: Westcombe Hill

Image 4.39: View from Charlton Riverside - Thames Barrier towards the West

4. CHARLTON

PRESENT DAY CONTEXT

This place includes all of Charlton ward, plus those parts of Kidbrooke with Hornfair ward north of Shooters Hill Road, as well as western parts of Woolwich Riverside ward and southern parts of Peninsula ward. It comprises three highly-differentiated parts. North of the A206 the area comprises industrial and 'big-box' retail uses, while to the south it is primarily residential, and to the east there is a linear sequence of major green spaces.

Figure 4.83: Location map

Image 4.40: Charlton **(copyright Google)**

HISTORIC DEVELOPMENT

The historic heart of Charlton is Charlton Village and Charlton House, set on an elevated position in its park with long vistas and views west and north. Charlton House was built in 1607 and is a Grade I listed building, one of the most important historic Elizabethan houses in London. The house stands as a group with the 17th century St Luke's Church and the curved street called the Village, a memory of a domestic-scaled settlement.

Further north, the Charlton Riverside area was low lying marshland until first drained for agricultural use and then adopted for industrial uses in the late 19th and particularly the early 20th Century. These areas retain their robust industrial heritage today, with their significance recognised in statutory listing as well as in an extensive Local List and Conservation Area designations. The ensemble of heritage assets includes the landmark Steam Factory and the extensive range of Siemens' buildings associated with cable manufacturing, where the first telegraph cable to be laid across the Atlantic in the late 19th century was manufactured.

The Thames Barrier (GLC 1972-1982), a notable engineering achievement with its distinctive steel caping over the flood prevention gates, stretches across the River Thames. The area, with its riverside location and historic quays and landing stages has long river views back to Woolwich and Greenwich.

Image 4.41: Charlton House in the early 19th century

Image 4.43: Charlton Village circa 1900

Image 4.42: Lower Charlton c.1900. The Siemens factory lies by the river where the Thames Barrier Gardens are today.

PLACE STRUCTURE

Largely undeveloped until the 20th century, this area flanks the east-west A206 route corridor linking Greenwich and Woolwich along the edge of the floodplain, extending from Blackwall Tunnel Approach in the west to Woolwich in the east. The Greenwich and North Kent railway lines run parallel, serving Charlton Station, with a narrow strip of land in between creating a fragmented series of sites occupied by housing and other uses. To the north, the land is flat and of highly mixed use, the legacy of former industrial and port-related land uses. Today these are mixed with more contemporary, creative and diverse commercial and community uses including the big-box retail park to the west on Bugsby's Way, and residential enclaves on Anchor and Hope Lane.

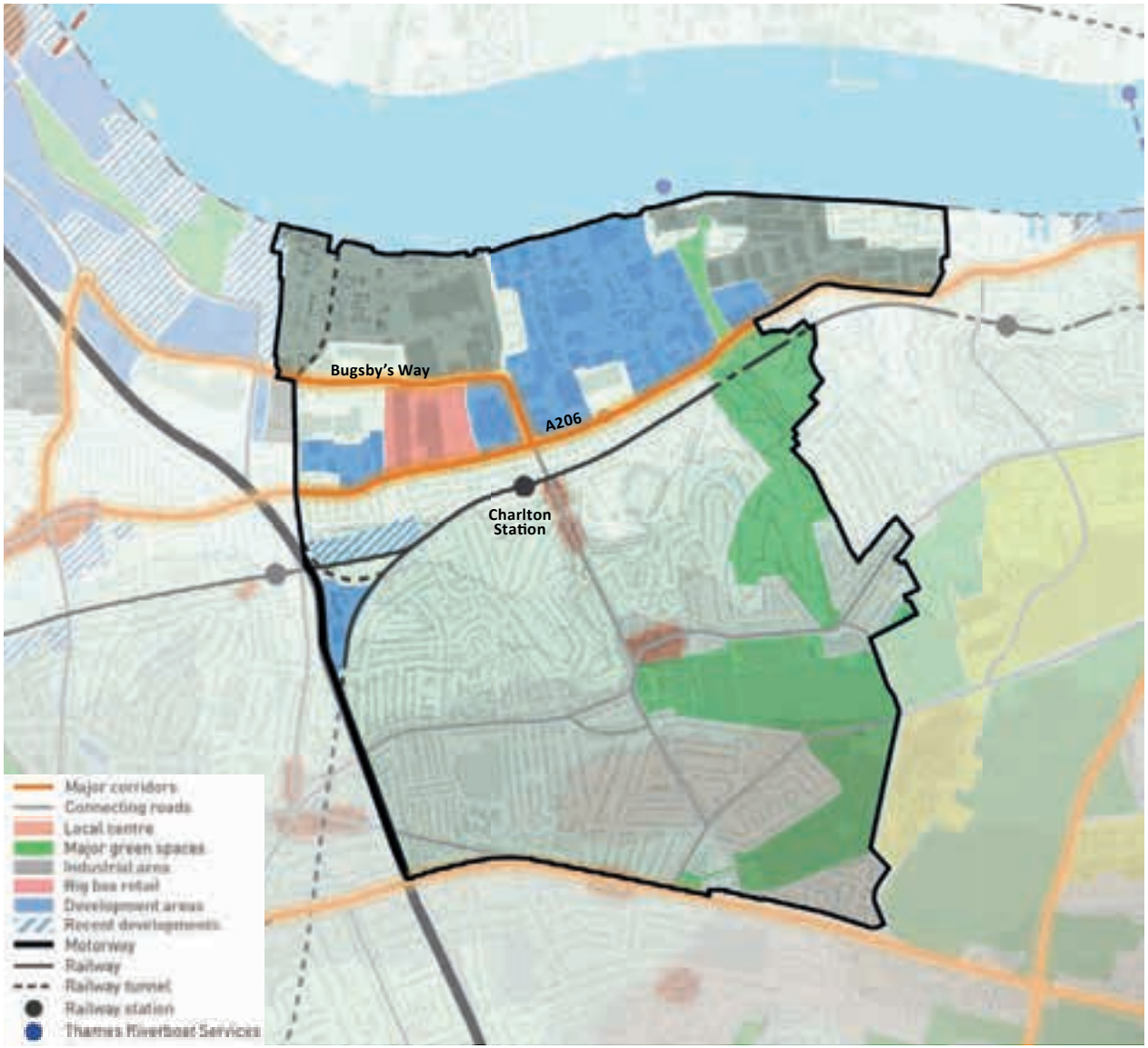


Figure 4.84: Place structure

South of the A206 the topography rises to a local high point at Charlton Village, then rises further to Shooters' Hill in the south-east. Development here is primarily of residential and community use, set within an interconnecting series of green spaces. There area few north-south connections, with Charlton Church Lane the only connection between these upper areas and the industrial riverside. There are local centre pockets along Charlton Church Lane including Charlton Village at a local high point. A series of green spaces—Hornfair Park, Charlton Park, Maryon Wilson Park, Maryon Park and linear green space connecting with Thames Barrier—together create a green corridor and large natural break between the Charlton area and the Woolwich Area.

Image 4.44: Anchor and Hope

Image 4.46: Floyd Road

Image 4.45: View from Charlton Riverside

Image 4.47: View from Charlton across River Thames

CHARACTER AND TOWNSCAPE FEATURES

This place is sharply divided between north and south. To the north of the A206 the land is flat and accommodates a range of mid- and large-scale industrial and commercial buildings with extensive hard standings. Together these form a series of discrete trading estates with buildings ranging from contemporary single-storey 'big box' retail warehouses to early century multi-storey industrial buildings with multiple commercial tenants. Some of these structures are of considerable heritage value including the Bowater Road Buildings, with its Siemens cable factory, and the Commonwealth Buildings, with the former Steam Factory and chimney. In between these estates are some enclaves for schools, leisure uses, and some housing. There are long views along the riverside with its historic wharves, as well as to the modern Thames Barrier and across to the opposite riverbank. This area as a whole is fragmented and of low sensitivity.

Figure 4.85: Character and townscape

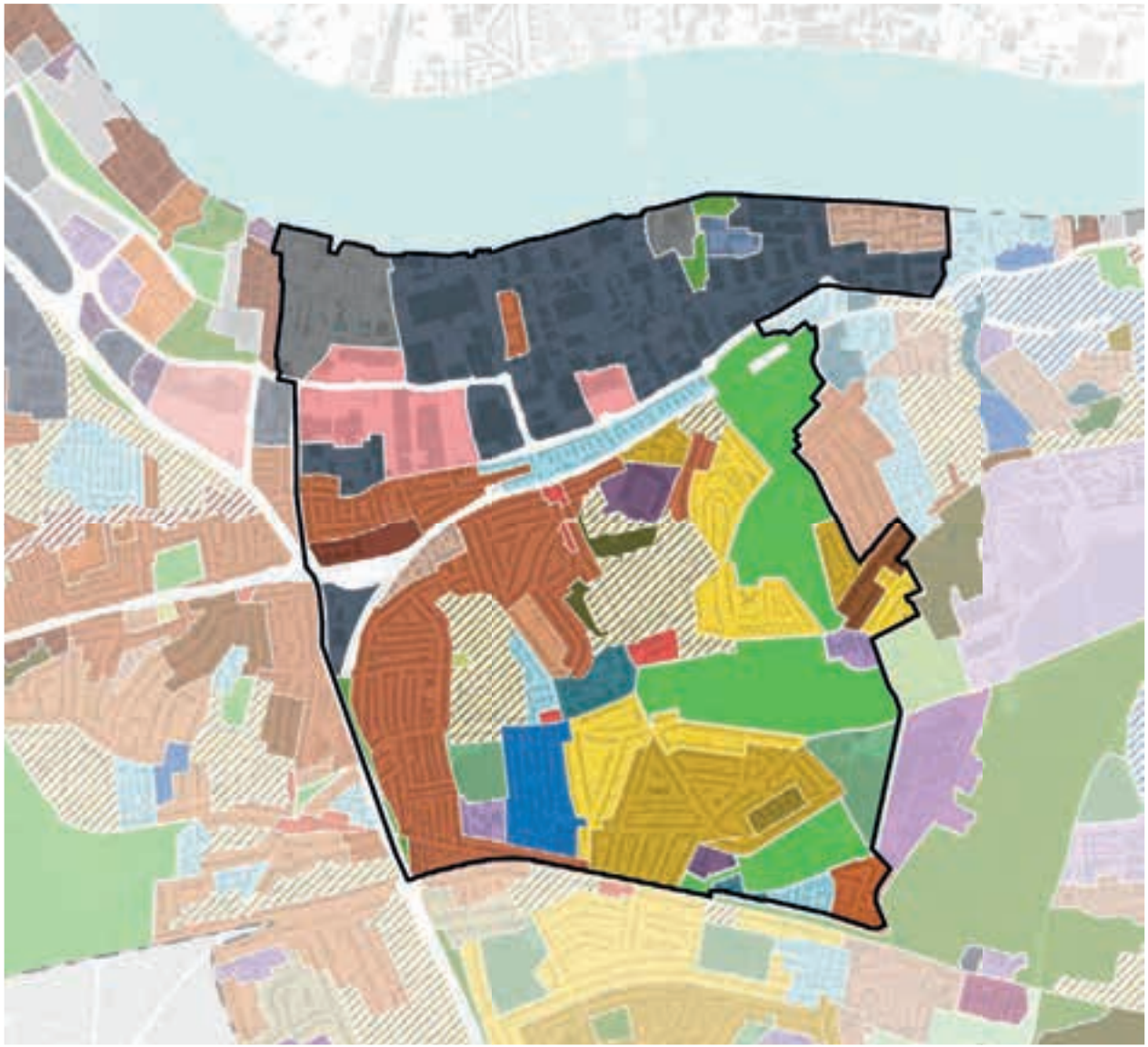


Figure 4.86: Urban typologies

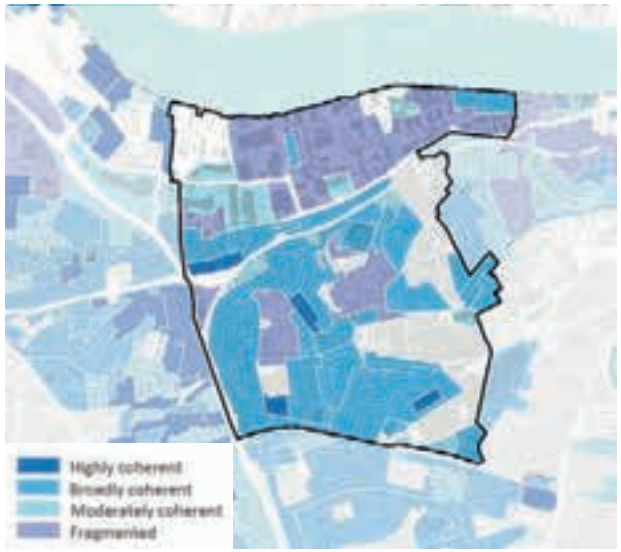


Figure 4.87: Coherence

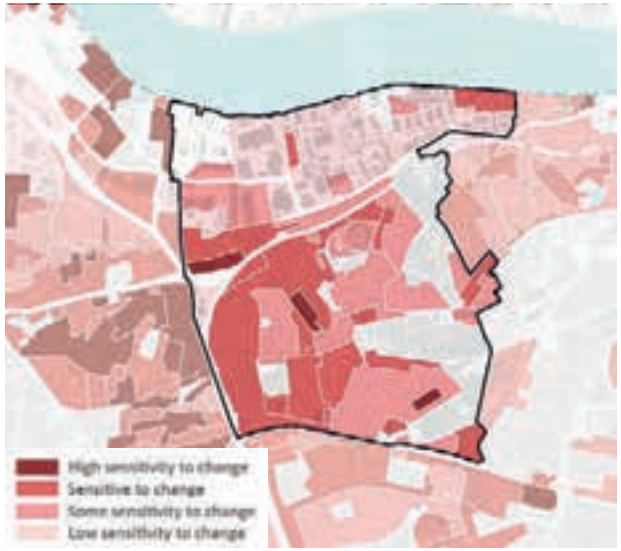


Figure 4.88: Sensitivity

South of the A206 the topography rises and the development is primarily residential. Housing types include street-facing terraces and semi-detached houses as well as modernist mid-rise and point blocks set in landscaped parkland. Within this tightly organised urban fabric is a range of community uses including schools, clinics, shopping parades, and sports clubs, as well as major leisure amenities such as The Valley football ground, with the Valiant House point block adjacent, and Charlton House & Gardens, visually prominent on Charlton Road. The older parts of this area are broadly coherent and sensitive with remnants of very domestic scale at Charlton Village and Saint Luke's Church, while post-1980 development at Highcombe and The Heights is more fragmented and moderately sensitive. Across the hillside the mature trees, large gardens and small-scale development nestled against the hill create a lush and green character, whose visual coherence is broken only by a few taller estate tower blocks such as on Springfield Grove and the Shooters Hill Estate towers. Along the east side of this area is a continuous linear sequence of major green spaces linking from the Thames Barrier inland to Woolwich Common, though there is little frontage or natural surveillance to either side along its full length.

There are however a number of features which detract from the townscape quality.

Traffic on the Blackwall Tunnel Approach and on the main access corridors of Woolwich Road and Bugsby's Way impose considerable noise and air quality impacts, and lack enclosure or have poor frontage development alongside. There is a disconnect between the southern residential areas and the riverside in general, and some housing estates between Woolwich Road and railway suffer particularly from this severance. The industrial riverside areas themselves are fragmented and sprawling, and the area as a whole lacks a larger urban centre and instead relies heavily on big box retail.

Image 4.49: Thames Barrier

Image 4.48: St. Luke's Church

Image 4.50: Gateway, Charlton House

BUILDING HEIGHTS

North of the A206 the predominant building form is of large-footprint industrial and commercial buildings, up to an equivalent height of 3-4 storeys. While many of these are actually single-storey warehouse type units, some are multistorey loft-style buildings. Interspersed between there are smaller-scale commercial and residential buildings up to 4 storeys.

South of the A206 there is greater range of building heights and forms. Across most of the area are found 2-4 storey street-based housing and 3-8 storey modernist flatted blocks. This pattern is only sporadically interrupted, for example by the stands of The Valley football ground, the modernist 17-storey Valiant House residential tower, and the series of contemporary 10-storey residential blocks at Bowen Drive.

The estate regeneration on the south eastern edge of Charlton, at Baker Road, displays a high variety of buildings from 3 storey contemporary terraces, to courtyard blocks up to the 11 storey post-war estate slab block.

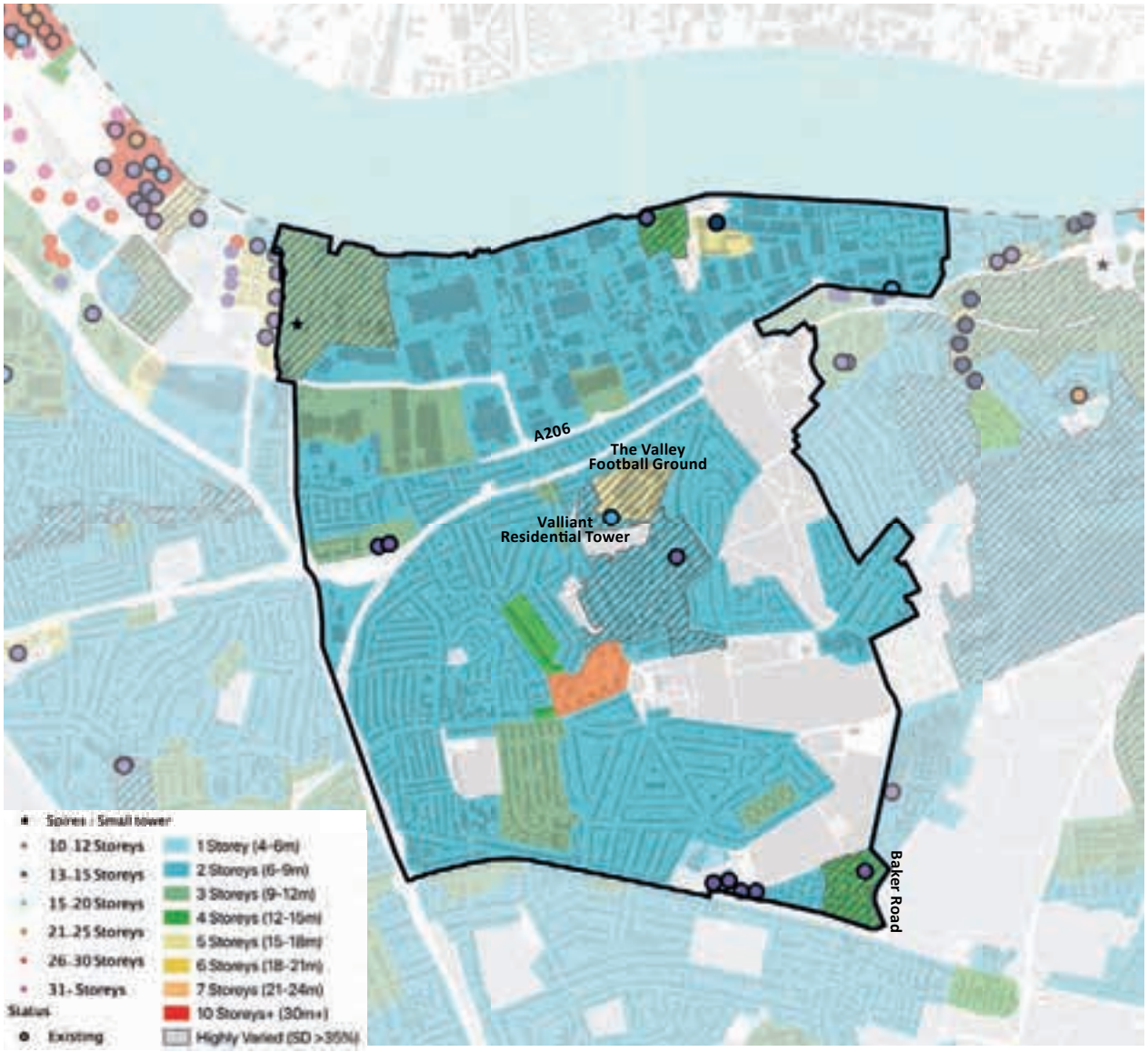


Figure 4.89: Context heights and Tall Buildings (existing shown with black outline, permitted shown with no outline)

HERITAGE, CONSERVATION AND VIEWS

Five Conservation Areas cover parts of this place, each located towards its boundaries and none of which are contiguous. To the north-west, Charlton Riverside CA comprises a residential terrace and an open quayside street. To the north-east Thames Barrier and Bowater Road CA includes the multi-storey quayside cable factory buildings, part of the former Siemens factory, and a Grade II listed warehouse. To the east is Charlton Village CA (part) which also includes the Grade I listed Charlton House and Charlton Lido. To the south-west is Rectory Field CA with its early Victorian residential terraces, and The Sun in the Sands CA (part) a 19th century network of residential streets around the eponymous public house and a Grade II listed terrace.

The Thames-side panorama from the Thames Barrier open space is locally-protected.

The grounds of Charlton House (Grade I) within the Charlton Village Conservation Area provides a raised viewing location, allowing long panoramic views to central London. Further long views are possible towards Shooter's Hill and the south-east from Charlton Park and Hornfair Park. Local views towards Charlton House are important, in particular along the planned park central axis.

Full details on significant views are provided in the Heritage Appendix.

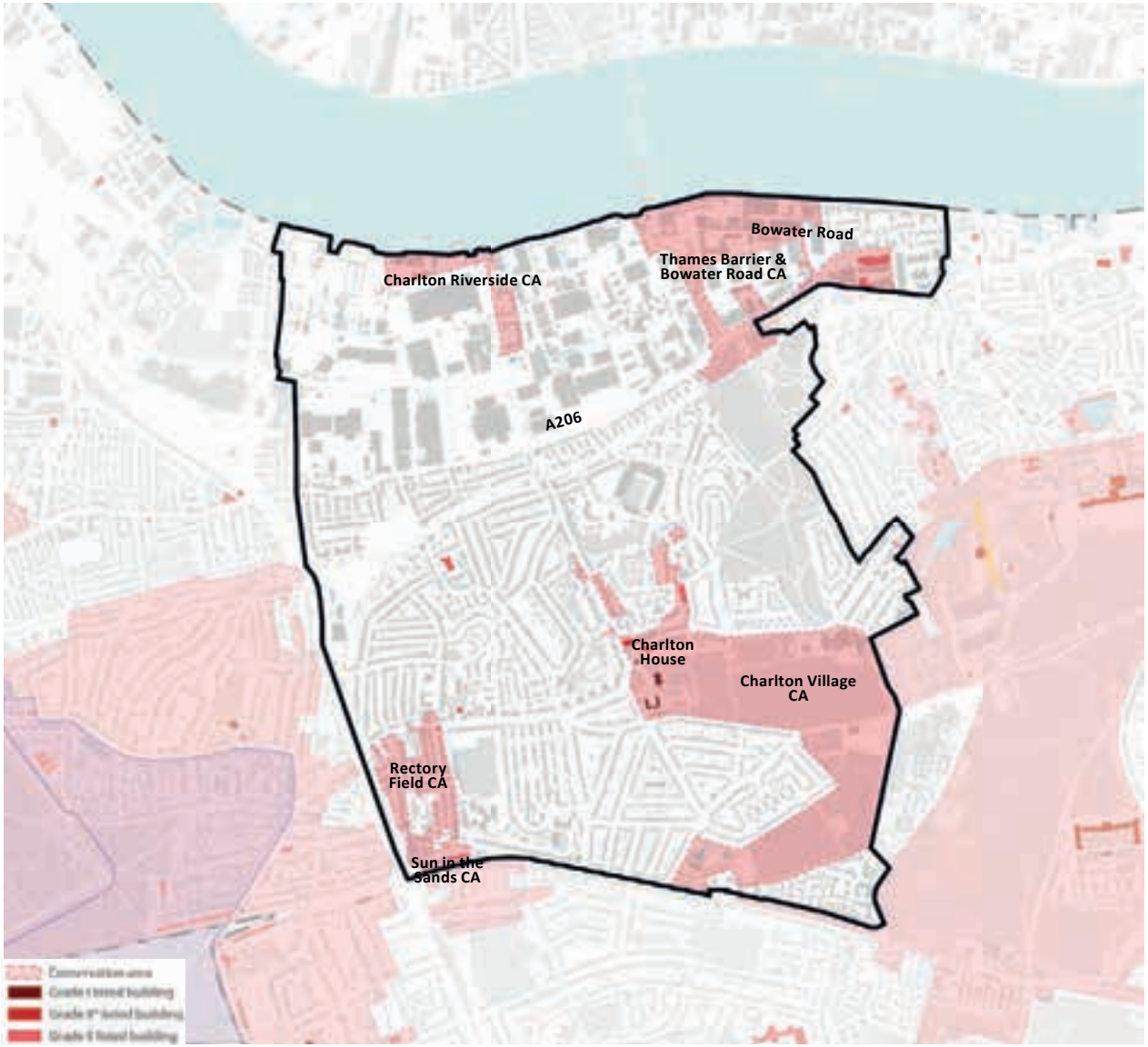


Figure 4.90: Heritage and conservation

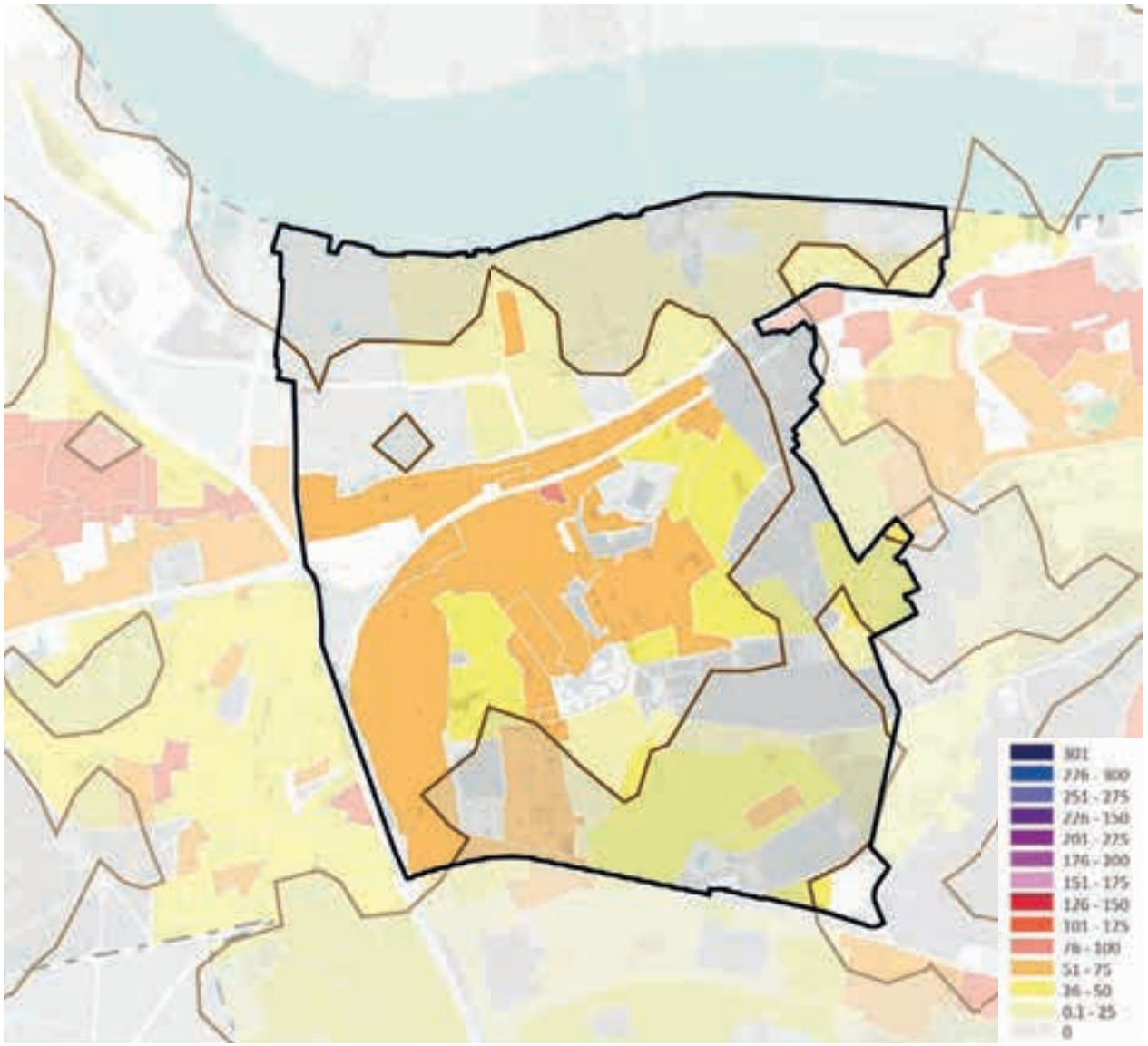


Figure 4.91: Dwelling density units/ha + PTAL 3+

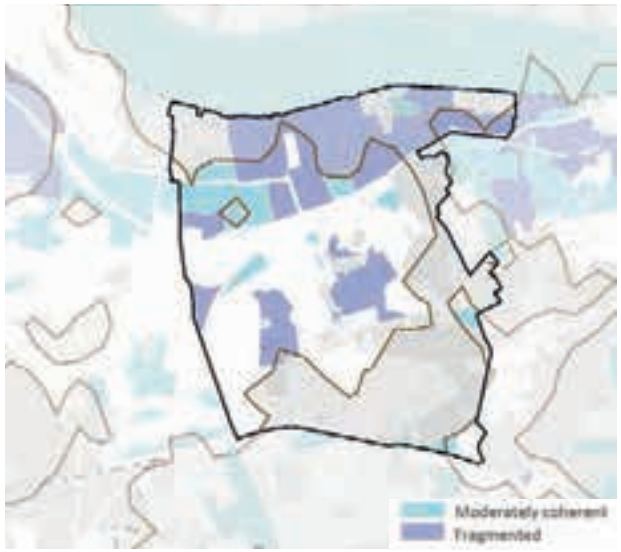


Figure 4.92: Coherence + PTAL 3+

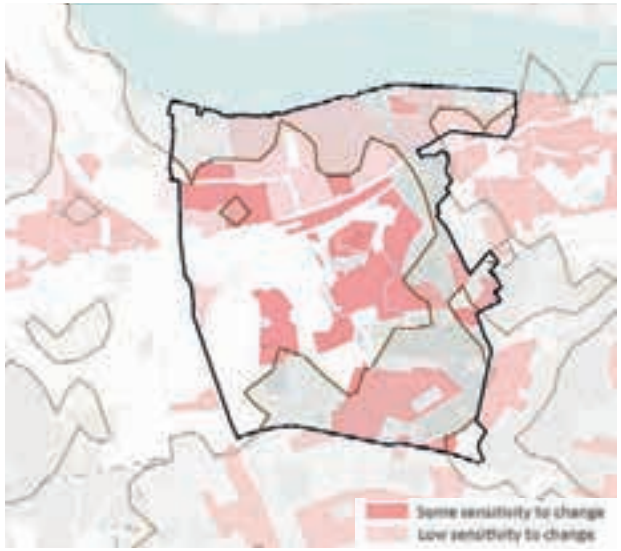


Figure 4.93: Sensitivity + PTAL 3+

CAPACITY FOR GROWTH

The central part of Charlton generally has good public transport accessibility, which falls below a PTAL score of 3 towards the riverside and southeast. This area is of low to medium density (0-75 homes per hectare), with the lowest densities in the riverfront industrial area. The industrial areas are generally the least coherent and sensitive, with some lower sensitivity residential areas also present around the centre of Charlton.

OPPORTUNITY FOR CHANGE

To the north of the A206, the character lends itself to more substantial change, with potential to transform a large industrial estate that lies outside of the Strategic Industrial Location (SIL) boundary. Areas within the SIL are protected but could still undergo a transition towards a more intense character with new development, while retaining employment uses. The residential area to the south of the A206 is more limited in potential and should see further reinforcement through contextual development. There are a small number of opportunities for Transition and intensification in less coherent areas and along corridors.

Each of these areas is discussed in detail on the following pages.

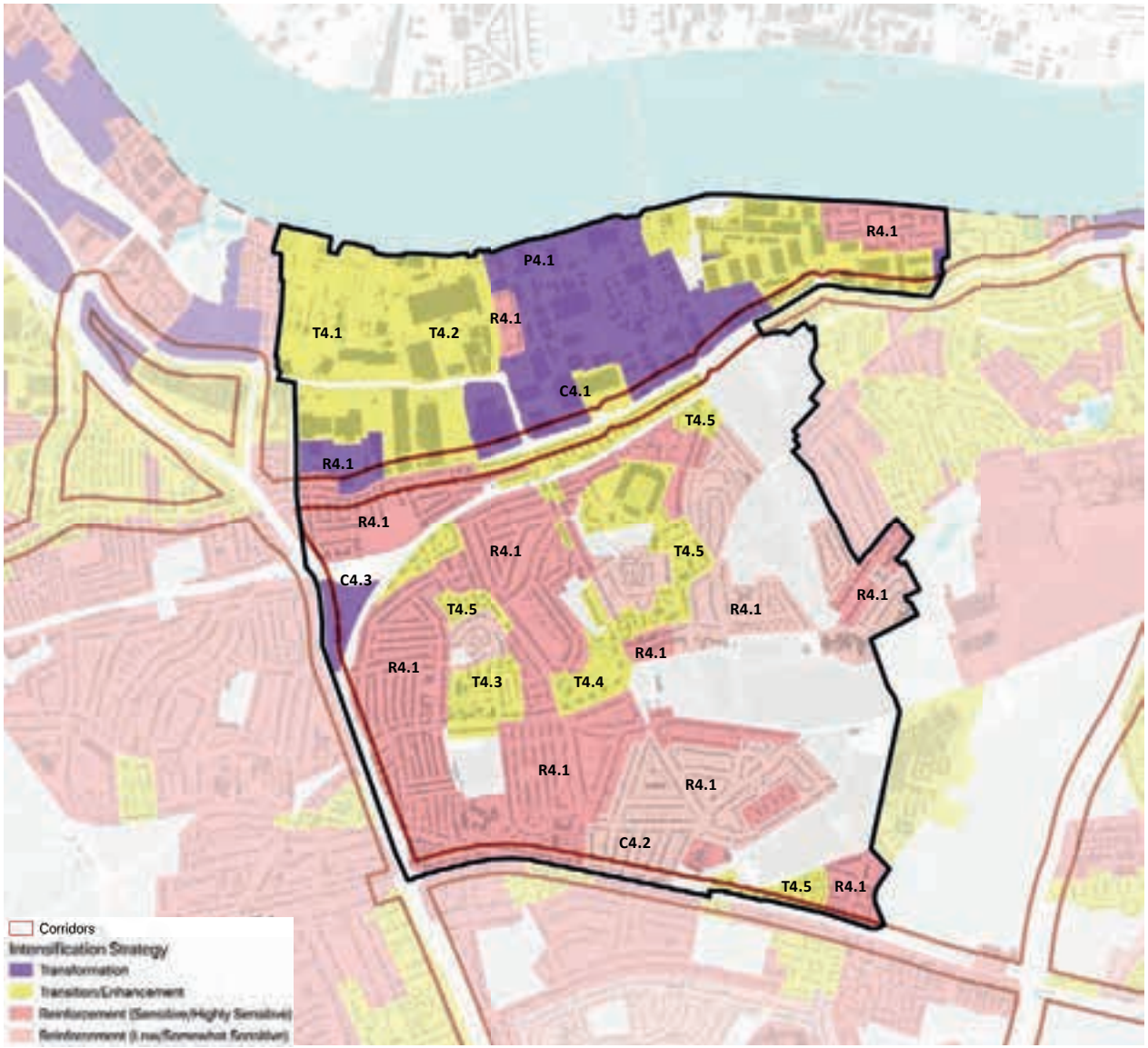


Figure 4.94: Intensification strategy

Transformation/ Placemaking	Principles	Sensitivities
· Charlton Riverside (P4.1)	· Masterplan led and phased development to ensure coherent development of the quarter and to avoid fragmentation and the juxtaposition of residential and industrial development; · Open up views and connections with the riverside and integrate industrial heritage and green structure across the south of Borough; · Medium rise development (range of 4-6 storeys) with potential for local landmarks at significant locations for the locality;	· Charlton Riverside CA · Thames Barrier and Bowater Road CA · Views from Thames Barrier Park

Figure 4.95: Transformation / placemaking

Corridor Improvements	Principles	Sensitivities
· Woolwich Road (C4.1)	· Improve definition and overlooking of road corridor through infill development, selective redevelopment and · consolidation of plots; · Potential to increase building height up to 6 storeys · Need for appropriate response and stepping down to the height of neighbouring development;	· Thames Barrier and Bowater Road CA · Local Views
· Shooters Hill Road (C4.2)	· Potential for intensification by infill, selective redevelopment and consolidation of plots; · Potential to modestly increase height up to 4 storeys;	· Rectory Field CA · The Sun in the Sands CA · Green and open setting
· Blackwall Tunnel Approach (C4.3)	· Enhance relationship of road corridor with adjacent neighbourhoods; · Potential for development to respond to road corridor and to establish a positive edge and sound barrier; · Potential for development to modestly increase height (1-2 storeys) above context height subject to responding sensitively to context;	· Rectory Field CA · The Sun in the Sands CA

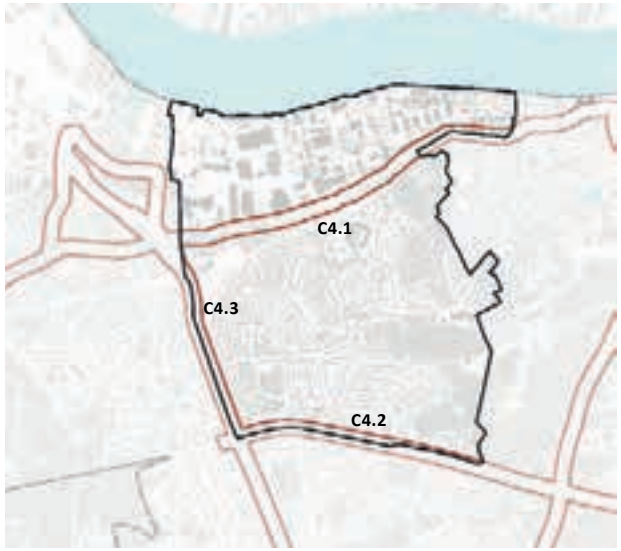


Figure 4.96: Corridor improvements / transition

Transition	Principles	Sensitivities
· Charlton Riverside West (T4.1)	· Opportunity to make more efficient use of site by rationalising operations and parking; · Provide appropriate new development (mixed use, industrial and residential) · Enhance definition and interface with streets, especially Woolwich Road;	· Charlton Riverside CA · Views from the river · Listed buildings
· Charlton Riverside East (T4.2)	· Intensification with employment uses; · Enhancement of industrial heritage and street scene; · Provision of improved amenities and facilities; · Continuity of riverwalk and better access; · Infill, selective redevelopment with potential for modest increase in height;	· Thames Barrier and Bowater Road CA · Listed buildings and Local Views
· Strip between Woolwich Road and Railway (T4.3)	· Potential for enhancement of frontage along Woolwich Corridor and addressing back to front conflicts; · Comprehensive estate regeneration where appropriate; · Infill development and selective redevelopment; · Potential for increased height of up to 6 storeys along frontage;	
· Tower Block Housing Estates (T4.4)	· Potential for enhanced development that provides a more sympathetic response to the layout, grain and the overall green character of area and landscape setting; · Comprehensive estate regeneration where appropriate; · Infill development and selective redevelopment; · Provide improved relationship with and definition of street space; · Where towers are removed provide compact development with contextual height, scale and massing;	· Green and open development form and topography · Views from the river / Thames Barrier Park · Charlton Village CA · Listed buildings · Local Views

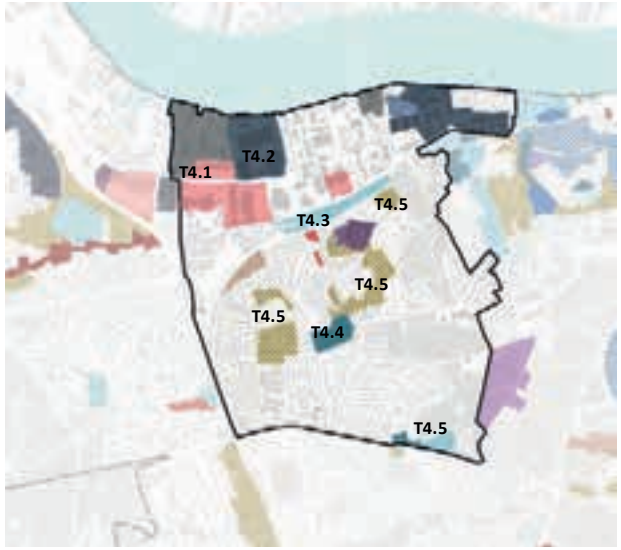


Figure 4.97: Corridor improvements / transition

Transition	Principles	Sensitivities
· Identified residential areas (T4.5)	· Potential to enhance coherence and intensify area's character; · Infill development and selective redevelopment; · Comprehensive estate regeneration where appropriate; · Additional floors; · Extensions; · Potential for modest increase in heights (1 storey) above context height and small increase in grain where appropriate;	· Green and open development form and topography · Views from the river / Thames Barrier Park · Charlton Village CA · Rectory Field CA · The Sun in the Sands CA · Listed buildings · Local Views

Reinforcement	Principles	Sensitivities
· Identified areas (R4.1)	· Contextual development: infill, selective redevelopment and extensions; · Retain typical grain and roof scape; · Strengthen and enhance street characteristics;	· Green and open development form and topography · Views from the river / Thames Barrier Park · Charlton Village CA · Rectory Field CA · The Sun in the Sands CA · Listed buildings · Local Views

Figure 4.98: Reinforcement

TALL BUILDING POTENTIAL

The adjoining plan illustrates the tall building recommendations for Charlton and the table on the following page provides full details.

There is opportunity for limited taller buildings within the industrial area along the riverfront, with a local scale tall buildings marking the entrance to the site. There is also opportunity for a local scale tall building to mark Charlton rail station.

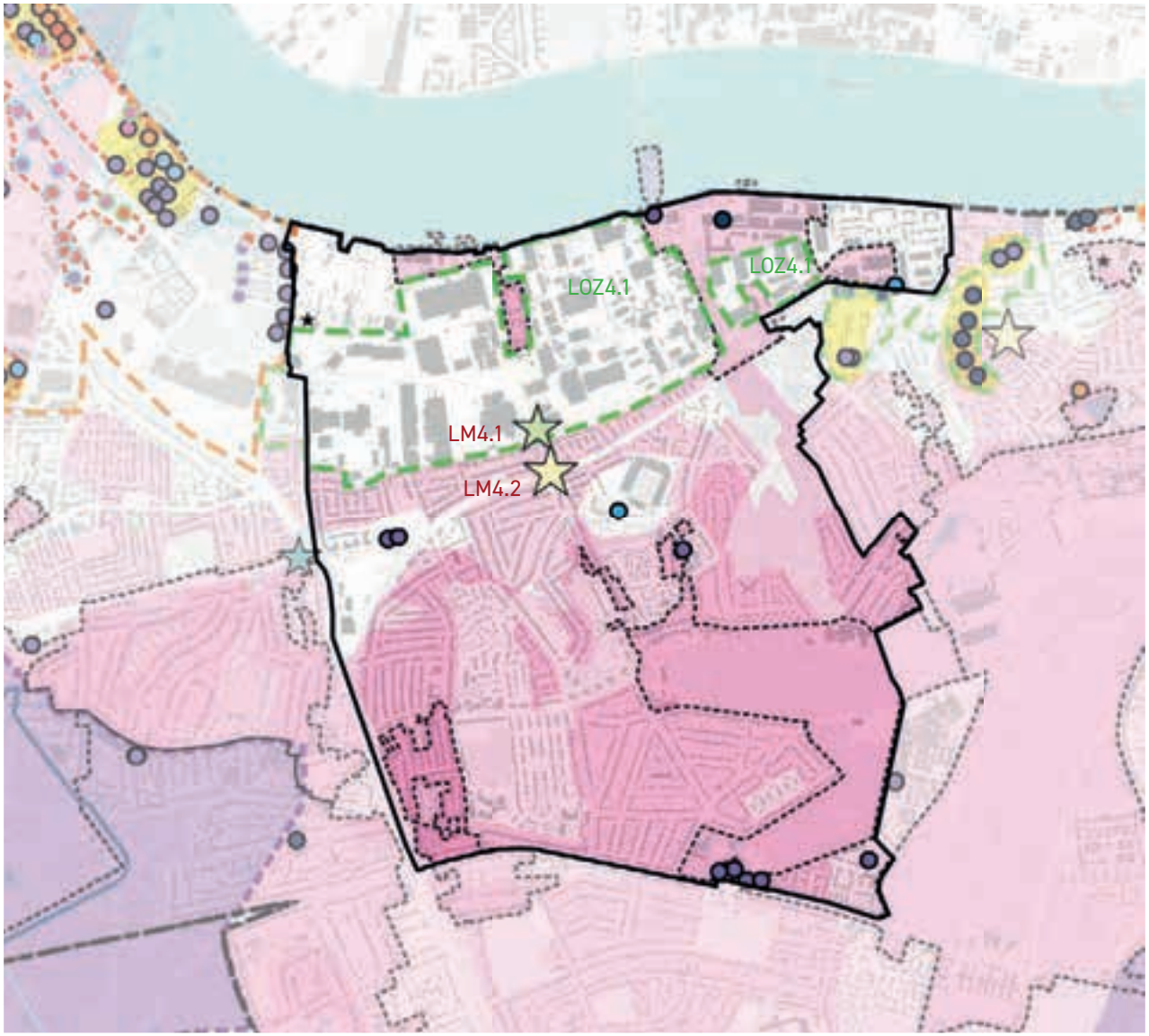


Figure 4.99: Tall building opportunities and sensitivities

Code	Promoting Factors	Context Height	Recommendations	Sensitivities
LO4.1	• To optimise development of Strategic Development Location, deliver place making and intensify in areas of high PTAL	• CH: 2-3 storeys	• Some opportunity for modest tall buildings as part of a coherently planned and delivered approach to placemaking for the Charlton Riverside area, outside Conservation Areas. • Tall buildings primarily to be considered as singular local landmarks to enhance distinctiveness, legibility and wayfinding, in line with the opportunities identified in the Charlton Riverside SPD. • Potential locations: - The main entrance into the area on Woolwich Road (**LM4.1**) - up to 2.5x context height (8 storeys) - Significant local activity hubs (local centre, new major green space etc.) – (up to 2.5x context height) - Key riverfront locations (up to 2.5x context height) - Other visually prominent location at important routes and intersections to aid wayfinding and enhance legibility (up to 2x context height) • Height should be proportional to the significance and hierarchy of place in Charlton Riverside and generally not exceed 10 storeys. • Avoid continuous runs of tall buildings along the riverfront – only emphasise a number of separate locations • Tall buildings not to compete with or detract from designated and non-designated heritage assets or the Thames Barrier Metropolitan Landmark.	• Charlton Riverside Conservation Area • Thames Barrier and Bowater Road Conservation Area • Thames Barrier City Image Landmark • Industrial Heritage
LM4.2	• To enhance legibility of rail station and intensify area of higher PTAL	CH: 2-3 storeys	• Opportunity for a singular local landmark building of up to 3x context height (maximum 9 storeys) to mark the station on Charlton Church Lane to enhance wayfinding, deliver an improved station environment and intensification around the station • Tall building to avoid adverse impact on neighbouring low rise buildings or to detract from historic public house at the corner with Woolwich Road	• Low-rise residential area

Table 3.3: Tall building recommendations - Charlton

Image 4.51: View from Charlton Riverside

Character typology key as reference to be used for all diagrams with character typologies