Tall buildings in Redbridge

Evidence base

London Borough of Redbridge

ARUP

Document Verification

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Contents

Figures

Tables

1 Introduction

1.1 Structure of report

1.1.1 The core objective of this study is to **review, update and supplement the Councils approach to the development of tall buildings throughout the borough**, outlined in the Draft Policy LP27 (refer to Figure 1).

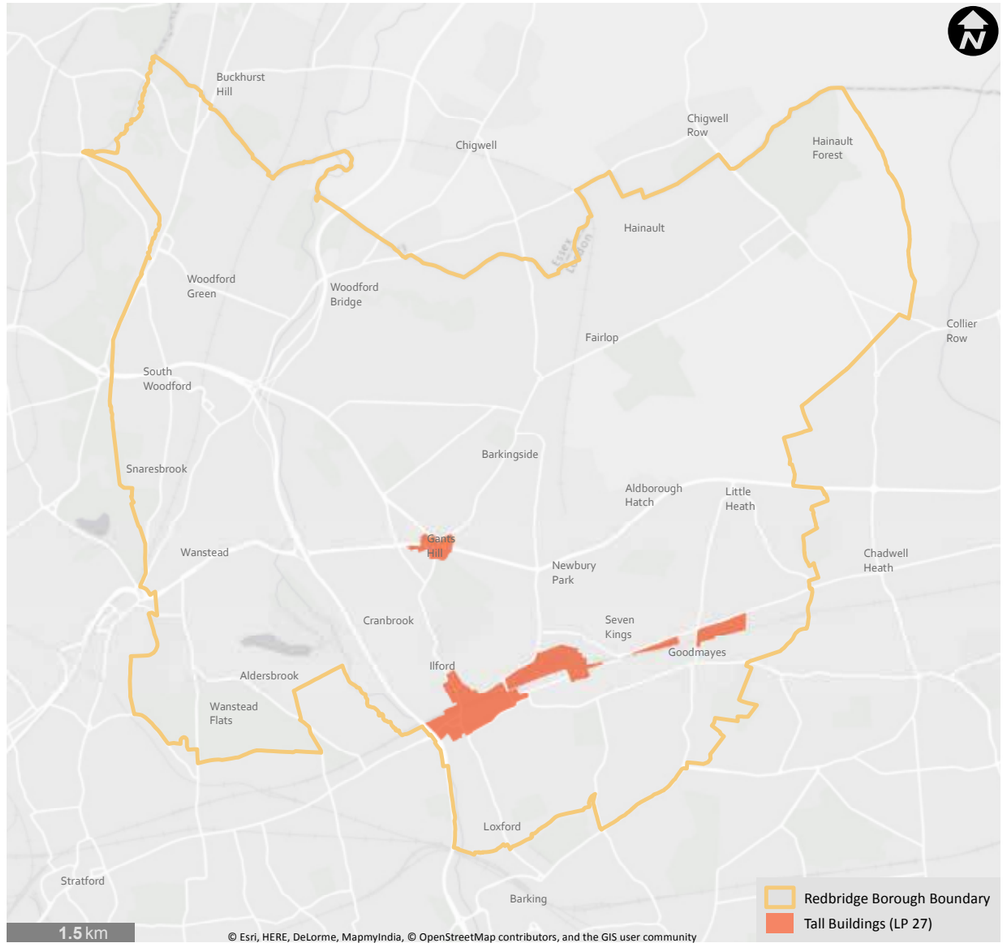
1.1.2 This report sets out the evidence base for the review of the content of the draft Tall Buildings policy LP27, divided into three key sections as follows:

- **A. Baseline review:**
  - a review of the policy context within Redbridge, including the relationship with the National Planning Policy Framework (NPPF) and the London Plan;
  - an overview of the baseline townscape character of Redbridge, including a preliminary identification of key local viewpoints and strategic vistas;
  - a review of relevant and recent planning applications for tall buildings in Redbridge, against the relevant policies used in their determination;
  - an assessment of the design quality of these recent tall building applications in Redbridge; and
  - a review of relevant and recent planning applications for tall buildings in comparable benchmark boroughs, alongside understanding their approach to setting tall building policies.
- **B. Scenario testing:**
  - development of a series of possible building scenarios around the borough;
  - modelling the overall visibility of these building scenarios; and
  - testing these scenarios within the identified views for the purpose of defining a spatial approach to tall building development within the draft Tall Building policy LP27.
- **C. Policy recommendations:**
  - drawing conclusions from the scenario testing to inform recommendations on the draft Tall Buildings policy, including in relation to the spatial approach to tall buildings in the borough.

1.2 Project background

1.2.1 Within Redbridge, planning applications for tall buildings are coming forward with a limited local policy framework present for their determination; the existing framework is largely focussed around AAPs adopted pre-NPPF and adoption of the London Plan. This in turn has led to the need to be more flexible at the planning application stage, which has met some resistance from local residents. Concerns include consideration of microclimate changes, particularly wind tunnelling.

Figure 1 Overview of tall building areas - defined by Draft Policy LP27

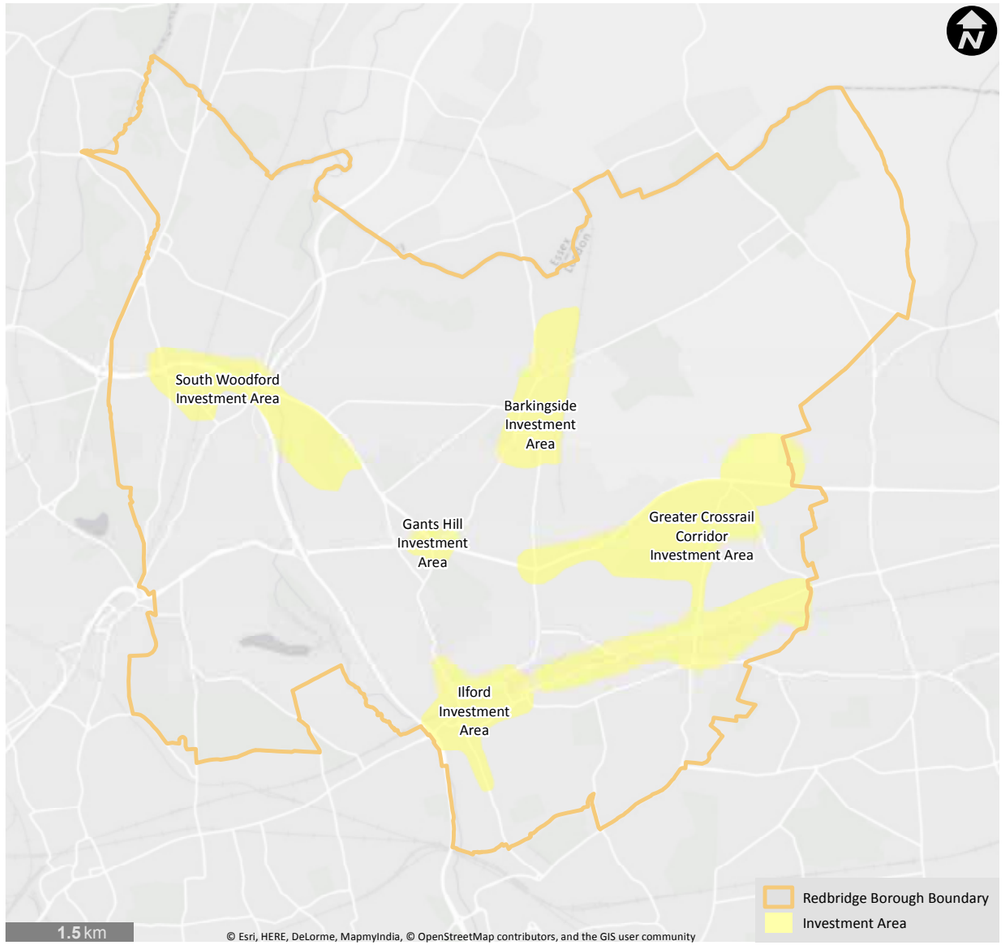


1.2.2 The Draft Local Plan has been under development since 2011, and contains the strategy to direct growth towards the borough's investment and growth areas (shown on Figure 2), alongside other areas with good public transport accessibility. Across these areas, the Draft Local Plan identifies Ilford, Gants Hill and the Crossrail Corridor as being most suitable for the development of tall buildings, with less scope within the areas of Barkingside and South Woodford due to the character of the existing townscape.

1.2.3 Key to the Draft Local Plan is the need to deliver housing. This is set within the context of poor housing delivery across the borough in recent years. Redbridge has an ambitious target of 18,774 homes by 2030, exceeding the Mayor's target.

1.2.4 Additional evidence is required to allow the Council to alleviate concerns from residents about the potential impacts of more tall building development within the borough. Additional evidence is also required to support the development of a

Figure 2 Overview of draft Local Plan Growth and Investment areas



tall building policy that fully considers the context and townscape character of the borough. Once adopted, the Local Plan will supersede the existing Area Action Plans (AAPs). The AAPs currently provide building height benchmarks, although these require reconsideration, particularly as they predate the NPPF and London Plan.

A

BASELINE REVIEW

2 Policy context

2.1 Introduction

2.1.1 Redbridge is currently in the process of preparing a new Local Plan which will steer development in the Borough to 2030. Initial consultation was undertaken in 2011 to identify key issues and establish aspirations of local communities. Following this consultation, the Preferred Options Report, which underwent Regulation 19 consultation from 7 January to 22 February 2013, identified those places where change and development should be accommodated.

2.1.2 Following the consultation on the Preferred Options Report, a further Preferred Options Extension - Alternative Development Strategies Report was produced, which presented four options that considered how to meet some of the borough's housing and infrastructure needs. The Council consulted on these options between 7 November 2014 and 22 December 2014, and used the findings to inform the pre-submission draft of the new Local Plan.

2.1.3 The pre-submission draft of the new 'Redbridge Local Plan 2015-2030' was subject to Regulation 19 consultation between 28 July and 30 September 2016, and is due to be submitted to the Secretary of State for independent examination in winter 2016.

2.1.4 Once adopted, the new Local Plan will replace the current development plan, which currently comprises the existing Core Strategy (adopted in 2008) and other Development Plan Documents (DPD). Until the new Local Plan is formally adopted, current planning applications are assessed against the policies contained within the existing DPDs, as well as the most up to date version of the London Plan and the National Planning Policy Framework (NPPF).

2.1.5 With respect to tall buildings, the primary development management policy framework applicable to Redbridge is summarised below:

2.2 National Planning Policy Framework (2012)

2.2.1 This contains no specific tall buildings guidance, although local planning policies are expected to align with the principles of NPPF **Section 7 - 'Requiring Good Design'**, within which building height is a key consideration.

2.3 The London Plan (2016)

2.3.1 **Policy 7.7 – Location and design of tall and large buildings,** is the primary Policy within the London Plan which guides matters related to tall buildings. The Policy is as follows:

"Strategic

A. Tall and large buildings should be part of a plan-led approach to changing or developing an area by the identification of appropriate, sensitive and inappropriate locations. Tall and large buildings should not have an unacceptably harmful impact on their surroundings.

Planning decisions

B. Applications for tall or large buildings should include an urban design analysis that demonstrates the proposal is part of a strategy that will meet the criteria below. This is particularly important if the site is not identified as a location for tall or large buildings in the borough's LDF.

C. Tall and large buildings should:

a) generally be limited to sites in the Central Activity Zone, opportunity areas, areas of intensification or town centres that have good access to public transport

b) only be considered in areas whose character would not be affected adversely by the scale, mass or bulk of a tall or large building

c) relate well to the form, proportion, composition, scale and character of surrounding buildings, urban grain and public realm (including landscape features), particularly at street level;

d) individually or as a group, improve the legibility of an area, by emphasising a point of civic or visual significance where appropriate, and enhance the skyline and image of London

e) incorporate the highest standards of architecture and materials, including sustainable design and construction practices

f) have ground floor activities that provide a positive relationship to the surrounding streets

g) contribute to improving the permeability of the site and wider area, where possible

h) incorporate publicly accessible areas on the upper floors, where appropriate

i) make a significant contribution to local regeneration.

D. Tall buildings:

a) should not affect their surroundings adversely in terms of microclimate, wind turbulence, overshadowing, noise, reflected glare, aviation, navigation and telecommunication interference

b) should not impact on local or strategic views adversely

E. The impact of tall buildings proposed in sensitive locations should be given particular consideration. Such areas might include conservation areas, listed buildings and their settings, registered historic parks and gardens, scheduled monuments, battlefields, the edge of the Green Belt or Metropolitan Open Land, World Heritage Sites or other areas designated by boroughs as being sensitive or inappropriate for tall buildings.

LDF preparation

F. Boroughs should work with the Mayor to consider which areas are appropriate, sensitive or inappropriate for tall and large buildings and identify them in their Local Development Frameworks. These areas should be consistent with the criteria above and the place shaping and heritage policies of this Plan."

2.3.2 While not explicitly worded in relation to tall buildings, Policy 3.4 is also of relevance.

2.3.3 **Policy 3.4 – Optimising Housing Potential**, states that taking into account local context and character, the design principles in Chapter 7 and public transport capacity, development should optimise housing output for different types of location within the relevant density range shown in Table 3.2 of the document. Table 3.2 provides the Sustainable residential quality (SRQ) density matrix (habitable rooms and dwelling per hectare) to be used in the application determination process.

2.3.4 London Plan designations affecting LBR are also of relevance. These include:

2.3.5 **Ilford Opportunity Area** - London has limited opportunities for accommodating large scale development and several suitable areas are identified in the London Plan, comprising 38 Opportunity Areas and seven Intensification Areas. Opportunity Areas are London's major source of brownfield land which have significant capacity for development, such as housing or commercial use, and existing or potentially improved public transport access. Typically they can accommodate at least 5,000 jobs, 2,500 new homes or a combination of the two, along with other supporting facilities and infrastructure. The Ilford Opportunity Area covers an area of 85 hectares.

2.3.6 **Ilford Metropolitan Centre** - Ilford is identified within London Plan Table A2.1: Town centre classifications and broad future directions as a Metropolitan Centre with medium potential for growth.

2.3.7 **Ilford Town Centre Housing Zone** - The Ilford Town Centre is identified as a Housing Zone, the purpose of which are to bring accelerated housing development to areas across London with high potential for growth.

2.4 Redbridge planning policy

Borough Wide Primary Policies Development Plan Document (2008)

2.4.1 **Policy BD2 – Tall buildings**, is the primary Policy within the existing Borough Wide Primary Policies Development Plan Document which guides matters related to tall buildings. The Policy states:

"Planning permission for tall buildings, usually considered as over 30 metres, will be granted in Ilford Town Centre to reinforce its role as a Metropolitan Centre and an Opportunity Area. The Ilford Town Centre Area Action Plan identifies key sites and provides detailed guidance on building heights.

Subject to criteria set out below, planning permission for other tall buildings will also be granted in areas shown on the Proposals Map. Their heights and siting will be determined in accordance with the design qualities of the building, their transport accessibility and the character of development in the centre and its surrounding area. Where appropriate, Area Action Plans will be progressed to identify key sites and provide detailed guidance on buildings heights.

In all cases tall buildings should:

1. Make a positive contribution to the skyline.

2. Not adversely affect views of importance.

3. Be of outstanding architectural quality.

4. Not impact adversely upon the setting and character of Conservation Areas, Listed Buildings (Statutory and Local), Residential Precincts, and historic parks and gardens.

5. Be sensitive to their impact on micro-climates in terms of wind, sun, reflection and overshadowing.

6. Take account of functional constraints including air navigation corridors, communication links (including television) and underground services and facilities.

7. Where appropriate, contain a mix of uses with public access, such as lower floor retail and leisure facilities with an active street frontage."

2.4.2 While not explicitly worded in relation to tall buildings, Policy BD1 and Policy BD3 are also of relevance.

2.4.3 **Policy BD1 – All Development**, states that proposals for all forms of development must incorporate high quality sustainable construction techniques. The Policy provides design guidance with which all forms of development are required to comply.

2.4.4 **Policy BD3 – Density in New Residential Development**, states that planning permission will be granted for new residential development where it achieves the required densities. The Policy allows for higher densities in Ilford Town Centre and maintains low densities in the established residential areas.

2.4.5 In addition to the Borough Wide Policies Document, other DPDs also make reference to building heights in different areas across the Borough. In particular, and as referenced in Policy BD2 above, AAPs have been developed for Ilford Metropolitan Centre, the Crossrail Corridor and Gants Hill District Centre, to provide more detailed guidance on tall buildings in these key areas of growth.

2.4.6 A summary of the policy positions set out in these three key documents is as follows:

Ilford Metropolitan Centre AAP (2008)

2.4.7 The Ilford Metropolitan Centre AAP contains **Policy BF3 – Building Height,** the main function of which is to outline suitable locations for tall buildings. The

policy, and accompanying Map 9 – Built Form Building Heights Strategy – outline primary and secondary tall building zones clustered at the eastern and western ends of the High Street. These primary and secondary zones are acceptable locations for buildings of 15+ storeys and 10-15 storeys respectively.

2.4.8 Within the Ilford Town Centre AAP, it is noted that there may be circumstances where landmark buildings (which may include buildings of greater height than prescribed by the zones) are desirable because of their ability to stimulate wider regeneration schemes or the need to emphasise key locations or focal points. Locations for possible taller/landmark buildings are plotted on Map 9 and their addresses and specific Opportunity Site reference is given in Table 2 within the policy.

2.4.9 The AAP retains a policy focus on steering the location of tall buildings, with less emphasis on design considerations or requirements. In contrast to tall buildings policies in the Crossrail Corridor AAP and the Gants Hill District Centre AAP (see below), Policy BF3 does not reference Borough Wide Policy BD2, which outlines both the preferred location of tall buildings across the Borough, and also some design principals.

Crossrail Corridor AAP (2011)

2.4.10 The Crossrail Corridor AAP contains Policy CC3 – Building Height, which serves to direct the spatial distribution of tall buildings within the area, in accordance with accompanying Map 5.2 – Building Height Strategy. The Policy seeks to steer tall buildings (up to 10 storeys) towards town centres and in close proximity to the key transport nodes of Seven Kings and Goodmayes, as well as the East of Ilford Character Area. The Policy also identifies key locations suitable for landmark buildings of above 10 storeys at Seven Kings and Goodmayes.

2.4.11 Within the Crossrail Corridor AAP, the Character Area Design Principles provide more detailed guidance, setting out where taller and landmark buildings may be appropriate on key Opportunity Sites. Those Opportunity Sites deemed to be suitable for Landmark Buildings are summarised in Table 5.1 of the document.

2.4.12 Policy CC3 makes specific reference to the wider Borough Wide Policy BD2 (Tall Buildings – see above), requiring that all tall buildings adhere to all of the requirements of the policy. This places a greater emphasis not just upon the location of taller buildings within the Crossrail Corridor, but also key design factors and an emphasis on the need for high quality design.

Gants Hill District Centre AAP (2009)

2.4.13 The Gants Hill District Centre AAP contains **Policy GH4 – Building Heights**, which steers the location of tall buildings in accordance with accompanying Map 5 – Building Heights. Policy GH4 defines tall buildings as those in excess of 30 metres in height, and the accompanying map outlines specific areas around Gants Hill centre which are appropriate for such tall buildings, primarily in areas set back from the main District Centre roundabout. At the roundabout itself, the plan indicates developments of 3-5 storeys are more appropriate to preserve the character of the street frontage.

2.4.14 With regards to the Gants Hill AAP, there is also consideration of indicative heights of potential development schemes. This is illustrated in Map 8: Illustrative Masterplan and can be overlaid onto the Opportunity Sites specified in Map 3.

2.4.15 As within the Crossrail Corridor AAP Policy CC3, Policy GH4 also makes specific reference to Policy BD2 (Tall Buildings), requiring tall buildings in the area to conform to the design criteria set out in this policy.

3 Townscape character overview

3.1 Scope of review

3.1.1 This section of the report focuses on developing a high level understanding of the townscape character of Redbridge, for the purpose of reviewing the appropriateness of the draft Tall Building policy LP27. The sequential approach to understanding different key characteristics of the townscape of the borough has been followed to help identify important local viewpoints, and strategic panoramas and vistas, within which tall building scenarios have been tested (refer to Section B). For example, the topographic and vegetation extents mapping give an indication of the strategic panoramas present across the borough; and the land use, building heights and historic assets inform important street level views and compositions.

3.1.2 The Redbridge Characterisation Study (2014) is a key reference document for this section of the report. The characterisation study describes more fully the urban character across the borough and includes some analysis of density, accessibility to public transport and other demographic factors. Where figures within the characterisation study are particularly relevant to the townscape analysis in relation to tall buildings, they have been reproduced in this document, with references provided back.

3.2 Character overview

3.2.1 Redbridge is an outer London Borough in the north-east of London, located within the M25. The borough as a whole covers approximately 22 square miles, a third of which is Green Belt. Other important and dispersed green spaces contribute to a total of 2,170 hectares, including two significant Historic Parks & Gardens.

3.2.2 The majority of the urban area of Redbridge comprises residential neighbourhoods characterised by extensive areas of low density 2-3 storey terraced housing. Some higher density housing and apartments are concentrated close to railway lines and London Underground stations at the District Centres around the borough and the Ilford Metropolitan Centre. Residential density is illustrated on Figure 3.[1]

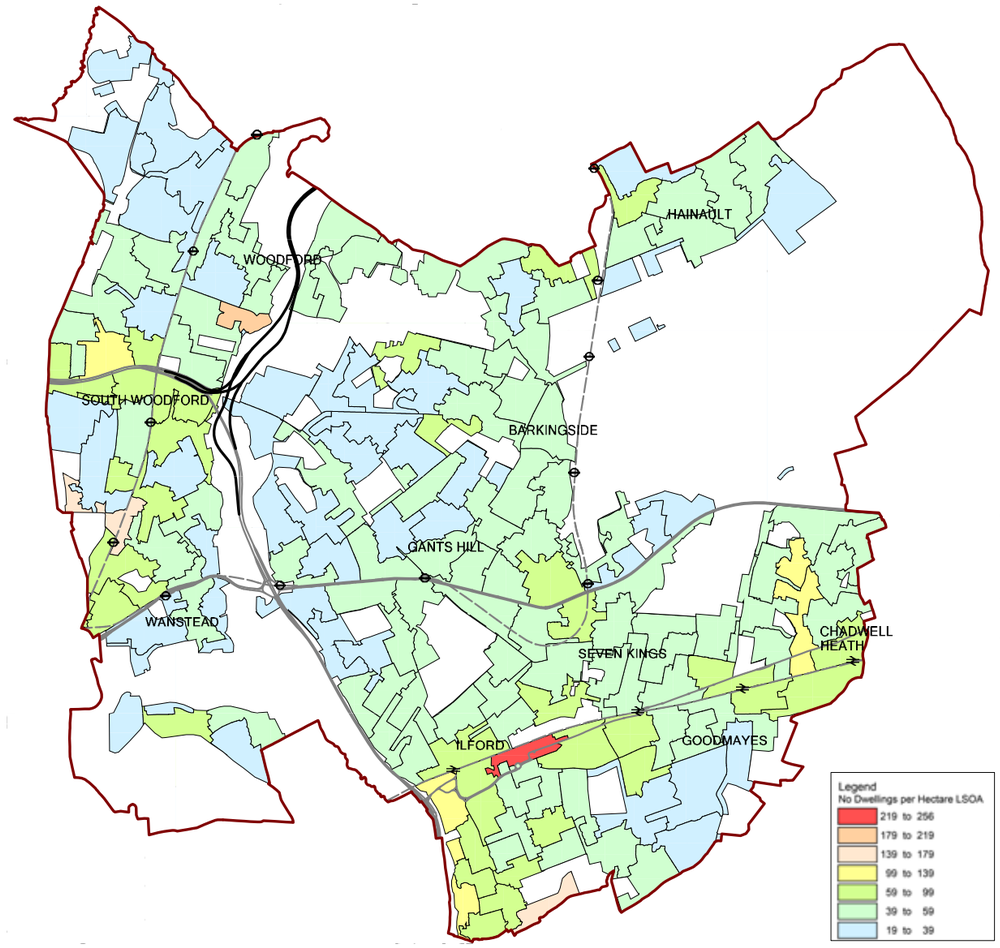
3.2.3 Overall the borough is therefore characterised by a low residential density in the range of 19-59 dwellings per hectare across the majority of the built environment. Only Ilford has densities in excess of 219 dwellings per hectare.

3.2.4 Outside of the built environment, Redbridge's open spaces are numerous and occupy large swathes of land. A particular characteristic is the ancient woodland of Epping Forest, occupying a ridge between the valleys of the River Lea and River Roding. In total over 40% of the borough is open space.

3.2.5 The following pages provide an overview of the key characteristics of the townscape character of Redbridge.

1 Figure courtesy of the Redbridge Characterisation Study (2014).

Figure 3 Residential density (dwellings per hectare by lower layer super output area)



3.3 Metropolitan and District Centres

3.3.1 Redbridge is characterised by six District Centres of varying size, located to the north of Ilford, which is the only Metropolitan Centre within the borough (as designated within the London Plan, 2015).

3.3.2 Metropolitan Centres are described as areas which "*serve wide catchments which can extend over several boroughs and into parts of the wider South East region. Typically they contain at least 100,000 sq.m of retail, leisure and service floorspace with a significant proportion of high-order comparison goods relative to convenience goods. These centres generally have very good accessibility and significant employment, service and leisure functions.*[2]"

2 https://www.london.gov.uk/what-we-do/planning/london-plan/current-london-plan/london-plan-annexes/annex-two-londons-town

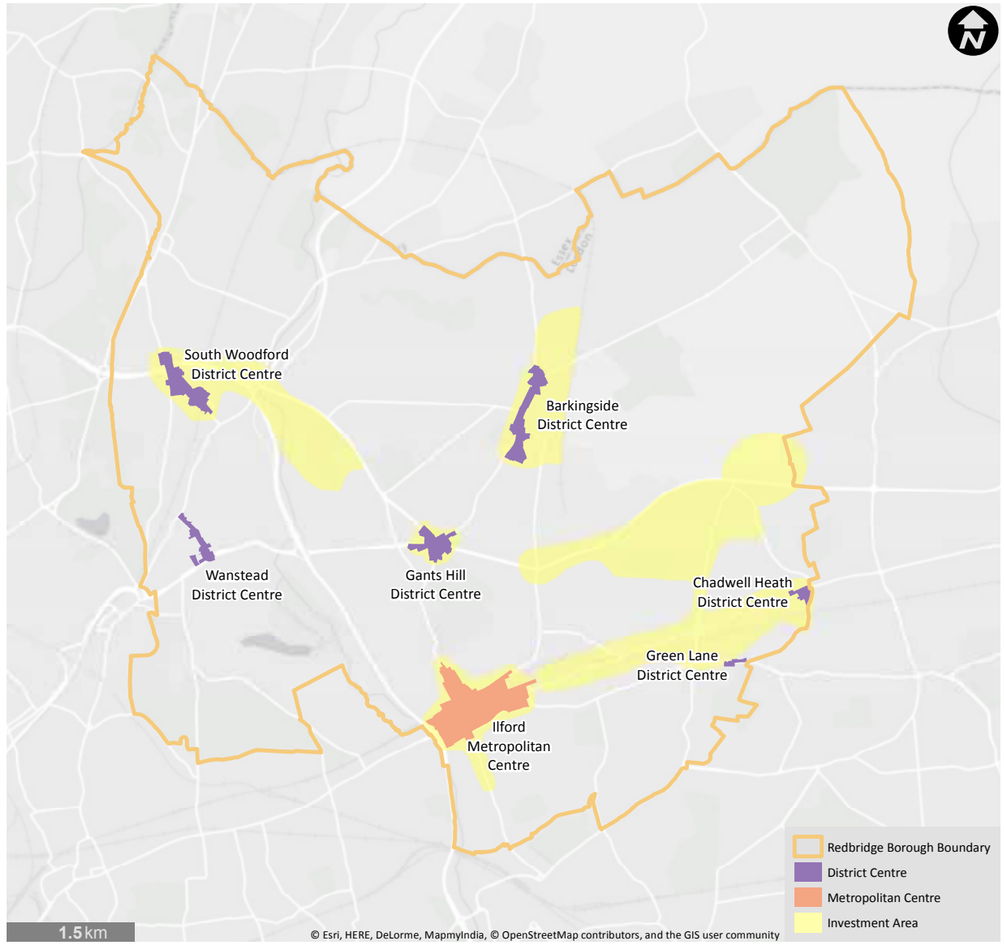
3.3.3 Ilford Metropolitan Centre is clustered around Ilford train station, located on the TfL Rail line going direct to Stratford and London Liverpool Street, and soon to be part of the Crossrail network. It contains the highest residential densities in the borough and a substantial proportion of the retail and commercial premises. Ilford is also designated as a Investment and Growth Area, which extends slightly beyond the Metropolitan Centre boundary and further to the south along Ilford Lane. Further details are set out in the AAP[3].

3.3.4 District Centres are described as "*distributed more widely than the Metropolitan and Major centres, providing convenience goods and services for more local communities and accessible by public transport, walking and cycling. Typically they contain 10,000–50,000 sq.m of retail, leisure and service floorspace. Some District centres have developed specialist shopping functions.*[4]"

3.3.5 The six District Centres are:

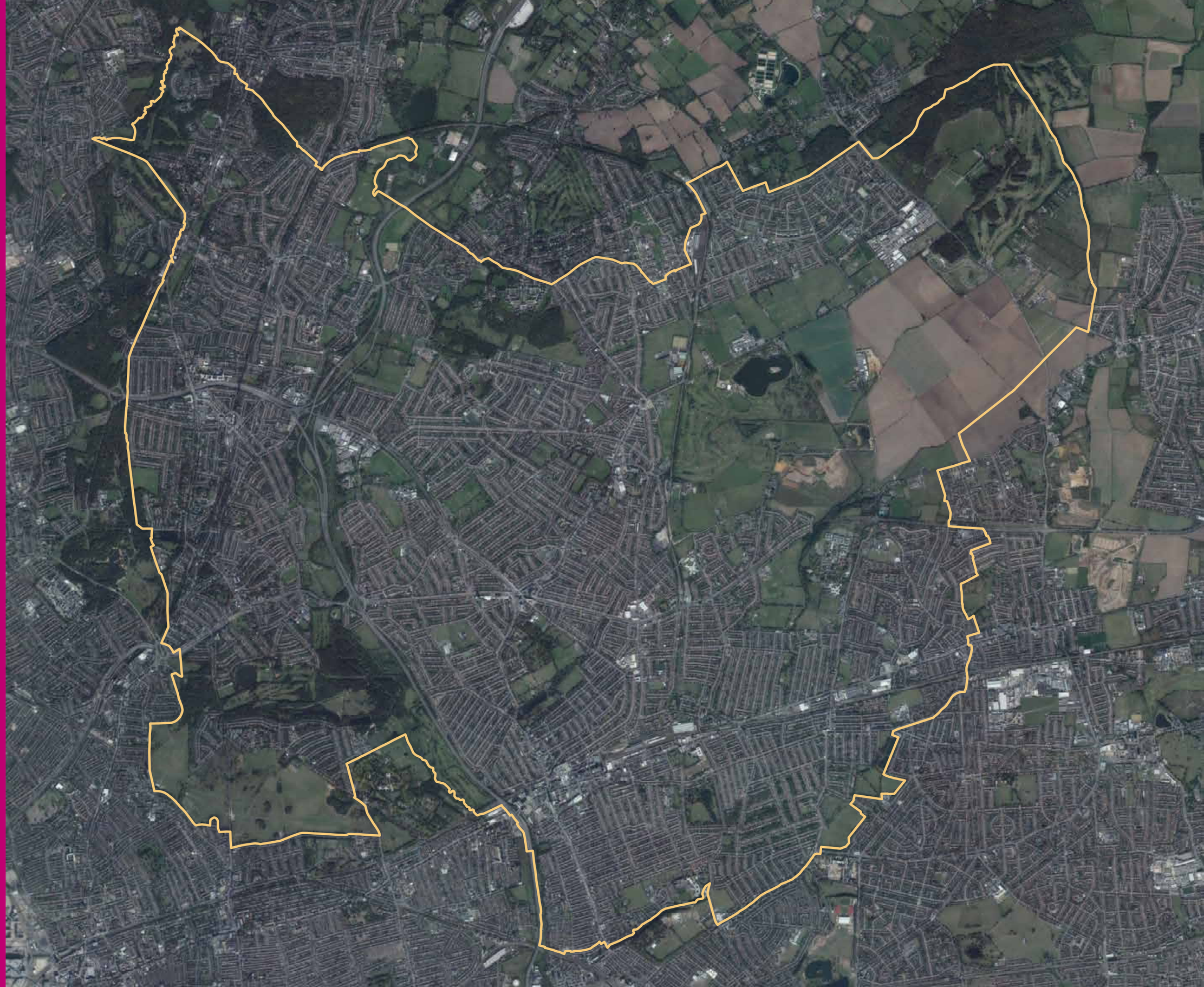
- **Green Lane** - Predominantly low density residential area in the south-east of the borough, close to Goodmayes train station. Some commercial uses and community facilities along Goodmayes Road and Green Lane. Green Lane sits within the wider Crossrail Corridor Investment and Growth Area, with further details set out in the AAP[5].
- **Chadwell Heath** - Largely residential area with some large retail / commercial units at the eastern edge of the borough, close to Chadwell Heath train station. Chadwell Heath sits within the wider Crossrail Corridor Investment and Growth Area, with further details set out in the AAP[6].
- **Gants Hill** - A well-connected District Centre situated at a busy roundabout junction with the A12, with good road and rail connections (Gants Hill is a London Underground Central line station). The centre forms a local cluster of buildings taller than much of the context in Redbridge, and there are a number of tall building applications which have been granted. There are a mix of retail and commercial premises. Gants Hill also sits within a Growth and Investment Area, with further details set out in the AAP[7].
- **South Woodford** - A local concentration of retail and leisure facilities adjacent to commercial uses and low density residential neighbourhoods, located close to South Woodford London Underground Central line station. There is a local concentration of tall buildings along the North Circular at Queen Mary Avenue. The District Centre is part of a wider Investment and Growth Area which stretches to the east along the North Circular.
- **Barkingside** - A linear District Centre with retail, commercial and civic facilities concentrated along the A123, with low density residential and large green open spaces to either side. The Centre is served by Barkingside and Fairlop London Underground Central line stations. Barkingside is also part of a wider Investment and Growth Area, which is mostly low density residential properties.
- **Wanstead** - A small District Centre focused along the High Street between Wanstead and Snaresbrook London Underground Central line stations. Development is all generally low height and low density, interspersed amongst open spaces, including Wanstead Historic Park & Garden.

Figure 4 Metropolitan and District Centres



3.3.6 The Metropolitan and District Centres within Redbridge are illustrated on Figure 4 above, overlain with the Investment and Growth Areas.

3 Ilford Town Centre Area, Area Action Plan Development Plan Document (2008).
4 https://www.london.gov.uk/what-we-do/planning/london-plan/current-london-plan/london-plan-annexes/annex-two-londons-town
5 Crossrail Corridor Area Action Plan (2011).
6 Crossrail Corridor Area Action Plan (2011).
7 Gants Hill District Centre Area Action Plan Development Plan Document (2009).



3.4 Key characteristics

Topography

3.4.1 Much of the southern part of the borough is relatively flat and low-lying, with a gradual rise from south to north and away from the River Roding corridor running from Woodford to Ilford.

3.4.2 The highest points in Redbridge are located at Woodford Wells (70m AOD), Repton Park / Claybury (65m AOD), Redbridge Cycle Centre / Hog Hill (65m AOD), Dog Kennel Hill (80m AOD) and Hainault Forest (90m AOD).

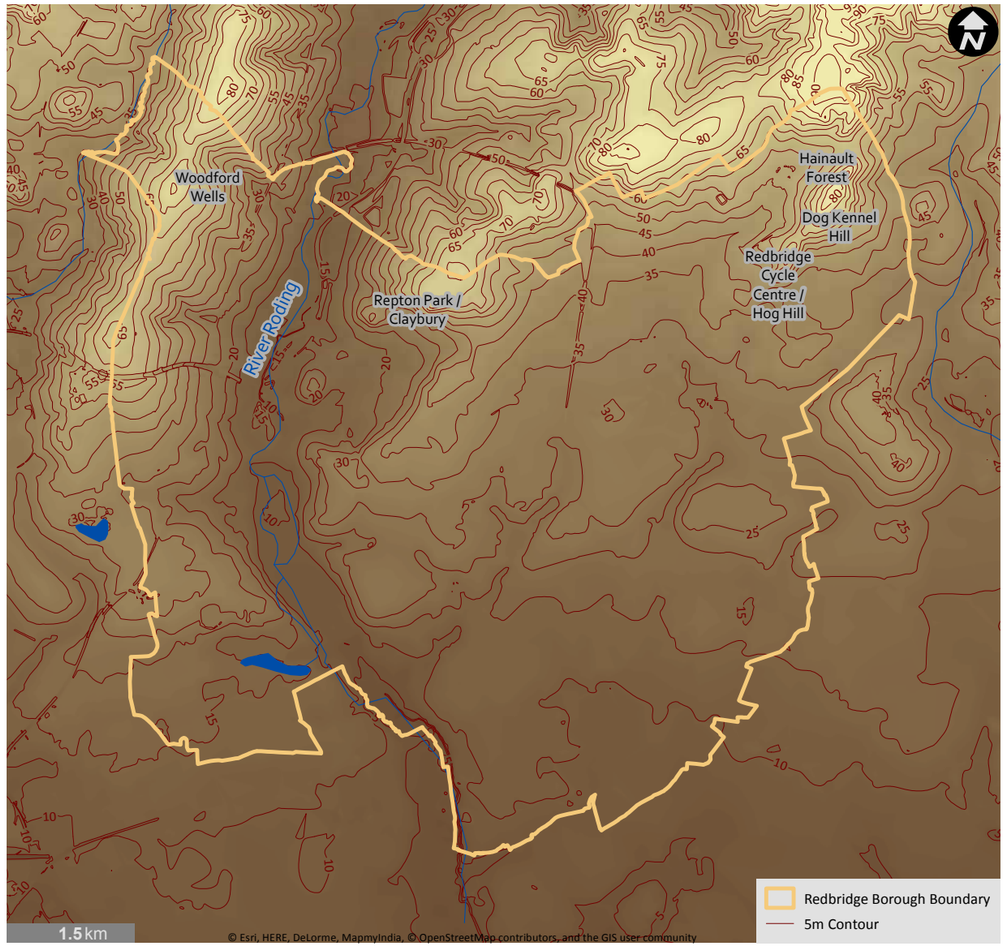
3.4.3 Ilford and the Crossrail Corridor lie broadly in the lowest parts of the borough (10-15m AOD), while Gants Hill, South Woodford and Barkingside Growth and Investment Areas sit between 20 and 30m AOD.

3.4.4 Contours are generally gradual with a low undulating landscape characterising the majority of the borough, except for the northern edges of the Roding valley and in the far north of the borough around Hainault where gradients are steeper.

3.4.5 The rise in levels from south to north, combined with the low height of the majority of development in the borough, allows for long distance panoramic views towards central and west London.

3.4.6 An overview of the topography of Redbridge and its immediate context is provided on Figure 5.

Figure 5 Topography overview plan



Green space

3.4.7 Sitting at the edge of Greater London, Redbridge is characterised by large swathes of green space. There is around 2,000 hectares of Green Belt, accounting for approximately 30% of the area of the whole borough.

3.4.8 There is a further 170ha of other open spaces, many of which are designated as Metropolitan Open Land, affording them similar levels of protection to Green Belt. In total, over 40% of the borough is open space, including publicly accessible spaces, private land, agricultural land, woodland, playing fields, numerous park typologies, play areas, allotments and cemeteries.

3.4.9 Forming a transitional zone between central London and Essex, Redbridge has a wide variety of both typology and scale of spaces. In the north, the land is characterised by expansive country parks, farmland and woodland, forming an extension to the rural Essex Green Belt. In the south and west, spaces are generally small urban parks and linear vegetated belts along infrastructure corridors and the River Roding.

3.4.10 An overview of the green space within Redbridge is provided in Figure 6.

3.4.11 The River Roding valley forms an important ecological corridor connecting into the wider All London Green Grid[1]. The floodplain is largely open, with amenity grassland and some recreational uses amongst relatively little tree cover. Due to its openness, the scenic quality of the valley is affected by major infrastructure including the M11, North Circular and overhead power lines.

3.4.12 The wider borough includes a variety of natural habitats including Special Conservation Areas, Sites of Special Scientific Interest, Sites of Nature Conservation Importance and Local Nature Reserves.

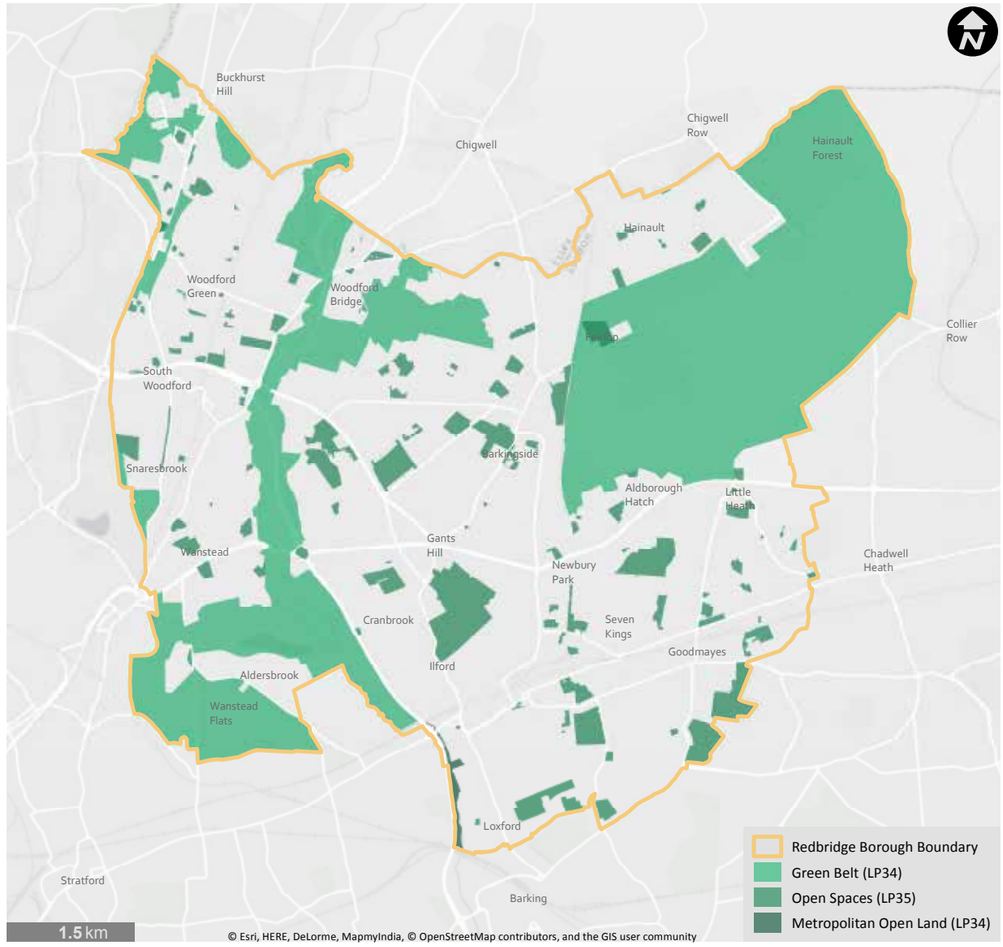
3.4.13 Open spaces are characterised into Metropolitan Parks, District Parks, Local Parks and Small Local Parks, in line with Table 7.2 of the London Plan. The distribution of these spaces is shown on Figure 7.[2]

3.4.14 Key Metropolitan Parks[3] include:

- Fairlop Waters Country Park - the largest country park in Redbridge, with numerous leisure facilities including 9 and 18 hole golf courses, a lake for watersports and a natural play area.
- Hainault Forest Country Park - a Green Flag Award[4] open space with woodlands, boating, fishing, nature trails and picnicking spaces.
- Wanstead Park - A grade II listed municipal park covering an area of 57 hectares.
- Claybury Park - Park with substantial areas of woodland, dating from the late 18th century.
- Wanstead Flats - The southernmost portion of Epping Forest in the south of the borough.

1 The All London Green Grid (ALGG) is a policy framework to promote the design and delivery of 'green infrastructure' across London. https://www.london.gov.uk/WHAT-WE-DO/environment/parks-green-spaces-and-biodiversity/all-london-green-grid.
2 Figure courtesy of the Redbridge Characterisation Study (2014).
3 Large areas of open space that provide a similar range of benefits to Regional Parks and offer a combination of facilities at a sub-regional level, are readily accessible by public transport and are managed to meet best practice quality standards.
4 The Green Flag Award® scheme recognises and rewards the very best green spaces.

Figure 6 Green space overview plan

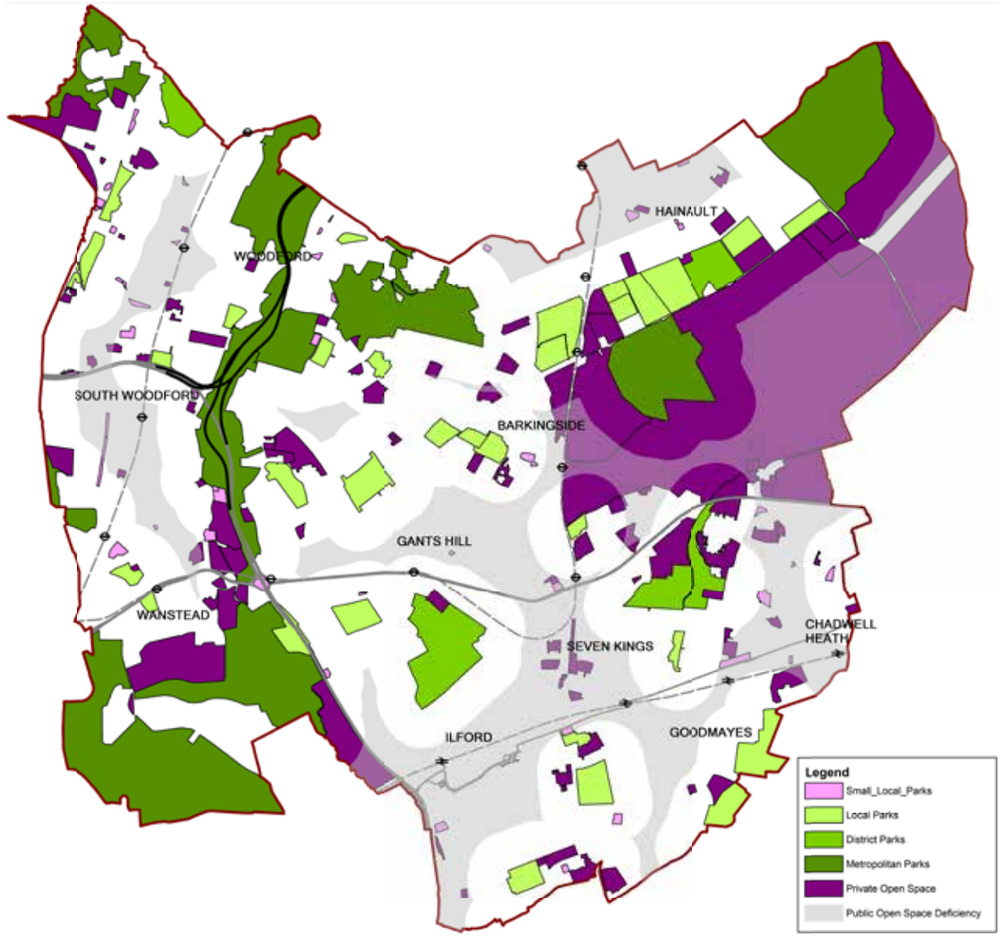


3.4.15 Valentines Park is one of the key District Parks[5] within the borough, dating from the early 18th century and recently having been renovated using Heritage Lottery funding. Valentines Park is a registered Historic Park & Garden.

3.4.16 Figure 7 also illustrates areas with a deficiency of access to public open space, which is particularly prevalent in Ilford, Gants Hill and South Woodford, and along

5 Large areas of open space that provide a landscape setting with a variety of natural features providing a wide range of activities, including outdoor sports facilities and playing fields, children's play for different age groups and informal recreation pursuits.

Figure 7 Open space typologies and areas of public open space deficiency



the Crossrail Corridor.

3.4.17 The majority of Redbridge's open spaces are used for formal recreation (63%), with the remainder used for informal recreation (9%) and non-recreational uses such as farmland (28%).

3.4.18 Due to the scale of some of the largest open spaces in the borough, they are often coincident with key strategic panoramas across the local townscape and towards the wider London context and skyline.

3.4.19 Some of the smaller urban parks, with wooded / vegetated edges provide local tranquil enclaves, with little or no view of the surrounding built environment due to the generally low building heights.

Vegetation cover

3.4.20 Redbridge is a very green borough as described in the green spaces description within this section. The larger open spaces in the borough are characterised by extensive woodland cover, particularly in Hainault Forest, Woodford Bridge and Wanstead. Intermittent trees are common along the valley of the River Roding.

3.4.21 Smaller open spaces around the borough, and some key infrastructure corridors, are also well lined by mature tree cover, providing a green outlook and perception of tranquillity within the urban realm.

3.4.22 This is further enhanced by the low density of development across the majority of Redbridge, with a high frequency of private gardens contributing to the green outlook along residential streets and neighbourhoods.

3.4.23 Street trees are not common across the borough, particularly in some of the District Centres and the Metropolitan Centre of Ilford. The Forestry Commission have indicated that much of Ilford and the Crossrail Corridor is a Street tree priority area moving forward.

3.4.24 The dense tree cover in parts of the borough limits visibility of the generally low density of built form. However, where vegetation opens up, it serves to frame long distance views of the whole borough and also the central London iconic skyline.

3.4.25 An aerial photo illustrating the overall cover of vegetation in the borough, alongside some of the specific mapped areas of woodland, is provided in Figure 8.

Figure 8 Vegetation cover overview plan

Heritage assets

3.4.26 Redbridge has a number of heritage assets of individual merit including Historic Parks & Gardens, conservation areas and listed buildings. Much of the borough is also designated as an Archaeological Priority Area.

3.4.27 Conservation areas are generally located outside of the main District Centres within the borough, and also outside of Ilford Metropolitan Centre. There are also a number of distinctive Residential Precincts which are of a certain quality but not protected by conservation area status, again largely outside the District and Metropolitan Centres.

3.4.28 The greatest concentration of heritage assets, including conservation areas, residential precincts, listed buildings and Wanstead Historic Park & Garden, are located in the west and north-west of the borough.

3.4.29 In total there are 16 conservation areas, generally located away from the town centres around the borough, and therefore characterised by low density residential development and open green space. Many of these areas have had detailed conservation area character appraisals prepared, alongside design guidance, preservation and enhancement proposals and management proposals. Parts of South Woodford, Barkingside and Wanstead District Centres are designated as conservation areas.

3.4.30 There are over 200 statutorily listed buildings across the borough, with concentrations within Ilford, Barkingside, Wanstead, South Woodford, Woodford Bridge and Woodford Green. The only grade I listed[1] building is the Church of St Mary in Wanstead, a Portland stone building completed in the late 18th century. There are a further eleven grade II* listed[2] buildings, with the remainder afforded grade II listed[3] protection.

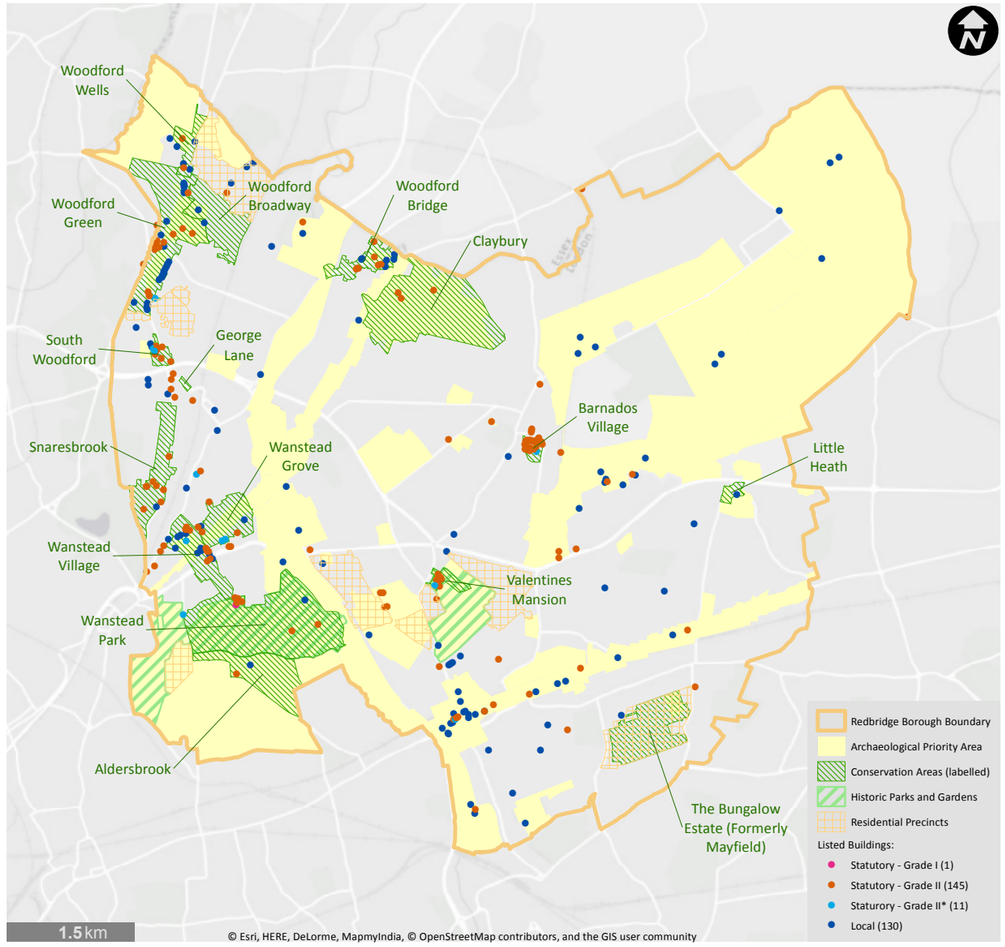
3.4.31 There are also large numbers of locally listed buildings, with particular concentrations in the west of the borough, within Ilford town centre and also interspersed along the Crossrail Corridor.

3.4.32 Two parks - Wanstead Park and Valentines Park - are registered as Historic Parks & Gardens, with further information provided in the green space overview of this section.

3.4.33 Many of the heritage assets within Redbridge are individual buildings that make important local contributions to individual street scenes due to the architectural merit. Many are relatively small in scale, in line with much of the built environment within the borough, and are sensitive to new denser / taller development.

3.4.34 An overview of the heritage assets within Redbridge is provided in Figure 9.

Figure 9 Heritage assets overview plan



1 Buildings of exceptional interest.
2 Particularly important buildings of more than special interest.
3 Buildings that are of special interest, warranting every effort to preserve them.

Transport network and nodes

3.4.35 Redbridge is well served by a variety of different public transport options in addition to strategic road connections. The north-west and centre of the borough is covered by London Underground Central line stations at the District Centres of Wanstead, South Woodford, Gants Hill and Barkingside, with a total of 12 stations on the line through Redbridge.

3.4.36 The south-east of the borough is currently served by the Greater Anglia railway line, with trains operated from London Liverpool Street and Stratford on the TfL Rail line. This route will soon include the Crossrail line with stations at Ilford, Seven Kings, Goodmayes and Chadwell Heath.

3.4.37 Immediately to the south of the borough runs the District Line, with nearby stations at Upney and East Ham. The borough is also part of the extensive London bus network, with services operated across Redbridge.

3.4.38 The main train and London Underground stations have become core centres for each of the Districts around the borough, with the capacity to act as a natural hub for intensification of development and hence greater concentrations of people. This has already naturally occurred at centres such as Ilford and Gants Hill, and, to a lesser extent, South Woodford, Wanstead and Seven Kings.

3.4.39 An overview of the rail network is provided on Figure 10.

3.4.40 The Redbridge Characterisation Study (2014) highlights the varying levels of access to public transport across the borough with reference to Public Transport Accessibility Levels (PTAL)[1]. Ilford has the highest levels (6a/6b), with Gants Hill and Wanstead at PTAL 5, and South Woodford and Barkingside at PTAL 4. Other centres generally have a PTAL of 3 with the remainder of the borough quite poorly connected. Crossrail will bring significantly increased levels of accessibility to Seven Kings, Goodmayes and Chadwell Heath. An overview of the current PTAL for Redbridge is provided on Figure 11[2] overleaf.

3.4.41 The characterisation study also maps deficiency in access to public transport away from the rail and London Underground stations (see Figure 12[3] overleaf) with the following categories:

- Level 1 - within 400m of a high frequency bus route serving two or more Metropolitan / District Centres.
- Level 2 - Within 400m of a high frequency bus route serving at least one Metropolitan / District Centre.
- Level 3 - Within 400m of a low frequency bus route.

Figure 10 Rail network overview plan

1 PTAL are used by Transport for London and local authorities to identify car parking standards and also appropriate development density ranges for different locations.
2 Figure courtesy of the Redbridge Characterisation Study (2014).
3 Figure courtesy of the Redbridge Characterisation Study (2014).

Figure 11 Redbridge PTAL levels

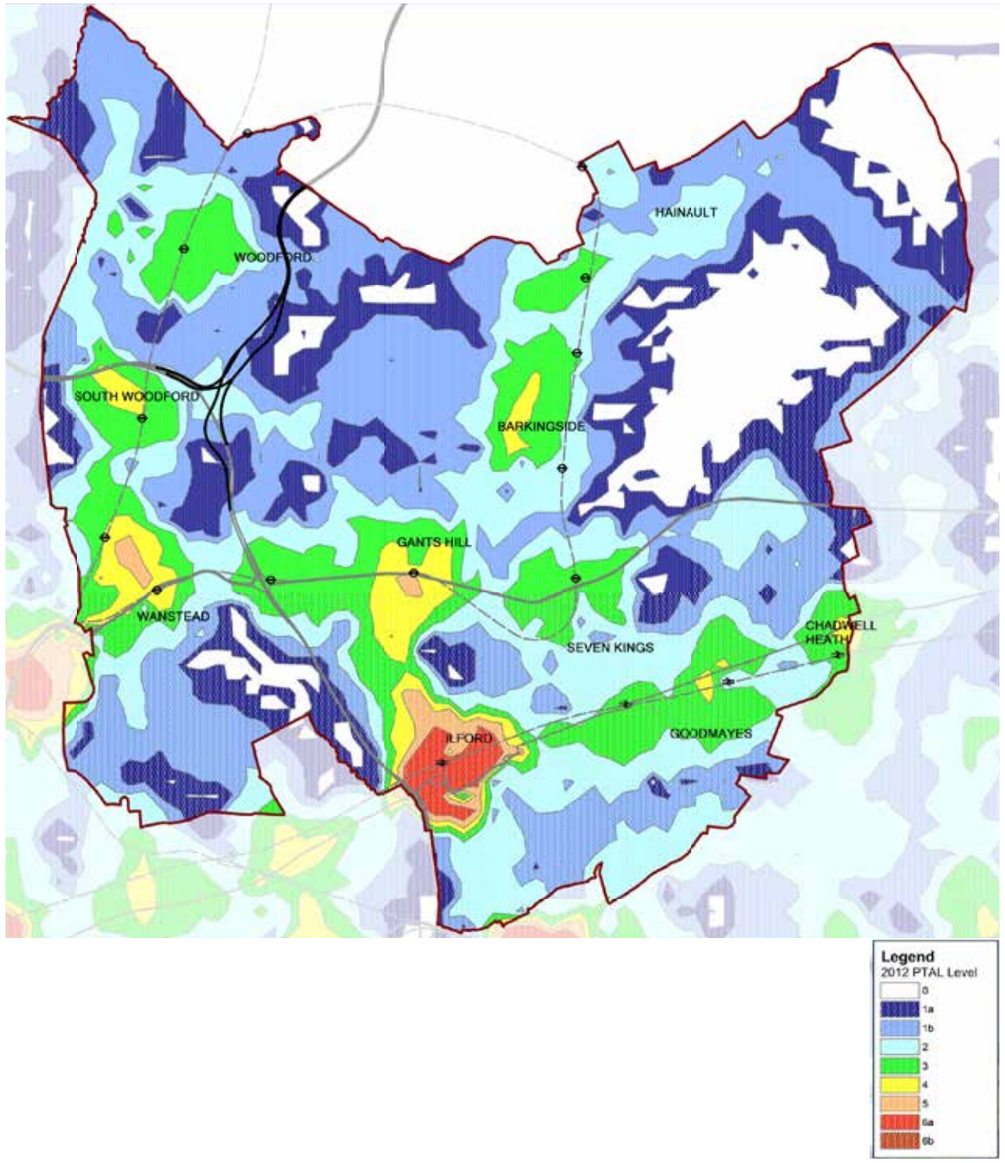
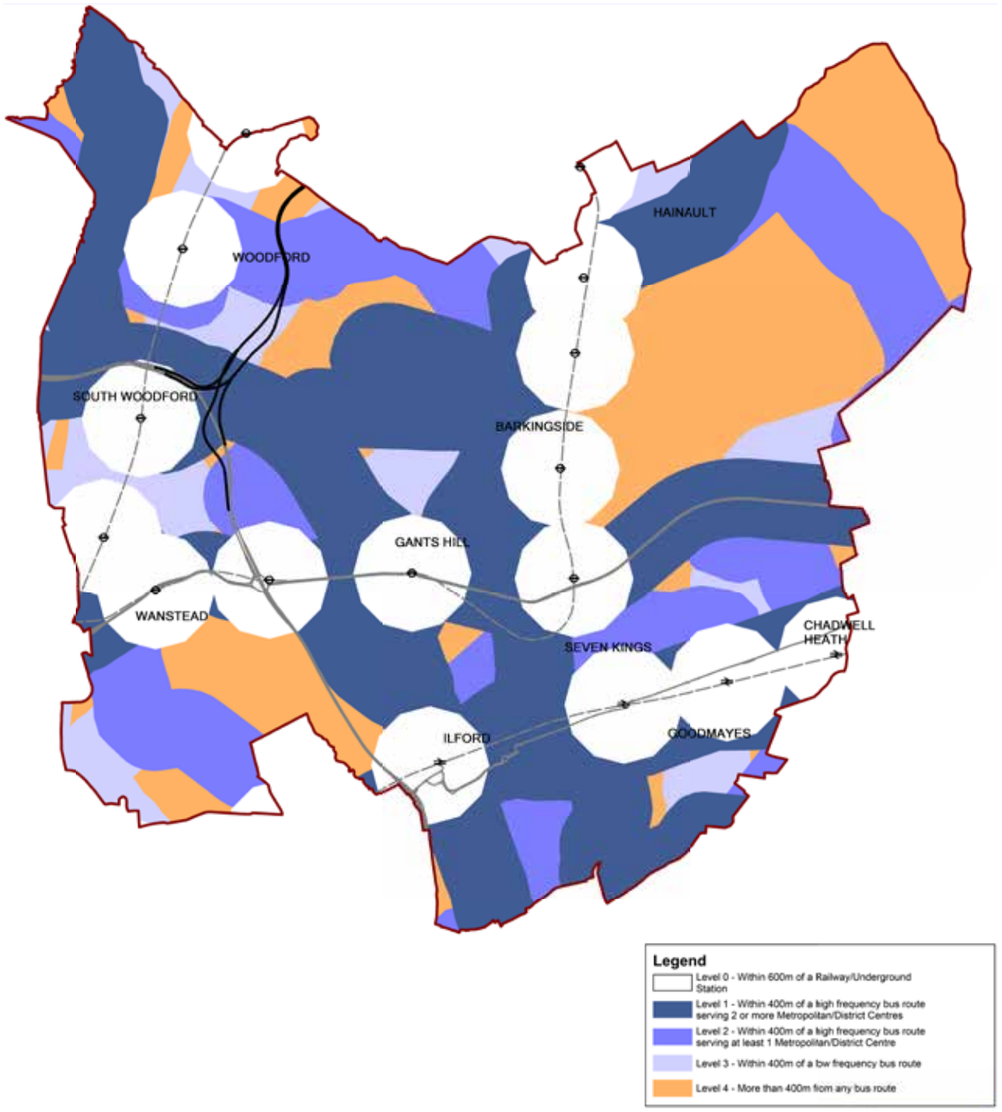


Figure 12 Public transport deficiency level



Building heights

3.4.42 The majority of the urban areas in Redbridge are characterised by residential neighbourhoods comprising mostly terraced and semi-detached two to three storey houses. Large retail, commercial and industrial premises are located in small concentrations throughout the borough, typically located close to major roads and railway lines. These are generally low in height. The primary retail area is around Ilford High Road, with further concentrations present in each of the District Centres.

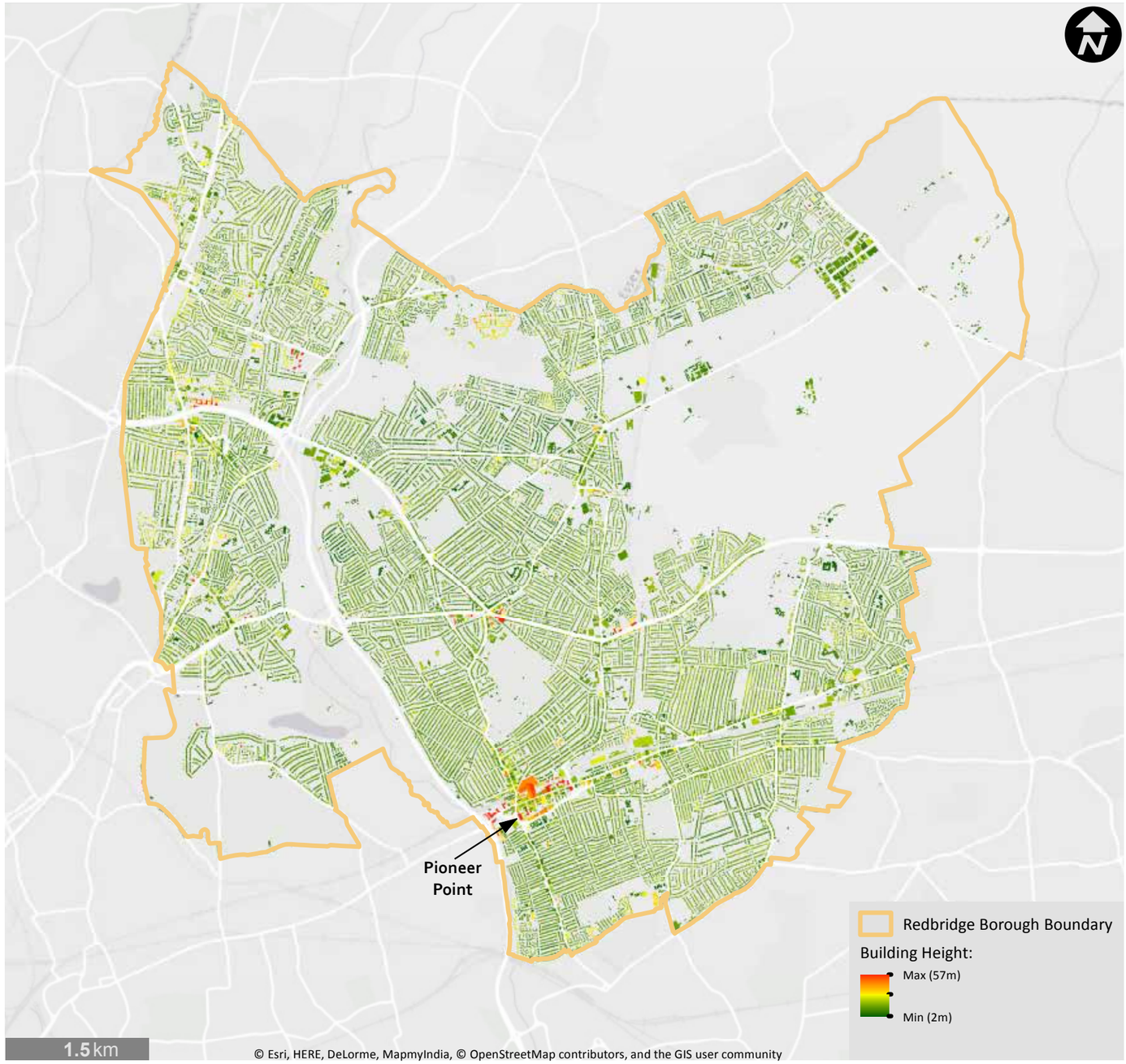
3.4.43 Key transport corridors and nodes have created focuses and hubs for denser development, with some taller buildings clustered near some rail and London Underground stations. These nodes are also typically the focus of recent planning applications which are not yet built out, covered in the next section of this report.

3.4.44 The highest density residential areas all align with the transport nodes, reflecting the trend in the borough for many of the residents to travel outside Redbridge to work.

3.4.45 Existing tall buildings across the borough vary in age, and it is likely that some will come up for redevelopment at some point in the short to medium term.

3.4.46 Pioneer Point at Ilford is the most recognisable tall building in the borough, visible from most open locations and apparent on the skyline from outside Redbridge.

Figure 13 Building heights overview plan



3.5 Overview and analysis

3.5.1 Comparing the individual townscape elements together, the overview plan of the borough (Figure 14) begins to clearly highlight the varying sensitivity of different areas to tall building development.

3.5.2 The areas with a high townscape sensitivity to tall building development occupy the majority of the borough, characterised by low building heights, established residential districts, extensive open space and reduced access to key public transport nodes, town centre amenities and key civic spaces.

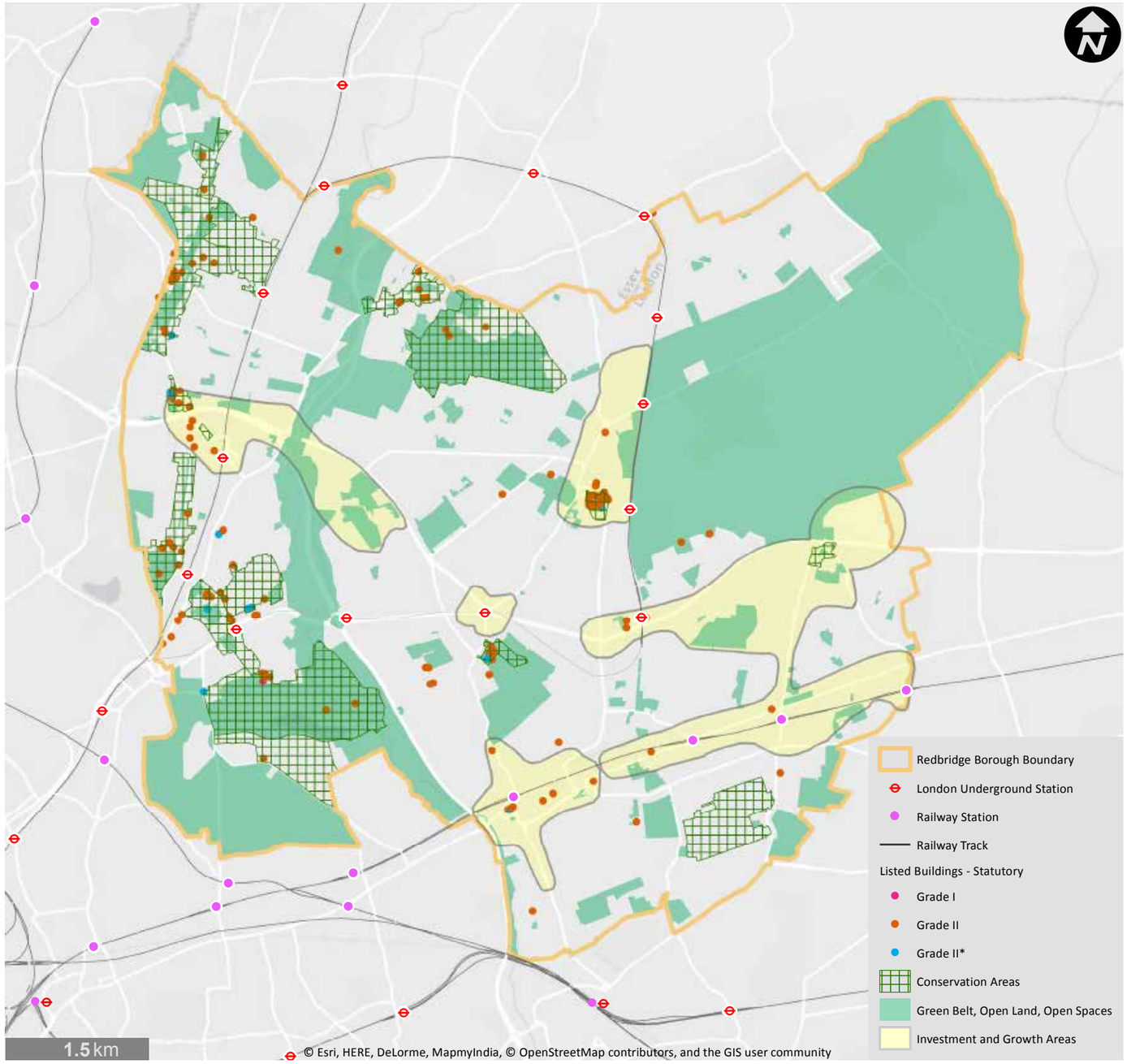
3.5.3 A number of areas have a moderate townscape sensitivity to tall buildings and/or intensified development, where individual proposals would need to be carefully examined to explore how they integrated into the specific context. In general terms, these coincide with the District Centres within the Investment and Growth Areas (shown in black outline on the plan).

3.5.4 However, a number of these areas also have local challenges with respect to consistency with neighbouring developments (generally low in height) and also the extensive heritage assets across the borough, particularly listed and locally listed buildings.

3.5.5 Areas with the lowest sensitivity to tall building development are generally concentrated at specific gateways, junctions, stations and civic spaces within the Ilford Investment Area, Gants Hill Investment Area and southern parts of the Crossrail Corridor Investment Area. The focus here should be on clustering development to give variety on the skyline and provide a key strategic wayfinding element, using signature tall buildings to mark key amenities and civic spaces. These are the areas where policy should be focused on promoting appropriate high quality tall building development to add to and enhance the overall character of the areas, and the character of the borough's skyline when viewed from strategic points.

3.5.6 This analysis is further explored in Section B of the report, examining the effect of a series of development scenarios, and in Section C, where policy recommendations are made.

Figure 14 Composite character overview plan



3.6 Strategic viewpoints

Overview

3.6.1 This section considers the presence if existing open views, vistas and panoramas within the borough, with particular consideration of:

- elevated viewpoints with open vistas to locations outside of the borough boundary, created by the current low density and height of development within Redbridge;
- specific views of existing taller buildings within the borough, in particular the Pioneer Point building in Ilford, which is visible on the skyline from many locations within Redbridge and beyond; and
- specific views of existing interesting / historically interesting buildings and scenic / picturesque vantages.

3.6.2 This section focuses on the borough wide strategic views, within which the appropriateness of tall building locations is reviewed in Section B of this report. Equally, these strategic views also identify large parts of the borough within which tall buildings could be visually inappropriate from a townscape perspective.

3.6.3 Due to the nature of the urban development within the borough, this analysis of strategic viewpoints has been used to determine locations:

- appropriate for tall building development;
- sensitive for tall building development; and
- inappropriate for tall building development.

3.6.4 The visual study does not seek to designate protected views within the borough, but focuses on providing an evidence base for the tall building locations through the scenario testing work (Section B) with the conclusions presented in the policy recommendations (Section C).

3.6.5 It is suggested that where a developer has a proposed building that falls into the field of view of any of these strategic viewpoints, they are asked to submit material that justifies the positive impact the building would have on the specific vista.

3.6.6 This study has identified a total of eleven long distance views across the borough, illustrated on the following pages. The location of each view is shown on Figure 15:

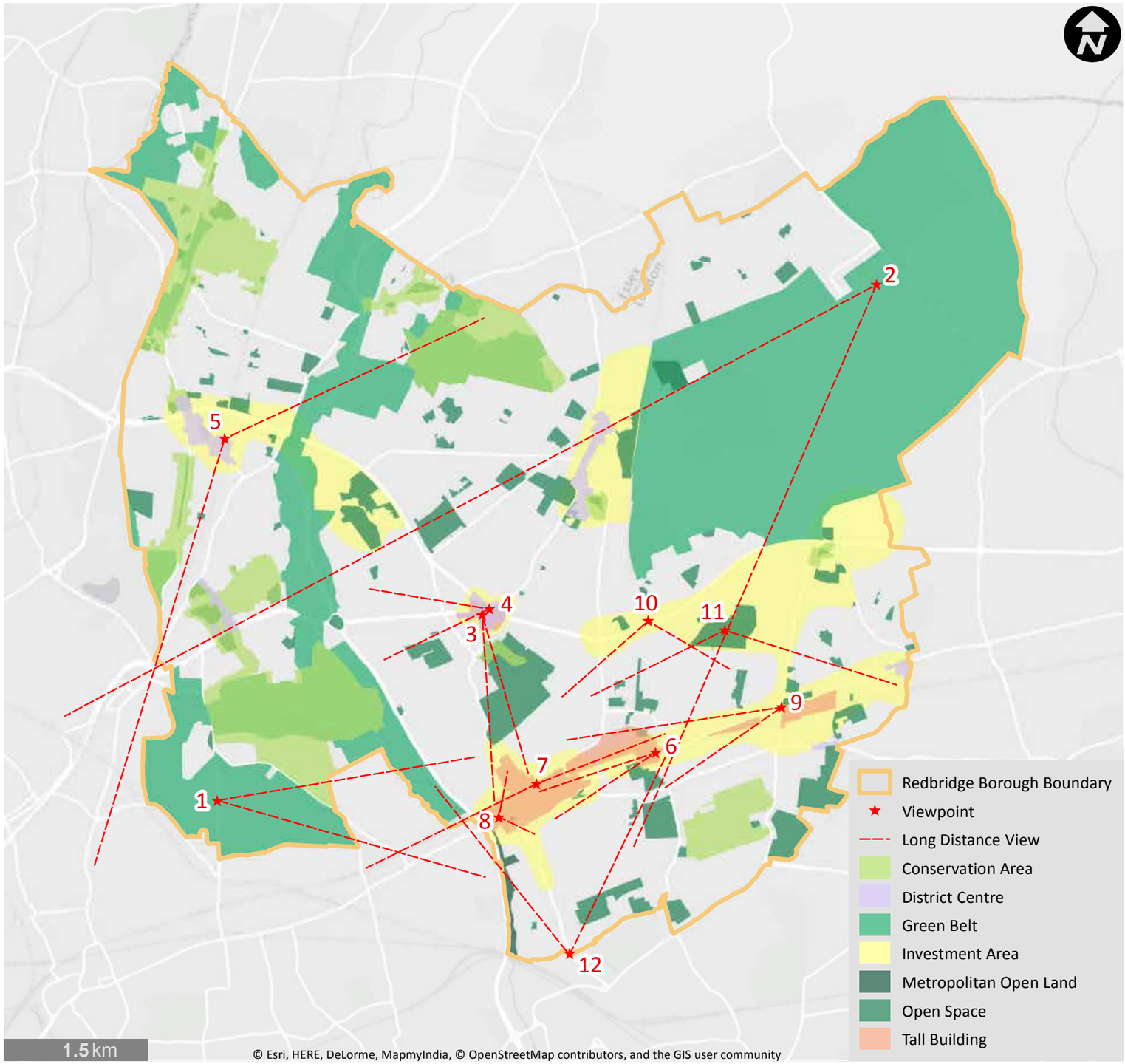
- Viewpoint 01 - Panoramic view east from Wanstead Flats;
- Viewpoint 02 - Panoramic view south-west from Redbridge Cycle Centre;
- Viewpoint 03 - View south from Gants Hill roundabout;
- Viewpoint 04 - View west from Gants Hill roundabout;
- Viewpoint 05 - Panoramic view south-east from South Woodford railway flyover;
- Viewpoint 06 - View south-west from Seven Kings;
- Viewpoint 07 - Panoramic view east to west from The Exchange Shopping Centre car park roof;
- Viewpoint 08 - View east from Ilford Hill;
- Viewpoint 09 - View south-west from Goodmayes;
- Viewpoint 10 - View south from Newbury Park station; and
- Viewpoint 11 - Panoramic view south from Seven Kings Park.

3.6.7 For each strategic view, a photo has been captured from the approximate location and stitched together where necessary. In each case, the location of key landmarks is annotated along with the approximate extent of any Redbridge Investment and Growth Areas apparent in the view.

3.6.8 Further local street scene views have been identified for each Investment and Growth Area (see Section 3.7). These have generally been chosen to allow the scenarios outlined in Section B to be tested, and developments on other opportunity sites should go through the same exercise of understanding important local views in which to analyse the proposed scheme.

3.6.9 Images have all been captured between November 2016 and January 2017.

Figure 15 Strategic viewpoints plan



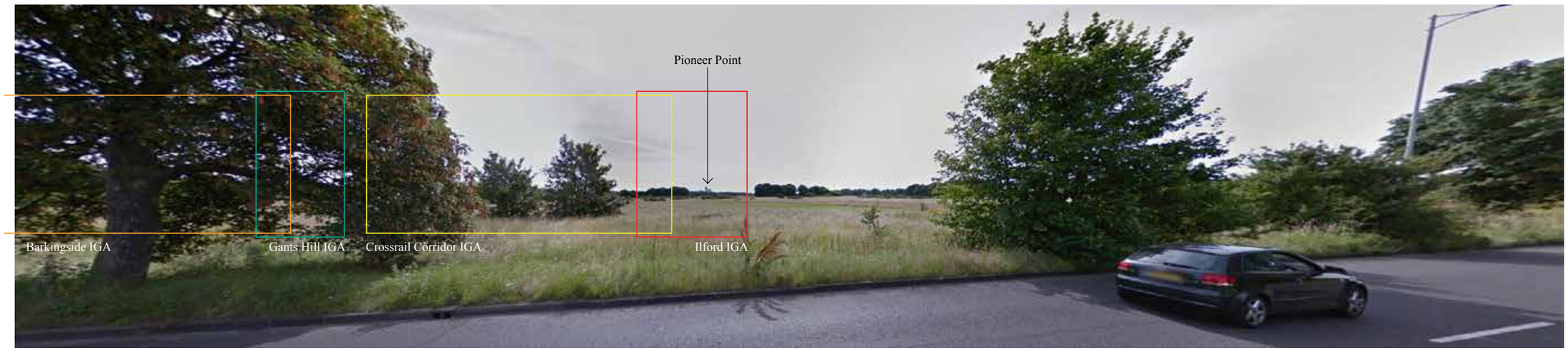
Viewpoint 01 - Panoramic view east from Wanstead Flats

3.6.10 This viewpoint (located as shown in Figure 16 adjacent and illustrated in Figure 17 below) is characterised by clear open views across Wanstead Flats. Pioneer Point in Ilford is the only building visible on the horizon line, creating a focal point on the skyline.

3.6.11 Further development within the Ilford Investment & Growth Area would be likely to be visible alongside the Pioneer Point building, However, visibility to other Investment and Growth Areas is restricted by the presence of multiple layers of intervening vegetation and tree cover. From certain locations within the open space, glimpses of tall buildings within Gants Hill or the Crossrail Corridor may be intermittently visible, but not substantive on the wider skyline.

Figure 16 Viewpoint 01 location

Figure 17 Viewpoint 01 - Panoramic view east from Wanstead Flats - Existing view



Viewpoint 02 - Panoramic view south-west from Redbridge Cycle Centre

3.6.12 This viewpoint (located as shown in Figure 18 adjacent and illustrated in Figure 19 below) is characterised by the wide open vista of the distinctive central London skyline, from the BT Tower in the West End, the City of London and Canary Wharf clusters and the ArcelorMittal Orbit and O2 Arena in the east of London.

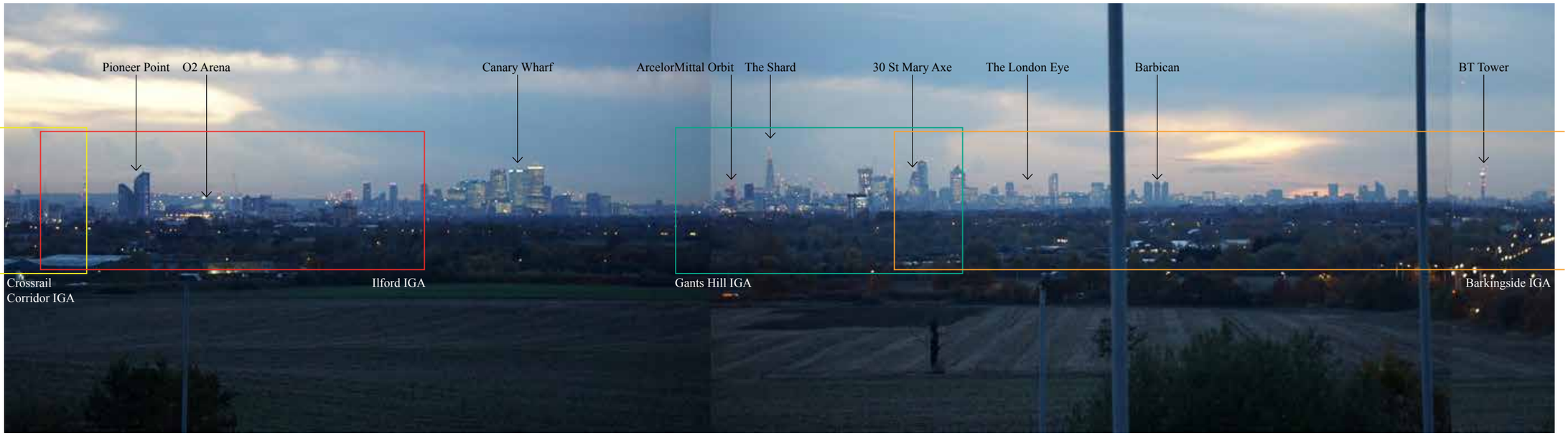
3.6.13 The foreground is characterised by the openness of the country park in which the viewpoint is located, and the mid-ground generally characterised by the low level and low density development of the majority of the borough. Pioneer Point is the only notably visible tall building visible from within Redbridge itself, with buildings in Gants Hill set in front of the City of London and hence less apparent.

3.6.14 Development within Barkingside Investment and Growth Area would appear incongruous from this viewpoint, interrupting the open vista towards central London and disrupting the character of the immediate area.

3.6.15 The Crossrail Corridor is less apparent from this location.

Figure 18 Viewpoint 02 location

Figure 19 Viewpoint 02 - Panoramic view south-west from Redbridge Cycle Centre - Existing view



Viewpoint 03 - View south from Gants Hill roundabout

3.6.16 This viewpoint (located as shown in Figure 20 adjacent and illustrated in Figure 21 below) represents a street scene down Cranbrook Road looking towards Pioneer Point in Ilford in the background.

3.6.17 The view is dominated by the street, vehicles and the three storey premises fronting onto the street, which are primarily retail with residential accommodation above.

3.6.18 Towards the right of the view the skyline is more open as the street bends to the west, with no tall buildings punctuating the horizon at present beyond the trees at the edge of Valentines Park. In summer, the greening of the tree canopy will further restrict views to most developments to the south.

3.6.19 The topography also contributes to limiting views of built form, with the ground gradually sloping down towards Ilford.

Figure 20 Viewpoint 03 location

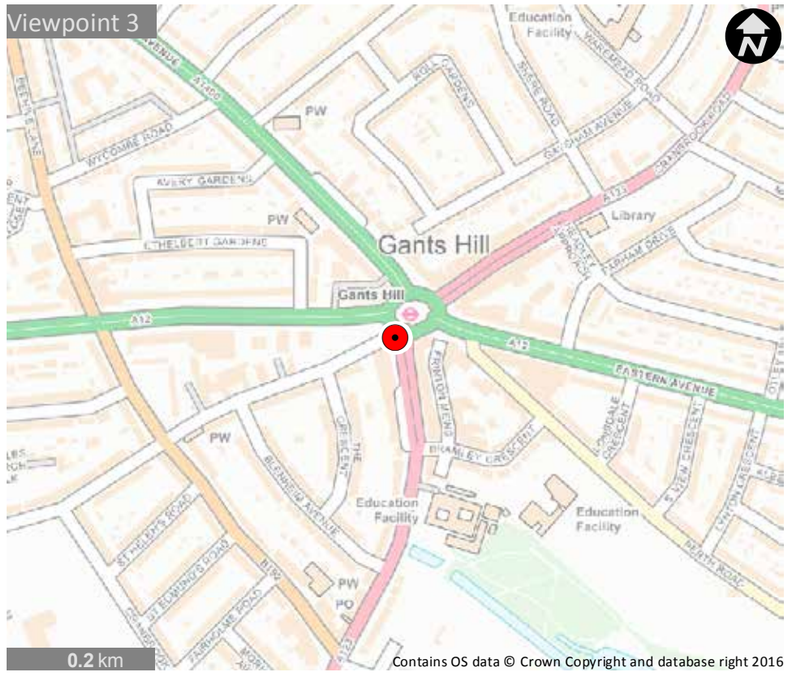


Figure 21 Viewpoint 03 - View south from Gants Hill roundabout - Existing view

Viewpoint 04 - View west from Gants Hill roundabout

3.6.20 This viewpoint (located as shown in Figure 22 adjacent and illustrated in Figure 23 below) represents a further street scene from Gants Hill roundabout, looking west down Woodford Avenue towards South Woodford.

3.6.21 The view is dominated by the street, vehicles and the two to three storey premises fronting onto the street, which are primarily retail and commercial with residential accommodation above. Properties on the south side of the road represent a strong homogeneous street scene, above which no other development is visible on the skyline.

3.6.22 In the centre left of the image, the open view down the A12 is focused on a tall office block (Wentworth House), and is framed by recent mid-height development along the south of the road.

Figure 22 Viewpoint 04 location

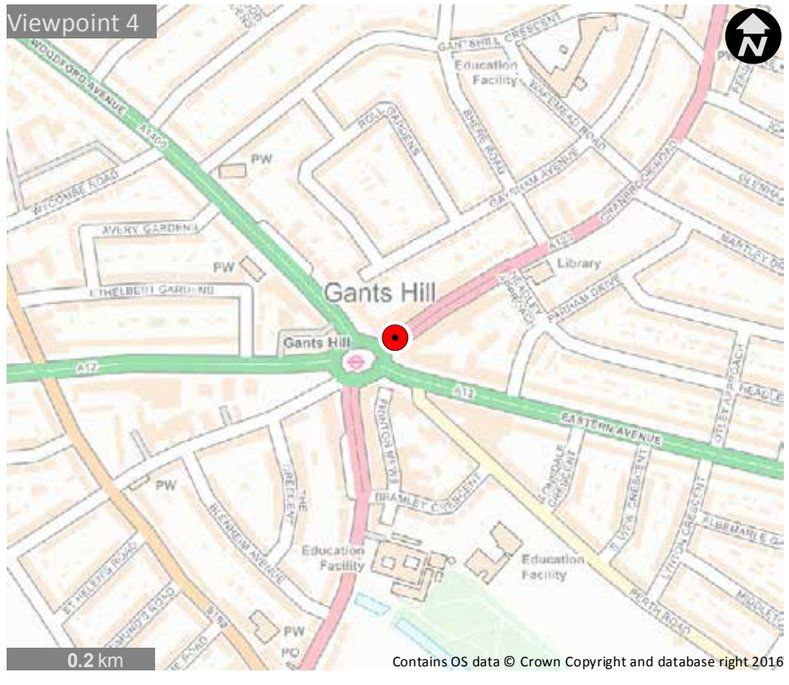


Figure 23 Viewpoint 04 - View west from Gants Hill roundabout - Existing view

Viewpoint 05 - Panoramic view south-east from South Woodford railway flyover

3.6.23 This viewpoint (located as shown in Figure 24 adjacent and illustrated in Figure 25 below) is a wide open panorama looking across much of the borough from an elevated vantage point.

3.6.24 The consistency of the horizon line highlights the consistent low height of development throughout much of Redbridge, with few features or landmarks to mark any of the Investment and Growth Areas visible across the panorama. Pioneer Point and, beyond in east London, Canary Wharf represent the only real punctuating elements on the skyline, but are not dominant features within the view.

3.6.25 The electricity pylons visible in the left of the image are a dominant infrastructural element apparent on the skyline.

Figure 24 Viewpoint 05 location

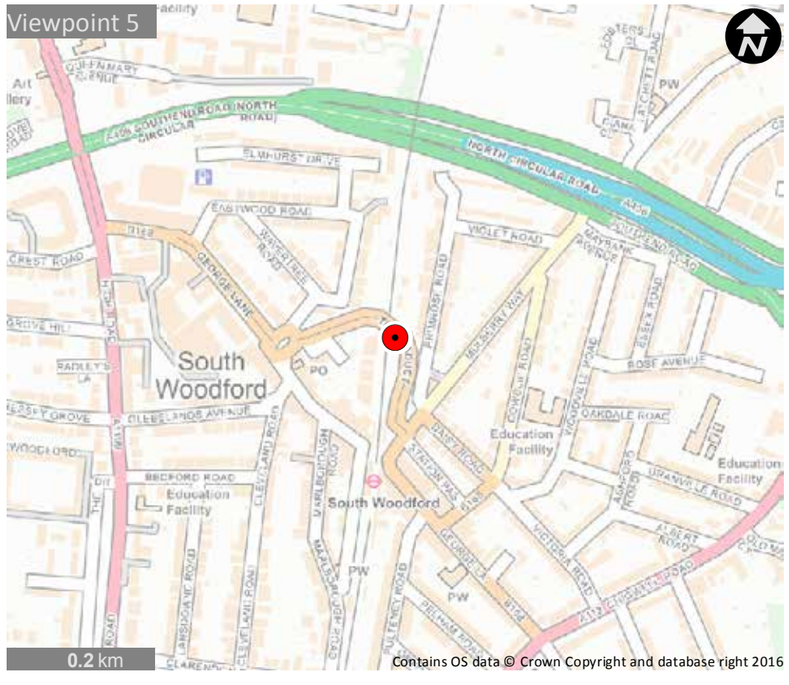
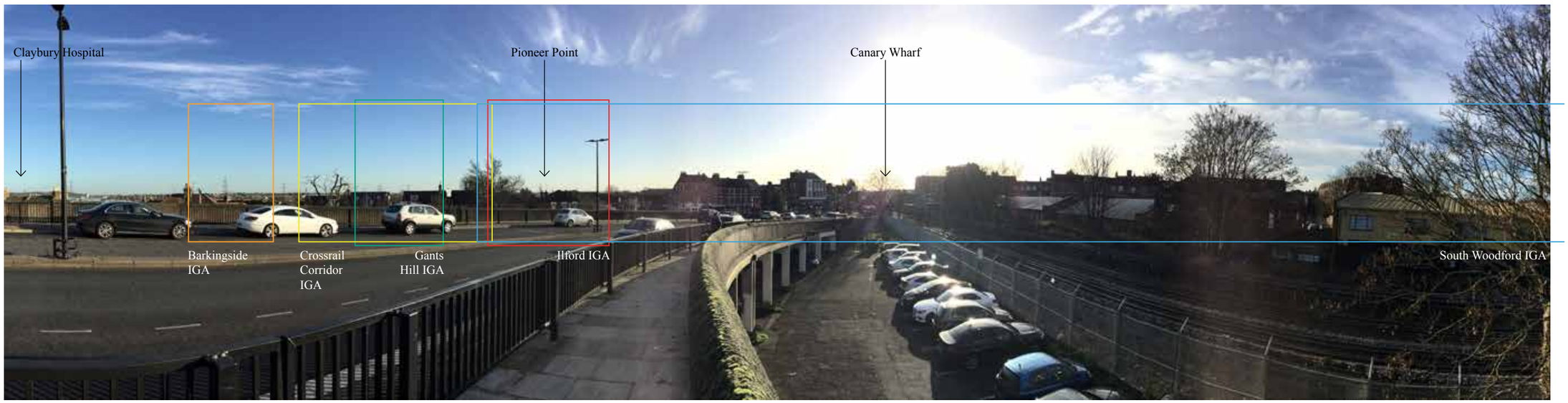


Figure 25 Viewpoint 05 - Panoramic view south-east from South Woodford railway flyover - Existing view



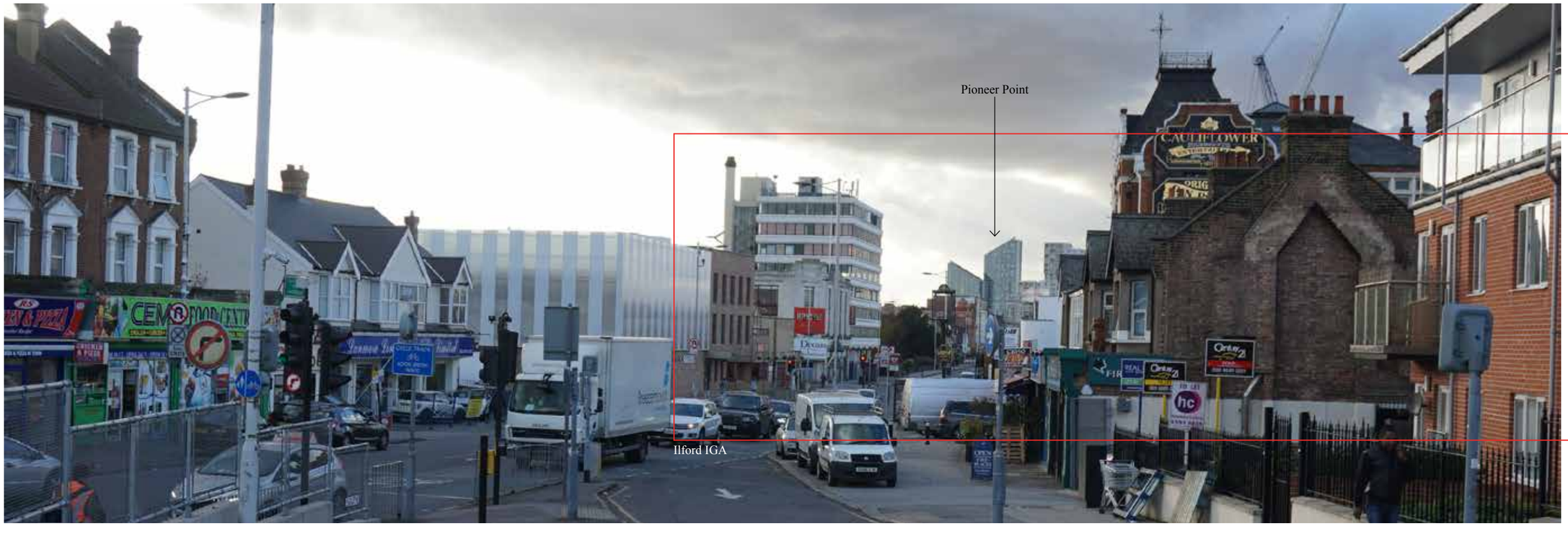
Viewpoint 06 - View south-west from Seven Kings

3.6.26 This viewpoint (located as shown in Figure 26 adjacent and illustrated in Figure 27 below) represents a street scene looking broadly west along the High Road from close to Seven Kings station.

3.6.27 The linear view is focused on the Pioneer Point development in Ilford, marking the skyline in the background of the view, flanked by buildings along the road with varying heights, ages and architectural styles. The varied foreground, with some buildings taller than the majority of the surrounding context, restricts visibility out to other parts of the borough, including the majority of the Ilford Investment and Growth Area.

Figure 26 Viewpoint 06 location

Figure 27 Viewpoint 06 - View south-west from Seven Kings - Existing view



Viewpoint 07 - Panoramic view east to west from The Exchange Shopping Centre car park roof

3.6.28 This viewpoint (located as shown in Figure 28 adjacent and illustrated in Figure 29 below) represents a panoramic scene from the elevated point at the top of the local shopping centre car park.

3.6.29 Pioneer Point (in the right of the view) is a dominant feature on the skyline, with no other development particularly visible beyond the foreground development in this location. The High Road is a clear feature in the middle ground of the view, with the distinctive Town Hall representing a key heritage asset in the view. Relatively tall buildings are interspersed along the High Road, and also beyond to Winston Way where the relatively modern Raphael House residential tower is located.

3.6.30 To the left of the view, the vista down Thorold Road is a characteristic of the rest of the residential neighbourhood stretching for the remainder of the distant view - two storey terraced and semi-detached low density housing stock.

Figure 28 Viewpoint 07 location

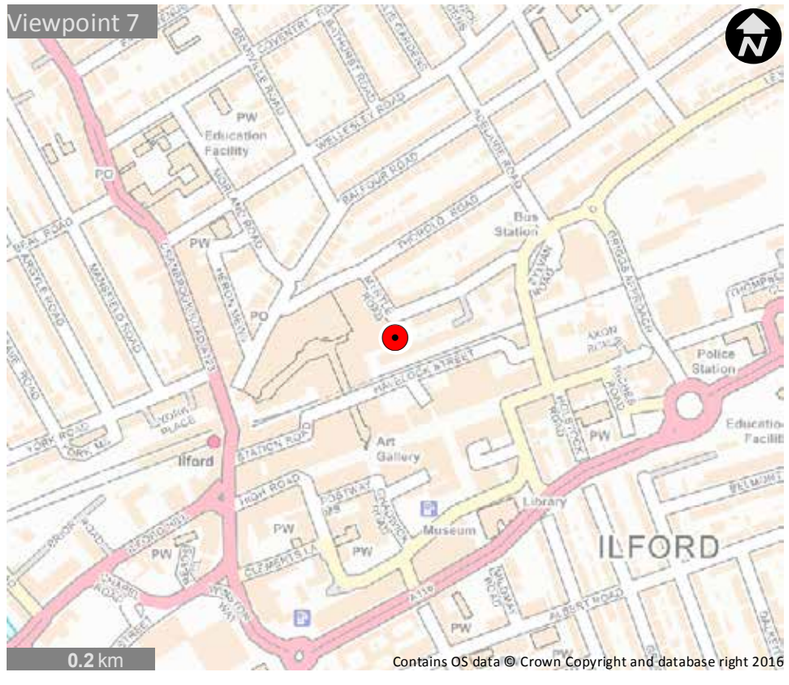
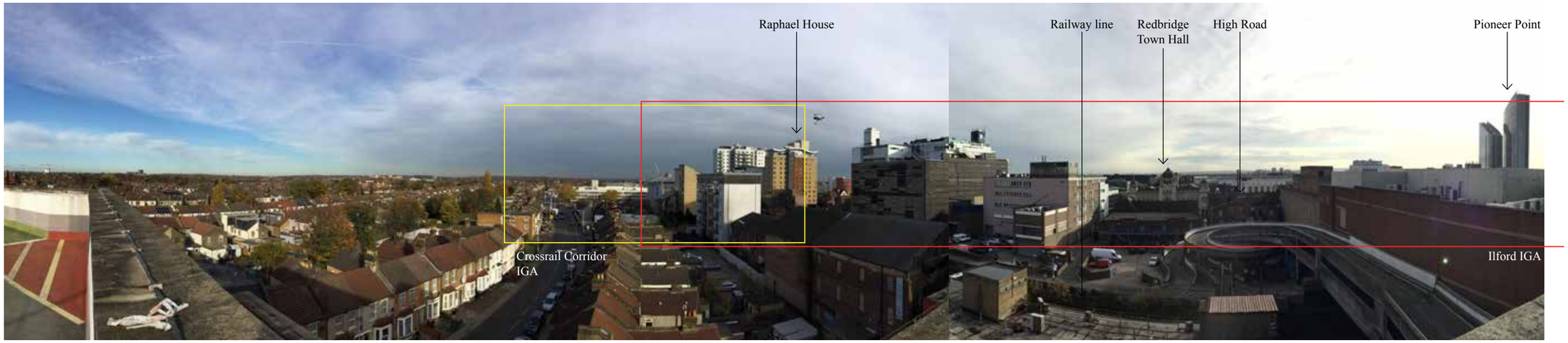


Figure 29 Viewpoint 07 - Panoramic view east to west from The Exchange Shopping Centre car park roof - Existing view



Viewpoint 08 - View east from Ilford Hill

3.6.31 This viewpoint (located as shown in Figure 30 adjacent and illustrated in Figure 31 below) captures the primary existing cluster of tall buildings within Ilford Metropolitan Centre, focused around Pioneer Point.

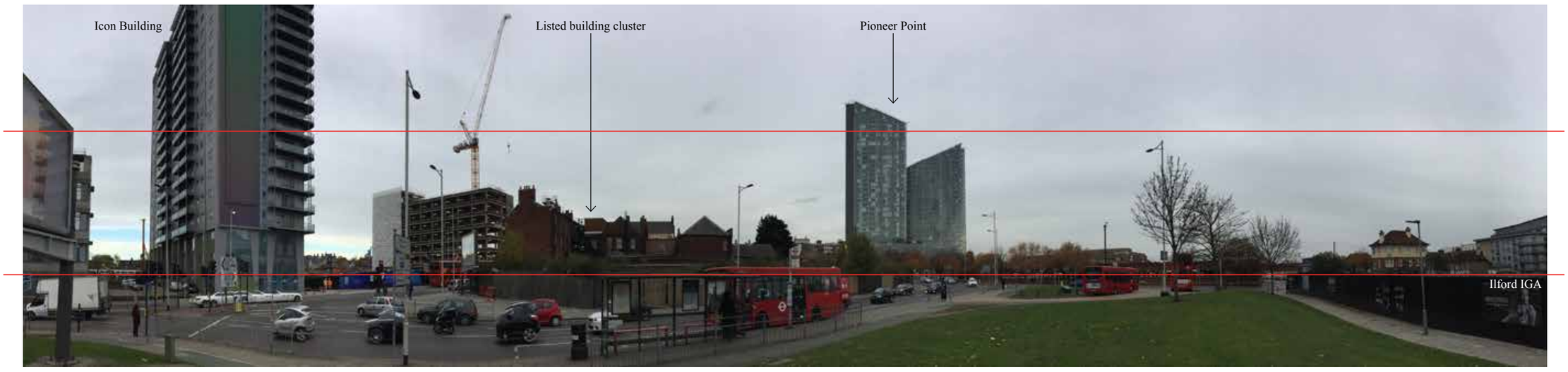
3.6.32 The 18 storey Icon Building to the left of the view is supported by further tall buildings behind the view, including Mill House at eleven storeys and other buildings either under construction or refurbishment.

3.6.33 Between the landmark tall buildings, most development remains low, and in particular the historic listed and locally listed buildings on Ilford Island are under threat from being encircled by dense, tall development.

3.6.34 The right of the view indicates how localised the tall building cluster is, with the urban grain rapidly returning to the typical character of Redbridge, generally dominated by two to three storey residential properties.

Figure 30 Viewpoint 08 location

Figure 31 Viewpoint 08 - View east from Ilford Hill - Existing view



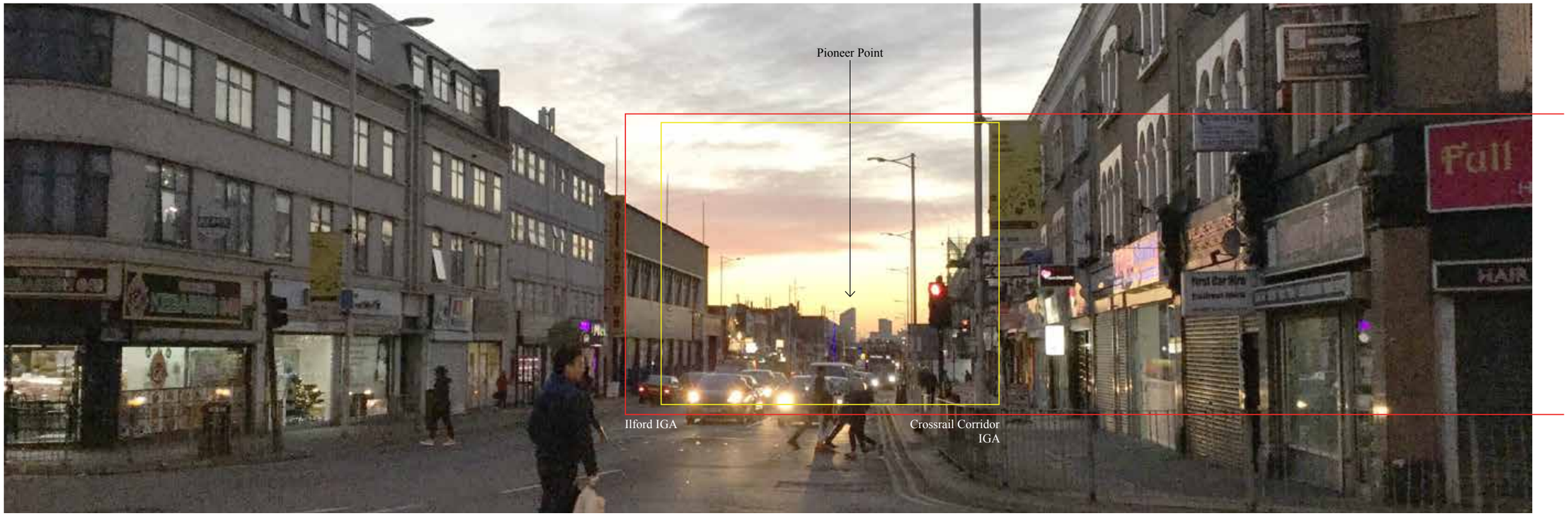
Viewpoint 09 - View south-west from Goodmayes

3.6.35 This viewpoint (located as shown in Figure 32 adjacent and illustrated in Figure 33 below) represents a linear view down the High Road looking towards Ilford Metropolitan Centre.

3.6.36 The view centres on Pioneer Point in the background, forming a skyline feature above the roofs of buildings towards the western end of the road. The view is lined by two to four storey commercial / retail premises with residential above, forming a fairly consistent roofline despite differing architectural styles.

Figure 32 Viewpoint 09 location

Figure 33 Viewpoint 09 - View south-west from Goodmayes - Existing view



Viewpoint 10 - View south from Newbury Park station

3.6.37 This viewpoint (located as shown in Figure 34 adjacent and illustrated in Figure 35 below) is focused on the Newbury Park station building and surrounding urban realm / hardstanding.

3.6.38 To the left of the view, the characteristic two to three storey residential properties forms the middle-ground, with a taller residential unit to the far left. Streets leading away from the view follow the same vernacular.

3.6.39 Pioneer Point forms the distant background to this view, partially screened by intervening buildings and street furniture / signage. The visibility of Pioneer Point is also reduced by the lower ground level in comparison to the viewing location.

Figure 34 Viewpoint 10 location

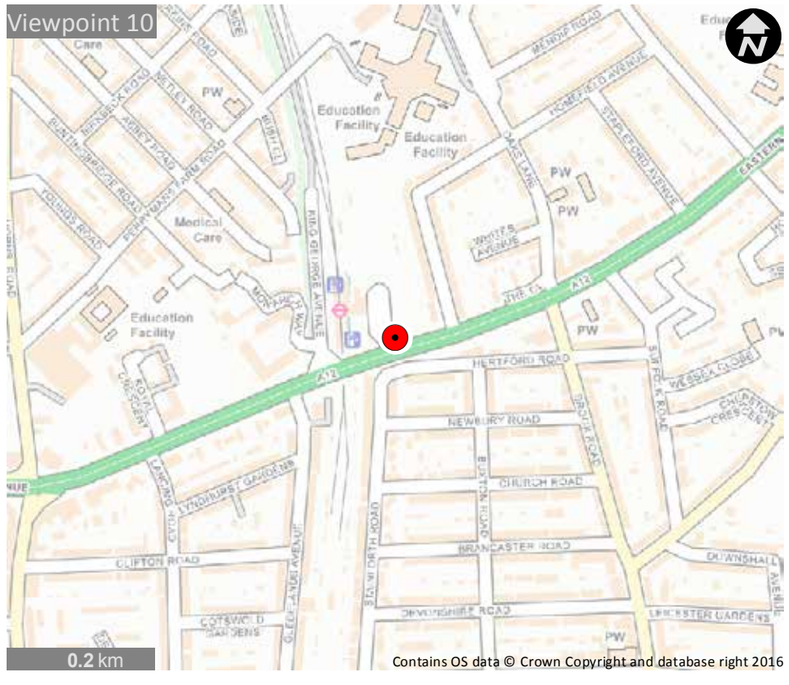
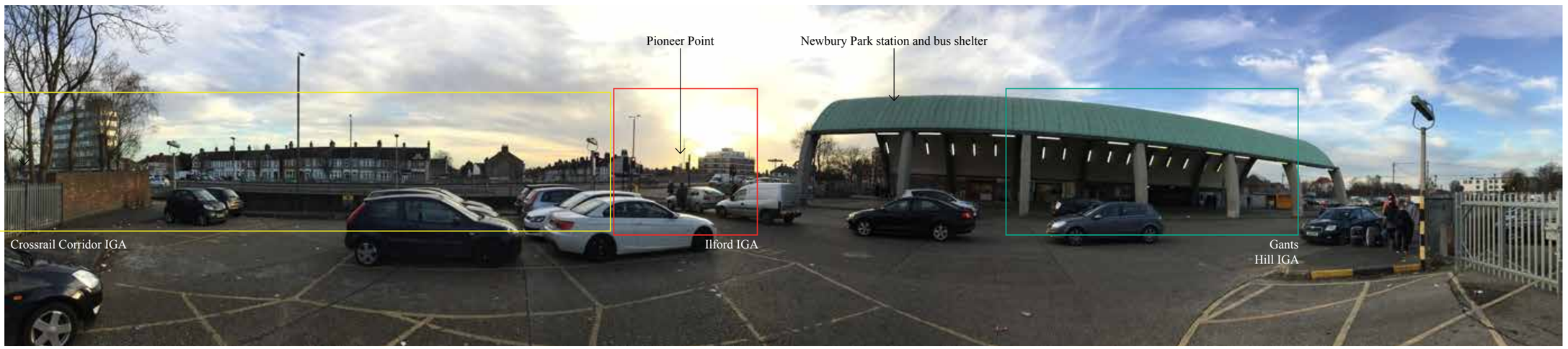


Figure 35 Viewpoint 10 - View south from Newbury Park station - Existing view



Viewpoint 11 - Panoramic view south from Seven Kings Park

3.6.40 This viewpoint (located as shown in Figure 36 adjacent and illustrated in Figure 37 below) represents a wide open panorama from within Seven Kings Park, portraying a largely treed skyline with the low development height beyond fairly imperceptible.

3.6.41 Pioneer Point is visible on the distant skyline, but does not represent a key characteristic of the overall panorama.

Figure 36 Viewpoint 11 location

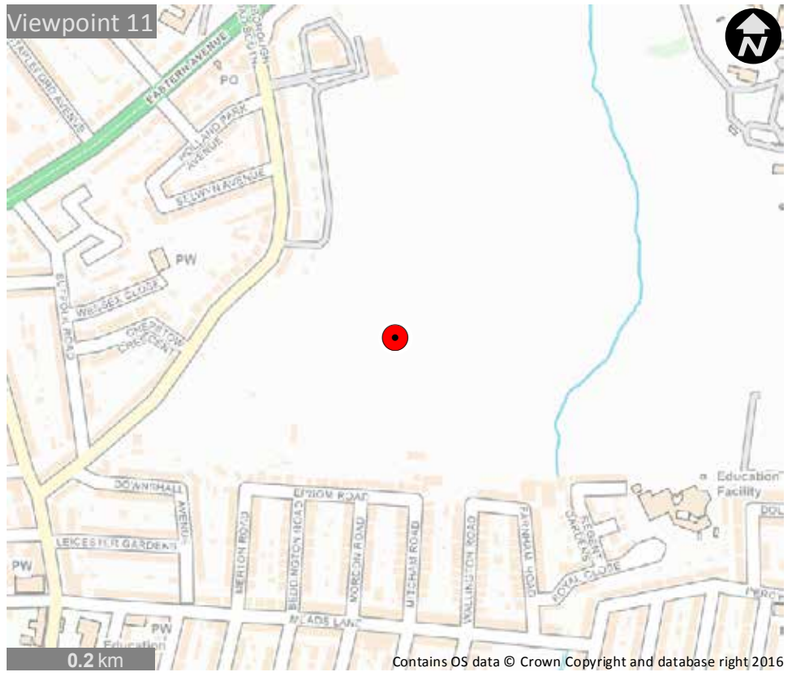


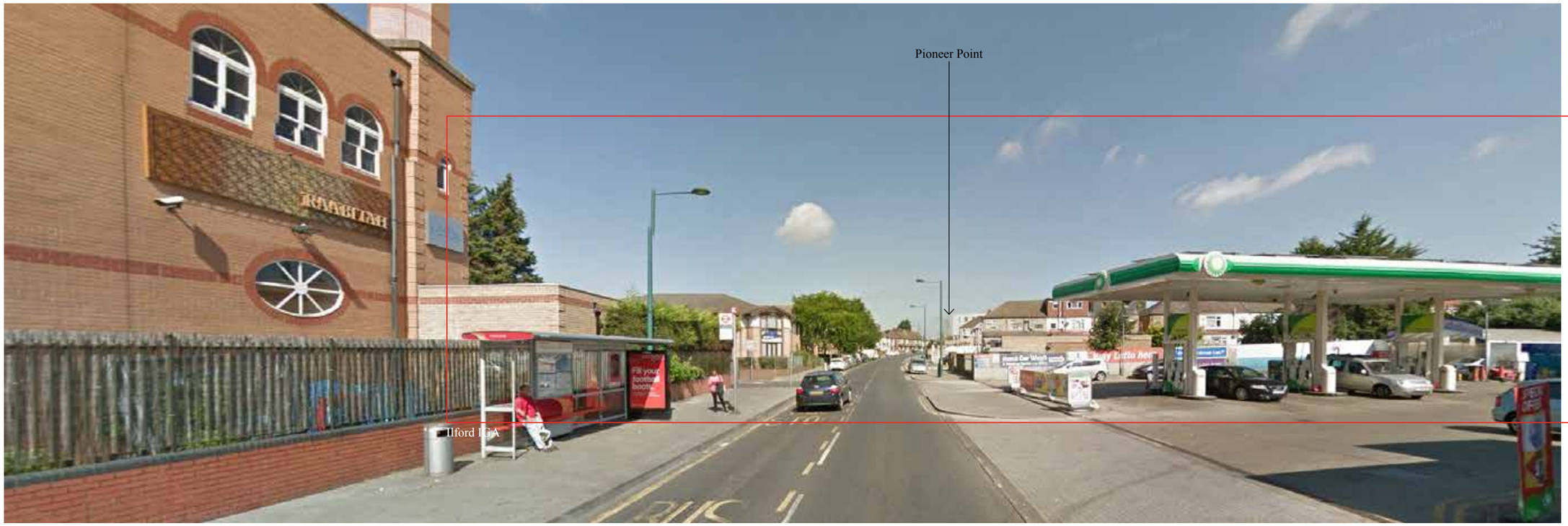
Figure 37 Viewpoint 11 - Panoramic view south from Seven Kings Park - Existing view

Viewpoint 12 - View north from Ilford Lane

3.6.42 This viewpoint (located as shown in Figure 38 adjacent and illustrated in Figure 39 below) represents a linear view up Ilford Lane towards Ilford Metropolitan Centre. The view is generally framed by the low height buildings running along Ilford Lane, with only Pioneer Point forming a distinct skyline feature in the background of the view.

Figure 38 Viewpoint 12 location

Figure 39 Viewpoint 12 - View north from Ilford Lane - Existing view



3.7 Local townscape analysis

3.7.1 This section of the report examines the townscape character of each of the Investment and Growth Areas in greater detail, identifying potential constraints to tall building development at a local level.

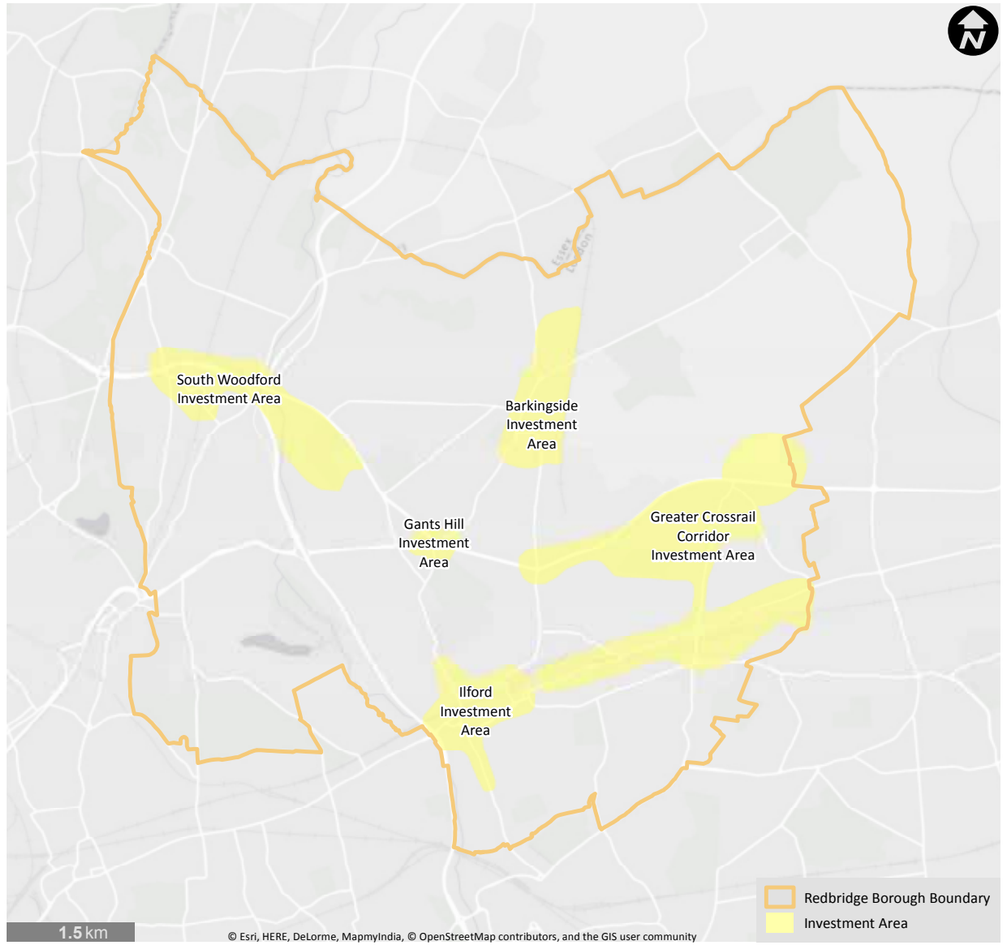
3.7.2 This more focused study has been undertaken for the Investment and Growth Areas only, as they are likely to be the areas under pressure from denser and taller development.

3.7.3 Local views should be selected and analysed in relation to specific proposed development locations, taking into consideration:

- relationship to neighbouring building heights;
- position and contribution to the overall street frontage;
- relationship to nearby heritage assets, in terms of height, massing, materials and architectural details;
- extent to which the development obscures, frames or open ups views to other features of note;
- contribution to the local skyline; and
- potential daylight, sunlight, wind and other microclimate considerations / impacts.

3.7.4 The location of each of the Investment and Growth Areas is shown on Figure 40 opposite.

Figure 40 Investment and Growth Areas



Ilford Investment and Growth Area

3.7.5 Ilford is the only Metropolitan Centre in Redbridge and as such has the following key characteristics:

- highest building heights in the borough, including the tall Pioneer Point building close to Ilford station;
- centred around the train line, soon to be served by Crossrail;
- a centre of commerce and retail focused along the train line and key road corridors. Beyond the immediate street frontages, the built form quickly reverts back to two to three storey residential properties;
- little open space / green space, with the exception of Valentines Park located at the northern tip of the Metropolitan Centre;
- it is a focus for redevelopment and intensification, with numerous approved planning applications, many of which introduce new height to the area; and
- a number of heritage assets, primarily along the High Road and particularly focused at the Ilford Island site close to the station.

3.7.6 While Ilford is a natural centre for intensification and redevelopment on the basis of the facilities available and the high levels of public transport accessibility, proposals do need to have due regard to the surrounding low density residential and also the listed and locally listed buildings threaded throughout the area.

Figure 41 Existing relationship of listed buildings and new tall development

Figure 42 Ilford Investment and Growth Area

Gants Hill Investment and Growth Area

3.7.7 Gants Hill is a District Centre focused around a major junction and the London Underground station. The townscape has the following key characteristics:

- taller and denser built form than the majority of the surrounding context, focused entirely around the junction and along the main roads;
- no significant open space or public realm;
- a mix of retail and commercial uses, often with residential above;
- limited heritage assets, with only two locally listed buildings in the east of the area; and
- it is also a focus for redevelopment, with numerous approved planning applications, some of which introduce new local height, although not to the same scale as Ilford.

3.7.8 As a District Centre with limited sensitivities due to the major infrastructure corridors and lack of heritage assets, Gants Hill could receive greater levels of intensification than currently proposed. However, the greatest sensitivity is the interaction with the surrounding two to three storey residential properties which immediately abut the taller development fronting onto the main roads.

Figure 43 New development in the District Centre

Figure 44 Gants Hill Investment and Growth Area

Crossrail Corridor Investment and Growth Area

3.7.9 The Crossrail Corridor is focused along the existing railway line and encompasses a series of Local Centres stretching from Ilford to the east. The Investment and Growth Area also stretches to the north to encompass Newbury Park and some large open spaces in the east of Redbridge. The IGA encompasses three discrete character areas, which are discussed in turn below.

Crossrail route and environs

3.7.10 This part of the IGA represents a corridor 0.2 to 0.3km either side of the existing railway line and the route of Crossrail when it is operating. It stretches from Ilford Metropolitan Centre to the eastern edge of the borough at Chadwell Heath. The peripheries of the area remain characterised by the two to three storey residential properties typical of the wider borough, but give way to “big-box” architecture immediately adjacent to the railway corridor, including large retail and supermarket outlets with expanses of surface car parking. There are also a number consented tall building schemes along this corridor, consistently located adjacent to the railway line, ranging from six to nine storeys in height. Together these developments have, and will continue to, changed the character of the area placing suburban scale residential development in close proximity to large commercial outlets. The western end of the area is characterised by significant areas of railway sidings and a large depot building.

3.7.11 Despite the disparity between the scale / massing of the large retail sheds and the residential properties, there remains little height along this corridor at present. This includes at the strategic transport nodes of Seven Kings, Goodmayes and Chadwell Heath stations. The permitted developments will alter this to an extent, but leave lots of areas with potential for further intensification.

Figure 45 Mix of development heights among low density residential

Figure 46 Crossrail Corridor Investment and Growth Area - Crossrail route and environs

Newbury Park

3.7.12 Newbury Park London Underground Central line station sits at the centre of this part of the IGA, which is bisected by the large dual carriageway A12. Along the A12 there are isolated tall buildings such as the Newbury Centre and The Parade development to the north, and Courtney Towers and Newbury House to the south.

3.7.13 The western extent of the area is characterised by a cluster of large retail sheds and a seven storey Holiday Inn with extensive surface car parking, adjacent to Ilford War Memorial Gardens which represents the main open space. Large extents of surface car parking is also a key characteristic at Newbury Park station itself.

3.7.14 Beyond these taller and blockier built elements in close proximity to the railway line and A12, the majority of the remaining townscape is characterised by the typical two to three storey residential properties commonplace across the borough. Occasional community buildings, such as schools, a synagogue and churches are also relatively low in height.

3.7.15 The areas with the greatest potential for intensification are located around the major infrastructure / transport corridors within this area, which the more established residential neighbourhoods are set back from.

Figure 47 Surface car parking with potential for intensification

Figure 48 Entrance to Newbury Park station and the A12

Figure 49 Crossrail Corridor Investment and Growth Area - Newbury Park

Goodmayes Hospital / Billet Road

3.7.16 This part of the wider Crossrail Corridor IGA encompasses large swathes of open space (both public and private) and the extensive King George Hospital complex. The A12 dual carriageway forms the northern boundary of the IGA before passing through in the east to bisect a residential neighbourhood from open green fields leading up to Billet Road.

3.7.17 The main public open space is Seven Kings Park in the south-west of the area, with mature trees framing large sports pitches. The surrounding two to three storey residential properties extend right up to the park boundaries in many places. This low density residential character extends to the east of this part of the IGA, with a small concentration of three to four storey apartments in the Glandford Way area.

3.7.18 The hospital, along with two schools and a college (located together in the centre of this area) are all characterised by large building footprints with minimal height.

3.7.19 There are no railway / London Underground stations in this part of the borough and this has clearly limited development.

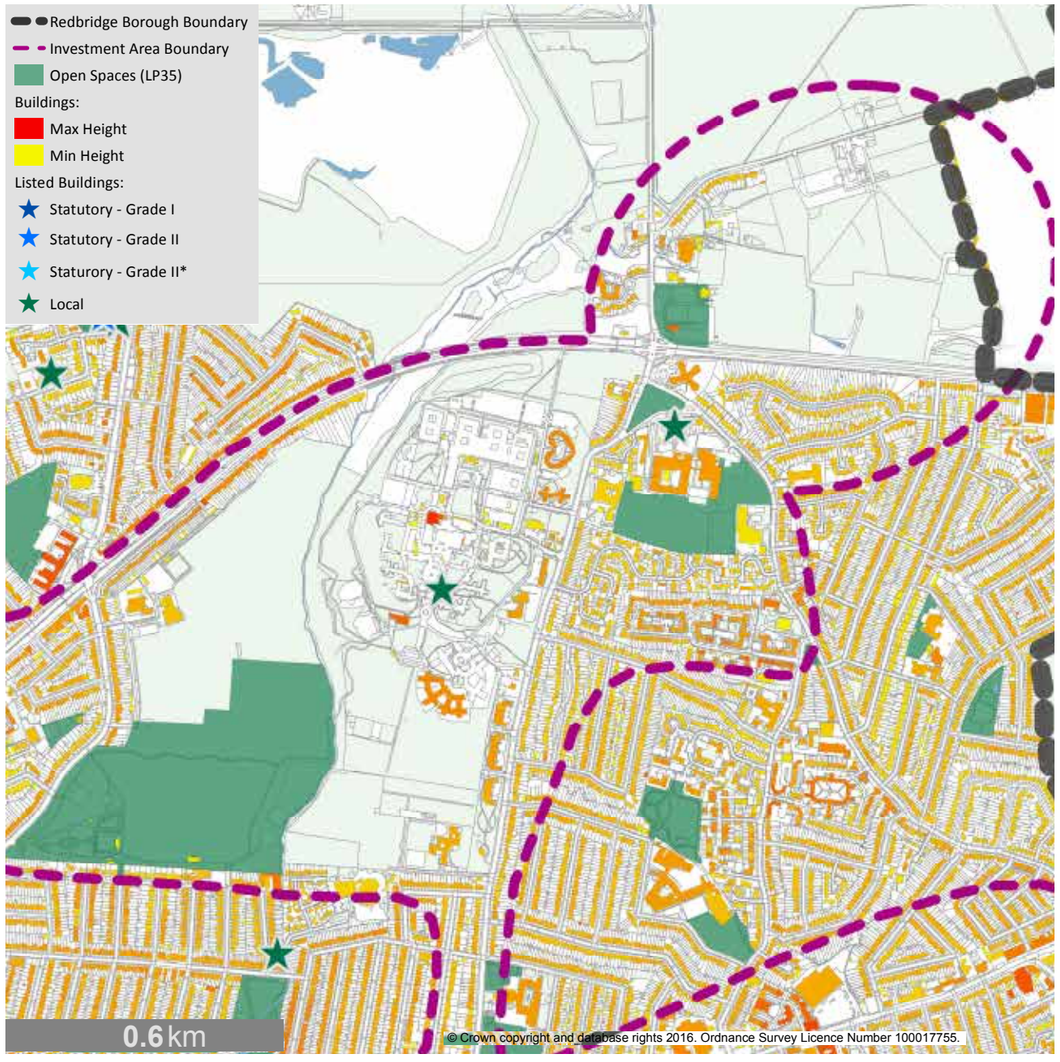
Overview

3.7.20 The Crossrail Corridor itself, particularly around the stations, is a natural hub for regeneration and provides an opportunity to change the character of some of the Local Centres, introducing height that will more distinctly mark them within the borough. This potential also exists in the Newbury Park area, particularly along the A12 corridor and also the railway line.

3.7.21 Over development along the length of the Crossrail Corridor would be incompatible with the overall character of the borough and also the local townscape of low residential street scenes. Therefore development needs a variety of heights to create a varied skyline that maximises the potential and accessibility of the area while respecting the close proximity of low density, low height residential neighbourhoods.

Figure 50 Taller buildings within Glandford Way

Figure 51 Crossrail Corridor Investment and Growth Area - Goodmayes Hospital / Billet Road



South Woodford Investment and Growth Area

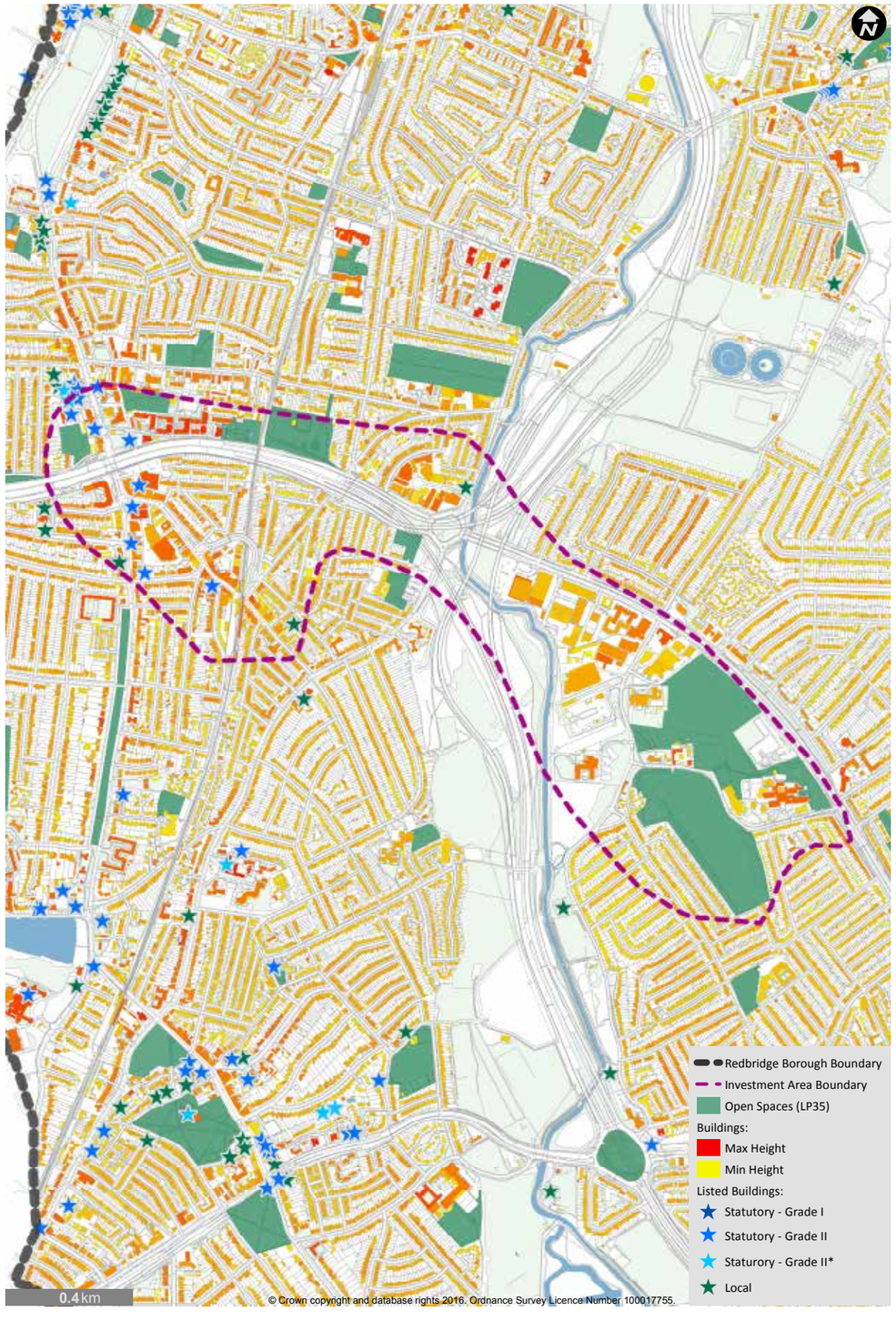
3.7.22 South Woodford is a District Centre focused along the North Circular road and also the London Underground station. The townscape has the following key characteristics:

- some locally tall buildings along the North Circular, and some larger shed developments in the south-east of the area;
- numerous open green spaces interspersed amongst the two to three storey residential properties;
- a concentration of listed heritage assets in the west of the area.

3.7.23 Due to the general lack of tall buildings in the area, and the overwhelming character of typical residential streets, development is limited in this area. More tall buildings would generally adversely alter the character of the area, except for potential locations immediately alongside the North Circular and in close proximity to existing taller buildings. Given that building heights are quite varied within this area, additional development to maximise density would require a sensitive approach within this area.

Figure 52 South Woodford centre street scene

Figure 53 South Woodford Investment and Growth Area



Barkingside Investment and Growth Area

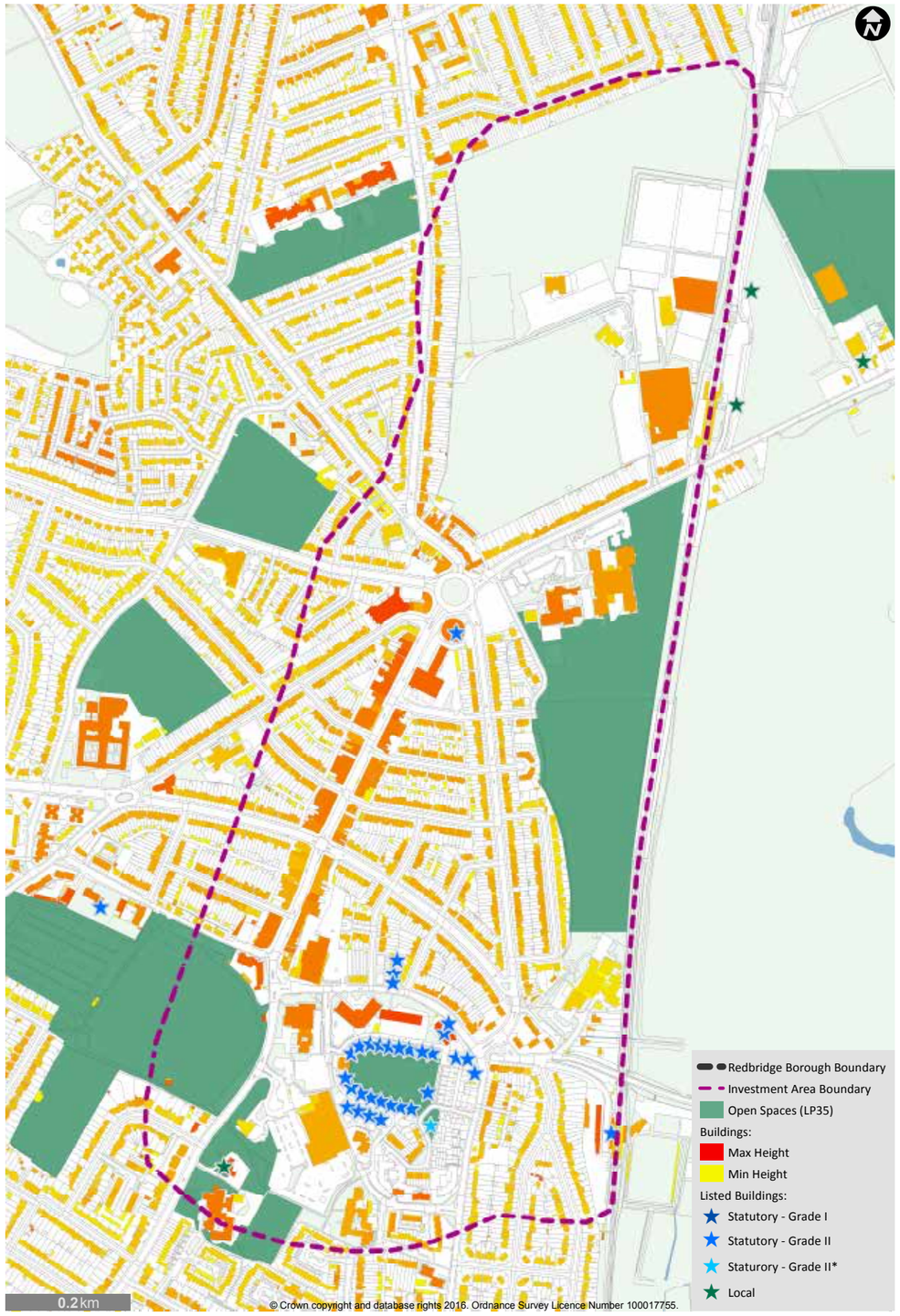
3.7.24 Barkingside District Centre immediately abuts the large open spaces to the north-east of the borough. The overall area has the following key characteristics:

- a concentration of slightly taller (generally no more than four storeys) buildings along the High Street with retail and commercial uses;
- dominance of two to three storey residential streets throughout the rest of the area;
- substantial areas of open space across the area;
- concentration of listed buildings in the south of the area around The Village Green; and
- a number of larger shed developments with retail / supermarket uses.

3.7.25 This Investment and Growth Area is the most sensitive to new development in the whole borough. The low building heights, position next to substantial open spaces and local concentrations of heritage assets and established street scenes all suggest that any new development should be clearly in keeping with the existing context. Introduction of substantive new height to the area would generally be incompatible with the townscape.

Figure 54 High Street with residential properties located in close proximity

Figure 55 Barkingside Investment and Growth Area



4 Planning application reviews

4.1 Introduction

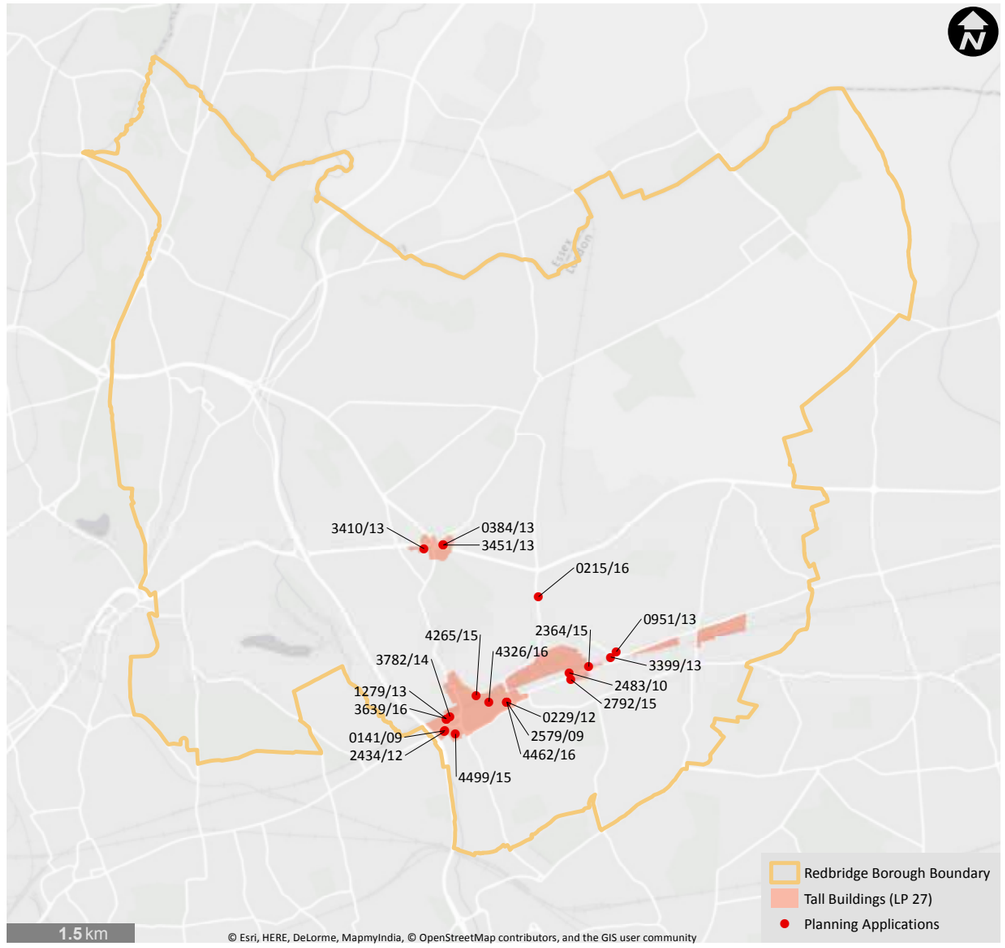
4.1.1 This section sets out a review of a series of planning applications within Redbridge in terms of:

- how the existing policy framework has been interpreted and used by applicants proposing tall buildings (Section 4.2);
- how the existing policy has influenced the decision-making process of the Local Planning Authority (Section 4.2); and
- an assessment of the design quality of the applications made.

4.1.2 The Council provided 51 major applications to consider as part of this review. In order to select the most appropriate applications for full analysis, each application was screened to determine its relevance:

- Firstly, applications were screened for those where tall buildings formed all or part of the proposed development. In order to do this, the applications were assessed against the definition of tall buildings provided in Borough Wide Policy BD2 – Tall Buildings, which defines them as "usually over 30 metres" in height. For the purposes of this review an assumption was made that 30 metres equates to approximately ten storeys of typical residential development. All applications which included buildings with a maximum height of over ten storeys were therefore automatically included for full review. Eight applications met this criteria, all of which are located within Ilford Metropolitan Centre. It should be noted that not all eight applications are for new build developments, and some involve extensions to existing buildings, which would result in the resultant development exceeding the ten storey threshold. This is clarified within Table 1.
- Secondly, in order to broaden the geographic spread of applications beyond Ilford Town Centre, a more flexible approach to defining tall buildings was then applied, based on the London Plan definition – "*substantially taller than their surroundings, cause a significant change to the skyline or are larger than the threshold sizes set for the referral of planning applications to the Mayor*". As a result, the threshold was lowered to allow for developments with a maximum height of six storeys or above, with a slightly higher threshold of eight storeys or above within Ilford Town Centre to reflect its generally 'taller' character. This resulted in eight more applications progressing for full review, including five in the Crossrail Corridor, two in Gants Hill District Centre and one in the wider Borough.
- Finally, all applications that met the above criteria but were pending determination as of 23rd November 2016 were also included; however it should be noted that it has not been possible to undertake a full review of these applications, as they are yet to be determined and therefore do not have any associated officer/committee reports. In consequence, only the application documents have been reviewed for these applications. Nevertheless, these applications were discussed at an officer workshop which took place on 1st December 2016. The workshop provided an update on the progress of the determination of these applications and the factors being considered by the Council.

Figure 56 Location plan of planning applications reviewed



4.1.3 Table 1 identifies those applications which have been included in the review, which documents have informed the process and whether the application was the focus of discussion at the officer workshop.

4.1.4 The location of the applications, along with their application numbers, is provided on Figure 56 above.

Table 1 Application review matrix

Planning ref	Site address	Decision	Decision date	Max.storeys	Review of application submission documents	Review of decision notice / officer report / committee report	Discussed topic at Officer Workshop
Ilford Metropolitan Centre							
4265/15	Car Park, The Exchange, High Road, Ilford	Approved at committee awaiting s106	Pending	26 storeys: extension to an existing building	*		*
0141/09	Britannia Music Development Site, 60-70 Roden Street, Ilford	Granted / Approved with conditions	05/10/2010	25 storeys: new build	*	*	
1279/13	Development Site adjacent to 39 Ilford Hill, Ilford	Granted / Approved with conditions	06/03/2015	18 storeys: new build	*	*	
3782/14	Valentines House, 51-69 Ilford Hill, Ilford	Granted / Approved with conditions	25/09/2015	11 storeys: extension to an existing building	*		*
4499/15	Sainsburys, 55 Roden Street, Ilford	Refused permission	22/08/2016	29 storeys: new build	*	*	
2579/09	Development Site at 226-244 High Road, Ilford	Granted / Approved with conditions	29/12/2011	16 storeys: new build	*	*	
4462/16	Development Site at 226-244 High Road, Ilford	Pending decision	Pending	30 storeys	*		*
4326/16	193-207, High Road, Ilford	Pending decision	Pending	30 storeys	*		*
Crossrail Corridor							
3399/13	The Joker, Cameron Road, Seven Kings, Ilford	Granted / Approved with conditions	20/03/2014	6 storeys: new build	*	*	
0951/13	Development Site at The Shannon Centre, Cameron Road, Seven Kings, Ilford	Granted / Approved with conditions	26/02/2015	6 storeys: new build	*	*	
2364/15	Development Site, 567-571 High Road, Seven Kings, Ilford	Granted / Approved with conditions	31/05/2016	9 storeys: new build	*	*	
2792/15	Charter House, 450 High Road, Ilford	Granted / Approved with conditions	31/05/2016	9 storeys (a 2 storey extension to existing building and a new 6 storey building)	*	*	
2483/10	501-536=5 High Road, Ilford	Granted / Approved with conditions	29/12/2011	10 storeys; new build	*		
Gants Hill District Centre							
0384/13	395 Eastern Avenue, Ilford	Granted / Approved with conditions	20/09/2013	8 storeys: new build	*	*	
3410/13	420 Eastern Avenue, Ilford	Granted / Approved with conditions	18/07/2014	7 storeys: new build	*	*	
Wider Borough							
0215/16	480-482 Ley Street, Ilford	Refused permission / consent Appeal lodged 12/07/2016 - pending decision	24/06/2016	6 storeys: new build	*		*

4.2 Policy based review

Scope of review

4.2.1 As part of the baseline review of the utilisation of existing tall buildings policies within the London Borough of Redbridge (LBR), a review of relevant planning applications has been undertaken to establish how the current policy framework functions.

4.2.2 The review includes recent planning applications for tall buildings in LBR, and in particular (although not exclusively) the areas within the three Area Action Plan (AAP) boundaries of Ilford Town Centre, the Crossrail Corridor and Gants Hill District Centre. This detailed application review has been undertaken in order to establish how the existing policy framework has been interpreted and used by applicants wishing to bring forward tall building schemes, and on the other hand, how it has influenced the decision-making process of the Local Planning Authority in determining applications involving tall buildings.

Approach

4.2.3 Following selection of the most appropriate applications (as set out above), a review was undertaken to reveal the ways in which the tall buildings policies featured in the application submission documents. In particular, the review focused upon references to tall buildings policies in the following application documents:

- Planning Statements; and
- Design and Access Statements.

4.2.4 The review of each application sought to establish:

- evidence of consideration of tall building policy issues in the application; and
- prioritisation and prominence of policies in relation to tall buildings.

4.2.5 Following this, the review turned to the determination process, to understand the role that the current policy framework plays in LBR's decision-making with respect to tall buildings. In reviewing the determination process, the following documents

were considered:

- decision notices; and
- committee reports or officer reports as relevant.

4.2.6 The above documents were analysed with respect to:

- evidence of the use of existing LBR policies in relation to tall buildings in determining the application;
- the weight given to these policies compared to other policies; and
- conformity of the application (as determined) to existing LBR policies relating to tall buildings.

Analysis of policies

4.2.7 Table 2 below summarises the local policies which are identified in applications and as a part of the determination process.

Table 2 Overview of Redbridge local policies and associated applications

Local Policy	Applications where policy is referenced	Application determination documents where policy is referenced
LBR Policy BD2 - Tall Buildings	2579/09; 4265-15; 3410/13; 1279/13; 2364/15; 4499/15; 0141-09; 4462/16; 4326/16; 2483/10	0384-13; 0951/13; 1279/13; 4499/15; 2579/09; 0141/09
Ilford Metropolitan Town Centre AAP	1279/13; 2579/09; 4499/15; 0141-09; 4265-15; 4462/16; 4326/16	4499/15; 0141/09; 1279/13; 2579/09
Gants Hill AAP	0384/13; 3410/13	0384/13; 3410/13
Crossrail Corridor AAP	2364/15; 2792/15; 3399/13; 2483/10	2364/15; 2792/15; 3399/13; 0951/13

London Plan and Borough Wide Primary Policies DPD (2008)

4.2.8 This section focuses on reviewing how Policy BD2 has been referenced in application submission documents and how it has been applied in the determination process. The review additionally considers other borough-wide primary policies and London Plan policies as relevant and/or referenced in the applications.

4.2.9 Review of policies referenced within application submission documents

4.2.10 Five planning applications demonstrate no evidence of consideration of Policy BD2:

- *3782/14: 14 Valentine's House, 51-69 Ilford Hill;*
- *3399/13: The Joker, Cameron Road;*
- *0951/13: The Shannon Centre, Cameron Road;*
- *0384/13: 395 Eastern Avenue;* and
- *0215/16: 480-482 Ley Street.*

4.2.11 Additionally, no evidence was found for the use of London Plan Policy 7.7 as a substitute for Policy BD2 in these five applications. The following three applications instead refer to the relevant AAP documents:

- *3782/14: 14 Valentine's House;*
- *51-59 Ilford Hill;* and
- *3399/13: The Joker, Cameron Road.*

4.2.12 In the case of application *0951/13: The Shannon Centre, Cameron Road,* no tall buildings policies are referred to within the submission documents.

4.2.13 The application submission documents for *0384-13: 395 Eastern Avenue* make reference to Policy BD3 and the Gants Hill AAP.

4.2.14 The submission documents for *0215-16: 480-482 Ley Street* make reference to Policies BD1, BD3 and London Plan Table 3.2 Density Matrix.

4.2.15 Across the applications, three do make reference to Policy BD2, although they do not explicitly justify their proposals against the policy:

- *2579/09: 226 to 224 High Road;*
- *4265-15: Car Park, The Exchange, High Road;* and
- *3410/13: 420 Eastern Avenue.*

4.2.16 In the case of application *2579/09: 226 to 224 High Road*, further and more explicit justification is made against Policy BD3 in justifying the suitability for a tall building at this site in helping to meet the required development density.

4.2.17 In the case of application *4265-15: Car Park, The Exchange, High Road,* reference is made to Policies BD1 and BD3 within the context of tall buildings considerations. The applicant also uses Ilford Town Centre's designation as an Opportunity Area within the London Plan to justify the acceptability of the proposed tall building, despite the fact it does not adhere to the building height guidelines in the Ilford Town Centre AAP.

4.2.18 Eight applications explicitly justify the proposed development against some or all of the criteria set out within Policy BD2:

- *1279/13: Development Site Adjacent 39, Ilford Hill;*
- *2364/15: 567 to 571 High Road;*
- *2792/15: Charter House, 450 High Road;*
- *4499/15: Sainsburys, 55 Roden Street;*
- *0141-09: Britannia Music Development Site at 60 to 70 Roden Street;*
- *4462/16: Development Site at 226 to 244, High Road;*
- *4326/16: 193-207 High Road; and*
- *2483/10: Development Site at 501 and 531-535, High Road, Ilford.*

4.2.19 In the case of *4462/16: 226 to 224 High Road* and *2792/15: Charter House 450 High Road*, reference or explicit justification is also made against Policies BD1 and BD3 within the context of tall buildings issues. The majority of these applications also refer or explicitly assess the proposed development against Policy 7.7 or 4B.9 (since superseded by 7.7) of the London Plan. Furthermore, the majority of these seven applications also refer to the AAP documents

Review of policy use within determination process

4.2.20 In terms of the determination process, both the decision notices and officer/ committee reports associated with ten applications were available for review. The remaining five applications were discussed in greater detail at the officer workshop. These five applications are incorporated into the report, where relevant.

4.2.21 In the document review, four applications do not consider Policy BD2:

- *2364/15: 567 to 571 High Road;*
- *2792/15: Charter House, 450 High Road;*
- *3399/13 The Joker, Cameron Road;* and
- *3410/13: 420 Eastern Avenue.*

4.2.22 In the case of *2364/15: 567 to 571 High Road*, reference is instead made to London Plan Policy 7.7, although the proposal is not considered in any detail against the criteria set out within this Policy. In terms of tall buildings considerations, the decision documentation makes most explicit reference to the Crossrail Corridor AAP which designates the site as being suitable for a building of up to ten storeys.

4.2.23 In the case of application *2792/15: Charter House, 450 High Road*, reference is also made to London Plan Policy 7.7, although the proposal is not considered in any detail against the criteria set out within this Policy. In terms of tall buildings considerations, the decision documentation makes most explicit reference to the Crossrail Corridor AAP, specifically Policy CC3. In this application, related London Plan Table 3.2 Density Matrix is also referenced by the Planning Officer as a relevant tall buildings consideration.

4.2.24 In the case of application *3399/13 The Joker, Cameron Road*, no reference is made to London Plan Policy 7.7 as a substitute for Policy BD2. In terms of tall buildings considerations, the decision documentation makes most explicit reference to Crossrail AAP, Policy CC3.

4.2.25 With regards to *3410/13: 420 Eastern Avenue* reference is instead made to Policies BD1 and BD3 and most explicit reference is made to the Gants Hill AAP, Policy GH4.

4.2.26 In the decision document review, two planning applications reference Policy BD2 although no detailed assessment was made against the Policy's criteria.

- *0384-13: 395 Eastern Avenue;* and
- *0951/13: The Shannon Centre, Cameron Road.*

4.2.27 In the case of application *0384-13: 395 Eastern Avenue*, reference was also made to Policy BD1, although more explicit reference was made against Policy BD3 and the London Plan Table 3.2 Density Matrix in order to justify the proposed tall building development within the context of density. Within this application, reference is also made to both London Plan Policy 7.7 and the Gants Hill District Centre AAP although a detailed assessment is not made against these Policies.

4.2.28 In the case of *0951/13: The Shannon Centre, Cameron Road*, the committee report refers to London Plan Policy 7.7 and provides more explicit assessment against the building height guidelines set out in the Crossrail Corridor AAP.

4.2.29 In the document review, four applications make explicit reference to Policy BD2. Specifically, there is evidence of the assessment of the proposed developments against some or all of the criteria set out in this Policy:

- *1279/13: Development Site Adjacent 39, Ilford Hill;*
- *4499/15: Sainsburys, 55 Roden Street;*
- *2579/09: 226 to 224 High Road;* and
- *0141/09: Britannia Music Development Site at 60 to 70 Roden Street.*

4.2.30 In the case of *4499/15: Sainsburys, 55 Roden Street*, the Planning Officer also explicitly refers to London Plan Policy 7.7 and the London Plan's designation of the Ilford Opportunity Area.

4.2.31 Furthermore, application *2579/09: 226 to 224 High Road* makes explicit reference to London Plan Policy 7.7.

4.2.32 In the case of *1279/13: Development Site Adjacent 39, Ilford Hill* and *0141/09: Britannia Music Development Site at 60 to 70 Roden Street*, the decision documentation also refers to London Plan Policy 7.7 and Policy 4B.9 (superseded Policy 7.7) respectively although does not provide a detailed assessment against these Policies. Application *0141/09: Britannia Music Development Site at 60 to 70 Roden Street* also references Policy BD3 within the context of tall buildings.

4.2.33 For those four cases which are explicitly assessed against Policy BD2, explicit reference is also made to the Ilford Town Centre AAP.

Ilford Town Centre Area Action Plan (AAP) (2008)

4.2.34 The Ilford Town Centre AAP was deemed to be of relevance to eight planning applications.

Review of the use of Ilford Town Centre AAP within application submission documents

4.2.35 Seven planning applications demonstrate explicit consideration of the development against Policy BF3 of the AAP:

- *1279/13: Development Site Adjacent 39, Ilford Hill;*
- *2579/09: 226 to 224 High Road;*

- *4499/15: Sainsburys, 55 Roden Street;*
- *0141-09: Britannia Music Development Site at 60 to 70 Roden Street;*
- *4265-15: Car Park, The Exchange, High Road;*
- *4462/16: Development Site at 226 to 244 High Road;* and
- *4326/16: 193-207 High Road.*

4.2.36 In two of these cases (*2579/09: 226 to 224 High Road and 4326/16: 193 – 207 High Road*) reference is also made to Policy BF1 on Built Form.

4.2.37 In three of the above planning applications (*4499/15: Sainsburys, 55 Roden Street; 4462/16: Development Site at 226 to 224 High Road and 4326/16: 193-207 High Road*), acknowledgement is made to the Opportunity Site designations within the AAP in relation to building height guidelines.

4.2.38 In two of the above applications (*4265/15: Car Park, The Exchange, High Road and 4499/15: Sainsburys, 55 Roden Road*), the applicants have also referred to Ilford's Opportunity Area status, as designated by the London Plan, alongside consideration of the AAP.

4.2.39 For application *3782/14: 14 Valentine's House, 51-69 Ilford Hill*, evidence of the use of the Ilford AAP was noted, specifically in relation to the designation of the site as an Opportunity Site – OS03. However, no linkage was explicitly made to the building height guidelines set out in Policy BF3.

Review of use of Ilford Town Centre AAP within determination process

4.2.40 In terms of the determination process, both the decision notices and officer/ committee reports associated with four of the seven applications within Ilford Town Centre were available for review. The remaining three applications were discussed in greater detail at the officer workshop. These three applications are incorporated into the report, where relevant.

4.2.41 In the document review, all four applications demonstrate explicit assessment of the development against the AAP, and specifically Policy BF3.

4.2.42 Alongside the use of Policy BF3, the committee report associated with *4499/15: Sainsburys, 55 Roden Street* also references the site as being located within the Ilford Opportunity Area, designated by the London Plan, thereby inferring the strategic importance of bringing forward developments for tall buildings.

4.2.43 With regards to application *0141/09: Britannia Music Development Site at 60 to 70 Roden Street*, there is also evidence of reference to Policy BF1 of the Ilford AAP as well as the site's Opportunity Site designation, 0S4 within the Ilford Area Action Plan.

Gants Hill District Centre Area Action Plan (AAP) Development Plan Document (DPD) (2009)

4.2.44 The Gants Hill District Centre AAP was relevant to two planning applications.

Review of use of Gants Hill District Centre AAP within application submission documents

4.2.45 For application 0384/13 395 Eastern Avenue, reference was made to Gants Hill District Centre AAP, Policy GH4. More explicit assessment was made in relation to Policy GH4 within the application submission documents for application 3410/13: 420 Eastern Avenue and additionally, emphasis was placed on the Opportunity Site designated by the AAP.

Review of use of Gants Hill District Centre AAP within determination process

4.2.46 In terms of the determination process, the decision notices and officer/ committee reports associated with both applications were available for review. The officer report associated with application *0384/13 395 Eastern Avenue* makes reference to the Gants Hill District Centre AAP, although does not explicitly assess the application against the building height parameters set out in Policy GH4. In the case of application *3410/13: 420 Eastern Avenue*, the scheme is more thoroughly assessed against the Policy GH4 of the Gants Hill AAP.

Crossrail Corridor Area Action Plan (AAP) (2011)

4.2.47 The Crossrail Corridor AAP was relevant to five planning applications.

Review of use of Crossrail Corridor AAP within application submission documents

4.2.48 In reviewing the application submission documents three applications (*2364/15: 567 to 571 High Road*; *2792/15: Charter House, 450 High Road and 2483/10: Development Site at 501 and 531-535 High Road*) explicitly justify the proposed development against the building height criteria set out in the Crossrail Corridor AAP, Policy CC3. Application *2364/15: 567 to 571 High Road* also makes reference to the fact that part of the site falls within a Housing DPD Site allocation contained within the Crossrail Corridor AAP, although this is not directly linked to building height.

4.2.49 The remaining applications, *0951/13: The Shannon Centre, Cameron Road*, and *3399/13: The Joker* do not reference the Crossrail Corridor AAP, Policy CC3. *Application 3399/13: The Joker* does refer to the designation of the site as an Opportunity Site within the Crossrail AAP Policy CC1 and the fact it is identified as a landmark building.

Review of use of Crossrail Corridor AAP within determination process

4.2.50 In terms of the determination process, the decision notices and officer/ committee reports associated with all four applications were available for review. All four of the planning applications (*3399/13: The Joker, Cameron Road, 2792/15: Charter House, 450 High Road, 0951/13: The Shannon Centre, Cameron Road* and *2364/15: 567 to 571 High Road*) were explicitly assessed in relation to the Crossrail Corridor AAP. Policy CC3 was not always explicitly mentioned but the use of the Policy was evident.

4.2.51 In the case of application *2364/15: 567 to 571 High Street,* the Planning Officer also makes reference to the fact that the site is allocated as an Opportunity Site (GM01) within the Crossrail APP. While this allocation does not specify building height guidelines, it does states that higher density development is appropriate in this location, thereby strengthening the case for a taller building at this site.

Evaluation of findings

The use of LBR tall buildings policies in application submission documents

4.2.52 There is relatively superficial consideration of Policy BD2 in application submissions. Across the 16 applications, eight applications made no reference or limited assessment of the proposal against the Policy or the set of criteria within it. Policies BD1 and BD3 have been used in conjunction with Policy BD2 to strengthen justification in the case of four applications. Policy BD3 is referenced instead of BD2 in one example and both Policies BD1 and BD3 are referenced instead of Policy BD2 in another, thereby demonstrating how other Policies within the Borough Wide Policies document are often prioritised.

4.2.53 With regards to London Plan Policy 7.7, five applications provide a thorough assessment of the application proposal in relation to the criteria. This Policy tends to be used in conjunction with Borough Wide Policy B2 and has not been found to 'stand in' for Policy BD2 where absent in the submission documents. Furthermore, five applications explicitly refer or list London Plan Table 3.2 Density Matrix as being relevant to the application proposal. In two of these examples, the London Plan Table 3.2 is referenced instead of Policy BD2. There is also widespread evidence of Ilford's designation as an Opportunity Area being included in the justification for tall buildings applications.

4.2.54 In terms of the use of the Ilford Town Centre AAP (2008), Gants Hill District Centre AAP (2009) and the Crossrail Corridor AAP (2011), the majority of planning applications which are located within the boundary of one of these areas have been either explicitly assessed in relation to building heights policies within the relevant AAPs or reference has been made. There is further evidence of AAP Opportunity Site designations being referenced within the application submission documents, in the justification of tall buildings applications.

4.2.55 Overall, the above demonstrates that applicants regularly use the AAP documents in the justification of schemes and these documents are generally used more explicitly than Policy BD2 of the Borough Wide Policies or London Plan Policy 7.7.

Key issues raised in respect of tall buildings policies within application submission documents

4.2.56 A key issue raised across the majority of planning application submission documents is the restrictive nature of the AAP building height policies. This is attributed to a number of factors as discussed below.

4.2.57 Precedent is cited as a reason for applying the AAP building height guidelines flexibly, specifically approval of tall buildings on adjoining sites. For example, in relation to application *2579/09 – 226-224 High Road*, situated within the parameters of the Ilford Town Centre AAP, Policy BF3 states that the site should have a height of between 10-15 storeys. The Planning Statement emphasises that planning permission had already been granted for a 21 storey development adjoining the application site and therefore the proposed 16 storey development should be considered acceptable. In the case of application *4462/15: Development Site At 226 to 224, High Road, Ilford*, the Planning Statement builds an argument against the 10-15 storey guidelines imposed on the site by the AAP by referring to recent approved planning applications for buildings taller than 15 storeys which have been permitted within the town centre.

4.2.58 In a number of cases, the prevailing strategic policy is given greater weight than the AAP in the justification of the schemes. Specifically, a common argument is that the AAP is outdated within the context of policy changes at the London Plan level. For example, with regard to application *4326-16 193-207 High Road*, the Planning Statement argues that the Ilford Town Centre AAP is too prescriptive in terms of building heights as compared to the criteria-based approach of London Plan Policy 7.7 and Primary Policy BD2 (Tall Buildings). The Planning Statement makes the case that subsequent London Plan designations such as the Ilford Opportunity Area and Housing Zone should supersede the parameters set within the AAP. This Planning Statement also refers to the draft emerging Policy LP27 (Tall Buildings), which supports the application in contrast to the AAP.

4.2.59 In the case of application *4462/15: Development Site At 226 to 224, High Road, Ilford*, the Planning Statement also contends that the location of the site within a Metropolitan Centre and Opportunity Area, as designated by the London Plan, should be given more weight than the AAP building height guidelines within the determination process.

4.2.60 In relation to application *4265/15: Car Park, The Exchange, High Road,* the application documents make the case that the existing AAP misses opportunities for new tall buildings since the site was identified as existing built form, being integral to the shopping centre and was therefore never encouraged as an opportunity site for tall buildings. As such, significant weight is applied to the London Plan's Opportunity Area and Metropolitan Centre designation to make the case for a tall building on this site within the Ilford Town Centre.

4.2.61 Furthermore, with regards to application *4499/15: Sainsburys, 55 Roden Road*, the application submission documents state that while the site falls within an area designated by the AAP as being appropriate for 6-12 storeys, the planning policy context has significantly changed in terms of scale, potential and density, since the adoption of the AAP in 2008. The submission documents emphasise that within the Metropolitan Centre and Opportunity Area, development and density should be optimised in order to contribute towards not only meeting Redbridge's minimum housing requirement, but also closing the gap between London's housing need and its housing target. The application submission documents also explicitly state that the proposed development aligns with London Plan Policy 7.7 which states that tall

buildings should generally be limited to sites in Opportunity Areas.

4.2.62 Design interventions are also emphasised within application submission documents as a means of mitigating the impact of development proposals which exceed building height guidelines as set out in the AAPs.

The use of LBR tall buildings policies in the LPA determination process

4.2.63 In the LPA decision-making process, there is relatively superficial consideration of Policy BD2. For the 10 applications for which full decision documents were available for review, six applications made no reference or limited assessment of the proposal against the Policy or the set of criteria within it. These six applications were located either within the Crossrail Corridor or Gants Hill District Centre. During the officer workshop application *0215/16: 480-482 Ley Street, Ilford* was discussed since this application site is not located within an AAP area and within the application submission documents, no reference was made to Policy BD2. Given it is not located within an AAP area, the assumed point of reference would be Borough Wide Policy BD2. However, when asked how this application had been assessed during the workshop, planning officers did not directly mention this Policy and instead emphasis was placed on design considerations, specifically how the scheme successfully incorporates a transition zone, relating to neighbouring two storey development. Notwithstanding this Officer opinion, the application was in fact refused at planning committee on design and scale grounds, although no tall buildings policies were cited in the refusal reasons. This lack of consideration against Policy BD2 was further reinforced during the officer workshop and an officer working within the development management team made the case that this Policy is not helpful in the decision-making process.

4.2.64 Within the desktop application review process it was found that London Plan Policy 7.7 or 4B.9 (superseded by 7.7) is referenced in most cases although there are no examples where the proposed developments are explicitly assessed against the criteria of this Policy. As such, London Plan Policy 7.7 or 4B.9 (superseded by 7.7) has not been found to 'stand in' for Policy BD2 where absent in the decision-making process. Furthermore, two applications include reference to London Plan Table 3.2, relating to density although this is also not considered to substitute Policy BD2. There is also evidence of the London Plan designation of Ilford as an Opportunity Area as being included in the justification of tall buildings applications.

4.2.65 Whilst not explicitly identified within the desk-top application reviews, the officer workshop revealed that London Plan 7.7 is generally prioritised over Policy BD2 in the decision-making process. A planning officer working within the development management team raised the point that the dual assessment of applications against both London Plan Policy 7.7 and Policy BD2 can be rather awkward as Policy BD2 is considered to provide a less detailed, sub-standard version of London Plan 7.7. As a result, London Plan Policy 7.7 is often given greater weight in the determination process. During the workshop, officers provided suggestions with regards to what a new borough-wide development management tall buildings Policy should comprise and this is considered in greater detail in Section 5 of the report.

4.2.66 In the desktop application review, three examples have been identified where other policies from the Borough Wide Primary Policies document, specifically BD1 and BD3 have been referenced with regards to tall buildings considerations and are considered to supplement Policy BD2. However, generally Policies BD1 and BD3 are used to assess design quality and density in isolation, without making reference to specific circumstances surrounding tall buildings.

4.2.67 In terms of the use of the Ilford Town Centre AAP (2008), Gants Hill District Centre AAP (2009) and the Crossrail Corridor AAP (2011), all of the planning applications located within the boundary of one of these areas has been either explicitly assessed in relation to the relevant AAP Policy or reference had been made to the AAP with regards to building heights. There is further evidence of AAP Opportunity Site designations being referenced within the decision-making process, in the justification of tall buildings applications. Discussions at the officer workshop pointed to the regular use of the AAP documents within the decision-making process for tall buildings. Four out of the five applications discussed in the workshop are located within AAP areas and when asked to provide a commentary on the decision-making processes for these applications, the responses were framed by the building height guidelines as set out within the corresponding AAP.

4.2.68 Overall, the above demonstrates that planning officers regularly use the AAP documents in the determination process for tall buildings and these documents are generally used more explicitly than Policy BD2 of the Borough Wide Policies document. Whilst not apparent in the desk-top application review process, the prioritisation of London Plan Policy 7.7 over Policy BD2 was emphasised in the officer workshop as being important in the formulation of officer recommendations.

4.2.69 Whilst this section has aimed to provide a commentary on the prioritisation and prominence of tall buildings policies in the decision-making process, the below section provides an overview of the actual conformity of the applications to these policies.

Conformity of applications to existing LBR policies relating to tall buildings

4.2.70 Table 1 provides a summary of the decision outcomes or current status for all reviewed planning applications. It should be noted that the two planning applications refused permission were not refused on grounds of non-compliance with specific tall buildings policies.

4.2.71 In reviewing the decision documentation, it is clear that the building height designations as set out within the AAPS are often applied flexibly. In the majority of applications located within the Ilford Town Centre, Crossrail Corridor and Gants Hill District Centre AAP boundaries, the planning officer makes the case for the acceptability of schemes which exceed the building height guidelines as set out in these documents. Each AAP is considered in greater detail below and findings from the officer workshop have been incorporated, where relevant.

Ilford Town Centre AAP

4.2.72 During the officer workshop it was suggested that the AAP is no longer fit for purpose, particularly since it is not linked to the London Plan Policy 3.4 and specifically Table 3.2 Density Matrix. Planning officers face challenges at the decision-making stage as the densities set out within this table do not relate to the building height parameters set out within the AAP. Proposed developments have therefore become increasingly taller through time and planning officers have had to apply a flexible approach, particularly within the context of Ilford Town Centre. This approach is evident in the following examples, which have been drawn from the desk-based application review process.

4.2.73 In the case of application *1279/13: Development Site Adjacent 39, Ilford Hill*, the Regulatory Committee report – 8 July 2014, Item no. 4, states:

The Ilford Town Centre Area Action Plan identifies specific taller building zones in the town centre. In accordance with Policy BF3 in the AAP the site falls within the 6-12 storey Ilford Hill Zone. Although the 14 and 18 storey block are taller than the prescribed heights contained within Policy BF3, it is considered that within the context of the adjacent Icon Building (19 storeys) and approved tower on Britannia Music Site (23 storeys) the proposed buildings will reflect other buildings in the vicinity. The taller buildings have reasonable setbacks to the public realm so that they will create a positive contribution to the existing townscape. Overall it is considered that the design of the development is broadly positive, responding to the character of the area, not overwhelming or excessive in terms of density and massing.

4.2.74 Given the maximum building height of the proposed development reaches 18 storeys, this is substantially higher than the 12 storey guide limit applied by Policy BF3. In this instance, the existing site context (including recently constructed or recently approved planning applications) is given greater weight in the decision-making process than the height designations set out in Policy BF3. Furthermore, the officer explicitly assesses the proposed development against Policy BD2 of the Borough Wide Policies and concludes that the development is compliant with the criteria.

4.2.75 In the case of application *4499/15: Sainsburys, 55 Roden Street*, the planning officer justifies that it is acceptable that half of the building exceeds the height guidelines set out in the Ilford AAP. This is again achieved through referencing recently completed/ approved developments for tall buildings within the local context and by emphasising that the site is located within an Opportunity Area as designated by the London Plan, with high PTAL rating of 6a. Furthermore, the officer explicitly assesses the proposed development against Policy BD2 of the Borough Wide Policies and concludes that the development is compliant with the criteria. This is evident within the following text taken from the Regulatory Committee Report -27 July 2014, Item no. 1, which states that:

Policy BF3 of the ITCAAP seeks to ensure that tall buildings are located within the 'Primary Tall Building Zone' (around the crossroads of the High Road and Cranbrook Road) and the two 'Secondary Tall Building Zones' at the eastern end of the High Road and western end of Ilford Hill. The north eastern corner of the Sainsburys site is located within the Primary Tall Building Zone, which indicates that buildings of 15 storeys or more could be acceptable, the remainder of the site is located within a suggested 6-12 storey band, before the heights increase again to 10-15 storeys at the Britannia Music site to the north west…

There is significant disparity in scale between existing buildings surrounding the site which ranges from two storey residential terraces… to the 33 storey Pioneer Point development. To the west of the site is the consented Britannia Music development which will provide a 25 storey tower.

The application site is located within the Ilford opportunity area designated by the London Plan, and features a high Public Transport Accessibility Level (PTAL of 6a). The Ilford Area Action Plan (AAP) provides guidance to the spatial growth of Ilford and identifies a number of key locations which are considered suitable for the development of tall buildings.

Areas for the development of tall buildings are situated around key gateways and points of arrival to the town centre. The AAP looks to consolidate opportunities to develop tall buildings within clusters around the eastern and western gateways, aiding the legibility of the town centre and identifies the western half of the site as an area where buildings of 6-12 storeys could be appropriate.

Apart from the Tower (at 29 floors…); the super store, Blocks 2-7, the Mew Houses and the Town Houses will all be below 16 floors in height. It is located in an area for high-density development supported by the Local and London Plan.

4.2.76 The officer workshop focussed on three applications pending decision, including *4265/15: Car Park, The Exchange, High Road, Ilford; 4462/16: Development Site at 226 to 244, High Road, Ilford* and *4326/16: 193-207, High Road, Ilford. Application 3782/14: Valentine's House, 51-69 Ilford Hill, Ilford* which was granted consent 25/09/2015 was also discussed as no decision documentation had been available for desk-top review.

4.2.77 In relation to *4265/15: Car Park, The Exchange, High Road, Ilford* this development is located outside of a tall buildings zone as set out in the AAP and is located within close proximity to two storey houses. Whilst the development would not result in desired clustering with existing tall buildings, officers clarified that it was considered to be acceptable in this instance given issues with microclimate and overshadowing could be absorbed by the existing built form.

4.2.78 In considering application *4462/16: Development Site at 226 to 244, High Road, Ilford,* officers clarified that the proposed development is located within an area designated as suitable for building heights of 10-15 storeys. However, the proposed development at 25 storeys is deemed to be acceptable. The height has been justified as a means of improving the poor quality materials on the existing scheme which has been built out to a lower height, thereby enhancing the overall appearance of the development from within the streetscene.

4.2.79 With reference to application *4326/16: 193-207, High Road, Ilford,* officers clarified that the proposed development is located within a 4-8 storey zone, as designated by the AAP. The current design is considered to be unacceptable

although the principle of the 30 storey building is deemed to be appropriate. Planning officers explained that this conclusion had been drawn as there is already a 12 storey building on the site which clearly exceeds the AAP guidelines.

4.2.80 In considering application *3782/14: Valentine's House, 51-69 Ilford Hill, Ilford,* the officers clarified that the site is located within an area suitable for 15+ storeys. Since the application comprised vertical extensions and resulted in a development of 11 storeys high, it was deemed to be acceptable. Furthermore, the officers emphasised that if the site is redeveloped, a much taller structure could be supported in this location.

4.2.81 During the workshop, the planning officers raised the point that in the current context there are now very tall buildings within the areas classified as being suitable for 4-8 storey buildings. As such, officers consider this document to be out of date. The officers inferred that development has continued to exceed the height parameters as set out in the AAP within the context of the Housing Zone designation and with the arrival of Crossrail. Within the decision-making process, officers clarified that very little weight is awarded to the specific height parameters although the overall wider zone is considered to be an appropriate means of attracting development for tall buildings. Planning officers made the case that flexibility is required in terms of building heights and a less prescriptive 'gradient' or 'heat' map, which avoids using banding with specific heights may be a more effective approach. Furthermore, the officers stated the merits in providing further clarification with an 'X marks the spot' approach for identifying suitable areas for destination or landmark buildings. However, it was emphasised that these areas should be indicative as opposed to being directly linked to Opportunity Sites.

4.2.82 There was consensus between officers with regards to the continuing importance of the Eastern and Western clusters of tall buildings and that focus should now be on the Western cluster given the majority of sites within the Eastern cluster have been developed. However, attention should be paid to the potential linkage of the Eastern cluster and upcoming development in the Crossrail Corridor and a consensus was reached between officers that further discussion was required around this topic.

Crossrail Corridor AAP

4.2.83 During the workshop, officers provided some historical context with regards to development that has come forward within the Crossrail Corridor AAP area extent since its adoption in 2011. Officers advised that most developments have broadly adhered to the building height designations as set out in Policy CC3, specifically up to 10 storeys. An example scheme, included in the application review, is *2483/10: Development Site at 501 and 531-535 High Road* which is a mixed use development comprising 105 flats, approved to a height of nine storeys. However, officers stated that developers have generally interpreted the 10 storey height guideline too prescriptively and this has created a series of 10 storey monolithic blocks which fail to transition to the surrounding area, which is predominantly comprised of two storey residential development.

4.2.84 Furthermore, the areas designated as suitable for up to 10 storeys within Policy CC3 were originally developed in line with site ownership boundaries. Planning officers pointed out that this has resulted in blocks of development which do not integrate with their surroundings. As such, there was a suggestion that development for the highest buildings should instead be clustered around stations and gateways and buildings should be encouraged to respond positively to road networks. It was emphasised that a 'gradient' or 'heat map' approach would be more useful in order to facilitate transitional zones between new and existing development. Officers suggested that developers should be encouraged to produce masterplans as opposed to developing a single site which is out of context with the surrounding area. The officers also raised the point that consideration should be given to the connection to the Goodmayes Hospital Site given this forms part of the Investment and Growth Area designation within the Draft Local Plan. Overall, whilst the broader zone for tall buildings works well in terms of steering appropriate development, the building height banding has not contributed to positive place-making.

4.2.85 In the desk-top application review, flexibility was observed in the application of building height zones within the Crossrail Corridor AAP. In the case of the *0951/13: The Shannon Centre, Cameron Road* the Regulatory Committee Report, 25 February 2015, Item no. 4 confirms that the proposed six storey development is sited in an area designated with a maximum height of five storeys. However, the officer makes the case that a six storey development is acceptable in this location due to the set-back at sixth floor level which mitigates the visual impact and thereby resulting in negligible height difference compared to the neighbouring street frontage.

4.2.86 In the case of *3399-13 The Joker, Cameron Road,* the Regulatory Committee Report, 18 March 2014, demonstrates that the officer has acknowledged that the development, at six storeys, exceeds the guidance on height contained in the Crossrail Corridor AAP by one storey. However the development is deemed to be acceptable as it has been "*specifically designed to break down the perceived massing*".

Gants Hill AAP

4.2.87 At the officer workshop, the officers clarified that most of the development sites within the Gants Hill AAP have now been delivered and there are some residual sites remaining. In terms of the effectiveness of Policy GH4, the officers stated that the general building height parameters have been working relatively well in the determination process. Furthermore, the designation of the wider zone is an effective means of directing tall and taller building elements to Gants Hill. A consensus was reached between officers at the workshop that the building heights as set out in Policy GH4 need to be considered within today's context and further discussion was necessary around this topic.

4.2.88 In the desk-top application review, an element of flexibility was observed in planning applications within Gants Hill. With regard to application *3410/13: 420 Eastern Avenue*, the officer report sets out the requirement in the Gants Hill AAP for building heights within the application site to be limited to 3 to 5 storeys.

However, the officer report concludes that the building height which extends to a maximum of 7 storeys is broadly in line with the Gants Hill AAP. The report states:

"*Gants Hill Area Action Plan indicates building heights for potential buildings for the application site as 3 to 5 storeys. Proposed development will have 3 storeys on the corner, 6 to 7 storeys along the Eastern Avenue and 4 storeys along the Clarence Avenue. Although proposal exceeds GHAAP indicative heights considering it complies with the height on the roundabout and steps up towards Montrose House which is a seven storey building. Along the Clarence Avenue proposal provides 4 storeys however fourth storey will be set-back from street and will reduce the impact.*"

4.2.89 As such, the planning officer makes the case that within the context of the surrounding area and due to design interventions, the proposed development is acceptable. It should be noted that the proposed development is not substantially greater than the height guidelines set out in the Policy.

4.2.90 Overall, up to date insights drawn from focussed discussion at the officer workshop have been considered with desk-top research in order to provide an analysis on planning officers' use of the existing tall buildings policy framework.

Key findings

4.2.91 The majority of planning applications have been found to exceed the height guidelines as set out in the relevant building height policies within the AAPs. However, in each case the application submission documents as well as the officer /committee reports and feedback from the officer workshop have tended to justify the divergence from policy as acceptable. This has been justified in the following ways:

- That the proposed development is acceptable in relation to the existing site context in terms of the height of recently approved or constructed tall buildings within the local area.
- That the proposed development is acceptable as a result of design interventions.

4.2.92 In the desktop application review it has been demonstrated that borough-wide Policy BD2 is given more weight in the decision-making process when the development cannot be justified against the relevant AAP Policy. This is likely to be due to the fact that the wording allows greater flexibility and is not as prescriptive in terms of building height. Additional discussion at the officer workshop revealed that Policy BD2 is generally not given significant weight in the decision-making process since the more up to date London Plan Policy 7.7 provides more useful criteria for assessment.

4.2.93 Furthermore, there is evidence of significant weight being applied to Ilford's designation as an Opportunity Area, Metropolitan Centre and Housing Zone in the London Plan, both within the application submission documents as well as the decision documentation for tall buildings applications. This suggests a prioritisation of these strategic designations, which promote Ilford as having significant capacity for development, above the building height guidelines as set out in the AAPs.

4.2.94 The above findings infer that the existing Borough tall buildings policies are no longer fit for purpose. Since Policy BD2 and the Area Action Plans were adopted some years ago (between the years of 2008-2011) they pre-date the NPPF and no longer reflect the existing built environment within Redbridge. Furthermore, these Policies no longer support the aspirations at both the London Plan and Borough level for intensification of development in appropriate locations.

4.2.95 Within the context of the above, there is evidence of planning applications being granted for tall buildings which do not conform to AAP building height guidelines, thereby undermining the role of AAP building height policies within the decision-making process.

4.3 Assessment of design quality

4.3.1 This assessment has been undertaken for the planning applications identified and reviewed in the policy review above. Each scheme has been assessed against a series of criteria drawing from Borough Policies BD2, LP26 and LP27, set out in Table 3 below. A summary of the assessment is provided on Table 4 overleaf.

4.3.2 Individual sheets for each planning application reviewed, indicating the proposed development and the urban context in which they would sit, are provided in Appendix A.

Table 3 Assessment of design quality - criteria

Tall Building Zones / Investment and Growth Areas		
The building is located within the Tall Building Zone	The building is located within an Investment and Growth Area	The building is located outside a Tall Building Zone or Investment and Growth Area
Architectural quality		
The building is of high architectural quality	The building is of acceptable architectural quality	The building is of low architectural quality
Urban design quality		
The building is of high urban design quality	The building is of acceptable urban design quality	The building is of low urban design quality
Local character		
The building is very compatible with the local character	The building is reasonably compatible with the local character	The building is not compatible with the local character
Heritage assets		
The building enhances heritage assets	The building does not impact heritage assets	The building negatively impacts heritage assets
Legibility and movement		
The building enhances legibility and movement	The building does not impact legibility and movement	The building negatively impacts legibility and movement
Street frontages		
The building frontage positively impacts the quality of the street	The building frontage does not impact the quality of the street	The building frontage negatively impacts the quality of the street
Safety and security		
The building positively impacts safety and security	The building does not impact safety and security	The building negatively impacts safety and security

Table 4 Assessment of design quality

Application reference no.	Tall building zone / Investment & Growth Areas	Architectural quality	Urban design quality	Local character	Heritage assets	Legibility and movement	Street frontages	Safety and security
Ilford - Metropolitan Centre								
Housing at The Exchange, Ilford (4265/15)	The building is located within Tall Building Zone and Investment / Growth Area.	The proposal consists of a high quality design in terms of layout, façade composition and provision of communal spaces.	The proposal deals with most of the existing issues related to massing, building frontages, surrounding streets and buildings.	The building is located close to terrace houses in the north. However, the massing distribution n tackles this issue by locating the tower in the south, facing the railway.	The building is not adjacent to historical assets.	The building has the potential to become a visual reference for the Exchange Shopping Mall.	The proposal activates the street frontage of the existing parking by including retail in the ground floor.	Activated street frontage is likely to improve the safety and security of the Myrtle Rd and Thorold Rd.
Britannia Music Site (0141/09 & 2434/12)	The building is located within Tall Building Zone and Investment / Growth Area.	The proposal consists of an acceptable quality design in terms of layout, façade composition and provision of communal spaces.	The proposal consists of a high quality design in terms of massing, orientation, building frontages, permeability and public spaces.	Massing distribution and material palette responds well to the adjacent buildings.	The development is located next to a listed pub. However, the proposed buildings are not likely to negatively impact the character of the listed pub.	The proposal introduces a new north-south pedestrian link that connects the adjacent residential units.	The proposal activates frontages facing main streets and public spaces by including retail, food and beverages in the ground floor.	Activated frontage and new residential units are likely to improve the safety and security and create an overlooked environment.
Paragon Heights (1279/13 & 3639/16)	The building is located within Tall Building Zone and Investment / Growth Area.	The proposal consists of a high quality design in terms of layout, façade composition and provision of communal spaces.	The proposal consists of a high quality design in terms of massing, orientation, building frontages, permeability and connectivity	Massing distribution and material palette responds well to the adjacent buildings.	The development is located close to listed buildings. However, the proposed buildings are not likely to negatively impact the character of these assets.	The proposal introduces a new pedestrian route to connect to Ilford station and the communities on the north of the railway, via the proposed footbridge over the railway.	The proposal activates frontages facing Ilford Hill by including retail in the ground floor. However,the internal pedestrian links could also benefit from active frontages	Active frontages could improve the safety and security of the pedestrian links and create an overlooked environment.
Valentines House (3782/14)	The building is located within Tall Building Zone and Investment / Growth Area.	The proposal consists of an acceptable quality design in terms of layout, façade composition and provision of public spaces.	The proposal deals with most of the existing issues related to massing, surrounding streets and buildings. However, it could be improved in terms of choice of pedestrian connection route and its fronting façades.	Massing distribution and material palette responds well to the adjacent buildings.	The development is located next to listed buildings. However, the proposed buildings are not likely to negatively impact the character of these assets.	The proposal introduces a new pedestrian route to connect to Ilford station and the communities on the north of the railway, via the existing footbridge over the railway.	The proposal activates the frontage facing the main street by including retail, food and beverages in the ground floor. However, the pedestrian link doesn't face active frontages.	Active frontages could improve the safety and security of the pedestrian link and create an overlooked environment.
Sainsbury's, Roden Street (4499/15)	The building is located within Tall Building Zone and Investment / Growth Area.	The proposal consists of an acceptable quality design in terms of layout, façade composition and provision of public spaces.	The proposal deals with most of the existing issues related to massing, building frontages, surrounding streets and buildings.	Massing distribution and material palette responds well to the adjacent buildings.	The development is located next to listed buildings. However, the proposed buildings are not likely to negatively impact the character of these assets.	The proposal has the potential to improve legibility by adding a visual reference to Ilford Metropolitan Centre	The proposal activates frontages facing main streets and public spaces by including retail, food and beverages in the ground floor.	Activated frontage and new residential units are likely to improve the safety and security and create an overlooked environment.
Central Point (2579/09 & 0229/12)	The building is located within Tall Building Zone and Investment / Growth Area.	The proposal consists of an acceptable quality design in terms of layout, façade composition and provision of communal spaces.	The proposal deals with most of the existing issues related to massing, building frontages, surrounding streets and buildings.	Massing distribution and material palette responds well to the adjacent buildings.	The building is not adjacent to historical assets.	The building is located next to an existing tower which acts as a landmark at the end of the High Road. By clustering the tall buildings together, the development has the potential enhance the existing landmark.	The proposal activates frontages facing the High Road by including retail, food and beverages in the ground floor.	Activated frontage is likely to improve the safety and security and create an overlooked environment.
Charter House Redevelopment (2792/15)	The building is located within Tall Building Zone and Investment / Growth Area.	The proposal consists of an acceptable quality design in terms of layout, façade composition provision of communal spaces.	The proposal deals with most of the existing issues related to massing, building frontages, surrounding streets and buildings.	Massing distribution and material palette responds well to the adjacent buildings.	The development is located next to a Church of St. Mary. However, the proposed building is not likely to negatively impact the character of the listed building.	The proposal is not likely to add value in terms of legibility and movement.	The proposed renovation of the existing derelict building improves the frontage significantly.	The proposal is to renovate and extend the existing derelict building which is likely to improve the safety and security by increasing natural surveillance.

Application reference no.	Tall building zone / Investment & Growth Areas	Architectural quality	Urban design quality	Local character	Heritage assets	Legibility and movement	Street frontages	Safety and security
Grants Hill (3410/13)	The building is located within Tall Building Zone and Investment / Growth Area.	The proposal consists of an acceptable quality design in terms of layout, façade composition and provision of communal spaces.	The proposal deals with most of the existing issues related to massing, building frontages, surrounding streets and buildings.	Massing distribution and material palette responds well to the adjacent buildings.	The building is not adjacent to historical assets.	The proposal is not likely to add values in terms of legibility and movement.	The proposal activates frontages facing main streets and public spaces by including retail and commercial in the ground floor.	Activated frontage is likely to improve the safety and security and create an overlooked environment.
Crossrail Corridor								
Seven Kings Hotel (3399/13)	The building is located within Investment / Growth Area.	The proposal consists of an acceptable quality design in terms of layout, façade composition and provision of communal spaces.	The proposal deals with most of the existing issues related to massing, building frontages, surrounding streets and buildings.	Massing distribution and material palette responds well to the adjacent buildings.	The development is located near to Seven Kings Station. However, the proposed building is not likely to negatively impact the character of the listed building.	The proposal has the potential to improve legibility by adding a landmark to Seven Kings Local Centre.	The proposal activates frontages facing Cameron Rd by including retail, food and beverages in the ground floor.	Activated frontage is likely to improve the safety and security and create an overlooked environment.
14 Cameron Road (0951/13)	The building is located within Investment / Growth Area.	The proposal consists of an acceptable quality design in terms of layout, façade composition and provision of communal spaces.	The proposal deals with most of the existing issues related to massing, surrounding buildings. However, it could be improved by including active frontages facing Farley Dr.	Massing distribution and material palette responds well to the adjacent buildings.	The development is located near to Seven Kings Station. However, the proposed building is not likely to negatively impact the character of the listed building.	The proposal improves legibility and movement by re-surfacing Farley Dr. pedestrian route and replacing the existing streetlights with new ones.	The proposed façade of the new building is likely to improves the frontage along Farley Dr.	The new residential development is likely to improve the safety and security by increasing natural surveillance.
567 – 571 High Road (2364/15)	The building is located within Tall Building Zone and Investment / Growth Area.	The proposal consists of an acceptable quality design in terms of layout, façade composition, use of material and provision of communal spaces.	The proposal deals with most of the existing issues related to massing, building frontages, surrounding streets and buildings.	Massing distribution and material palette responds well to the adjacent buildings.	The building is not adjacent to historical assets.	The proposal is not likely to add values in terms of legibility and movement.	The proposal activates frontages facing the High Road by including commercial uses in the ground floor.	Activated frontage is likely to improve the safety and security and create an overlooked environment.
501 – 535 High Road (2483/10)	The building is located within Tall Building Zone and Investment / Growth Area.	The proposal consists of an acceptable quality design in terms of layout, façade composition, use of material and provision of communal spaces.	The proposal deals with most of the existing issues related to massing, building frontages, surrounding streets and buildings.	Massing distribution and material palette responds well to the adjacent buildings.	The development is located close to a Church of St. Mary. However, the proposed building is not likely to negatively impact the character of the listed building	The proposal is not likely to add values in terms of legibility and movement.	The new facade improves the street frontage.	The new cultural and banqueting facility is likely to improve the safety and security and create an overlooked environment.
Wider borough								
480 – 482 Ley Street (0215/16)	The building is not located within the Investment / Growth Area or the Tall Building Zone.	The proposal consists of an acceptable quality design in terms of layout, façade composition and provision of communal spaces.	The proposal deals with most of the existing issues related to massing, surrounding streets and buildings.	Massing distribution and material palette responds well to the adjacent buildings.	The building is not adjacent to historical assets.	The proposal is not likely to add values in terms of legibility and movement.	The new residential facade improves the street frontage.	The new residential balconies facing the main street are likely to improve the safety and security by increasing natural surveillance.
395 Eastern Avenue, Ilford (0384/13 & 3451/13)	The building is located within Tall Building Zone and Investment / Growth Area.	The proposal consists of an acceptable quality design in terms of layout, façade composition and provision of communal spaces.	The proposal deals with most of the existing issues related to massing, surrounding streets and buildings.	Massing distribution and material palette responds well to the adjacent buildings.	The building is not adjacent to historical assets.	The proposal is not likely to add values in terms of legibility and movement.	The proposal activates frontages facing the main street by including commercial uses in the ground floor.	Activated frontage is likely to improve the safety and security and create an overlooked environment.

4.3.3 Please note that the assessment of design quality is based upon an independent review of each individual application by the Arup team, considering the information submitted in support of the application. This assessment offers a high level discussion of the principles of each individual scheme and do not seek to challenge or conflict with any planning decision in relation to these applications.

5 Case study reviews

5.1 Introduction

5.1.1 This section sets out a review of planning policy and planning applications in three case study boroughs.

5.2 Scope of planning review

5.2.1 In addition to the review of planning applications within Redbridge, this baseline review has also considered tall buildings policy and associated applications from three case study London Boroughs. The case study review has been undertaken in order to gain a greater understanding of the variation in approaches and how these different perspectives may assist Redbridge in the preparation of Draft Policy LP27 in the new Local Plan.

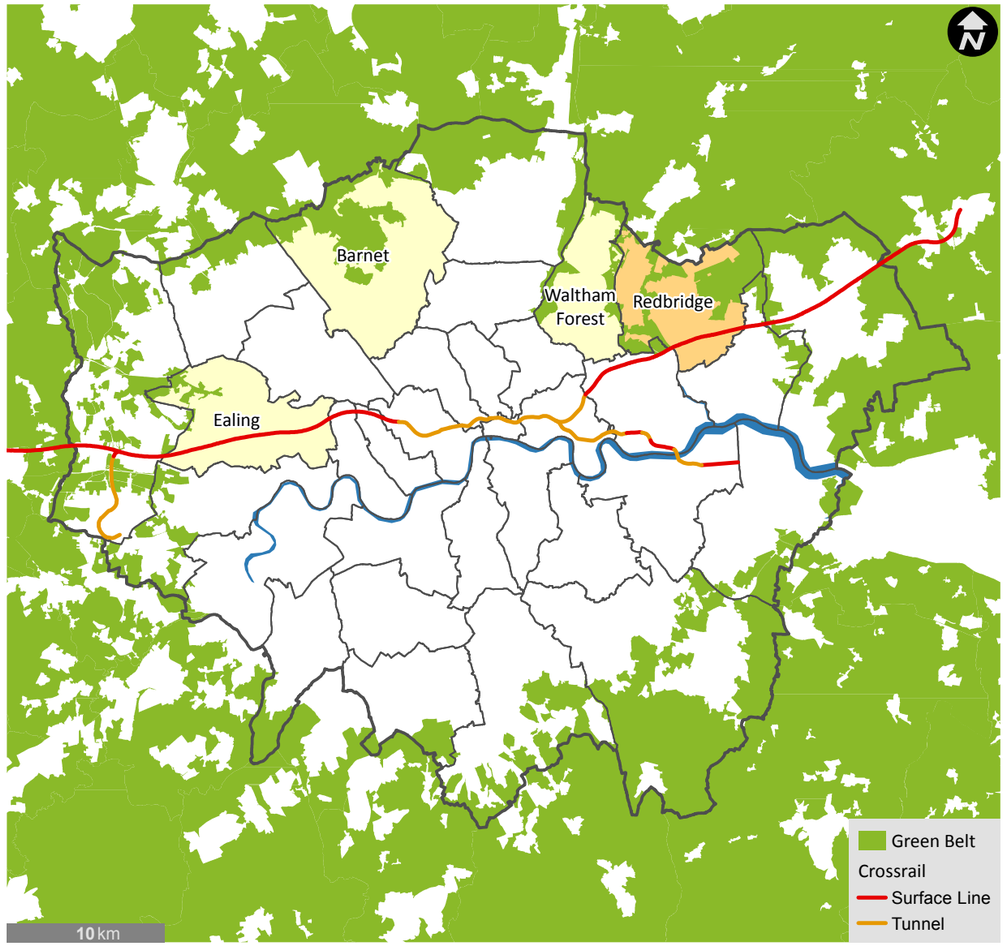
5.2.2 The three case study Boroughs are the London Borough of Ealing (LBE), the London Borough of Waltham Forest (LBWF) and the London Borough of Barnet (LBB). These Boroughs were selected in discussion with Redbridge as they are representative of areas where tall buildings have played a role in delivering recent growth and intensification, and are likely to continue to do so in future. They therefore provide an appropriate range of potential lessons based on the effectiveness and performance of tall building policies. In addition, LBE, LBWF and LBB are Outer London areas with similar geographical and development contexts to LBR, and all three have key growth centres. In particular:

- Waltham Forest - outer London character and mix of intensified growth areas (e.g. Walthamstow) alongside suburban development patterns and green belt constraints.
- Barnet - similarly an outer London character with intensified growth areas such as Brent Cross and Colindale set alongside suburban districts and green belt.
- Ealing - a London borough also experiencing the growth potential associated with the delivery of a number of Crossrail Stations (for example at Ealing and Acton).

5.2.3 These case study boroughs therefore provide lessons that may be applicable to the future growth of centres in Redbridge.

5.2.4 A review of all three boroughs was undertaken to establish their current policy approaches relating to tall buildings, using a similar approach to that undertaken for the LBR. In addition, recent planning applications for the development of tall buildings within LBE, LBWF and LBB were examined, as listed in Table 5 overleaf. The location of the case study boroughs are shown on Figure 57 adjacent. The figure also illustrates the distribution of green belt across the three case study boroughs (and Redbridge as a reference) and the line of Crossrail to highlight the similar opportunities and challenges Ealing has to Redbridge,

Figure 57 Case study boroughs location plan



5.2.5 These planning applications were assessed in line with the framework set out in Section 4 above and are referenced, where relevant, in the following sections of the report to provide some insight into how tall buildings policies in these areas have been utilised in the application and decision-making process within these boroughs.

Table 5 Application review matrix

Planning ref	Site address	Decision	Decision date	Max.storeys	Review of application submission documents	Review of decision notice / officer report / committee report
London Borough Waltham Forest						
142873	Land adjacent to south of Walthamstow Central Station and Land at the junction of Hoe Street and Selborne Road, Walthamstow	Approved with conditions and informatives	15/06/2016	12 storeys: new build	*	*
153834	97 Lea Bridge Road, Leyton	Approved with conditions and informatives	23/11/2016	18 storeys: new build	*	*
160333	Land at South Grove, 68-75 Brunner Road and Alpha Business Centre, 60 South Grove, Walthamstow	Approved with conditions and informatives	03/11/2016	12 storeys: new build	*	*
161647	Land adjacent 132 Dunend Road, Leyton	Approved with informatives	24/11/2016	16 storeys	*	*
London Borough Ealing						
161144FUL	6 Portal Way, North Acton	Pending decision	Pending	42 storeys	*	Full set of decision documents not available
PP/2011/4250	Land at junction of Chase Road and Victoria Road, Acton	Granted with conditions	08/03/2013	18 storeys	*	Full set of decision documents not available
P/2015/0095	1 Portal Way, Acton	Granted with conditions	08/08/2016	32 storeys	*	Full set of decision documents not available
PP/2012/3154	The Oaks Shopping Centre and adjoining car park in Churchfield Road, High Street Acton	Granted with conditions	08/04/2014	9 storeys	*	Full set of decision documents not available
London Borough Barnet						
B/05674/13	Northway House, 1379 High Road, London	Granted with conditions	02/12/2013	Refurbishment of existing 13 storey building		*

5.3 Tall buildings in the London Borough of Ealing - policy context

5.3.1 LBE adopted its Local Plan on 10 December 2013, for the period to 2026. With respect to tall buildings, the primary policy framework that exists at present within Ealing is summarised below:

LBE Development Strategy 2026 DPD (Apr 2012)

5.3.2 The Development Strategy DPD contains **Policy 1.2 – Delivery of the Vision for Ealing 2026**, which seeks to deliver LBE's spatial vision over the Plan Period. Policy 1.2 (h) supports higher density development in areas of good public transport accessibility. Policy 1.2 (h) references its regard to relevant London Plan policies. It emphasises that the proposed design quality and relation to context and accessibility are the overriding considerations in the assessment of any proposed development. It also states that the need to provide a suitable housing mix is an important factor in decision-making. Policy 1.2 (h) states that tall buildings may be suitable in specified sites within Acton, Ealing and Southall town centres, gateways to Park Royal and identified development sites only. It explains that specific locations which are appropriate for tall buildings shall be designated through the Development Sites DPD and through SPDs/AAPs.

LBE Development Management DPD (Dec 2013)

Policy 7.7 Ealing Local Variation – Location and Design of Tall and Large Buildings

5.3.3 The Development Management DPD contains Policy 7.7 Ealing Local Variation – Location and Design of Tall and Large Buildings:

Planning Decisions

In addition to the above principles, tall buildings should;

- *accord with the spatial objectives of the Development Strategy in being located on specified sites within Acton, Ealing and Southall town centres, gateways to Park Royal and identified development sites*
- *offer an outstanding quality of design*
- *make a positive and appropriate contribution to the local context and the broader area on which they impact*

5.3.4 Tall buildings are defined as those that are substantially taller than their neighbours and/or which significantly change the skyline.

5.3.5 Policy 7.7 refers to the Development Sites DPD and other SPDs/AAPs, which will designate specific locations identified as suitable for tall buildings.

LBE Development Sites DPD (Dec 2013)

5.3.6 The Development Sites DPD provides site-specific guidance on broad design principles and desired uses.

5.3.7 In relation to tall buildings considerations, the site allocations generally state whether in principle the site is an appropriate location for a tall building(s). However, this document does not provide prescriptive parameters with regards to the number of storeys that would be considered appropriate.

5.3.8 An example of a site allocation is OISI1 Park Royal Southern Gateway, which serves to shape the redevelopment of this area. OISI1 explains that specific guidance is set out in the Park Royal Opportunity Area Planning Framework. The supporting text states that the site is considered in principle as an appropriate location for tall buildings, however, the acceptability of tall buildings will be determined based on the detailed design as presented in a full planning application; outline planning applications for a tall building will not be considered. If tall buildings are proposed they must be attractive as viewed from all angles, contribute to an interesting skyline, and create a well-defined public realm at street level with active ground floor frontages and a high quality landscaping treatment that contributes to an improved public realm.

Old Oak Common and Park Royal Opportunity Area Planning Framework (November 2015)

5.3.9 The Old Oak Common and Park Royal OAPF contains Principle PR5, which advises that buildings heights should accord with the specified indicative density arrangement given in the policy. The density arrangement reflects the London Plan density matrix (Table 3.2 of the London Plan), indicating areas suitable for densities between 300 and 550 units per hectare.

Southall Opportunity Area Planning Framework (July 2014)

5.3.10 The Southall OAPF contains tall building policy principles, identifying broad locations for taller buildings near Southall Station and in East Southall in order to act as landmarks, improve legibility and optimise development potential. The OAPF does not specify exact building height parameters, instead providing guides such as ‘over 10 storeys’ or ‘mid-rise elements of 4-8 storeys’. The guidance also provides scope for some taller buildings at certain gateway or entry points, subjected to detailed design considerations.

Southall Gateway SPD (June 2015)

5.3.11 The Southall Gateway SPD provides a steer on suitable locations for taller buildings.

Ealing Cinema SPD (Dec 2013)

5.3.12 The Ealing Cinema SPD provides a map to indicate a suitable location to the south of the Cinema which has potential for taller buildings overlooking Ealing Green.

LBE Acton Town Hall and Surroundings SPD (Dec 2013)

5.3.13 The Acton Town Hall and Surroundings SPD states that taller landmark buildings may be appropriate to the Town Hall extension and land at the south of the ‘main/ island’ site.

5.4 Tall buildings in the London Borough of Waltham Forest - policy context

5.4.1 The London Borough of Waltham Forest (LBWF) adopted its Local Plan on 24 October 2013, which set out how the borough will develop up to 2026.

5.4.2 With respect to tall buildings, the primary policy framework that exists at present within Waltham Forest is summarised below:

LBWF Core Strategy (Mar 2012)

5.4.3 **Policy CS15 - Well Designed Buildings, Place and Spaces**, is the primary Policy within the Core Strategy which guides matters related to tall buildings. In relation to tall buildings specifically, it sets out that new development proposals will be expected to:

- *Address issues of height and scale sensitively. Subject to detailed analysis of their impact on local and historic context and other key criteria set out in the English Heritage/CABE guidance, tall buildings (defined as ten storeys and above (26 metres above natural ground level)) may only be appropriate on specific sites within the key growth areas of Blackhorse Lane, Northern Olympic Fringe, Walthamstow Town Centre and Wood Street. Appropriate sites will be identified as part of the development of the AAPs. Elsewhere within the Borough tall buildings are considered inappropriate. In some limited circumstances, medium rise, taller buildings (defined as between 5-9 storeys (13 - 23 metres above natural ground level)) may be appropriate both within the growth areas and at other key locations outside of the growth areas, subject to meeting the same criteria above. Appropriate locations for medium-rise buildings outside of the growth areas will be identified in the Site Specific Allocations Document, and could include;*
- *‘gateway’ sites or key entrance points into the Borough, specific locations at key junctions along principal routes, central areas or key junctions within shopping centres and, in areas fronting large areas of open space, subject to there being no detrimental impact on openness and visual amenity.*
- *reinforce and, where appropriate, create new distinctive and legible areas/*

spaces based on a design-led approach to redevelopment, particularly in the identified key growth areas; and

- *incorporate high quality and inclusive design measures to create an attractive, safe, healthy, accessible and sustainable environment throughout Waltham Forest.*

LBWF Development Management Policies Local Plan (Oct 2013)

Policy DM31 - Tall Buildings

5.4.4 This Policy supports the implementation of Core Strategy Policy CS15, stating:

Subject to compliance with Core Strategy Policy CS15 (C), the Council will consider all of the following factors when considering proposals for tall buildings:

i. the quality of design and architecture;

ii. the quality of construction and materials;

iii. detail and impact at ground floor level;

iv. impact on privacy and amenity with adjacent properties;

v. accessibility to transport interchanges and nearby facilities such as shops, community facilities and other services etc.;

vi. impact on local and strategic views;

vii. impact on micro climate for example wind, sun and reflection;

viii. impact on the historic context;

ix. relationship to topography and surrounding land form; and

x. the management regime, particularly in relation to residential mix.

5.4.5 Developers will be expected to take into account relevant guidance on design/ heritage matters as published by CABE/English Heritage particularly in relation to the impact of such buildings on their surroundings and local historic context.

LBWF Walthamstow Town Centre AAP (Oct 2014)

5.4.6 **Policy WTC9 – Design and Placemaking** sets a framework for building heights to be sympathetic in scale to the predominant 2-3 storey context, whilst focusing taller buildings on key 'gateway' sites near Walthamstow Station and St. James Street Station.

5.4.7 The AAP also lists 'Key Opportunity Sites' and provides advisory building heights for sites considered to be suitable for taller buildings.

LBWF Blackhorse Lane AAP (Jan 2015)

5.4.8 **Policy BHL8: Design and Local Character** advises that building heights should normally be 3-6 storeys across the AAP area, with the exception of the key gateway site indicated by Site BHL1: The Station Hub and Waterfront. Policy BHL8 notes that Policy CS15 (Well Designed Buildings, Places and Spaces) sets out that 'tall' (10+ storey) and 'taller' (5-9 storeys) may be appropriate on specific sites in the borough's key growth areas, including Blackhorse Lane. However, Policy BHL8 justifies a general 3-6 storey range as a balance between densification and contextual development.

5.5 Tall buildings in the London Borough of Barnet - policy context

5.5.1 The London Borough of Barnet (LBB) adopted its Local Plan Core Strategy and Development Management Policies DPD in September 2012.

5.5.2 With respect to tall buildings, the primary policy framework that exists at present within Barnet is summarised below:

LBB Core Strategy (Sep 2012)

5.5.3 **Policy CS5 - Protecting and enhancing Barnet's character to create high quality places**, is the primary policy within LBB's core strategy which addresses tall buildings. Within the policy, there is a sub-section specific to tall buildings, which states:

Tall buildings (8 storeys (or 26 metres) or more) may be appropriate in the following strategic locations:

- *Brent Cross – Cricklewood Regeneration Area*
- *Colindale – Colindale Avenue Corridor of Change*
- *Edgware Road Corridor of Change (in accordance with Policy 5.3 Building Heights in the Colindale Area Action Plan, 2010)*
- *Grahame Park Estate*
- *Stonegrove and Spur Road Estate*
- *West Hendon Estate.*

And the Priority Town Centres of:

- *Edgware*
- *Finchley Church End and*
- *North Finchley.*

Proposals for tall buildings will be considered in accordance with ***DM05 – Tall Buildings, London Plan Policy 7.7 – Location and Design of Tall and Large***

Buildings *and Guidance on Tall Buildings (2007) by English Heritage and CABE*

Outside of these specific locations, proposals for tall buildings will not be supported.

LBB Development Management Policies DPD (Sep 2012)

Policy DM05 - Tall Buildings

5.5.4 This Policy supports the implementation of Core Strategy Policy CS5. The Policy is as follows:

Tall buildings outside the strategic locations identified in the Core Strategy will not be considered acceptable. Proposals for tall buildings will need to demonstrate:

i. an active street frontage where appropriate

ii. successful integration into the existing urban fabric

iii. a regard to topography and no adverse impact on Local Viewing Corridors, local views and the skyline

iv. not cause harm to heritage assets and their setting

v. that the potential microclimatic effect does not adversely affect existing levels of comfort in the public realm.

Proposals for redevelopment or refurbishment of existing tall buildings will be required to make a positive contribution to the townscape.

Colindale AAP (Jun 2009)

5.5.5 Within the Colindale AAP, **Policy 5.3 – Building Height** outlines the local approach to tall buildings. The policy defines 'taller' buildings as those in excess of six storeys, and sets out that they will only be considered in the most sustainable locations with good access to transport, shops and services. The policy steers the location of tall buildings, and is accompanied by a map which outlines indicative buildings heights within the area. The policy also mentions design factors, including a need for tall buildings to be of excellent design quality and a requirement that they should enhance the qualities of the immediate surroundings and wider setting.

Cricklewood, Brent Cross and West Hendon Regeneration Area Development Framework SPD (Dec 2005)

5.5.6 The SPD for Cricklewood, Brent Cross and West Hendon contains a section on 'Building Scale and Density', which covers matters related to tall buildings. A building height profile is given for the area, comprising a range of building typologies including three storey terraces, five-eight storey courtyard blocks and a range of taller buildings from 10-25 storeys with some landmark commercial buildings located at the gateway to the area.

5.5.7 The SPD goes on to outline specific design criteria for tall buildings, including the possible need for setbacks at upper levels to create view corridors, create an animated skyline, offer daylight penetration and comfort at street level for pedestrians.

5.6 Comparison of Redbridge and case study borough tall buildings policies

5.6.1 The analysis of tall buildings policy within LBE, LBB and LBWF reveals a number of key similarities and differences in comparison with Redbridge.

Borough-wide policy approach

5.6.2 Redbridge Policy BD2 offers a definition of tall buildings stating that tall buildings are 'usually' considered to be over 30m in height. Redbridge Policy BD2 provides only one definition for tall buildings, with no lower designations such as medium-rise 'taller' buildings as outlined in LBWF Policy CS15. LBWF Policy CS15 outlines more explicitly what constitutes a 'tall building' within the borough, with 'tall' buildings being 10 storeys or above, and medium rise 'taller' buildings between five and nine storeys. Similarly to LBWF, LBB's Core Strategy Policy CS5 also outlines a definition for 'tall buildings' of eight storeys (or 26 metres) or above; this is more specific than the definition outlined in London Plan Policy 7.7. LBE Policy 7.7 on the other hand adopts a definition more in line with the London Plan, defining them as being substantially taller than their neighbours and/or which significantly change the skyline.

5.6.3 LBWF Policy DM31, when compared to Redbridge Policy BD2, provides a greater level of detail for the assessment of tall buildings. On the other hand, LBE Policy 7.7 adopts a lighter touch approach than LBWF Policy DM31 and Redbridge Policy BD2, mentioning only three criteria including the location, design and local context. The level of detail in LBB Policy DM05 lies somewhere in between the detailed Redbridge Policy BD2 / LBWF Policy DM31, and the lighter touch LBE Policy 7.7, outlining five criteria for tall buildings. A more detailed comparative exercise has therefore been undertaken against the more detailed LBWF Policy DM31 and LBB Policy DM05, as set out below.

5.6.4 With LBWF Policy DM31, the emphasis on design and materials is greater, with particular reference to the need for developers to take into account relevant guidance on design/heritage matters as published by CABE/English Heritage. The design-led approach that is emphasised within LBWF's policy framework appears to have had an impact upon the emphasis given to design factors in both applications for and the determination of tall building schemes within the Borough. For example, two of the four applications reviewed (*153834 - 97 Lea Bridge Road, Leyton; and 160333 - Land at South Grove*) place particular emphasis on the detailed design requirements of Policy DM31, and this observation also applies to the decision documents for these applications.

5.6.5 The privacy and amenity of adjoining occupiers is given more weight within

LBWF Policy DM31 than Redbridge Policy BD2 and the importance of accessibility to shops, community facilities and other services is also given more emphasis. Within the assessment criteria, LBWF Policy DM31 also includes the management regime, particularly in relation to residential mix; a consideration which is absent in Redbridge Policy BD2.

5.6.6 Regarding LBB Policy DM05, some of the criteria included match those within Redbridge Policy BD2, notably requirements around skyline and views, microclimate issues and minimising the impact upon conservation and heritage assets.

5.6.7 With a focus on the requirement to provide active street frontages, LBB Policy DM05 includes this as a standalone criterion, rather than as part of a wider set of criteria (including public access and ground floor leisure and retail) as is the case in Policy BD2.

5.6.8 In addition, there is a lesser emphasis on design within LBB Policy DM05, with 'design' not specifically mentioned in the policy, instead being most closely covered by a requirement for tall buildings to demonstrate "*successful integration into the existing urban fabric*". In contrast, Policy BD2 requires buildings to be of "*an outstanding architectural quality*". Through focussing on "architectural quality", the wording of Policy BD2 infers more isolated consideration of a building or scheme; whereas the wording of LBB Policy DM05 requires consideration of the wider local context.

5.6.9 Finally, a key aspect of LBB Policy DM05 which is not featured in Redbridge Policy BD2 is the requirement for the "*redevelopment and/or refurbishment of existing tall buildings to make a positive contribution to townscape*".

5.6.10 The above differences in tall buildings policy criteria are areas for consideration in the review of Draft Policy LP27.

Site level policy approach

5.6.11 A key difference between the existing tall buildings policies of Redbridge and the three case study boroughs is the way in which tall buildings are dealt with at more refined spatial scales. Critically, Redbridge's current policy framework adopts a zonal approach for building heights solely through Policy BD2 and the three AAPs. Each AAP provides a building heights map which sets building heights through zonal banding. Whilst a zonal approach is prioritised within these documents, more site specific detail can also be found. Specifically, Opportunity Site designations are referred to in the AAPs within the context of building height. The approach within each AAP has been summarised in Section 2 of this report.

5.6.12 In the case of LBWF, the AAPs summarised in Section 5.4, provide guidance for tall buildings in a number of different formats. However, these AAPs do not provide building height zones in map form as a means of guiding building height. In the case of the Walthamstow AAP for example, there is greater focus on the identification of key opportunity sites, and using a text-based approach, bespoke guidance is provided with regards to how taller elements can be incorporated into developments. Within the planning application process, the utilisation of these site specific designations is evidenced within one of the reviewed applications (*142873/FUL Walthamstow Central Station and Land at the Junction of Hoe Street, and Selborne Road*). In this example, the committee report mentions Opportunity Site designation WTC0S10 as a material consideration in the determination process in relation to building height. With regards to the Blackhorse Lane AAP, this document specifies that there is scope of a three to six storey range across the whole area extent, with the exception of one opportunity site.

5.6.13 In the case of LBE, the Development Sites DPD captures in a text-based format whether in principle a site is acceptable for tall buildings, although it is not overly prescriptive in terms of the number of storeys that would be suitable. The use of this Policy is evidenced in reviewed application *16/1144/FUL - 6 Portal Way, North Acton*. Within the Planning Statement, the applicant identifies that the site falls within OISI1 Park Royal South Gateway and states that the site is considered in principle an appropriate location for tall buildings. It is at this level of policy, as opposed to the more strategic development management Policy 7.7, where more detail is provided with regards to the assessment criteria for tall buildings. In identifying assessment criteria which are provided within the Development Sites DPD but not within Redbridge's Policy BD2, the contribution of high quality landscaping to an improved public realm is a key example. This criterion is therefore an area for consideration for the review of Draft Policy LP27.

5.6.14 The LBE Old Oak Common Opportunity Area Planning Framework has also been reviewed and emphasis is placed on the fact that building heights should accord with density arrangement. Again, on the basis that the subject of density does not feature within Redbridge Policy BD2, consideration should be given with regards to the relevance of this criteria in the review of Draft Policy LP27.

5.6.15 The Southall Opportunity Area Planning Framework provides building height parameters which use a text-based approach for different character areas. Similarly, the Southall Gateway SPD adopts a text-based approach for building height parameters and comprises of a map which provides an exact site location for a potential tall building. The remaining SPDs considered for LBE relate to Ealing Cinema and Acton Town Hall and Surroundings SPD. Both of these documents focus on relatively small areas and provide specific locations for where taller landmark buildings may be acceptable.

5.6.16 In the case of LBB, the Colindale AAP does give indicative building heights; however this takes on more of a masterplan form, with heights assigned to specific buildings or blocks, rather than the broader zoned approach adopted within Redbridge's AAPs. The Cricklewood, Brent Cross and West Hendon SPD does however provide indicative building heights in the form of broader zones, in a similar way to the Redbridge AAPs. The SPD also gives additional requirements for 'taller' buildings, which are defined as those above 15 storeys. In these cases, applications are required to be supported by a design statement, movement statement, building services strategy (including details about life cycle), a heritage statement, an economic statement (for commercial buildings), a statement related to views, and a construction and demolition statement. These application requirements

are not currently incorporated into Redbridge's tall building policy. Furthermore, the requirement for a movement statement, building services strategy, an economic statement, a statement related to views, and a construction and demolition statement are not currently listed within the Redbridge Local Validation Checklist.

5.6.17 Overall, within the context of LBE and LBWF, the spatial focus tends to be on appraising specific sites with regards to their suitability to accommodate tall buildings. Furthermore, the approach for setting building height parameters tends to be dealt with through a textual analysis of the site as opposed to the zonal mapping of building height parameters, as evidenced in Redbridge. LBB apply a mixed approach, using both zonal and more site specific height guides.

5.6.18 In addition to the identification of different spatial approaches to steering the development of tall buildings, specific criteria have been highlighted which appears in LBE, LBWF or LBB Policy, but are less apparent within Redbridge Policy.

Summary

5.6.19 The case study review has highlighted a number of key differences between Redbridge's tall building policies and those of the comparator boroughs, in terms of the assessment criteria and factors for consideration. Given the similar geographical and development contexts between Redbridge and the comparator boroughs, there may be potential lessons applicable to the future growth of centres in Redbridge. As such, the criteria identified as absent from the current policy framework of Redbridge provide potentially relevant material to feed into the review of Draft Policy LP27. An appraisal of each of the criteria identified is given in Section 5.7 below.

5.7 Appraisal of policy criteria within the case study boroughs

5.7.1 Those factors which have been identified as forming part of the policy framework in either LBE, LBWF or LBB but which are absent in the current policy framework of Redbridge are identified below. Various application submission requirements have also been highlighted and will be considered again in Section C.

- privacy and amenity (features in LBWF policy);
- accessibility to shops, community facilities and other services (features in LBWF policy);
- management regime and residential mix (features in LBWF policy);
- landscaping and public realm (features in LBE policy);
- redevelopment and/or refurbishment of existing tall buildings (features in LBB policy); and
- density (features in LBE policy).

5.7.2 All of these criteria were screened for their relevance within the Redbridge context at an officer workshop on 1st December 2016, with the intention of discounting those which may not be appropriate for incorporation within Draft Policy LP27. The following two criteria were initially discounted at this stage for the following reasons:

- **Density**: this criteria is already adequately covered by other Policies within the Draft Local Plan and therefore its inclusion within Draft Policy LP27 is not necessary. Notwithstanding this, there is a need to be cognisant of other Policies within the Draft Local Plan that include density considerations. As such, this criterion will be revisited in Section C.
- **Accessibility to shops, community facilities and other services**: these factors can be dealt with implicitly in spatial criteria of Draft Policy LP27.

5.7.3 Whilst the remaining criteria have been identified as being potentially useful within the context of a review of Draft Policy LP27, it is important to test whether these criteria are being actively used within their own Borough contexts.

5.7.4 The planning applications from the comparator boroughs have been assessed with a specific focus upon these criteria, in order to uncover the ways in which these aspects of the policy are used both within applications and in determinations.

Privacy and amenity

5.7.5 Regarding the privacy and amenity criteria outlined in LBWF policy, the application submission documents accompanying *153834 - 97 Lea Bridge Road, Leyton*, make specific reference to Policy DM31 as the primary guideline for the design of the taller elements of the proposals. The planning statement then goes on specifically to mention that "the height is distributed to respect neighbouring privacy and amenity", showing an explicit consideration of this aspect of the policy. Similarly, application *161647 - Land Adjacent 132 Dunedin Road, Leyton*, also acknowledges neighbouring privacy and amenity as a requirement of Policy DM31; however the application does not go so far as to assess the impact on amenity against Policy DM31, opting instead to assess residential amenity against London Plan policy 7.6 (architecture) and other local policies, most notably Policy DM32 (Managing Impact of Development on Occupiers and Neighbours).

5.7.6 Application *160333 - Land at South Grove*, does not make reference to neighbouring privacy and amenity in relation to Policy DM31 at all, instead discussing this issue in relation to LBWF Policy DM29 (Design Principles, Standards and Local Distinctiveness). This would suggest that in this case, the applicant deemed that it was not necessary to mention neighbouring amenity in the context of the development being a tall building, deciding to discuss the issue more generally in the context of other local policies.

5.7.7 With respect to the determination of the above applications, none of the associated Officer Reports make a direct assessment of privacy or residential amenity in relation to Policy DM31, instead assessing these criteria against other guidance, such as the London Plan Housing SPG in the case of *160333 - Land at South Grove*. This suggests that the inclusion of privacy and amenity as criteria within tall buildings Policy DM31 has some limited applicability within applications

and decision-making in LBWF. As such, it is not considered that this criteria will provide useful insights for Redbridge with regards to Draft Policy LP27 and therefore this criteria is not considered further. Furthermore, at a meeting with Redbridge on 11th January 2017 it was agreed that this criteria is adequately covered in other Policies within the Draft Local Plan.

Management regime and residential mix

5.7.8 Secondly, regarding building management regimes and residential mix, only one of the applications examined makes specific reference to these criteria in relation to tall buildings Policy DM31. Specifically, application *160333 - Land at South Grove*, makes reference to the residential mix by outlining the mix of sizes of apartments in its discussion of tall buildings policy, however the application does not explicitly outline how the development is in compliance with the policy as a result. In contrast, the other applications, do not reference the residential mix in relation to local tall buildings policy. In the case of *161647 - Land Adjacent 132 Dunedin Road, Leyton*, residential mix is discussed in relation to a suite of separate local policies, including DM3 (Affordable Housing Provision) and more pertinently DM5 (Housing Mix). Application *153834 - 97 Lea Bridge Road, Leyton*, on the other hand discusses residential mix primarily in relation to London Plan Policy 3.8 (Housing Choice) and local Core Strategy Policy CS2 (Improving Housing Quality and Choice). No evidence has been found of a linkage between building management regime and residential mix within application submission documents.

5.7.9 With respect to the determination of these applications, it is clear that Officers within LBWF have also prioritised London Plan Policy 3.8 and Core Strategy Policy CS2 in their appraisals of residential mix, with no reference to tall buildings policy DM31 in relation to these criteria at all; whilst the Officer Report for *142873/FUL - Land Adjacent to South of Walthamstow Central*, is the only report to reference local policy DM5 in its appraisal of housing mix. Despite this, the Officer Report for application *160333 - Land at South Grove*, does discuss the Walthamstow Town Centre AAP in its appraisal of residential mix, although no specific policy within this document is referenced.

5.7.10 In summary, the application review reveals that issues of residential mix and management regime within tall buildings Policy DM31 are largely overlooked both by applicants bringing forward tall buildings schemes, and by officers in determining these applications. In the case of residential mix, this is likely to be due to the suite of more detailed existing policies which deal with these issues more explicitly in LBWF's local policy and within the London Plan. As a result, only part of this criteria is taken forward for further consideration - specifically in relation to building management regimes. This criteria was discussed at the officer workshop on 1st December 2016 and at a meeting with Redbridge on 11th January 2017 and was considered to be of relevance within the Redbridge context, particularly if linked to building life cycle.

Landscaping and public realm

5.7.11 Thirdly, regarding the criteria of public realm and landscaping improvements outlined in the LBE policy framework, application *16/1144/FUL - 6 Portal Way, North Acton*, discusses LBE tall buildings Policy 7.7, and the Development Sites DPD allocation OIS1 Park Royal Southern Gateway Policy, and references the requirements of both of these policies in terms of public realm and landscaping improvements. The application then goes on to justify its public realm elements specifically against the requirements of both policies, demonstrating that they have been an important consideration for the applicant. Application *P/2015/0095 - 1 Portal Way, Acton*, also makes specific reference to the Development Sites DPD allocation OIS1 Park Royal Southern Gateway, and its requirement that tall buildings must provide improvements to public realm and landscaping. This application also makes a direct assessment of the proposed development against this policy, with specific consideration of public realm and landscaping.

5.7.12 On the other hand, application *PP/2011/4250 - Land at the Junction of Chase Road and Victoria Road, Acton*, makes no reference to public realm or landscaping improvements when discussing local tall buildings policy. In addition, application *PP/2012/3154 - The Oaks Shopping Centre and Car Park*, despite post-dating the adoption of LBE's Core Strategy, makes reference to landscaping and public realm in relation to LBE's saved Unitary Development Plan (2004) Policies in conjunction with London Plan policies and the NPPF. This makes this particular application less relevant for analysis.

5.7.13 In summary, the analysis of applications within LBE reveal that in terms of landscaping and public realm, there is evidence that these criteria are being considered by applicants when they form part of local tall buildings policy. This is therefore an area that Redbridge could consider when reviewing Draft Policy LP27.

Redevelopment and/or refurbishment of existing tall buildings

5.7.14 Finally, there is evidence that this aspect of Policy DM05 is being actively utilised within the decision-making process for this type of development within LBB, as documented within the committee report relating to approved application *B/05674/13 - Northway House, 1379 High Road, Whetstone*. The Redbridge application review in Section 4 highlights that applications to redevelop or refurbish existing tall buildings within the Redbridge are coming forward, therefore it is an area that Redbridge could consider when reviewing Draft Policy LP27.

Summary

5.7.15 The criteria which have been identified for further consideration are:

- Management regime (including building life cycle) (features in LBWF policy);
- Landscaping and public realm (features in LBE policy);
- Redevelopment and/or refurbishment of existing tall buildings (features in LBB policy)

5.7.16 These criteria will be revisited in Section C of the report which makes recommendations for Draft Policy LP27.

B

SCENARIO TESTING

6 Scenario testing

6.1 Introduction

6.1.1 This section of the report outlines how scenarios have been developed for a series of sites around Redbridge, and tested to inform the review of draft Tall Buildings Policy LP27. The scenarios primarily help to inform the spatial approach to tall buildings within the borough in the context of the local townscape, microclimate and local / strategic views. This work informs the policy recommendations which are set out in full in Section C of this report.

6.1.2 This report covers:

- the approach to selecting sites on which to develop scenarios;
- the approach to developing high and medium density scenarios on each site;
- an overview of the scenarios developed; and
- an analysis of how each scenario sits within the strategic views identified, and the local townscapes, including their overall visibility within the borough.

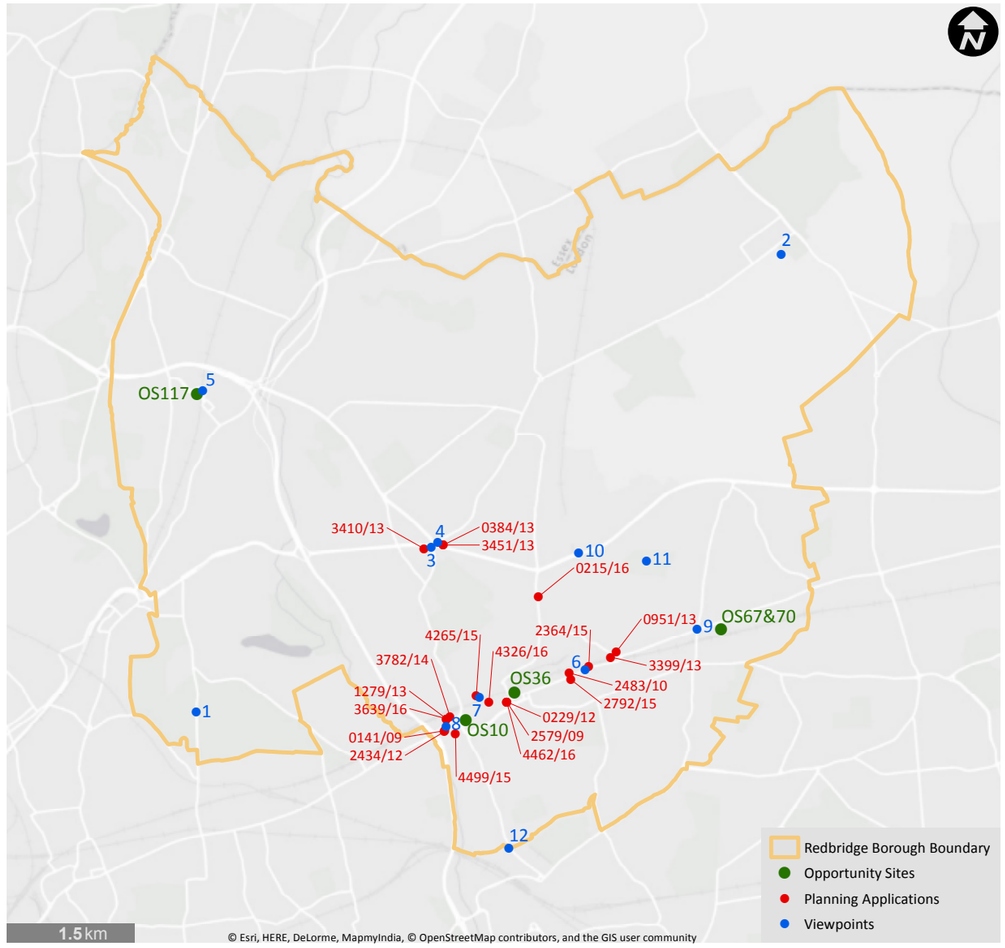
6.2 Approach to site selection

6.2.1 Development sites have been selected from the opportunity sites identified in the draft local plan for each investment area, in liaison with LBR Officers. Individual sites have been selected on the following basis:

- plots which have not yet come up for development or have not had development approved on them;
- distribution and spread across the borough, to ensure potential high and medium density development is considered and tested across possible sets in Redbridge to provide even feedback for the review of the policy;
- a range of plot sizes to text differing scales, massing, heights and density of development; and
- a range of positions within local townscapes and views, and strategic vistas, to test how development in different areas may affect the wider skyline and local street scenes – particularly in the context of local heritage assets.

6.2.2 On this basis, the following four Opportunity Sites[1] have been selected as a core to develop scenarios on. Further detail on the selection of each site is provided for each scenario in turn. An overview of the distribution of these sites is shown on Figure 58 above:

Figure 58 Location plan of scenarios



- Opportunity Site 10 - Chapel Road / High Road / Clements Lane - Ilford IGA.
- Opportunity Site 36 - Redbridge Enterprise and Ilford Retail Park - Ilford IGA.
- Opportunity Site 117 - Station Estate - South Woodford IGA.
- Opportunity Sites 67 and 70 together - Tesco 822 High Road and Goodmayes Retail Centre - Crossrail Corridor IGA.

1 Opportunity Sites are shown on the Policies Inset Maps saved on the Redbridge website - https://www.redbridge.gov.uk/planning-and-building/planning-policy/redbridge-local-plan-2015-2030/

6.3 Approach to scenario development

6.3.1 Scenarios have been developed to thoroughly test the Council's spatial approach to tall buildings within the borough, and therefore provide an evidence base that supports the policy recommendations set out in Section C of this report. In particular, the methodology adopted seeks to respond to the Mayor's representation that asks whether intensification of existing brownfield land / opportunity areas has been fully explored. To do this we have followed four key steps and applied this to the four core Opportunity Sites as described above:

- Development of a scenario for the site that meets the upper limit of the density range within the SRQ matrix[1], including a relevant discount of the site area to allow for mixed-use development.
- Testing of this scenario against the key local townscape sensitivities to understand whether this level of density would be appropriate within this context. Townscape sensitivities include consideration of strategic views, local views / street scenes, the setting of heritage assets and microclimatic impacts.
- Where the high density scenario is found to be potentially inappropriate in a townscape and/or microclimate context, a further mid-density scenario has been developed (within the range defined by the SRQ matrix).
- This mid-density scenario has then been tested as described above to understand its appropriateness, with relevant conclusions drawn.

6.3.2 For the Ilford Metropolitan Centre, we have used the ranges set out for a "Central" area, and the Public Transport Accessibility Level (PTAL) in the top range due to the connectivity of the borough.

6.3.3 To further support the study, we have taken a further three sites and explored a single scenario at either a medium or high density depending on the local context. Conclusions are drawn from these as to whether the density illustrated is:

- appropriate for the location in terms of townscape character and position within local and strategic views;
- overly dense / tall and therefore inappropriate for the location, and therefore conclusions are drawn as to what a more appropriate density might be; or
- appropriate, but the location could receive a higher density than modelled in the scenario.

6.3.4 Building scenarios have been developed on the basis of some core urban design / architectural principles as appropriate to the high level nature of this study:

- the dispersal of massing within the sites is based on best practice assumptions of floor plate efficiency;
- heights of proposed massing have been determined and adjusted to have a clear relation and appropriateness to adjoining buildings – for example through stepping down towards lower height elements and in relation to the position of the development along a street scene;
- the dispersal of massing has assumed that non-residential uses will be prescribed to the ground floors or tower podiums generally, and in locations where deemed appropriate in terms of best practice urban design, such as providing active frontage, or delivering non-residential land use as part of increased density;
- a higher storey height podium has been assumed in relevant examples where mixed / active uses would be encouraged;
- the block dispersal does not take into account the requirements for private space provision or car parking provision;
- a common 10-12m podium level has been assumed; and
- buildings have been distributed and spaced in line with good urban design / architectural practice to minimise overshadowing and overlooking properties.

6.3.5 It should be noted that the scenarios have been developed solely for the purpose of testing the existing draft Tall Buildings Policy LP27 and our own policy recommendations in this regard. They do not represent proposals that could be developed at the specific sites, and do not take into account any site specific constraints that would not be known to us without a detailed appraisal of all unique constraints and opportunities, and in the absence of a development brief.

6.4 Approach to scenario testing

6.4.1 Each scenario has been modelled and integrated into the borough wide model created for the purpose of this study from latest available topographic (ground plane) data, building heights data and Ordnance Survey Mastermap data.

6.4.2 For each scenario:

- a zone of theoretical visibility (ZTV) has been generated, indicating the likely visibility of the scenario across the borough, taking into account topographic changes and existing intervening built form;
- this ZTV has been analysed to qualitatively describe the level of visibility of the scenario;
- the visibility within the strategic views has been analysed, shown in the context of other granted planning applications which have not yet been built out. For each view:
  - Pioneer Point (existing tall building in Redbridge) has been shown in red, where visible;
  - granted planning applications and current proposals (where visible) have been shown in purple, modelled to the maximum extents of their approved building envelopes; and

1 Table 32. of London Plan Policy 3.4 - the Sustainable residential quality (SRQ) matrix (habitable rooms and dwellings per hectare).

- modelled scenarios are shown in orange.

- the visibility of the scenarios within strategic views are considered together in Section 6.6 as typically most of the development scenarios are visible to some extent in most of the views;
- the following characteristics are then assessed and described for each scenario in turn:
  - the relationship with local townscape character and views;
  - the relationship with heritage assets;
  - the response of the scenario to known site constraints; and
  - the relationship to adjacent developments;
- a high level microclimate analysis of each scenario has also been undertaken with reference to the methodology provided in Appendix B.

6.4.3 The conclusions drawn from the scenario testing have then informed the production of a building height gradient map for the tall building policy – indicating where differing levels of tall development would be appropriate within the borough. This is illustrated in Section C - Policy recommendations.

6.5 Scenarios

6.5.1 This section outlines each scenario in turn, describing what has been developed and why, and testing it within the views and local townscape.

6.5.2 An overview of each scenario is provided in Section 6.7 and the conclusions drawn for each scenario are presented together in Section 6.8.

Opportunity Site 10 - Chapel Road / High Road / Clements Lane

6.5.3 This site has been selected as a good representation of an available relatively small site in close proximity to Ilford Station - an important public transport node that would benefit from strategic marking in line with feedback from Redbridge in terms of potential tall building locations. The location of the scenario is shown on Figure 59 below.

High density scenario

6.5.4 With reference to the London Plan Policy 3.4, this site is within a Central area (i.e. located within 800m walking distance of a Metropolitan Centre) and has the highest PTAL levels (4-6). On this basis, the high density range is 215-405 u/ha. The scenario developed sits at the upper end of this density, outlined below and illustrated on Figure 60 adjacent.

- Total site area - 0.62 ha
- Potential residential units - 251
- Potential non-residential GFA - 0.87 ha

Figure 59 Opportunity Site 10 location plan

- Potential density - approx. 405 u/ha

Extent of visibility

6.5.5 The indicative extent of visibility of the scenario is shown on Figure 61. The ZTV illustrates that the proposed development would be visible from the high ground in the north-east of the borough and other large open spaces such as Valentines Park, Seven Kings Park and up the River Roding valley.

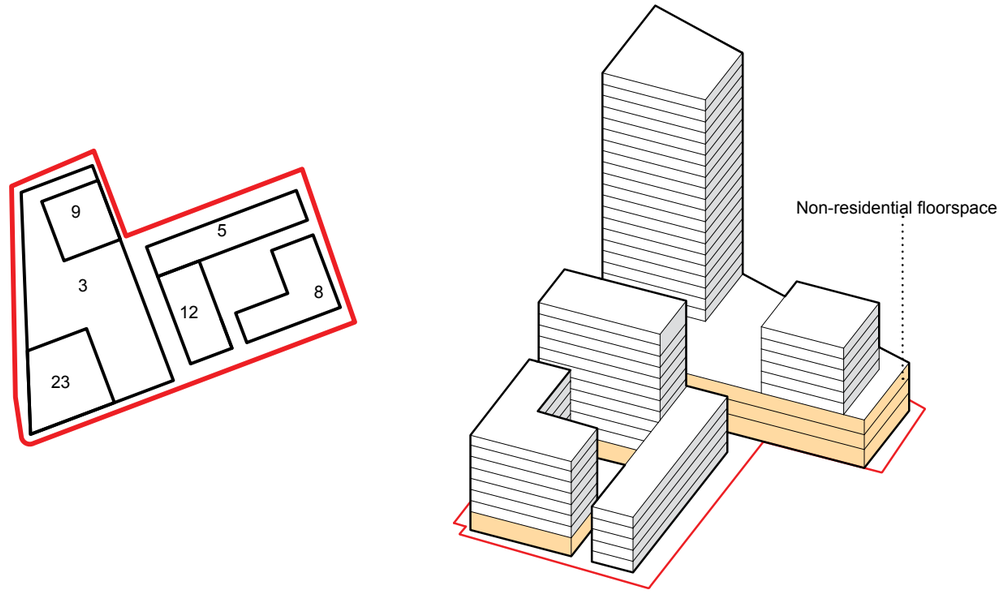
6.5.6 Within Ilford Metropolitan Centre, the tower element of the scenario would be widely visible, with this visibility also extending east along the existing railway corridor towards Seven Kings and Goodmayes.

6.5.7 The tallest parts of the scenario would also be likely to be visible from localised other parts of the borough including South Woodford and Wanstead District Centres, in line with the current visibility of Pioneer Point.

Townscape and visual analysis

6.5.8 **Strategic views** - This scenario forms a skyline feature in the backdrop of street scene views from viewpoints 3 and 9, while also being apparent in the background of views 1, 2 and 5 depending on the exact built form of the consented developments when built. The scenario would form a clearly visible middle-ground / foreground element in views 7 and 8. Generally, in all strategic views, this scenario would be viewed alongside the existing Pioneer Point tower and other consented tall buildings that, when built, will form a distinct cluster marking Ilford Metropolitan Centre. **Conclusion - density of scenario illustrates no significant**

Figure 60 OS10 - High density scenario massing and layout with building storeys



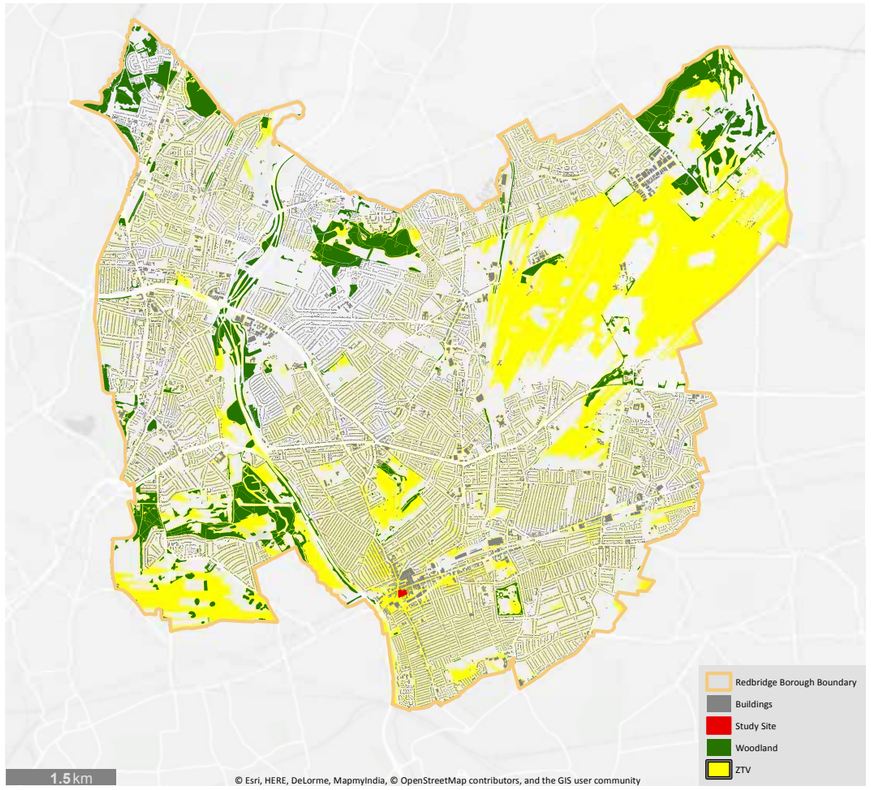
impact.

6.5.9 **Local townscape and views** - Within the immediate townscape context this building would sit alongside other tall buildings with relatively large footprints clearly marking Ilford Hill and the High Road. It would sit immediately adjacent to Pioneer Point forming a clear cluster of height around Ilford Station. **Conclusion - density of scenario illustrates no significant impact.**

6.5.10 **Heritage assets** - The site is in close proximity to the Ilford Island site which is characterised by a number of statutory and locally listed buildings. The highest elements are shown adjacent to Pioneer Point, with other building blocks stepping down towards the listed buildings. However, taking into account the other permitted developments, this scenario would accentuate the encircling of the Ilford Island site with tall developments. Overall, it is considered that the development proposed would have negligible impact upon heritage assets, however development beyond this scale could result in significant impact upon these assets. **Conclusion - density of scenario illustrates no significant impact provided appropriate mitigation is adopted in the siting of buildings in relation to the listed buildings.**

6.5.11 **Response to site constraints** - No specific constraints within the site other than taking into account access arrangements. **Conclusion - density of scenario illustrates no significant impact**

Figure 61 OS10 - High density scenario zone of theoretical visibility



illustrates no significant impact

6.5.12 **Relationship to adjacent developments** - The scenario proposes a clear step change in building heights across the plot to respond positively to surrounding buildings, including lower units along the High Road and the listed buildings of Ilford Island. **Conclusion - density of scenario illustrates no significant impact provided appropriate mitigation is adopted in the siting of buildings in relation to the listed buildings.**

Microclimate analysis

Introduction

6.5.13 Figure 62 indicates the built form of the baseline (existing) case and the proposed scenario, set within its immediate context. Within this study area zones have been defined to allow for a wind microclimate assessment and a daylighting study to be undertaken, presented below.

Figure 62 OS10 Baseline and scenario built form

Wind microclimate assessment

6.5.14 Table 6 below outlines the wind microclimate assessment, comparing the baseline situation with the high density scenario for OS10, with reference to the zones illustrated on Figure 63 (baseline) and Figure 64 (high density scenario). Figure 65 provides further detail on the anticipated wind movements.

Table 6 OS10 High density - Wind microclimate assessment

OS10 - Baseline	OS10 - High density scenario
On-site windiness (zone C) - The existing tower blocks facing Cranbrook Road are exposed to the prevailing winds and will deflect these components to ground level (downdrafting). Windiness along the west side of the Site facing Cranbrook Road (zone A) is likely to be Strolling to Business Walking. Winds are accelerated in the passage between the existing tower block and the adjacent low-rise block, where Business Walking is likely to occur. Standing to Strolling within the Site's car park.	**On-site windiness (zone C)** - With the proposed development, windiness along Cranbrook Road is increased. The tall block, adjacent to the existing towers, will contribute to enhance the downdrafting mechanism. 'Business Walking' is anticipated on Cranbrook Road (zone A). These conditions are acceptable for access use but not for entrance. Local mitigation may be considered for entrances on this frontage. Relocation of the tall block, or reconfiguration of its massing, may be considered. Business Walking is also anticipated on the podium. Local mitigation should be considered for external seating use of the podium, for example outdoor cafés. Possibility of distress exceedance is anticipated within the gap between the existing towers and the adjacent tall block. Standing to Strolling are anticipated within other areas of the Site.
Off-site windiness (zone A) - Strolling to Business Walking along Cranbrook Road, affecting the frontage of the low-rise blocks to the south-west of the road.	**Off-site windiness (zone A)** - Windiness along the frontage of the low-rise blocks to the south-west of Cranbrook Road is increased to Business Walking. These conditions are acceptable for access, but not for entrance use.
On-site windiness (zone B) - Standing to Strolling along the north side of the Site (High Road).	**On-site windiness (zone B)** - Standing to Strolling along the north side of the Site (High Road), suitable for access.

Figure 65 OS10 Wind mechanisms - high density scenario

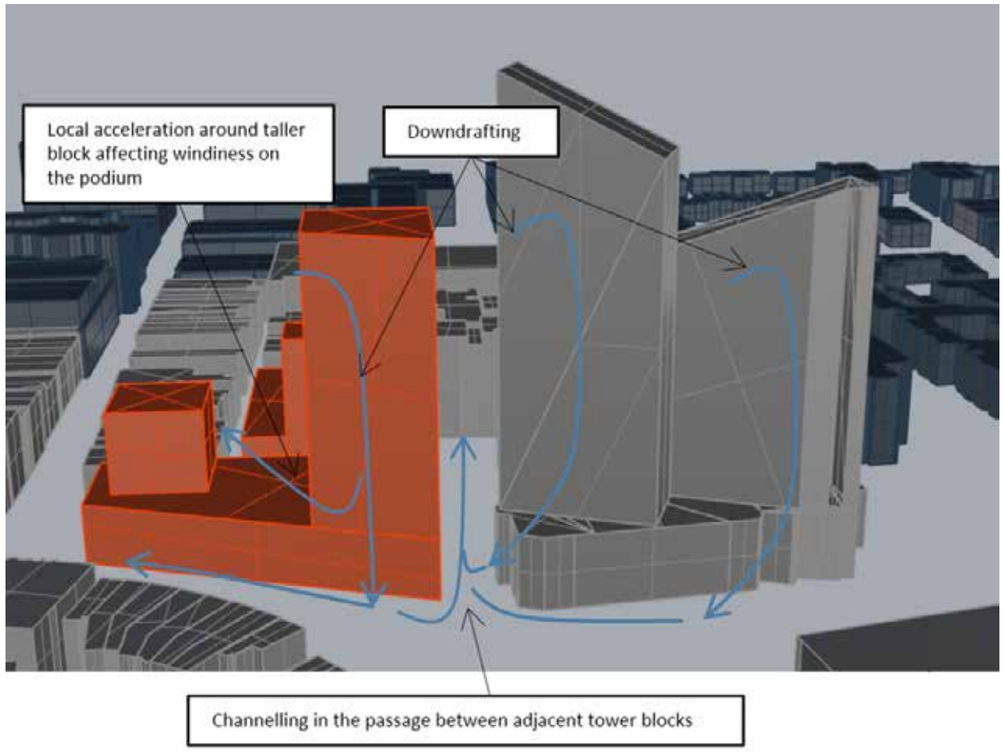


Figure 63 OS10 Wind microclimate assessment - baseline

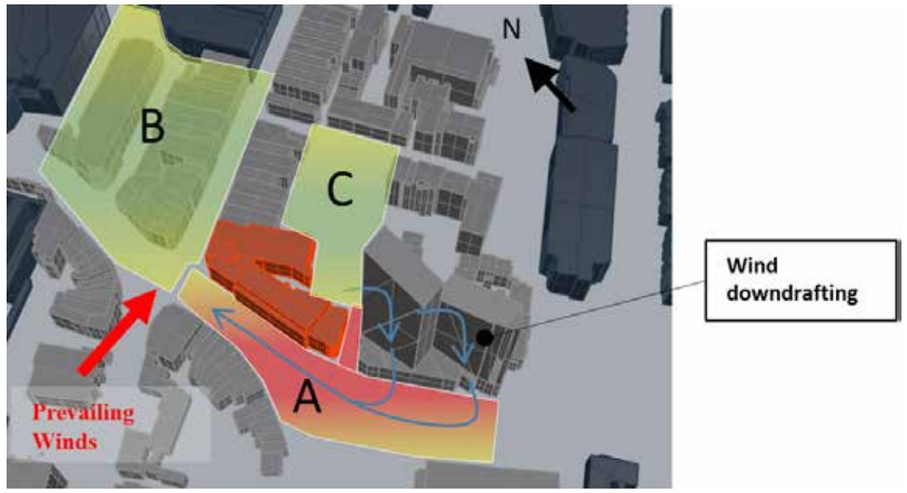


Figure 64 OS10 Wind microclimate assessment - high density scenario

Daylighting study

6.5.15 Table 7 below outlines the daylighting study comparing the baseline situation with the high density scenario for OS10, with reference to the zones illustrated on Figure 66. The findings of the study are illustrated in Figure 67.

Table 7 OS10 High density - Daylighting study

Zone	OS10 - Baseline	OS10 - High density
A	Little to no overshadowing	North of the proposed development there is negligible change in the VSC except for the buildings directly adjacent to the development. The South façade of these buildings will be completely overshadowed.
B	No overshadowing	East of Clements Road there are significant reductions in the VSC of the façade nearest the development.
C	Some overshadowing	South of Clements Lane there are significant reductions in VSC in all the North and West façades of the buildings and the North façade of the high rise towers.
D	No overshadowing	West of Winston Way and Chapel Road the buildings directly opposite from OS10 see a significant reduction in VSC.

Figure 66 OS10 Daylighting study - zones

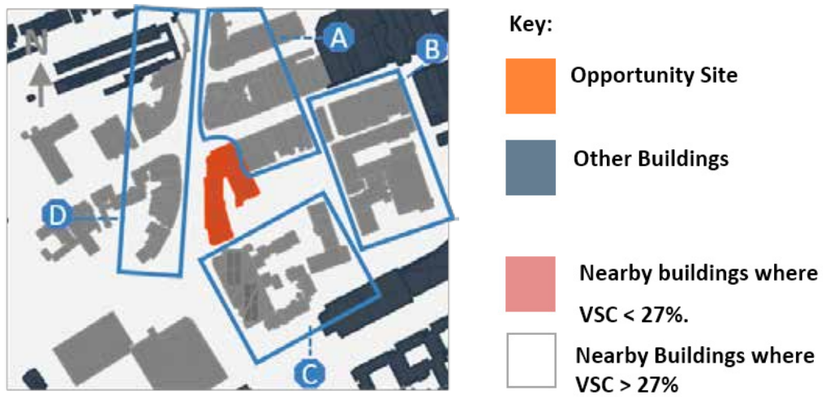
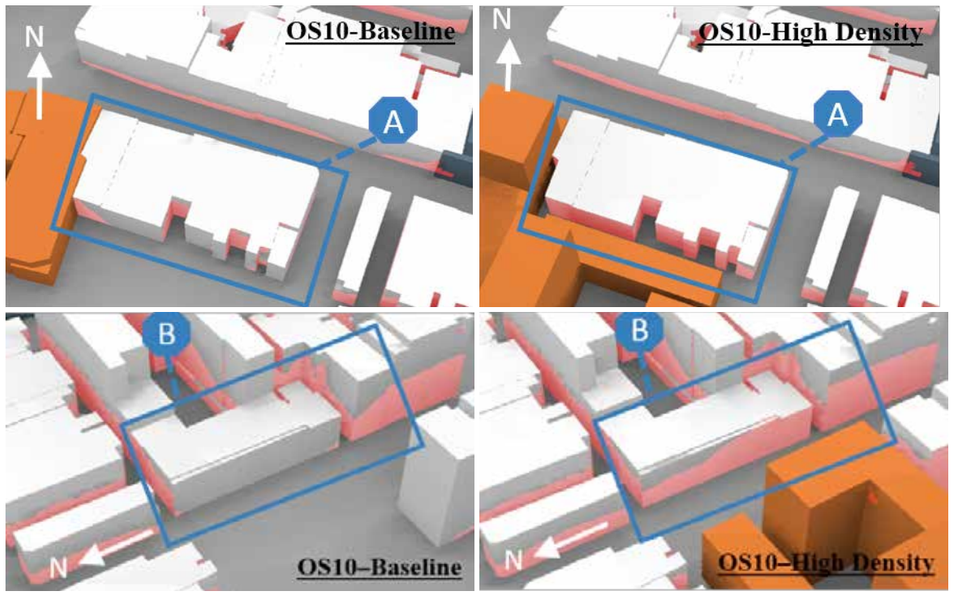
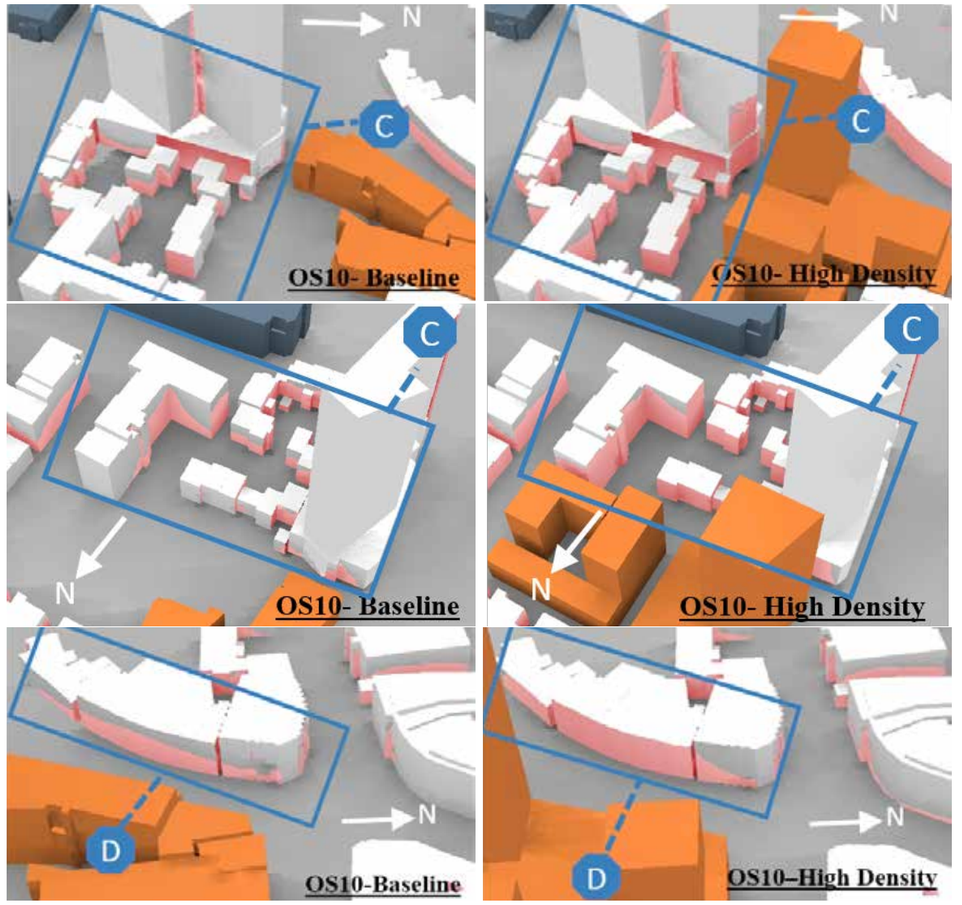


Figure 67 OS10 Daylighting study model outputs





Microclimate overview

6.5.16 The current site is likely to be windy already due to the impact of the existing high rise. Introducing the proposed development will create a 'wall' of high rise blocks which is predicted to increase windiness in the region especially along the street front and side passageway. There is also likely to be an increase in overshadowing to surrounding areas on all sides of the proposed development. However, most of these impacts are arising from the location of the tower immediately adjacent to the Pioneer Point towers and immediately on the street frontage. Moving this tower element within the plot, or as a minimum setting it back from the street so it rises above a podium could address these local shadowing and windy conditions. Furthermore, the overshadowing is mostly onto retail frontages, which is more acceptable than residential. On this basis, this level of density, with some detailed review of the plot organisation on the site, is considered acceptable in microclimate terms. Taller / denser development is likely to exacerbate the local microclimate issues and minimise the options for mitigating this. **Conclusion - density of scenario illustrates no significant impact provided appropriate mitigation is adopted in the siting of buildings in relation to potential wind and overshadowing impacts. Development beyond this scale could result in microclimate impacts which cannot be satisfactorily mitigated.**

Opportunity Site 36 - Redbridge Enterprise and Ilford Retail Park

6.5.17 This site has been selected as a good representation of a larger site within a wider area of likely regeneration and intensification at the boundary of Ilford and the Crossrail Corridor. The land use and nearby facilities support the concept of intensification of residential development. However, the site is positioned away from other existing and proposed (consented) tall building clusters, and is also not contiguous with notable civic spaces or public transport nodes. The location of the scenario is shown on Figure 68 below.

High density scenario

6.5.18 With reference to the London Plan Policy 3.4, this site is within an Urban area (i.e. located along a main arterial route) but also very close to Ilford Metropolitan Centre. Different parts of the site fall into the top two PTAL categories (2 to 3 and 4 to 6). On this basis, the high density range is from 70 to 405 u/ha. The scenario developed sits towards the upper end of this density, reflecting its location that transitions across zones. This is outlined below and illustrated on Figure 69 adjacent.

Figure 68 Opportunity Site 36 location plan

- Total site area - 1.9ha
- Potential residential units - 571
- Potential non-residential GFA - 0.28 ha
- Potential density - approx. 300 u/ha

Extent of visibility

6.5.19 The indicative extent of visibility of the scenario is shown on Figure 70. The ZTV illustrates that the proposed development would be visible from the high ground in the north-east of the borough and other large open spaces such as Valentines Park, Seven Kings Park. Unlike OS10, the location and massing of this scenario would not be overly visible from the River Roding valley.

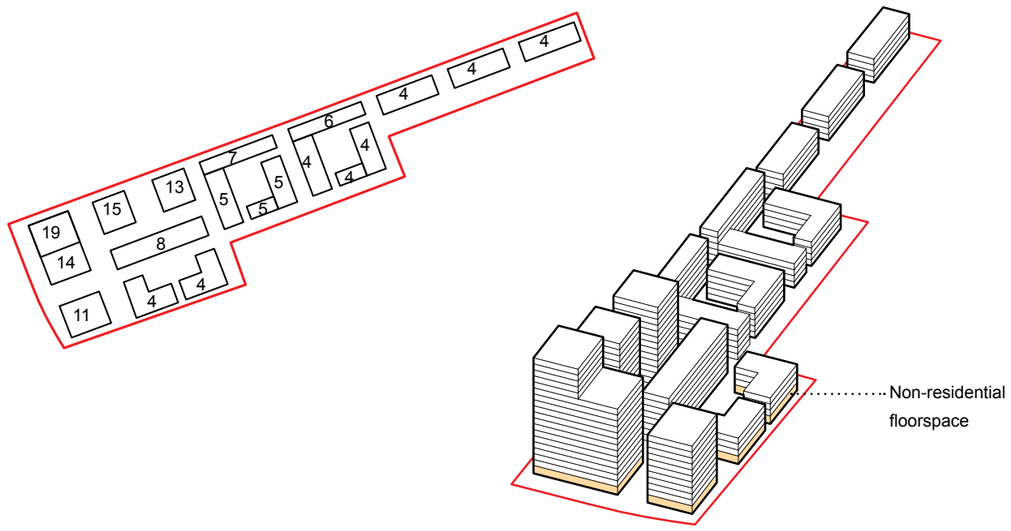
6.5.20 Within Ilford Metropolitan Centre, the taller elements of the scenario would be relatively visible except for where it would be obscured by other tall building developments. Visibility would extend east, largely limited to the railway corridor and buildings backing immediately onto this.

6.5.21 The tallest parts of the scenario would also be likely to be visible from localised other parts of the borough including Wanstead District Centres and the northern part of South Woodford.

Townscape and visual analysis

6.5.22 **Strategic views** - This scenario would be apparent in the background of strategic view 2 and the distant background of views 5 and 9. The scenario would form a

Figure 69 OS36 - High density scenario massing and layout with building storeys



middle-ground feature of view 7 from the elevated rooftop position. In each of these strategic views, this scenario would be viewed alongside other consented tall buildings that, when built, will form a distinct cluster marking Ilford Metropolitan Centre. **Conclusion - density of scenario illustrates no significant impact.**

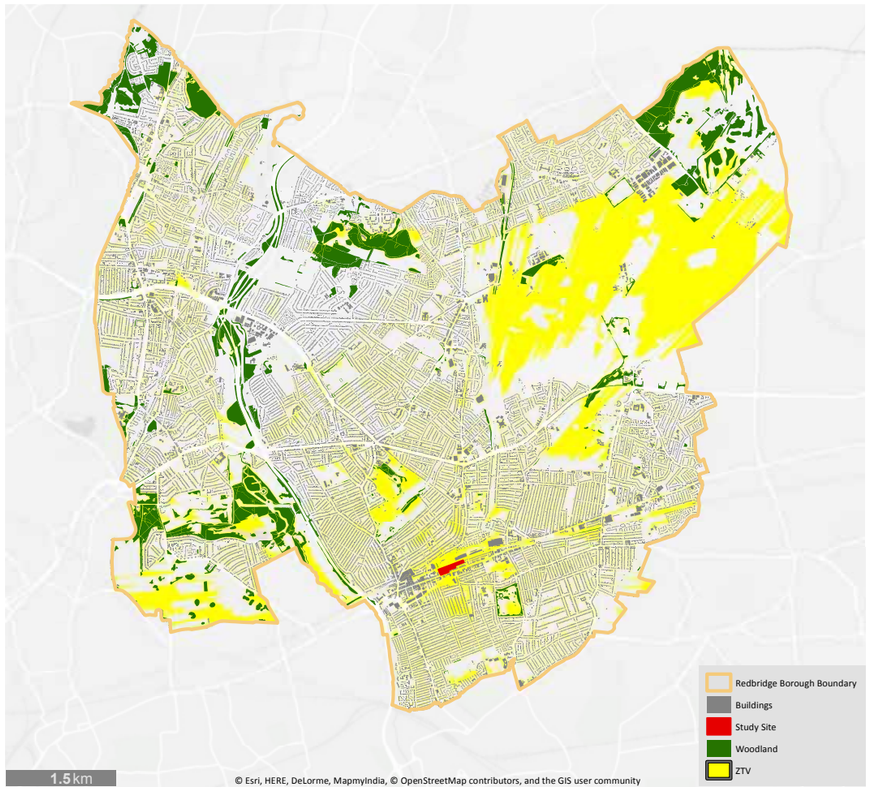
6.5.23 **Local townscape and views** - Within the immediate townscape context this building would sit alongside other consented tall buildings with relatively large footprints denoting the eastern end of the High Road. However, the current townscape is considerably lower in density and height than the western extent close to Ilford Station. The plot is bounded by the railway line and would therefore provide some gradation in building heights from the infrastructure corridor to the surrounding urban context. Overall, within this setting, this scenario is considered to have an adverse effect on the local townscape character. **Conclusion - scenario at density tested would result in a significant impact on the character of the local townscape.**

6.5.24 **Heritage assets** - With the exception of one statutorily listed building to the south of the plot, this scenario is not in close proximity to any notable heritage assets. **Conclusion - density of scenario illustrates no significant impact.**

6.5.25 **Response to site constraints** - Building heights respond to the presence of the railway corridor to the north, and plot orientation responds to the linear nature of the site and access arrangements. **Conclusion - density of scenario illustrates no significant impact.**

6.5.26 **Relationship to adjacent developments** - The scenario locates the main height towards the railway line, providing a buffer to other development, and towards the western end of the plot closest to amenities and facilities of Ilford Metropolitan Centre. The scenario steps down in height towards less dense development to the south and east. **Conclusion - scenario at density tested would result in a significant impact on the setting of nearby residential developments.**

Figure 70 OS36 - High density scenario zone of theoretical visibility

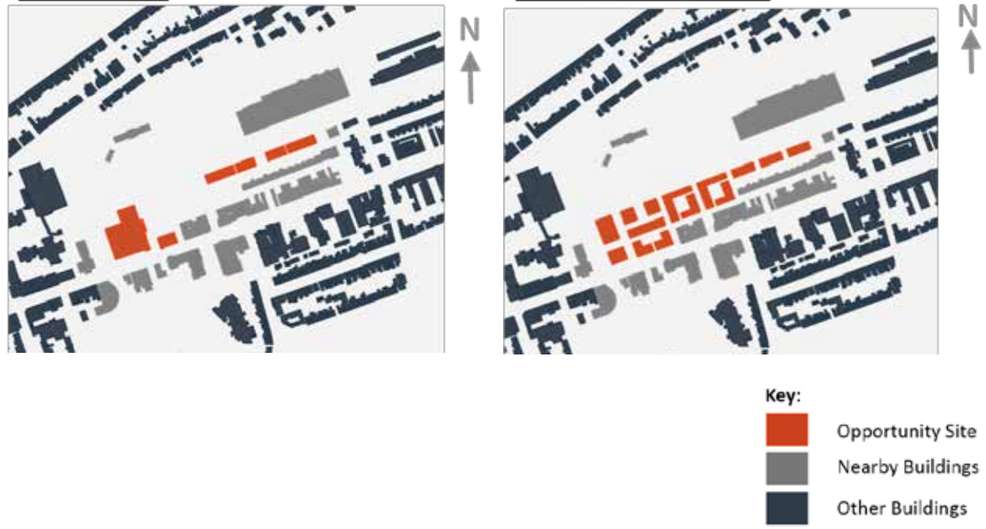


Microclimate analysis

Introduction

6.5.27 Figure 71 indicates the built form of the baseline (existing) case and the proposed scenario, set within its immediate context. Within this study area zones have been defined to allow for a wind microclimate assessment and a daylighting study to be undertaken, presented below.

Figure 71 OS36 Baseline and scenario built form



Wind microclimate assessment

6.5.28 Table 8 below outlines the wind microclimate assessment, comparing the baseline situation with the high density scenario for OS36, with reference to the zones illustrated on Figure 72 (baseline) and Figure 73 (high density scenario). Figure 74 provides further detail on the anticipated wind movements.

Table 8 OS36 High density - Wind microclimate assessment

OS36 - Baseline	OS36 - High density scenario
On-site windiness - Standing with possibility of Strolling along the west side of the Site facing Griggs Approach (suitable for access use)	**On-site windiness** - The taller blocks to the north-west side of the Site may promote local wind mechanisms such as down drafting or funnelling affecting windiness within the immediate areas at ground level. Local windiness will be upper Standing to Strolling, marginally higher than existing. Conditions within other areas of the Site will remain similar to the existing.
Off-site windiness (zones A, B, C) - Standing (suitable for entrance and access use).	**Off-site windiness (zones A, B, C)** - Wind conditions will remain similar to existing.
On-site windiness (zone D) - Strolling (suitable for access use).	**On-site windiness (zone D)** - Wind conditions will remain similar to existing.

Figure 74 OS36 Wind mechanisms - high density scenario

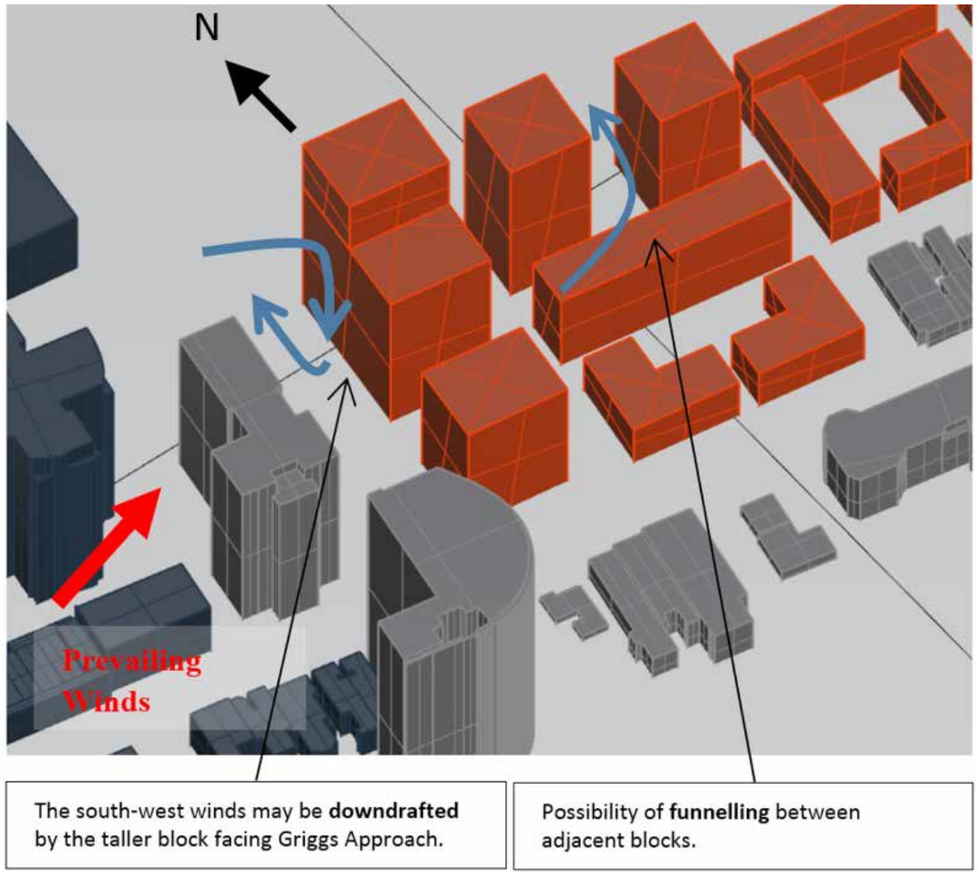
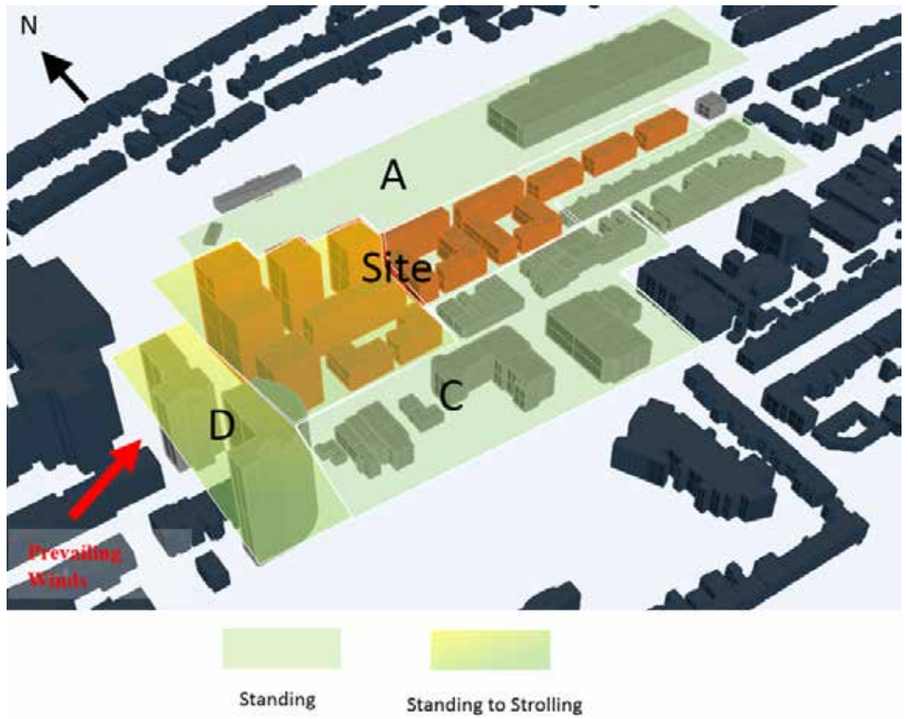


Figure 72 OS36 Wind microclimate assessment - baseline

Figure 73 OS36 Wind microclimate assessment - high density scenario



Daylighting study

6.5.29 Table 9 below outlines the daylighting study comparing the baseline situation with the high density scenario for OS36, with reference to the zones illustrated on Figure 75. The findings of the study are illustrated in Figure 76.

Table 9 OS36 High density - Daylighting study

Zone	OS36 - Baseline	OS36 - High density
A	Little to no overshadowing	The area around the railway tracks is sufficiently removed from the proposed development such that there are no changes to the VSC for these buildings for this scenario.
B	Little to no overshadowing	VSC is reduced significantly on the north façade for the high rise scenario.
C	Little to no overshadowing	The area on the High Rd and Thompson Close shows a significant overshadowing of the North façade of buildings for the high density scenario.
D	The two high rises on Griggs Approach are overshadowed by a road bridge.	For the high rise scenario the VSC on the East façade is reduced for higher floors most likely above the level of the road bridge.

Figure 75 OS36 Daylighting study - zones

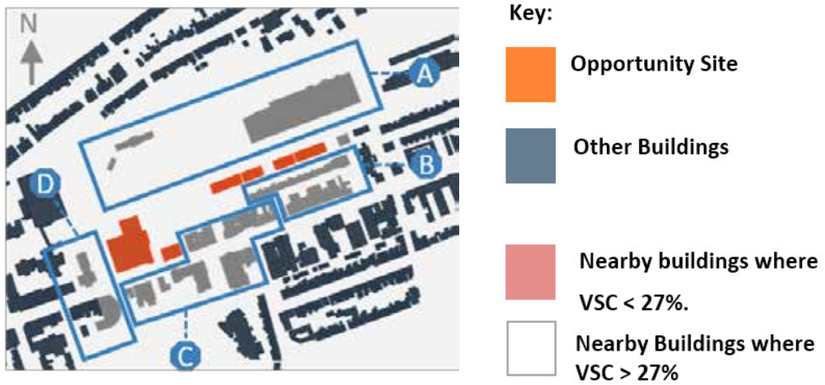
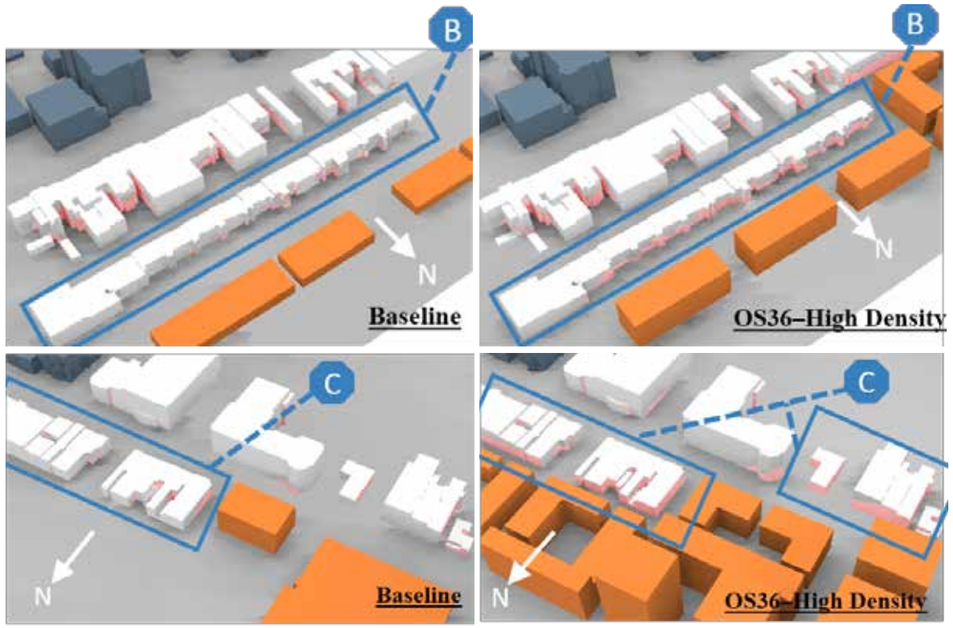
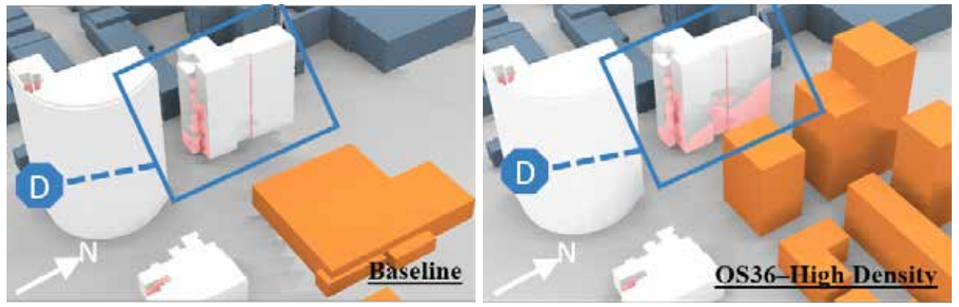


Figure 76 OS36 Daylighting study model outputs





Microclimate overview

6.5.30 The microclimate assessment indicates that there will be no increase in adverse pedestrian wind to the surrounding area due to the proposed high density development. There is also little increase in overshadowing for most of the surrounding area for the high rise scenarios. Some closely located buildings on the southern side may experience some increased overshadowing. **Conclusion - density of scenario illustrates no significant impact.**

Medium density scenario

6.5.31 As highlighted above, this site is within an Urban area but also very close to Ilford Metropolitan Centre; and different parts of the site fall into the top two PTAL categories (2 to 3 and 4 to 6). On this basis, the medium density range is from 55 to 355 u/ha. The scenario developed sits within this density range to test an alternative building typology at the site. This is outlined below and illustrated on Figure 77 below.

- Total site area - 1.9ha
- Potential residential units - 366
- Potential non-residential GFA - 0.23 ha
- Potential density - approx. 192 u/ha

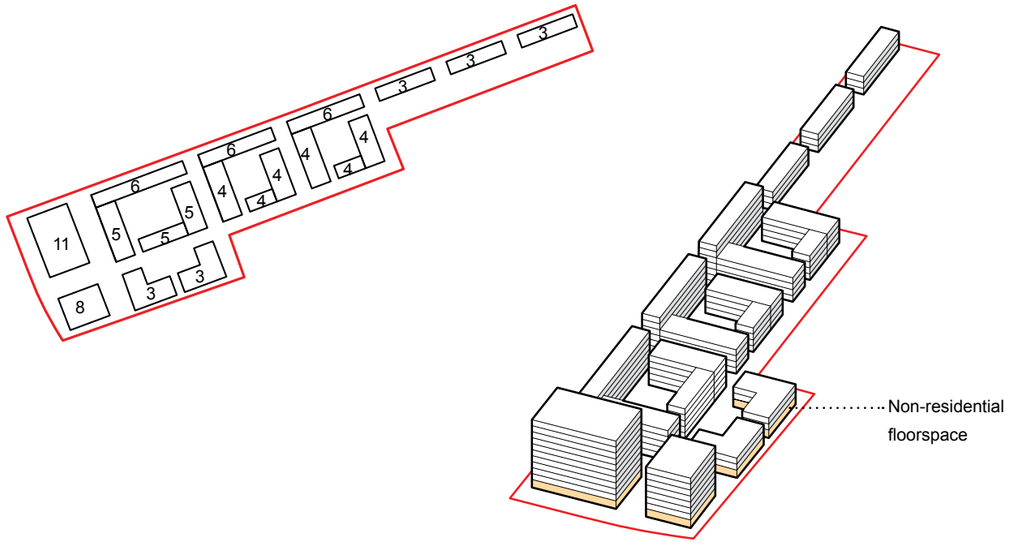
Extent of visibility

6.5.32 The indicative extent of visibility of the scenario is shown on Figure 78. The ZTV illustrates that visibility of the medium density scenario would be substantially reduced from the high ground in the north-east of the borough in addition to the other large open spaces such as Valentines Park, Seven Kings Park.

6.5.33 Within Ilford Metropolitan Centre and the Crossrail Corridor, the taller elements of the scenario would only be apparent from the eastern parts of Ilford, and parts of the railway corridor such as around Seven Kings.

6.5.34 Visibility of the scheme from elsewhere in the borough would be highly restricted.

Figure 77 OS36 - Medium density scenario massing and layout with building storeys



Analysis

6.5.35 **Strategic views** - This medium density scenario would remain visible in the background of view 2, but would no longer be apparent within viewpoints 5 or 9. In view 7 the scenario would remain a feature within the middle-ground of the view, although the reduced building heights, particularly the tower element in the north-west corner, would reduce its overall impact. **Conclusion - density of scenario illustrates no significant impact.**

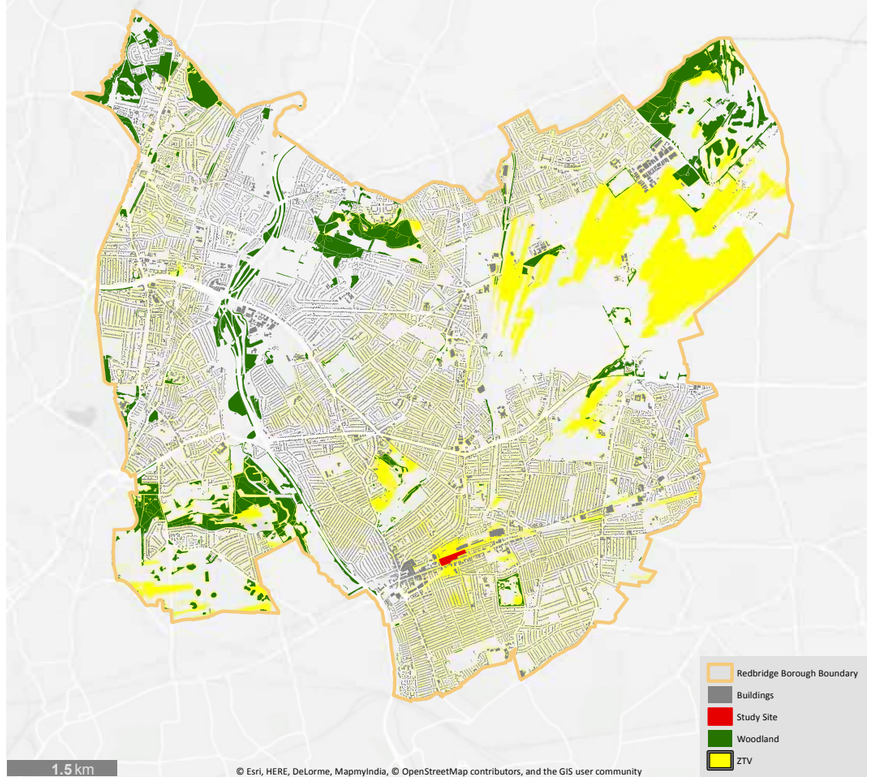
6.5.36 **Local townscape and views** - The medium density scenario with lower building heights better integrates with the townscape context at this eastern end of Ilford. The tallest elements would be slightly lower than other nearby consented schemes. **Conclusion - density of scenario illustrates no significant impact.**

6.5.37 **Heritage assets** - As before. **Conclusion - density of scenario illustrates no significant impact.**

6.5.38 **Response to site constraints** - As before. **Conclusion - density of scenario illustrates no significant impact.**

6.5.39 **Relationship to adjacent developments** - Largely as before, with the taller tower element in the north-west of the scenario better interacting with the surrounding

Figure 78 OS36 - Medium density scenario zone of theoretical visibility



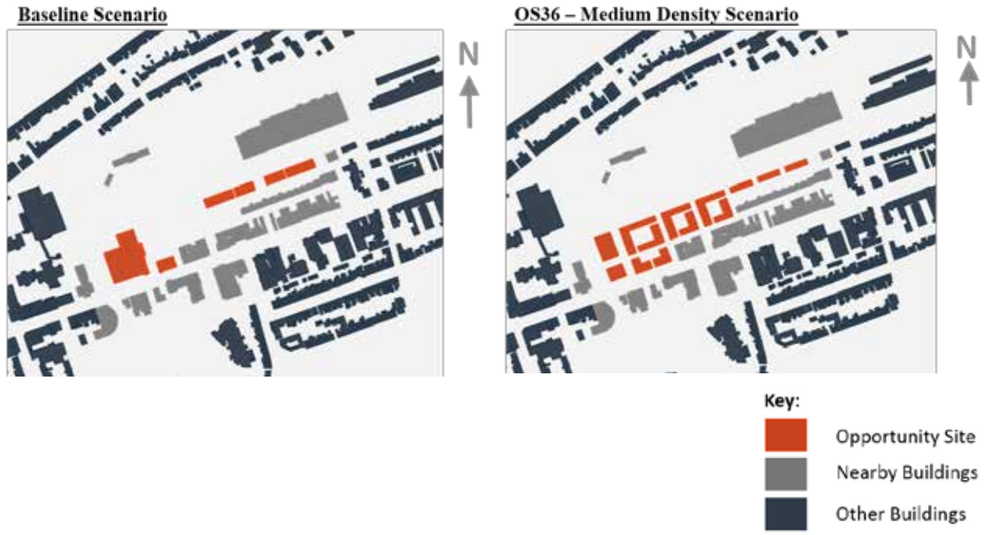
buildings along this street. **Conclusion - density of scenario illustrates no significant impact.**

Microclimate analysis

Introduction

6.5.40 Figure 79 indicates the built form of the baseline (existing) case and the proposed scenario, set within its immediate context. Within this study area zones have been defined to allow for a wind microclimate assessment and a daylighting study to be undertaken, presented below.

Figure 79 OS36 Baseline and scenario built form



Wind microclimate assessment

6.5.41 Table 10 below outlines the wind microclimate assessment, comparing the baseline situation with the high density scenario for OS36, with reference to the zones illustrated on Figure 80 (baseline) and Figure 81 (medium density scenario).

Table 10 OS36 Medium density - Wind microclimate assessment

OS36 - Baseline	OS36 - Medium density scenario
On-site windiness - Standing with possibility of Strolling along the west side of the Site facing Griggs Approach (suitable for access use)	**On-site windiness** - The arrangement and wind exposure of the proposed building blocks is not expected to significantly enhance windiness at the Site. Wind conditions will remain similar to existing. Conditions within the proposed courtyard spaces will be 'Sitting' to 'Standing' (acceptable for external seating in good weather conditions).
Off-site windiness (zones A, B, C) - Standing (suitable for entrance and access use).	**Off-site windiness (zones A, B, C)** - Wind conditions will remain similar to existing.
On-site windiness (zone D) - Strolling (suitable for access use).	**On-site windiness (zone D)** - Wind conditions will remain similar to existing.

Figure 80 OS36 Wind microclimate assessment - baseline

Figure 81 OS36 Wind microclimate assessment - medium density scenario

Daylighting study

6.5.42 Table 11 below outlines the daylighting study comparing the baseline situation with the medium density scenario for OS36, with reference to the zones illustrated on Figure 82. The findings of the study are illustrated in Figure 83.

Table 11 OS36 Medium density - Daylighting study

Zone	OS36 - Baseline	OS35 - Medium density
A	Little to no overshadowing	The area around the railway tracks is sufficiently removed from the proposed development such that there are no changes to the VSC for these buildings for this scenario.
B	Little to no overshadowing	Buildings on Oaklands Park Ave show negligible reduction in daylighting levels with the medium rise scenario.
C	Little to no overshadowing	The area on the High Rd and Thompson Close shows a significant overshadowing of the North façade of buildings for the medium scenario.
D	The two high rises on Griggs Approach are overshadowed by a road bridge.	No further impact for the medium rise scenario.

Figure 82 OS36 Daylighting study - zones

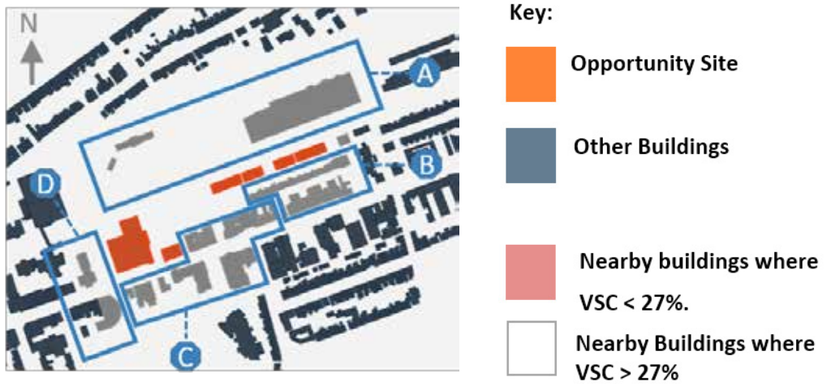
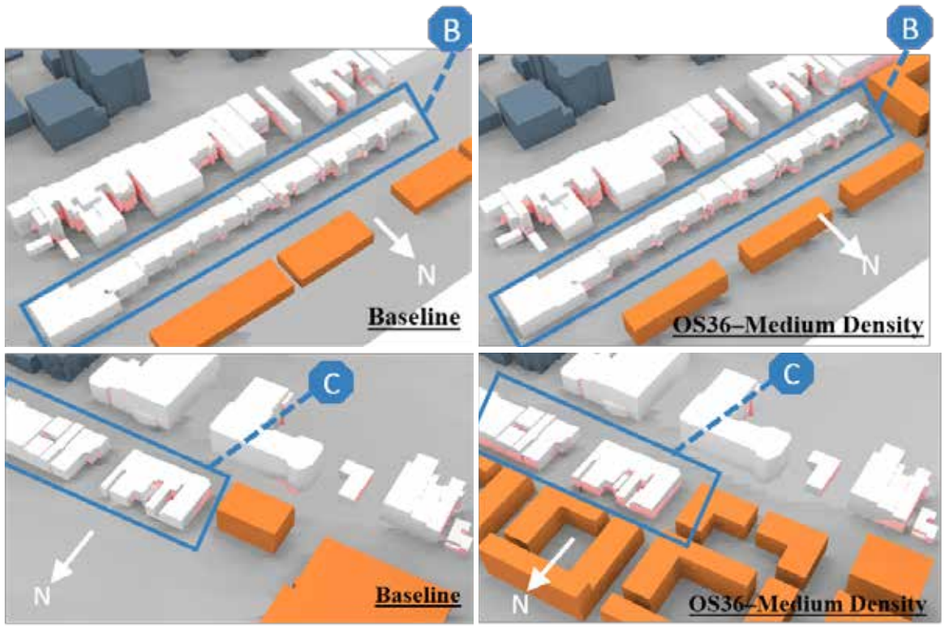
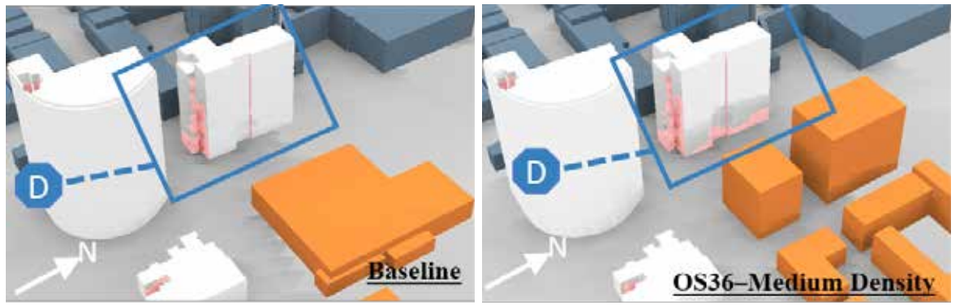


Figure 83 OS36 Daylighting study model outputs





Microclimate overview

6.5.43 The microclimate assessment indicates that there will be no increase in adverse pedestrian wind to the surrounding area due to the proposed medium density development. There is also little increase in overshadowing for most of the surrounding area for the medium rise scenarios. **Conclusion - density of scenario illustrates no significant impact.**

Opportunity Site 117 - Station Estate

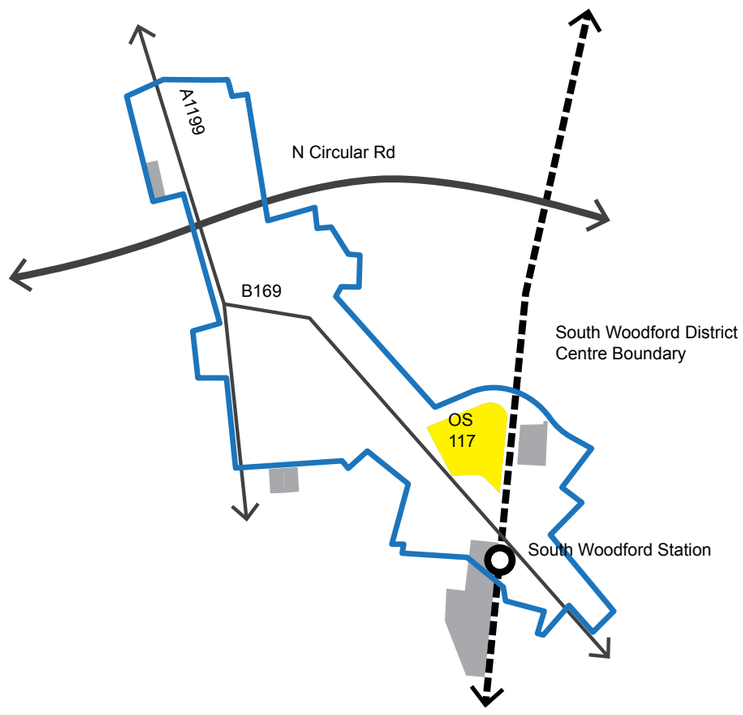
6.5.44 This site has been selected as a good representation of a larger site running alongside the London Underground Central line and surrounded by The Viaduct (an elevated structure). The site is in close proximity to South Woodford station, and the other surrounding land uses suggest that intensification would be possible in the area. However, South Woodford contains very few tall buildings, and even these are only slighter taller than the typical vernacular of two to three storey properties. Furthermore, there are no tall building applications granted in the area. The location of the scenario is shown on Figure 84 below.

High density scenario

6.5.45 With reference to the London Plan Policy 3.4, this site is within an Urban area (i.e. located along a main arterial route) and in an area with the highest PTAL levels (4 to 6). On this basis, the high density range is from 70 to 260 u/ha. The scenario developed sits towards the upper end of this density, outlined below and illustrated on Figure 85 adjacent.

- Total site area - 0.77ha
- Potential residential units - 186
- Potential non-residential GFA - 0.0ha
- Potential density - approx. 241 u/ha

Figure 84 Opportunity Site 117 location plan



Extent of visibility

6.5.46 The indicative extent of visibility of the scenario is shown on Figure 86. The ZTV illustrates that the proposed development would generally only be visible from open areas within the west of the borough, particularly along the River Roding valley.

6.5.47 Within South Woodford, elements of the scheme would be visible along linear corridors down roads and the railway line, with isolated glimpses extending to locations to the north and east.

Analysis

6.5.48 **Strategic views** - This scenario would not generally be apparent within any of the strategic views, with the exception of sitting within the foreground of viewpoint 5 from the elevated Viaduct structure. **Conclusion - density of scenario illustrates no significant impact.**

6.5.49 **Local townscape and views** - While South Woodford generally has an absence of tall buildings, this particular plot is located along the main street (where some intermittent height already exists), adjacent to the railway line and also adjacent to the elevated Viaduct structure (which serves to reduce the perceived height of any development). Within some local street views, this scenario would be apparent as one of the tallest elements in the local area, although the considerations listed above suggests that this would not necessarily be detrimental to the existing townscape. **Conclusion - scenario at density tested would result in a significant impact on the character of the local townscape.**

Figure 85 OS117 - High density scenario massing and layout with building storeys

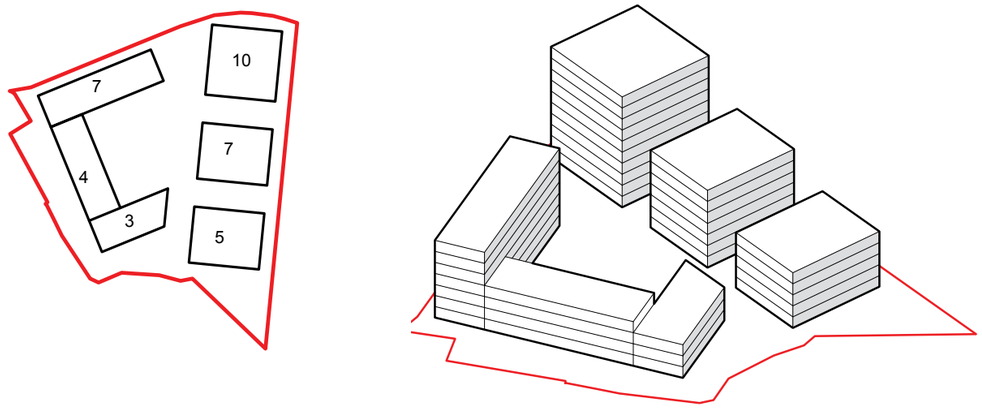
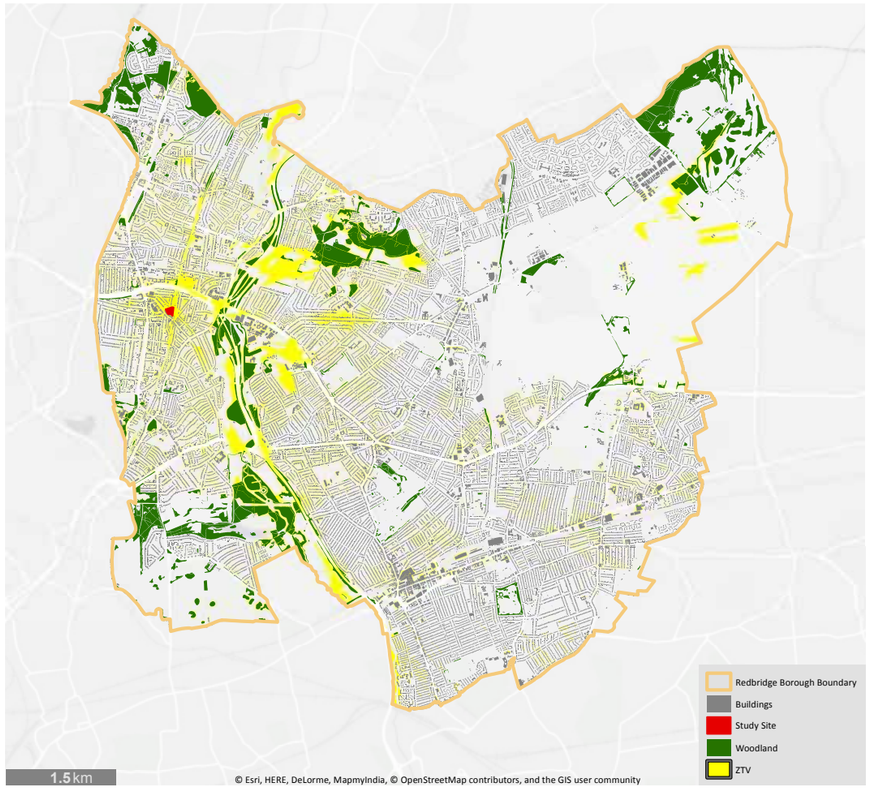


Figure 86 OS117 - High density scenario zone of theoretical visibility



6.5.50 **Heritage assets** - This scenario is not located close to any built heritage assets other than one locally listed building. In respect of this, the lowest building heights have been proposed to positively respond to the adjacent urban grain. However, the setting of George Lane Conservation Area to the north would be adversely affected by the presence of the tallest parts of the development, despite the intervening presence of the elevated Viaduct. **Conclusion - scenario at density tested would result in a significant impact on the setting of George Lane Conservation Area.**

6.5.51 **Response to site constraints** - The presence of the railway line and particularly the elevated Viaduct structure influences the development of the scenario through providing the opportunity for additional height uncommon within this part of the borough. **Conclusion - density of scenario illustrates no significant impact.**

6.5.52 **Relationship to adjacent developments** - With The Viaduct to the north, the only boundary this plot particularly shares with other buildings is to the south-west. In this respect, the building heights step down to close to the level of existing properties to ensure a smooth transition. **Conclusion - density of scenario illustrates no significant impact.**

Microclimate analysis

Introduction

6.5.53 Figure 87 indicates the built form of the baseline (existing) case and the proposed scenario, set within its immediate context. Within this study area zones have been defined to allow for a wind microclimate assessment and a daylighting study to be undertaken, presented below.

Figure 87 OS117 Baseline and scenario built form

Wind microclimate assessment

6.5.54 Table 12 below outlines the wind microclimate assessment, comparing the baseline situation with the high density scenario for OS117, with reference to the zones illustrated on Figure 88 (baseline) and Figure 89 (high density scenario) overleaf.

Figure 88 OS117 Wind microclimate assessment - baseline

Figure 89 OS117 Wind microclimate assessment - high density scenario

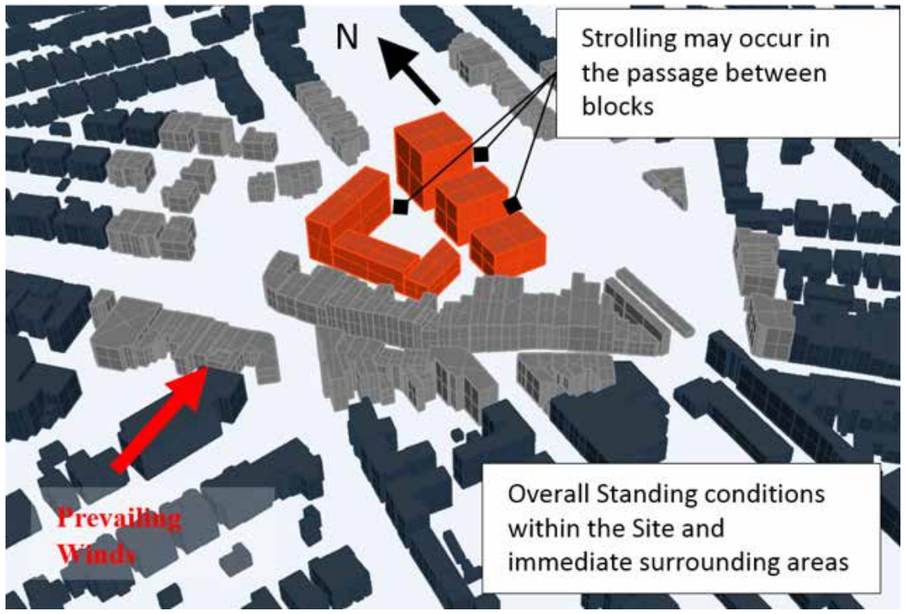


Table 12 OS117 High density - Wind microclimate assessment

OS117 - Baseline	OS117 - High density scenario
On-site windiness - Standing (suitable for entrance and access use).	**On-site windiness** - The arrangement of the proposed blocks is not likely to significantly enhance windiness at the Site. Overall, wind conditions will remain within Standing, suitable for entrance and access use. Areas of Strolling are likely to occur in the passage between blocks.
Off-site windiness - Standing (suitable for entrance and access use).	**Off-site windiness** - Wind conditions will remain similar to existing.

Daylighting study

6.5.55 Table 13 below outlines the daylighting study comparing the baseline situation with the high density scenario for OS117, with reference to the zones illustrated on Figure 90. The findings of the study are illustrated in Figure 91.

Figure 90 OS117 Daylighting study - zones

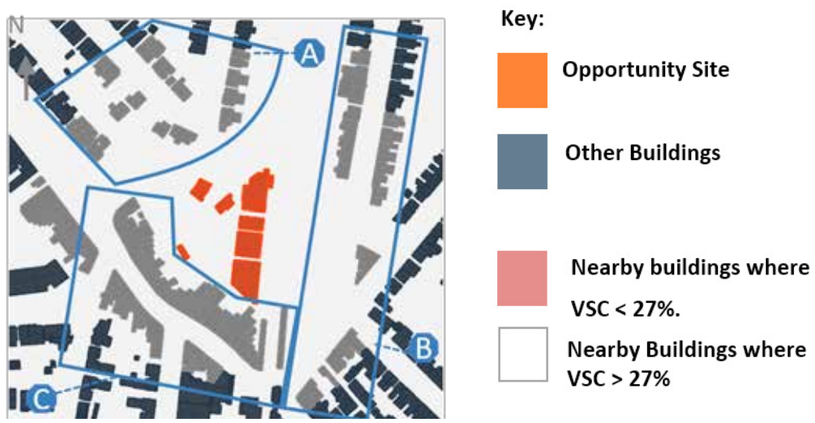


Figure 91 OS117 Daylighting study model outputs

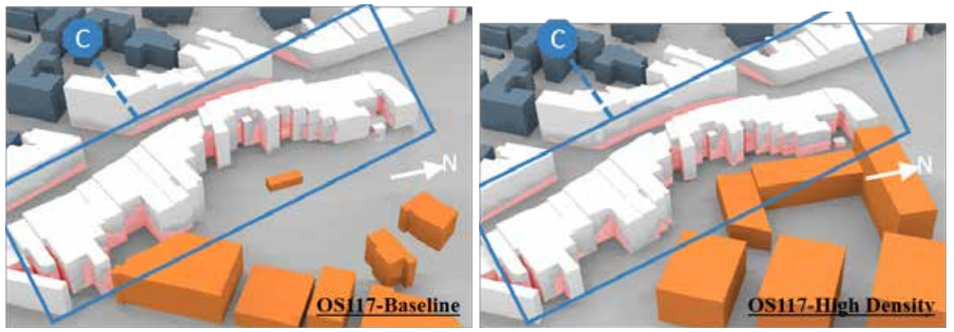


Table 13 OS117 High density - Daylighting study

Zone	OS117 - Baseline	OS117 - High density
A	Overshadowed by The Viaduct	The area north-west of the site is far removed and separated from the site by the Viaduct. There is negligible impact on VSC level.
B	No overshadowing	The area to the East of the site is far removed and separated by the railway tracks and the Viaduct. There is no impact on VSC levels on the buildings in Zone B.
C	No overshadowing	The buildings South West of the site on George Lane are the most affected due to their proximity to the site. In particular the buildings on the Northern most block of Zone C show a significant reduction in VSC for the high density scenario.

Microclimate overview

6.5.56 In terms of wind there may be some small wind acceleration in passageways making them areas for strolling for the high density scenario. Most surrounding buildings are located far enough away from the site to avoid being significantly overshadowed for this scenario. **Conclusion - density of scenario illustrates no significant impact.**

Medium density scenario

6.5.57 As highlighted above, this site is within an Urban area with the highest PTAL levels (4 to 6). On this basis, the medium density range is from 55 to 225 u/ha. The scenario developed sits within the upper limit of this density range to test an alternative building typology at the site and also reflective of its position next to the elevated viaduct structure. This is outlined below and illustrated on Figure 92 below.

- Total site area - 0.77ha
- Potential residential units - 149
- Potential non-residential GFA - 0.0ha
- Potential density - approx. 193 u/ha

Extent of visibility

6.5.58 The indicative extent of visibility of the scenario is shown on Figure 93. Overall, visibility across the borough is very similar to the high density scenario, which is generally localised to linear corridors within South Woodford, and open spaces along the River Roding valley.

Analysis

6.5.59 **Strategic views** - As before. **Conclusion - density of scenario illustrates no significant impact.**

6.5.60 **Local townscape and views** - As before, the specific location of this plot means it has the greatest capacity for buildings taller than the surrounding context. Within this medium density scenario, the built form within the south-east of the site

Figure 92 OS117 - Medium density scenario massing and layout with building storeys

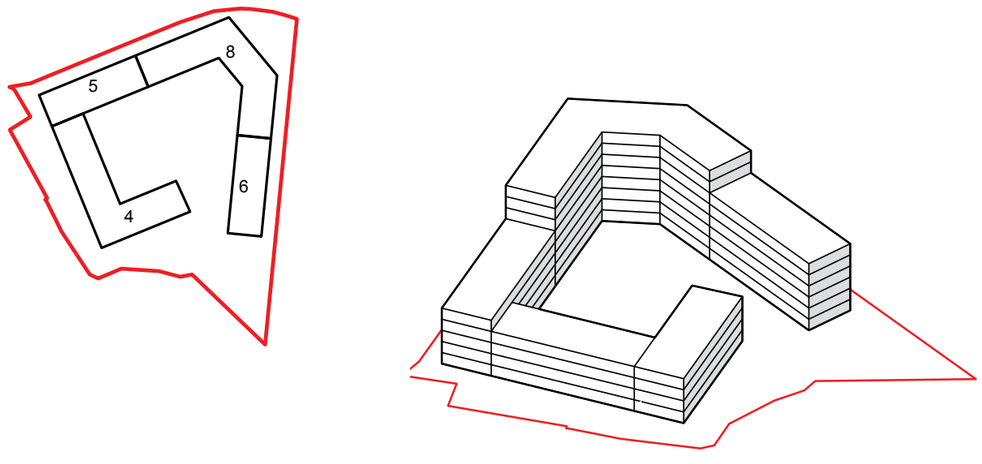
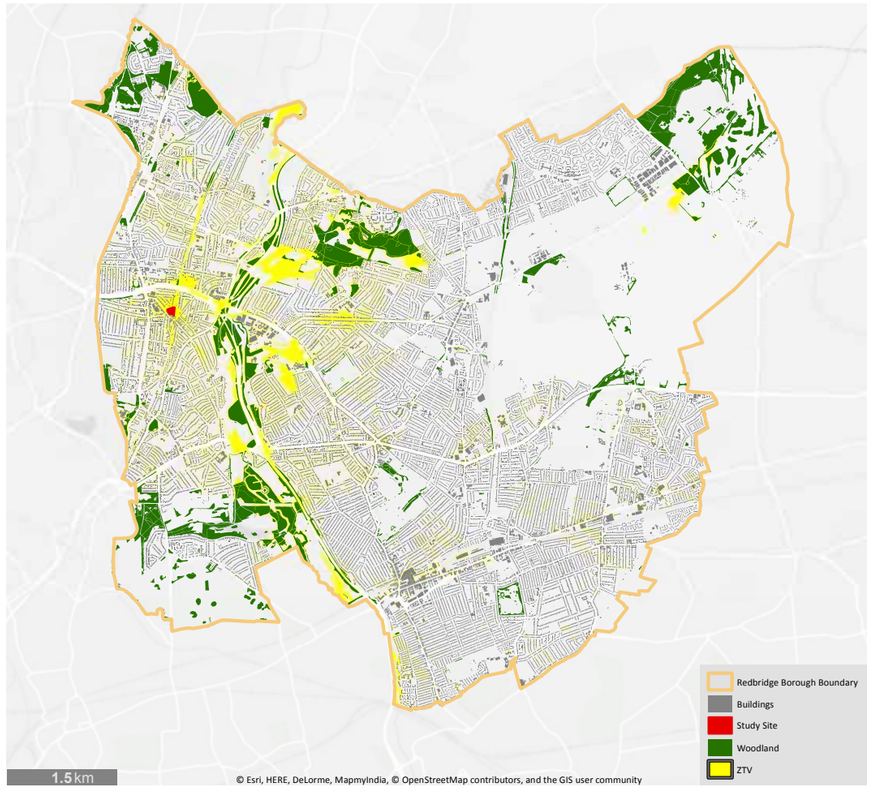


Figure 93 OS117 - Medium density scenario zone of theoretical visibility



remains largely the same as the high density scenario, providing an appropriate gradation of height towards adjacent properties. The taller elements would be viewed clearly against the elevated Viaduct structure, with less height protruding above. **Conclusion - density of scenario illustrates no significant impact.**

6.5.61 **Heritage assets** - The lower building heights would have minimal impact on the setting of the nearby George Lane Conservation Area. **Conclusion - density of scenario illustrates no significant impact.**

6.5.62 **Response to site constraints** - As before. **Conclusion - density of scenario illustrates no significant impact.**

6.5.63 **Relationship to adjacent developments** - As before. **Conclusion - density of scenario illustrates no significant impact.**

Microclimate analysis

Introduction

6.5.64 Figure 94 indicates the built form of the baseline (existing) case and the proposed scenario, set within its immediate context. Within this study area zones have been defined to allow for a wind microclimate assessment and a daylighting study to be undertaken, presented below.

Figure 94 OS117 Baseline and scenario built form

Wind microclimate assessment

6.5.65 Table 14 below outlines the wind microclimate assessment, comparing the baseline situation with the high density scenario for OS117, with reference to the zones illustrated on Figure 95 (baseline) and Figure 96 (medium density scenario) overleaf.

Table 14 OS117 Medium density - Wind microclimate assessment

OS117 - Baseline	OS117 - Medium density scenario
On-site windiness - Standing (suitable for entrance and access use).	**On-site windiness** - The arrangement of the proposed blocks is not likely to enhance windiness at the Site. Conditions will remain similar to existing.
Off-site windiness - Standing (suitable for entrance and access use).	**Off-site windiness** - Wind conditions will remain similar to existing.

Figure 95 OS117 Wind microclimate assessment - baseline

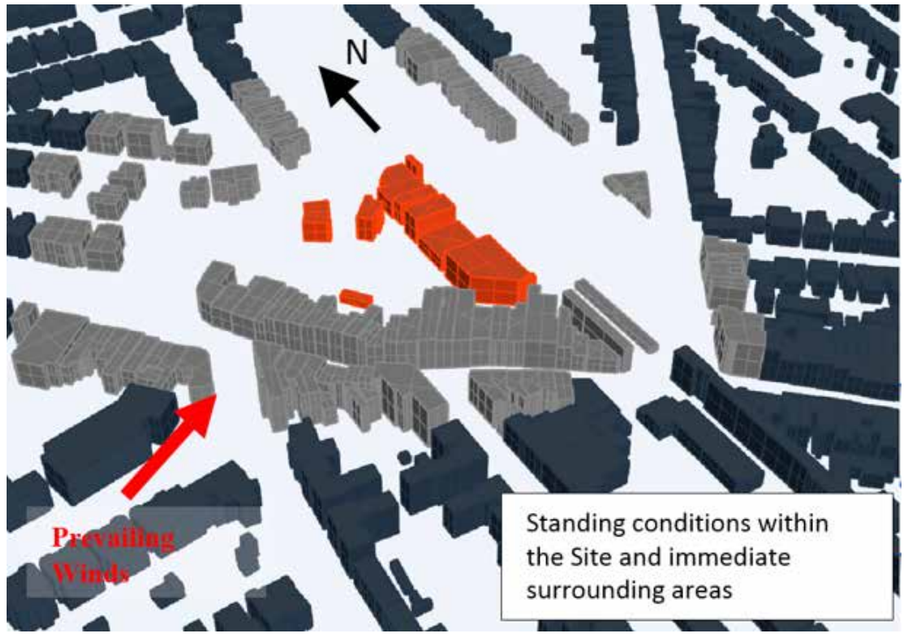
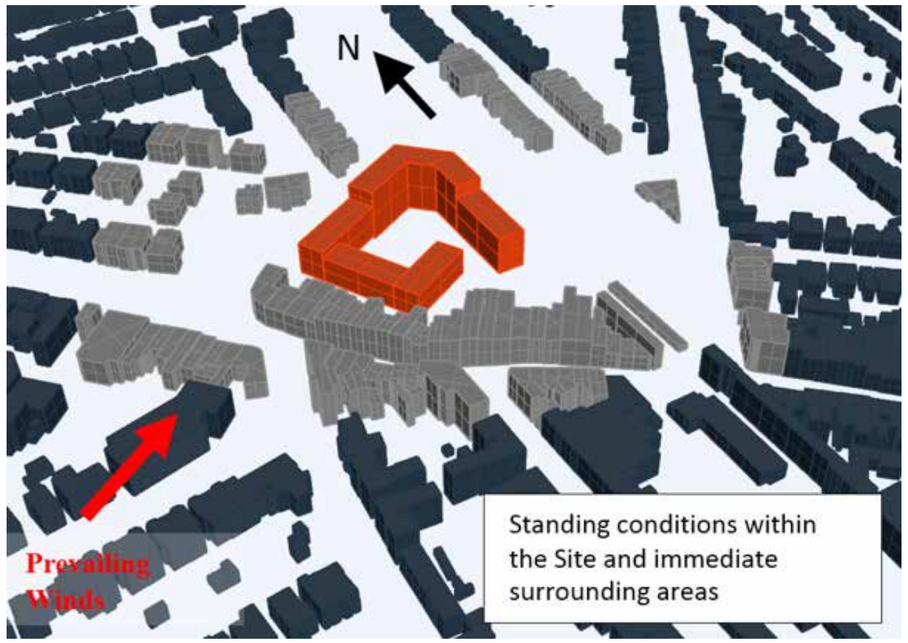


Figure 96 OS117 Wind microclimate assessment - medium density scenario



Daylighting study

6.5.66 Table 15 below outlines the daylighting study comparing the baseline situation with the medium density scenario for OS117, with reference to the zones illustrated on Figure 97. The findings of the study are illustrated in Figure 98.

Table 15 OS117 Medium density - Daylighting study

Zone	OS117 - Baseline	OS117 - Medium density
A	Overshadowed by The Viaduct	The area north-west of the site is far removed and separated from the site by the Viaduct. There is negligible impact on VSC level.
B	No overshadowing	The area to the East of the site is far removed and separated by the railway tracks and the Viaduct. There is no impact on VSC levels on the buildings in Zone B.
C	No overshadowing	The buildings South West of the site on George Lane are the most affected due to their proximity to the site. In particular the buildings on the Northern most block of Zone C show a significant reduction in VSC for the medium density scenario.

Figure 97 OS117 Daylighting study - zones

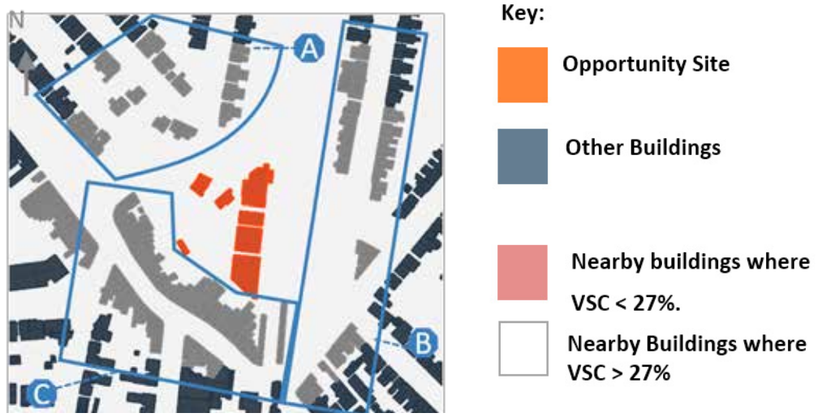
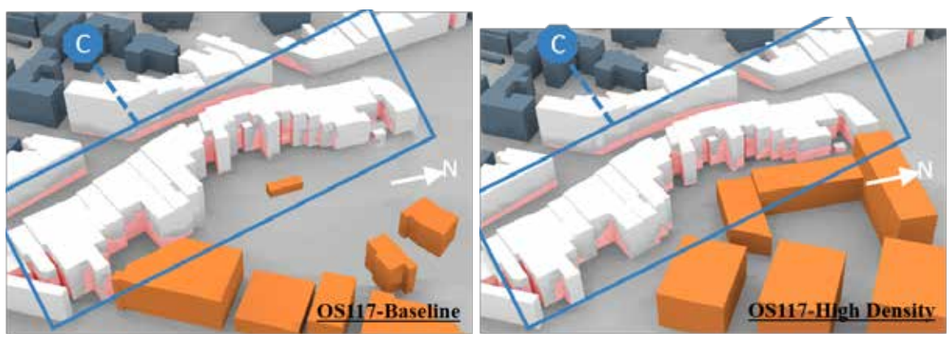


Figure 98 OS117 Daylighting study model outputs



Microclimate overview

6.5.67 In terms of wind there is no adverse impact for the medium scenario. Most surrounding buildings are located far enough away from the site to avoid being significantly overshadowed for this scenario. **Conclusion - density of scenario illustrates no significant impact.**

Opportunity Sites 67 and 70 - Tesco 822 High Road and Goodmayes Retail Centre

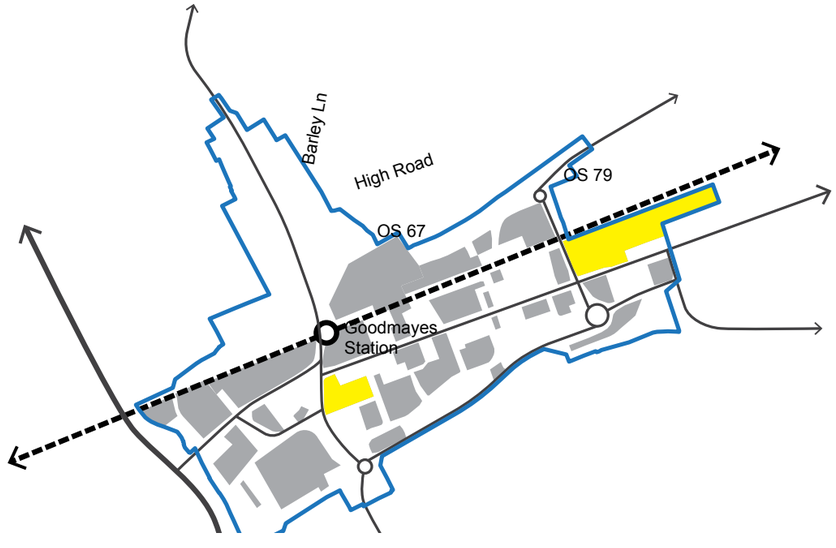
6.5.68 This site has been selected as a major potential regeneration site along the Crossrail corridor, incorporating two Opportunity Sites as set out in the Local Plan. The scenarios have also taken into account the buildings immediately adjacent to Barley Lane, which are not included within the boundary of the Opportunity Site but represent obvious areas for development with Goodmayes Station immediately adjacent to them, particularly in the context of Crossrail beginning. The location of the scenario is shown on Figure 99 below.

High density scenario

6.5.69 With reference to the London Plan Policy 3.4, this site is within an Urban area (i.e. located along a main arterial route) and in an area with the highest PTAL levels (4 to 6). On this basis, the high density range is from 70 to 260 u/ha. The scenario developed sits towards the upper end of this density, outlined below and illustrated on Figure 100 adjacent.

- Total site area - 7 ha
- Potential residential units - 1673
- Potential non-residential GFA - 0.5 ha
- Potential density - approx. 240 u/ha

Figure 99 Opportunity Sites 67 & 70 location plan



Extent of visibility

6.5.70 The indicative extent of visibility of the scenario is shown on Figure 101. The ZTV illustrates that the proposed development would be visible from the high ground in the north-east of the borough and other large open spaces including Seven Kings and western parts of Valentines Park.

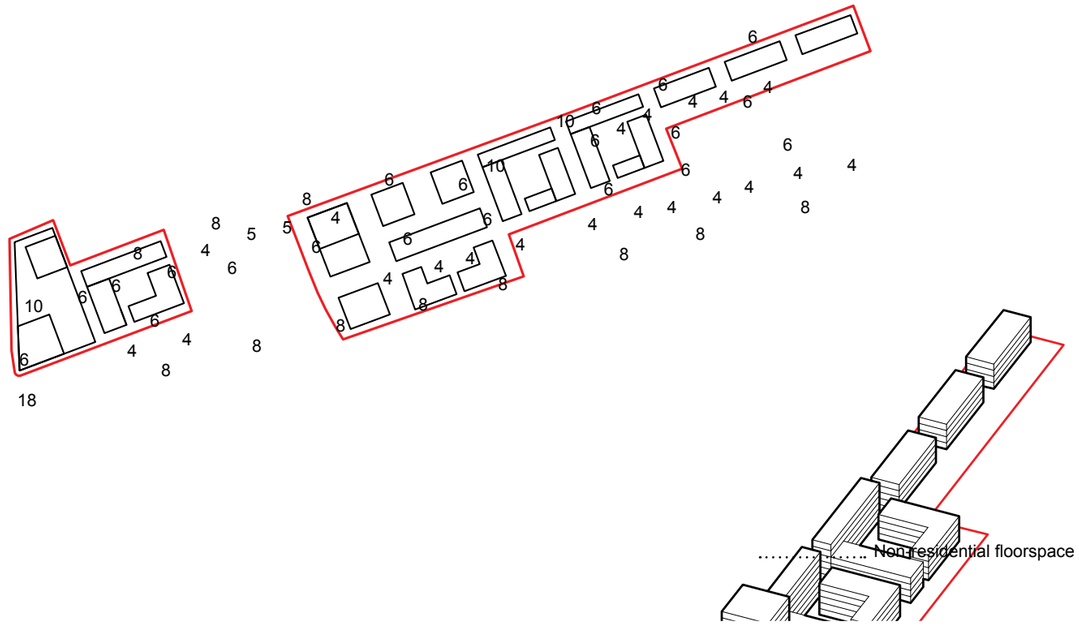
6.5.71 Visibility of the scenario would extend along the Crossrail Corridor to the eastern extents of Ilford Metropolitan Centre. Within the wider borough, and particularly west of the River Roding, the proposed building heights would generally not be apparent.

Analysis

6.5.72 **Strategic views** - This scenario would be apparent in the distant background of strategic view 5, and clearly visible in the backgrounds of views 7 and 8 - particularly the tower element at Goodmayes Station. It is situated further east than most tall building applications and existing tall buildings along this corridor, and would therefore represent a change to the townscape character of the area when viewed from these locations. Within the strategic views, the overall density of the development is not overly apparent, with attention focused on the tall tower elements, particularly at Goodmayes Station. **Conclusion - density of scenario illustrates no significant impact.**

6.5.73 **Local townscape and views** - As noted above, this scenario would represent a substantial transformation of this particular part of the Crossrail Corridor,

Figure 100 OS67&70 - High density scenario massing and layout with building storeys

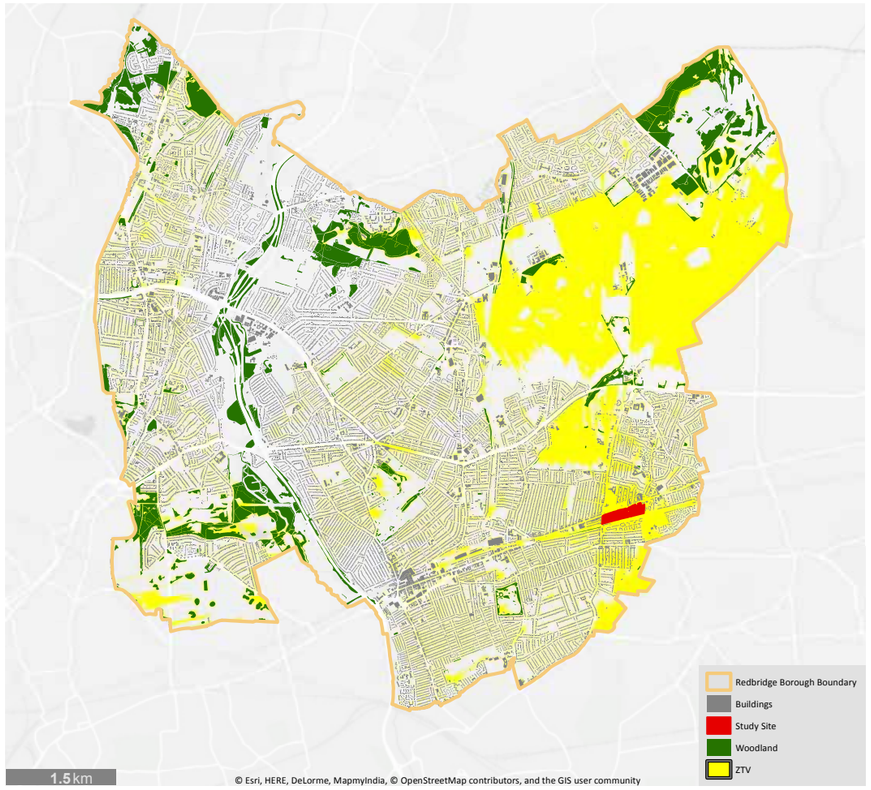


focused around Goodmayes Station. The existing character of large retail sheds and extensive surface car parking would be altered to dense building blocks very different in scale to the residential properties to the north and south. However, this particular plot is bounded to the north by a key road corridor and open space, and to the south by the railway line. It therefore shares few immediate boundaries with surrounding built form, lessening any impact on the existing townscape context. However, the overall consistently high density across the plot represents a significant departure from the existing urban fabric of the area, and bears little resemblance of the established residential areas beyond the immediacy of the railway corridor. On this basis, this scenario is considered to adversely affect the local character of the area. **Conclusion - scenario at density tested would result in a significant impact on the character of the local townscape.**

6.5.74 **Heritage assets** - No key heritage assets local to the scenario. **Conclusion - density of scenario illustrates no significant impact.**

6.5.75 **Response to site constraints** - The built form responds to the general access layout of the linear site, while also responding to the presence of Goodmayes station in the south-west corner of the plot (suggesting a greater density of dwellings to maximise the benefit of the high levels of accessibility to public transport. **Conclusion - density of scenario illustrates no significant impact.**

Figure 101 OS67&70 - High density scenario zone of theoretical visibility



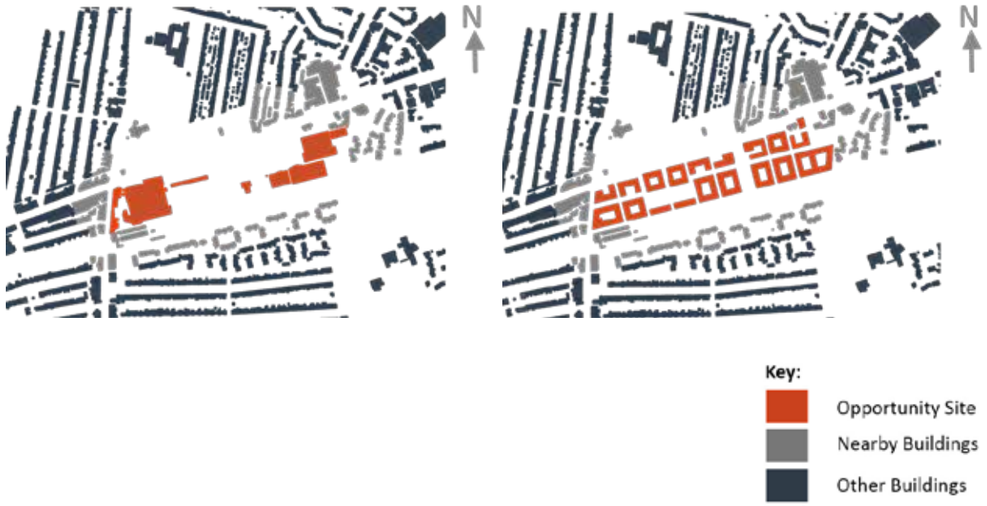
6.5.76 **Relationship to adjacent developments** - As noted above, this plot shares few boundaries with other built form, bounded by road, rail and open space. Generally, the built form steps down from key transport nodes, including Goodmayes station. However, building heights are still considerably and consistently higher than the majority of the surrounding built form. **Conclusion - scenario at density tested would result in a significant impact on the setting of nearby residential development.**

Microclimate analysis

Introduction

6.5.77 Figure 102 indicates the built form of the baseline (existing) case and the proposed scenario, set within its immediate context. Within this study area zones have been defined to allow for a wind microclimate assessment and a daylighting study to be undertaken, presented below.

Figure 102 OS67&70 Baseline and scenario built form



Wind microclimate assessment

6.5.78 Table 16 below outlines the wind microclimate assessment, comparing the baseline situation with the high density scenario for OS67&70, with reference to the zones illustrated on Figure 103 (baseline) and Figure 104 (high density scenario) overleaf. Figure 105 provides further detail on the anticipated wind movements.

Table 16 OS67&70 High density - Wind microclimate assessment

OS67&70 - Baseline	OS67&70 - High density scenario
On-site windiness - Standing to Strolling (suitable for access use).	**On-site windiness** - Overall, the arrangement of the proposed blocks is not likely to enhance existing windiness at the Site. Building blocks are generally homogeneous in height and will mutually shelter each other. Sitting conditions are likely to be achieved within the courtyards. These are likely to be usable as outdoor seating spaces in good weather conditions. The proposed blocks along the south-west side of the site, being taller than the adjacent existing buildings, will downdraft the prevailing SW winds to ground level increasing windiness along Goodmayes Road to Strolling. These conditions are acceptable for access. Entrances along this frontage may require local mitigation. Possibility of Business Walking along Goodmayes Road.
Off-site windiness - Standing (suitable for entrance and access use).	**Off-site windiness** - Windiness along Goodmayes Road is increased to Strolling. Windiness in other areas will remain similar to existing.

Figure 105 OS67&70 Wind mechanisms - high density scenario

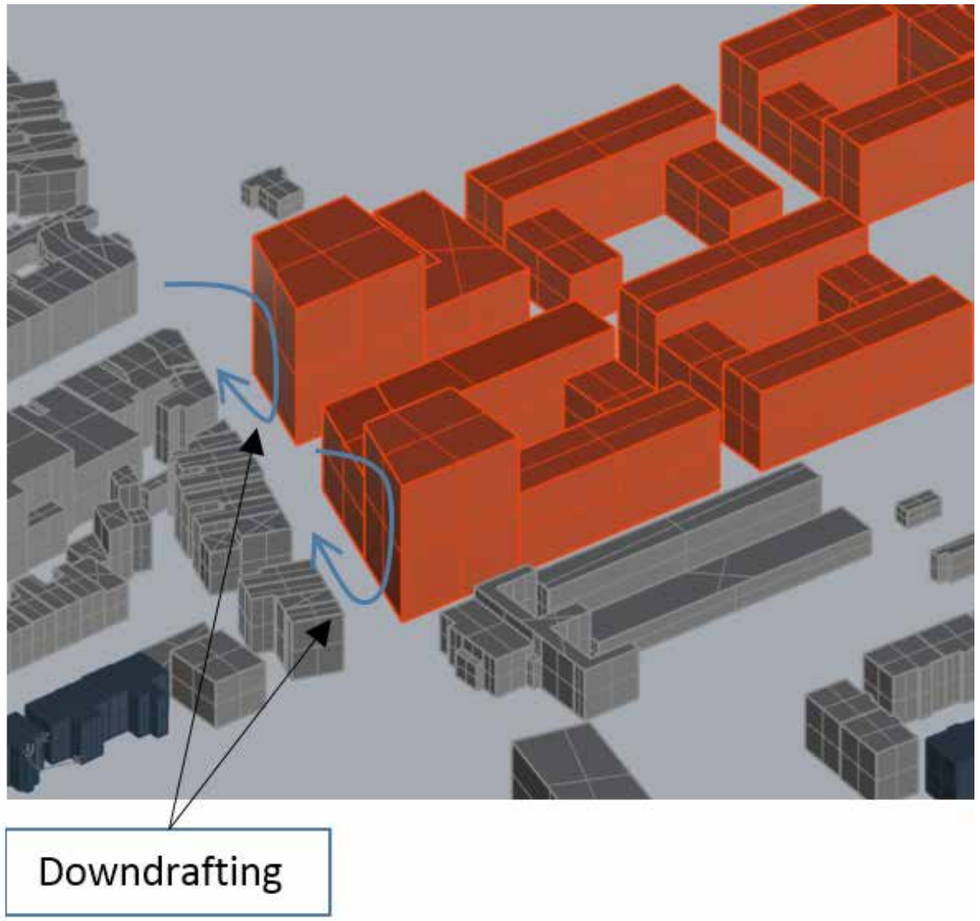
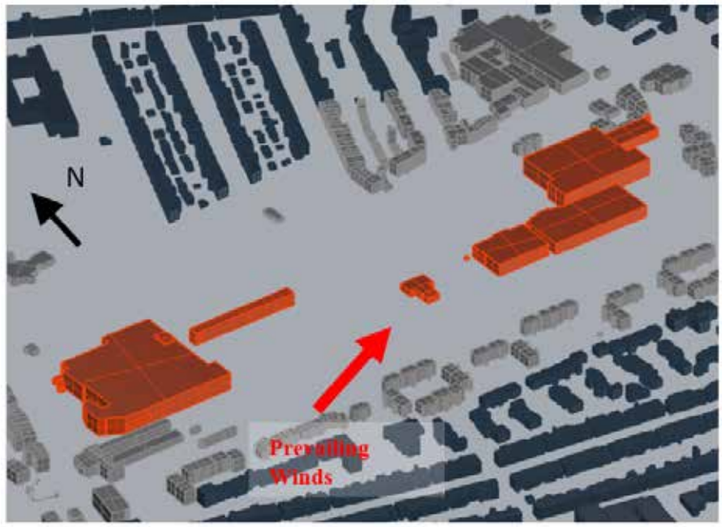


Figure 103 OS67&70 Wind microclimate assessment - baseline



Standing with areas of Strolling within the Site and immediate surroundings

Figure 104 OS67&70 Wind microclimate assessment - high density scenario

Strolling with possibility of Business Walking along Goodmayes Road

Standing to Strolling within the Site and immediate surrounding areas

Daylighting study

6.5.79 Table 17 below outlines the daylighting study comparing the baseline situation with the high density scenario for OS67&70, with reference to the zones illustrated on Figure 106. The findings of the study are illustrated in Figure 107.

Table 17 OS67&70 High density - Daylighting study

Zone	OS67&70 - Baseline	OS67&70 - High density
A	Little to no overshadowing.	The area North of the High Road has few buildings adjacent to the site and the road is wide enough to separate them from the development, such that there are negligible changes in the VSC
B	Some overshadowing of Northern most buildings.	The high density scenario reduces the VSC on the Western most buildings but increased levels of VSC are observed on the Northern most buildings.
C	Little to no overshadowing. Most overshadowing occurs in adjacent station building.	The area South of the railway tracks is far enough removed such that there no changes in VSC. The only exception is the station building on the South West corner which is mostly overshadowed in the Baseline model as well.
D	Little to no overshadowing.	The buildings West of Barley Lane are completely overshadowed by the high density scenario. The current baseline case has lower rise buildings East of Barley Lane which allow adequate daylighting to the buildings on the opposite side of the road.

Figure 106 OS67&70 Daylighting study - zones

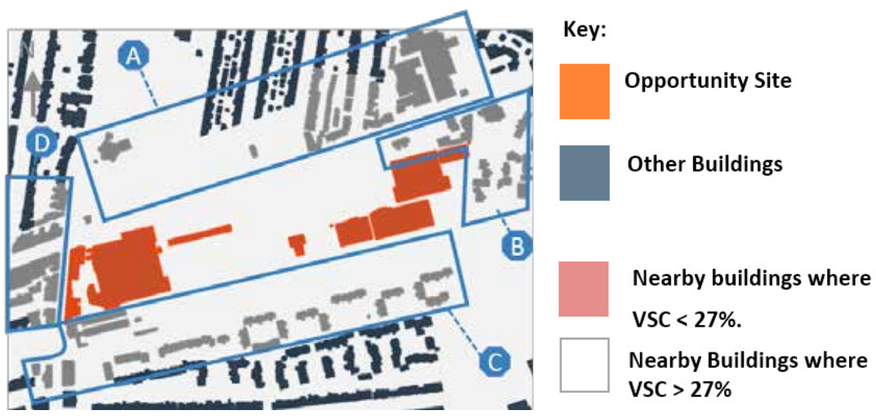
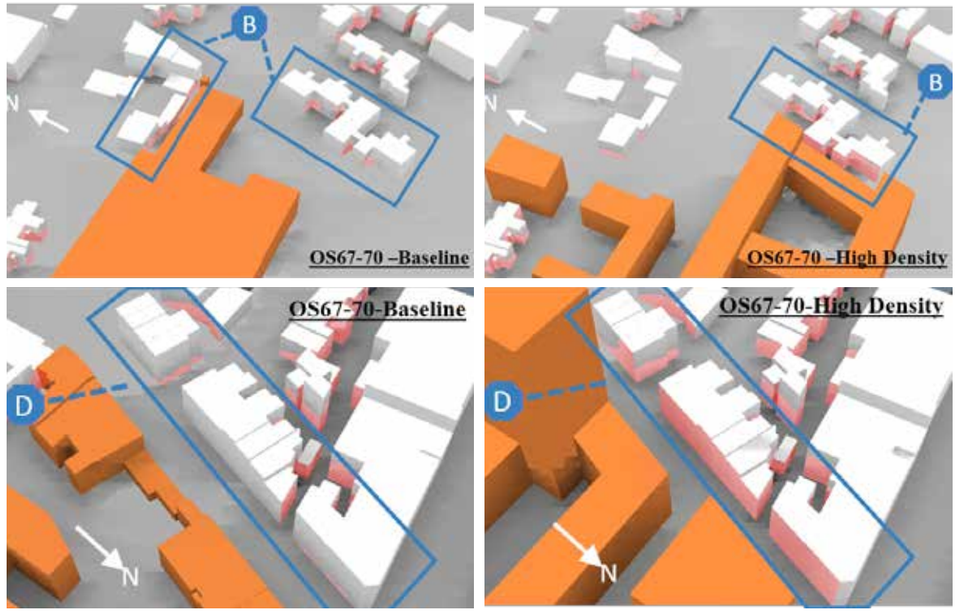


Figure 107 OS67&70 Daylighting study model outputs



Microclimate overview

6.5.80 Windiness is predicted to increase where the building height is increased (along Goodmayes road) for the high density scenario. This will increase windiness to strolling level. Homogeneity in height over the remainder of the site is likely to prevent other areas of adverse wind. Overshadowing is increased in the North East and South West corners of the site, where the new development is located close to adjacent buildings for this scenario. With some local re-distribution of the tallest elements of the development, and in-particular considering setting the towers back slightly from Goodmayes Road, the local issues of downdrafts would be likely to be addressed and overshadowing reduced. In addition, Goodmayes Road, at strolling level, would remain acceptable for most uses except entrances, and overshadowing is generally of retail units which is less problematic than residential. On this basis, this level of density should be achievable for this site pending a more detailed masterplan being developed that fully addresses microclimatic influences. **Conclusion - density of scenario illustrates no significant impact provided appropriate mitigation is adopted in the siting of buildings in relation to potential wind and overshadowing impacts.**

Medium density scenario

6.5.81 As highlighted above, this site is within an Urban area with the highest PTAL levels (4 to 6). On this basis, the medium density range is from 55 to 225 u/ha. The scenario developed sits within the upper limit of this density range to test an alternative series of building typologies and heights at the site. This is outlined below and illustrated on Figure 108 adjacent.

- Total site area - 7 ha
- Potential residential units - 1405
- Potential non-residential GFA - 0.38 ha
- Potential density - approx. 200 u/ha

Extent of visibility

6.5.82 The indicative extent of visibility of the scenario is shown on Figure 109. The ZTV illustrates that the medium density scenario would still be visible from the high ground in the north-east of the borough and Seven Kings Park, although to a lesser extent.

6.5.83 Visibility would continue to extend along the immediate rail corridor, but restricted to those buildings fronting directly onto this route. The scheme would generally not be apparent from elsewhere in the borough.

Analysis

6.5.84 **Strategic views** - This scenario would generally only be visible in the background of strategic views 7 and 8, with the built form generally seen as in keeping with the surrounding context when viewed from this distance. **Conclusion - density of scenario illustrates no significant impact.**

6.5.85 **Local townscape and views** - The lower building heights in this medium density scenario would be more compatible with the surrounding urban fabric, although this fails to take into account the location of the plot bounded by key road and rail corridors (suggesting increased levels of density than the surrounding townscape may be possible). On this basis, this scenario is a more appropriate response to the local townscape character. **Conclusion - density of scenario illustrates no significant impact.**

6.5.86 **Heritage assets** - As before. **Conclusion - density of scenario illustrates no significant impact.**

6.5.87 **Response to site constraints** - As before, although without so notably marking key transport nodes such as Goodmayes station. **Conclusion - density of scenario illustrates no significant impact.**

Figure 108 OS67&70 - Medium density scenario massing and layout with building storeys

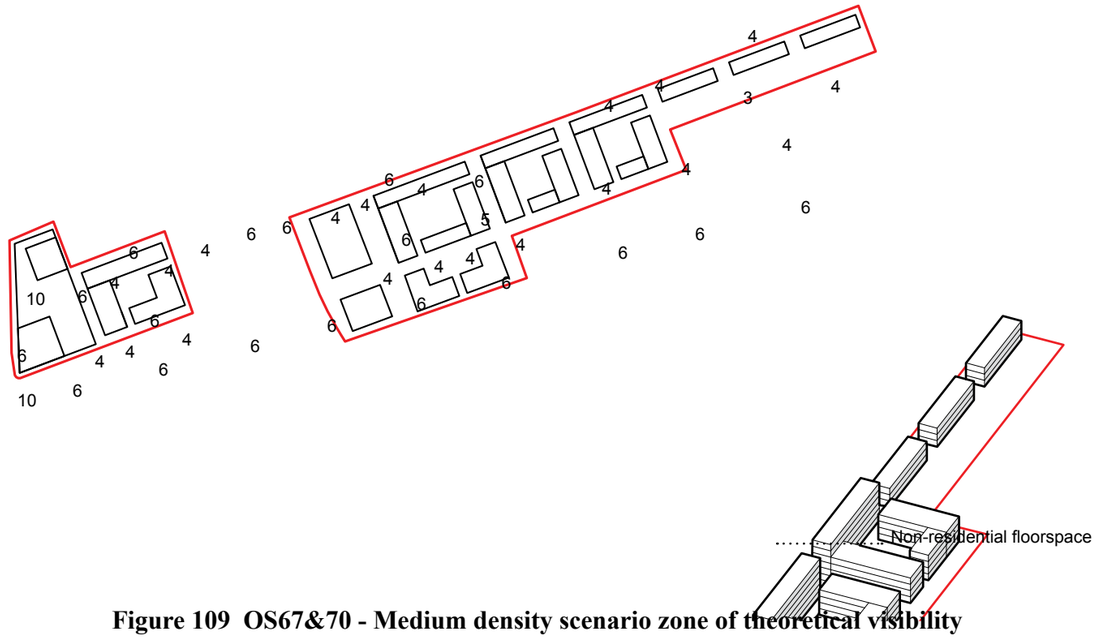
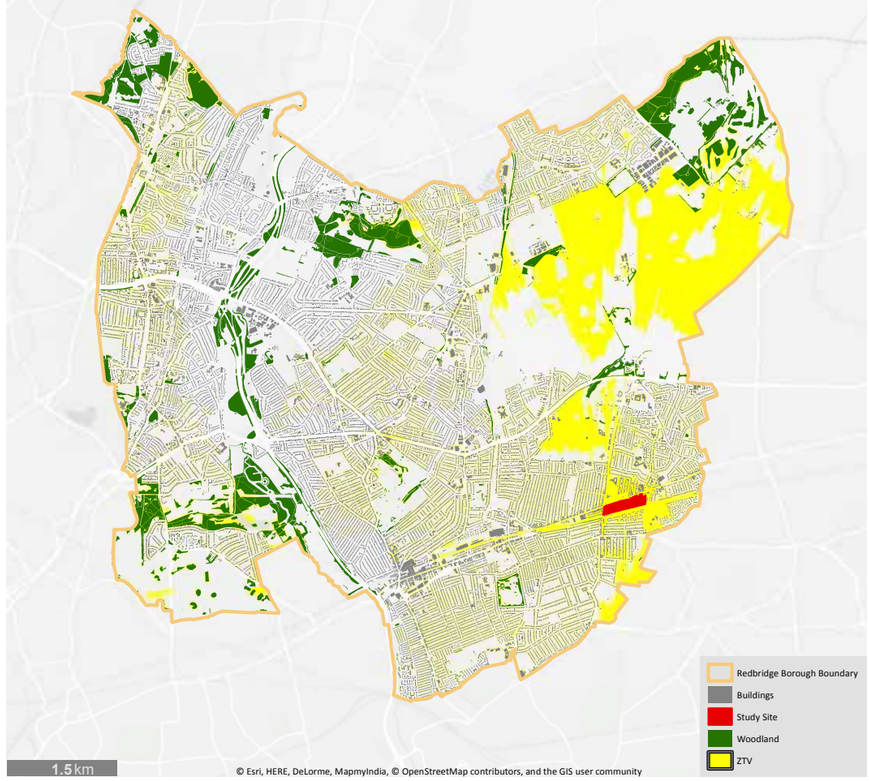


Figure 109 OS67&70 - Medium density scenario zone of theoretical visibility



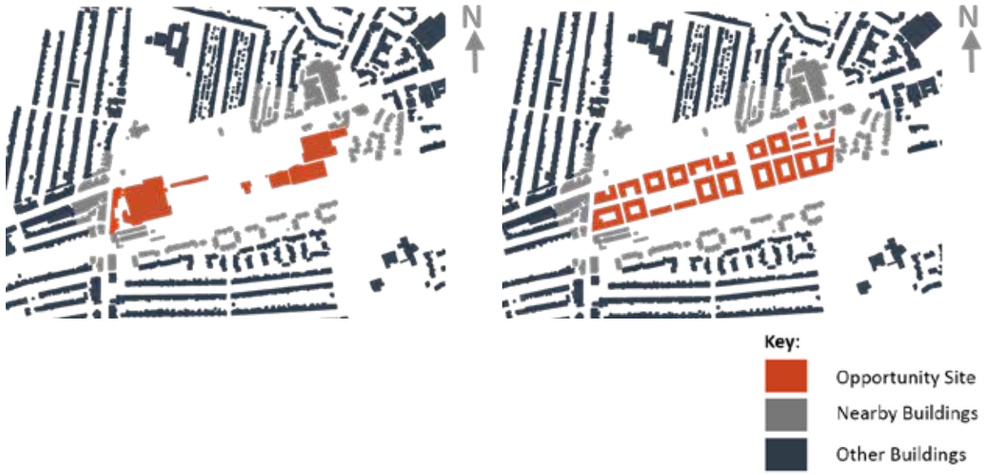
6.5.88 **Relationship to adjacent developments** - As before. **Conclusion - density of scenario illustrates no significant impact.**

Microclimate analysis

Introduction

6.5.89 Figure 110 indicates the built form of the baseline (existing) case and the proposed scenario, set within its immediate context. Within this study area zones have been defined to allow for a wind microclimate assessment and a daylighting study to be undertaken, presented below.

Figure 110 OS67&70 Baseline and scenario built form



Wind microclimate assessment

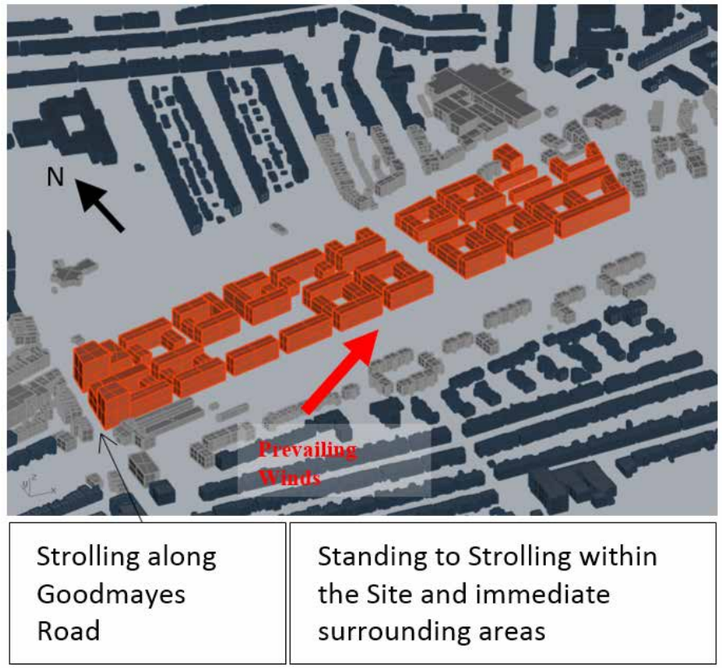
6.5.90 Table 18 adjacent outlines the wind microclimate assessment, comparing the baseline situation with the medium density scenario for OS67&70, with reference to the zones illustrated on Figure 111 (baseline) and Figure 112 (medium density scenario) adjacent.

Table 18 OS67&70 Medium density - Wind microclimate assessment

OS67&70 - Baseline	OS67&70 - Medium density scenario
On-site windiness - Standing to Strolling (suitable for access use).	**On-site windiness** - Overall, the arrangement of the proposed blocks is not likely to enhance existing windiness at the Site. Building blocks are generally homogeneous in height and will mutually shelter each other. Sitting conditions are likely to be achieved within the courtyards. These are likely to be usable as outdoor seating spaces in good weather conditions. The proposed blocks along the south-west side of the site, being taller than the adjacent existing buildings, will downdraft the prevailing SW winds to ground level increasing windiness along Goodmayes Road to Strolling. These conditions are acceptable for access. Entrances along this frontage may require local mitigation.

Figure 111 OS67&70 Wind microclimate assessment - baseline

Figure 112 OS67&70 Wind microclimate assessment - medium density scenario



OS67&70 - Baseline	OS67&70 - Medium density scenario
Off-site windiness - Standing (suitable for entrance and access use).	**Off-site windiness** - Windiness along Goodmayes Road is increased to Strolling. Windiness in other areas will remain similar to existing.

Daylighting study

6.5.91 Table 19 below outlines the daylighting study comparing the baseline situation with the medium density scenario for OS67&70, with reference to the zones illustrated on Figure 113. The findings of the study are illustrated in Figure 114.

Table 19 OS67&70 Medium density - Daylighting study

Zone	OS67&70 - Baseline	OS67&70 - Medium density
A	Little to no overshadowing.	The area North of the High Road has few buildings adjacent to the site and the road is wide enough to separate them from the development, such that there are negligible changes in the VSC
B	Some overshadowing of Northern most buildings.	The buildings on the North East corner of the development see significantly worse VSC values with the medium density scenario.

Figure 113 OS67&70 Daylighting study - zones

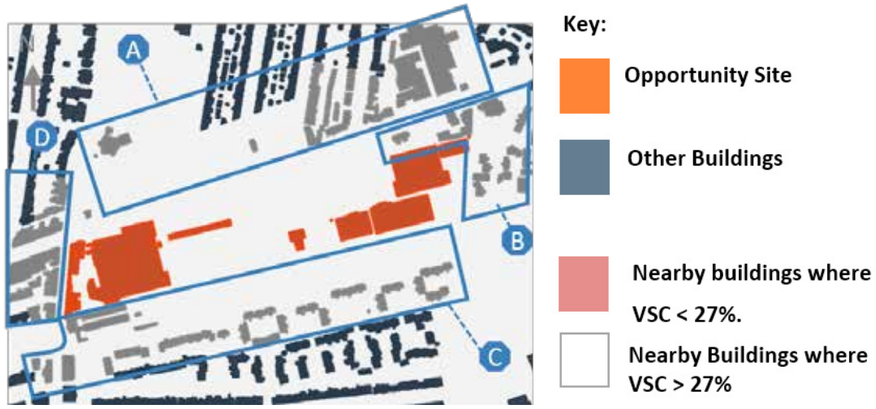
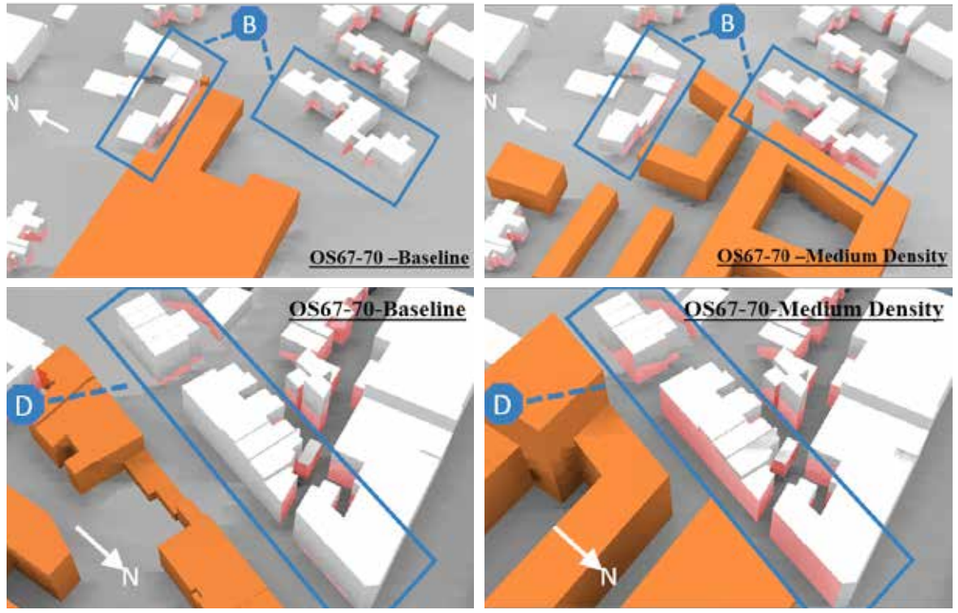


Figure 114 OS67&70 Daylighting study model outputs



Zone	OS67&70 - Baseline	OS67&70 - Medium density
C	Little to no overshadowing. Most overshadowing occurs in adjacent station building.	The area South of the railway tracks is far enough removed such that there no changes in VSC. The only exception is the station building on the South West corner which is mostly overshadowed in the Baseline model as well.
D	Little to no overshadowing.	The buildings West of Barley Lane are completely overshadowed by the high density scenario. The current baseline case has lower rise buildings East of Barley Lane which allow adequate daylighting to the buildings on the opposite side of the road.

Microclimate overview

6.5.92 Windiness is predicted to increase where the building height is increased (along Goodmayes road) for the medium density scenario. This will increase windiness to strolling level. Homogeneity in height over the remainder of the site is likely to prevent other areas of adverse wind. Overshadowing is increased in the North East and South West corners of the site, where the new development is located close to adjacent buildings for this scenario. **Conclusion - density of scenario illustrates no significant impact provided appropriate mitigation is adopted in the siting of buildings in relation to potential wind and overshadowing impacts.**

6.6 Visual analysis of scenarios

6.6.1 This section analyses the scenarios in each of the strategic views identified in Section 3.6. For each view:

- the proposed scenarios have been modelled and are shown illustrated as orange blocks on the existing context;
- the scenarios are also shown against the maximum extents of other planning applications that have been consented, partially implemented, awaiting consideration or currently under appeal (shown in purple blocks);
- in each case Pioneer Point (as the prime landmark building already constructed in the borough) is highlighted in red;
- 3D model images have been generated from an aerial perspective, to clearly show the wider context, and from the approximate view locations; and
- the 3D model has been transposed onto the photographic base to give an approximation of how the scenarios and approved planning applications may look from each strategic view.

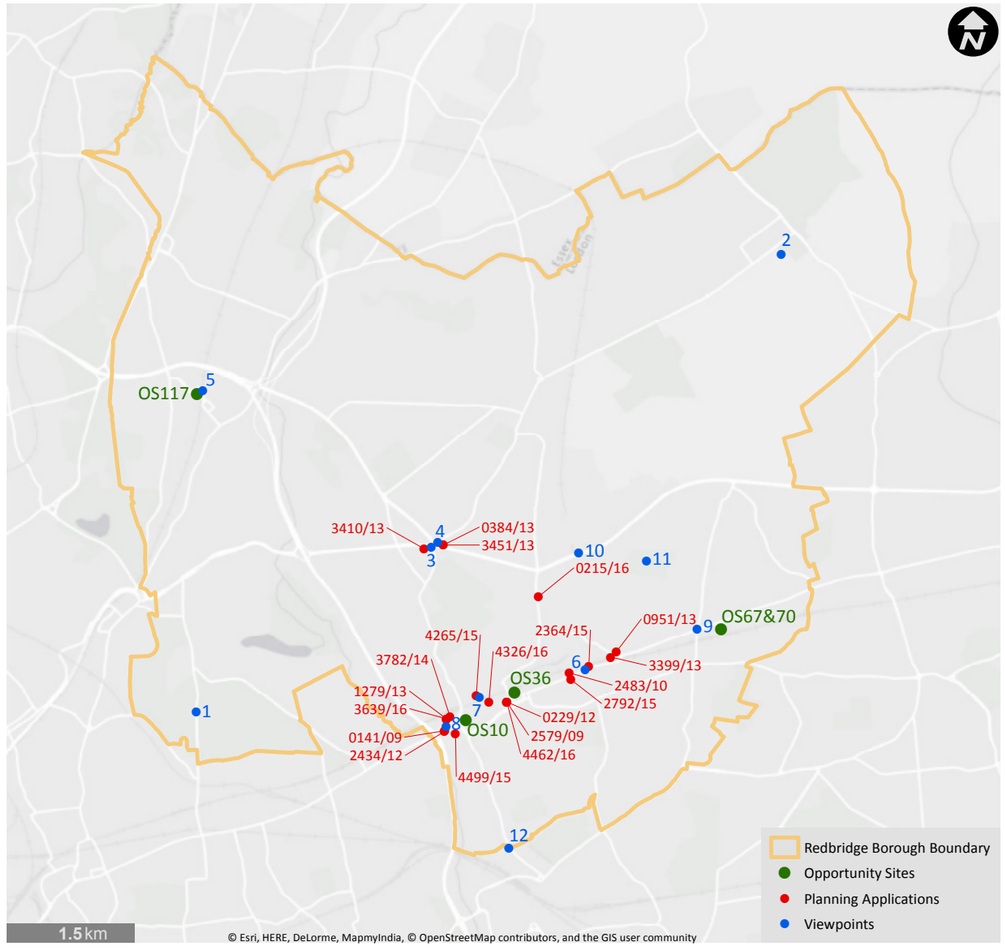
6.6.2 The location of the viewpoints, approved/pending planning applications and scenarios are shown together on Figure 115 adjacent.

6.6.3 Very limited or no views of the proposed scenarios are available from strategic views 4, 6, 10 or 11, therefore the following pages do not include sheets for these views.

6.6.4 For each viewpoint a commentary is provided as to how the existing (baseline) view will change taking into account:

- proposed developments that are consented, partially implemented, awaiting consideration or currently under appeal (purple);
- the high density scenarios developed, including a commentary on how they will affect the view in-combination with the consented developments; and
- the medium density scenarios, again including a commentary for the in-combination effects with the consented developments. For the medium density scenario renders, the high density proposal for Opportunity Site 10 is also shown, as no medium density scenario for this site has been developed.

Figure 115 Viewpoint plan for scenario testing



Viewpoint 01 - Panoramic view east from Wanstead Flats

6.6.5 The location of this view, including the indicative extent of the viewing corridor, is shown on Figure 117, indicating the consented developments and Opportunity Site (OS) scenarios within this area. Figure 116 below gives an overview of the approximate changes to the view introduced by these developments and scenarios, alongside setting out the approximate location of the Investment & Growth Areas.

Consented developments

6.6.6 The intensification of Ilford Metropolitan Centre with further tall buildings (approved planning applications) located around Pioneer Point would form a distinct cluster on the skyline when viewed from this open location.

6.6.7 From other locations within Wanstead Flats, development would also potentially be apparent along the Crossrail Corridor IGA, although from this view this is obscured by intervening vegetation.

6.6.8 Views to other IGAs are restricted by vegetation, although it is possible that developments could be apparent in Gants Hill and Barkingside, depending on their height and position.

Figure 117 Viewpoint 01 key plan

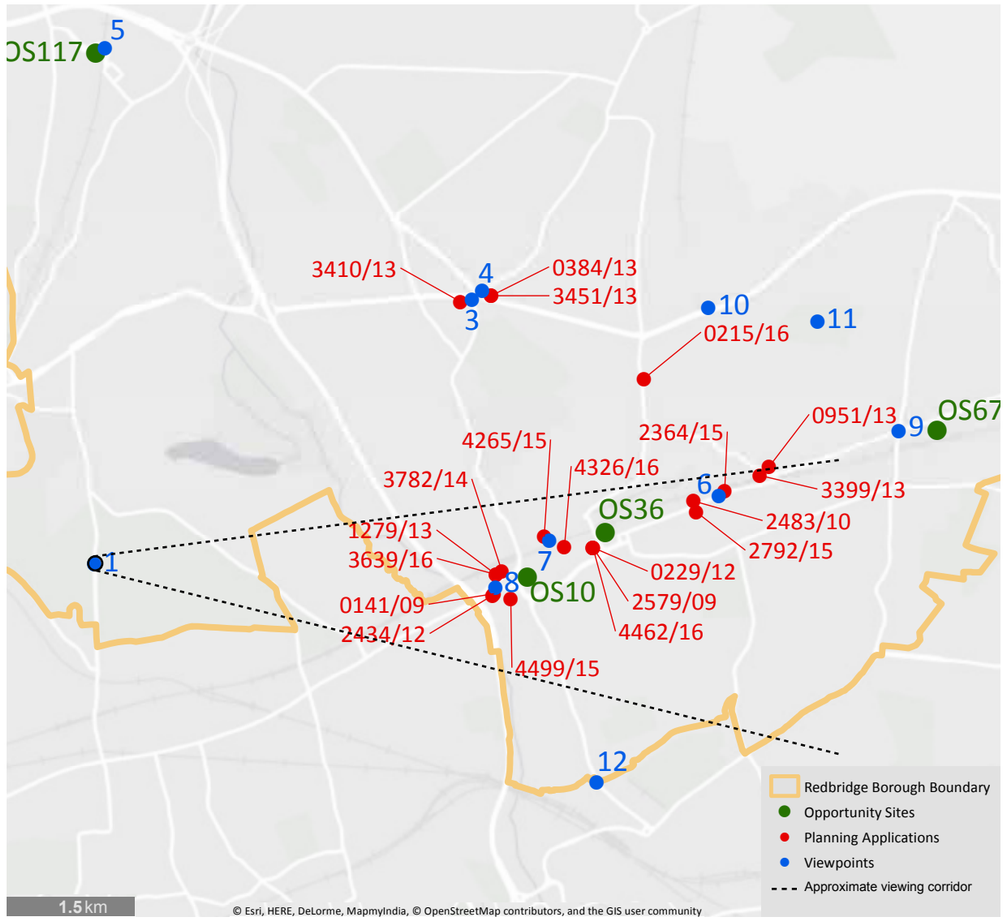
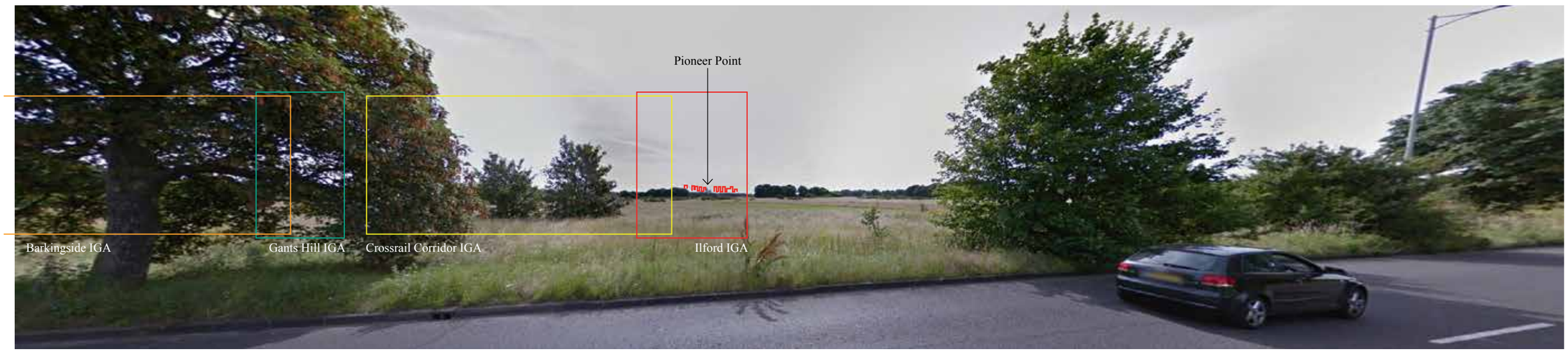


Figure 116 Viewpoint 01 - Panoramic view east from Wanstead Flats - Scenario analysis



High density scenarios

6.6.9 The aerial view (Figure 118) illustrates the distribution of consented schemes, clearly indicating OS10 in close proximity to them, and locating OS36 behind other consented developments.

6.6.10 When viewing from the actual viewpoint location at ground level (Figure 119), OS10 is likely to be only intermittently visible through the tree cover within Wanstead Flats, forming a fairly imperceptible new skyline element. OS36 would not be visible from this location, and is not expected to be visible from elsewhere within the general viewing location.

6.6.11 Other Opportunity Sites would not be visible due to the intervening topography, vegetation and built form.

6.6.12 Overall, when viewed from this location, the additional intensification brought by OS10 in addition to the consented developments makes only a slight change in the background skyline of this view, clearly clustering taller buildings around Ilford Metropolitan Centre while maintaining an open skyline for the majority of the panorama.

Figure 118 Viewpoint 01 - High density scenarios - Aerial view

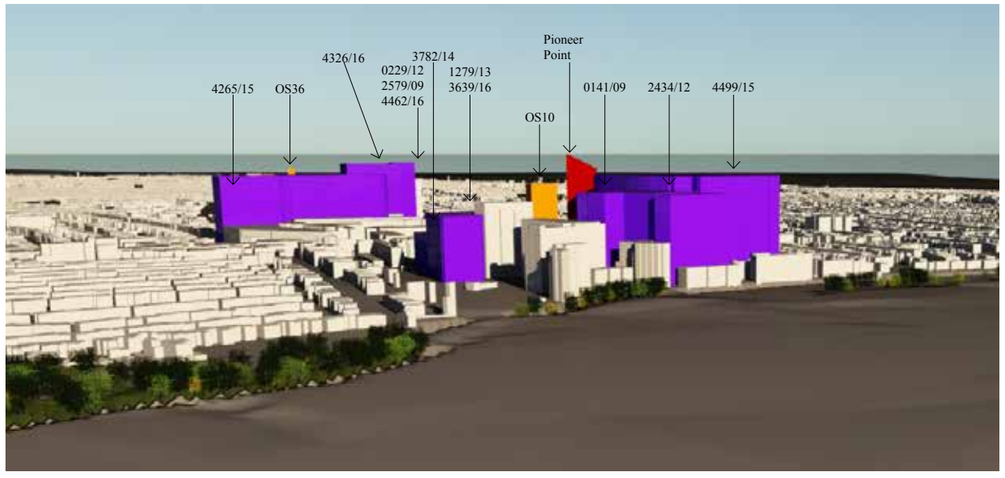


Figure 119 Viewpoint 01 - High density scenarios - Model render from viewing location

Medium density scenarios

6.6.13 With only OS10 visible from this viewing location (which has been tested only as a high density scenario), in addition to the consented schemes, Figure 120 and Figure 121 illustrate no change to the view from this location for the medium density scenarios.

6.6.14 As clear in the aerial view (Figure 120), all of OS36 would be sited behind other consented developments even when looked at from an elevated vantage point.

Figure 120 Viewpoint 01 - Medium density scenarios - Aerial view

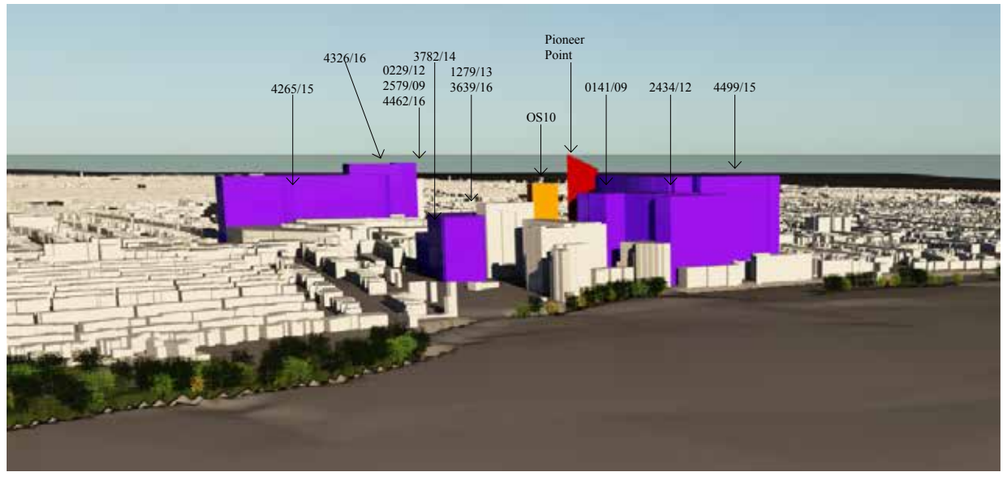


Figure 121 Viewpoint 01 - Medium density scenarios - Model render from viewing location

Viewpoint 02 - Panoramic view south-west from Redbridge Cycle Centre

6.6.15 The location of this view, including the indicative extent of the viewing corridor, is shown on Figure 123, indicating the consented developments and Opportunity Site (OS) scenarios within this area. Figure 122 below gives an overview of the approximate changes to the view introduced by these developments and scenarios, alongside setting out the approximate location of the Investment & Growth Areas.

Consented developments

6.6.16 This view provides a strategic panoramic vista of much of Redbridge, set in the context of the Central London skyline. As the indicative building lines highlight, approved planning applications clearly highlight Ilford Metropolitan Centre and, to a lesser extent, Gants Hill District Centre.

6.6.17 The view also highlights that while mid-height buildings in Barkingside would not impact on the iconic skyline view, they would be incongruous with the existing townscape character in this part of the borough.

Figure 123 Viewpoint 02 key plan

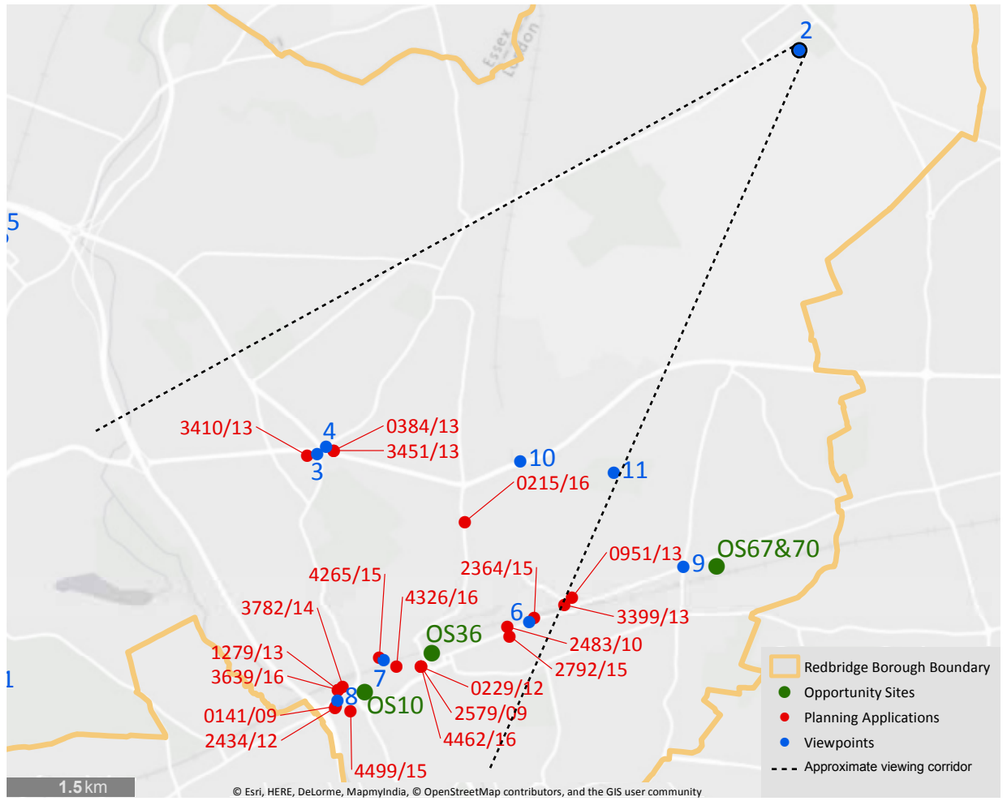
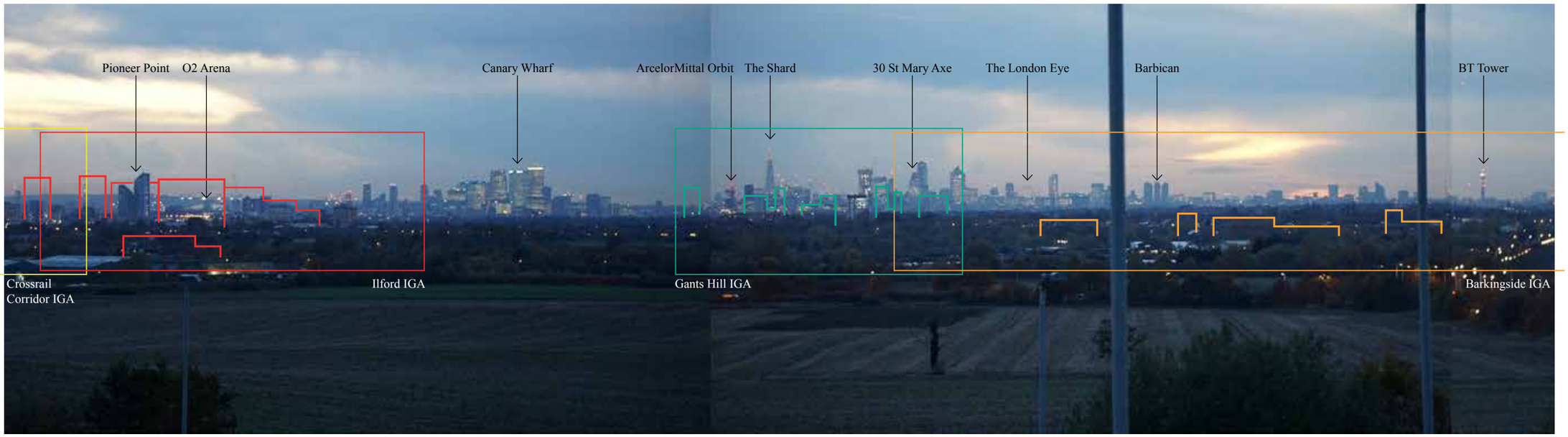


Figure 122 Viewpoint 02 - Panoramic view south-west from Redbridge Cycle Centre - Scenario analysis



High density scenarios

6.6.18 The zoomed in view from this elevated vantage point (Figure 124) illustrates the distribution of consented schemes, clearly indicating OS36 located to the left of the main consented building cluster in Ilford Metropolitan Centre itself. Depending on the exact built form of the consented schemes when built, views towards OS10 are restricted. In this view Pioneer Point remains a distinct skyline feature, albeit surrounded by other development.

6.6.19 When looking at the wider panorama (Figure 125), no further scenarios are visible, although the consented schemes within the wider Crossrail Corridor and at Gants Hill are apparent within the townscape.

6.6.20 Overall, when viewed from this location, the height of the westernmost (right hand side of the image) blocks in OS36 appear incongruous with the surrounding built form and extend the tall buildings away from the distinct cluster in Ilford close to the station. In addition, the scale of the scenario at this point suggests proximity to a key transport node, which this site is located away from.

Figure 124 Viewpoint 02 - High density scenarios - Zoomed view

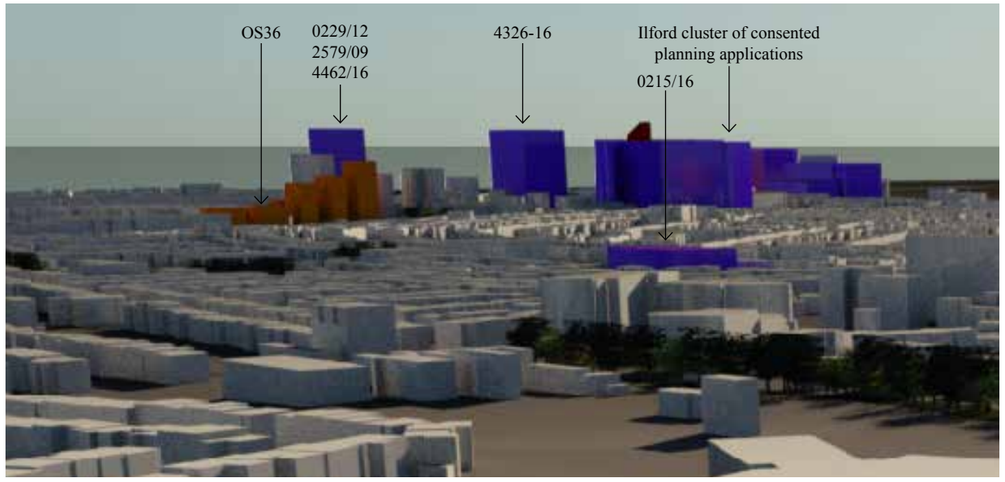
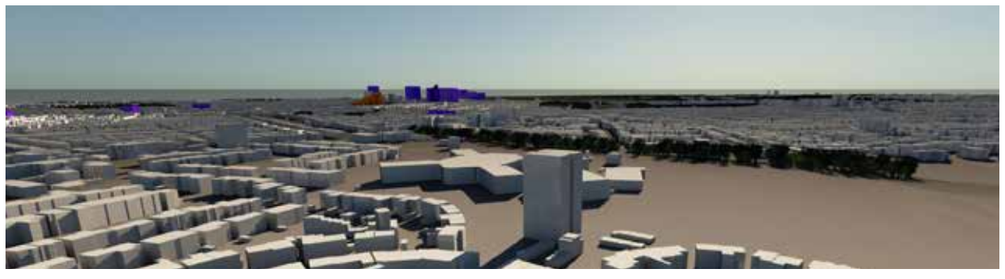


Figure 125 Viewpoint 02 - High density scenarios - Model render from viewing location



Medium density scenarios

6.6.21 In this scenario, the lower height of the individual blocks in OS36 integrates better into the existing townscape, with blocks to the right generally only slightly higher than surrounding buildings, and elements closest to Ilford Metropolitan Centre lower than some existing tall buildings (shown in grey). This is clearly visible in Figure 126.

6.6.22 Assessing the wider panorama (Figure 127), this further affirms that the density to the west (left side of the view) integrates well with development along the Crossrail Corridor (particularly considering this site is away from any of the stations). However, it is considered that blocks to the right, closest to Ilford, could receive greater height to provide a smoother stepping of heights along the rail corridor. This could be achieved with the additional scenario sketched on Figure 162.

6.6.23 Overall, it is considered that OS36 has the capacity to receive a density between the two scenarios illustrated in the figures below. Any future development proposal will need to carefully plan building heights to provide a clear step-change from west to east along the rail corridor, with the tallest heights closest to Ilford Metropolitan Centre.

Figure 126 Viewpoint 02 - Medium density scenarios - Zoomed view

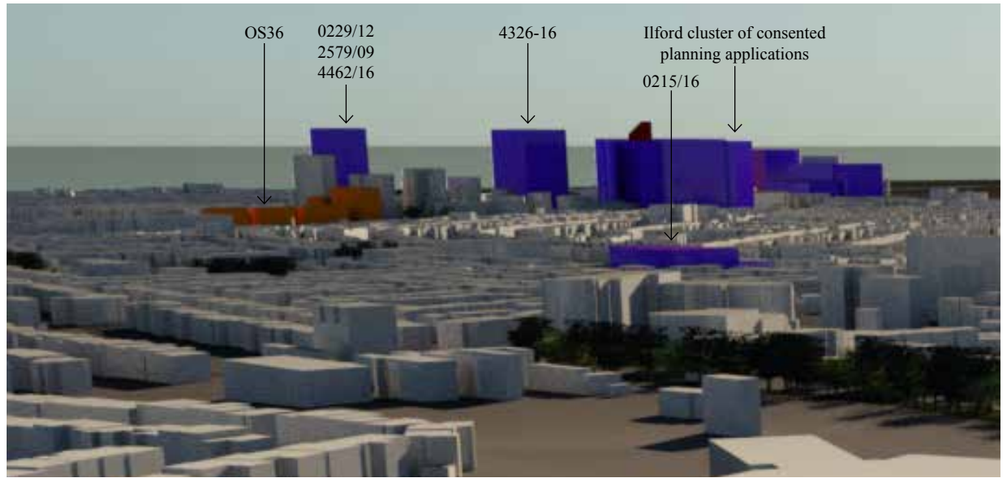
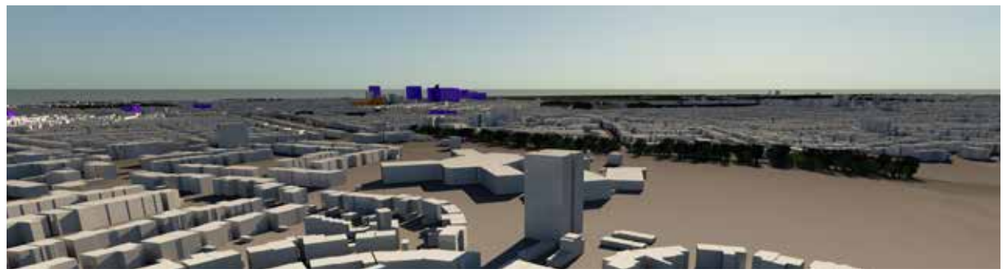


Figure 127 Viewpoint 02 - Medium density scenarios - Model render from viewing location



Viewpoint 03 - View south from Gants Hill roundabout

6.6.24 The location of this view, including the indicative extent of the viewing corridor, is shown on Figure 129, indicating the consented developments and Opportunity Site (OS) scenarios within this area. Figure 128 below gives an overview of the approximate changes to the view introduced by these developments and scenarios, alongside setting out the approximate location of the Investment & Growth Areas.

Consented developments

6.6.25 This view primarily represents a street scene, although punctuated by Pioneer Point on the skyline in the background of the view. Further tall buildings in Ilford Metropolitan Centre would create a cluster in the backdrop of this view, serving to highlight the strategic importance of Ilford within the borough.

6.6.26 Due to the falling levels towards Ilford, as well as the tree cover in Valentines Park, development in Ilford is not overly visible from this location.

6.6.27 Wider development of tall buildings would generally not be visible from this viewpoint.

6.6.28 Taller development than that shown in the approved planning applications would begin to dominate the view and change the townscape setting of this area.

Figure 129 Viewpoint 03 key plan

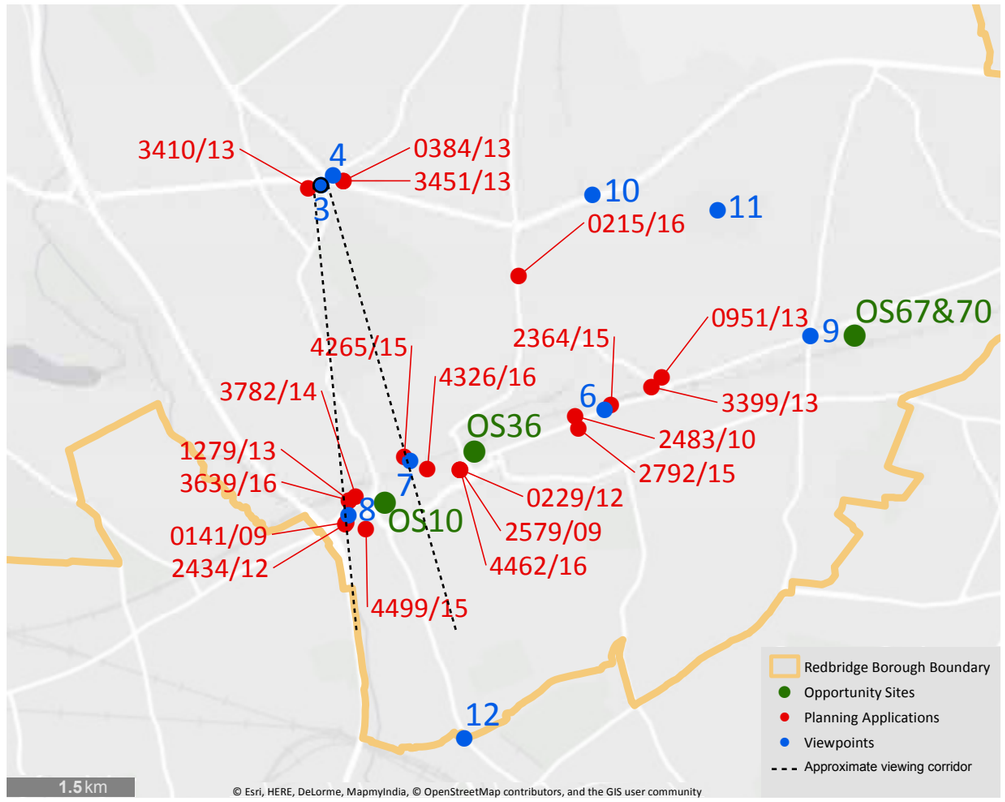


Figure 128 Viewpoint 03 - View south from Gants Hill roundabout - Scenario analysis

High density scenarios

6.6.29 The aerial view (Figure 130) illustrates the distribution of consented schemes, clearly indicating OS10 in close proximity to them, with OS36 extending this high density development further to the east along the Crossrail Corridor.

6.6.30 However, when viewing from the actual viewpoint location at ground level, both OS10 and OS36 would be obscured by intervening buildings in the foreground of the view. If OS10 was developed to a greater height than shown in the high density scenario then it would be likely to form an additional skyline feature, as Pioneer Point currently does.

6.6.31 Overall, from this location, most development is not likely to alter the character of this view unless tower elements are included at a similar height and location as Pioneer Point.

Medium density scenarios

6.6.32 The medium density scenarios are not visible from this viewpoint. The aerial view below (Figure 131) gives a clear indication of the reduced density of OS36 stretching to the east along the Crossrail Corridor, but this lower density would represent no change to the ground level view described for the high density scenarios.

Figure 130 Viewpoint 03 - High density scenarios - Aerial view

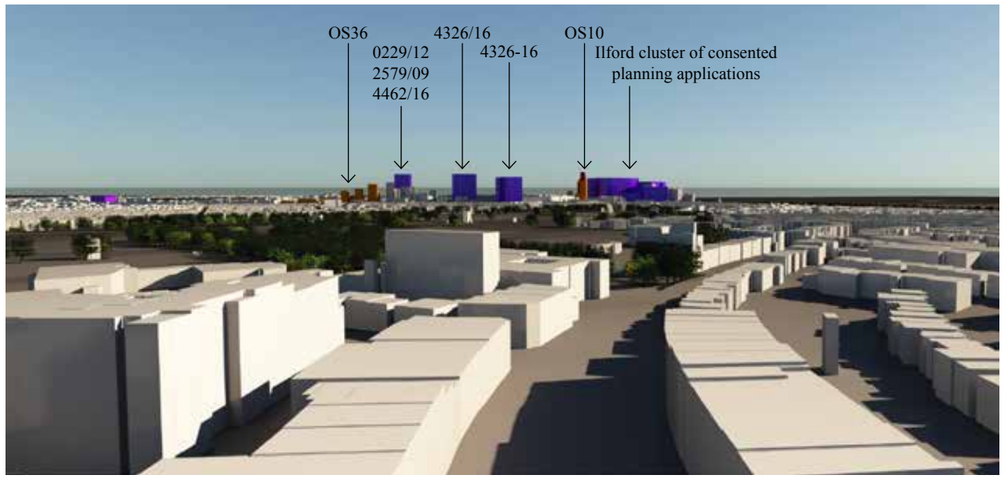
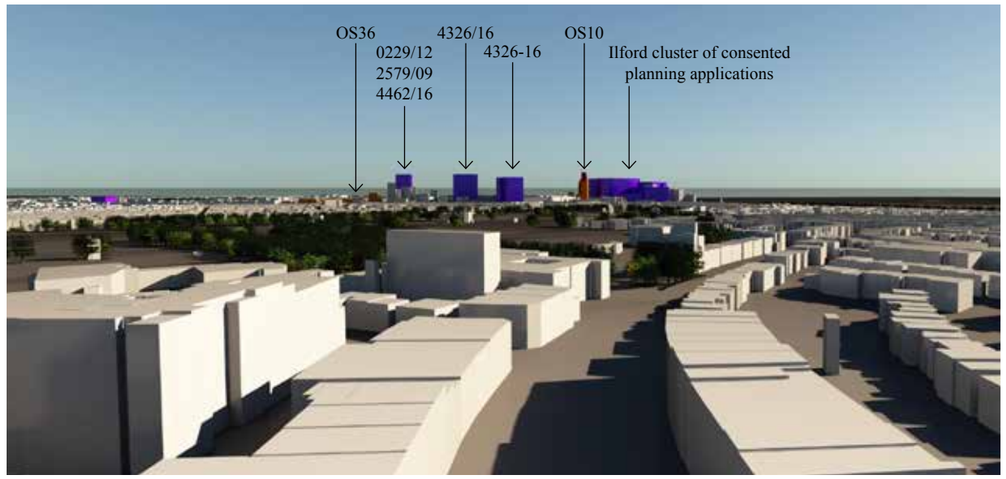


Figure 131 Viewpoint 03 - Medium density scenarios - Aerial view



Viewpoint 05 - Panoramic view south-east from South Woodford railway flyover

6.6.33 The location of this view, including the indicative extent of the viewing corridor, is shown on Figure 133, indicating the consented developments and Opportunity Site (OS) scenarios within this area. Figure 132 below gives an overview of the approximate changes to the view introduced by these developments and scenarios, alongside setting out the approximate location of the Investment & Growth Areas.

Consented developments

6.6.34 This view from the elevated Viaduct in South Woodford provides a broad panorama of much of Redbridge. At present, Pioneer Point is barely perceptible on the distant skyline, and further tall buildings in Ilford would have little impact on the character of this view.

6.6.35 Other development in Gants Hill, the Crossrail Corridor and Barkingside would be visible in the panorama, forming some strategic markers for the District and Local Centres. However, due to the distance and differences in topography, most development would not be overly apparent, and only the tallest buildings would break the skyline.

Figure 133 Viewpoint 05 key plan

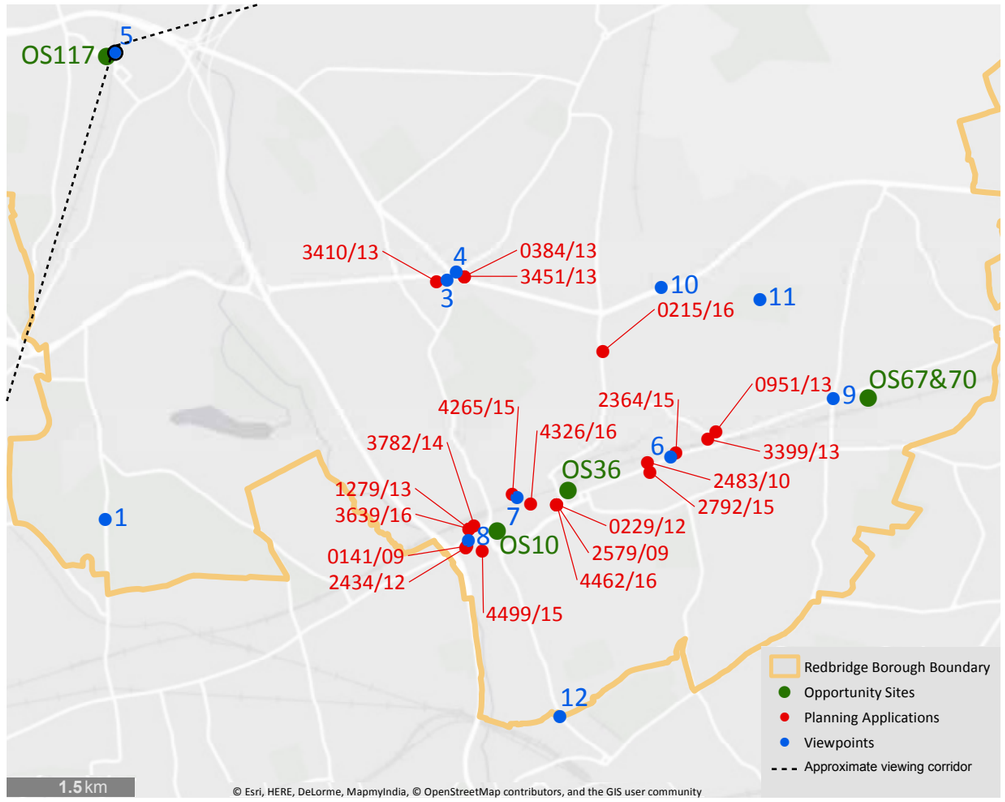
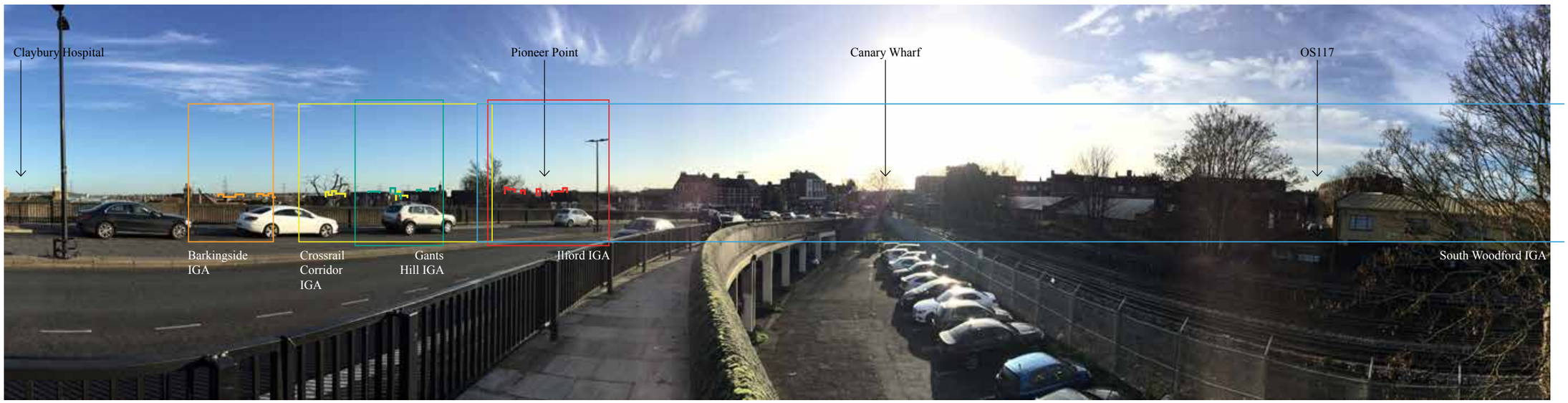


Figure 132 Viewpoint 05 - Panoramic view south-east from South Woodford railway flyover - Scenario analysis



High density scenarios

6.6.36 The aerial view (Figure 134) illustrates the distribution of consented schemes in the background of the view, clearly indicating OS10 in close proximity to them within Ilford Metropolitan Centre, OS36 extending eastwards with the tower element forming a skyline element, and OS67&70 further east again along the Crossrail Corridor, with the tower marking the location of Goodmayes Station.

6.6.37 When viewing from the actual viewpoint location at ground level (Figure 135), OS36 and OS67&70 are likely to be obscured by intervening built form. Only the top of OS10 is likely to be visible, in close proximity to Pioneer Point.

6.6.38 OS117 would be clearly visible in the foreground of the view, adjacent to the railway line and elevated Viaduct structure. While the specific characteristics of the site and its surrounds allows for a greater density of development than is typical for the area, the tallest elements are considered to dominate the foreground of the view and form an uncharacteristic local element.

6.6.39 Overall, when viewed from this location, the additional intensification in Ilford and the Crossrail Corridor generally is not likely to change the character of the view based on the scenarios as modelled. However, the high density scheme at OS117 is considered to be overly tall for the local context of South Woodford.

Figure 134 Viewpoint 05 - High density scenarios - Aerial view

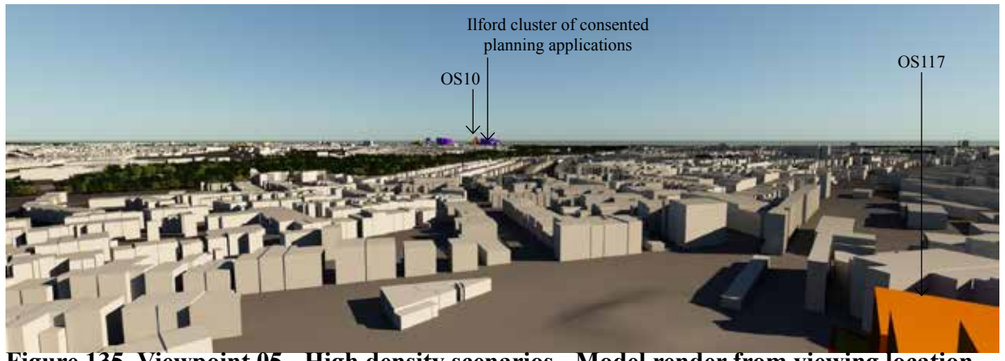
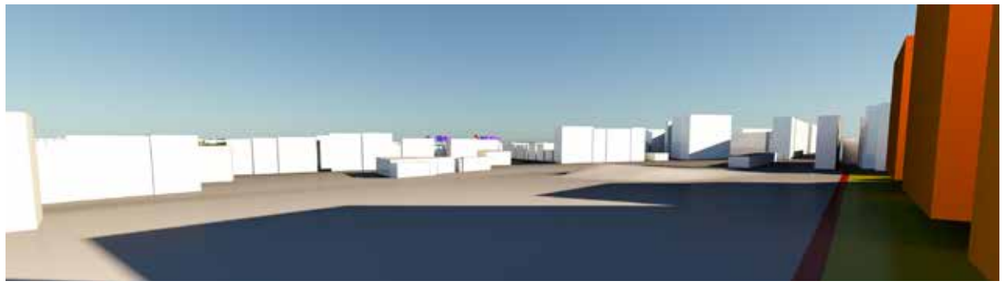


Figure 135 Viewpoint 05 - High density scenarios - Model render from viewing location



Medium density scenarios

6.6.40 The aerial view for the medium density scenarios (Figure 136) indicates the lower building heights at OS36 and OS67/70 within the Crossrail Corridor. As indicated for strategic view 2, OS36 is a better fit to the surrounding townscape, although there remains potential for more height at the Ilford end (western) of the development to provide a smoother stepping of building heights. For OS67&70, again the lower heights integrate better with the surrounding context, although the opportunity to provide greater density at Goodmayes Station, marking the important transport node, is not fulfilled.

6.6.41 However, as for the high density scenarios, both OS36 and OS67&70 are not visible from ground level (Figure 137). Therefore, with only the high density scenario developed for OS10, there would be no change to the background of this view than described for the high density scenarios adjacent.

6.6.42 OS117 is again clearly visible located in the right of the view responding to the immediate site conditions and context. In this medium density scenario, the building heights are considered a more appropriate frame to the view, integrating well with other built form.

6.6.43 Overall, these lower building heights at the Station Estate site (OS117) are considered to be a more appropriate response to the townscape character of South Woodford.

Figure 136 Viewpoint 05 - Medium density scenarios - Aerial view

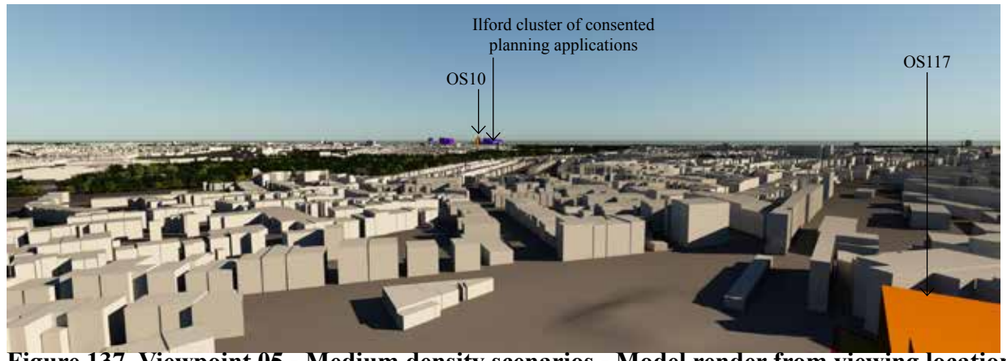
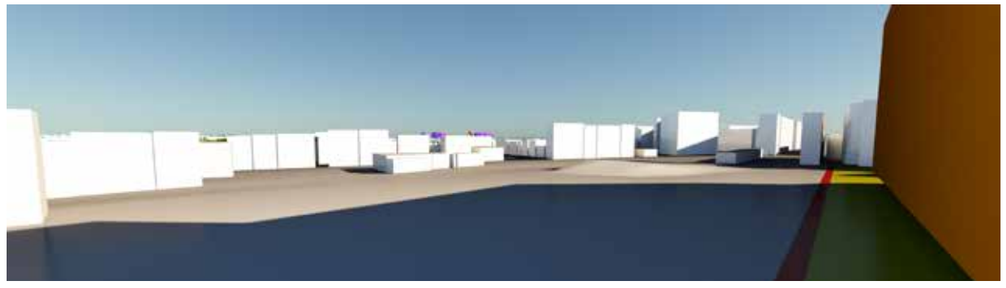


Figure 137 Viewpoint 05 - Medium density scenarios - Model render from viewing location



Viewpoint 07 - Panoramic view east to west from The Exchange Shopping Centre car park roof

6.6.44 The location of this view, including the indicative extent of the viewing corridor, is shown on Figure 139, indicating the consented developments and Opportunity Site (OS) scenarios within this area. Figure 138 below gives an overview of the approximate changes to the view introduced by these developments and scenarios, alongside setting out the approximate location of the Investment & Growth Areas.

Consented developments

6.6.45 This elevated view is at the heart of Ilford Metropolitan Centre, actually located on one of the approved planning application sites. The current view is clearly divided, with large and relatively tall buildings located along the High Road and around Ilford Island; set against the low level residential district to the left of the photo.

6.6.46 The approved planning applications will serve to further strengthen this emphasis of development clustered around the existing Pioneer Point, Ilford station and the High Road (representing the main retail / commercial area in the borough).

6.6.47 Further developments are apparent along the Crossrail Corridor, where taller development is considered to be possible, as long as it is located specifically to create clusters around key transport nodes such as Seven Kings and Goodmayes.

Figure 139 Viewpoint 07 key plan

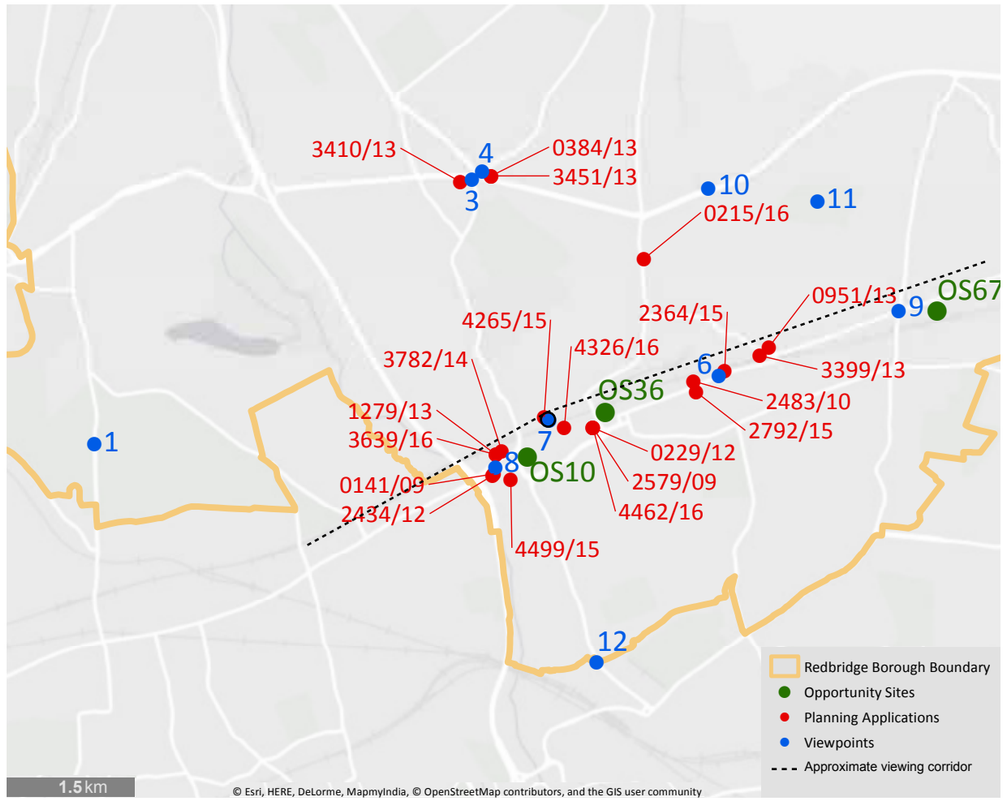
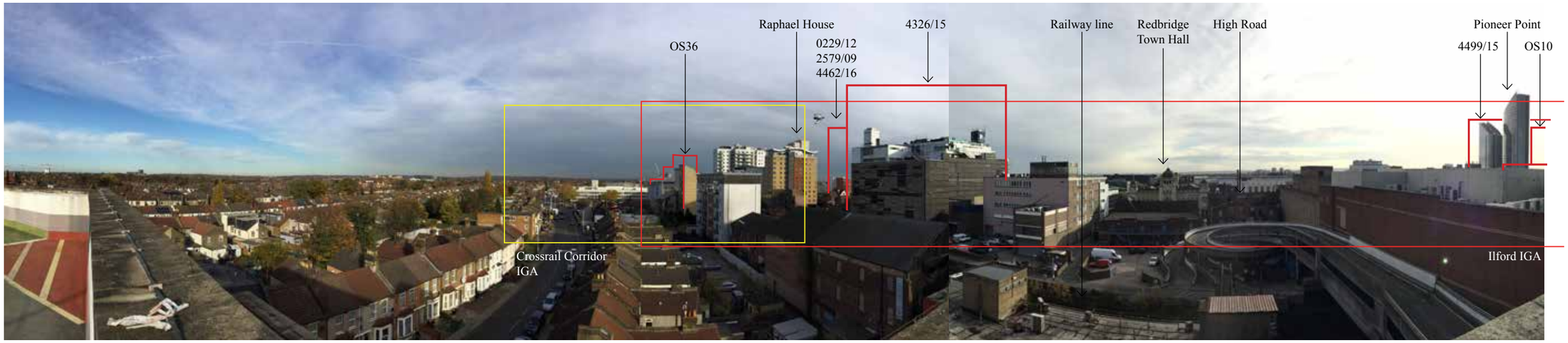


Figure 138 Viewpoint 07 - Panoramic view east to west from The Exchange Shopping Centre car park roof - Scenario analysis



High density scenarios

6.6.48 The aerial view (Figure 140) illustrates the distribution of consented schemes in the background of the view, clearly indicating OS10 in close proximity to them within Ilford Metropolitan Centre, and OS36 extending eastwards along the Crossrail Corridor.

6.6.49 When viewing from the actual viewpoint location at ground level (Figure 141), both OS10 and OS36 remain clearly visible foreground / middle-ground elements of the view. OS67&70 would also be visible towards the background of the view, with the tower element clearly marking Goodmayes Station on the Crossrail Corridor.

6.6.50 Overall, the OS10 development sits comfortably adjacent to Pioneer Point and other consented developments, with the blocks stepping down towards other low building heights in the area. OS36 appears as a dominant development set slightly east of Ilford Metropolitan Centre, particularly with the tower element forming a skyline element. OS67&70 also appears as a dense habitat set away from other consented schemes and also dramatically different in scale to the existing townscape, although clearly marking the key transport node of Goodmayes station.

Figure 140 Viewpoint 07 - High density scenarios - Aerial view

Figure 141 Viewpoint 07 - High density scenarios - Model render from viewing location

Medium density scenarios

6.6.51 Within this view (illustrated in Figure 142 and Figure 143), OS10 remains consistent with the description provided adjacent.

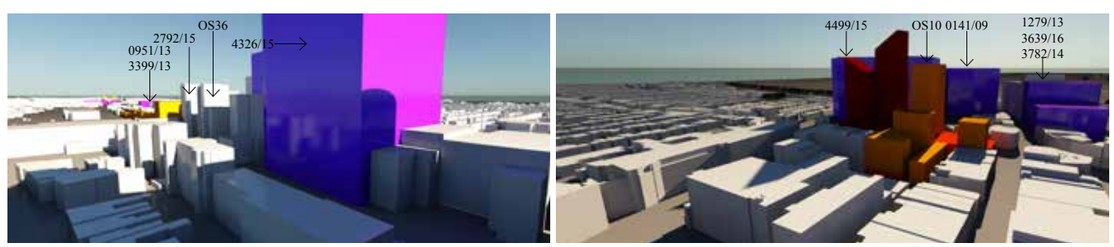
6.6.52 OS36 remains a clearly visible element in the middle-ground of the view but with building heights more typical of the surrounding area to the east of Ilford Metropolitan Centre. The development blocks closest to Ilford are noticeably lower in height than other existing and consented buildings within the centre, and therefore some further density could be achieved to provide a smoother stepping in building heights.

6.6.53 OS67&70 is less noticeable in the background of the view, with no strategic marking of Goodmayes Station achieved.

6.6.54 Overall, these medium density scenarios generally sit more comfortably within the surrounding townscape, but opportunities for some extra height (for example immediately adjacent to Ilford Metropolitan Centre and at Goodmayes Station) are missed. Therefore, scenarios between the high and medium ones illustrated for OS36 and OS67&70 may be appropriate.

Figure 142 Viewpoint 07 - Medium density scenarios - Aerial view

Figure 143 Viewpoint 07 - Medium density scenarios - Model render from viewing location



Viewpoint 08 - View east from Ilford Hill

6.6.55 The location of this view, including the indicative extent of the viewing corridor, is shown on Figure 145, indicating the consented developments and Opportunity Site (OS) scenarios within this area. Figure 144 below gives an overview of the approximate changes to the view introduced by these developments and scenarios, alongside setting out the approximate location of the Investment & Growth Areas.

Consented developments

6.6.56 This view is located at the centre of Ilford, close to the Ilford Island cluster of heritage buildings. At present the view is punctuated with Pioneer Point and the tower in the left of the view. These will be supplemented with a series of additional developments in the foreground and mid-ground of the view. The tall building series will form a distinct cluster, but design quality and precise massing will be critical in ensuring the setting of the heritage assets is respected.

6.6.57 Due to the density of development in the immediate foreground, changes in the wider borough would not be apparent from this location.

Figure 145 Viewpoint 08 key plan

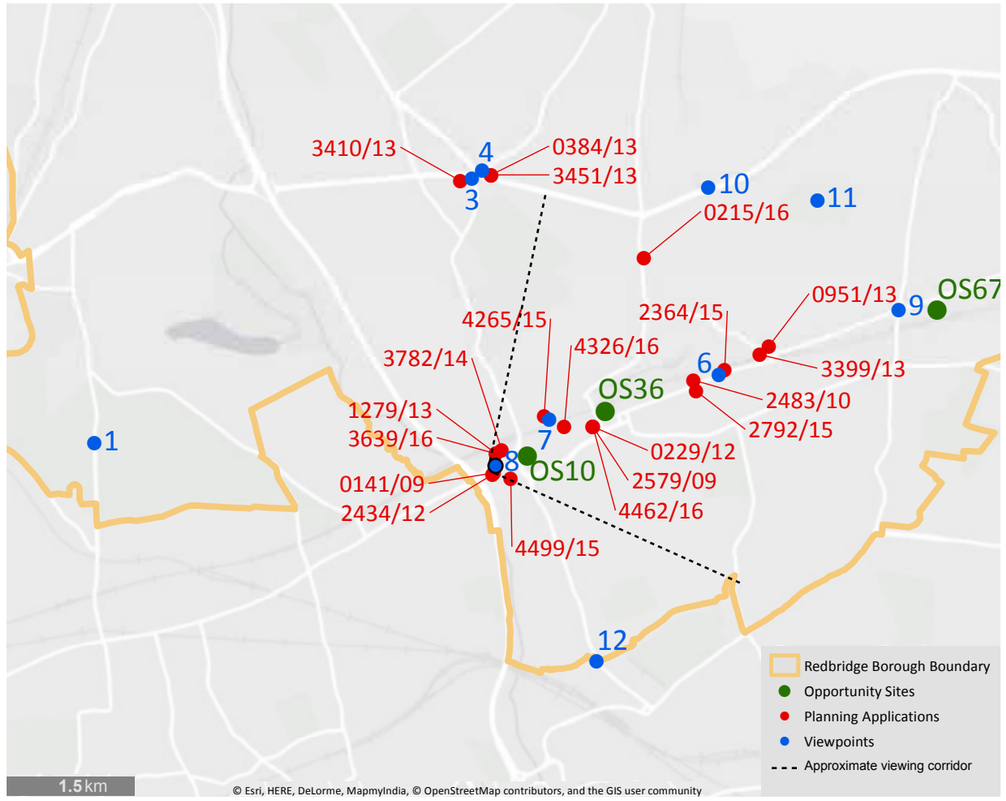
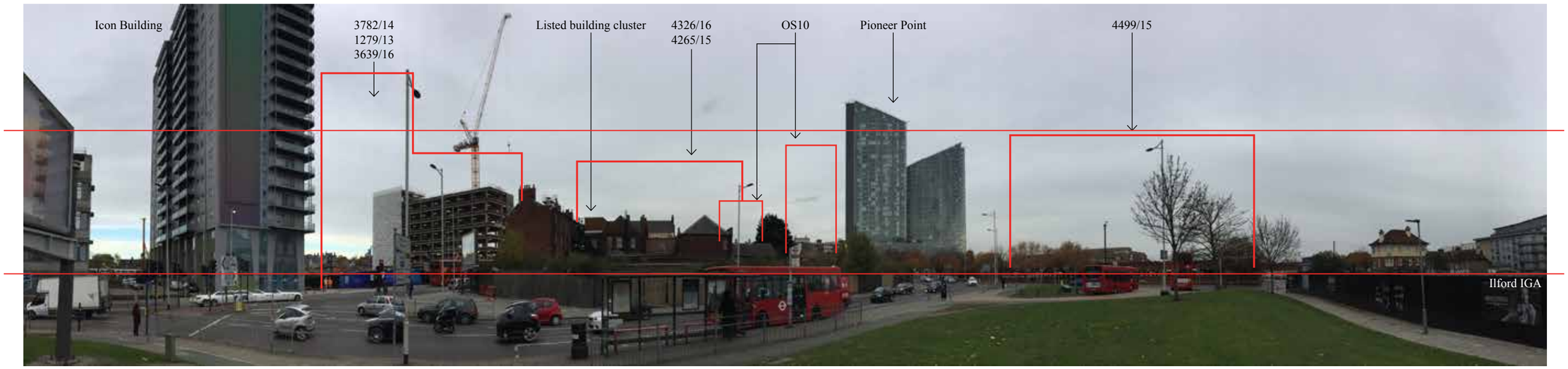


Figure 144 Viewpoint 08 - View east from Ilford Hill - Scenario analysis



High density scenarios

6.6.58 The aerial view (Figure 146) illustrates the distribution of consented schemes in the background of the view, clearly indicating OS10 in the foreground of the view within Ilford Metropolitan Centre, and OS36 (largely obscured by intervening buildings) and OS67&70 extending eastwards along the Crossrail Corridor.

6.6.59 When viewing from the actual viewpoint location at ground level (Figure 147), only OS10 remains clearly visible in the foreground of the view adjacent to Pioneer Point and set beyond the listed buildings on Ilford Island. OS36 and OS67&70 would be obscured by intervening built form including consented buildings not yet constructed.

6.6.60 Overall, the OS10 development sits comfortably adjacent to Pioneer Point and other consented developments, with the blocks stepping down towards other low building heights in the area, including the listed buildings on Ilford Island.

Figure 146 Viewpoint 08 - High density scenarios - Aerial view

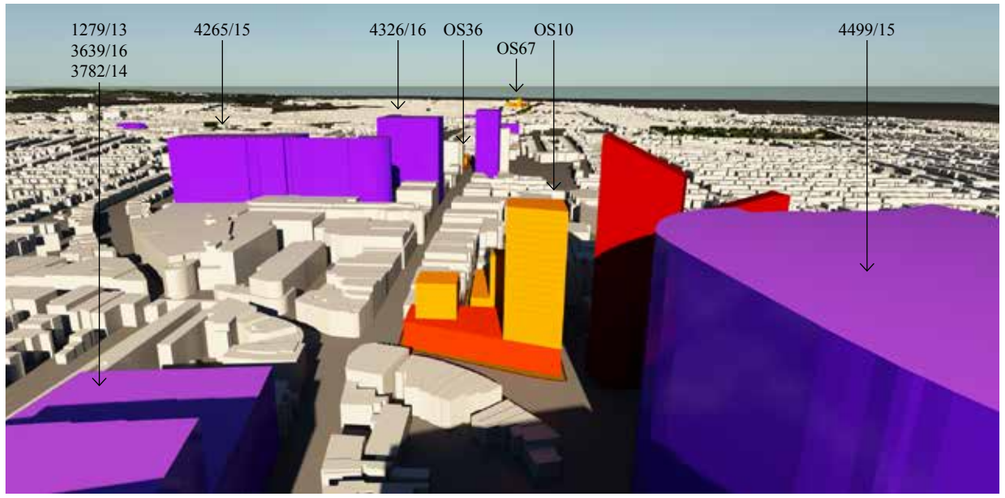
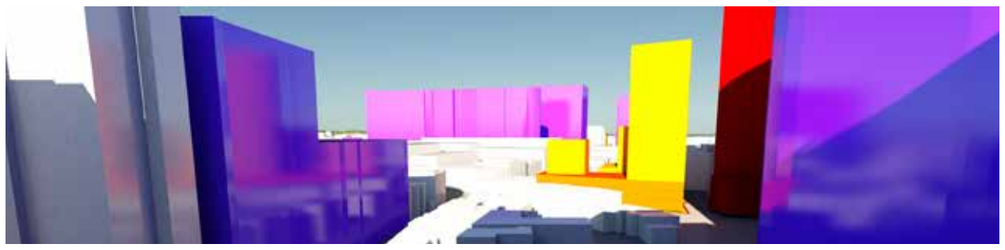


Figure 147 Viewpoint 08 - High density scenarios - Model render from viewing location



Medium density scenarios

6.6.61 The medium density scenarios are not visible from this viewpoint. The aerial view below (Figure 148) gives a clear indication of the reduced density of OS67&70 and, to a lesser extent, OS36 stretching to the east along the Crossrail Corridor, but this lower density would represent no change to the ground level view (see Figure 149) described for the high density scenarios.

Figure 148 Viewpoint 08 - Medium density scenarios - Aerial view

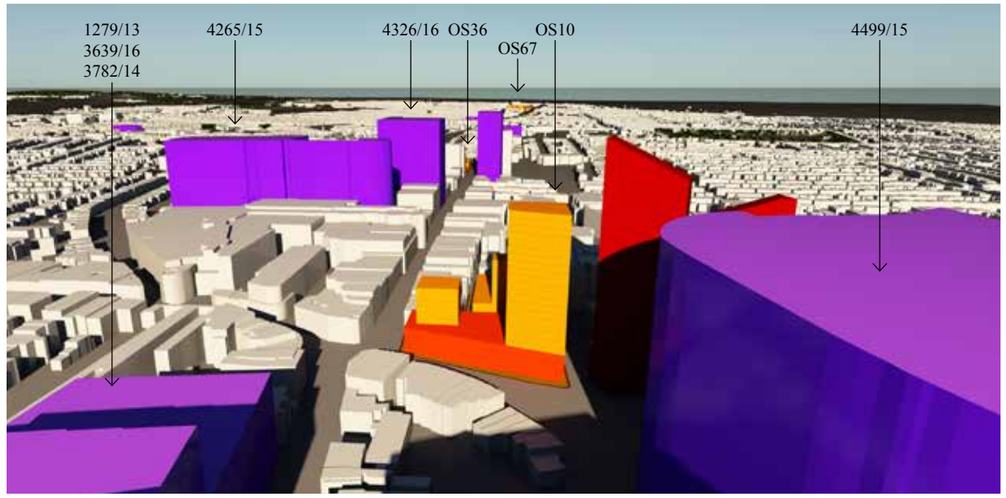
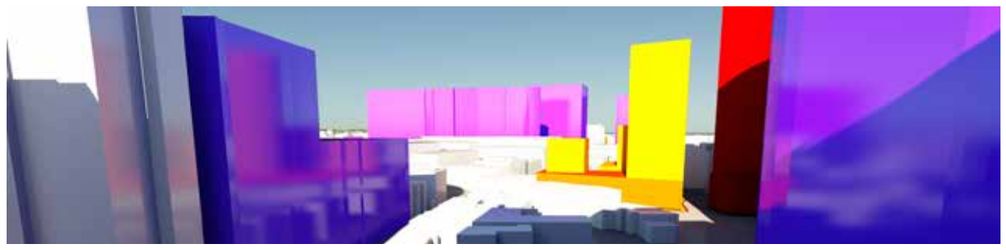


Figure 149 Viewpoint 08 - Medium density scenarios - Model render from viewing location



Viewpoint 09 - View south-west from Goodmayes

6.6.62 The location of this view, including the indicative extent of the viewing corridor, is shown on Figure 151, indicating the consented developments and Opportunity Site (OS) scenarios within this area. Figure 150 below gives an overview of the approximate changes to the view introduced by these developments and scenarios, alongside setting out the approximate location of the Investment & Growth Areas.

Consented developments

6.6.63 This street scene would remain largely unchanged by development in the wider borough. Ilford is visible in the background of the view, currently marked by Pioneer Point. Approved planning applications would create a development cluster here, reinforcing the marking of Ilford as a Metropolitan Centre.

6.6.64 Further height in Ilford could be acceptable from this view, but would change the nature of the skyline and potentially could end up adversely dominating the view.

Figure 151 Viewpoint 09 key plan

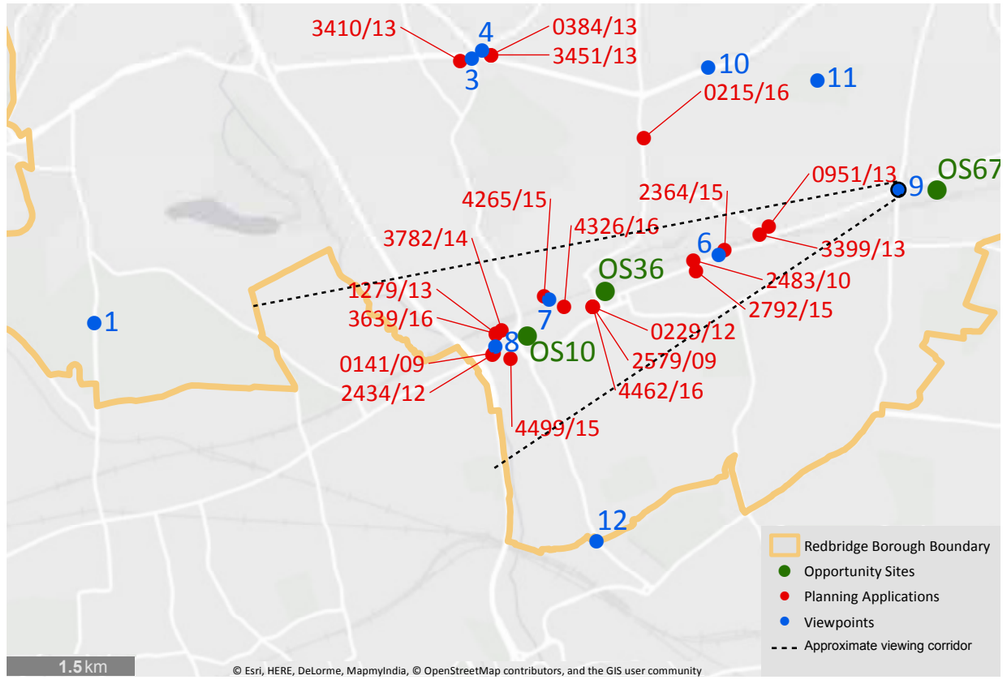
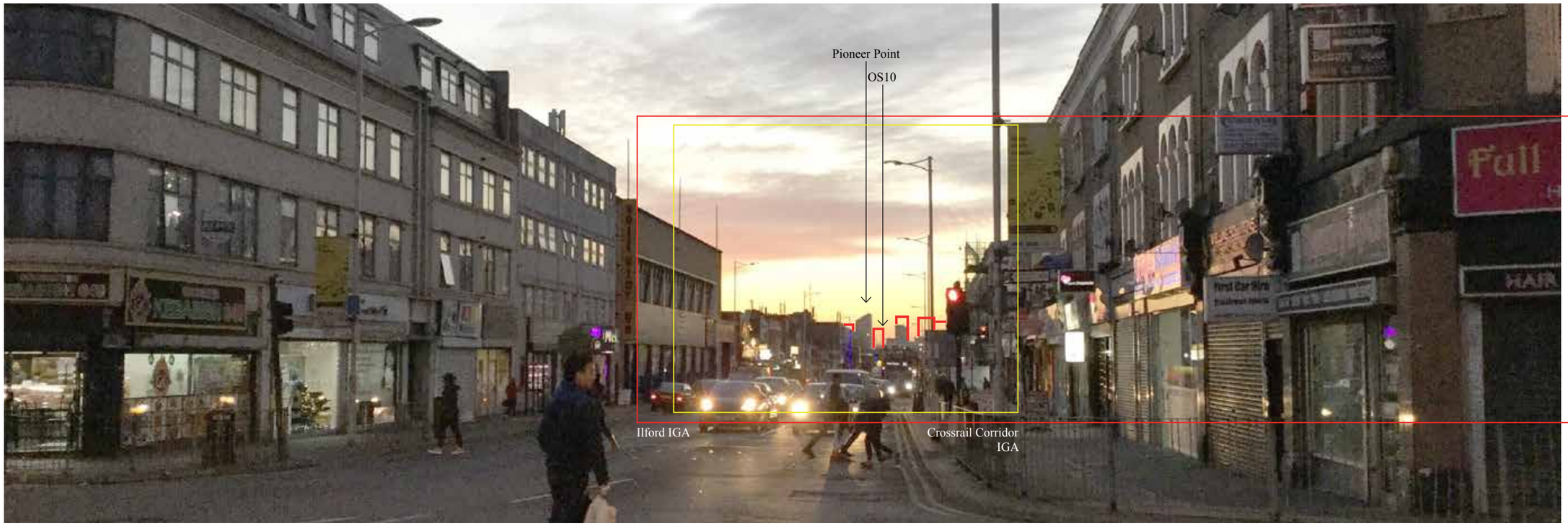


Figure 150 Viewpoint 09 - View south-west from Goodmayes - Scenario analysis



High density scenarios

6.6.65 The aerial view (Figure 152) illustrates the distribution of consented schemes in the background of the view, illustrating OS10 adjacent to Pioneer Point, partially obscured by intervening buildings, and OS36 at the eastern edge of Ilford.

6.6.66 When viewing from the actual viewpoint location at ground level (Figure 153), only small parts of OS10 and OS36 would be visible, with the majority of the scenarios obscured by intervening existing and consented buildings.

6.6.67 Overall, when viewed from this location, the OS10 and OS36 scenarios both fit well into the townscape of Ilford and the Crossrail Corridor. In particular, the mid-height transition of OS36 from west to east forms an appropriate response to the townscape when viewed from this point.

Figure 152 Viewpoint 09 - High density scenarios - Aerial view

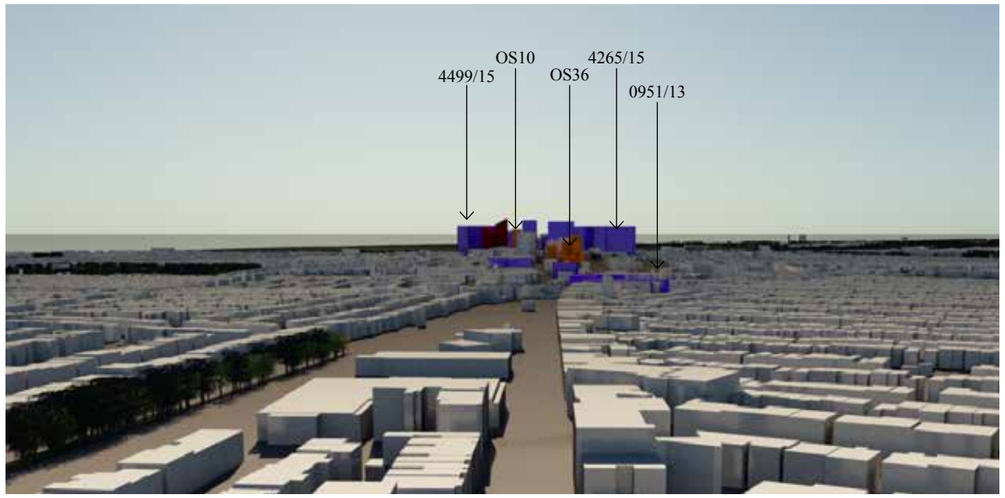
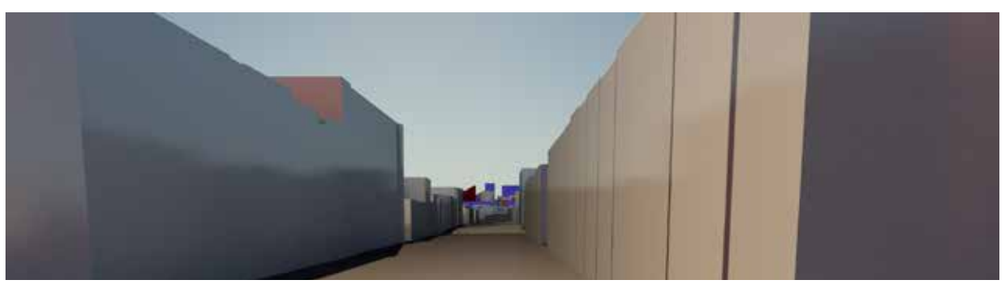


Figure 153 Viewpoint 09 - High density scenarios - Model render from viewing location



Medium density scenarios

6.6.68 In the medium density scenarios, less of the building plots within OS36 would be visible due to their reduced height. Therefore, from this viewpoint this scenario also does not negatively impact on the view.

Figure 154 Viewpoint 09 - Medium density scenarios - Aerial view

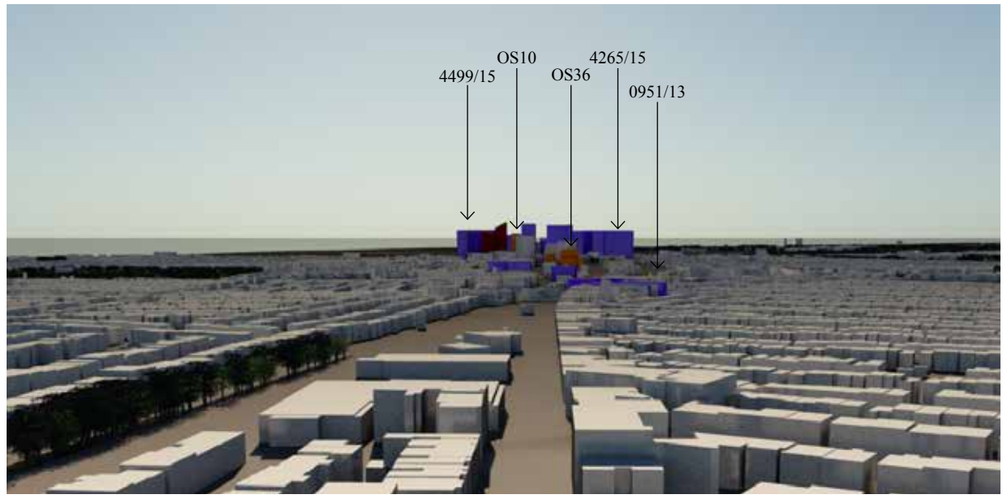


Figure 155 Viewpoint 09 - Medium density scenarios - Model render from viewing location

Viewpoint 12 - View north from Ilford Lane

6.6.69 The location of this view, including the indicative extent of the viewing corridor, is shown on Figure 157, indicating the consented developments and Opportunity Site (OS) scenarios within this area. Figure 156 below gives an overview of the approximate changes to the view introduced by these developments and scenarios, alongside setting out the approximate location of the Investment & Growth Areas.

Consented developments

6.6.70 This street scene would remain largely unchanged by development in the wider borough. Ilford is visible in the background of the view, currently marked by the top of Pioneer Point. Approved planning applications in close proximity to Ilford station would further reinforce the development cluster here, marking of Ilford as a Metropolitan Centre.

6.6.71 Further height in Ilford could be acceptable from this view, but would change the nature of the skyline and potentially could end up adversely dominating the background of the view.

Figure 157 Viewpoint 12 key plan

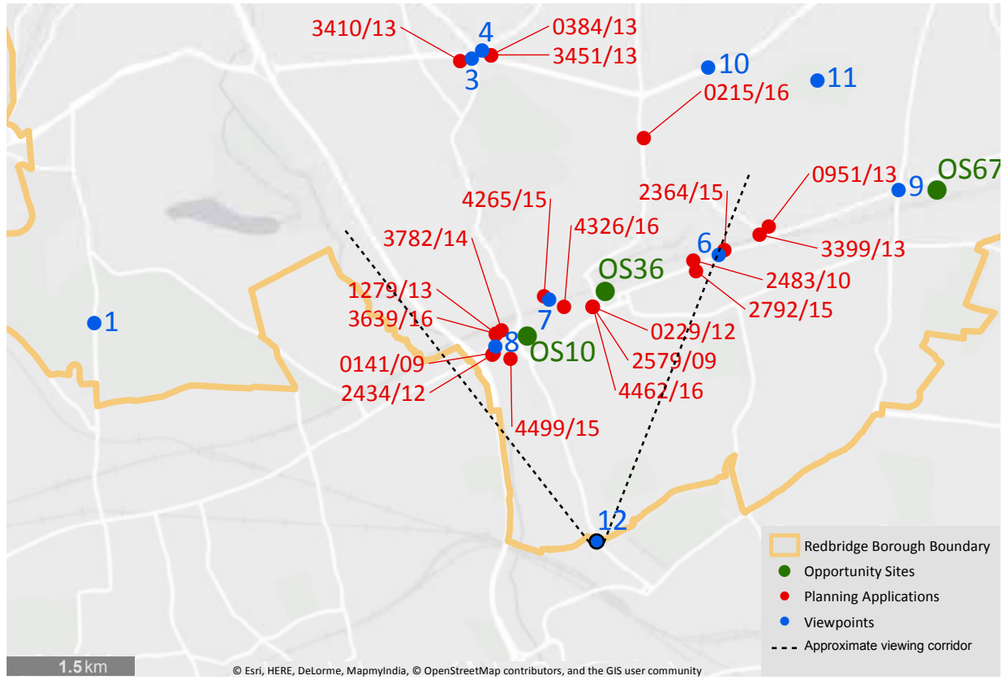
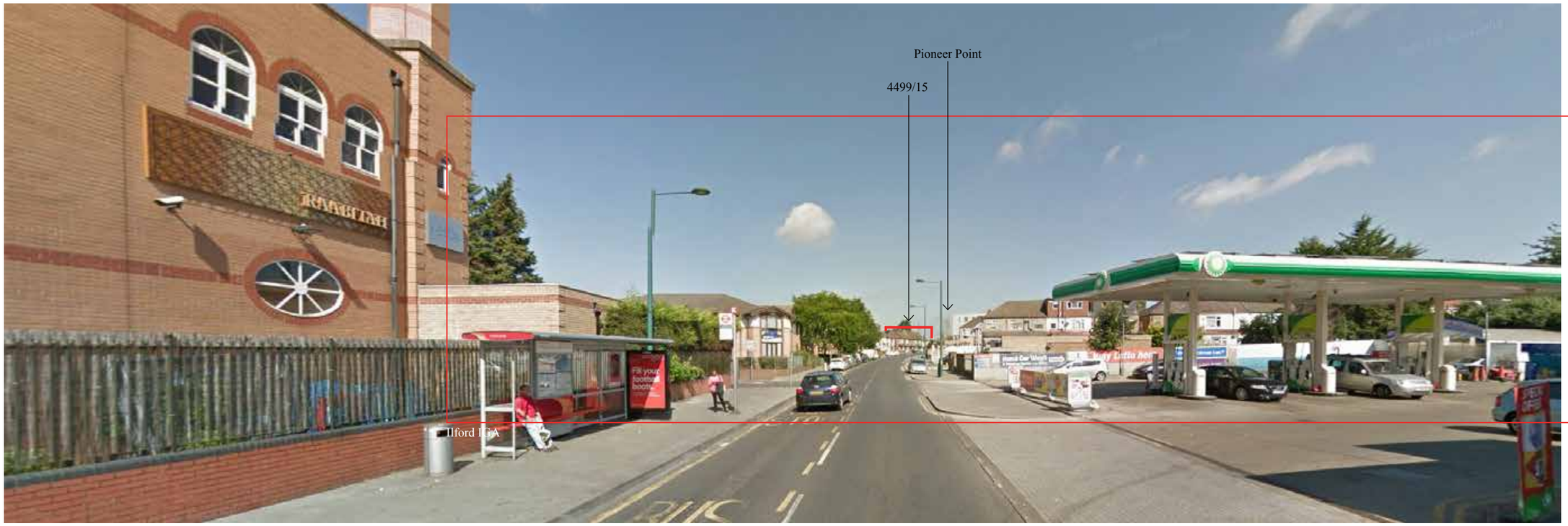


Figure 156 Viewpoint 12 - View north from Ilford Lane - Scenario analysis



High density scenarios

6.6.72 The aerial view (Figure 158) illustrates the distribution of consented schemes in the background of the view, illustrating OS10 adjacent to Pioneer Point and OS36 at the eastern edge of Ilford, both partially obscured by intervening buildings.

6.6.73 When viewing from the actual viewpoint location at ground level (Figure 153), neither of these scenarios are likely to be visible due to the intervening buildings in the foreground and middle-ground of the view.

6.6.74 On this basis, the high density scenarios tested would not impact this view.

Figure 158 Viewpoint 12 - High density scenarios - Aerial view

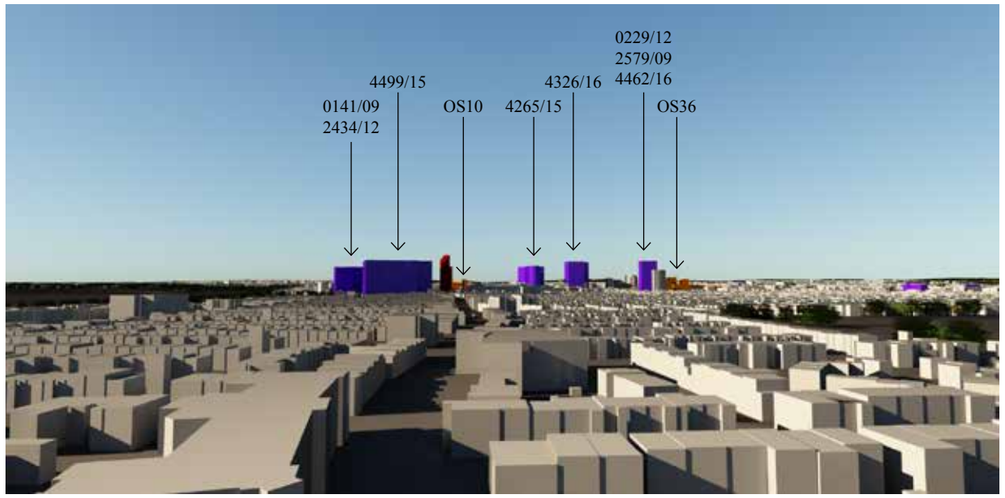
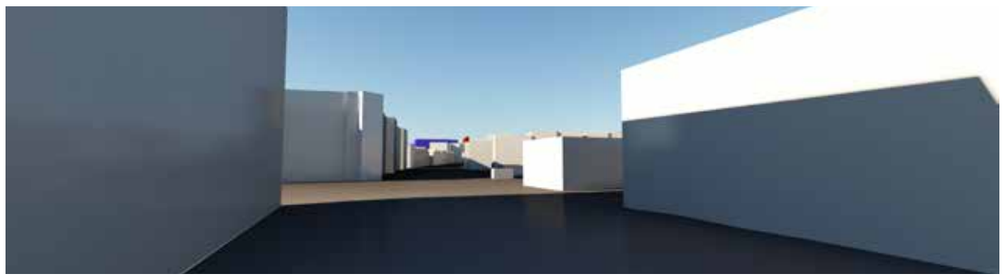


Figure 160 Viewpoint 12 - High density scenarios - Model render from viewing location



Medium density scenarios

6.6.75 The lower building height of these medium density scenarios (shown in the aerial view in Figure 159) would not be visible from this viewing location (see Figure 161) and therefore would not affect this strategic view.

Figure 159 Viewpoint 12 - Medium density scenarios - Aerial view

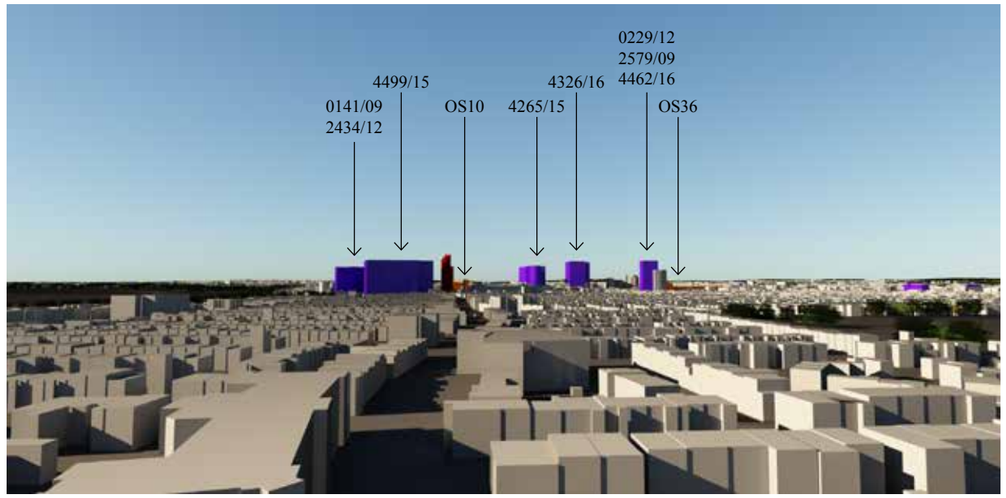
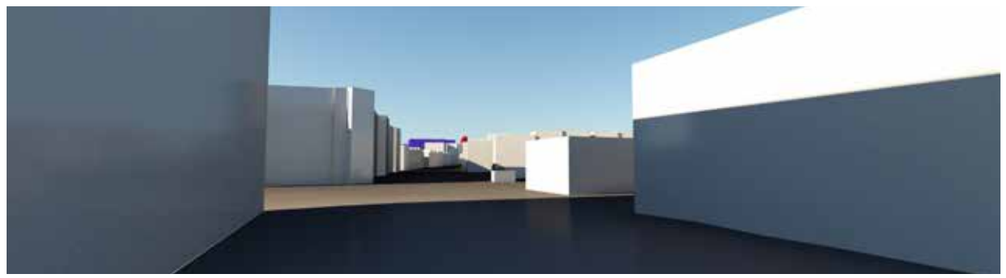


Figure 161 Viewpoint 12 - Medium density scenarios - Model render from viewing location



6.7 Overview of scenarios

Site	Gross site area (ha)	High density scenarios						Medium density scenarios					
		Potential non-residential GFA (ha)	Potential residential units (No.)	Suggested density range - London Plan Policy 3.4	Suggested density	Sensitivity testing and impact (+ : acceptable; - : not acceptable; o : acceptable with mitigation)		Potential non-residential GFA (ha)	Potential residential units (No.)	Suggested density range - London Plan Policy 3.4	Suggested density	Sensitivity testing (+ : acceptable; - : not acceptable; o : acceptable with mitigation)	
OS10 - Chapel Road / High Road / Clements Lane, Ilford IGA	0.62	0.87	251	215-405 u/ha	405 u/ha	**Strategic views** - skyline background feature in views 3 and 9, background visibility in views 1, 2 and 5 and visible in the foreground / middle-ground of views 7 and 8. In all views this would be seen as an addition to the cluster at Ilford Metropolitan Centre. **Local townscape and views** - sits alongside other tall buildings. **Heritage assets** - steps down towards listed buildings at Ilford Island which is in close proximity, although further accentuating the dominance of new tall developments on this isolated site. Further density would be likely to have an adverse effect on the setting of these buildings,. **Response to site constraints** - none specific. **Relationship to adjacent developments** - step change in plot heights responds to surrounding lower context, particularly the listed buildings of Ilford Island. **Microclimate** - Local increases in windiness and overshadowing which could be resolved through detailed planning of the site layout. Further density could create unacceptable microclimatic conditions that cannot be satisfactorily mitigated.	+ + + + + o	n/a	n/a	Not tested	Not tested	Not tested	
OS36 - Redbridge Enterprise and Ilford Retail Park - Ilford IGA	1.9	0.28	571	70-405 u/ha	300 u/ha	**Strategic views** - background feature of views 2, 5 and 9; and middle-ground feature of view 7. Generally adds to the cluster of buildings in Ilford Metropolitan Centre, extending existing height towards the east. **Local townscape and views** - sits close to other tall buildings, although lower in height than those in Ilford centre. Extends greater height further eastwards into the Crossrail Corridor which is in conflict with the local built form. **Heritage assets** - no significant interaction with listed buildings. **Response to site constraints** - none specific other than responding to the presence of the railway corridor. **Relationship to adjacent developments** - main height located adjacent to the railway and in the west closest to Ilford centre, stepping down towards less dense development in the south and east. Built form is considerably taller and denser than other adjacent residential developments. **Microclimate** - No increase in adverse pedestrian wind. Small increase in overshadowing to the south of the development.	+ - + + - +	0.23	366	55-355 u/ha	192 u/ha	**Strategic views** - background feature of view 2; and middle-ground feature of view 7. Generally adds to the cluster of buildings in Ilford Metropolitan Centre, extending existing height towards the east although less significantly than the high density scenario. **Local townscape and views** - better integration with lower building heights to the east of Ilford Metropolitan Centre, although plots in the west would be lower than other nearby consented schemes. **Heritage assets** - as before. **Response to site constraints** - as before **Relationship to adjacent developments** - largely as before, with the lower buildings, particularly in the north-west of the plot, better interacting with the surrounding buildings along this street. **Microclimate** - No increase in adverse pedestrian wind. Small increase in overshadowing to the south of the development.	+ + + + + +
OS117 - Station Estate - South Woodford IGA	0.77	0.0	186	70-260 u/ha	241 u/ha	**Strategic views** - foreground feature of view 5. **Local townscape and views** - highly visible as the tallest element within the local South Woodford area, although partially mitigated by the railway line and elevated Viaduct. **Heritage assets** - no significant interaction with listed buildings. Tallest buildings would adversely impact on the setting of the nearby conservation area. **Response to site constraints** - presence of railway line and elevated Viaduct influences the position of the tallest proposed blocks. **Relationship to adjacent developments** - only shares a boundary with other buildings to the south-west, where building heights are proposed to step down. **Microclimate** - Some small wind acceleration in passageways.	+ - - + + +	0.0	149	55-225 u/ha	193 u/ha	**Strategic views** - as before. **Local townscape and views** - visible as one of the taller elements within the local South Woodford area, although partially mitigated by the railway line and elevated Viaduct. **Heritage assets** - lower building heights would have minimal impact on the adjacent conservation area. **Response to site constraints** - as before. **Relationship to adjacent developments** - as before. **Microclimate** - No adverse wind or overshadowing issues.	+ + + + + +

Site	Gross site area (ha)	High density scenarios					Medium density scenarios				
		Potential non-residential GFA (ha)	Potential residential units (No.)	Suggested density range - London Plan Policy 3.4	Suggested density	Sensitivity testing and impact (+ : acceptable; - : not acceptable; o : acceptable with mitigation)	Potential non-residential GFA (ha)	Potential residential units (No.)	Suggested density range - London Plan Policy 3.4	Suggested density	Sensitivity testing (+ : acceptable; - : not acceptable; o : acceptable with mitigation)
OS67&70 - Tesco 822 High Road and Goodmayes Retail Centre - Crossrail Corridor IGA	7.0	0.5	1673	70-260 u/ha	240 u/ha	**Strategic views** - visible in backgrounds of views 5, 7 and 8, with the tall tower element particularly highlighting Goodmayes Station. + **Local townscape and views** - substantial transformation of this local townscape, changing large retail sheds and surface car parking into dense mixed use development, sitting adjacent to low density development beyond the plot boundaries. - **Heritage assets** - not applicable. + **Response to site constraints** - presence of railway line and Goodmayes Station influences the position of the tallest proposed blocks. + **Relationship to adjacent developments** - generally bounded by road and rail corridors and an open space. Overall, the building heights step down away from key transport nodes, including Goodmayes Station. Building heights still generally considerably higher than adjacent built form. - **Microclimate** - Increase in windiness to strolling levels along Goodmayes Road. Limited overshadowing to the north-east and south-west. o	0.38	1405	55-225 u/ha	200 u/ha	**Strategic views** - visible in backgrounds of views 7 and 8, with the built form generally in keeping with the surrounding building heights. + **Local townscape and views** - the lower building heights would be more compatible with the surrounding urban fabric, although does not take into account the greater density achievable with the road and rail boundaries the plot benefits from. + **Heritage assets** - as before. **Response to site constraints** - as before, without so notably marking key transport nodes such as Goodmayes Station. + **Relationship to adjacent developments** - as before. + **Microclimate** - Increase in windiness to strolling levels along Goodmayes Road. Limited overshadowing to the north-east and south-west. o

6.8 Scenario conclusions

OS10

High density scenario

6.8.1 Due to the strategic location of this scenario, within Ilford Metropolitan Centre and close to Ilford Station on the Crossrail Line; and the emerging presence of a distinct cluster of consented and built tall buildings, this site is considered suitable for high density, tall building development.

6.8.2 From a microclimate perspective, this development is likely to increase local windiness but not beyond levels acceptable for standing, strolling and business walking in different zones. Furthermore, appropriate mitigation could and should be adopted to create areas comfortable for seating to maximise the active podium uses. There would also be overshadowing of immediate adjacent properties to the east, south and west, but only an increase due to the relatively open nature of the current site.

6.8.3 On this basis, no medium density scenario has been tested for this site.

6.8.4 Development at the site will need to take care to respond positively to the setting of the listed buildings within the Ilford Island site and undertake careful microclimate modelling to ensure the quality of the pedestrian environment in Ilford is not compromised, also taking into account other tall building developments proposed / consented. Development beyond the density tested could result in adverse impacts on nearby heritage assets and also local microclimatic conditions which could not be satisfactorily mitigated.

OS36

High density scenario

6.8.5 While this scenario is located close to Ilford Metropolitan Centre, it is positioned between key amenities and transport nodes. The plot itself is slightly removed from the existing and consented clusters of tall buildings in Ilford and further east at Seven Kings. Apparent in view 7, the stepping down of building heights towards the east fits well with the existing and immediate future townscape pattern; although the taller tower elements at Griggs Approach are noticeably taller than anything around them, without performing the function of marking a strategic space or facility of civic importance.

6.8.6 This scenario would not increase adverse pedestrian wind to the surrounding area. The scenario would also only result in a small increase in overshadowing, mostly to the south of the development.

6.8.7 With regard to the townscape and visual concerns, a medium density scenario has been developed and tested for this site, presented on the following pages.

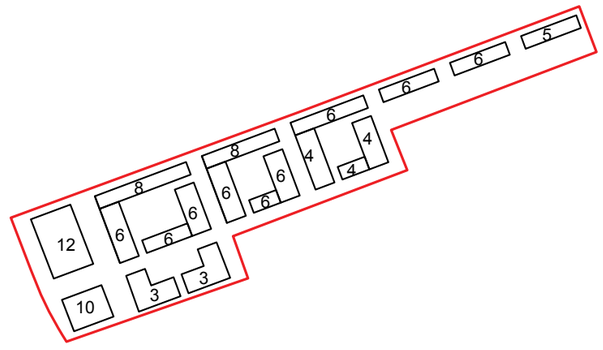
Medium density scenario

6.8.8 The lower building heights within this scenario are generally a better fit with the immediate townscape context than the high density scenario presented on the previous spread. Avoiding the stand-alone tower elements is also considered to be a more appropriate proposal for this location, which is situated away from key civic spaces, transport nodes and primary amenities. However, much of the development would not impact on either local or more strategic borough views, suggesting that the good levels of accessibility to public transport would not be maximised.

6.8.9 This scenario would not increase adverse pedestrian wind to the surrounding area. The scenario would also only result in a small increase in overshadowing, mostly to the south of the development.

6.8.10 On the basis of the townscape and visual concerns, further consideration has been given to a scenario which would deliver a density towards the upper end of the London Plan recommendations for a site with a PTAL of 2-3. This is illustrated in Figure 162 below.

Figure 162 OS36 - Achieving a medium to high density



6.8.11 In this scenario a density of approximately 238 u/ha could be achieved with nominal increases in building heights across some of the plots. In particular this avoids a primary tall tower element in the north-west corner of the site which did not integrate comfortably with the local townscape as demonstrated in the high density scenario.

6.8.12 On this basis, it is considered that a medium density scenario towards the upper limits of the London Plan recommendations is an appropriate response to plots in this location.

OS117

High density scenario

6.8.13 Generally this scenario sits well within both the strategic and local context due to the immediate surrounds of the site - particularly the elevated Viaduct structure. It is also close to South Woodford London Underground Central line station, and would therefore serve as a marker within the townscape for this key transport node. However, the tallest elements of the scenario would be incongruous with other building heights within South Woodford, located away from the railway line and elevated Viaduct.

6.8.14 For this scenario there may be some small wind acceleration in passageways making them areas for strolling. Surrounding buildings are located far enough away to avoid significant overshadowing issues.

6.8.15 On this basis, a medium density scenario has been developed and tested on the following spread to explore whether a different, lower height building typology might be more appropriate for this sensitive low density context.

Medium density scenario

6.8.16 Similar to the high density scenario, this integrates well within both the strategic and local context due to the immediate surrounds of the site - particularly due to the elevated Viaduct structure. The reduced building heights in this medium density scenario would be more contiguous with the rest of the built form in South Woodford, but is relatively inefficient in comparison to the high density proposal and also doesn't particularly maximise the location of the plot adjacent to the Viaduct and railway line, and close to South Woodford station.

6.8.17 The medium density scenario does not give rise to any adverse wind or overshadowing issues.

6.8.18 Provided any development responds positively to the surrounding low density context of South Woodford, particularly along the south-west boundary with other properties, a high density scenario is considered to be achievable in this location. This is primarily due to the site location adjacent to the railway line and elevated Viaduct. However, the density requires efficient use of the site (noting the scenarios do not include for any non-residential GFA) and height beyond that illustrated in the scenarios would be likely to be inappropriate.

OS67&70

High density scenario

6.8.19 This scenario responds well to the opportunity presented by Crossrail to transform under-utilised areas of large retail sheds and car parking to deliver large numbers of new homes. Within strategic views, the taller tower elements succeed in marking key transport nodes, particularly Goodmayes station. However, the overall high density of the development across the entire plot would be a significant change on the surrounding residential character of the rest of this part of the borough. While it does provide clear intensification around the rail corridor, there is minimal stepping in building heights towards surrounding properties. This is in part mitigated by the limits of this site being defined by road and rail corridors, and an open space.

6.8.20 It should also be noted that this high level of density is located outside of either Ilford Metropolitan Centre or any District Centres within the borough.

6.8.21 Windiness is predicted to increase to strolling level along Goodmayes Road, with the homogeneity of height over the remainder of the site preventing other areas of adverse wind. Overshadowing of properties is limited to the north-east and south-west corners of the site.

6.8.22 With regard to these concerns, a medium density scenario has been developed and tested for this site, presented on the following pages.

Medium density scenario

6.8.23 The lower building heights within this scenario are generally a better fit with the immediate townscape context beyond the road and rail, than the high density scenario presented on the previous spread. However, the medium density scenario misses the opportunity to intensify development particularly around Goodmayes station on the Crossrail route. The lesser visibility of the medium density scenario on open space in the north-east of the borough is offset against not adopting the opportunity to maximise the excellent levels of accessibility to public transport would not be maximised.

6.8.24 As with the high density scenario, windiness is predicted to increase to strolling level along Goodmayes Road, with the homogeneity of height over the remainder of the site preventing other areas of adverse wind. Overshadowing of properties is limited to the north-east and south-west corners of the site.

6.8.25 On this basis, it is considered that any development that comes forward on this plot should sit between the two densities tested in this study, giving consideration to variation in the overall skyline and marking key civic spaces / transport nodes such as Goodmayes station.

C

POLICY RECOMMENDATIONS

7 Analysis of Draft Policy LP27

7.1 Policy alignment framework

7.1.1 An alignment framework has been developed to assess Draft Policy LP27 against higher tier policy. LP27 has been compared against the relevant sections of the following policy/guidance documents:

- NPPF (March, 2012);
- London Plan (2016 – Consolidated with alterations since 2011).

7.1.2 An assessment on the degree of alignment is provided along with a commentary setting out the reasons for the assessment. Table 20 sets out the assessment criteria used.

7.1.3 The comparison focuses on the main content of Draft Policy LP27, since this is the section predominantly used in decision-making. However the supporting text is also considered and points of relevance noted, for example those instances where there might have been a higher degree of alignment if points within the supporting text were included in the main policy wording.

Table 20 Alignment framework assessment criteria

	Very aligned	Policies are very consistent. Policies seek to achieve exactly the same ambition using exactly the same approach. The same or similar language is used.
	Aligned	Policies are consistent. Policies seek to achieve similar ambitions using similar approaches. Similar language is used.
	Some non-alignment	Policies are consistent in some areas but inconsistent in others. The policies seek to achieve slightly different ambitions or propose slightly different approaches.
	Not aligned	Policies are in conflict. Policies seek to achieve different ambitions and/or propose different approaches; or policies contain elements which are not shared in any form.

Alignment with the NPPF

7.1.4 The NPPF does not provide specific guidance on tall buildings.

7.1.5 However, Draft Policy LP27 is generally well aligned with the overarching principle of the NPPF – a "*presumption in favour of sustainable development*". LP27 directs tall buildings to specific "Tall Buildings Zones", and there is also a requirement for any tall buildings outside these zones to be located within "*centres that have good public transport, and where the character of the surrounding area would not be harmed or adversely affected…*" This is well aligned in ensuring that tall buildings are located in sustainable locations. LP27 also outlines a consideration for "*sustainable design and construction practices*". Support for tall buildings in sustainable locations is further elaborated in the supporting text, which promotes tall buildings in areas which are "*the most urbanised, the most accessible by public transport, with the most commercial and retail activity, and with the capacity for intensification within the higher density ranges*".

7.1.6 NPPF section 7, paragraph 59, states that "*design policies should avoid unnecessary prescription or detail and should concentrate on guiding the overall scale, density, massing, height, landscape, layout, materials and access of new development in relation to neighbouring buildings and the local area more generally*". LP27 is generally aligned with these principles, particularly where it states that tall buildings will be considered suitable "*where the character of the surrounding area would not be harmed or adversely affected by the scale, mass or height of the building, and where it relates well to the urban layout, streets, open spaces and public realm of the surrounding area*".

7.1.7 It is noted that given the lack of specific reference to tall buildings within the NPPF, and that within the NPPF tall buildings are most closely covered by design issues, Draft Policy LP26 may be of more relevance to the NPPF. Although not within the scope of this review, it is noted that LP27 makes explicit reference to LP26. Therefore, provided that LP26 is in compliance with the NPPF, then there should be uniformity between the NPPF and LP27.

Alignment with the London Plan

7.1.8 Table 21 presents an analysis of the alignment of Draft Policy LP27 in relation to London Plan Policy 7.7. The analysis has been undertaken against each of the key sub-sections of London Plan Policy 7.7, and an assessment of compliance, along with a commentary outlining the rationale behind each assessment, is included within the table.

7.1.9 The assessment indicates that Draft Policy LP27 is generally aligned with London Plan Policy 7.7. There are however some elements of partial non-alignment or complete non-alignment, for example with regards to microclimate issues, upper floor public access and regeneration.

7.1.10 It should be noted that the degree to which Draft Policy LP27 aligns with London Plan Policy 7.7 does not necessarily determine the effectiveness or soundness of the policy. For example, having a fully aligned policy is not necessarily the most appropriate outcome, as LP27 should not merely duplicate London Plan Policy 7.7, rather, it should supplement the higher tier of policy and provide emphasis or elaboration on those aspects which are of particular importance to the local context. In this way, the areas of complete non-alignment also need not be of any concern if there is no need to either reiterate or supplement the London Plan further within the LBR context for particular criteria.

7.1.11 Key areas of both alignment and non-alignment are therefore considered and evaluated in terms of possible amendments to Draft Policy LP27, within the recommendations Section 8.

Table 21 Alignment analysis of Draft Policy LP27 in relation to London Plan Policy 7.7

London Plan Policy 7.7 sub-section	Draft Policy LP27	
	Assessment	Commentary
A - Tall and large buildings should be part of a plan-led approach to changing or developing an area by the identification of appropriate, sensitive and inappropriate locations. Tall and large buildings should not have an unacceptably harmful impact on their surroundings.		LP27 is generally well aligned with this aspect of 7.7, in identifying appropriate locations for tall buildings (Tall Buildings Zones). The policy is consistent in stating that tall buildings should not be harmful to their surroundings; however while 7.7 states that tall buildings should not be 'unacceptably' harmful, LP27 does not assign a degree of harm. This implies that any form of harm to the surrounding areas will be deemed inappropriate within the Borough; however it is not clear whether this is the intention of the policy or not. LP27 is also not explicit in outlining any areas which are inappropriate for tall buildings, which reduces its compliance with 7.7. While the introductory text to the policy does acknowledge the London Plan requirement to define 'sensitive' areas, and although it is perhaps implicit that areas outside of the designated Tall Buildings Zones are sensitive, LP27 does not outline any specific 'sensitive' areas within the policy itself, instead making reference to sensitive locations within the supporting text, as those which are designated areas of special character in South Woodford and Barkingside.
B - Applications for tall or large buildings should include an urban design analysis that demonstrates the proposal is part of a strategy that will meet the criteria below. This is particularly important if the site is not identified as a location for tall or large buildings in the borough's LDF.		LP27 is very aligned with Policy 7.7, making explicit reference to the need for an 'urban design analysis' for tall buildings schemes, reflecting the exact requirements of the London Plan policy.
Ca - Tall and large buildings should generally be limited to sites in the Central Activity Zone, opportunity areas, areas of intensification or town centres that have good access to public transport.		The policies are very aligned in this case, with all of the relevant criteria for areas generally suitable for tall buildings outlined in 7.7 also employed within LP27.
Cb - Tall and large buildings should only be considered in areas whose character would not be affected adversely by the scale, mass or bulk of a tall or large building.		LP27 generally aligns with 7.7 in that it uses very similar terminology – i.e. that character should not be affected adversely by the scale, mass or bulk of a tall or large buildings. One area of non-alignment however, is that these criteria in 7.7 refer to all tall buildings, whereas their positioning within LP27 suggests that they relate only to tall buildings in areas outside of the designated Tall Buildings Zones.
Cc - Tall and large buildings should relate well to the form, proportion, composition, scale and character of surrounding buildings, urban grain and public realm (including landscape features), particularly at street level.		The policies are generally aligned. In particular, LP27 supplements the requirements of Policy 7.7 by requiring that consideration will be given to 'how the building integrates within the site and surroundings'. This builds upon the some of the key considerations which feature in 7.7, such as 'proportion' 'form', 'composition' and 'urban grain'. The policies are also consistent in considering public realm and the integration of tall buildings at street level; however LP27 does not supplement Policy 7.7 in terms of referencing local landscape features.
Cd - Tall and large buildings should individually or as a group, improve the legibility of an area, by emphasising a point of civic or visual significance where appropriate, and enhance the skyline and image of London.		LP27 is generally aligned with this aspect of Policy 7.7. Although there are minor differences in terminology, for example 7.7 discusses 'legibility', whereas LP27 discusses 'way-finding'. It is assumed however, that these cover the same issues.
Ce - Tall and large buildings should incorporate the highest standards of architecture and materials, including sustainable design and construction practices.		LP27 is very aligned with 7.7, with LP27(f) providing an exact replica of the wording of 7.7(Ce).
Cf - Tall and large buildings should have ground floor activities that provide a positive relationship to the surrounding streets.		Although not incorporating the same terminology, LP27 does generally align with 7.7 in requiring appropriate and active ground floor uses. While 7.7 requires that ground floor uses provide a positive relationship to surrounding streets, the requirements of LP27(g) do not frame ground floor uses in relation to surrounding streets, nor is there the addition of terminology such as 'positive relationship'.
Cg - Tall and large buildings should contribute to improving the permeability of the site and wider area, where possible.		LP27 discusses permeability in section (e); however, there is a slight contrast between the policies, as 7.7 makes explicit spatial reference to the permeability of the site and the wider area; whereas LP27 does not provide a spatial scale for assessing permeability.
Ch - Tall and large buildings should incorporate publicly accessible areas on the upper floors, where appropriate.		This criterion is not shared between Policies in any form. LP27 contains no reference to public access to upper floors of tall buildings to supplement policy 7.7.
Ci - Tall and large buildings should make a significant contribution to local regeneration.		This criterion is not shared between Policies in any form. LP27 contains no reference to tall buildings being required to make a significant contribution to local regeneration to supplement policy 7.7.
Da – Tall buildings should not affect their surroundings adversely in terms of microclimate, wind turbulence, overshadowing, noise, reflected glare, aviation, navigation and telecommunication interference.		The majority of these criteria are not shared between Policies. While LP27 is in alignment with 7.7 in mentioning overshadowing, there are no supplementary provisions for the remainder of criteria outlined in this part of policy 7.7 (e.g. microclimate, wind turbulence, noise, reflected glare, aviation etc.)
Db – Tall buildings should not impact on local or strategic views adversely.		The policies are generally aligned. LP27 does make reference to the need for tall buildings to be considered in relation to the impact upon views. LP27 requires that views 'of the area' are considered; however no reference is made to 'strategic' or 'local' views, which is included in 7.7.
E - The impact of tall buildings proposed in sensitive locations should be given particular consideration. Such areas might include conservation areas, listed buildings and their settings, registered historic parks and gardens, scheduled monuments, battlefields, the edge of the Green Belt or Metropolitan Open Land, World Heritage Sites or other areas designated by boroughs as being sensitive or inappropriate for tall buildings.		There is some non-alignment between the policies, as LP27 does not make specific provision for tall buildings in sensitive locations such as conservation areas. However, there is a requirement within LP27 for consideration of the historic context of the surrounding area, and of heritage assets. It is also stated that tall buildings will also be assessed in relation to other built conservation policy within the Borough.

7.2 Review of Regulation 19 consultation responses

7.2.1 A number of representations were received during Regulation 19 consultation in relation to Draft Policy LP27. These include:

Response 1: Historic England

7.2.2 This response makes a number of minor suggestions for LP27, centred on heritage assets and built heritage. Firstly, it is suggested that within the introductory text to the policy (paragraph 5.2.1), there should be an expansion of the acknowledgement that high density development does not necessarily equate to a need for tall buildings, to include reference to a range of higher density typologies such as terraced housing. Secondly, the response suggests a number of minor amendments to the wording of Draft Policy LP27 itself, so that it includes reference to: "heritage assets" in part 3; reference to "setting" in part 3b and replaces the term "built conservation" with "conservation of the historic environment".

Response 2: Local Councillor

7.2.3 This response argues that Draft Policy LP27 is not compliant with the London Plan, as it is worded in a "looser" fashion. In particular, the response argues that whilst London Plan Policy 7.7 states that buildings "should" conform to the relevant criteria, Draft Policy LP27 instead uses the term "attention paid", which is argued to be a less definitive form of terminology.

Response 3: South Woodford Society

7.2.4 This response references the supporting text of Draft Policy LP27, specifically, paragraph 5.2.12, which states that outside of the designated Tall Buildings Zones, sites for tall buildings will be identified through additional work and planning briefs for specific sites. The response therefore questions why a specific "landmark" location at Station Estate in South Woodford has been identified within Draft Policy LP1D – South Woodford Investment and Growth Area - as this site is not within a Tall Buildings Zone.

Response 4: Neighbourhoods of Ilford South Engage (NOISE)

7.2.5 This response argues that town centre areas, and Ilford in particular, are already at a saturation point with respect to high density, flatted development. The representation also argues that tall buildings in Ilford do not have adequate provision of onsite accessible open space, are not suitable for families or the elderly, and that some taller developments (including the landmark Pioneer Point) are structurally poor and will require significant repairs in future. It is also argued that ground floor uses in existing tall buildings have failed to provide "vibrant outlets", and that tall buildings should be dealt with on a case by case basis, rather than the plan specifying particular locations as is the case with Draft Policy LP27 and related policy.

7.2.6 In light of the representations received, this section provides further clarification of the Council's approach to managing tall buildings in the borough.

8 Recommendations for Draft Policy LP27

8.1 Introduction

8.1.1 This section sets out recommendations for Draft Policy LP27 which should be taken into account in progressing the emerging Local Plan. The recommendations consider the range of findings within the previous sections of this report and are cognisant of up to date national guidance, specifically the Tall Buildings Historic England Advice Note 4 (2015). This section has also been informed by the feedback from the Officer Workshop held on 1 December 2016.

8.2 Spatial approach

8.2.1 The review has highlighted a need to reconsider the spatial approach to tall buildings, given the age of the existing AAPs and the evolving nature of schemes coming forward within the Borough. Draft Policy LP27 has developed three designated Tall Buildings Zones, shown on Figure 1. Section B of this report reviews the appropriateness of these zones, in addition to testing other locations suitable for tall buildings through a series of medium and high density scenarios. The findings of this review generally corroborate the locations of the 'Tall Buildings Zones', however they also reveal other areas within the Borough which may be suitable for tall buildings in line with the London Plan definition "substantially taller than their surroundings". In addition, as revealed by the alignment framework, the London Plan states that Local Plans should identify areas that are appropriate, sensitive and inappropriate for tall buildings. In light of this work, and the findings of the compliance framework, the following recommendations are made to LBR:

8.2.2 **Recommendation 1a: To consider the replacement of 'Tall Buildings Zones' with an alternative spatial hierarchy which links to the 'building height gradient map'. Accordingly, consideration should be given to the following:**

i. **Tall and large building clusters are most appropriate within Ilford Metropolitan Town Centre, at Seven Kings and Goodmayes stations in the Crossrail Corridor and Gants Hill District Centre.**

ii. **Tall and large buildings may be appropriate within the local context in the following areas: Ilford Metropolitan Town Centre; The Crossrail Corridor (East Ilford, Seven Kings Local Centre, Goodmayes Local Centre and Newbury Park), Gants Hill District Centre, South Woodford District Centre and Barkingside District Centre.**

iii. **Within Wanstead District Centre, Woodford Green, and at Hainault, Fairlop and Redbridge stations, tall and large buildings may be**

appropriate within the local context.

iv. **Areas elsewhere in the Borough are deemed to be the most sensitive to tall buildings where development should generally match the surrounding height and context. Local landmark buildings and mid-density development which is tall within the local context may be acceptable in areas of good public transport accessibility within District Centres**

8.2.3 The proposed building height gradient map is shown on Figure 163 overleaf.

8.2.4 **Recommendation 1b: To consider an update to the Draft Local Plan Policies Map to reflect the 'building height gradient map' as opposed to the provision of three bounded 'Tall Buildings Zones'.**

8.2.5 Recommendation 1a suggests the explicit use of the word 'sensitive' within the Policy text, in order to bring Draft Policy LP27 further in line with London Plan Policy 7.7. In order to make clear which areas are most sensitive, the following recommendation is made:

8.2.6 **Recommendation 2: Re-order the supporting text to bring the contents of paragraph 5.2.12 closer to the beginning of the Policy.**

8.2.7 This would bring the issue of sensitive areas to a more prominent place in the policy, and would aid users in understanding that the Borough is generally quite sensitive to taller development.

8.3 London Plan criteria of local importance

8.3.1 The alignment framework concluded that Draft Policy LP27 is generally very aligned with London Plan Policy 7.7. One of the core planning principles of the NPPF is that planning should be plan-led through 'succinct' local plans (paragraph 17; page 5). The London Plan forms part of the Development Plan of LBR, thus it is not necessary for Local Plans to repeat the provisions of the London Plan in local planning policy, rather they should strive to provide supplementary local context. With this in mind, the following recommendations are made:

8.3.2 **Recommendation 3a: Within Draft Policy LP27, explicitly reference that London Plan Policy 7.7 will apply to tall buildings applications in the Borough.**

8.3.3 **Recommendation 3b: Draft Policy LP27 should avoid duplicating London Plan Policy 7.7 without supplementing with factors of local significance.**

8.3.4 The alignment framework identified some areas of complete alignment with London Plan Policy 7.7. LP27(f) is a notable example of where this is the case, and the value of retaining this criterion within Draft Policy LP27 should therefore be considered by LBR in light of recommendation 3b. The alignment framework also found that the remainder of Draft Policy LP27 criteria (a) to (g) cover much of the same terminology and many of the same themes, resulting in a generally high level of alignment even where the policy is not duplicated verbatim. In order to steer Draft Policy LP27 to more effectively account for the local context of each of the London Plan Policy 7.7 criteria, Table 22 has been created, using the evidence base and consultation responses, to suggest areas of possible local significance which could be applied within LP27.

8.3.5 The compliance framework also revealed that there are criteria contained within London Plan Policy 7.7 which are not included in LP27. These are also included within Table 22 where any factors of local significance which may justify their inclusion in Draft Policy LP27 are considered.

Table 22 Locally significant criteria within London Plan

London Plan criteria	London Plan criteria identified as locally significant within Redbridge
Cc - Tall and large buildings should relate well to the form, proportion, composition, scale and character of surrounding buildings, urban grain and public realm (including landscape features), particularly at street level.	As agreed with LBR: Emphasis on enhancing local landscape features and demarcation between public and private space.
Cd - Tall and large buildings should individually or as a group, improve the legibility of an area, by emphasising a point of civic or visual significance where appropriate, and enhance the skyline and image of London.	As raised at the officer workshop: Requirement that tall buildings should contribute to a varied skyline when viewed across the Borough. Emphasis placed on consolidating clusters of tall buildings to mark spaces of civic significance, public transport nodes and to assist with strategic way-finding, marking Metropolitan and District Centres.
Ce - Tall and large buildings should incorporate the highest standards of architecture and materials, including sustainable design and construction practices.	As raised at the officer workshop, and concerns raised in consultation responses: Consideration of management regime and building lifecycles, ensuring that tall buildings are built to last with durability and longevity of both design and materials.
Cf - Tall and large buildings should have ground floor activities that provide a positive relationship to the surrounding streets.	Concerns raised in consultation responses: Requirement for active ground floor frontages.
Cg - Tall and large buildings should contribute to improving the permeability of the site and wider area, where possible.	As raised at the officer workshop: Tall buildings should identify gateway areas and increase permeability by becoming strategic wayfinding elements, thereby promoting accessibility.
Ch - Tall and large buildings should incorporate publicly accessible areas on the upper floors, where appropriate.	No specific local context identified.
Ci - Tall and large buildings should make a significant contribution to local regeneration.	As agreed with LBR: Emphasis on local regeneration given Ilford's status as an Opportunity Area.
Da – Tall buildings should not affect their surroundings adversely in terms of microclimate, wind turbulence, overshadowing, noise, reflected glare, aviation, navigation and telecommunication interference.	As raised at the officer workshop: Concerns regarding wind tunnelling are frequently raised in representations for tall building applications in the Borough. Requirement to consider evidence base on microclimate.

London Plan criteria	London Plan criteria identified as locally significant within Redbridge
Db – Tall buildings should not impact on local or strategic views adversely.	As raised at the officer workshop and as agreed with LBR: Requirement for buildings to act as landmarks within strategic views identified in Section A, marking spaces of civic importance and key transport nodes. As such, it is recommended that there should be a requirement for developers to submit details of the appearance of schemes within individual street scenes, including clear consideration of the development's relationship to adjoining and nearby buildings, particularly those of historic significance.
E - The impact of tall buildings proposed in sensitive locations should be given particular consideration. Such areas might include conservation areas, listed buildings and their settings, registered historic parks and gardens, scheduled monuments, battlefields, the edge of the Green Belt or Metropolitan Open Land, World Heritage Sites or other areas designated by boroughs as being sensitive or inappropriate for tall buildings.	As agreed with LBR: Consideration of specific sensitive areas, or types of areas considered especially sensitive within the Borough. In relation to Redbridge, this particularly relates to conservation areas, listed buildings, locally listed buildings and Green Belt.

8.3.6 The following recommendations are made with regard to criteria (a) to (g), and should be considered in conjunction with the findings of Table 22:

8.3.7 **Recommendation 4a**: **Further consideration is required as to how local context is captured within the criteria outlined in Draft Policy LP27 (a) to (g), to ensure that they supplement, rather than duplicate, London Plan Policy 7.7.**

8.3.8 **Recommendation 4b: The addition of further supplementary detail within the supporting text to expand upon the local significance of criteria (a) to (g) should be considered.**

8.3.9 **Recommendation 4c: Areas of non-alignment with the London Plan should not be added to Draft Policy LP27 unless there are local factors which would justify their inclusion, and they are adapted accordingly.**

8.4 Other relevant criteria

Relevant and already included within Draft Policy LP27

8.4.1 Draft Policy LP27 states that "*tall and large buildings will also be assessed against other relevant policies within the Local Plan in relation to* ***mixed use development, amenity space, built conservation and sustainability***." It is considered that this paragraph may not capture the full extent of relevant planning policies against which all tall buildings will be assessed. As such, the following recommendation is made:

8.4.2 **Recommendation 5: To consider the amendment of this paragraph to signpost readers to all other relevant policies within the Local Plan.**

Relevant and suggested for further consideration

8.4.3 The following criteria have been highlighted as relevant to tall buildings policies within the findings sections of this report. Specifically, the criteria have been sourced from the case study policy and application reviews (Section A) as well as relevant national guidance documents including the Historic England (HE) Advice Note 4: Tall Buildings (2015). Table 23 below provides justification on how these criteria may be deemed to be appropriate when applied to the LBR context.

Table 23 Other criteria: appropriateness within the Redbridge context

Criteria	Source	Appropriateness of criteria within the Redbridge context
Night time appearance	HE Advice Note 4: Tall Buildings	Enhancing the legibility of buildings at night adding value to Redbridge's skyline and night time character, particularly within the Ilford Opportunity Area as the only Metropolitan Centre within the Borough.
Management regime (including details about building life cycle)	LBWF policy	Consultation response highlights concern around the longevity of existing tall buildings within LBR. Furthermore, these considerations were agreed to be locally important with LBR at the officer workshop.
Proposals for redevelopment and refurbishment of existing tall buildings	LBB policy	LBR have confirmed that a small number of applications have been received under the General Permitted Development Order 2016 for office to residential conversion. Therefore, it is appropriate to ensure the wording in the policy has some acknowledgement of the refurbishment of existing tall buildings.
Landscaping	LBE policy	The local significance of this criteria has been covered in Table 22.
Density	LBE policy	Consultation response highlights that high density development does not have to equate to tall buildings

8.4.4 On the basis of the above, the following recommendation has been made to Redbridge:

8.4.5 **Recommendation 6: Further consideration is required around how the following criteria identified in Table 7 could supplement the set of criteria and supporting text within Draft Policy LP27:**

- **night time appearance;**
- **management regime (including details about building life cycle);**
- **proposals for redevelopment and refurbishment of existing tall buildings; and**
- **landscaping.**

8.4.6 The remaining criterion is in relation to density. It is acknowledged that the Draft Local Plan does not include a standalone policy on density and instead this consideration is embedded in a number of Draft Policies. Whilst it is acknowledged that high density development does not always equate to tall buildings, density and building height should not be considered in isolation. On this basis, the following recommendation has been made to LBR:

8.4.7 **Recommendation 7: Further consideration is required with regards to how density is applied throughout the Draft Plan, taking into account the findings of Section 6 and the 'building height gradient map', to ensure that the suite of**

Policies are drafted to help the Council achieve its growth objectives.

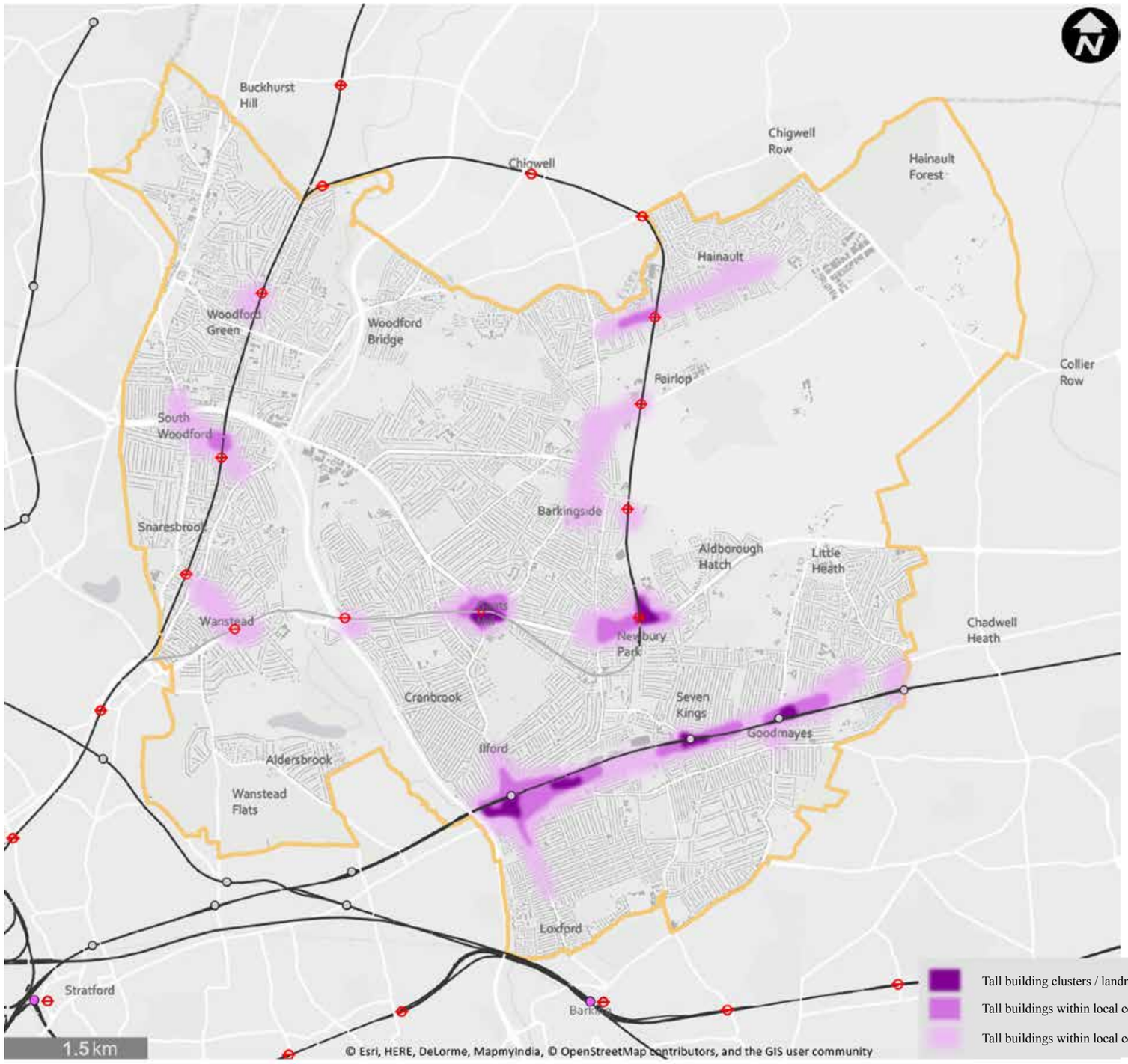
8.5 Additional application requirements

8.5.1 Local validation checklists and policy wording should provide applicants with confidence and clarity around the type of information they need to submit as part of tall building applications. The findings section of this report has highlighted documents deemed to be important in tall buildings policy within the case study boroughs. A further review has been undertaken to reveal any additional application requirements for tall buildings which are set out within validation checklists or tall buildings policy within other London Boroughs (specifically London Borough Tower Hamlets and London Borough of Kensington and Chelsea). The below list collates these findings and whilst it does not provide an exhaustive list of document requirements, it identifies those currently not included within Draft Policy LP27 or the Redbridge local validation checklist.

- **Lighting assessment**
- **Movement statement** (provides a traffic impact assessment, including car parking, pedestrian movement and public transport needs, and a servicing strategy.)
- **Building services strategy** (including building systems and enclosure, energy consumption and efficiency, waste storage and disposal and maintenance.)
- **Economic statement** (for commercial buildings)
- **A statement related to views**
- **A construction and demolition statement**

8.5.2 **Recommendation 8: To consider supplementing Draft Policy LP27 or the local validation checklist to include the above supporting documentation as requirements for all tall buildings applications.**

Figure 163 Proposed building height gradient map



APPENDIX A

ASSESSMENT OF DESIGN QUALITY SHEETS

Housing at The Exchange, Ilford (4265/15)

The scheme proposes a restoration of the existing 6 storey car park for the Exchange shopping mall. It comprises of erection of a podium development above the parking. An additional storey tower along the railway corridor creates a new landmark.

Through reconfiguration of the car park, the proposal activates its frontages, also creating access to the new 241 residential units on top.

Landscaped roof of the parking provides communal garden for the residents.

Proposed scheme

Site location

Tall Building Zone
Investment and Growth Area
Site Location
Local / Statutory Listed Building

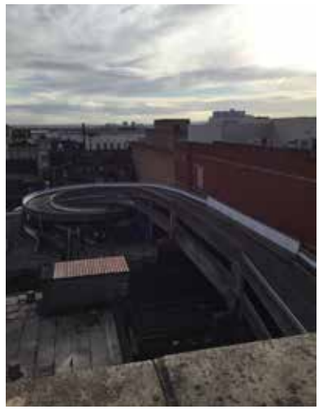
Photo locations

View 1

View 2

View 3

View 4



Application reference no.	Tall building zone / Investment & Growth Areas	Architectural quality	Urban design quality	Local character	Heritage assets	Legibility and movement	Street frontages	Safety and security
Housing at The Exchange, Ilford (4265/15)	The building is located within Tall Building Zone and Investment / Growth Area.	The proposal consists of a high quality design in terms of layout, façade composition and provision of communal spaces.	The proposal deals with most of the existing issues related to massing, building frontages, surrounding streets and buildings.	The building is located close to terrace houses in the north. However, the massing distribution n tackles this issue by locating the tower in the south, facing the railway.	The building is not adjacent to historical assets.	The building has the potential to become a visual reference for the Exchange Shopping Mall.	The proposal activates the street frontage of the existing parking by including retail in the ground floor.	Activated street frontage is likely to improve the safety and security of the Myrtle Rd and Thorold Rd.

Britannia Music Site (0141/09 and 2434/12)

The site known as the Britannia Music Site is located south of Ilford Hill within walking distance from Ilford Station.

The previous consented scheme (0141/09) had 332 residential units. The amended proposal (2434/12) extends the site boundary incorporating 354 apartments of different typologies. Both proposals include office spaces and retail uses as well.

The massing is comprised of four different blocks including a 23 storey landmark tower. It creates a new public space through which a north-south pedestrian link is proposed.

Proposed scheme

Site location

Tall Building Zone
Investment and Growth Area
Site Location
Local / Statutory Listed Building
Photo locations

View 1

View 2

Application reference no.	Tall building zone / Investment & Growth Areas	Architectural quality	Urban design quality	Local character	Heritage assets	Legibility and movement	Street frontages	Safety and security
Britannia Music Site (0141/09 & 2434/12)	The building is located within Tall Building Zone and Investment / Growth Area.	The proposal consists of an acceptable quality design in terms of layout, façade composition and provision of communal spaces.	The proposal consists of a high quality design in terms of massing, orientation, building frontages, permeability and public spaces.	Massing distribution and material palette responds well to the adjacent buildings.	The development is located next to a listed pub. However, the proposed buildings are not likely to negatively impact the character of the listed pub.	The proposal introduces a new north-south pedestrian link that connects the adjacent residential units.	The proposal activates frontages facing main streets and public spaces by including retail, food and beverages in the ground floor.	Activated frontage and new residential units are likely to improve the safety and security and create an overlooked environment.

Paragon Heights (1279/13 and 3639/16)

The site is located north of Ilford Hill within walking distance from Ilford Station and Ilford High Road. It is adjacent to the 'iCon Building' (19 storey office building converted to residential units).

The massing is comprised of three blocks -from 10 to 18 storeys- stepping up towards the 'iCon Building' . The proposal provides 141 apartments and new north-south pedestrian connection.

Proposed scheme

Site location

Tall Building Zone
Investment and Growth Area
Site Location
Local / Statutory Listed Building

Photo locations

View 1

View 2

View 3

View 4

Application reference no.	Tall building zone / Investment & Growth Areas	Architectural quality	Urban design quality	Local character	Heritage assets	Legibility and movement	Street frontages	Safety and security
Paragon Heights (1279/13 & 3639/16)	The building is located within Tall Building Zone and Investment / Growth Area.	The proposal consists of a high quality design in terms of layout, façade composition and provision of communal spaces.	The proposal consists of a high quality design in terms of massing, orientation, building frontages, permeability and connectivity	Massing distribution and material palette responds well to the adjacent buildings.	The development is located close to listed buildings. However, the proposed buildings are not likely to negatively impact the character of these assets.	The proposal introduces a new pedestrian route to connect to Ilford station and the communities on the north of the railway, via the proposed footbridge over the railway.	The proposal activates frontages facing Ilford Hill by including retail in the ground floor. However,the internal pedestrian links could also benefit from active frontages	Active frontages could improve the safety and security of the pedestrian links and create an overlooked environment.

Valentines House (3782/14)

The site known is located close to Ilford Station. The scheme proposes change of use of the existing office to a residential led development.

It consists of a complete change to the facade of the building also adding balconies for the residential units. Extending the height of the existing building by four storeys, it creates 122 residential units.

Proposed scheme

Site location

Tall Building Zone
Investment and Growth Area
Site Location
Local / Statutory Listed Building

Photo locations

View 1

View 2

View 3

Application reference no.	Tall building zone / Investment & Growth Areas	Architectural quality	Urban design quality	Local character	Heritage assets	Legibility and movement	Street frontages	Safety and security
Valentines House (3782/14)	The building is located within Tall Building Zone and Investment / Growth Area.	The proposal consists of an acceptable quality design in terms of layout, façade composition and provision of public spaces.	The proposal deals with most of the existing issues related to massing, surrounding streets and buildings. However, it could be improved in terms of choice of pedestrian connection route and its fronting façades.	Massing distribution and material palette responds well to the adjacent buildings.	The development is located next to listed buildings. However, the proposed buildings are not likely to negatively impact the character of these assets.	The proposal introduces a new pedestrian route to connect to Ilford station and the communities on the north of the railway, via the existing footbridge over the railway.	The proposal activates the frontage facing the main street by including retail, food and beverages in the ground floor. However, the pedestrian link doesn't face active frontages.	Active frontages could improve the safety and security of the pedestrian link and create an overlooked environment.

Sainsbury's, Roden Street (4499/15

The scheme proposes demolition of the existing Sainsbury's store on Roden Street and its replacement with a modern store integrated into a housing led development.

The development offers a range of residential typologies from apartments to terraced housing. Nine different blocks from 4 to 31 storeys would distribute across the site. The proposal responds to the surrounding buildings by stepping down from the tower element at the northern most part to terraced housing along the southern boundary.

Proposed scheme

Site location

Tall Building Zone
Investment and Growth Area
Site Location
Local / Statutory Listed Building

Photo locations

View 1

View 2

Application reference no.	Tall building zone / Investment & Growth Areas	Architectural quality	Urban design quality	Local character	Heritage assets	Legibility and movement	Street frontages	Safety and security
Sainsbury's, Roden Street (4499/15)	The building is located within Tall Building Zone and Investment / Growth Area.	The proposal consists of an acceptable quality design in terms of layout, façade composition and provision of public spaces.	The proposal deals with most of the existing issues related to massing, building frontages, surrounding streets and buildings.	Massing distribution and material palette responds well to the adjacent buildings.	The development is located next to listed buildings. However, the proposed buildings are not likely to negatively impact the character of these assets.	The proposal has the potential to improve legibility by adding a visual reference to Ilford Metropolitan Centre	The proposal activates frontages facing main streets and public spaces by including retail, food and beverages in the ground floor.	Activated frontage and new residential units are likely to improve the safety and security and create an overlooked environment.

Central Point (2579/09 & 0229/12)

The site is located on the southern side of Ilford High Road, next to Raphael House (new mixed use development within 5-21 storeys).

The building height is between 3 to 16 storeys. From the west it steps up from three storeys facing the High Road to 9 storeys and rises to 16 adjacent to Raphael House's 21 storey tower.

The proposal consist of commercial uses at ground, first and second levels along the High Road.

Proposed scheme

Site location

Tall Building Zone
Investment and Growth Area
Site Location
Local / Statutory Listed Building

Photo locations

View 1

View 2

View 3

Application reference no.	Tall building zone / Investment & Growth Areas	Architectural quality	Urban design quality	Local character	Heritage assets	Legibility and movement	Street frontages	Safety and security
Central Point (2579/09 & 0229/12)	The building is located within Tall Building Zone and Investment / Growth Area.	The proposal consists of an acceptable quality design in terms of layout, façade composition and provision of communal spaces.	The proposal deals with most of the existing issues related to massing, building frontages, surrounding streets and buildings.	Massing distribution and material palette responds well to the adjacent buildings.	The building is not adjacent to historical assets.	The building is located next to an existing tower which acts as a landmark at the end of the High Road. By clustering the tall buildings together, the development has the potential enhance the existing landmark.	The proposal activates frontages facing the High Road by including retail, food and beverages in the ground floor.	Activated frontage is likely to improve the safety and security and create an overlooked environment.

Charter House Redevelopment (2792/15)

The site is located on the High Road, adjacent to a St Mary the Virgin Church.

The scheme proposes change of use of the existing 8 storey office building to a residential led development. The new extensions and alterations provide 96 residential units with office floorspace on the upper/lower ground floors.

The massing comprises of a 2 stories addition to the existing building and a new 6 storey building.

Proposed scheme

Site location

Tall Building Zone
Investment and Growth Area
Site Location
Local / Statutory Listed Building

Photo locations

View 1

View 2

View 3

Application reference no.	Tall building zone / Investment & Growth Areas	Architectural quality	Urban design quality	Local character	Heritage assets	Legibility and movement	Street frontages	Safety and security
Charter House Redevelopment (2792/15)	The building is located within Tall Building Zone and Investment / Growth Area.	The proposal consists of an acceptable quality design in terms of layout, façade composition provision of communal spaces.	The proposal deals with most of the existing issues related to massing, building frontages, surrounding streets and buildings.	Massing distribution and material palette responds well to the adjacent buildings.	The development is located next to a Church of St. Mary. However, the proposed building is not likely to negatively impact the character of the listed building.	The proposal is not likely to add value in terms of legibility and movement.	The proposed renovation of the existing derelict building improves the frontage significantly.	The proposal is to renovate and extend the existing derelict building which is likely to improve the safety and security by increasing natural surveillance.

Gants Hill (3410/13)

The site is located close to Gants Hill Station.

The scheme is a residential led development. It provides 105 residential units and circa 730 m2 of commercial and retail area. The building height ranges from 3 to 6 storeys.

Proposed scheme

Site location

Tall Building Zone
Investment and Growth Area
Site Location
Local / Statutory Listed Building

Photo locations

View 1

View 2

View 3

Application reference no.	Tall building zone / Investment & Growth Areas	Architectural quality	Urban design quality	Local character	Heritage assets	Legibility and movement	Street frontages	Safety and security
Gants Hill (3410/13)	The building is located within Tall Building Zone and Investment / Growth Area.	The proposal consists of an acceptable quality design in terms of layout, façade composition and provision of communal spaces.	The proposal deals with most of the existing issues related to massing, building frontages, surrounding streets and buildings.	Massing distribution and material palette responds well to the adjacent buildings.	The building is not adjacent to historical assets.	The proposal is not likely to add values in terms of legibility and movement.	The proposal activates frontages facing main streets and public spaces by including retail and commercial in the ground floor.	Activated frontage is likely to improve the safety and security and create an overlooked environment.

Seven Kings Hotel (3399/13)

The site is located close to Seven Kings Station and close to Cross Rail corridor.

The scheme proposes demolition of the existing building and erection of a 4 to 6 storey hotel. It comprises of 95 beds and one commercial unit.

Proposed scheme

Site location

Tall Building Zone
Investment and Growth Area
Site Location
Local / Statutory Listed Building

Photo locations

View 1

View 2

View 3

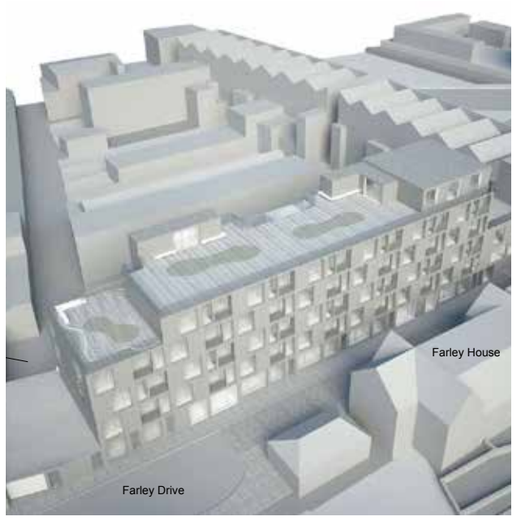
Application reference no.	Tall building zone / Investment & Growth Areas	Architectural quality	Urban design quality	Local character	Heritage assets	Legibility and movement	Street frontages	Safety and security
Seven Kings Hotel (3399/13)	The building is located within Investment / Growth Area.	The proposal consists of an acceptable quality design in terms of layout, façade composition and provision of communal spaces.	The proposal deals with most of the existing issues related to massing, building frontages, surrounding streets and buildings.	Massing distribution and material palette responds well to the adjacent buildings.	The development is located near to Seven Kings Station. However, the proposed building is not likely to negatively impact the character of the listed building.	The proposal has the potential to improve legibility by adding a landmark to Seven Kings Local Centre.	The proposal activates frontages facing Cameron Rd by including retail, food and beverages in the ground floor.	Activated frontage is likely to improve the safety and security and create an overlooked environment.

14 Cameron Road (0951/13)

The Site is located close to Seven Kings Station, north of Cameron Road.

The proposal is a residential led development with 32 residential units and two commercial units. It also includes public realm improvement to Farley Drive pedestrian area.

Proposed scheme



Site location

Tall Building Zone
Investment and Growth Area
Site Location
Local / Statutory Listed Building

Photo locations

View 1

View 2

View 3

Application reference no.	Tall building zone / Investment & Growth Areas	Architectural quality	Urban design quality	Local character	Heritage assets	Legibility and movement	Street frontages	Safety and security
14 Cameron Road (0951/13)	The building is located within Investment / Growth Area.	The proposal consists of an acceptable quality design in terms of layout, façade composition and provision of communal spaces.	The proposal deals with most of the existing issues related to massing, surrounding buildings. However, it could be improved by including active frontages facing Farley Dr.	Massing distribution and material palette responds well to the adjacent buildings.	The development is located near to Seven Kings Station. However, the proposed building is not likely to negatively impact the character of the listed building.	The proposal improves legibility and movement by re-surfacing Farley Dr. pedestrian route and replacing the existing streetlights with new ones.	The proposed façade of the new building is likely to improves the frontage along Farley Dr.	The new residential development is likely to improve the safety and security by increasing natural surveillance.

567-571 High Road (2364/15)

The site is located north of Ilford High Road, to the east of Ilford town centre.

The scheme provides 36 residential units with commercial spaces on the ground floor. The building height varies from 6 to 9 storeys.

Proposed scheme

Site location

Tall Building Zone
Investment and Growth Area
Site Location
Local / Statutory Listed Building

Photo locations

View 1

View 2

View 3

Application reference no.	Tall building zone / Investment & Growth Areas	Architectural quality	Urban design quality	Local character	Heritage assets	Legibility and movement	Street frontages	Safety and security
567 – 571 High Road (2364/15)	The building is located within Tall Building Zone and Investment / Growth Area.	The proposal consists of an acceptable quality design in terms of layout, façade composition, use of material and provision of communal spaces.	The proposal deals with most of the existing issues related to massing, building frontages, surrounding streets and buildings.	Massing distribution and material palette responds well to the adjacent buildings.	The building is not adjacent to historical assets.	The proposal is not likely to add values in terms of legibility and movement.	The proposal activates frontages facing the High Road by including commercial uses in the ground floor.	Activated frontage is likely to improve the safety and security and create an overlooked environment.

501 – 535 High Road (2483/10)

The site is located on the High Road, close to a St Mary the Virgin Church.

The scheme provides 105 residential units with banqueting suite on lower, ground, first and second floors. The building height varies from 4 to 9 storeys.

Proposed scheme

Site location

Tall Building Zone
Investment and Growth Area
Site Location
Local / Statutory Listed Building

Photo locations

View 1

View 2

View 3

Application reference no.	Tall building zone / Investment & Growth Areas	Architectural quality	Urban design quality	Local character	Heritage assets	Legibility and movement	Street frontages	Safety and security
501 – 535 High Road (2483/10)	The building is located within Tall Building Zone and Investment / Growth Area.	The proposal consists of an acceptable quality design in terms of layout, façade composition, use of material and provision of communal spaces.	The proposal deals with most of the existing issues related to massing, building frontages, surrounding streets and buildings.	Massing distribution and material palette responds well to the adjacent buildings.	The development is located close to a Church of St. Mary. However, the proposed building is not likely to negatively impact the character of the listed building	The proposal is not likely to add values in terms of legibility and movement.	The new façade improves the street frontage.	The new cultural and banqueting facility is likely to improve the safety and security and create an overlooked environment.

480-482 Ley Street (0215/16)

The site is located at the junction of Ley Street and Lynn Road.

The scheme proposes demolition of the existing car showroom and workshops, and erection of a residential development. The building height varies from 2 to 4 storeys. It provides 66 apartment units and 5 terraced houses.

Proposed scheme

Site location

View 1

View 2

View 3

Application reference no.	Tall building zone / Investment & Growth Areas	Architectural quality	Urban design quality	Local character	Heritage assets	Legibility and movement	Street frontages	Safety and security
480 – 482 Ley Street (0215/16)	The building is not located within the Investment / Growth Area or the Tall Building Zone.	The proposal consists of an acceptable quality design in terms of layout, façade composition and provision of communal spaces.	The proposal deals with most of the existing issues related to massing, surrounding streets and buildings.	Massing distribution and material palette responds well to the adjacent buildings.	The building is not adjacent to historical assets.	The proposal is not likely to add values in terms of legibility and movement.	The new residential facade improves the street frontage.	The new residential balconies facing the main street are likely to improve the safety and security by increasing natural surveillance.

395 Eastern Avenue, Ilford (0384/13 & 3451/13)

The site is located close to Gants Hill Station.

The scheme proposes demolition of the existing building and construction of a mixed use 3 to 8 storey development. It provides 25 residential units together with community facilities in the ground floor.

Proposed scheme

Site location

Tall Building Zone
Investment and Growth Area
Site Location
Local / Statutory Listed Building

Photo locations

View 1

View 2

View 3

Application reference no.	Tall building zone / Investment & Growth Areas	Architectural quality	Urban design quality	Local character	Heritage assets	Legibility and movement	Street frontages	Safety and security
395 Eastern Avenue, Ilford (0384/13 & 3451/13)	The building is located within Tall Building Zone and Investment / Growth Area.	The proposal consists of an acceptable quality design in terms of layout, façade composition and provision of communal spaces.	The proposal deals with most of the existing issues related to massing, surrounding streets and buildings.	Massing distribution and material palette responds well to the adjacent buildings.	The building is not adjacent to historical assets.	The proposal is not likely to add values in terms of legibility and movement.	The proposal activates frontages facing the main street by including commercial uses in the ground floor.	Activated frontage is likely to improve the safety and security and create an overlooked environment.

APPENDIX B

MICROCLIMATE ASSESSMENT METHODOLOGY

Microclimate assessment methodology

This section outlines the methodology adopted for the preliminary microclimate assessment of each scenario presented in Section 6.5. Microclimate assessments have been carried out on some selected opportunity sites for medium and high density scenarios. The assessments provide a high level overview of the impact new developments are likely to have on the microclimate environment for some key locations in Redbridge.

For each location, the existing baseline condition is examined and compared to the proposed scenarios to assess the impact on environmental wind and daylighting levels on the areas surrounding each site. This includes the impact at street level as well as the surrounding buildings.

Methodology

Environmental wind conditions are assessed based on a qualitative desk study approach. The assessment is based on review of geometrical drawings provided by the design team (in February 2017), evaluation of aerial views of the site and its surroundings, and Arup's previous extensive experience of wind tunnel testing around buildings. The criteria used to describe windiness are those of T.V. Lawson extracted from "The evaluation of the windiness of a building complex before construction", London Docklands Development Corporation (defined further below).

Daylighting levels on adjacent properties are assessed based on the recommendations in the BRE 209 guide for good practice. The Vertical Sky Component (VSC) is used as a base measure to determine problem areas where daylighting levels might be insufficient. The recommended value of VSC to achieve reasonable daylighting with conventional window design is 27%. This will be used throughout this study to compare current daylighting levels with those achieved with the proposed developments. Further detail is set out below.

It should be noted that both wind and daylighting studies are high level and indicative and do not include a thorough examination of considerations such as material properties, detailed geometrical features, wind gusts etc.

A detailed microclimate assessment is recommended for any future building applications.

Criteria to describe the levels of windiness

The criteria used to describe windiness in this study are those of T.V. Lawson of Bristol University, extracted from "The evaluation of the windiness of a building complex before construction", T.V. Lawson, London Docklands Development Corporation. These are used widely in the UK and around the world. Even without wind tunnel testing, these criteria are useful to define windiness in terms of acceptability for particular activities.

The acceptability of windiness is subjective and depends on a number of factors, most notably the activities to be performed in the area being assessed. The Lawson Criteria describe acceptability for particular activities in terms of 'comfort' and 'distress' (or safety). Acceptable conditions for various activities in order of increasing windiness are described in Table B1 below.

Table B1 - Comfort criteria as defined by T.V. Lawson

Criteria	Description
'Sitting'	Reading a newspaper and eating and drinking
'Standing' or short term sitting	Appropriate for bus stops, window shopping and building entrances
Walking or 'Strolling'	General areas of walking and sightseeing
'Business Walking'	Local areas around tall buildings where people are not expected to linger

The conditions described above are the limiting criteria for comfort. For ideal conditions the windiness will be a category better than outlined above. For more sensitive activities, such as regular use for external eating, conditions should be well within the 'Sitting' category.

In this assessment the words 'Sitting', 'Standing', 'Strolling' and 'Walking' are used to describe comfort levels of windiness as described in Table B1.

The comfort criteria above describe more frequent wind conditions. There is also a distress criterion for 'General Public Access', equivalent to a mean speed of 15 m/s and a gust speed of 28 m/s (62 mph) to be exceeded less often than once a year. This is intended to identify wind conditions which less able individuals or cyclists may find physically difficult. Conditions in excess of this limit may be acceptable for optional routes and routes which less physically able individuals are unlikely to use.

There is a further limiting distress criterion beyond which even 'Able-bodied' individuals may find themselves in difficulties at times. This corresponds to a mean speed of 20 m/s and a gust speed of 37 m/s (83 mph) to be exceeded less often than once a year. Beyond this gust speed aerodynamic forces approach body weight and it rapidly becomes impossible for anyone to remain standing. These distress criteria are summarised in Table B2 adjacent.

Table B2 - Distress criteria as defined by T.V. Lawson

Distress Criteria	Description
'General public access'	Above which the less able and cyclists may at times find conditions physically difficult.
'Able-bodied access'	Above which it may become impossible at times for an able bodied person to remain standing.

Wind climate in London

The annual wind rose from historical data at London City Airport is shown below. This wind rose represents the wind characteristics (direction and strength) across all times of day and all seasons.

Overall, the wind climate in London is similar to the rest of the UK.

The south-west winds are the most frequent and strongest winds in the UK at all times of the year, blowing from a quadrant centred on west south-west. These winds are relatively warm and wet. Most cases of serious annoyance due to strong winds around buildings are caused by these winds.

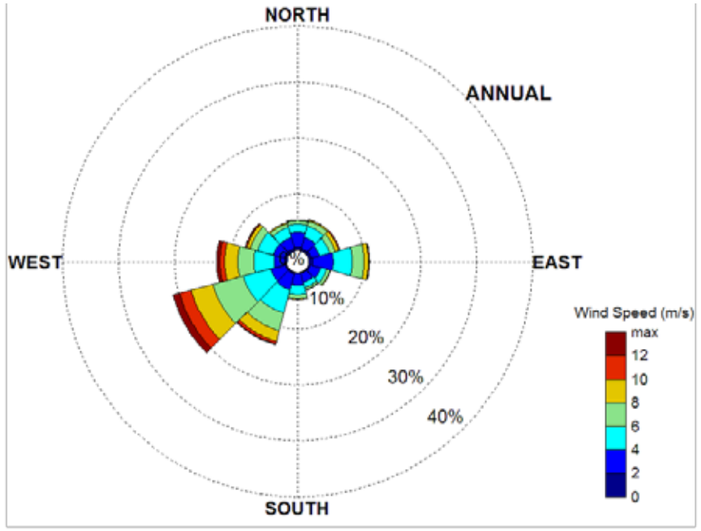
North-east winds are almost as common as the southwest winds during spring but are weaker.

They are often associated with cold, dry conditions. These winds can be more unpleasant than their strength suggests due to the lower-than-average air temperature.

North-west winds from can be as strong as the southwest winds but are less frequent. They are relatively cold and can bring snow in winter.

Finally, south-east winds are generally warm and light and are rarely associated with annoying ground level winds.

Annual wind rose from London City Airport



BRE 209 - Site layout for daylight and sunlight

The Vertical Sky Component (VSC) is proposed in BRE 209 as a way of determining problem areas, where the external environment or layout can cause poor daylighting.

VSC is the ratio of direct sky illuminance falling at a point on a vertical wall, to the illuminance on a horizontal surface with no obstructions. It does not include reflected light either from the ground or other buildings. A standard overcast sky is used, which makes this study independent of time of year or geographical location.

The recommended VSC is 27% or above, for buildings with standard window design. This can vary depending on the type of room, but usually gives reasonable results. The VSC can be decreased to between 15% and 27% if large windows and changes to the room layout are made. Anything below this will make it hard to achieve adequate daylighting. Further studies of interior conditions using methodologies described in BS 8206-2 would typically be carried out if a VSC < 27% is found.

BRE 209 also recommends a visible sky angle of 65° (see figure below) to avoid overshadowing existing buildings. However, regulations are less strict in densely built-up areas. Geometric aspects can make it difficult to determine the visible sky angle, so it is generally thought that complying with the VSC > 27% should be sufficient.

Visible sky angle (Source BRE 209)