AVISON YOUNG

Industrial Land Strategy

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Contents

Appendices

Prepared By: Lara Boyd, Bart Monhonval, Martyn Saunders
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For and on behalf of Avison Young (UK) Limited

1. Introduction

1.1 Avison Young was commissioned by the London Borough of Barking and Dagenham (LBBD) and Be First to prepare an updated Industrial Land Strategy for the borough. The purpose of the Strategy is to evolve and deepen the understanding of the borough's industrial economy and land supply, how this will change in the future and the subsequent scale and nature of floorspace needed to accommodate it.

1.2 The strategy has a number of intended purposes. Firstly it will support the borough's Local Plan, providing an objective evidence-based assessment of land and floorspace requirements for the plan period. Secondly it will provide the borough and Be First with guidance on the scale and nature of floorspace requirements to include in their emerging masterplans for the borough's areas of growth and regeneration.

1.3 It should be noted that the work has been undertaken at a time of significant uncertainty in the UK economy, with the ongoing effects of Brexit and the COVID-19 pandemic still being experienced and their long-term implications unknown. As such, whilst the forecasts used and the advice given are based on the best information available at the time of writing, these are subject to change and therefore the recommendations of this study may need monitoring and review over the coming years.

1.4 Within this report we consider

- The policy and strategy context for the study and the borough's economy in the future.
- The scale, nature and character of the existing land and floorspace supply portfolio.
- The future needs of the industrial economy arising from both economic growth and potential displacement.
- The potential capacity of sites across the borough to accommodate industrial activity.
- The need and capacity balance and how this does (or doesn't) provide an appropriate portfolio of space for the future under different scenarios.
- The potential sequencing of sites to ensure appropriate capacity is available at the point in time it is needed.

2. Executive Summary

2.1 The London Borough of Barking and Dagenham (LBBD) has currently a large amount of industrial land. For the purpose of this study, a total of 446.55 ha of industrial land has been identified, divided between 8 different clusters, with Dagenham Dock being by far the largest cluster (21.1.8 ha), followed by River Road (86.4 ha):

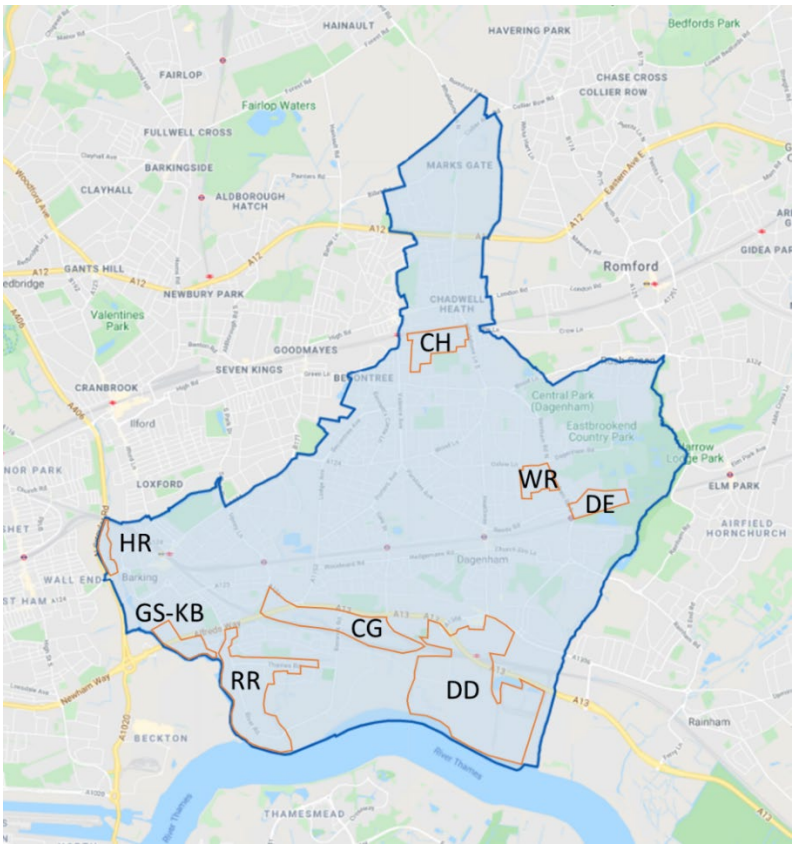
- Castle Green (CG)
- Chadwell Heath (CH)
- Dagenham Dock (DD)
- Dagenham East (DE)
- Gascoigne South and Kingsbridge (GS-KB)
- River Road (RR)
- Wantz Road (WR)
- Hertford Road (HR)

2.2 Each cluster is further sub-divided into sites (38 in total), which are formed of individual plots (reflecting underlying freehold ownership).

2.3 Most industrial sites in LBBD are designated as SIL, with 20 out of the 38 employment sites in the borough. The 20 SIL sites offer a total of 330.6 ha of employment land (circa 75% of all employment land in the borough) with sites ranging in size from 1.3 ha (River Road, Site RR2) to 76.2 ha (Dagenham Dock, Site DD7).

2.4 Clusters are shown in Figure 2.

Figure 1 – LBBD Industrial Clusters



2.5 Each cluster was subdivided into sites and analysed individually to understand current supply. This baseline analysis was important to understand the current capacity of each site, the amount of floorspace that would need to be relocated if released for alternative uses, the type of activities to be relocated and to identify suitable locations for their relocation.

2.6 Details about each site are provided in this report (see chapter 4).

2.7 Following the baseline analysis of existing supply, we identified future needs. Future (industrial) employment land and floorspace requirements will be driven by two main factors: employment growth and displacement/relocation.

2.8 Using a standard approach as used for employment land studies, starting from the latest Experian employment forecast available at the time of the study, we established that LBBD could face a requirement for an additional 203,000 sqm of industrial floorspace (circa 50 ha of employment land using traditional development typologies and density ratios).

2.9 Based on the translation of employment forecast into floorspace and land requirement, we expect that a large share of this future demand will come in the short-term (next 5 years).

2.10 In addition to the conversion of employment forecast, the future needs assessment considered the nature of location and space requirements that may arise from new businesses, based on the evolution of the economy, new technologies and evolution of the different sectors as well as on their linkages to strategic growth sectors identified for LBBD (i.e. employment growth in automotive manufacturing likely to be generated in advanced manufacturing and green technology sectors rather than from traditional car manufacturing plants).

2.11 This analysis helped to understand what it means in terms of space and location requirement and therefore potential for allocation to different sites (i.e. suitability for colocation, access requirements, etc.) – this moved the simplistic quantitative assessment established in the forecast into a more nuanced understanding of business requirements in key sectors.

2.12 The second main aspect of future requirement will come from the need to relocate businesses following the release of industrial land for alternative uses. Sites retained for industrial use will need to be able to accommodate the entire existing floorspace (just over 1.7mn sqm).

2.13 LBBD is setting ambitious regeneration plans for the Borough with masterplans currently being considered and drafted for the redevelopment of several areas, including currently designated industrial land.

2.14 In total, 172.3 ha of land are earmarked for potential release, currently accommodating 679,383 sqm of employment space which would need to be relocated to support this release.

2.15 In the next step of the study, we assessed the potential capacity of all sites in the study area through four sources of floorspace: existing floorspace, additional floorspace to be delivered through the planning pipeline (developments with approved planning application), additional floorspace to be delivered through industrial intensification (redevelopment with intensified development of specific and identified plots of land), and additional floorspace to be delivered through general densification (additional floorspace secured through vertical and horizontal extension of existing properties and infill developments).

2.16 Overall, we assessed that all the sites in the study area (38 sites across 8 clusters) have a total capacity to delivery just over 3mn sqm of industrial floorspace. Whilst this is well in excess of future requirement, it does not account for the loss of land being release to alternative use and need to relocate the existing floorspace for those areas.

2.17 An iterative process was undertaken to understand the impact of the release of land on the balance between future requirement and future supply. Starting from the baseline position identified in our

baseline analysis (full release of all sites identified with potential for release by LBBD and Be First), which returned a tight balance between future requirements and future capacity (not sufficient to accommodate uncertainty), we progressively studied the impact of opting for colocation on some of the sites and retaining a higher number of sites.

2.18 This report presents 3 different scenarios, with the third scenario presenting our preferred option, combining the retention of some sites which have low potential for alternative uses (such as residential) and opting for colocation on sites we believe suitable for this based on current characteristics of the site, activities in the surrounding areas and future employment activities expected to be accommodated on those sites.

2.19 Overall, we recommend the retention of 389.9 ha of industrial land (including land suitable for colocation) out of 446.55 ha of industrial land currently available in LBBD. The recommendation for each individual site is presented in Table 68.

2.20 Having established the quantum of industrial floorspace that could be created in LBBD, we consider the sequencing of delivery both from a quantitative and qualitative perspective to identify how both the scale and nature of floorspace needs can be achieved over time, reflecting the demand and land release scenario.

2.21 By combining the planning pipeline, intensification opportunities and general densification and comparing with future requirements, we would expect the following levels of 'over-supply' to be created:

- Short term (to 2027) = 135,000 sqm
- Medium term (to 2032) = 305,000 sqm
- Long term (to 2040) = 655,000 sqm

2.22 It should also be noted that the capacity that could be delivered in the short-term would be sufficient to accommodate all future demand (and needs for relocation) in the short, medium and long-term if densification is fully realised.

3. Policy Context and Evidence Base

Britain Industrial Strategy

3.1 The Government's Industrial Strategy White Paper was published in 2017 and provides a basis, at the national level, for the creation of an economy that boosts productivity and earning power throughout the UK. The vision for a transformed economy relies on 5 foundations:

- Ideas: the world's most innovative economy
- People: good jobs and greater earning power for all
- Infrastructure: a major upgrade to the UK's infrastructure
- Business environment: the best place to start and grow a business
- Places: prosperous communities across the UK

3.2 Furthermore, the Industrial Strategy White Paper depicts the future industrial UK economy as centred around the following objectives:

- AI & data economy: put the UK at the forefront of the artificial intelligence and data revolution
- Future of mobility: become a world leader in the way people, goods and services move
- Clean growth: maximise the advantages for UK industry from the global shift to clean growth
- Ageing population: harness the power of innovation to help meet the needs of an ageing society

3.3 London is a world-leading hub for financial services, creative industries, tech businesses and more; a global city which continues to be a magnet for international businesses and talent.

3.4 The White Paper advocates for the promotion of growth through fostering clusters and connectivity across cities, towns and surrounding areas.

3.5 The White Paper highlights that almost 90% of London's secondary schools are good or outstanding, compared to just 67% of schools in the northeast of England[1]. Similarly, the entry rates to higher

[1] Ofsted (2017), 'Maintained schools and academies inspections and outcomes as of 31 March 2017', https://www.gov.uk/government/statistics/maintained-schools-and-academiesinspections-and-outcomes-as-at-31-march-2017

education for 18-year-olds are 40% in London, but only 29% in the north east of England[2]. This suggests that London could and should be at the forefront of innovative growth.

3.6 It is clear from the Industrial Strategy White Paper that there is a focus on environment technology, artificial intelligence, green tech and promoting technology clusters. This focus is expected to be reinforced in the next iteration of the White Paper. Whilst aiming to promote those industries outside London (levelling up agenda), the Industrial Strategy recognises the importance of London as a technological hub and its vital role in the UK economy in attracting investment and delivering growth.

New London Plan (December 2020)

3.7 The New London Plan was approved in December 2020.

3.8 The London Plan has seen many changes made to policies, particularly regarding industrial land, from its previous draft iterations which are important to highlight to understand the new opportunities and challenges created by this approved London Plan.

3.9 From the first version of the Draft New London Plan (2017) and up to March 2020, the Draft New London Plan set out a clear framework for any proposed release of industrial land to ensure there would be 'no net loss' of industrial capacity. But, in March 2020, for the purpose of realism and need to establish policies that could be effectively applied, the Secretary of State (SoS) recommended the removal of this position.

3.10 The latest version of the Draft New Local Plan (December 2020) saw the removal of the 'no net loss' position in response to the SoS recommendations whilst still encouraging local authorities to provide industrial land and uses through a more flexible approach. The SoS' directions encourage local authorities to give greater importance to releasing industrial land for alternative uses where vacancy rates are higher than the London average and therefore further base their approach on market conditions. Additionally, following recommendations from the SoS, the plan now adds that where boroughs are proposing changes through a local plan to Green Belt or MOL boundaries to accommodate their housing target, they should demonstrate that they have made as much use as possible of suitable brownfield sites and underutilised land, including in exceptional circumstances, appropriate industrial land in active employment use. The plan continues and adds that a substitution approach to alternative sites with higher demand for industrial uses should be considered where possible and appropriate.

[2] UCAS (2017), 'UCAS 2016 Application Cycle: End of Cycle' Report', https://www.ucas.com/ corporate/data-and-analysis/ucas-undergraduate-releases/ucas-undergraduate-analysis-reports/ucas-undergraduate-end-cycle-reports

3.11 Effectively, these changes dilute the protection of industrial land (particularly in the local plan making process) by increasing competition between residential and industrial uses and encourages the optimisation of industrial land-use and under-used land through innovative approaches to industrial intensification (such as multi-storey developments) or industrial co-location (such as the introduction of alternative uses within industrial developments).

3.12 This could have a significant impact on the oldest industrial stock, which may not be in the best location and have a rate of vacancy above the London average but is so important to provide affordable space for small SMEs. The importance of affordable space is particularly relevant for growth industries identified in Barking and Dagenham such as the creative sector.

3.13 Policy E4: Land for industry, logistics and services to support London's economy functions

3.14 Policy E4 is particularly relevant for this commission. Policy E4 mentions that sufficient supply of land and premises in different parts of London to meet current and future demands for industrial and related functions should be provided and maintained, considering strategic and local employment land reviews, industrial land audits and the potential for intensification, co-location and substitution (Policy E7). This should make provision for the varied operational requirements of:

- light and general industry (Use Classes B1c and B2)
- storage and logistics/distribution (Use Class B8) including 'last mile' distribution close to central London and the Northern Isle of Dogs, consolidation centres and collection points
- secondary materials, waste management and aggregates
- utilities infrastructure (such as energy and water)
- land for sustainable transport functions including intermodal freight interchanges, rail and bus infrastructure
- wholesale markets
- emerging industrial-related sectors
- flexible (B1c/B2/B8) hybrid space to accommodate services that support the wider London economy and population
- low-cost industrial and related space for micro, small and medium-sized enterprises
- research and development of industrial and related products or processes (falling within Use Class B1b)

3.15 The Plan specifies that London's land and premises for industry, logistics and services falls into three categories:

- Strategic Industrial Locations (SIL) – defined in Policy E5
- Locally Significant Industrial Sites (LSIS) – defined in Policy E6
- Non-Designated Industrial Sites (Sites containing industrial and related functions that are not formally designated as SIL or LSIS in a Local Plan)

3.16 The retention, enhancement and provision of additional industrial capacity across the three categories of industrial land should be planned, monitored and managed. Any release of industrial land to manage issues of long-term vacancy and to achieve wider planning objectives, including the delivery of strategic infrastructure, should be facilitated through the processes of industrial intensification, co-location and substitution (Policy E7 and Policy E5).

3.17 The retention, enhancement and provision of additional industrial capacity should be prioritised in locations that:

- are accessible to the strategic road network and/or have potential for the transport of goods by rail and/or water transport
- provide capacity for logistics, waste management, emerging industrial sectors or essential industrial-related services that support London's economy and population
- provide capacity for micro, small and medium-sized enterprises
- are suitable for 'last mile' distribution services to support largescale residential or mixed-use developments subject to existing provision
- support access to supply chains and local employment in industrial and related activities.

3.18 Any release of industrial capacity in line with The London Plan Policies should be focused in locations that are (or are planned to be) well-connected by public transport, walking and cycling and contribute to other planning priorities including housing (and particularly affordable housing), schools and other infrastructure.

3.19 Efficient wholesale market functions should be retained to meet London's requirements whilst enabling opportunities to consolidate composite wholesale markets to meet long-term wholesaling needs

3.20 Boroughs should ensure that the need to retain sufficient industrial and logistics capacity is not undermined by permitted development rights by introducing Article 4 Directions where appropriate.

3.21 Policy E5: Strategic Industrial Locations (SIL)

3.22 The London Plan mentions that Strategic Industrial Locations should be managed proactively through a plan-led process to sustain them as London's largest concentrations of industrial, logistics and related capacity for uses that support the functioning of London's economy.

3.23 Boroughs, in their Development Plans, should:

- define the detailed boundary of SILs in policies maps having regard to the scope for intensification, co-location and substitution (Policy E7)
- develop local policies to protect and intensify the function of SILs and enhance their attractiveness and competitiveness for the functions set out in Policy E4
- explore opportunities to intensify and make more efficient use of land in SILs in Development Plan reviews and through Opportunity Area Planning Frameworks in collaboration with the GLA and other planning authorities within and outside London (Policy E7)
- strategically coordinate Development Plans to identify opportunities to substitute industrial capacity and function of Strategic Industrial Locations where evidence that alternative, more suitable, locations exist.

3.24 Development proposals within or adjacent to SILs should not compromise the integrity or effectiveness of these locations in accommodating industrial-type activities and their ability to operate on a 24-hour basis. Residential development adjacent to SILs should be designed to ensure that existing or potential industrial activities in SIL are not compromised or curtailed. Particular attention should be given to layouts, access, orientation, servicing, public realm, air quality, soundproofing and other design mitigation in the residential development.

3.25 The London Plan identifies 3 SIL in Barking and Dagenham. Those sites are listed in Table 1.

Table 1 – Strategic Industrial Location

Location	Industrial Property Market Area	Planning Authority
Dagenham Dock / Rainham Employment Area	Thames Gateway	Barking & Dagenham / Havering
Rippleside	Thames Gateway	Barking & Dagenham
River Road Employment Area	Thames Gateway	Barking & Dagenham

Source: London Plan, December 2020

3.26 Policy E6: Locally Significant Industrial Sites (LSIS)

3.27 In their Development Plans, boroughs should:

- designate and define detailed boundaries and policies for Locally Significant Industrial Sites (LSIS) in policies maps justified by evidence in local employment land reviews considering the scope for intensification, co-location and substitution
- make clear the range of industrial and related uses that are acceptable in LSIS including, where appropriate, hybrid or flexible B1c/B2/B8 suitable for SMEs and distinguish these from local employment areas that can accommodate a wider range of business uses.

3.28 Policy E7: Industrial intensification, co-location and substitution

3.29 Development Plans and development proposals should be proactive and encourage the intensification of business uses in Use Classes B1c, B2 and B8 occupying all categories of industrial land through:

- introduction of small units
- development of multi-storey schemes
- addition of basements
- more efficient use of land through higher plot ratios having regard to operational yard space requirements (including servicing) and mitigating impacts on the transport network where necessary

3.30 Development Plans and planning frameworks should be proactive and consider, in collaboration with the Mayor, whether certain logistics, industrial and related functions in selected parts of SIL or LSIS could be intensified to provide additional industrial capacity. Intensification can also be used to facilitate the consolidation of an identified SIL or LSIS to support the delivery of residential and other uses, such as social infrastructure, or to contribute to town centre renewal. This process must meet the criteria set out below.

3.31 Mixed-use or residential development proposals on Non-Designated Industrial Sites should only be supported where:

- there is no reasonable prospect of the site being used for the industrial and related purposes as set out in Policy E4;
- it has been allocated in an adopted local Development Plan Document for residential or mixed-use development; or
- industrial, storage or distribution floorspace is provided as part of mixed-use intensification

3.32 Mixed-use development proposals on Non-Designated Industrial Sites which co-locate industrial, storage or distribution floorspace with residential and/or other uses should also meet the criteria set out below.

3.33 The industrial intensification, co-location and substitution processes must ensure that:

- the industrial and related activities on-site and in surrounding parts of the SIL, LSIS or Non-Designated Industrial Site are not compromised in terms of their continued efficient function, access, service arrangements and days/hours of operation noting that many businesses have 7-day/24-hour access and operational requirements
- the intensified industrial, storage and distribution uses are completed in advance of any residential component being occupied
- appropriate design mitigation is provided in any residential element to ensure compliance with 7-day/24-hour access and with particular consideration given to safety and security; the layout, orientation, access, servicing and delivery arrangements of the uses in order to minimise conflict; design quality, public realm, visual impact and amenity for residents; agent of change principles; vibration and noise; air quality, including dust, odour and emissions and potential contamination.

3.34 Policy E8 (Sector growth opportunities and clusters)

3.35 Employment opportunities for Londoners across a diverse range of sectors should be promoted and supported along with support for the development of business growth and sector-specific opportunities.

3.36 London's global leadership in tech across all sectors should be maximised.

3.37 The evolution of London's diverse sectors should be supported, ensuring the availability of suitable workspaces including:

- start-up, incubation and accelerator space for micro, small and medium-sized enterprises
- flexible workspace such as co-working space and serviced offices
- conventional space for expanding businesses to grow or move on
- laboratory space and theatre, television and film studio capacity
- affordable workspace in defined circumstances

3.38 Innovation, including London's role as a location for research and development should be supported, and collaboration between businesses, higher education providers and other relevant research and innovation organisations should be encouraged.

3.39 Policy E8 precises that the development of new clusters should be supported where opportunities exist, such as CleanTech innovation clusters, Creative Enterprise Zones, film, fashion and design clusters, and green enterprise districts such as in the Thames Gateway.

London Local Industrial Strategy Evidence Base, 2020

3.40 London, as a requirement made by Government, produced a Local Industrial Strategy (LIS) Evidence Base focused on raising productivity and earning power, building upon the Government's Industrial Strategy White Paper.

3.41 The LIS inform the allocation of future funding and local growth across the regional area (Greater London).

3.42 The focus of the London LIS is to achieve inclusive growth and productivity improvements across the capital. This is reflected in the strategy's four key areas:

- Enabling access to good work and fair pay for all Londoners
- Supporting inclusive innovation in London
- Nurturing the conditions for local growth across communities
- Collaborating for regional and national growth

3.43 The London LIS identifies Barking and Dagenham (River Road) as a Strategic Industrial Locations (SIL) identified in the draft London Plan which accommodate strategically important activities such as logistics, waste management and transport functions that are also crucial for running the capital.

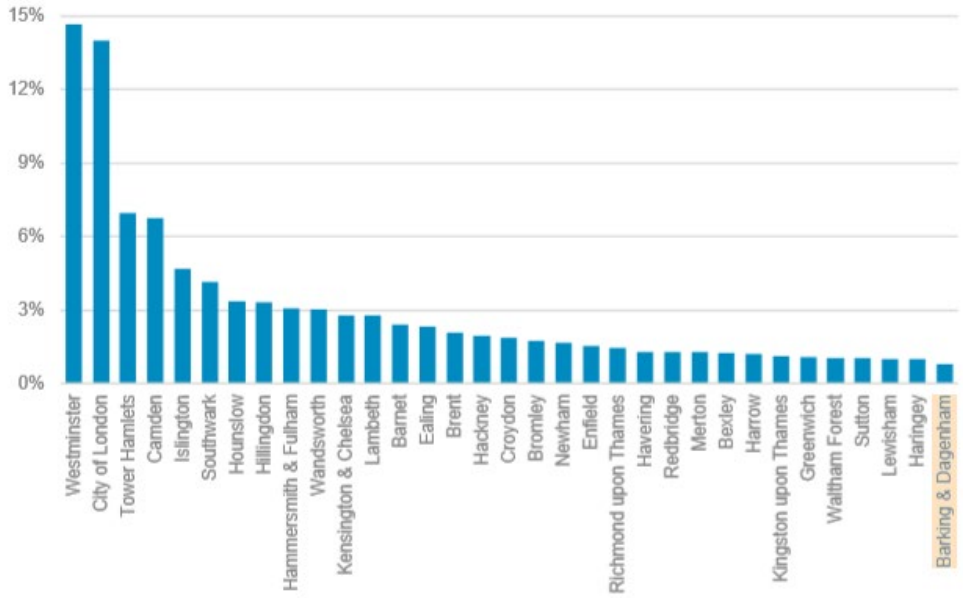
3.44 Despite strengths in higher level qualifications, there are still large parts of the capital's population with lower skills levels. There is considerable geographic variation in skills attainment within the capital, with stark inequalities appearing between different London Boroughs. Within London the share of adults with low qualifications varies widely: from very low (6% of 25-64-year-olds in Richmond upon Thames) to very high (21% in Barking and Dagenham and 25% in Havering).

3.45 Both unemployment levels and income follow similar spatial patterns, with areas of relative disadvantage found in boroughs such Barking and Dagenham.

3.46 The relative high share of low qualifications observed in Barking and Dagenham will influence the attractiveness of the borough for employers in the tech industries.

3.47 It is therefore not surprising that the London LIS found Barking and Dagenham to provide the lowest contribution of London's boroughs to total output in London in 2017) as shown in Figure 2.

Figure 2 - Contribution of London's boroughs to total output in London in 2017



Source: The Evidence Base for London's Local Industrial Strategy – Final report, 2020

3.48 The link between high share of low qualifications, high level of unemployment, lower income and low level of contribution towards London's total output is a clear challenge for Barking and Dagenham.

3.49 The relatively poor economic performance is a characteristic of boroughs, such as Barking and Dagenham, which had an historical strong manufacturing presence but have experienced a decline in industrial activities since then, leading to a loss of jobs since the early 1970's.

3.50 However, there is some optimism as some of these boroughs, including Barking and Dagenham, have seen some job growth in recent years.

London Economic Development Strategy, December 2018

3.51 The Mayor must balance competing demands for land use, all of which are important for London's growth. In recent years, we have seen the loss of much office and industrial space, often to conversion or redevelopment for residential use. This is putting pressure on businesses which serve and support London's economy, especially small and medium sized enterprises. A range of different types of workspace are needed for businesses of different sizes, sectors and stages of development.

3.52 As part of this strategy to ensure needed industrial space is delivered, and through the London Plan, the Mayor will ensure that London retains sufficient industrial land to keep the economy working efficiently and support the provision of affordable and flexible workspace.

3.53 Industrial areas help to keep London's economy working effectively. They accommodate many essential functions such as food preparation and processing, repair services, warehousing and storage

operations, logistics and distribution (deliveries), construction, and maintenance activities. They also provide space for utilities, waste processing, and recycling, essential for the operation of the capital.

3.54 London has a large amount of industrial land. However, in recent years, industrial land in London has been lost at almost three times the benchmark set by the London Plan. In the meantime, projections indicate that demand for activities serving London's economy are expected to grow with an increasing population. Following a long period of steady decline, the loss of jobs in manufacturing has slowed in recent years and has even seen a small increase in some sectors. This marked reduction, coupled with steady demand, is beginning to have implications with industrial rents rising faster than elsewhere in the UK.

3.55 The Mayor wants to ensure that London retains sufficient industrial land to keep the economy functioning efficiently. To that end, he will:

- set out detailed policies in the London Plan to maintain a sufficient supply of land and premises to meet current and future demand for industrial and related functions;
- make more efficient use of industrial land (for example, through intensification) so that it can continue to support London's economy;
- work with landlords, developers, and occupiers to look at intensifying the way London's industrial land is used, through more multi-storey industrial buildings with associated shared yard space or co-location alongside residential development; and
- help to enhance the physical condition of London's industrial estates by supporting the creation of Industrial Business Improvement Districts (BIDs).

3.56 The London Economic Development Strategy identifies significant capacity and potential for growth in East London to strengthen London's creative and cultural productivity and innovation. In partnership with North Kent, South Essex, the South East Local Enterprise Partnership and the South East Creative Economy Network, the Mayor has launched a bold vision for a Thames Estuary Production Corridor. Their vision is set out in the Thames Estuary 2050 Growth Commission report.

3.57 The London Economic Development Strategy also highlights the impact of an ageing and growing population in London with more complex health needs has and will have on the importance of the development of new products and services in life sciences. Scientific research is the foundation of the life sciences sector and London has world class expertise and institutions which are helping to tackle some of the big health challenges in society including cancer, heart disease, diabetes and dementia.

London, together with Oxford and Cambridge, form the 'Golden Triangle' – a world-leading hub for life sciences with a rich network of renowned research centres, healthcare providers, medical charities, innovative SMEs and large industry players. The Golden Triangle is a springboard for innovation and growth nationally.

3.58 The Golden Triangle is home to four of the world's top ten universities; five out of seven of the UK's academic health science centres; leading medical research institutes and organisations. Additionally, several new and planned investments are expanding the research capabilities of the sector, including Care City – a ground-breaking research, education and innovation site based in Barking, which received funding to be an innovation test bed.

3.59 It is vital that the science research and development base is supported to innovate and grow, both to improve health outcomes and boost the economy. London's life sciences industry now boasts over 1,300 life sciences companies in London alone, with a further 2,000 companies in the Wider South East. In 2017, the sector in London and the Wider South East was estimated to generate £38.4bn in turnover for the UK.

3.60 While London is home to some of the greatest scientific minds on the planet and is a beacon for world-class research and development, some of our most entrepreneurial science and tech companies need more support to transform their ideas into products. Some of the physical barriers facing the sector include the need for affordable workspace to enable companies to grow and scale up in London, including 'wet' lab space[3].

Thames Estuary 2050 Growth Commission Report

3.61 The report endorses the vision and states that 'there is a real potential to ensure that its ambitions are realised'. The vision is for this area to become a world-class centre for production, developing talent and building infrastructure to support digital, creative and cultural businesses. The Corridor will be a network of production facilities of scale, primarily repurposing strategic industrial land, dispersed along 200 miles of land lining the River Thames. It will support creative production, manufacturing and innovation. The aim is for it to be underpinned by a digital highway which will test and promote the newest and fastest digital connectivity that creative enterprises require. In partnership with higher and further education partners across the Corridor, the state-of-the-art facilities will create hundreds of jobs and apprenticeships, training and work experience opportunities for local people along the Thames Estuary.

[3] Wet laboratories are laboratories where chemicals, drugs, or other material or biological matter are handled in liquid solutions or volatile phases, requiring direct ventilation, and specialized piped utilities.

3.62 The report identifies an area called the "City Ribbon", which include the east London boroughs of Tower Hamlets, Newham, Barking and Dagenham, Havering, Lewisham, Bexley and Greenwich and the London Legacy Development Corporation.

3.63 The core strengths of this place include the growing cultural and creative industries sector, supported by the Mayor's Production Corridor, and significant projected population growth, which is collectively one of the youngest on average in London. This is allied to major regeneration programmes in areas including Barking Riverside and Thamesmead. Space will be created for start-ups and grow-on spaces for small and medium sized businesses

3.64 The challenges of the area include integrating and delivering future connectivity projects, including river crossings and the Crossrail 1 extension to Ebbsfleet, and ensuring this unlocks the delivery of affordable housing. The area suffers from some of the highest levels of deprivation in London with high levels of unemployment and low skills.

3.65 The report identifies Dagenham as an opportunity area to support this growth. A study commissioned by Barking and Dagenham Council and the Mayor has shown that Dagenham East is an ideal location to build a world-class film and television production complex, with the potential to generate around 780 full time jobs in the local area and £35mn each year for the economy. This will come with substantial trickle-down impacts, supporting a wide array of businesses in the supply chain.

London Industrial Land Demand (October 2017)

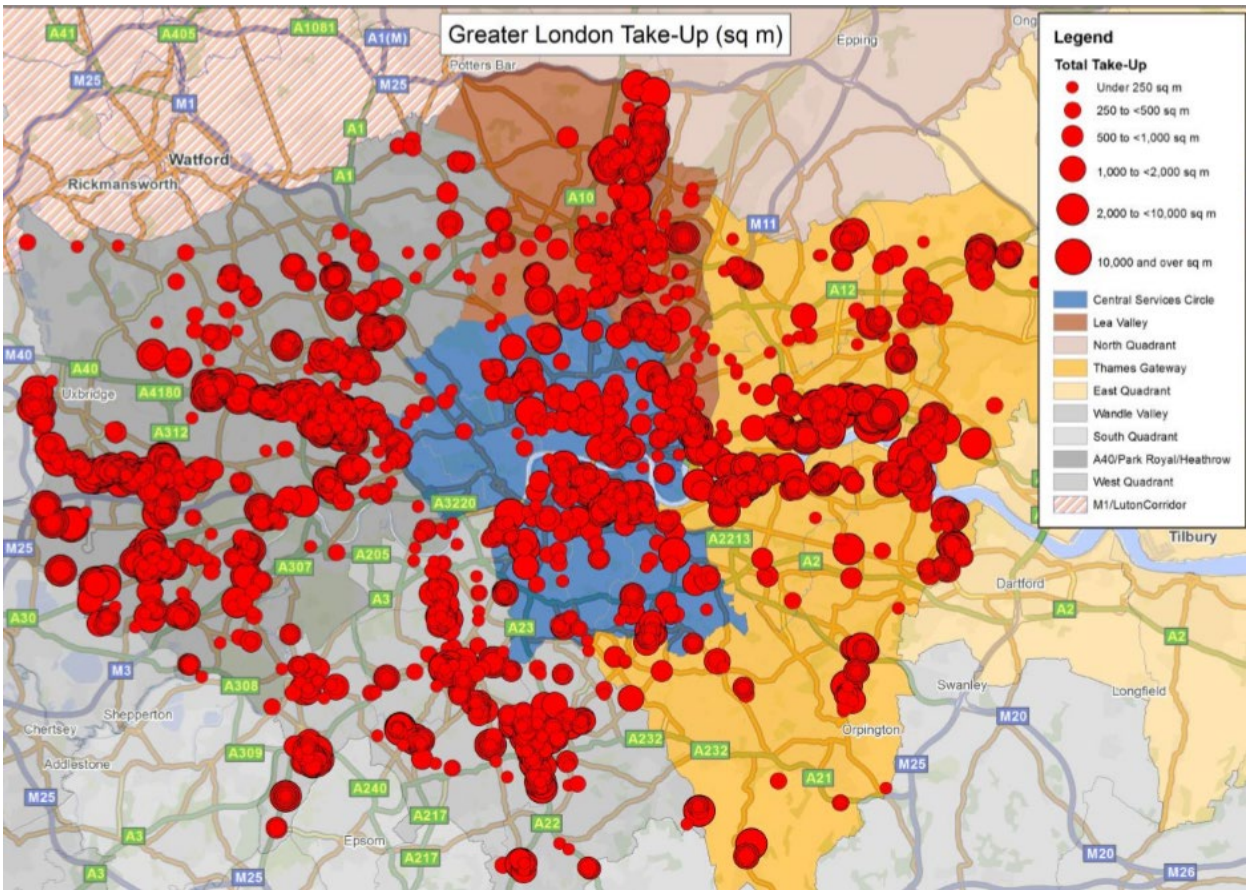
3.66 The report aimed to assess land demands for various types of industry and the amount of industrial land that London needs to maintain to ensure it continues to function as a successful and sustainable city. As London continues to grow there are increasing pressures on all forms of land use activity to demonstrate that they are contributing efficiently to London's needs. Industrial land in London is under pressure given the high demand for housing land and the much higher land values that residential development commands compared to industrial.

3.67 The report mentions that there were approximately 7,000 hectares of industrial land in London in 2016 but that this stock fell by over 500 ha between 2010 and 2015. This is the equivalent to an annual rate of 106 ha and compared to a release benchmark of 37 ha per annum that was set in the London Plan (2016) based on recommendations in the 2011 Industrial Land Demand and Release Benchmarks in London report[4].

[4] Industrial Land Demand and Release Benchmarks in London – Roger Tym & Partners (2011)

3.68 The report highlights the importance of the Thames Gateway as one of the five broad property market areas which support industrial activities in London. The Thames Gateway is an area extending through the east part of Newham Borough, and the boroughs of Barking and Dagenham, Havering and Redbridge on the north side of the Thames and Greenwich, Bexley and Bromley boroughs to the south of the river. The Thames Gateway has developed as a significant location for large-scale warehouses and logistics facilities, notably along the A13 corridor, where several major new developments have been constructed over recent years. Thames Gateway is also, with Park Royal, the largest property market areas in London for industrial activities (the two broad property market areas accounted for around 38% of industrial take-up in recent years preceding the publication of this report).

3.69 A map from the report illustrates take-up by size band for the period 2010 to Q3 2016, clearly showing the hot spots in London. Demand has been particularly strong in Bermondsey, Croydon, Erith and Belvedere, Barking and Dagenham, the Lea Valley and the Tottenham / Ponders End / Enfield corridor, Park Royal / A40 corridor and Heathrow.



3.70 The report mentions that in London and the Inner South East there is solid demand for mid-box (30,000-50,000 sqft) and cross-dock facilities in prime and second-tier locations as occupiers look to optimise their distribution networks within easy reach of the customer. Prime locations include Park Royal, Enfield, Croydon, Dartford, Dagenham / Barking and Erith / Belvedere.

3.71 Cross-dock facilities usually comprise two sets of dock doors on two sides of the warehouse for inbound and outbound goods. This allows efficient transfer of goods from inbound "supplier" to outbound "customer". Increasingly these facilities are designed specifically to accommodate inbound articulated vehicles and outbound white vans. Companies are seeking to reduce supply chains and improve efficiency in the face of insatiable demand from the "want it now" consumer.

3.72 The report demonstrates the importance of the role played by Barking and Dagenham for distribution and logistics activities in London. Barking and Dagenham had, at the time of publication of the report, 10 distribution centres all centred on the A13, this is the greatest number of distribution centres in any single Borough in London.

3.73 The report also highlights a number of emerging activities, or sectors, that also make demands on industrial land. For example, renewable energy generation, data centres, life sciences, clean technology and low carbon activities. Such activities tend towards lower density land use and are more likely to be located in Outer London locations. The potential for industrial land to accommodate new uses was demonstrated by the Mayor of London's announcement of a feasibility study (to be undertaken by Film London, London Local Enterprise Panel and London Borough of Barking & Dagenham) into the creation of a major new film studio on a seven-hectare industrial site in Dagenham East.

3.74 The very wide variety of businesses and activities described here suggests that the conventional understanding of 'industrial' property needs to be expanded, in order that spatial policy can be more sensitive to the dynamics of demand in industrial areas. In particular, there is a need to recognise the important role of hybrid buildings in accommodating activities that are vitally important to London's economy.

Barking & Dagenham Local Plan Regulation 19

3.75 The Local Plan is currently at Regulation 19 stage. The draft Local Plan aims to set the vision and framework for how Barking and Dagenham will be transformed to 2037. Central to the strategy is the ambition to "adopt more intelligent use of Barking and Dagenham's industrial lands, particularly on sites that benefit from new public transport infrastructure, enabling the provision of more floor space and greater job densities on less land, and enabling the provision of new homes to meet needs." The Local Plan outlines that renewal and intensification of the "best preforming and best located industrial areas, in particular Dagenham Docks, is also planned." In these locations, there is a desire to deliver a mix of commercial uses, including office, light industrial and studio commercial floorspace. Workspace, orientated towards office, light industrial and storage space will additionally be required and delivered.

3.76 There are seven subareas, "Transformation Areas"; three of which have a particular focus outlined to deliver new industry. This includes, Thames and the Riverside, Chadwell Heath and Marks Gate, and Dagenham Docks, Beam Park and the Stamping Plant. Geographically, this will predominantly see new industry delivering along the riverfront.

Figure 3: Key Diagram Illustrating Policy SPDG1

Source: Joint Waste Development Plan for the East London Waste Authority Boroughs, 2012

3.77 Chapter 7: Economy sets out employment land policies, and with an overarching intention to encourage sustainable economic growth through "promoting intelligent use of under-utilised industrial land within the borough." Policy DME 1: Utilising the borough's employment land more efficiently, outlines the requirements to, in line with the London Plan, protect and retain industrial activity on SIL and LSIS sites. As outlined in the policy, the Council are preparing localised planning frameworks, SPGs on the Transformation Areas, which provide strategic guidance and greater detail on the types of industrial activity and intensification that is considered appropriate for the specific areas.

3.78 There is a further ambition from the Council to protect affordable space for SMEs across the borough. Policy DME 1 stipulates that proposals should provide (where suitable) a mix of units to meet the needs of SMEs. Outside of the SIL designations, the Council will resist development proposals that will result in a net loss of viable employment floorspace, particularly affordable and low-cost workspace, unless it can be stringently proven that the site does not meet occupier/market demands. An extension of protecting low-cost space for SMEs, Policy DME 2: Providing flexible, affordable workspace, shows the Council's commitment to deliver affordable space as part of new development proposals.

3.79 Waste sites in the borough will be safeguarded, and development proposal are supported where they seek to maximise the efficiency and capacity of waste facilities within the borough; outlined in Policy DSMI 8: Waste sites. Proposals for non-waste uses on safeguarded sites will only be considered acceptable where it is clearly demonstrated that a compensatory site provision, or compensatory capacity, will be delivered on a suitable replacement site within the borough in the first instance or another part of London that provides equivalent to, or greater than, the maximum annual throughput than the existing site could achieve. Additional waste site allocations could be made by means of a specific review as part of the development of the new waste plan.

Joint Waste Development Plan for the East London Waste Authority Boroughs (2012)

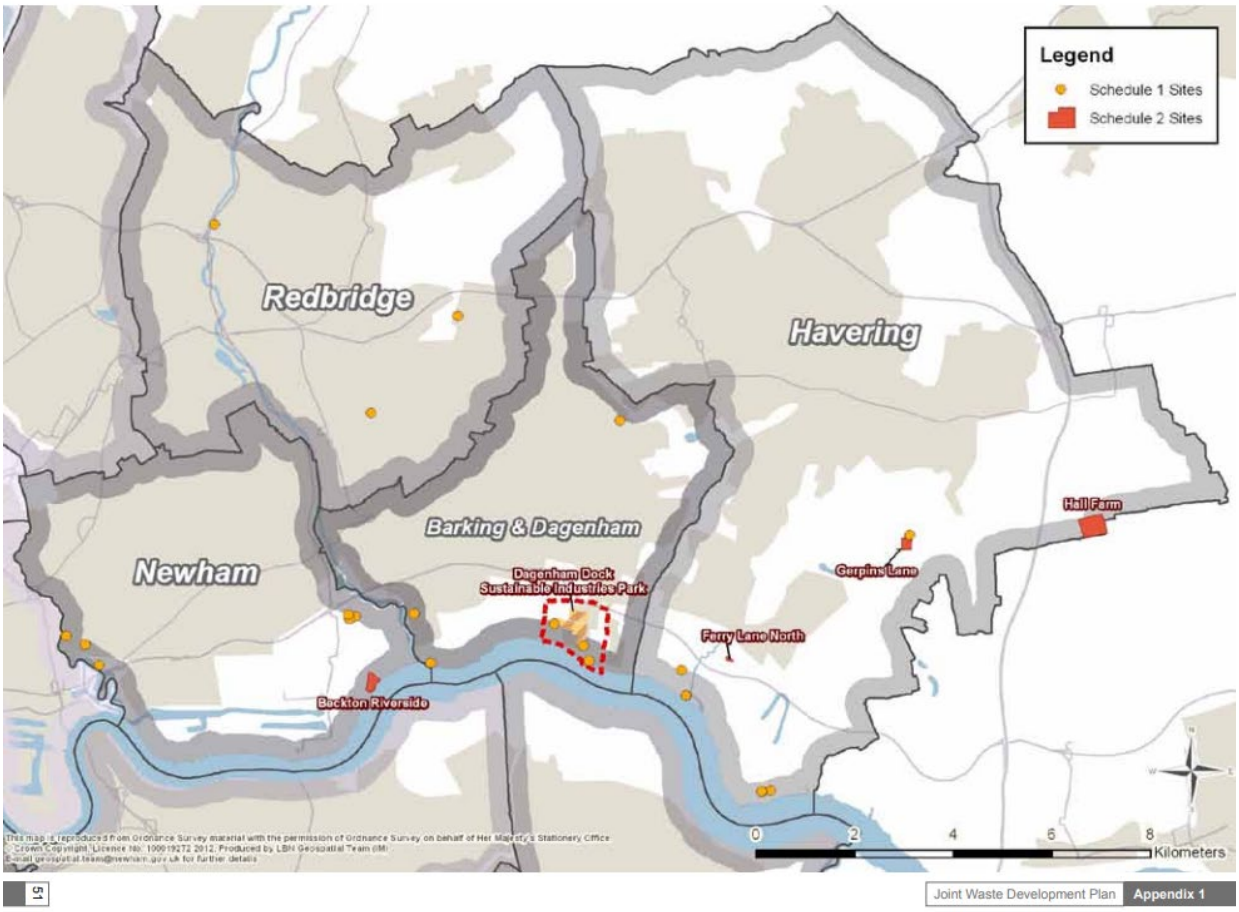
3.80 A new East London Joint Resources and Waste strategy is being prepared however draft plans are not publicly available.

3.81 The Joint Waste Development Plan was adopted in 2012 and developed in partnership with four East London boroughs; LB Barking and Dagenham, Havering, Newham and Redbridge. The Joint Waste Strategy sets the strategic framework and future waste management requirements. In line with London Plan Policy W2: Waste Management Capacity, Apportionment & Site Allocation, existing waste management facilities are outlined to be safeguarded and future sites required to meet the forecasted capacity are identified.

3.82 Within Barking and Dagenham, there are five Recycling and one Recovery facilities. The sites are as follows:

- **Recycling** - Frizlands Lane refuse & Recycling Centre
- **Recycling** – White Mountain Roadstone Ltd
- **Recycling** - Closed Loop Recycling
- **Recycling** - SITA UK Ltd
- **Recycling** – Jewometal UK Ltd
- **Recovery** – Hunts Wharf

Figure 4: Waste and recycling sites

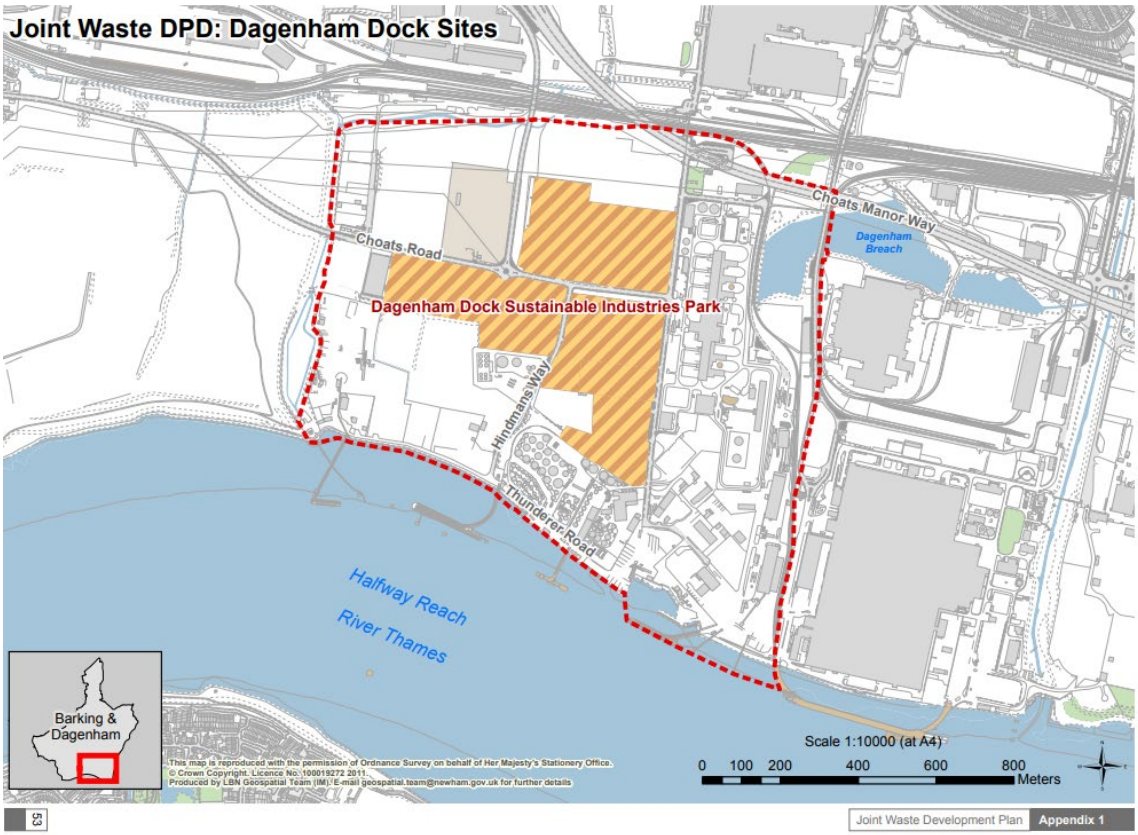


Source: Joint Waste Development Plan for the East London Waste Authority Boroughs, 2012

3.83 In terms of future sites, a 4.5 -11.5 ha site has been outlined in Dagenham Docks Sustainable Industries Park. There is capacity for 2 medium and 1 small scale facility, for In-vessel composting (IVC), Anaerobic digestion (AD) and Recovery facilities. As present, one large scale facility exists on the site: Application submitted in 2010 for by Thames Gateway Power for development of Thames Gateway Energy Facility - an energy generation facility to generate low carbon renewable combined heat and power. This is a

capacity of 120,000 tonnes of nonrecyclable waste using 3.34 ha of land in the northern part of the SIP. No further waste facilities in this site are/have been delivered.

Figure 5: Dagenham Docks Sustainable Industries Park – Waste Site Allocation



Source: Joint Waste Development Plan for the East London Waste Authority Boroughs, 2012

4. Supply

4.1 In this section, we will look at consolidating the supply information, grouped under current designations (retain and intensification sites); planned release for co-location; planned release for non-industrial.

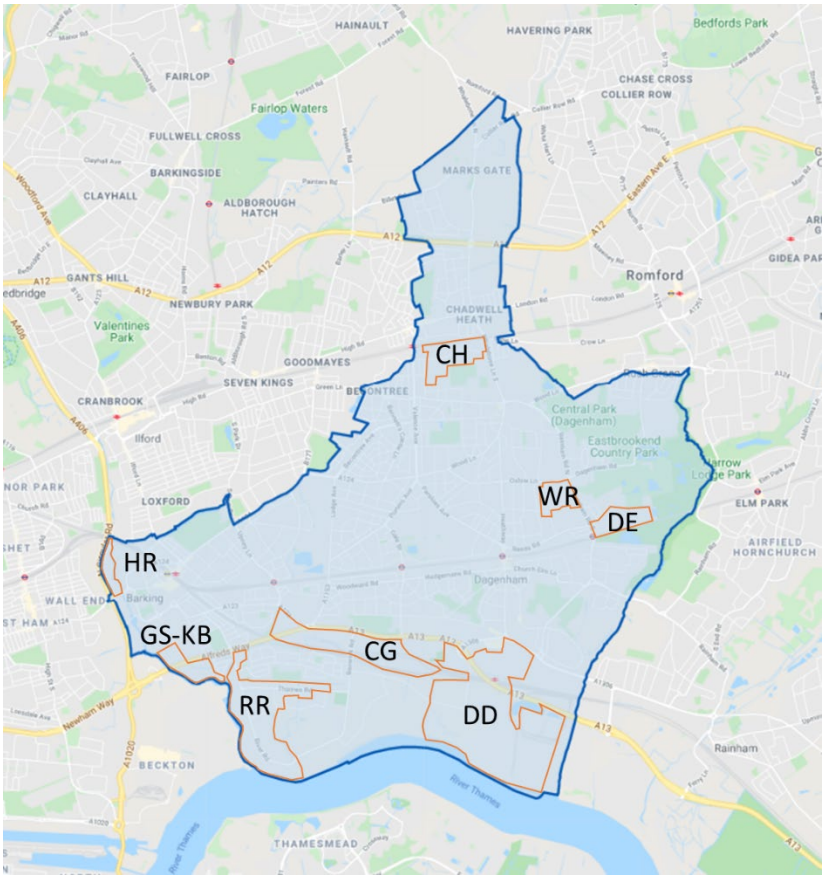
4.2 We will then estimate the amount of developable land (vacant and under-developed sites).

4.3 Finally, we will set out the ownership of opportunity sites. This will also aim to identify long leases (7 years plus) to understand where constraints may lie.

4.4 LBBD has a total of 446.55 ha of industrial land, divided between 8 clusters, with Dagenham Dock being by far the largest cluster (21.1.8 ha), followed by River Road (86.4 ha). Clusters are shown in Figure 6.

4.5 Most industrial sites in LBBD are designated as SIL, with 20 out of the 38 employment sites in the borough. The 20 SIL sites offer a total of 330.6 ha of employment land (circa 75% of all employment land in the borough) with sites ranging in size from 1.3 ha (River Road, Site RR2) to 76.2 ha (Dagenham Dock, Site DD7). The balance of sites are either Locally Significant Industrial Sites (LSIS) or non-designated sites that accommodated industrial activity (NDS).

Figure 6 – LBBD Industrial Clusters



Source: Avison Young

Assessment Overview

4.6 In the following pages of this section, we have provided an overview of each employment site in the eight clusters and assessed their relative merits across a range of factors, to determine the potential for industrial intensification.

4.7 As a general overview on the colouring, we have used a modified traffic light colour system to identify where there are opportunities for intensification. Red indicates where an outcome is not supportive of intensification, and green to indicate where the conditions are supportive.

4.8 To support the readability of the following pages, please see the key below:

Table 2 - Key, Plot Ratio, Vacancy Rate, Quality, Age

	Plot ratio	Vacancy Rate	Quality	Age
Red	0.6 – 1.0	0% - 3%	3.6 - 5	2001 +
Orange	0.4 - 0.5	4% - 6%	2.1 – 3.5	1980 – 2000
Green	0.0 – 0.3	7% and above	1 – 2	1979 and below

Table 3 - Key Landownership

	Landownership
Red	Highly fragmented, no supportive land ownerships, significant number of leases
Orange	Some consolidation, no supportive ownerships, and a small number of leases
Green	Consolidated ownership, supportive land ownership

4.9 Please note that the term supportive landownership, indicates where freehold land is owned by the public sector, developers or interested parties, such as SEGRO and Capital Industrial, who we envisage would carry out intensification without public intervention should the opportunity arise. Our view is that pension funds would not lie within this list as we are aware, they are relatively risk adverse and may not be able to partake in industrial intensification.

Table 4 - Key Road access and public transport

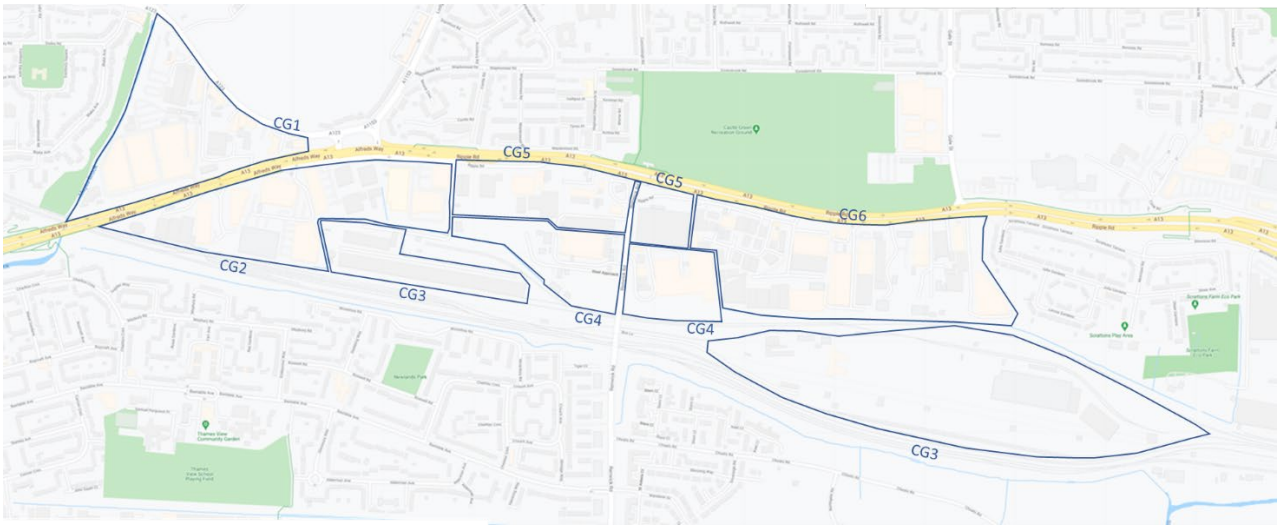
	Internal Access	Access to road network	Public Transport
Red	Convoluted internal access, narrow lanes and awkward turning capabilities, shared with other uses e.g. residential	Far from, and poorly connected to strategic road network	No public transport connections
Orange	Some convoluted roads, with some narrow lanes and turning capabilities	Good access to strategic road network	Some public transport connections
Green	Wide, unencumbered internal roads for the predominant use of the businesses	Direct access to the strategic road network	Multiple public transport connections

Castle Green

4.10 Castle Green is situated within the centre of the borough, comprising 6 sites. The sites are nestled with the A13 (Ripple Road) and railway lines, with the River Thames situated to the south. To the north, is predominantly residential in character with the Castle Green Community and Leisure Centre, Community School, Nursery and grounds. To the west is predominantly residential, and to the east, is Dagenham Docks and Beam Park site.

4.11 Note that CG3 is divided in two sites, one smaller site to the west and a second large site to the east (Box Lane / Euro Hub) which is surrounded by rail infrastructure.

Figure 7 - Castle Green Employment Sites



Source: Avison Young based on Be First, 2021

4.12 All size sites in the cluster are SIL designated. The total land take is c.58.7ha, with relatively large plots. Assessing the VOA data, the total floorspace across the cluster is 248,710sqm. Comparing the plot size versus the existing floorspace, CG1 and CG2 are already relatively well utilised with plot ratios of 0.66 and 0.82; therefore, the sites would be challenged from intensification lens. CG3 to CG6 on the other

hand have relatively low plot ratios of 0.17 to 0.45. Cross referencing this with the vacancy rates, CG4 and CG6 have relatively high vacancy rates. This signals that the stock could be dated, and not fit for purpose for modern occupiers, therefore supporting the case for intensification.

Table 5 – Castle Green, Summary Table of Existing Supply

	Designation	Plot size (ha)	Floorspace (sqm)	Plot ratio	Vacancy Rate	Quality	Age
CG1	SIL	7.9	51,858	0.66	0.0%	2.1	1965
CG2	SIL	8.3	67,781	0.82	0.0%	2.8	1994
CG3	SIL	19.7	49,264	0.25	0.0%	3.00	1980
CG4	SIL	6.0	10,126	0.17	9.1%	2.2	1977
CG5	SIL	5.4	18,185	0.34	0.0%	2.3	1958
CG6	SIL	11.4	51,496	0.45	3.7%	2.1	1978
Castle Green		**58.7**	248,710	0.42	**2.2%**	**2.3**	**1977**

Source: Avison Young, based on CoStar (January 2021) and VOA

4.13 In terms of quality, sites in this area obtained an average score (CoStar Rating[5]) ranging from 2.06 to 3.00 (average of all properties within the site), whilst the range across LBBD sites ranges from 1.63 to 3.67. Sites in Castle Green could therefore be considered as average in terms of quality and relative to the overall supply in the borough.

4.14 The age of the stock is relatively dated, and the average age of the stock across the cluster is late 1970s. In CG1 the average age of the properties is 1965, yet the showroom is reported to be fairly modern. This identifies that that some of the stock has been refurbished, and therefore is less likely therefore in need of redevelopment. Stock within CG4, CG5 and CG6 are old having been completed before 1979 and is reported to be poor and average, thus we could consider these buildings to be suitable for redevelopment.

Table 6 – Castle Green, Proposed development

	Planned released for co-location	Planned release for non-industrial	Proposed Use (site allocation)
CG1	N/A	Residential, Employment, Commercial, Education, Community	A comprehensive mixed-use development including a new overground station, residential, employment, commercial, education and community uses. Potential to deliver circa 12,000 (net) units of new homes, 1 primary and 1 secondary school provision, open spaces and a district energy centre/network linking to Barking Riverside
CG2	N/A		
CG3	N/A		
CG4	N/A		
CG5	N/A		
CG6	N/A		

Source: LBBD Proposed Site Allocation document, 2021

[5] Appendix V**Error! Reference source not found.** provides some information on the CoStar Quality Score

4.15 The proposed site allocation document identifies that Castle Green are suitable for non-industrial uses including new homes. A new overground station and the tunnelling of the A13 could be used as a catalyst for residential-led regeneration of the area.

4.16 There are mainly single storey warehouses with large operational yards used for storage and wholesale within each plot. This is with the exception of CG3 which is a large rail depot.

Table 7 – Castle Green, Nature of Stock

	Nature of Units	General Aspect	Size	Surrounding Area
CG1	Light industrial / industrial, showrooms with medium yards not always efficiently used. Small available land	Average quality, with modern showroom	Small and medium, single storey	Self-contained site with residential on one side (over river), industrial and cemetery on other sides
CG2	Sheds used for storage and wholesale, with parking space and small available land	More modern stock, of relatively good quality	Medium, 2 storeys	Surrounded by A13, rail and industrial
CG3	Depot connected to rail (freight)	Good quality despite age	Medium, single storey	Surrounded by rail and industrial
CG4	Sheds with large amount of unused yard and storage yard	Poor to average quality and ageing buildings	Medium, single storey	Surrounded rail and industrial
CG5	Sheds, with large amount of storage yard	Small units are of bad quality of older, with larger stock tending to be of slightly better quality	Small, medium and large, 2 storeys	Surrounded by A13 and industrial
CG6	Storage and services units to the east with some but limited yard space (mainly operational)	Mainly composed of basic industrial stock in average quality (with some good)	Small and medium, single storey	Surrounded by A13, rail and industrial, with some residential on its eastern border

Source: Avison Young, based on CoStar (January 2021)

4.17 The size of stock across the cluster is mainly small to large sized units, particularly for CG1, CG2, CG4, CG6. CG3, which comprises of two separate sites, has a couple of larger distribution sized sheds. Given the strategic connectivity of the cluster, this is not surprising.

Table 8 - Castle Green, Size of Stock

	Small		Medium		Large		X-Large		
	0sqm - 100sqm	100sqm - 250sqm	250sqm - 500sqm	500sqm - 1,000sqm	1,000sqm - 5,000sqm	5,000sqm - 10,000sqm	10,000sqm - 50,000sqm	50,000sqm - 100,000sqm	100,000sqm - 1,000,000sqm
CG1	27%	45%	16%	2%	8%	2%	0%	0%	0%
CG2	6%	13%	16%	38%	22%	6%	0%	0%	0%
CG3	0%	0%	0%	0%	50%	0%	50%	0%	0%
CG4	9%	0%	9%	36%	18%	18%	9%	0%	0%
CG5	25%	0%	0%	13%	50%	13%	0%	0%	0%
CG6	12%	10%	15%	33%	29%	0%	2%	0%	0%

Source: Avison Young, based on CoStar (January 2021)

4.18 Across the cluster the landownership profile is complex. CG5 and CG6 have little to no supportive land ownerships with a significant number of freeholders owing small plots and leases layered above. CG1 in particular has a significant number of leaseholders (this reflects leases which are 7-year terms and longer), which could be costly to terminate and achieve Vacant Possession. However, there is LBBD ownership, which could be considered as the site is 1.4ha. CG4 is less complex but comprises mostly small plots with private owners – not supportive for considering intensification. CG2 and CG3 are predominately owned by Investment Trusts who are characteristically risk-adverse and may be unlikely to consider entering into a development agreement. However, Capital Industrial own a sizeable plot (1.12ha) with direct access off the A13. The site itself is not intensively used and may be an opportunity.

Table 9 – Castle Green, Freehold / Leasehold Structure

	Largest Freeholder	Size of site (ha)	Supportive land ownership	Size of site (ha)	Freeholders	Leaseholders	NB
CG1	Colvia Management Company Limited	3.5	Barking and Dagenham Council	1.4	11	100	Mostly blue-chip companies e.g. Shell, Ford
CG2	Standard Life Assurance Limited	2.8	Secretary of State for Transport Hampshire County Council Capital Industrial Four B.V.	2.2	8	31	Capital Industrial have a large site. Mainly small property development companies and REITS.
CG3	Legal & General Pensions Limited	13.2	Secretary of State for Transport	3.4	2	3	Part of the site unknown and unregistered.
CG4	Sabreleague Limited	2.6	Network Rail Infrastructure Limited	0.3	14	7	Number of small private owners. Includes unregistered brownfield land, at Renwick Road.
CG5	Uneek Forwarding Limited	0.7	Barking Parish Council Barking and Dagenham Council	0.3	21+	5	Quite fragmented and several private owners.
CG6	Parkdale Investments Limited	1.6	N/A		21+	24	Extremely fragmented. Mainly small REITS.

Source: Nimbus Map (January 2021)

Table 10 – Castle Green, Area Characteristics

	Internal Accessibility	Access to Strategic Road Network	Public Transport
CG1	Average	Good	Good
CG2	Good	Good	Average
CG3	Average	Good	Average
CG4	Good	Good	Average
CG5	Good	Good	Average
CG6	Good	Good	Average

Source: Avison Young, 2021

4.19 Overall, the internal accessibility of plots is good with CG1 and CG3 being relatively poorer. CG3 with the rail depot is restricted by the rail lines and can only be accessed via Box Lane. If intensification was considered here, a new route may be needed to handle the additional vehicle capacity generated. The A13 lines to the northern boundary of the cluster and is there is direct access from most plots. This is attractive to retaining logistics and distribution occupiers. Other than CG1, access and proximity to the public transport is relatively average as there are bus stops along the A13, which is quite a distance/walk from some plots.

Summary

4.20 The following table provides a summary of the suitability of each site for intensification based on the baseline analysis of the supply. This table also provides an indication of any known aspiration for the site (as published by LBBD and Be First in planning documentation). Further consideration will be given

to the suitability for intensification and future aspiration later in this report and recommendations will be made on future opportunities for those sites.

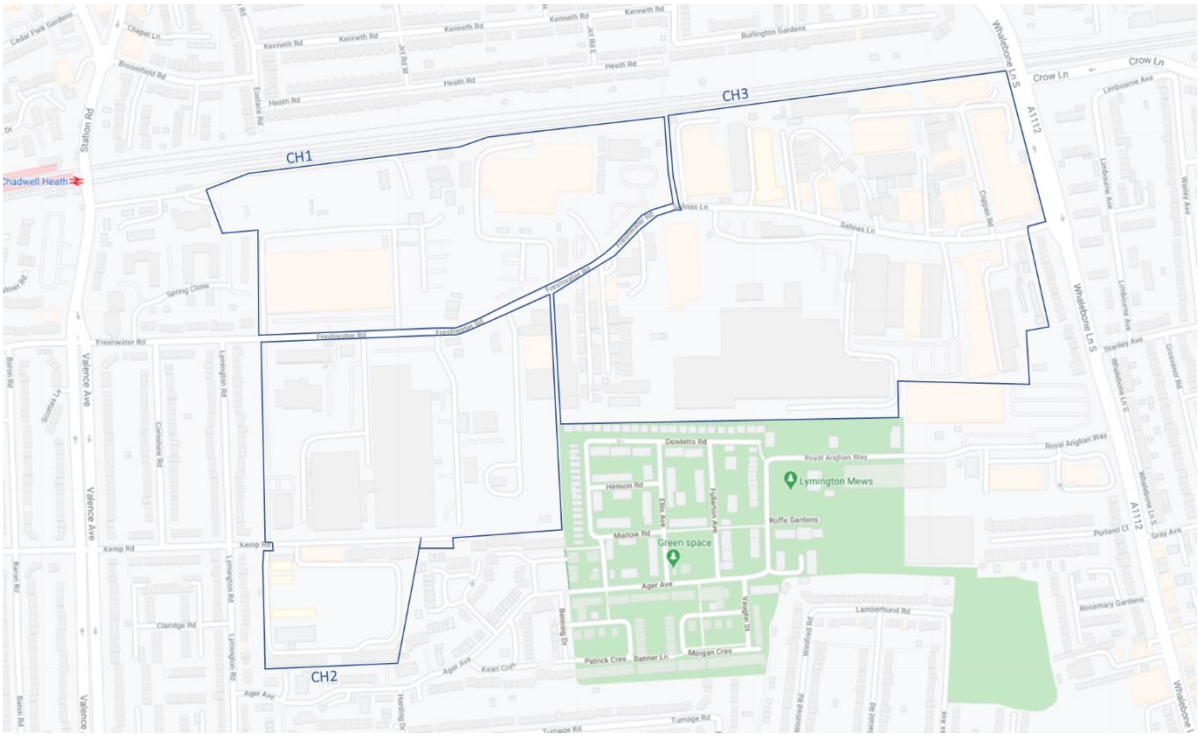
	Suitability for Intensification	Aspiration for the Site
CG1	Yes. Potential on LBBD plot.	A comprehensive mixed-use development including a new overground station, residential, employment, commercial, education and community uses. Potential to deliver circa 12,000 (net) units of new homes, 1 primary and 1 secondary school provision, open spaces and a district energy centre/network linking to Barking Riverside.
CG2	Yes. Capital industrial site.	
CG3	Yes. Legal and General site	
CG4	No real sizable plot or supportive land ownership	
CG5	No. Very fragmented ownership.	
CG6	No. Very fragmented ownership.	

Source: Avison Young

Chadwell Heath

4.21 Chadwell Heath is situated immediately south of Chadwell Heath Railway Station and comprises 3 sites. It sits in a highly residential context, with low rise terraced houses to the south, west and east. The railway tracks run along the northern boundary. Of note, Freshwater Lane runs through the middle of the site, connecting to Whalebone Lane (running along the eastern boundary) leading to the A12 to the north.

Figure 8 – Chadwell Heath Employment Sites



Source: Avison Young based on Be First, 2021

4.22 All three plots are LSIS designated, with the total land take amounting to 30.9ha. The total floorspace is c.146,400sqm. The plot ratio suggests CH1 and CH2 are relatively well utilised, with plot ratios of 0.63 and 0.5 respectively. CH3 has a very low plot ratio of 0.3 which suggest there could be scope to intensify

the site. In addition to this, the vacancy rate for CH3 at 4.1% (which there is no reported vacancy in CH1 and CH2). This implies that there could be stock that is not fit for purpose in CH3, and therefore supportive to consider redevelop here.

Table 11 – Chadwell Heath, Summary Table of Existing Supply

	Designation	Plot size (ha)	Floorspace (sqm)	Plot ratio	Vacancy Rate	Quality	Age
CH1	LSIS	7.6	47,645	0.63	0.0%	2.3	1981
CH2	LSIS	8.9	44,787	0.5	0.0%	2.2	1974
CH3	LSIS	14.4	53,986	0.37	4.1%	2.4	1967
Chadwell Heath		**30.9**	**146,418**	**0.47**	**2.6%**	**2.3**	**1975**

Source: Avison Young, based on CoStar (January 2021) and VOA

Table 12 – Chadwell Heath, Proposed development

	Planned released for co-location	Planned release for non-industrial	Proposed Use (site allocation)
CH1	Yes	Residential, Commercial, Healthcare, Education	Comprehensive redevelopment involving intensification of industrial floorspace and new commercial uses alongside residential development, with supporting social infrastructure including schools and healthcare. Potential to deliver approx. 3,685 (net) units of homes and approx. 26,000 sqm industrial and office floorspace, together with commercial/community uses and open spaces.
CH2	Yes		
CH3	Yes		

Source: LBBD Proposed Site Allocation document, 2021

4.23 The proposed site allocation document identifies that sites in Chadwell Heath are suitable for non-industrial uses and colocation including new homes.

4.24 CH1 has large warehouses, used for wholesale and storage which are reported to be in average condition. In comparison, CH2 and CH3 has smaller, light industrial units with some trade counters, and the stock is reported to be of low quality and some building in poor conditions. There is a large, cleared site in CH3 which signals this may be redeveloped. The average age of properties across the cluster is relatively old, c.1975s. This is supportive to consider redevelopment.

Table 13 – Chadwell Heath, Nature of Stock

	Nature of Units	General Aspect	Size	Surrounding Area
CH1	Wholesale / trade counter units, with large operation yards	Average quality units	Large single and 2 storeys	Rail and Industrial with some residential to the west
CH2	industrial and light industrial units / workshops /industrious	Low quality of stock, dense, attracting small independent and local businesses	Small 2 storeys to south and large single storey to north	Residential, with industrial to the north
CH3	Mix of light industrial workshops and larger trade counters and warehouses and industrious space	Mix of old, low-quality stock and larger slightly more modern but low-quality warehouses	Small single and 2 storeys	Rail, Industrial, with residential and community across rail and road and residential to south

Source: Avison Young, based on CoStar (January 2021)

4.25 The size of stock is generally small to large c. up to 10,000sqm, with there being one x-large unit in CH1. Given that the cluster sits in a highly residential context and with constraint access do not support heavy industrial or distribution related occupiers.

Table 14 - Chadwell Heath, Size of Stock

	Small		Medium		Large		X-Large		
	0sqm - 100sqm	100sqm - 250sqm	250sqm - 500sqm	500sqm - 1,000sqm	1,000sqm - 5,000sqm	5,000sqm - 10,000sqm	10,000sqm - 50,000sqm	50,000sqm - 100,000sqm	100,000sqm - 1,000,000sqm
CH1	27%	33%	12%	9%	12%	0%	6%	0%	0%
CH2	30%	33%	17%	11%	7%	2%	0%	0%	0%
CH3	23%	32%	26%	8%	10%	1%	0%	0%	0%

Source: Avison Young, based on CoStar (January 2021)

4.26 The ownership within CH1 is comparatively supportive for intensification as it consolidated and has network rail land to the north. The land owned by Network Rail sits parallel to the railway tracks and is relatively underutilised – it is mostly surface car parking. Given its proximity to Chadwell Heath station, it would be feasible to consider a light industrial typology mixed with residential at this location.

4.27 Both CH2 and CH3 have fragmented ownership with a significant number of leases layers above which would make consolidation of sits in these plots challenging and costly. Lionpride Ltd have a large, cleared site in CH2 extending 5.3ha which is most likely up for redevelopment.

Table 15 – Chadwell Heath, Freehold / Leasehold Structure

	Largest Freeholder	Size of site (ha)	Supportive land ownership	Size of site (ha)	Freeholders	Leaseholders	NB
CH1	Hoo Hing Limited	2.2	Network Rail Infrastructure Limited	0.5	5	3	Large swathes of unregistered land around the railway line boundary to the north. The unregistered land is occupied and in use. Consolidated land ownership.
CH2	Countrywide Electrical Distributors Limited	1.2	Barking and Dagenham Council	0.2	21+	61	54 leases are attributed to the Spectrum Building within the site. Very fragmented ownership - especially to the south.
CH3	Lionpride Limited	5.3	N/A	0.0	21+	15	Extremely fragmented and high number of private owners with small sites. Lionpride site cleared for development. FW Hipkin site unregistered.

Source: Nimbus Map (January 2021)

4.28 The internal accessibility is average to poor across the cluster, mainly as the roads are convoluted with some shared roads with residential uses. The access to the strategic road network is on average quite poor. Eastern plots within the cluster have some advantage in that it has a marginally more direct access to the A12 better via Whalebone Lane. Public transport is poor within the cluster, with fringe sites having better access to bus stops along Valance Avenue and Whalebone Lane. Chadwell Heath train station lies to the north west of the cluster but is some walking distance for most sites.

Table 16 – Chadwell Heath, Area Characteristics

	Internal Accessibility	Access to Strategic Road Network	Public Transport	Neighbouring Area(s)
CH1	Average	Average	Average	Residential, Rail, Industrial
CH2	Poor	Poor	Average	Residential
CH3	Average	Average	Average	Residential, Rail, Industrial, Community

Source: Avison Young

Summary

4.29 The following table provides a summary of the suitability of each site for intensification based on the baseline analysis of the supply. This table also provides an indication of any known aspiration for the site (as published by LBBD and Be First in planning documentation). Further consideration will be given to the suitability for intensification and future aspiration later in this report and recommendations will be made on future opportunities for those sites.

Table 17: Chadwell Heath, Summary

	Suitability for Intensification	Aspiration for the Site
CH1	May be an opportunity on the network rail site, for light industrial uses.	Comprehensive redevelopment involving intensification of industrial floorspace and new commercial uses alongside residential development, with supporting social infrastructure including schools and healthcare. Potential to deliver approx. 3,685 (net) units of homes and approx. 26,000 sqm industrial and office floorspace, together with commercial/community uses and open spaces.
CH2	No. Highly fragmented ownership.	
CH3	No. Highly fragmented ownership.	

Source: Avison Young

Dagenham Dock

4.30 Dagenham Dock cluster is situated to the south of the borough, along the river Thames. The A13 cuts diagonally through the cluster towards the north east. Historically heavy industry has been focussed in this location, with the surrounding uses predominantly brownfield land and some housing to the north.

Figure 9 – Dagenham Dock Employment Sites

Source: Avison Young based on Be First, 2021

Table 18 – Dagenham Dock, Summary Table of Existing Supply

	Designation	Plot size (ha)	Floorspace	Plot ratio	Vacancy Rate	Quality	Age
DD1	SIL	10.3	51,011	0.5	0.0%	3.4	1992
DD2	NDS	8.5	59,105	0.7	0.0%	3.7	2015
DD3	LSIS	22.5	323	0	0.0%	2.8	1972
DD4	NDS	2.2	14,347	0.65	0.0%	3	2016
DD5	SIL	17.3	10,507	0.06	0.0%	3	1993
DD6	SIL	11.8	-	-	0.0%	3	N/A
DD7	SIL	76.2	193,410	0.25	0.1%	2.8	2006
DD8	SIL	64.0	254,903	0.4	0.0%	2.7	1999
Dagenham Dock		**212.8**	**583,606**	**0.27**	**0.0%**	2.9	2000

Source: Avison Young, based on CoStar (January 2021) and VOA

4.31 Five of the eight sites are SIL designated, with DD2, DD3 and DD4 designated as NDS. Across the cluster, the plot ratios are very low, signalling the potential to increase the capacity on the sites. This is most likely due to the number of aggregate and waste/recycling businesses which tend to have large operational yards and very little built floorspace. DD5 and DD7 are prime examples of this. DD3 and DD6 are cleared sites, which we understand are likely to be brought forward for redevelopment.

Table 19 – Dagenham Dock, Proposed development

	Planned released for co-location	Planned release for non-industrial	Proposed Use (site allocation)
DD1		N/A	
DD2	N/A	N/A	
DD3	N/A	Housing and education	A comprehensive mixed-use development (Residential, Commercial floorspace, Community uses) & supported infrastructure including a potential secondary school & cultural facilities. Potential to deliver circa 3,000 (net) homes.
DD4	Yes	Housing	Mixed Use (Residential, Industrial B1, Retail, and Community uses). Potential to deliver circa 411 (net) homes, with circa 800sqm office space and community/leisure floorspace
DD5	N/A	N/A	100,000 sqm of consolidated wholesale market (sui generis) and connected/supporting uses including food processing, logistics, food education and retail.
DD6	N/A	N/A	Opportunities for industrial intensification through strategic planning.
DD7	N/A	N/A	
DD8	N/A	N/A	Opportunities for industrial intensification through strategic planning.

Source: LBBD Proposed Site Allocation document, 2021

4.32 The proposed site allocation document identifies that DD3, DD4 and DD5 are suitable for non-industrial uses including new homes. As the remaining plots are SIL designated, the proposed uses for DD6 and DD7 have been identified for industrial intensification.

4.33 In terms of nature of stock, much of the land take is tied to operational yards or in the case of DD3, cleared. Larger distribution warehouses are present here. The quality of the stock is varied, but DD1 and DD2 have some good modern properties. The rest of the cluster has quite dated, average to poor quality stock. DD5 is Barking Power Station which, should it be redeveloped may need to be re-provided which would factor into the cost and complexity of redeveloping the site. However, as we are aware LSH have identified this as the location for the new consolidated wholesale food markets – therefore it should be disregarded for intensification.

Table 20 – Dagenham Dock, Nature of Stock

	Nature of Units	General Aspect	Size	Surrounding Area
DD1	Distribution units with some operational yard space	Good condition, using site efficiently	Large, 2 storeys	Rail and major road network, some residential to the west
DD2	Distribution units with operational yard space	Modern stock in very good condition	Large, single and 2 storeys	Major road network and industrial
DD3	Undeveloped land / brownfield	N/A	N/A	Major road network, rail, industrial, undeveloped land
DD4	Operational yard used for storage	N/A	N/A	Rail and industrial
DD5	Barking Power Station	N/A	N/A	Industrial
DD6	Mainly undeveloped / brownfield with some storage yard	N/A	N/A	Rail and industrial
DD7	Medium and large warehouses and distribution sheds with oil storage at the south of the site	Half north of site composed of modern and good quality stock, southern side composed of older and low-quality stock	Large, single and 2 storeys	Industrial
DD8	Mainly brownfield and storage yard on Western Site; large units on Eastern Site	Relatively recent buildings of average quality on Western Site; old and poor-quality building on Eastern Site	Large, single storey	Industrial

Source: Avison Young, based on CoStar (January 2021)

4.34 There is a varied mix of property sizes across the cluster, with the presence of larger distribution warehouses in DD1, DD4, DD7 and DD8. This is most likely owning to the good strategic road network. Conversely there are very few small units, with this mostly within DD7.

Table 21 – Dagenham Dock, Size of Stock

	Small		Medium		Large		X-Large		
	0sqm - 100sqm	100sqm - 250sqm	250sqm - 500sqm	500sqm - 1,000sqm	1,000sqm - 5,000sqm	5,000sqm - 10,000sqm	10,000sqm - 50,000sqm	50,000sqm - 100,000sqm	100,000sqm - 1,000,000sqm
DD1	0%	0%	0%	0%	0%	0%	0%	100%	0%
DD2	15%	5%	0%	0%	65%	15%	0%	0%	0%
DD3	0%	0%	100%	0%	0%	0%	0%	0%	0%
DD4	0%	0%	0%	0%	0%	0%	100%	0%	0%
DD5	0%	0%	0%	0%	100%	0%	0%	0%	0%
DD6	0%	0%	0%	0%	0%	0%	0%	0%	0%
DD7	13%	27%	15%	6%	17%	12%	10%	0%	0%
DD8	0%	0%	0%	0%	53%	20%	20%	0%	7%

Source: Avison Young, based on CoStar (January 2021)

4.35 DD3 is the former Ford Stamping site owned by Dagenham Dock Ltd (partnership between Countryside Properties and London & Quadrant Housing Trust) which has been earmarked for redevelopment. The EIA scoping opinion sought to provide 3,200 homes and 8,000sqm of commercial floorspace (A1-A4/D1). As the site is under consultation, with a planning application imminent this site will not be available for intensification. Aforementioned, DD5 owned by Barking Power Limited but is the proposed site for the new consolidated wholesale market and will be disregarded to deliver new industry floorspace.

4.36 The GLA own large swathes of land in this area, including DD6. This site is currently cleared and would support new employment uses coming forward. The GLA ownership in the area is shown below in red. They additionally own parts of DD8 to the south of the cluster. These sites form part of the Segro Park Dagenham Sites – shown below. London Sustainable Industries Park is outlined to be delivered in this location, which would support the decision to consider new intensified stock here.

Figure 10: GLA ownership

Source: Avison Young based on Be First, 2021

4.37 A large swath of land in DD8 is owned by Ford Motors but appears to be an operational site.

4.38 Overall, majority of the sites have consolidated landownership and would support redevelopment.

Table 22 – Dagenham Dock, Freehold / Leasehold Structure

	Largest Freeholder	Size of site (ha)	Supportive land ownership	Size of site (ha)	Freeholders	Leaseholders	NB
DD1	LMP Dagenham Limited	10.9	N/A	0.0	1	3	Consolidated landownership
DD2			Segro Properties Limited	3.1	8	4	Consolidated landownership.
DD3	Dagenham Dock Ltd	18.4	Barking and Dagenham Council GLA Land and Property Limited	1.5	6	5	Consolidated landownership. Site to the south (Breedons Hope Cement are tenants) is unregistered and unaccounted for.
DD4	G S R Property Investments Limited	1.4	N/A	0.0	3	0	Consolidated landownership.
DD5	Barking Power Limited	15.9	N/A	0.0	2	1	Consolidated landownership.
DD6			GLA Land and Property Limited	15.5	2	5	Consolidated landownership. Mainly public landowners.
DD7	Standard Life Assurance Limited	15.7	GLA Land and Property Limited	3.2	21+	54	Prologis own a large site. Stolthaven owns a large site (operational) along the riverside c. 28 acres. GLA owns majority of the roads and access. Fragmented, but handful of owners have large sites.
DD8	Ford Motor Company Limited	177.1	Barking and Dagenham Council GLA Land and Property Limited	9.9	10	7	Fairly consolidated land ownership. GLA owns several sites (which are cleared). Aggregates companies own large swathes of land and appears operational.

Source: Nimbus Map (January 2021)

4.39 Given the proximity and access to the A13, the plots within the clusters have excellent connectivity to the strategic road network. Across the cluster, the internal roads are unencumbered by other traffic and can accommodate larger vehicles. The cluster is well connected to public transport via rail and buses. Therefore, the current connectivity and road network would most likely be able to accommodate increased industrial capacity and vehicle traffic.

Table 23 – Dagenham Dock, Area Characteristics

	Internal Accessibility	Access to Strategic Road Network	Public Transport
DD1	Good	Good	Good
DD2	Good	Good	Good
DD3	Good	Good	Good
DD4	Average	Good	Good
DD5	Good	Good	Good
DD6	Good	Good	Good
DD7	Good	Good	Good
DD8	Good	Good	Average

Source: Avison Young

Summary

4.40 The following table provides a summary of the suitability of each site for intensification based on the baseline analysis of the supply. This table also provides an indication of any known aspiration for the site (as published by LBBD and Be First in planning documentation). Further consideration will be given to the suitability for intensification and future aspiration later in this report and recommendations will be made on future opportunities for those sites.

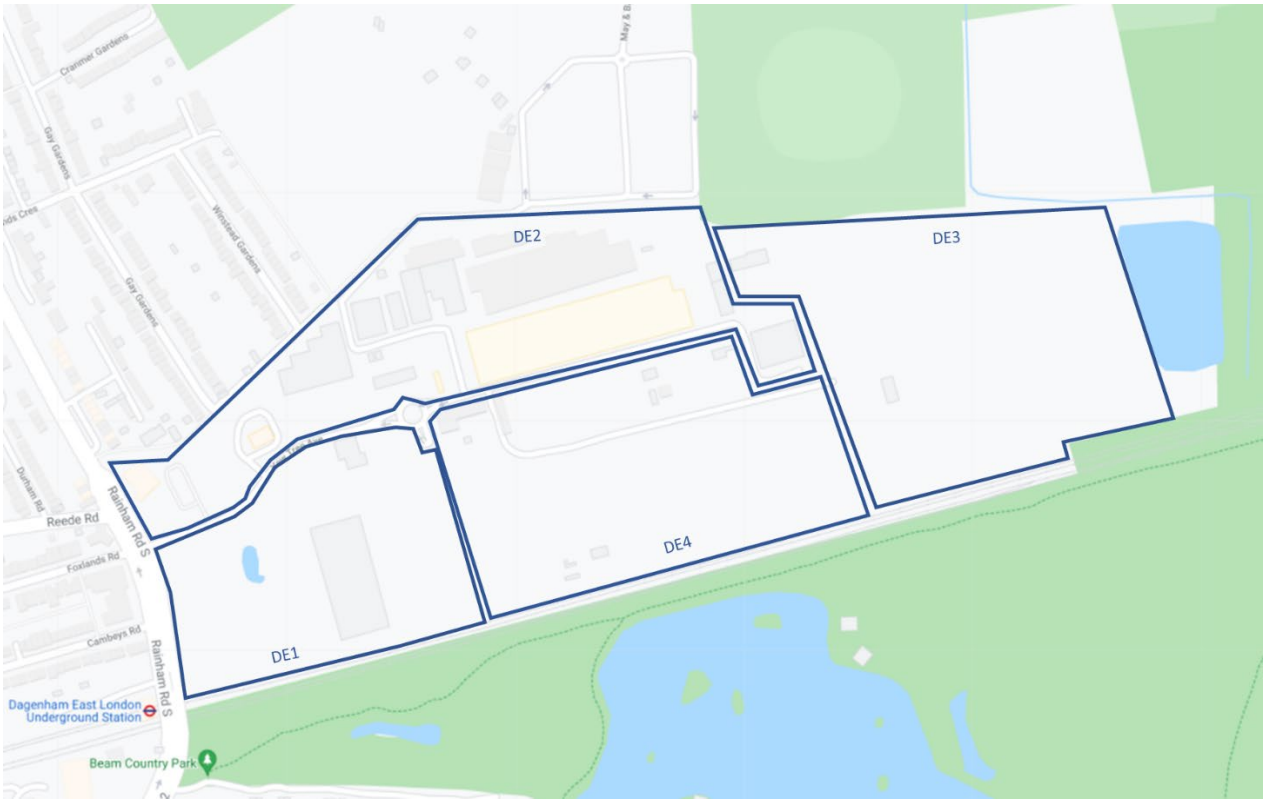
	Suitability for Intensification	Aspiration for the Site
DD1	Yes, as consolidated ownership and low plot ratio.	
DD2	Yes – on potentially the Segro part of the site. But the plot ratio is very high – so may be unable to increase capacity.	
DD3	Potential if required to deliver additional industrial capacity	A comprehensive mixed-use development (Residential, Commercial floorspace, Community uses) & supported infrastructure including a potential secondary school & cultural facilities. Potential to deliver circa 3,000 (net) homes.
DD4	No. No opportunity.	Mixed Use (Residential, Industrial B1, Retail, and Community uses). Potential to deliver circa 411 (net) homes, with circa 800sqm office space and community/leisure floorspace
DD5	No. Site for new markets	100,000 sqm of consolidated wholesale market (sui generis) and connected/supporting uses including food processing, logistics, food education and retail.
DD6	Yes, GLA ownership and earmarked as suitable for intensification	Opportunities for industrial intensification through strategic planning.
DD7	No. Highly fragmented ownership.	
DD8	Yes, partly. GLA ownership.	Opportunities for industrial intensification through strategic planning.

Source: Avison Young

Dagenham East

4.41 The cluster comprises of 4 sites, situated adjacent to Dagenham East underground station. The southern boundary of the cluster runs along the railway tracks. The immediate west of the cluster is highly residential, with open metropolitan land to the north, east and south. The site is characterised by the Made in Dagenham Film Studios.

Figure 11: Dagenham East Employment Sites



Source: Avison Young based on Be First, 2021

Table 24 – Dagenham East, Summary Table of Existing Supply

	Designation	Plot size (ha)	Floorspace	Plot ratio	Vacancy Rate	Quality	Age
DE1	NDS	3.5	0.00	0.00	N/A	N/A	N/A
DE2	LSIS	5.7	32,039	0.56	9.2%	3	2013
DE3	NDS	6.0	0.00	0.00	N/A	unknown	N/A
DE4	NDS	5.0	0.00	0.00	N/A	unknown	N/A
Dagenham East		**20.3**	**32,039**	**0.16**	**7.7%**	**2.7**	**2014**

Source: Avison Young, based on CoStar (January 2021 and VOA

4.42 At present, there are very few properties within the cluster – most of the sites are cleared, brownfield land. DE2 is a LSIS designated site, and the remaining sites are locally important employment sites. The floorspace for DE4 is unknown, as the information has yet to be reported on the VOA and property databases.

Table 25 – Dagenham East, Proposed development

	Planned released for co-location	Planned release for non-industrial	Proposed Use (site allocation)
DE1	N/A	Film / Media	A comprehensive mixed-use development involving a film studios and related ancillary uses.
DE2	N/A	Film / Media	
DE3	N/A	N/A	
DE4	N/A	Film / Media	A comprehensive mixed-use development involving a film studios and related ancillary uses.

Source: LBBD Proposed Site Allocation document, 2021

4.43 The film studio acts as an anchor, and the proposed uses on DE1, DE2 and DE4 are associated with this. This area has been identified as a media/creative cluster for Barking and Dagenham. There could be an opportunity to deliver light industrial workshops which could potentially house businesses who make props etc. for the film studio.

Table 26 – Dagenham East, Nature of Stock

	Nature of Units	General Aspect	Size	Surrounding Area
DE1	Brownfield	N/A	N/A	Industrial, rail, residential
DE2	Business park units	Average to good quality	Small and Medium, 2 storeys	Industrial, residential
DE3	Data centre and undeveloped land	Modern	Large, 3 storeys	Industrial, rail, open space
DE4	Medium size industrial units	New and modern	unknown	Industrial, rail

Source: Avison Young, based on CoStar (January 2021)

4.44 The stock within DE2 and DE4 are relatively modern and of good quality. Redevelopment would not be appropriate for these sites.

4.45 Within DE2, the range of property sizes is diverse, and ranges from medium to x-large warehouses.

Table 27 – Dagenham East, Size of Stock

	Small		Medium		Large		X-Large		
	0sqm - 100sqm	100sqm - 250sqm	250sqm - 500sqm	500sqm - 1,000sqm	1,000sqm - 5,000sqm	5,000sqm - 10,000sqm	10,000sqm - 50,000sqm	50,000sqm - 100,000sqm	100,000sqm - 1,000,000sq
DE1	0%	0%	0%	0%	0%	0%	0%	0%	0%
DE2	0%	0%	50%	17%	0%	17%	17%	0%	0%
DE3	0%	0%	0%	0%	0%	0%	0%	0%	0%
DE4	0%	0%	0%	0%	0%	0%	0%	0%	0%

Source: Avison Young, based on CoStar (January 2021)

Table 28 – Dagenham East, Freehold / Leasehold Structure

	Largest Freeholder	Size of site (ha)	Supportive land ownership	Size of site (ha)	Freeholders	Leaseholders	NB
DE1		10.9	Barking and Dagenham Council	3.5	1	0	Cleared site.
DE2	Londoneast-UK Limited	7.0	Barking and Dagenham Council	0.4	7	6	The car park to the north is included in the landownership. London East site cleared for development.
DE3	Dagenham B.V.	5.0	N/A	0.0	1	0	Dagenham Film Studios
DE4	Dagenham 2 B.V.	6.0	N/A	0.0	3	0	Dagenham Film Studios

Source: Nimbus Map (January 2021)

4.46 All the plots within the cluster have consolidated landownership, with very few leases – the most supportive condition for intensification. DE1 is wholly owned by LBBD, which is particularly advantageous.

Table 29 – Dagenham Dock, Area Characteristics

	Internal Accessibility	Access to Strategic Road Network	Public Transport
DE1	Good	Poor	Good
DE2	Good	Poor	Good
DE3	Good	Poor	Good
DE4	Good	Poor	Good

Source: Avison Young

4.47 The internal road accessibility is excellent, owning to the Yew Tree Avenue running directly through the middle of the site. The road is unencumbered with other traffic and appears wide enough to accommodate lager vehicles. There is good public transport links, with the underground station close. Taking this into consideration and given the connectivity to the strategic road network is poor, lighter industrial/hybrid office uses may be more suitable in this location. Potentially, creative studios and workshops to align with the film studio and wider media cluster.

Summary

4.48 The following table provides a summary of the suitability of each site for intensification based on the baseline analysis of the supply. This table also provides an indication of any known aspiration for the site (as published by LBBD and Be First in planning documentation). Further consideration will be given to the suitability for intensification and future aspiration later in this report and recommendations will be made on future opportunities for those sites.

	Suitability for Intensification	Aspiration for the Site
DE1	No, being redeveloped.	A comprehensive mixed-use development involving a film studios and related ancillary uses.
DE2	No, redeveloped.	
DE3	Yes	
DE4	No, as the film studios are being developed out on this site.	A comprehensive mixed-use development involving a film studios and related ancillary uses.

Source: Avison Young

Gascoigne South and Kingsbridge

4.49 This cluster comprises of two sites, situated to the west of the borough. Immediately south of the cluster, is the Thames Water Beckton Site. To the west are allotments and Beckton Triangle Retail Park. To the north and east are industrial uses, including Fresh Wharf Estates.

Figure 12: Gascoigne South and Kingsbridge, Employment Sites

Source: Avison Young based on Be First, 2021

Table 30 – Gascoigne South and Kingsbridge, Summary Table of Existing Supply

	Designation	Plot size (ha)	Floorspace	Plot ratio	Vacancy Rate	Quality	Age
GS1	LSIS	5.83	47,674	0.82	18.8%	2.9	1989
KB1	SIL	11.1	42,396	0.38	0.0%	2.5	1982
GS & KN		**17.0**	**90,070**	**0.53**	**9.0%**	**2.7**	**1985**

Source: Avison Young, based on CoStar (January 2021) and VOA

4.50 KB1 is designated as a SIL site, with GS1 designated as a LSIS. GS1 has a high plot ratio, but there is a significant vacancy rate, indicating the stock may no longer meet occupier demand. KB1 has a lower plot ratio but is reported to be well-occupied with vacancy rates at 0%.

Table 31 – Gascoigne South and Kingsbridge, Proposed development

	Planned released for co-location	Planned release for non-industrial	Proposed Use (site allocation)
GS1	N/A	Housing Allocation	Comprehensive redevelopment involving residential-led mixed use development, supported by social infrastructure and improved parks/open spaces. Potential to deliver approx. 2,328 (net) homes together with commercial and community uses.
KB1	N/A	N/A	

Source: LBBD Proposed Site Allocation document, 2021

4.51 The draft site allocations for GS1 includes an aspiration to deliver residential-led mixed use development. Commercial quantum is not specified, but desired.

Table 32 – Gascoigne South and Kingsbridge, Nature of Stock

	Nature of Units	General Aspect	Size	Surrounding Area
GS1	Wholesale units	Mostly modern in good quality	Medium	Industrial, major road network, residential
KB1	Wholesale and light industrial units, with operational yard and undeveloped land	Wholesale units are modern and of better quality than small light industrial units	Small and medium	Industrial, major road network, residential

Source: Avison Young, based on CoStar (January 2021)

4.52 The quality of the stock is relatively modern and of good quality in GS1. In KS1, the quality of the stock is mixed, with the medium sized warehouses appearing to be in better condition.

4.53 The size of stock is mixed in GS1 ranging from small to x-large, which means that the plot can meet the need of a wide range of occupiers.

Table 33 – Gascoigne South and Kingsbridge, Size of Stock

	Small		Medium		Large		X-Large		
	0sqm - 100sqm	100sqm - 250sqm	250sqm - 500sqm	500sqm - 1,000sqm	1,000sqm - 5,000sqm	5,000sqm - 10,000sqm	10,000sqm - 50,000sqm	50,000sqm - 100,000sqm	100,000sqm - 1,000,000sqm
GS1	17%	8%	17%	17%	25%	13%	4%	0%	0%
KB1	0%	0%	7%	47%	27%	13%	7%	0%	0%

Source: Avison Young, based on CoStar (January 2021)

4.54 Within GS1 the landownership is relatively consolidated but there are very few supportive ownerships. M&G own a large plot, but given they are likely to be risk adverse any redevelopment of their relatively modern warehouse is unlikely. The ownership profile within KS1 is less supportive; there are several private businesses. One site of particular interest is a 0.9ha site owned by TJM Essex Ltd, which currently is cleared and overgrown. This would be a good site to consider purchasing – particularly as it as a direct access onto the A13. Thames Water own a large site (that appears to be mostly offices with a small testing facility), extending 2.4ha. Should the site become operationally obsolete this would be a good site to deliver additional capacity.

Table 34 – Gascoigne South and Kingsbridge, Freehold / Leasehold Structure

	Largest Freeholder	Size of site (ha)	Supportive land ownership	Size of site (ha)	Freeholders	Leaseholders	NB
GS1	Reassure Limited	3.1	Barking and Dagenham Council	0.03	6	12	Council have extremely small site, which is the small access road
KB1	Thames Water Utilities Limited	2.4	Barking and Dagenham Council	0.3	13	15	Council have small narrow sites.

Source: Nimbus Map (January 2021)

4.55 GS1 has good internal accessibility and access to the strategic road network; the A13 lies directly below the plot. However, access to public transport is average. The internal road within KB1 is fairly convoluted and as a result, average. The access to public transport is limited, with connectivity only via one bus stop to the north of the plot. The access to A13 is excellent, with the northern sites having direct access.

Table 35 – Gascoigne South and Kingsbridge, Area Characteristics

	Internal Accessibility	Access to Strategic Road Network	Public Transport
GS1	Good	Good	Average
KB1	Average	Good	Poor

Source: Avison Young

Summary

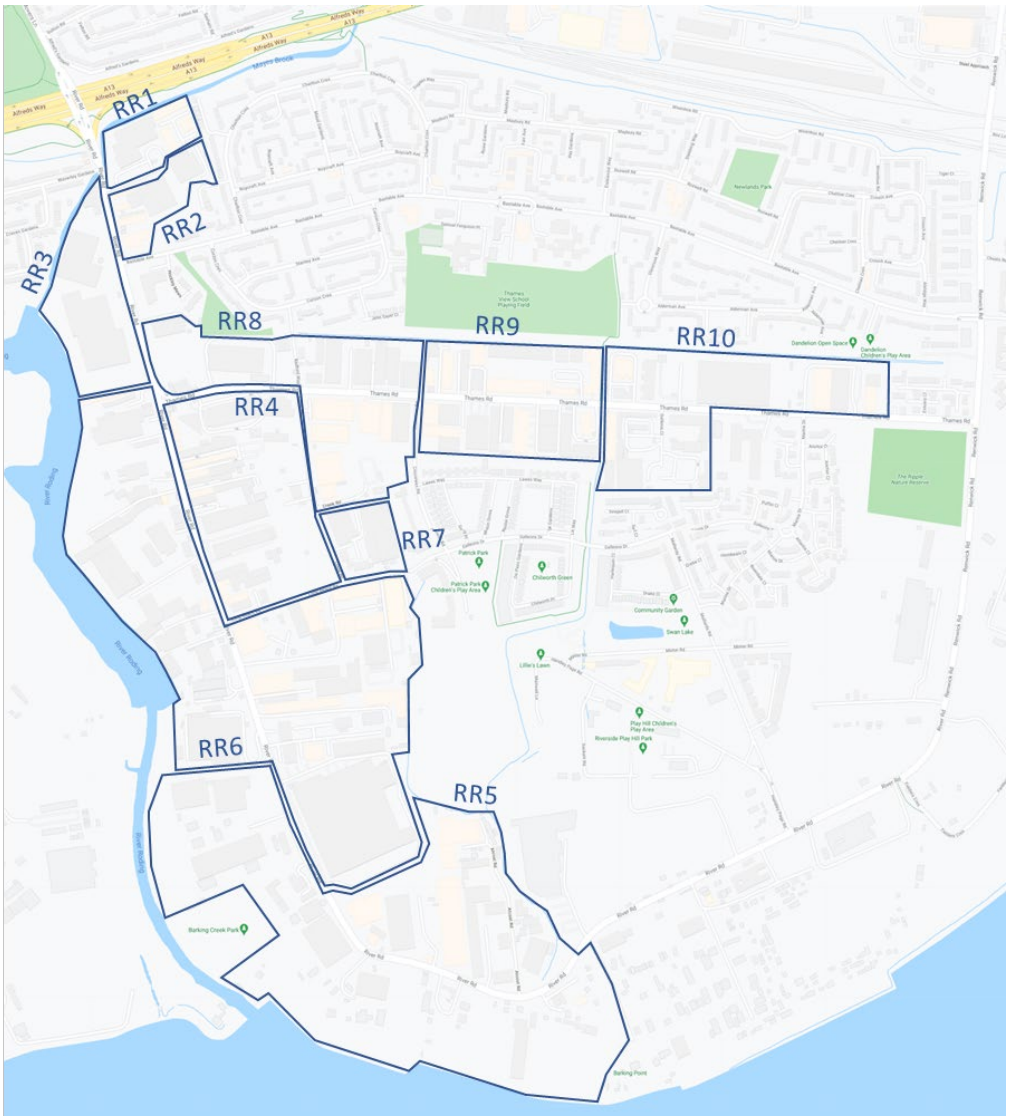
4.56 The following table provides a summary of the suitability of each site for intensification based on the baseline analysis of the supply. This table also provides an indication of any known aspiration for the site (as published by LBBD and Be First in planning documentation). Further consideration will be given to the suitability for intensification and future aspiration later in this report and recommendations will be made on future opportunities for those sites.

	Suitability for Intensification	Aspiration for the Site
GS1	There are limited opportunities.	Comprehensive redevelopment involving residential-led mixed use development, supported by social infrastructure and improved parks/open spaces. Potential to deliver approx. 2,328 (net) homes together with commercial and community uses.
KB1	Yes. But will require purchasing TJM Essex site, or Thames Water site.	

River Road

4.57 The cluster is situated to the west of Barking Riverside and sits within a highly industrious area. The River Thames borders the cluster to the south, with the River Roding running along the western border. Residential is situated to the north and east but are separated from the industrial activity through the road network and open brownfield land. New housing developments, part of the Barking Riverside scheme, have come forward in and around Galleons Drive, which has changed the landscape considerably.

Figure 13: River Road, Employment Sites



Source: Avison Young based on Be First, 2021

Table 36 – River Road, Summary Table of Existing Supply

	Designation	Plot size (ha)	Floorspace	Plot ratio	Vacancy Rate	Quality	Age
RR1	LSIS	1.4	9,282	0.66	0.0%	2.5	1993
RR2	SIL	7.6	14,308	1.1	0.0%	1.6	1963
RR3	LSIS	1.3	28,558	0.73	0.0%	3	1981
RR4	SIL	3.9	42,960	0.52	0.0%	2	1966
RR5	SIL	8.3	87,293	0.56	2.5%	2.1	1975
RR6	SIL	15.7	105,577	0.45	0.0%	2.3	1985
RR7	SIL	23.4	9,117	0.57	0.0%	2	1960
RR8	SIL	1.6	41,294	0.52	0.0%	2	1972
RR9	SIL	7.9	117,710	0.76	3.3%	2.3	1975
RR10	SIL	15.4	23,383	0.31	28.1%	2.4	1983
River Road		**86.4**	**479,481**	**0.55**	**4.2%**	**2.2**	**1976**

Source: Avison Young, based on CoStar (January 2021) and VOA

4.58 Majority of the plots are SIL designated, with RR3 and RR1 being LSIS. Across the cluster it is evidence that the plots are already quite dense, with 7 plots having a plot ratio of 0.51 and higher. Aligned to this, vacancy rates are relatively low indicating that the stock is well utilised. RR10 appears this be to relatively underutilised and could potentially be considered for delivering additional capacity.

Table 37 – River Road, Proposed development

	Planned released for co-location	Planned release for non-industrial	Proposed Use (site allocation)
RR1	Yes	Residential, Commercial, Employment, Industrial,	A comprehensive mixed-use development involves residential, commercial, employment and industrial floorspace; and supported by social infrastructure. Potential to deliver circa 538 (net) homes and cir.20,000 sqm office/Industrial floorspace with circa 1,000 sqm community uses.
RR2	N/A	N/A	
RR3	N/A	N/A	
RR4	N/A	N/A	
RR5	N/A	N/A	
RR6	N/A	N/A	
RR7	N/A	N/A	
RR8	N/A	Housing, Community, Commercial	A comprehensive mixed-use scheme including residential and commercial/community space and a new neighbourhood centre, education provision. Potential to deliver approx. 2,000 (net) new homes, 1 new primary school and 1 new secondary school and district energy network linking to the Barking Riverside development.
RR9			
RR10			
River Road			

Source: LBBD Proposed Site Allocation document, 2021

4.59 RR1 and RR8 to RR10 are both identified for mixed-use development. RR10 sits within the Barking Riverside designation, and is outlined to deliver housing, community and or commercial space (in a new neighbourhood centre), that would link into the development. RR10 is designated as SIL, and therefore increased capacity would need to be achieved elsewhere to enable the site to be released from SIL and deliver non-industrial uses. RR1 is earmarked as suitable to deliver residential, alongside a substantial quantum of industrial floorspace (an increase of c.50% on the current provision). Looking back at old boundary plans for Barking Riverside, RN1 appears to be part of the outlined area.

Figure 14: Barking Riverside

Source: Barking Riverside Gateways Housing Zone, Be:First, 2017

4.60 Most of the stock is small to medium sized sheds, with some large and x-large sheds (present predominantly within RR3, RR7). The nature of the stock is varied, ranging from smaller light industrial warehouses to larger wholesale and distribution sheds. Across the cluster, the stock is fairly old and in poor condition (RR2, RR4, RR7, RR8) which is a supportive condition for redevelopment.

Table 38 – River Road, Nature of Stock

	Nature of Units	General Aspect	Size	Surrounding Area
RR1	Wholesale and light manufacturing	Average to good quality	Small, medium	Industrial, residential
RR2	Wholesale and light manufacturing	Mainly old and poor quality	Small, medium	Industrial, residential
RR3	Industrial	Old but relatively good quality	Large	Industrial, residential
RR4	Light industrial, industrial and warehouse	Mainly composed of older and poor-quality stock	Small, medium	Industrial
RR5	Light industrial, warehouse and storage yard	Mainly composed of older and poor-quality stock	Small, medium	Industrial, Thames
RR6	Light industrial and industrial and medium wholesale and warehousing	Mainly composed of older and poor-quality stock with some exceptions	Small, medium	Industrial, residential
RR7	Warehousing	Old and poor quality	Medium	Industrial, residential
RR8	Industrial sheds	Mainly old and poor-quality stock	Medium	Industrial, residential
RR9	Light industrial and wholesale	Mainly old and poor to average quality stock	Small, medium	Industrial, residential
RR10	Wholesale and warehouse with operational yard, and large distribution centre	Older stock of average quality mainly	Small	Industrial, residential

Source: Avison Young, based on CoStar (January 2021)

Table 39 – River Road, Size of Stock

	Small		Medium		Large		X-Large		
	0sqm - 100sqm	100sqm - 250sqm	250sqm - 500sqm	500sqm - 1,000sqm	1,000sqm - 5,000sqm	5,000sqm - 10,000sqm	10,000sqm - 50,000sqm	50,000sqm - 100,000sqm	100,000sqm - 1,000,000sqm
RR1	17%	17%	50%	8%	0%	8%	0%	0%	0%
RR2	14%	0%	43%	14%	0%	29%	0%	0%	0%
RR3	0%	25%	25%	0%	0%	0%	50%	0%	0%
RR4	10%	51%	18%	10%	6%	4%	0%	0%	0%
RR5	12%	12%	28%	28%	15%	4%	1%	0%	0%
RR6	7%	21%	22%	20%	24%	3%	2%	0%	0%
RR7	0%	0%	0%	0%	0%	100%	0%	0%	0%
RR8	65%	10%	3%	0%	20%	0%	3%	0%	0%
RR9	10%	22%	29%	18%	14%	6%	1%	0%	0%
RR10	0%	53%	5%	16%	21%	5%	0%	0%	0%

Source: Avison Young, based on CoStar (January 2021)

4.61 RR3 is wholly owned by LBBD and is a sizable site extending 3.7ha. This would be a good opportunity to deliver a development upfront to increase capacity. However, on balance the plot ratio is quite high (0.73) therefore dampening the potential to increase the industrial capacity significantly.

4.62 Within RR4, LBBD own two sites (extending 1.5ha) next to one another currently occupied by Go Ahead and used for parking their vehicles. It forms part of the wider Go-Ahead compound used for their operations. Should Go Ahead be relocated, two of their sites could be acquired (c.1.14ha) to make a development plot of c.2.64ha. Given that site is used mainly for parking vehicles, the uplift would be significant. However, this is wholly dependent on Go Ahead being relocated or operations downsized which may be unlikely. Taking a wider view on LBBD ownership in the wider cluster (please refer to Figure 15), there is a cluster of properties to the east that could be grouped for redevelopment as the stock is generally poor and dated.

4.63 RR5 has consolidated landownership and are predominantly owner-occupiers. The business tends to be aggregates-related thus accounting for the low plot ratio. Given the nature of the activity, it may be unlikely the businesses will be able to locate elsewhere without incurring huge costs. Therefore, we would discount these sites until, it is known that this is their ambition.

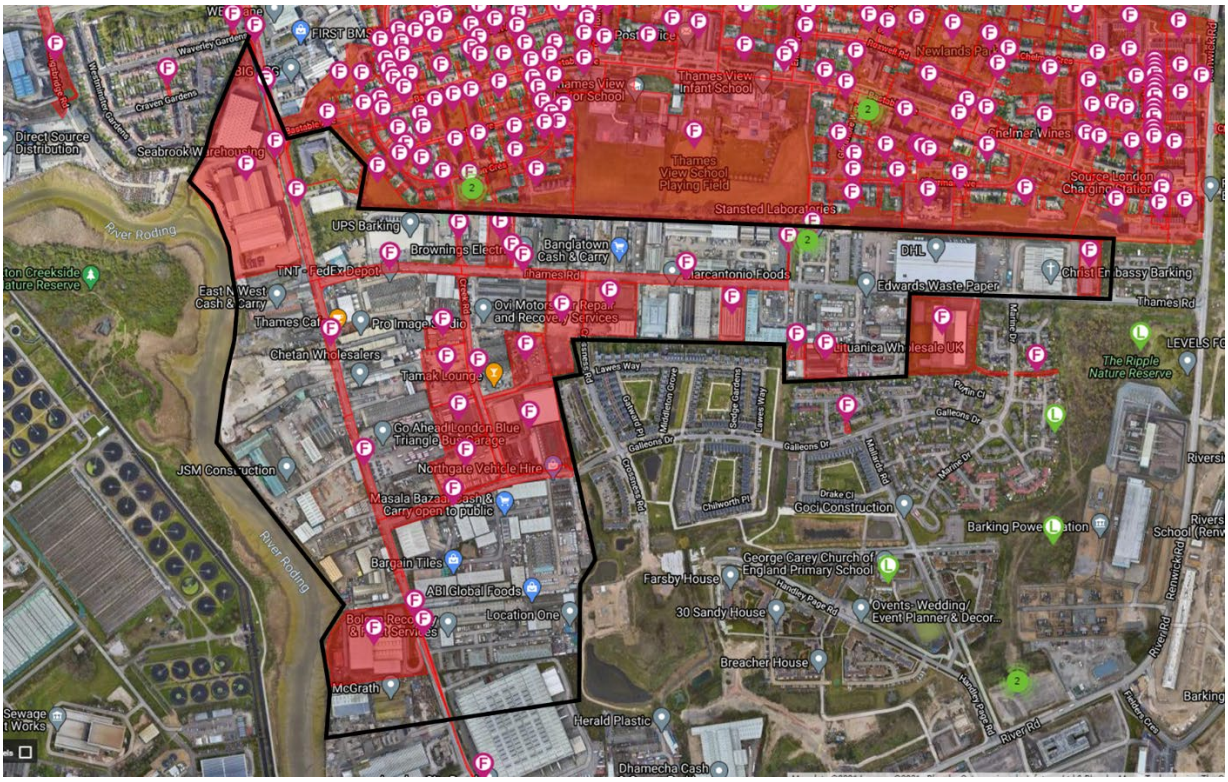
4.64 Segro own a large site in RR6 extending 5.4ha – occupied by London City Bond. However, this looks to be quite dense and well utilised from a design capacity perspective and it is unlikely further capacity could be allocated here should the site be redeveloped.

Table 40 – River Road, Freehold / Leasehold Structure

	Largest Freeholder	Size of site (ha)	Supportive land ownership	Size of site (ha)	Free-holders	Lease-holders	NB
RR1	Picton UK Real Estate Trust	2.1	N/A		2	5	Environment agency have a narrow site, but this forms the river and embankment.
RR2	Private Owner	0.2	N/A	0.0	21+	15	Highly fragmented - mainly private owners.
RR3		0.0	Barking and Dagenham Council	3.7	1	1	
RR4		0.0	Barking and Dagenham Council	1.5	19	36	LBBD site occupied by Go Ahead - difficult to move. Many private owners to the north.
RR5	McGrath Bros (Environmental) Limited	4.0	Capital Industrial	1.17	10	10	Mostly owner-occupiers. Aggregates companies.
RR6			Segro (Barking) Limited	5.4	21	45	Large sites - but high number of different owners. Mostly construction/aggregate companies. High number of Industrial developers/investors i.e. SEGRO, Capital Industrial etc
RR7		0.0	Barking and Dagenham Council	1.6	1	4	London City Bond are tenants.
RR8		0.0	Barking and Dagenham Council	1.9	15	11	Large site along Thames and crossness road c.2 acres. Appears cleared.
RR9	BNP Paribas Depositary Services (Jersey) Limited	1.9	Barking and Dagenham Council	1.2	9	20	Council own road, and two small sites. BNP own small industrial warehouse complex.
RR10	VALOR BARKING 1 S.A R.L.	2.4	Barking and Dagenham Council	0.8	21+	12	Council own two small sites. One is tucked away up against residential. Other is on Thames Road - next to church.

Source: Nimbus Map (January 2021)

Figure 15: LBBD ownership (red)



LBBD ownership in highlighted in red – please refer to the red highlight within the black polygon. Please note that the "F" circled in pink outlines the freehold ownership, the green "L" is leasehold ownership.

Source: Nimbus, 2021

4.65 The A13 (Alfreds Way) runs along the north of the cluster. RR1, RR2, RR3, which are position at the top of River Road benefit from direct access onto this strategic road network. Similarly, the plots situated along Thames Road (RR8, RR9 and RR10) have good access to Alfred Way, via Renwick Road, although this is shared with residential uses. Internal access is relatively convoluted for RR4 particularly. Public transportation is poor across the cluster.

Table 41 – River Road, Area Characteristics

	Internal Accessibility	Access to Strategic Road Network	Public Transport
RR1	Average	Good	Average
RR2	Poor	Good	Average
RR3	Good	Good	Average
RR4	Poor	Average	Poor
RR5	Average	Average	Poor
RR6	Average	Average	Poor
RR7	Average	Average	Poor
RR8	Average	Average	Poor
RR9	Average	Average	Poor
RR10	Good	Average	Poor

Source: Avison Young

Summary

4.66 The following table provides a summary of the suitability of each site for intensification based on the baseline analysis of the supply. This table also provides an indication of any known aspiration for the site (as published by LBBD and Be First in planning documentation). Further consideration will be given to the suitability for intensification and future aspiration later in this report and recommendations will be made on future opportunities for those sites.

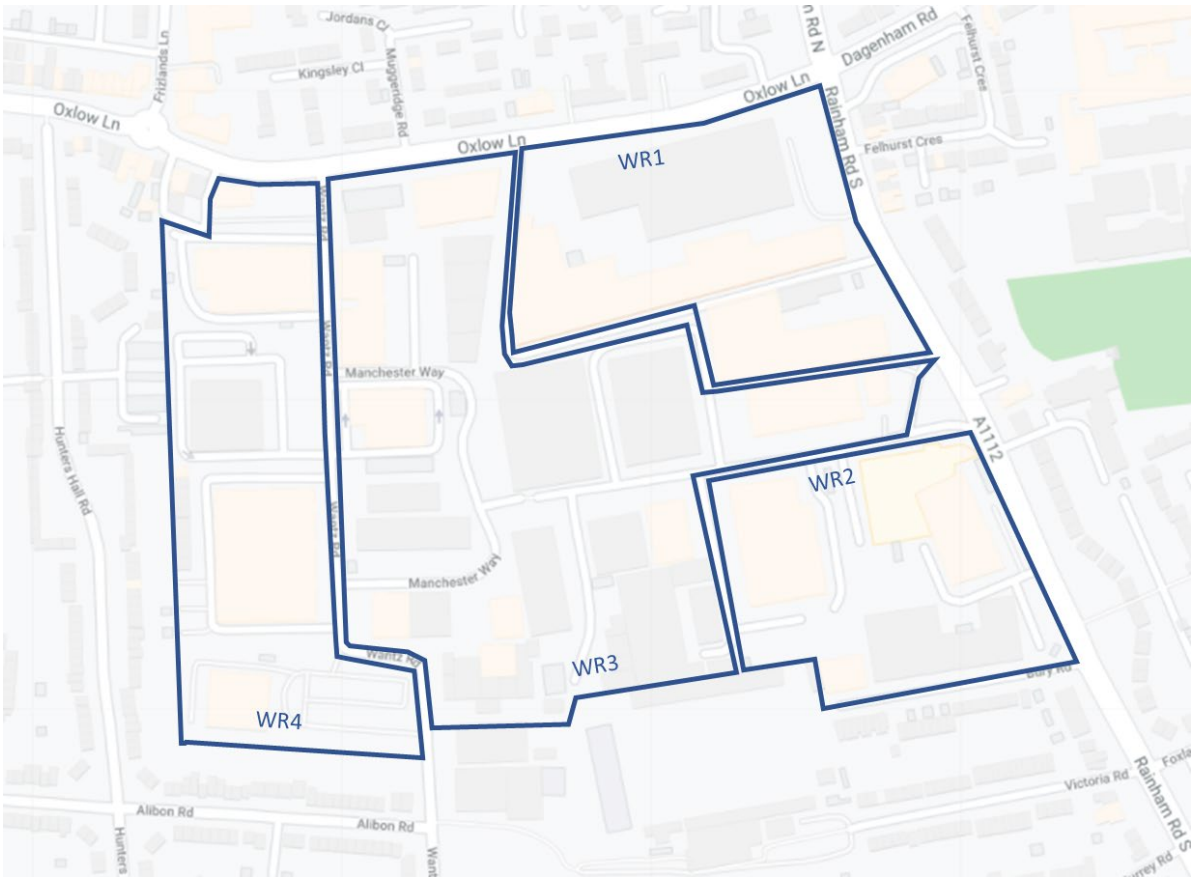
	Suitability for Intensification	Aspiration for Site
RR1	Unlikely unless Picton Real Estate willing to sell off asset. Site has high average plot ratio too.	A comprehensive mixed-use development involves residential, commercial, employment and industrial floorspace; and supported by social infrastructure. Potential to deliver circa 538 (net) homes and cir.20,000 sqm office/Industrial floorspace with circa 1,000 sqm community uses.
RR2	No. highly fragmented.	
RR3	No. Site well occupied and stock relatively modern.	
RR4	Yes, if the remaining LBBD sites redeveloped.	
RR5	Potential to consider Capital Industrial site and cleared Gapsun site.	
RR6	No potential.	
RR7	Yes. LBBD ownership.	
RR8	Yes. LBBD ownership.	A comprehensive mixed-use scheme including residential and commercial/community space and a new neighbourhood centre, education provision. Potential to deliver approx. 2,000 (net) new homes, 1 new primary school and 1 new secondary school and district energy network linking to the Barking Riverside development.
RR9	Unlikely. Plot ratio is very high. Some LBBD ownership, but realistically additionally capacity is limited.	
RR10	Council ownership is very small, and the ownership is highly garmented in the plot.	

Source: Avison Young

Wantz Road

4.67 Wantz Road cluster comprises 4 plots, and is situated to the north-east of the borough, above the River Road cluster and with Dagenham East cluster to the immediate south-east. The cluster is nestled in a highlight residential context, except for Eastbrook School to the east. The cluster is accessible via Rainham Road South (A1112) to the eastern boundary. Dagenham East Rail and Underground station is situated close by and lies to the immediate south of the site (0.4 miles).

Figure 16: Wantz Road, Employment Sites



Source: Avison Young based on Be First, 2021

Table 42 – Wantz Road, Summary Table of Existing Supply

	Designation	Plot size (ha)	Floorspace	Plot ratio	Vacancy Rate	Quality	Age
WR1	LSIS	3.2	27,533	0.86	0.0%	2.3	1946
WR2	LSIS	2.5	6,416	0.26	0.0%	2.7	1968
WR3	LSIS	5.8	45,381	0.78	1.4%	2.5	1974
WR4	LSIS	3.4	30,634	0.90	3.0%	2.3	1963
Wantz Road		**15.0**	109,964	0.73	**1.0%**	**2.5**	**1969**

Source: Avison Young, based on CoStar (January 2021) and VOA

4.68 Three out of the four plots have a high plot ratio and low vacancy rate signally the sites are already well utilised. WR2 has a relatively low plot ratio, but it appears this may be due to the yard size.

4.69 Reviewing the Site Allocations DPD, there are no proposed uses for the plots.

4.70 Across the four plots, the stock is reported to be mainly small to large light industrial units, with stock in WR1 and WR2 being mainly being larger, and wholesale in nature. There are some newer, more modern units pepper potted around the cluster, but mainly the stock is dated and relatively old, with the average age being from later 60s. From this perspective, these factors would be supportive to consider redevelopment.

Table 43 – Wantz Road, Nature of Stock

	Nature of Units	General Aspect	Size	Surrounding Area
WR1	Wholesale	Combination of old and newer stock, of average quality	Medium and Large	Industrial, residential
WR2	Wholesale and light industrial	Mainly older stock of average quality	Medium	Industrial, residential
WR3	Light industrial	Combination of old and newer stock, of average quality	Small and medium	Industrial
WR4	Light industrial	Mainly older stock of poor to average quality	Small and medium	Industrial, residential

Source: Avison Young, based on CoStar (January 2021)

Table 44 – Wantz Road, Size of Stock

	Small		Medium		Large		X-Large		
	0sqm - 100sqm	100sqm - 250sqm	250sqm - 500sqm	500sqm - 1,000sqm	1,000sqm - 5,000sqm	5,000sqm - 10,000sqm	10,000sqm - 50,000sqm	50,000sqm - 100,000sqm	100,000sqm - 1,000,000sqm
WR1	0%	0%	0%	0%	0%	50%	50%	0%	0%
WR2	0%	0%	0%	0%	100%	0%	0%	0%	0%
WR3	6%	19%	8%	33%	31%	2%	0%	0%	0%
WR4	13%	61%	12%	5%	8%	0%	0%	0%	0%

Source: Avison Young, based on CoStar (January 2021)

4.71 There are limited supportive land ownerships across the cluster; LBBD have only a small 0.8ha land parcel in WR4. The leasehold structure is highly fragmented which could be costly to acquire land. WR1 is wholly owned WF Electrical, and the site extends 2.5ha. This would be a good site to acquire should the opportunity arise. Redwood Propco SARL own several plots across the cluster, including Sterling Works Industrial Estate, but their ambitions are unknown at this point.

Table 45 – Wantz Road, Freehold / Leasehold Structure

	Largest Freeholder	Size of site (ha)	Supportive land ownership	Size of site (ha)	Free-holders	Lease-holders	NB
WR1	WF Electrical Limited	2.5	N/A	0.0	1	1	
WR2	Private Owner	0.5		0.0	6	3	Large warehouse (compass plumbing) not accounted for due to land ownership boundary being extremely large going over other sites. This is owned by Redwood Propco SARL (extends 7 acres) - Sterling works Inds. Estate.
WR3	Redwood (Light Industrial) Propco S. A. R. L.	3.1	Barking Parish Council	0.1	21	16	Redwood Propco owns number of sites. Quite fragmented in parts.
WR4		0.0	Barking and Dagenham Council	0.8	21	17	quite fragmented. Council site occupied by pulse Dance academy - has large car park.

Source: Nimbus, 2021

4.72 Internal accessibility across the plots is average as the roads are quite convoluted with a number of pinch points that could be difficult for larger vehicles to turn within the site, but access to the strategic road network is poor. Access to A12 and A13 is quite some distance, having to travel through B roads which are smaller and often at some points shared with residential traffic. Dagenham East station is situated to the south and accessible by bus or foot.

Table 46 – Wantz Road, Area Characteristics

	Internal Accessibility	Access to Strategic Road Network	Public Transport
WR1	Average	Poor	Average
WR2	Average	Poor	Average
WR3	Average	Poor	Average
WR4	Average	Poor	Average

Source: Avison Young, 2021

Summary

4.73 The following table provides a summary of the suitability of each site for intensification based on the baseline analysis of the supply. This table also provides an indication of any known aspiration for the site (as published by LBBD and Be First in planning documentation). Further consideration will be given to the suitability for intensification and future aspiration later in this report and recommendations will be made on future opportunities for those sites.

	Suitability for Intensification	Aspiration for Site
WR1	Limited. high plot ratio and no supportive land ownership, unless purchase WF electrical site.	N/A
WR2	No. No supportive landownership	N/A
WR3	No. High fragmented plot.	N/A
WR4	No. High fragmented plot.	N/A

Source: Avison Young

Hertford Road

Figure 17: Hertford Road, Employment Site

Source: Avison Young based on Be First, 2021

4.74 Hertford Road Cluster is situated to the north west of the borough, comprises of 1 plot and extends c.5.35ha. The cluster is bound by the North Circular to the west and River Roding to the east. There are residential neighbourhoods to the east beyond the River.

Table 47 – Hertford Road, Summary Table of Existing Supply

	Designation	Plot size	Floorspace	Plot ratio	Vacancy Rate	Quality	Age
HR	LSIS	5.35	30,244	0.57	0.0%	2	1987
Hertford Rd		**5.35**	30,244	0.57	**0.0%**	**2**	**1987**

Source: Avison Young, based on CoStar (January 2021) and VOA

Table 48 – Hertford Road, Proposed development

	Planned released for co-location	Planned release for non-industrial	Proposed Use (site allocation)
HR1		Residential, Education	A comprehensive residential-led redevelopment which will involve a wide range of uses and supported by social infrastructure including expanded education provision, healthcare facilities, places of worship and open spaces. Potential to deliver circa 1,422 (gross)

4.75 The plot is designated as LSIS and extends 5.35ha. The plot is well occupied with a plot ratio of 0.57 and vacancy rate of 0%. There is a site allocation proposal to consider a residential-led redevelopment in this plot, with supporting educational uses. Employment uses are not outlined in this proposal.

Table 49 – Hertford Road, Nature of Stock

	Nature of Units	General Aspect	Size	Surrounding Area
HR1	Wholesale - trade counters	Average quality.	Medium and large	Residential, open space

Source: Avison Young, based on CoStar (January 2021)

Table 50 – Hertford Road, Size of Stock

	Small		Medium		Large		X-Large		
	0sqm - 100sqm	100sqm - 250sqm	250sqm - 500sqm	500sqm - 1,000sqm	1,000sqm - 5,000sqm	5,000sqm - 10,000sqm	10,000sqm - 50,000sqm	50,000sqm - 100,000sqm	100,000sqm - 1,000,000sqm
HR1	49%	28%	3%	5%	8%	8%	0%	0%	0%

Source: Avison Young, based on CoStar (January 2021) and VOA

4.76 Given the proximity to the North Circular, the size of the stock is mainly medium to larger units of a wholesale nature. Trade counters are prominent across the cluster. The stock is of average quality with the average age of completion being late 80s.

4.77 A significant plot is under one ownership, The Mayor's Office for Policing and Crime, and extends 4 ha. Much of the plot (to the north) appears to be underutilised and could therefore be considered for redevelopment.

Table 51 – Wantz Road, Freehold / Leasehold Structure

	Largest Freeholder	Size of site (ha)	Supportive land ownership	Size of site (ha)	Free-holders	Lease-holders	NB
WR1			The Mayor's Office for Policing and Crime	4.00	9	10	Large plot owned by police

Source: Nimbus, 2021

4.78 The internal access is good with the road being predominantly for industrial / business activity. The north Circular lies to the immediate west of the cluster and is easily accessible. This is highly advantageous to the desirability of the cluster, particularly towards logistics and distribution businesses. Public transport is average with the closest bus station at Tesco, to the south of the cluster.

Table 52 – High Road, Area Characteristics

	Internal Accessibility	Access to Strategic Road Network	Public Transport
HR1	Good	Good	Average

Source: Avison Young

Summary

4.79 The following table provides a summary of the suitability of each site for intensification based on the baseline analysis of the supply. This table also provides an indication of any known aspiration for the site (as published by LBBD and Be First in planning documentation). Further consideration will be given to the suitability for intensification and future aspiration later in this report and recommendations will be made on future opportunities for those sites.

	Suitability for Intensification	Aspiration for Site
HR1	Limited. Stock is in average condition.	A comprehensive residential-led redevelopment which will involve a wide range of uses and supported by social infrastructure including expanded education provision, healthcare facilities, places of worship and open spaces. Potential to deliver circa 1,422 (gross)

Source: Avison Young

5. Establishing Future Needs

5.1 Going beyond strategic objectives set in national, regional, and local policies, this section will look at assessing in quantitative and qualitative terms the future land demand arising from sectoral growth based on an analysis of the latest Experian Employment Forecasts available to us (September 2020). This set of forecasts was released to cover the impact of Covid-19 on the economy.

5.2 Additionally, strategic trends, displacement and relocation will be reviewed to determine important factors to consider when looking at an industrial land strategy in Barking and Dagenham.

5.3 This chapter aims to highlight the future requirements of industrial space both in terms of scale and nature as well as their requirements in terms of location, connectivity (i.e. supply chain links), accessibility and availability of infrastructure.

Updated Assessment of Sectoral Growth

5.4 To assess future sectoral growth, in industrial activities, we have looked at the latest Experian Employment Forecasts (September 2020). Using the similar approach used for employment land reviews, we have translated employment forecasts predicted by Experian (38 categories) into 5-digit SIC codes (729 industries) and profile them over the period 2021-2040 to understand the change in employment in the different industrial sectors. This analysis covers employment that would traditionally be considered to take place in **B1b/c, B2** (manufacturing) spaces, **B8** (warehousing) spaces and **Waste** activities.

5.5 General Employment Growth

5.6 The analysis, realised at the 5-digits SIC Codes level to allow us to better match employment to the most adequate planning use class, is then aggregated and presented to the 2-digit SIC codes level (88 industries) to make it to more accessible to readers. Only industries with employment in B1b/c, B2, B8 and Waste Activities are presented, again for the sake of clarity.

5.7 We have rebased the Experian Employment Forecasts on the Business Register Employment Survey BRES) 2019 figures to obtain a forecast closer to reality[6].

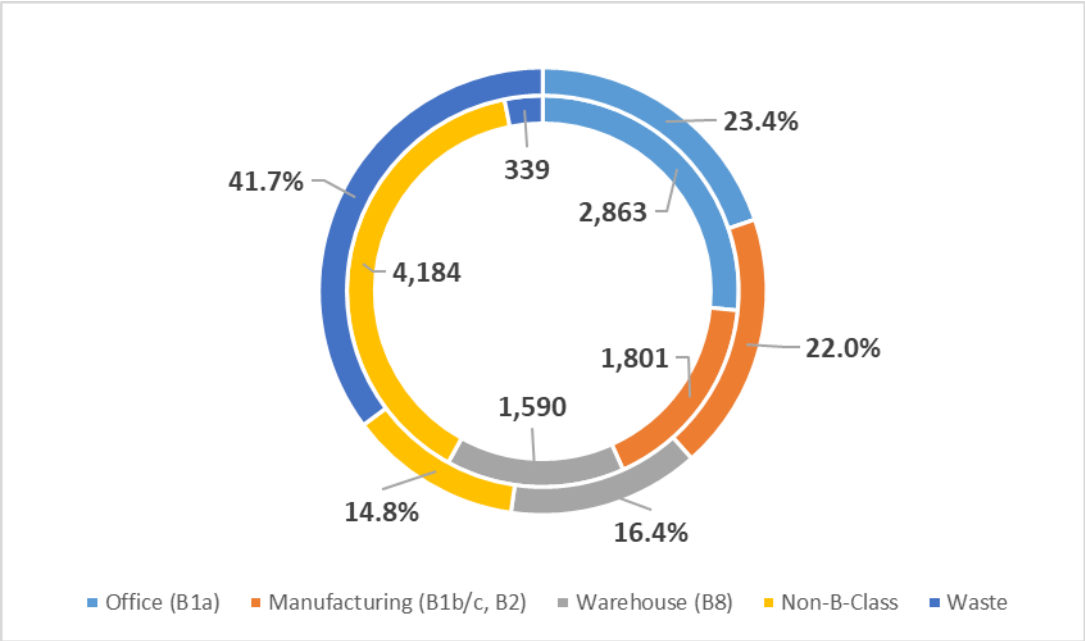
5.8 The Experian Employment Forecasts (rebased on BRES 2019 figures) shows that there will be an additional 10,777 jobs in Barking and Dagenham by 2040 in comparison to employment level in 2020.

[6] Experian Employment Forecasts assumes a number of 50,800 FTEs employment in Barking and Dagenham in 2019; BRES which is a robust data source refers to 57,890 FTEs employment in the same year. The starting position (2019) of the Experian data was therefore adjusted to reflect figures published in BRES (and applying Experian growth forecasts for future years).

This represents and overall growth of 18.2% in the number of jobs in the borough. However, a large number of those additional jobs will be created in non-B use classes (4,184 jobs) and B1a (office) use class (2,863 jobs). Out of the 10,770 jobs to be created in Barking and Dagenham between 2020 and 2040, we estimate that 3,730 jobs will be created in B1b/c, B2 (manufacturing) activities, B8 (warehousing) activities and Waste activities.

5.9 Figure 18 shows employment growth between the different planning use classes. The inner circle shows each planning use class' nominal contribution to employment (i.e. number of jobs created within the whole local economy); whilst the outer circle shows the respective employment growth within each planning use class activities (i.e. growth relative to their own initial size). This figure clearly shows that non-B use class will deliver the largest number of jobs for the London Borough of Barking and Dagenham (LBBD) between 2020 and 2040 but also has the lowest growth rate (this implies that non-B employment is the largest source of employment in the borough in 2020). On the other hand, Waste activities will deliver by far the smallest number of additional jobs by 2040 but is the fastest growing sector of activities (Waste activities provide a small number of jobs in 2020). Warehousing activities is slightly larger in size (jobs) than manufacturing activities in 2020 but we expect to see a nominal and proportion growth in manufacturing activities in LBBD between 2020 and 2040 more important than in warehousing activities, meaning that (proportionally) manufacturing activities will gain in importance over warehousing activities in LBBD.

Figure 18 – Employment Growth 2020-2040, LBBD

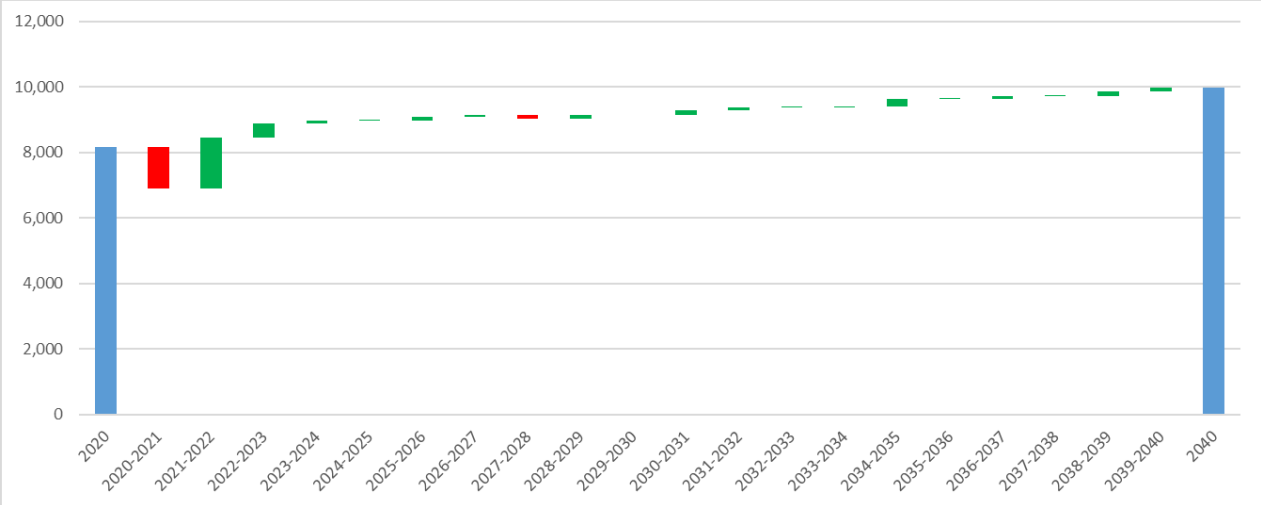


Source: Avison Young's calculations, based on Experian Employment Forecasts (September 2020)

5.10 Manufacturing (B1b/c, B2) activities

5.11 In B1b/c, B2 activities, we expect to see 1,801 jobs in LBBD by 2040. This represents a 22.0% growth from 2020. Despite a loss of over 1,200 jobs in manufacturing activities in 2021, we expect a bounce back effect in 2022, followed by a slow but steady growth in employment over the following years, with the exception of 2028 which will see a small drop. This is shown in Figure 19 (with blue sticks showing start and end levels of employment, green stick an increase in employment and red sticks a decrease in employment).

Figure 19 – Manufacturing Activities Employment Level 2020-2040, LBBD



Source: Avison Young's calculations, based on Experian Employment Forecasts (September 2020)

5.12 Based on standard employment density and plot ratio assumptions, applied across the board to all B1b/c, B2 additional jobs, we estimate that between 64,848 sqm and 84,663 sqm of floorspace will be

required to accommodate future employment. This corresponds a land requirement ranging between 16.21 Ha and 21.17 Ha.

Table 53 – B1b/c, B2 Floorspace and Land Requirement, 2020-2040, LBBD

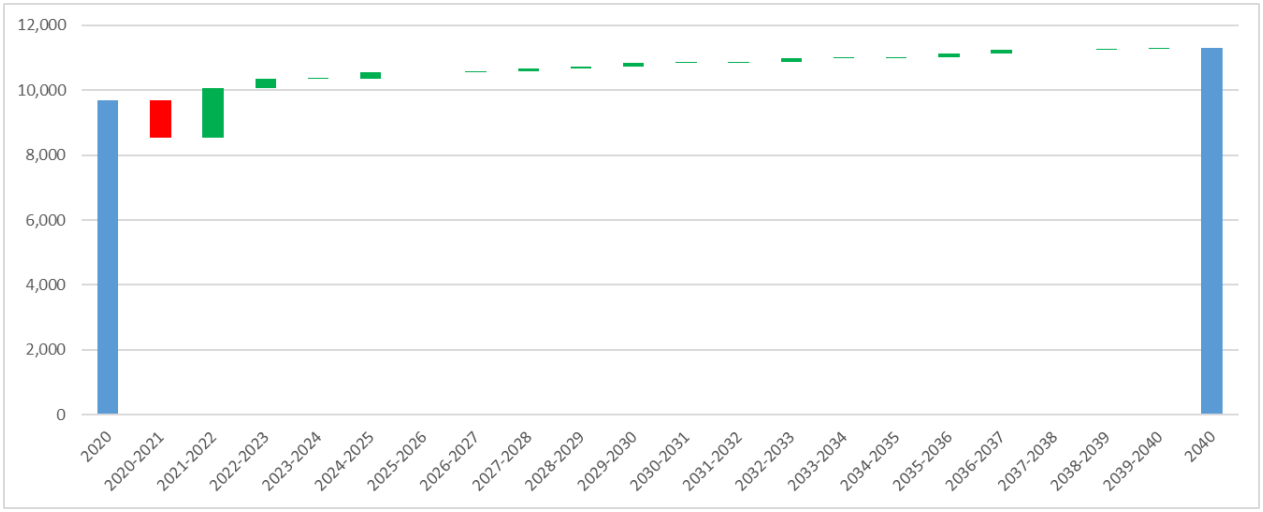
	FTEs Change 2020-2040	Employment Density[7]	Floorspace requirement (sqm)	Plot Ratio	Land Requirement (Ha)
Manufacturing (B1b/c, B2)	1,801	36 to 47 sqm per FTE	64,848 to 84,663	0.4	16.21 to 21.17

Source: Avison Young

5.13 Warehousing (B8) activities

5.14 In B8 activities, we expect to see an additional 1,590 jobs in LBBD by 2040. This represents a 16.4% growth from 2020. Similarly to manufacturing activities (b1b/c, B2), employment forecasts predict a loss of employment in B8 activities in 2021, with a reduction of 1,158 jobs in the sector. We also expect to see a bounce back effect in 2022, followed by a slow but steady growth in employment over the following years to 2040. This is shown in Figure 20 (with blue sticks showing start and end levels of employment, green sticks an increase in employment and red sticks a decrease in employment).

Figure 20 – Warehousing Activities Employment Level 2020-2040, LBBD



Source: Avison Young's calculations, based on Experian Employment Forecasts (September 2020)

5.15 Based on standard employment density and plot ratio assumptions, applied across the board to all B8 additional jobs, we estimate that between 111,307 sqm and 151,060 sqm of floorspace will be required to accommodate future employment. This corresponds a land requirement ranging between 27.83 Ha and 37.76 Ha.

[7] HCA Employment Density, Third Edition, 2015 (36 sqm per FTE for B2 Industrial and Manufacturing; 47 sqm per FTE for B1c Light Industrial)

Table 54 – B8 Floorspace and Land Requirement, 2020-2040, LBBD

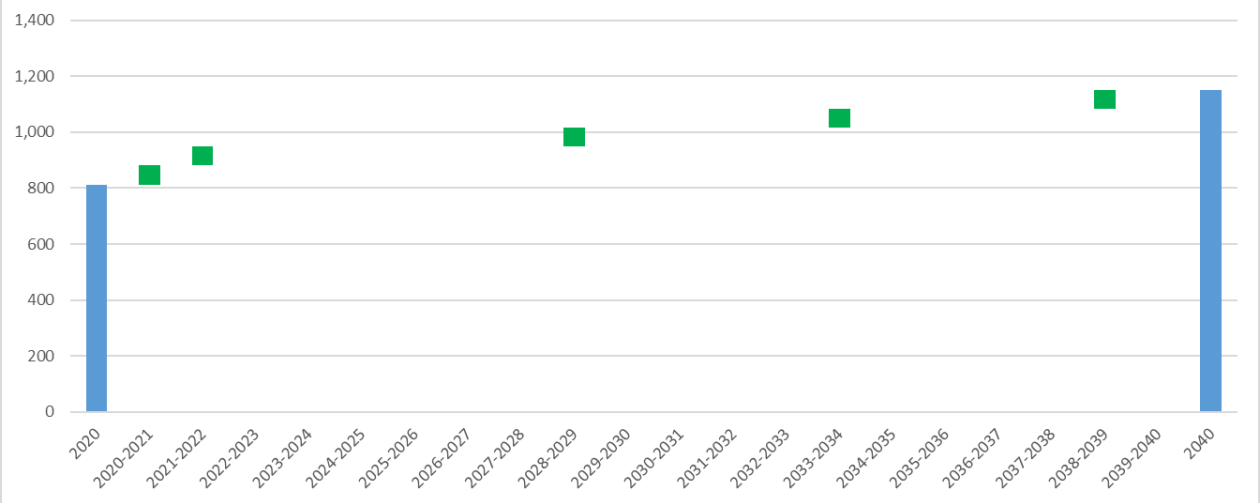
	FTEs Change 2020-2040	Employment Density[8]	Floorspace requirement (sqm)	Plot Ratio	Land Requirement (Ha)
Warehousing (B8)	1,590	70 to 77 sqm per FTE	111,307 to 122,438	0.4	27.83 to 30.61

Source: Avison Young

5.16 Waste activities

5.17 In Waste activities, we expect to see a more limited growth, with 339 additional jobs in LBBD by 2040. However, this number represents the fastest growth as employment in Waste activities is expected to grow by 41.7% between 2020 and 2040. This sector of activity is expected to growth periodically between 2020 and 2040. This is shown in Figure 21 (with blue sticks showing start and end levels of employment, green sticks an increase in employment and red sticks a decrease in employment).

Figure 21 – Waste Activities Employment Level 2020-2040, LBBD



Source: Avison Young's calculations, based on Experian Employment Forecasts (September 2020)

5.18 It should be noted that there is no industry standard in regard to employment density in Waste activities. The employment density in this sector will be very sensitive to the actual type of activities being carried out. It is important to understand that employment is not necessarily the primary driver of space design and utilisation but instead spaces are designed to meet specific activity's requirements with the level of jobs then determined by what is required for that facility to function. Therefore we have not calculated the floorspace or land requirement to accommodate employment in the Waste activities. Instead, the future land requirement will be determined from existing planning policies.

[8] HCA Employment Density, Third Edition, 2015 (70 sqm per FTE for Final Mile Distribution Centre; 77 sqm per FTE for Regional Distribution Centre; 95 sqm per FTE for National Distribution Centre) – We have assumed that no national distributors would take up space in LBBD.

5.19 Sectoral Growth

5.20 Experian Employment Forecasts, provided by Experian employment categories, and translated in to 5 and 2-digit Industry SIC Codes, allow us to provide a more detailed picture of future employment in LBBD over the next 20 years.

5.21 Our analysis of employment forecasts shows that there will be a limited number of industrial activities (B1b/c, B2, B8 and Waste activities) which will see a sizeable change in employment over the next 20 years in LBBD. This is shown in Figure 22. A table of detailed results is presented in Appendix I for better clarity.

Figure 22 – Employment Change 2020-2040 in Manufacturing, Warehousing and Waste Activities, LBBD

Source: Avison Young's calculations, based on Experian Employment Forecasts (September 2020)

5.22 Figure 22 shows that between 2020 and 2040:

- A large number of industries analysis will not see any change in employment level (26 industries out of the 42 industries considered).
- Printing and reproduction of recorded media is the only industry that will see a loss in number of jobs (103 jobs to be lost). This represents a loss of 25% of employment in this particular industry.
- The two industries registering the largest gain in employment numbers are both manufacturing industries: Manufacture of motor vehicles, trailers, and semi-trailers (+874 jobs); Specialised construction activities (+830 jobs).

- The third industry in term of number of additional jobs is a warehousing-based industry: Wholesale trade, except of motor vehicles and motorcycles (+726 jobs).
- Other industries will see more moderate number of jobs being created

5.23 More details on those figures are provided in Table 55

Table 55 – Employment Change 2020-2040 in Manufacturing, Warehousing and Waste Activities, LBBD

	B1b/c, B2	B8	Waste
29: Manufacture of motor vehicles, trailers, and semi-trailers	874	0	0
43: Specialised construction activities	830	0	0
46: Wholesale trade, except of motor vehicles and motorcycles	0	726	0
41: Construction of buildings	0	363	0
45: Wholesale and retail trade and repair of motor vehicles and motorcycles	0	246	0
38: Waste collection, treatment, and disposal activities; materials recovery	0	34	193
52: Warehousing and support activities for transportation	0	175	0
39: Remediation activities and other waste management services	0	0	136
23: Manufacture of other non-metallic mineral products	100	0	0
81: Services to buildings and landscape activities	54	0	0
22: Manufacture of rubber and plastic products	33	0	0
53: Postal and courier activities	0	41	0
74: Other professional, scientific, and technical activities	13	0	0
37: Sewerage	0	0	9
82: Office administrative, office support and other business support activities[9]	0	5	0
18: Printing and reproduction of recorded media	(103)	0	0
TOTAL	**1,801**	**1,590**	**339**

Source: Avison Young

5.24 This detailed analysis allows us to refine employment density and plot ratio assumptions to derive refined floorspace and land requirements.

5.25 This analysis is presented in Table 56 and shows that to support employment growth, by 2040:

- an additional 73,633 sqm of floorspace could be required for Manufacturing activities (B1b/c, B2) in LBBD (or 18.41 Ha of land); and
- an additional 124,612 sqm of floorspace could be required for Warehousing activities (B8) in LBBD (or 31.15 Ha of land)

[9] Note the employment in this 2-digit SIC correspond to activities in "82920: Packaging activities"

Table 56 – Sectoral Floorspace and Land Requirement, 2020-2040, LBBD

	Jobs 2020-2040[10]	Employment density	Plot Ratio	Use Class	Floorspace (sqm)	Land (Ha)
29: Manufacture of motor vehicles, trailers, and semi-trailers	874	36	0.4	B1b/c, B2	31,459	7.86
43: Specialised construction activities	830	47	0.4	B1b/c, B2	39,010	9.75
46: Wholesale trade, except of motor vehicles and motorcycles	726	90	0.4	B8	65,368	16.34
41: Construction of buildings	363	47	0.4	B8	17,038	4.26
45: Wholesale and retail trade and repair of motor vehicles and motorcycles	246	90	0.4	B8	22,168	5.54
38: Waste collection, treatment, and disposal activities; materials recovery	34	90	0.4	B8	3,068	0.77
52: Warehousing and support activities for transportation	175	77	0.4	B8	13,440	3.36
39: Remediation activities and other waste management services	0	N/A	N/A		0	0.00
23: Manufacture of other non-metallic mineral products	100	36	0.4	B1b/c, B2	3,600	0.90
81: Services to buildings and landscape activities	54	47	0.4	B1b/c, B2	2,549	0.64
22: Manufacture of rubber and plastic products	33	36	0.4	B1b/c, B2	1,170	0.29
53: Postal and courier activities	41	77	0.4	B8	3,150	0.79
74: Other professional, scientific, and technical activities	13	50	0.4	B1b/c, B2	662	0.17
37: Sewerage	0	N/A	N/A		0	0.00
82: Office administrative, office support and other business support activities	5	70	0.4	B8	380	0.09
18: Printing and reproduction of recorded media	-103	47	0.4	B1b/c, B2	-4,818	(1.20)
				Total B1b/c, B2	73,633	18.41
				Total B8	124,612	31.15
				TOTAL	**198,245**	**49.56**

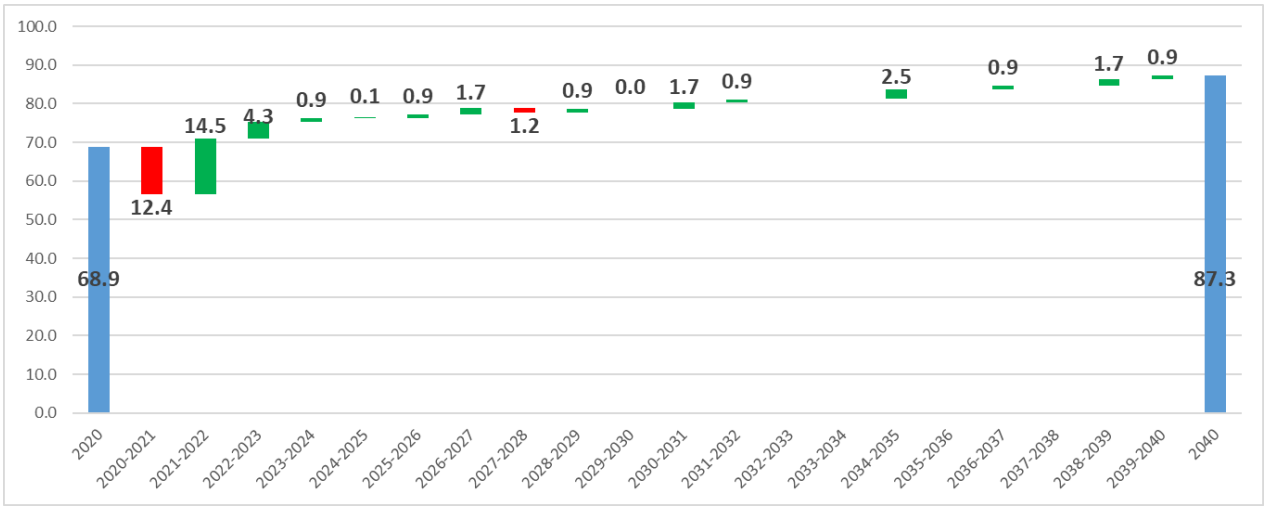
Source: Avison Young

[10] Ignores employment generated in Waste activities

5.26 Using the same assumptions in terms of employment density and plot ratio, we have profiled the land requirement on an annual basis to better understand the timing. This is presented in Figure 23 for Manufacturing activities (B1b/c, B2) and in Figure 24 for Warehousing activities (B8). Once again, we have not modelled the land requirement for Waste activities as land requirement is usually determined on activity requirements rather than employment. As previously, blue sticks indicate the start and end position (note that the start position may not reflect the actual existing industrial land provision in LBBD but is rather an estimated land requirement baseline to accommodate existing employment), green sticks indicate additional land requirement and red sticks indicate land surplus.

5.27 Figure 23 shows that after having an excess of B1b/c, B2 land in 2020 (due to drop in employment between 2020 and 2021), there will be a bounce back, with a need for land greater that the excess observed the previous year. In total, between 2020 and 2022, about 2.1 Ha of B1b/c, B2 land could be required to support employment, with a further 4.3 Ha needed for 2023. Beyond 2023, additional requirement for B1b/c, B2 land will be more limited by remain positive, except for 2027-2028.

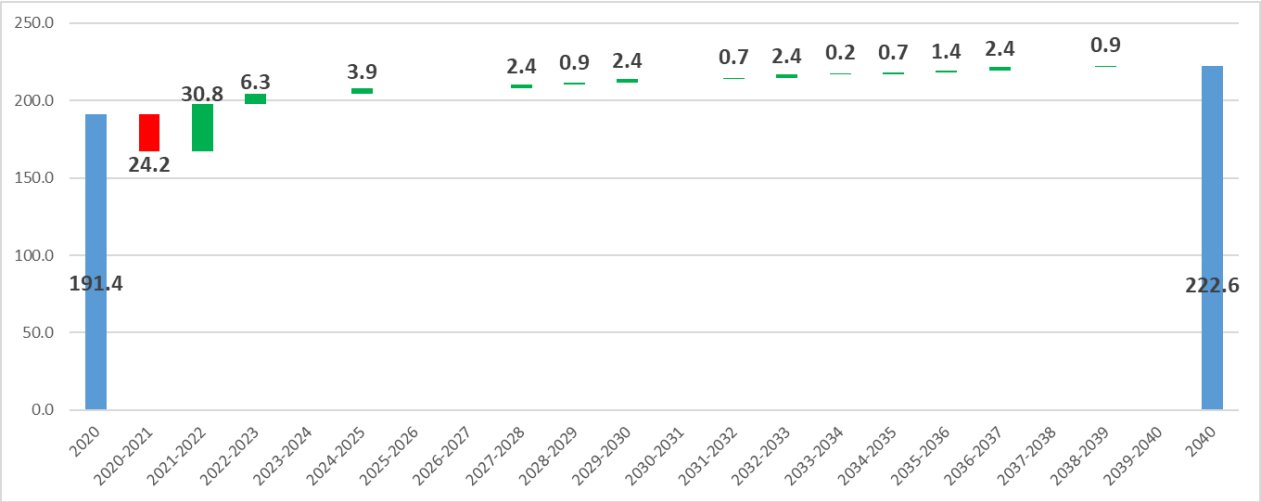
Figure 23 – Land Requirement (Ha) for Manufacturing Activities (B1b/c, B2), 2020-2040, LBBD



Source: Avison Young

5.28 Figure 24 shows that after having a major excess of B8 land in 2020 (due to drop in employment between 2020 and 2021), there will be a bounce back, with a need for land greater that the excess observed the previous year. In total, between 2020 and 2022, about 6.6 Ha of B8 land could be required to support employment, with a further 6.3 Ha needed for 2023 and 3.9 Ha for 2025. Beyond 2025, additional requirement for B8 land will be more limited by remain positive, with a few years of increased demand such as 2028, 2030, 2033, and 2037 (2.4 Ha each of those years).

Figure 24 – Land Requirement (Ha) for Warehousing Activities (B8), 2020-2040, LBBD



Source: Avison Young

Strategic Growth Sector - Space and Location Requirements

5.29 In addition and/or parallel to additional employment forecasted in traditional employment forecasts such as the Experian Forecast used for this study, it is likely that employment will be generated in strategic growth sector as the resultant of strategic investments or shifts in the local economy.

5.30 Those jobs could be either additional to forecasted employment (i.e. investment into the film studio at Dagenham East is likely to boost the local activity of the cultural sector, beyond what is forecasted in the Experian Employment Forecast) or define the future employment as forecasted by Experian (i.e. jobs in the manufacture of motor vehicles industry, forecasted by Experian to be the faster growing industry in terms of employment in LBBD, could be predominantly created in the advanced and green technology sectors – such as Electric Vehicles for instance).

5.31 It is the purpose of this report and the Local Plan to ensure there is sufficient floorspace of appropriate types and locations to meet future needs, ultimately what is therefore of most importance to understand is the nature of space different activities require and how these can be delivered. In ensuring a robust land supply is in place the site and space attributes should provide sufficient flexibility for how the economy may change and therefore enable the borough to accommodate different sectors than those suggested in any particular forecasting model.

5.32 Table 57 provides a summary of strategic growth sectors, which were identified primarily through our analysis of the local context (chapter 2) and knowledge of the local economy. Where appropriate, strategic growth sectors were linked to growth industries (Experian Forecast). For each strategic growth sector, we develop the nature of employment, space requirements and suitable location in LBBD.

5.33 This analysis will be useful to identify potential for relocation and inform the sequencing of relocation in chapter 8 and 9.

Table 57 – Strategic Sectors' Requirements

Strategic Sector	Growth Industries (Experian Forecast)	Nature of Employment Activity	Typical Unit Size	Location and Space Requirements	Nature of Suitable Growth Locations	Suitable LBBD Areas
Transport & Logistics	Wholesale trade, except of motor vehicles and motorcycles(1) Warehousing and support activities for transportation(1)	Largely B8 / Wholesale activity	Medium to large B8 units, with requirement for some smaller units ('last mile' distribution)	- Good strategic road network connectivity - Link with key supply chain routes (i.e. ports, airports, major road network) - Proximity to London and South East markets - Access to large employment sites - large yard space for vehicle circulation and turning	- Strategic in nature based on key location and space requirements	Along the strategic road network (A13 / North Circular)
Advanced Manufacturing	Manufacture of motor vehicles, trailers, and semi-trailers(2) Specialised construction activities(3) Construction of buildings(3)	Largely B1c and B2 activity with some B8 activity (largely ancillary)	Medium industrial and light industrial units, with potential requirement for some small and flexible R&D/prototyping space and small to medium B8 ancillary storage	- Good strategic road network connectivity - Link with key supply chain routes (i.e. ports, airports, major road network) - Proximity to London and South East markets - Access to medium to large employment sites - Access to skilled workforce - Clustering with similar activities	- Largely strategic in nature based on key location and space requirements - However some local drivers where this is existing strength	Dagenham Dock, River Road, Castle Green
Green Technology	Manufacture of motor vehicles, trailers, and semi-trailers(1) Specialised construction activities(3)	Largely B1c and B2 activity with some B1b and B8 activity (largely ancillary)	Small to medium industrial and light industrial units, with likely requirement for some small and flexible R&D/prototyping space and small to medium B8 ancillary storage	- Good strategic road network connectivity - Link with key supply chain routes (i.e. ports, airports, major road network) - Proximity to London and South East markets - Access to medium to large employment sites - Access to skilled workforce - Clustering with similar activities	- Largely strategic in nature based on key location and space requirements - However some local drivers where this is existing strength	River Road, Kingsbridge, Dagenham Dock

Strategic Sector	Growth Industries (Experian Forecast)	Nature of Employment Activity	Typical Unit Size	Location and Space Requirements	Nature of Suitable Growth Locations	Suitable LBBD Areas
Digital / Cultural Creative Industries	N/A	Mixed of B1, B1c and B2 activities	Small to medium flexible workspaces Potential requirement for few larger industrial units in major clusters	- Mixed use, urban environment, with good amenity provision - Cluster with similar activity and proximity to anchor tenants - Flexibility in space typology - Good public transport connectivity - Access to skilled workforce - Strong digital infrastructure	- Largely local in nature based on existing location characteristics and activity strengths - Slight strategic nature given Thames Estuary Growth Commission Vision and Dagenham Film Studio	Chadwell Heath, Dagenham East

Source: Avison Young, 2021

(1) Increase demand for larger space, capable of accommodating automation systems (robotic) such as multi-storey and mezzanine level warehousing sheds, where basic tasks are operated by robots rather than human capital.

Likelihood of increased concentration on more urban areas to respond to requirements of e-commerce (fast delivery services require to be close to customers). Units to be considered to be of smaller size, potentially cohabitating with other uses or re-using underused assets (i.e. use of basement for micro-fulfilment centres or above store).

Figure 25: Underground micro-fulfilment centre

Source: CommonSense Robotics

Figure 26: Micro-fulfilment automation

Source: warehouseautomation.ca

(2) Increasing conversion of automotive industry towards new technologies such as electric vehicles (and production of EV batteries). As the business model of major car makers changes, moving from concessionary sales to online sales and from push production to a pull production[11], the requirement for industrial land has also evolved with diminished needs for yard space (therefore increasing the density of development).

An example of modern automotive factory is Tesla Giga Berlin which is currently under construction and should provide work for 4,000 persons and will be the most advanced high-volume electric vehicle production plant in the world.

Figure 27: Tesla Giga Berlin

Source: Tesla

[11] A pull system initiates production as a reaction to present demand, while a push system initiates production in anticipation of future demand

(3) Construction industry partially turning towards advanced technologies and advanced manufacturing the increase the delivery of homes and commercial properties in the UK, with increasing interest on new construction techniques such as modular buildings, prefabricated, digital printing of construction components, etc.

Figure 28: L&G Modular Housing Factory

Figure 29: SA2 Modular (California), net positive and carbon neutral factory

Conclusion and Emerging Thinking about Employment Requirements

5.34 Based on Experian Employment Forecasts (September 2020), LBBD could experience a growth in employment levels in industrial activities (manufacturing and warehousing), with an additional 3,391 jobs to be created by 2040. About half of those jobs created by the end of 2025 (49.3%).

5.35 Employment growth in industrial activities could generate a requirement for circa 18.41 ha of manufacturing land (B1b/c, B2) and 31.15 ha of warehousing land (B8) by 2040 (for a total of 49.56 ha). Similarly to employment, about half of that land requirement (51.2%) will materialise by the end of 2025.

5.36 It is expected that the industrial growth will develop in strategic sectors such as the advanced manufacturing and green technology sectors, which have particular requirements in terms of typology and location and could accelerate the regeneration in LBBD (through the requirement for higher quality industrial stock, therefore contributing to the redevelopment and increase in density of existing poor-quality stock).

5.37 We also expect Dagenham Film Studio to have an impact on the nature of industrial activities in the borough, with an increase focus on industrious activities (mixing industrial and office requirements) linked to the cultural and digital industries.

6. Displacement and Relocation

6.1 LBBD is setting ambitious regeneration plans for the Borough with masterplans currently being considered and drafted for the redevelopment of several area, including on currently designated industrial land.

6.2 Table 58 summarises the current proposals impacting industrial clusters in LBBD. This tables shows that release of industrial land is considered is several parts of the Borough, including Castle Green, Chadwell Heath, Dagenham Dock, Dagenham East (although predominantly for commercial activities), Gascoigne South, River Road and Hertford Road.

6.3 In total, 172.3 ha of land are earmarked for potential release, currently accommodating 679,383 sqm of employment space (based on VOA data analysis carried out by Avison Young). To release the land identified for alternative use, it will be necessary to demonstrate that floorspace can be accommodated elsewhere in the Borough. This will be discussed later in this report.

Table 58 – Proposed Release

	Designation	Plot size (ha)	Floorspace (sqm)	Planned release for co-location	Planned release for non-industrial	Proposed Use (SA)
CG1	SIL	7.9	51,858	N/A	Residential, Employment, Commercial, Education, Community	A comprehensive mixed-use development including a new overground station, residential, employment, commercial, education and community uses. Potential to deliver circa 12,000 (net) units of new homes, 1 primary and 1 secondary school provision, open spaces and a district energy centre/network linking to Barking Riverside
CG2	SIL	8.3	67,781	N/A		
CG3	SIL	19.7	49,264	N/A		
CG4	SIL	6	10,126	N/A		
CG5	SIL	5.4	18,185	N/A		
CG6	SIL	11.4	51,496	N/A		
CH1	LSIS	7.6	47,645	Yes	Residential, Commercial Healthcare, Education	Comprehensive redevelopment involving intensification of industrial floorspace and new commercial uses alongside residential development, with supporting social infrastructure including schools and healthcare. Potential to deliver approx. 3,685 (net) units of homes and approx. 26,000 sqm industrial and office floorspace, together with commercial/community uses and open spaces.
CH2	LSIS	8.9	44,787	Yes		
CH3	LSIS	14.4	53,986	Yes		
DD3	LSIS	22.5	323	N/A	Housing and education	A comprehensive mixed use development (Residential, Commercial floorspace, Community uses) & supported infrastructure including a potential secondary school & cultural facilities. Potential to deliver circa 3,000 (net) homes.

DD4	NDS	2.2	14,347	Yes	Housing	Mixed Use (Residential, Industrial B1, Retail, and Community uses). Potential to deliver circa 411 (net) homes, with circa 800sqm office space and community/leisure floorspace
DE1	NDS	3.5	0	N/A	Film / Media	A comprehensive mixed-use development involving a film studios and related ancillary uses.
DE3	NDS	6	0	N/A		
DE4	NDS	5	0	N/A		
GS1	LSIS	5.83	47,674	N/A	Housing Allocation	Comprehensive redevelopment involving residential-led mixed use development, supported by social infrastructure, and improved parks/open spaces. Potential to deliver approx. 2,328 (net) homes together with commercial and community uses.
RR1	L SIS	1.4	9,282	Yes	Residential, Commercial, Employment, Industrial,	A comprehensive mixed-use development involves residential, commercial, employment and industrial floorspace; and supported by social infrastructure. Potential to deliver circa 538 (net) homes and cir.20,000 sqm office/Industrial floorspace with circa. 1,000 sqm community uses.
RR8	SIL	7.9	39,003	N/A	Housing, Community, Commercial	A comprehensive mixed-use scheme including residential and commercial/community space and a new neighbourhood centre, education provision. Potential to deliver approx. 2,000 (net) new homes, 1 new primary school and 1 new secondary school and district energy network linking to the Barking Riverside development.
RR9	SIL	15.4	120,001	N/A		
RR10	SIL	7.6	23,383	N/A		
HR1	LSIS	5.35	30,244	N/A	Residential, Education	A comprehensive residential-led redevelopment which will involve a wide range of uses and supported by social infrastructure including expanded education provision, healthcare facilities, places of worship and open spaces. Potential to deliver circa 1,422 (gross)
TOTAL		**172.3**	**679,385**			

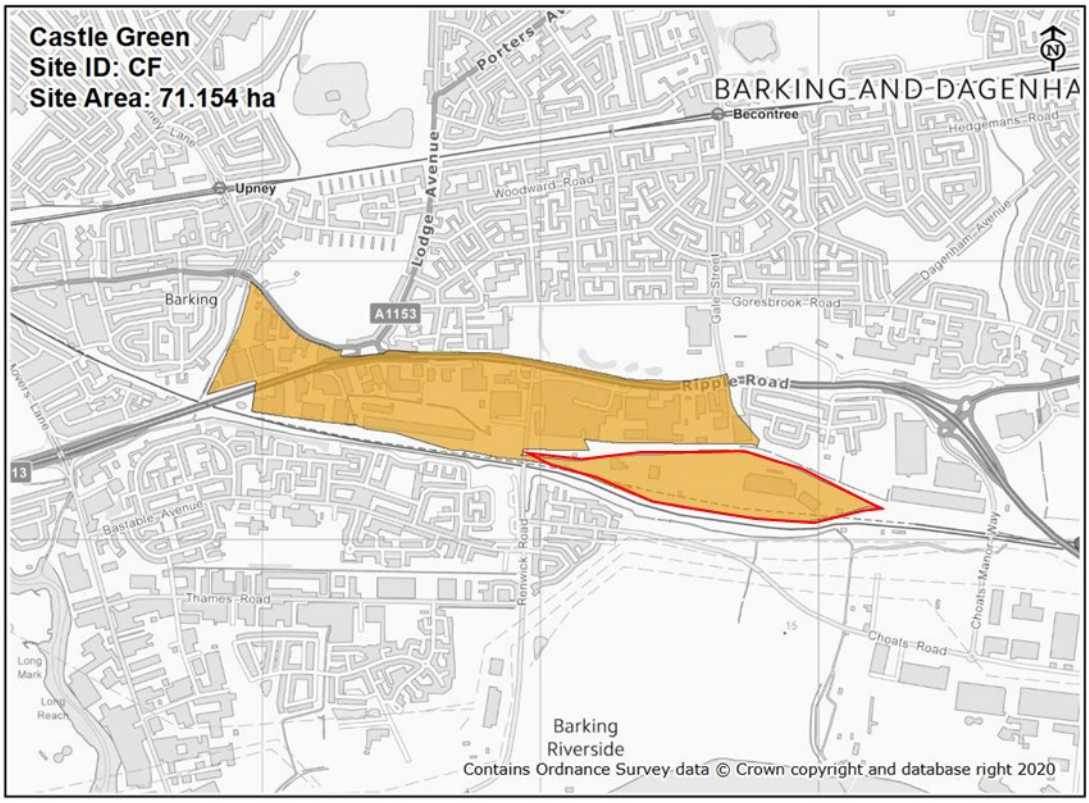
Source: Avison Young Summary of LBBD Planning Documentation

6.4 From discussions with Be First, we understand that an emerging masterplan is under way for Castle Green but still at an early stage. Therefore, advice is required on the whole of the area to inform the emerging masterplan.

6.5 A long-term proposal has been made to tunnel the A13 (Riverside Tunnel). No detailed plans have been drafted but we believe that the tunnel would go from mid-point of the southern border of CG1 all the way to the eastern side of CG6. Further to the tunnelling of the A13, a new station is proposed Castle Green. Again, there is no detailed proposed for the scheme yet. Euro Hub (identified by red boundary in Figure 30), part of CG3, is proposed to be retained for industrial use.

6.6 If delivered, the Riverside Tunnel and station will be catalysts for change in Castle Green.

Figure 30: Riverside Tunnel, Affected Area



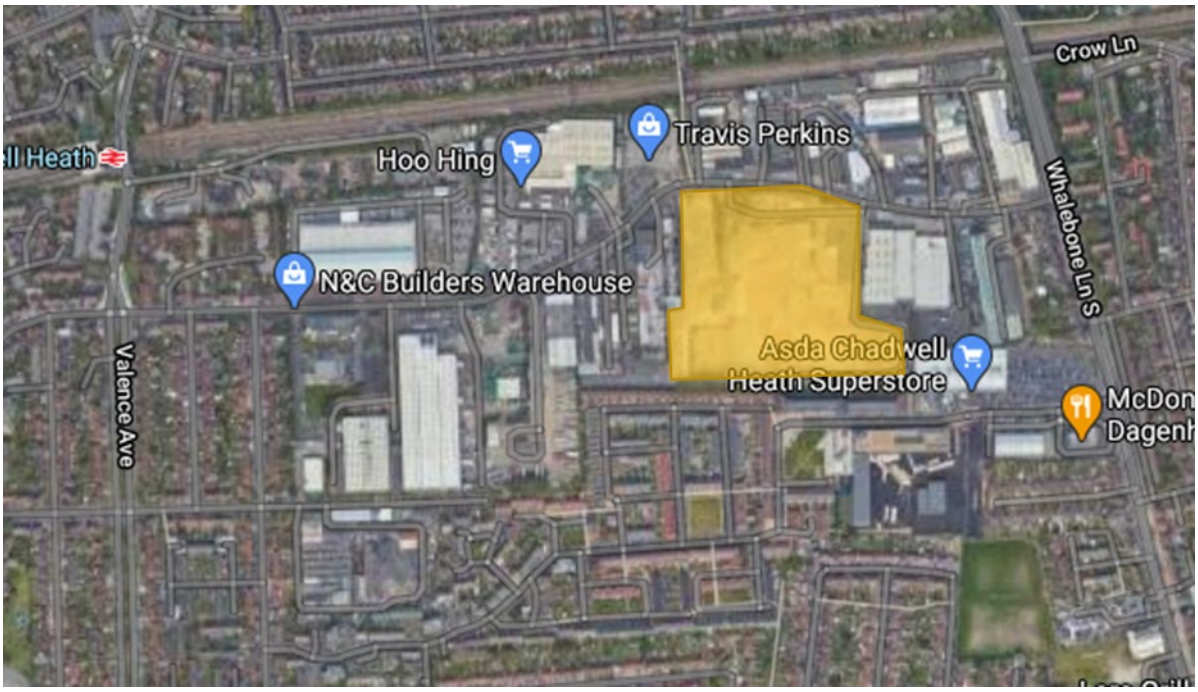
Source: LBBD Local Plan 2021

6.7 An emerging masterplan is also under way for the area in Chadwell Heath (CH1, CH2 and CH3) but still at an early stage. Therefore, advice is required on the whole area to inform the emerging masterplan.

6.8 LBBD recently purchased the former Muller site (13 acres), on Selinas Lane, with the initial vision to it into a place suitable for homes and shops. Talking with Be First, we understand that discussions are still ongoing on the future of the site and that an alternative proposal to use the site to accommodate the e-gaming industry has also been proposed.

6.9 The arrival of Crossrail at Chadwell Heath is a catalyst for change in the area.

Figure 31: Muller Site, Chadwell Heath



Source: Avison Young

6.10 The current Draft Policy of LBBD Local Plan states for Dagenham Dock that it is the new location for London's three main wholesale food markets and will be the focus of innovative forms of industrial design, including stacked industrial buildings. The Council are working with partners, including the Thames Estuary Commission, Department of Education, as well as existing main landowners including SEGRO, Network Rail, Peabody, and the Ford Motor Company Development to regenerate the area and unlock regeneration in the wider Thames Estuary.

6.11 The Council will support development that contributes positively to the delivery of:

- comprehensive redevelopment of this area as London's premier Sustainable Industrial Business Park – incorporating a sustainable and green industries hub and building on its location's logistics, food, and energy operations, capitalising on the extensive road, rail, and river infrastructure connections, which provide national and international connections
- the successful relocation and consolidation of London's three wholesale city markets – Billingsgate, Smithfield and New Spitalfields, enabling development that will support its operation within the borough
- expansion and intensification of employment floor space across and complementary commercial uses across the area
- supporting and developing opportunities to use waste as energy, and to consolidate current waste operations to minimise any detrimental impacts to the wider area.

6.12 DD3 is designated as LSIS currently and pre-application discussion has been made for the delivery of a mixed-use redevelopment including a secondary school. Advice on the opportunity of releasing this site is required.

6.13 DD4 is currently non-designated industrial land. Advice is required on this site to understand the opportunity for release or requirement to protect for employment and industrial use.

6.14 Dagenham East (D1, D2, D3, D4) accommodated an existing employment site for Dagenham Film Studio (the former May and Baker site). There are also plans to enhance the Dagenham Heathway District Centre and its adjacent south part for a mixed-use development and create a heart of this residential community.

6.15 Gascoigne is identified for release and proposed for a major residential-led mixed use development, supported by social infrastructure, and improved parks/open spaces. The area will also deliver supporting community and commercial space.

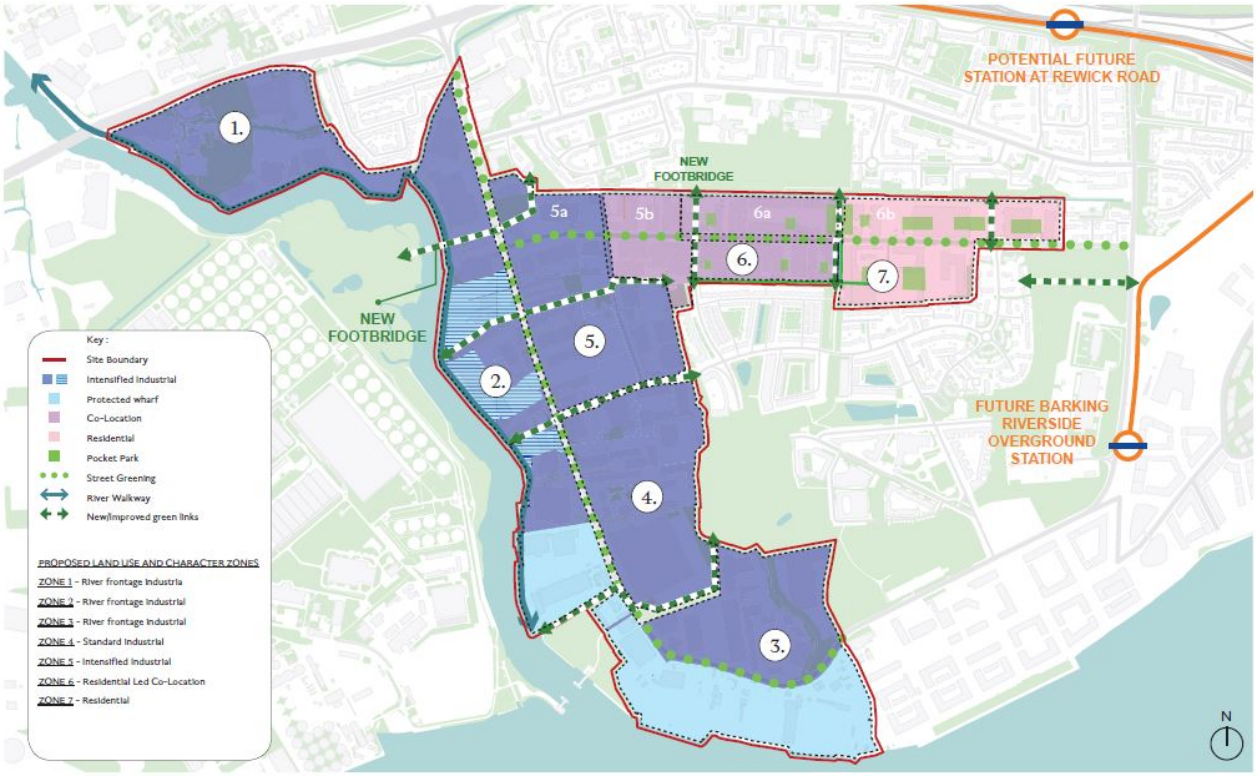
6.16 LBBD and Be First have an aspiration to create a mixed-use neighbourhood in River Road. The Council's draft policy outlines the Thames Road and River Road Transformation Area as the location of a "thriving mixed-use neighbourhood characterised by a rich mix of industrial and commercial space alongside new homes, community uses and open space. Guided by a masterplan-led approach, the Council will support development that contributes positively to the delivery of:

a) '*a mixed-use neighbourhood accommodating housing, industrial and commercial space, focusing on industrial uses to the west of the area, adjacent to the River Roding – potentially through stacking of uses, supported by sufficient yard space and delivery access*'

b) '*new residential development, especially to the east of the area, linking the residential areas to the north and south of Thames Road, and creating greater separation of these area from heavy industrial uses*'

6.17 River Road is one of the most developed area in policy terms in LBBD, with a published draft SPD for the River Road Employment Area, incorporating a masterplan for Thames Road (2020). Figure 32 demonstrates that the key principle of the Council's approach to date has been to adopt a 'zoning' system, with the release of 30ha of SIL in Zones 6 and 7 for co-location and residential usages respectively and intensification of industrial floorspace on other plots in this area of SIL to offset this.

Figure 32: River Road Masterplanning



Source: Be First, 2021

6.18 Be First is seeking advice on the whole River Road/Thames Road SIL area (including RR3, RR4, RR5, RR6, RR8 & KB1) to help to examine the draft masterplan and inform its next stages.

7. Identifying Capacity

7.1 Be First have ambitious regeneration aspirations for Barking and Dagenham and that a significant amount of industrial land is proposed for release.

7.2 In this section, we will examine and assess the potential of all industrial land, setting a maximum capacity of industrial floorspace that could be accommodated in LBBD assuming all land is retained as industrial as well as summarise the current floorspace capacity provided.

7.3 This first step will be useful in understanding the capacity that could be achieved by each cluster and each site within these clusters and the impact of a release of specific sites on future (existing and maximum) capacity.

7.4 To assess this maximum capacity, we have been working on two approaches that are considered in combination:

- Additional floorspace is currently being delivered or in the process of being delivered in LBBD. We have looked at approved planning applications within the past 3 years to assess this floorspace.
- We have identified a series of plots of land (based on land ownership) which have a high potential for intensification and have tested the delivery of relevant and existing typologies on those plots to determine the maximum potential of the plots.
- We have assumed that whilst the rest of the area within the site may not be suitable for this type of intensification (i.e. redevelopment of the plot to accommodate new scheme), increasing land value and pressure for industrial space in the area will contribute to increasing densification of industrial space in LBBD. Additional capacity will be delivered through a long-term natural process of densification of space in the area (made possible through new technologies allowing for businesses to use space more efficiently and allowing for infill developments, vertical and horizontal extensions).

7.5 Through an iterative process, we will refine the analysis, assessing the impact of releasing industrial land to alternative uses (or colocation) on future capacity and how this capacity balance with future demand and requirement for relocation.

7.6 Additionally to providing a qualitative assessment, we will make recommendation on qualitative considerations such as how relocation could be shaped (redirecting adequate floorspace in most appropriate areas) to deliver a coherent approach to regeneration that will also support industrial activities in LBBD.

Methodology

Future Capacity through Intensification on Targeted Plots

7.7 To achieve this assessment, we have investigated each cluster individually to identify specific plots that could have a potential for industrial intensification.

7.8 At this stage, we have assessed all the clusters and sites, including the ones identified by LBBD for potential future release to alternative uses. The plots that have planning permissions or are being developed have been excluded from our assessment as considered not available for intensification.

7.9 The plots identified have been classified in terms of deliverability and timescale (short, medium, long term). This will be useful in the next sections of this report, when we discuss the sequencing and deliverability. The identification of plots with potential for intensification was done on a range of criteria, including:

- Complexity of the land ownership: large concentration of land, in public ownership, provide good opportunities for redevelopment as opposed to highly fragmented land in private ownership
- Complexity of the lease structure: we identified the number of long-term leases for each plot, with the plots presenting a low number of no long-term leases being the most likely to lead to redevelopment. However, plots which are owner-occupier (and therefore have no long-term leases) are considered as complex and unlikely to be redeveloped
- Existing provision on plot: we considered the quality and age of the build currently on plot to assess whether it had a potential for redevelopment
- Shape of the plot: large, rectangular plots present better opportunities for redevelopment and intensification
- Physical barriers: we considered things such as accessibility, potential contamination, surrounding environment, etc.

7.10 To some extent, a degree of subjectivity and professional opinion was applied to evaluate whether a plot was likely to be redeveloped or not.

7.11 With a list of plots identified for potential intensification, we have gathered data about the plots regarding existing floorspace, we well as potential aspirations for the site in which they sit.

7.12 Existing floorspace was derived from the VOA data. It should be noted that it can be complicated to associated properties as referenced by the VOA with specific plots due to a lack of common reference. We have estimated, to our best, the existing provision of space on these plots, accounting for all

properties that we could identify in the VOA data. Where there was a doubt about a VOA property, the VOA floorspace was included to provide a conservative estimate (worst case scenario).

7.13 For each plot, we have then tested a series of (existing) typologies. The intend of this process is to identify the amount of floorspace that could be delivered on a plot by applying an existing typology to this plot. To go through the test, the plot had to:

- be of sufficient size to accommodate the typology tested. To test this, we have compared the size of the plot with the size of the plot on which the typology is sitting. We have allowed for some flexibility in this analysis, recognising that a slightly adapted version of the typology (smaller) could be accommodated on a slightly smaller plot. The assumption made is that the plot will be able to accommodate the typology if it is at least 80% of the size of the typology plot.
- be in an area (cluster) which could accommodate the typology. To test this, we have looked at the scale and the nature of the development and identified whether such scale and nature would be suitable for the cluster's area. For this process, we have identified the suitable scale and nature for each cluster as well as defined the scale and nature of activities delivered by each typology tested.
- Finally, the typology had to provide an uplift in floorspace capacity (floorspace delivered by the tested typology is greater than existing floorspace).

7.14 The suitability of different scales and activities by cluster was determined by our baseline analysis. By looking at the existing provision, the surrounding environment, and the aspiration for each cluster, we were able to assess the typologies that would or would not be suitable for each area (based on their size and the type of activities they will accommodate).

7.15 Typologies were matched to selected plots to identify the range of typology (and associated plot ratio) that could be delivered. This was used to inform the potential capacity of each selected plot, applying a low and high density (based on the less and most dense development that could be accommodated) to the plot area. The results provide a low, medium, and high estimate for each plot.

7.16 The uplift was then calculated as the difference between the potential capacity following intensification and the existing floorspace currently available on plot. It can be noted that this analysis does not take into consideration the quality of the stock and therefore does not consider the benefit of redeveloping old and poor-quality stock in response to modern businesses' requirements.

Future Capacity through densification

7.17 Future capacity through densification is assumed to happen through a natural process. As response to demand is limited by availability of space, low level of availability will push prices up. As older building becomes progressively outdated and no longer fit for purpose, the high level of demand and increasing land value in LBBD will incentivise developer and land owners to redevelop their properties, maximising the revenue generated by their developments. This will take the form of standard redevelopments, infill developments, vertical and horizontal extensions.

7.18 We have assumed that in the long term, an overall plot ratio of 60% could be achieved on SIL sites and 40% on other sites (LSIS or NDS) where this ratio is not currently achieved.

7.19 This assumption is applied as a blanket approach across sites and is purposely conservative. Examples of higher plot ratio (particularly on SIL sites) can be found in Greater London. It is however important to apply a cautious approach to this assessment as future increase in density (achieving higher plot ratio) will be entirely dependent on the reaction of the market and investors with minimal control from LBBD over this "natural" process (which will respond to the economic dynamics of the market).

7.20 This has been assumed across the remainder of the industrial sites (discounting plots identified for industrial intensification and with approved planning consent have been removed from this assessment of densification to avoid double counting).

Planning Pipeline

7.21 In this section we consolidate and summarise any major committed investments identified in the planning pipeline, which will have an impact on availability of land and floorspace provision.

7.22 To do so, we have looked at planning application granted in the past 3 years and form the planning pipeline.

7.23 This analysis shows that 64,059 sqm of additional industrial floorspace will be delivered in LBBD in the short term.

Table 59 – Planning Pipeline (granted since April 2018)

Address	Planning Ref	Application for	Change (sqm)	Site
Simple House Freshwater Road Dagenham RM8 1RX	20/02425/FULL	Vertical Extension	112	CH3
Humphries Ltd 72-76 River Road Barking IG11 0DS	20/01371/FULL	New Development	615	RR5
Shell Service Station 514 Ripple Road Barking IG11 9PG	20/01059/FULL	Redevelopment (from A2, A5 B2 to B2)	762	CG1
12 Thames Road Barking IG11 0HZ	19/01970/FUL	Redevelopment to Mixed Use from A3 (B1c, B2, B8 + 152 dwellings)	4105	RR8
1A, A.D.S. Components Alfreds Way Barking IG11 0TJ	19/01772/FUL	Redevelopment of existing B2 to B2	1025	CG1
Unit 4, Neptune Recycling Thunderer Road Dagenham RM9 6QD	19/01012/FUL	Redevelopment of B8 space	-143	DD8
17 & 18, Rippleside Commercial Estate Ripple Road Barking IG11 0RJ	19/00979/FUL	Redevelopment of B8 space	191	CG6
Alfreds Way Industrial Estate Alfreds Way Barking IG11 0AS	19/00679/FUL	Redevelopment of B1c/B2/B8 space	-75	CG1
Marcantonio Foods Limited 18-22 Thames Road Barking IG11 0HZ	19/00322/FUL	Redevelopment of part of B1c space	602	RR9
D3, Sterling Industrial Estate Rainham Road South Dagenham RM10 8TX	18/02226/FUL	Horizontal Extension	725	WR3
Unit 1, Former Visitor Centre Yewtree Avenue Dagenham RM10 7FN	19/00073/FUL	New Development (B1a)	0	DE2
Stolthaven Terminal Hindmans Way Dagenham RM9 6LB	18/00781/FUL	Redevelopment of B1a	0	DD7
Maple Wharf 36-38 River Road Barking IG11 0DN	17/02095/FUL	Redevelopment of B8 space	185	RR6
Mixit Concrete Ltd 78 River Road Barking IG11 0DS	17/01019/FUL	Redevelopment of B1a	0	RR5
A Creek Road Barking IG11 0JH	20/02298/FULL	New 4 storeys flexible industrial	11362	RR4
Wellbeck Wharf, 8 River Road Barking IG11 0JE	20/02111/FULL	Change of use from B8 to B2	0	RR3
1 & 2, Cromwell Centre Selinas Lane Dagenham RM8 1QH	20/01439/FULL	Change of use to SG	0	RR3
SEGRO Dagenham Park		Application for industrial and warehousing units suitable for start-ups, traditional light industrial and urban logistics occupiers	24451	DD6
			20142	DD8

Source: EGi

Industrial Intensification Capacity Assessment (Average)

Plot Selection for Intensification

7.24 Through our selection process, we have identified 26 plots which we believe have some potential for industrial intensification in the short, medium, or long term. Where relevant and reasonable, we have aggregated those plots as they will offer a higher potential than if redeveloped individually and independently of other surrounding plots.

7.25 Table 60 to Table 62 provide a list of those selected plots. The plots have been classified in terms of short, medium, and long term opportunities. Appendix IV also provides maps of the clusters and location of the plots. The plots are reference by their Plot Titles (freehold reference).

7.26 We have identified four plots for short term opportunity. All those plots are currently undeveloped and in public ownership. It can be noted that additional undeveloped land, in public ownership, was identified through the process but was subsequently discarded as planning permission have been granted for future development on those plots.

7.27 Short term opportunity plots provide 6.92 ha of land. There is currently a small amount of existing floorspace but overall the land is widely available for redevelopment.

Table 60 – Plot Selection, Short Term

Plot Title(s)	Owner	Cluster	Designation	Plot Size (ha)	Current Floorspace (sqm)	Plot Ratio
EGL502936	GLA	DD6	SIL	5.10	0	0.00
EGL370841 EGL370821	LBBD	RR4	SIL	1.23	1,859	0.15
EGL370820	LBBD	RR8	SIL	0.59	0	0.00

Source: Avison Young

7.28 We have identified ten plots for medium term opportunity. Those plots are either in public ownership or in private ownership and either vacant or with ageing stock on them of stock that does not meet the future requirements of modern businesses.

7.29 Medium term opportunity plots provide 12.56 ha of land and have an overall plot ratio of 0.38.

Table 61 – Plot Selection, Medium Term

Plot Title(s)	Owner	Cluster	Designation	Plot Size (ha)	Current Floorspace (sqm)	Plot Ratio
EGL402305 EGL441025 EGL388430	LLBD Private Ford Car Dealership	CG1	SIL	1.56	3,863	0.25
EGL376165	Mercedes-Benz	CG1	SIL	0.91	9,976	1.09
EX79686	Triangle Investment	CG1	SIL	0.26	1,121	0.43
EGL432606	TJM Essex	KB1	SIL	0.90	0	0.00
TGL384476	Thames Water	KN1	SIL	2.40	0	0.00
EGL383609	G & H (HOLDINGS)	KN1	SIL	0.86	6,876	0.80
TGL481438	Network Rail	CH1	LSIS	1.92	8,783	0.46
NGL62812	LBBD	RR3	SIL	3.75	17,277	0.46

Source: Avison Young

7.30 We have identified twelve plots for long term opportunity. Those plots are either in public ownership or in private ownership but currently accommodate ageing stock and have long leases in place. It is not

unlikely that, in the longer term, given the evolution of the industrial property market, landowners will be willing and keen to intensify their portfolio to get much out of their land.

7.31 Long term opportunity plots provide 28.26 ha of land and have an overall plot ratio of 0.34.

Table 62 – Plot Selection, Long Term

Plot Title(s)	Owner	Cluster	Designation	Plot Size (ha)	Current Floorspace (sqm)	Plot Ratio
TGL428860	SEGRO	DD2	NDS	2.62	9,660	0.37
EGL361399	L&G	CG3	SIL	13.24	13,732	0.10
NGL164602 EGL164087 EGL254386 NGL21199	Kenninghall Holding	RR6	SIL	3.36	11,765	0.35
EGL42494 EGL108640 EGL556759 EGL258084	Thames Recycling Gapsun Private London Power Networks	RR5	SIL	6.25	6,247	0.10
EGL91637	Capital & Industrial	RR5	SIL	1.17	6,524	0.56
EGL370838	LLBD	RR8	SIL	1.62	13,310	0.82

Source: Avison Young

Typologies Tested

7.32 Our assessment led us to test 7 existing and proven typologies, most of which could be delivered in LBBD. Most of those typologies tested have been (or are about to be) delivered in London, including a couple in LBBD.

7.33 These typologies are:

- Gewerbehof Laim, Munich, Germany

- Belartza, Donostia-San Sebastian, Spain

- The Gantry Studio, Hackney Wick, London, UK

- Binck Twins Business Centre, The Hague, Netherlands

- Industria, Barking & Dagenham, UK

- SEGRO Park Dagenham, UK

- The Generator, London, UK

7.34 Table 63 provides a description and list of characteristics for each of the typologies tested

Table 63 – Typologies Tested

	Typology	Example	Description	Plot size (ha)	Total Floorspace (sqm)	Plot Ratio
Typology A	Industrial Units	Gewerbehof Laim, Munich, Germany	Light industrial units which do not require operational yards and are therefore stackable, served by cargo lifts	0.96	11,000	115%
Typology B	Shared Yard	Berlartza, Donostia-San Sebastian, Spain	A group of ground dependent and small stackable units with clustered shared yards and goods lifts, designed to maximise efficiency	0.84	8,500	101%
Typology C	Attached Structure	The Gantry Studio, Hackney Wick, London, UK	A group of small stackable units attached to a ground dependent larger industrial building, creating an active frontage to a large unit	4.34	47,740	110%
Typology D	Multi-storey Industrial	The Generator, London, UK	4 floors of workshop / industrial / manufacturing space above car parking (decked arrangement). Access to all upper floors via goods / cargo lifts Ability to let on a floor-by-floor basis or floors can be split in units from 3,000 sqft upwards	0.65		186%
Typology E	Multi-storey 4 Flexible Industrial	Industria, Unit 1 Creek Road (RR4)	flexible Class E (industrial research development processes), Class B2 and Class B8 use) mix of SME and Flatted Factory units	0.81	11,362	140%
Typology F	Co-location with employment	Binck Twins Business Centre, The Hague, Netherlands	A group of small to medium units serving both ground dependent and stackable uses. All require small operational yards, so units can be integrated with other units which do not require operational yard, and create an active frontage	1.32	16,632	126%
Typology G	Multi-Storey Industrial 2	Plot 2, SEGRO Park Dagenham	2-storey industrial building (Use Class B2, B8), with ancillary offices and access ramps	3.99	29,050	73%

Source: Avison Young

Additional Capacity through Industrial Intensification

7.35 The assessment of identified plots suitable for industrial intensification shows that they have a potential to deliver up to c.558,000 sqm of industrial floorspace in the long-term. This equates to an uplift of c.447,000 sqm after deduction of the c.111,000 sqm of existing floorspace on those plots.

Table 64 – Capacity Industrial Intensification

Plots Considered		Floorspace Delivery (sqm)	Floorspace Lost (sqm)	Uplift (sqm)
Short Term	**Public only**	94,531	1,859	92,672
	All	94,531	1,859	92,672
Medium Term	**Public only**	170,194	31,783	138,412
	All	251,740	49,755	201,985
Long Term	**Public only**	274,961	63,065	211,896
	All	558,080	110,993	447,088

Source: Avison Young

7.36 It can be noted that industrial intensification alone should deliver enough space (uplift) to accommodate future demand generating through growth.

7.37 In the long term, the

General Densification Capacity Assessment

7.38 As mentioned in the methodology, we have assumed that SIL designated sites could achieved a minimum plot ratio of 0.80 in the long term, other sites (LSIS and NDS) could achieve a plot ratio of 0.60.

7.39 This assessment will provide the maximum capacity of each site (remainder of space, excluding plots assessed for industrial intensification). Further analysis will assess the impact of the release of specific sites on the balance of land supply/demand.

7.40 The detailed densification capacity is presented in the summary section (Table 65).

Summary of Capacity

7.41 Table 65 provides a summary of industrial sites assessed in our analysis, current designation, size (in hectares), existing floorspace and current plot ratio. The table then provides the results of the average capacity assessment of each site from industrial intensification on identified plots, planning pipeline and densification on remainder of the sites.

7.42 This table shows sites assessed deliver 446.3 ha of industrial land and currently accommodate 1,720,396 sqm of employment space (based on VOA analysis). The current plot ratio achieve across LBBD is relatively low (0.39) which supports the assumption that significant floorspace could be delivered through long term densification.

7.43 Overall, we have assessed that LBBD could deliver up to 3,062,517 sqm of industrial space should all sites be retained for industrial use. This total capacity is made of c.64,000 sqm of floorspace to be

delivered in the short term (planning pipeline), c.558,000 sqm of floorspace that could be delivered through industrial intensification in identified plots suitable for this (list of plots is provided in Appendix IV) and c.2,440,000 sqm of floorspace delivered through general density uplift in the longer term.

7.44 The provision of industrial floorspace in LBBD could be increased by as much as 78% (assuming no industrial land is release for alternative uses).

Table 65 – Maximum Floorspace Capacity

	Current designation	Size (ha)	Existing Floorspace (sqm)	Current Plot Ratio	Capacity Assessment			
					Planning Pipeline	Intensification	Achieving higher density	Maximum Capacity
CG1	SIL	7.9	51,858	0.66	1,712	37,641	38,610	77,963
CG2	SIL	8.3	67,781	0.82	0	0	67,781	67,781
CG3	SIL	19.7	49,264	0.25	0	101,134	38,779	139,913
CG4	SIL	6.0	10,126	0.17	0	0	36,000	36,000
CG5	SIL	5.4	18,185	0.34	0	0	32,400	32,400
CG6	SIL	11.4	51,496	0.45	191	0	68,400	68,591
CH1	LSIS	7.6	47,645	0.63	0	20,691	38,862	59,553
CH2	LSIS	8.9	44,787	0.50	0	0	44,787	44,787
CH3	LSIS	14.4	53,986	0.37	112	0	57,600	57,712
DD1	SIL	10.3	51,011	0.50	0	0	61,800	61,800
DD2	NDS	8.5	59,105	0.70	0	40,808	49,445	90,253
DD3	NDS	22.5	323	0.00	0	0	90,000	90,000
DD4	NDS	2.2	14,347	0.65	0	0	14,347	14,347
DD5	SIL	17.3	10,507	0.06	0	0	103,800	103,800
DD6	SIL	11.8	0	0.00	24,451	66,036	40,181	130,668
DD7	SIL	76.2	193,410	0.25	0	0	457,200	457,200
DD8	SIL	64.0	254,903	0.40	19,999	0	384,000	403,999
DE1	NDS	3.5	0	0.00	0	0	14,000	14,000
DE2	LSIS	5.7	32,039	0.56	0	0	32,039	32,039
DE3	NDS	6.0	0	0.00	0	0	24,000	24,000
DE4	NDS	5.0	0	0.00	0	0	20,000	20,000
GS1	LSIS	5.8	47,674	0.82	0	0	47,674	47,674
KB1	SIL	11.1	42,396	0.38	0	66,272	41,595	107,867
RR1	LSIS	1.4	9,282	0.66	0	0	9,282	9,282
RR2	SIL	1.3	14,308	1.10	0	0	14,308	14,308
RR3	LSIS	3.9	28,558	0.73	0	32,605	11,281	43,886
RR4	SIL	8.3	42,960	0.52	11,362	17,596	52,463	81,421
RR5	SIL	15.7	87,293	0.56	615	97,702	75,137	173,453
RR6	SIL	23.4	105,577	0.45	185	43,476	120,242	163,903
RR7	SIL	1.6	9,117	0.57	0	0	9,600	9,600
RR8	SIL	7.9	39,003	0.49	4,105	34,120	34,181	72,407
RR9	SIL	15.4	120,001	0.78	602	0	120,603	121,205
RR10	SIL	7.6	23,383	0.31	0	0	45,600	45,600
WR1	LSIS	3.2	27,533	0.86	0	0	27,533	27,533
WR2	LSIS	2.5	6,416	0.26	0	0	10,000	10,000
WR3	LSIS	5.8	45,381	0.78	725	0	46,106	46,831
WR4	LSIS	3.4	30,497	0.90	0	0	30,497	30,497
HR1	LSIS	5.4	30,244	0.57	0	0	30,244	30,244
TOTAL		**446.3**	**1,720,396**	**0.39**	**64,059**	**558,080**	**2,440,377**	**3,062,517**

Source: Avison Young, 2021

8. Relocation Scenarios & Impact on Floorspace Capacity

8.1 With the baseline property analysis of existing supply done, future demand established, requirement for relocation summarised, and capacity of each individual site assessed, we now turn our attention to how regeneration and growth ambitions can be achieved, without adversely impacting the industrial economy of the borough.

8.2 As discussed throughout this report the future regeneration of key locations across the borough will require the redevelopment of sites that currently, or formerly, accommodated industrial activity. In some cases this will result in a full loss of land capacity, in others some capacity will be re-provided, either through intensification of some land (and release of a balance) or through the co-location of industrial space with residential.

8.3 Whilst some release of industrial land within the borough is accepted, it is critical that there is sufficient evidence in place to show that the borough can consider going beyond this over time to both realise its wider ambitions and ensure the industrial economy is provided for both in appropriate environments and at the time when relocation space is needed. Ultimately the sequencing of industrial space provision and land release needs to be aligned so businesses can be successfully relocated, ideally with a 'single move' to minimise cost and disruption to their operations.

8.4 Clearly there is not a 'single' sequencing strategy that can 'prescribe' how sites will come forward as this will be subject to a much wider set of market and delivery factors. Therefore we have tested a number of scenarios that have iteratively tested difference scales and sequencing of land reprovision and release to understand the balance of need and supply over time.

8.5 This iterative process is necessary given the inter-relationships between the scale, timing and location of release and the quantum and type of floorspace that needs to be provided at within any time period.

8.6 What follows in this section is a summary of the testing process used to understand how an equilibrium can be reached between the release of sites from industrial use and the projected needs for space in the future (both from forecast growth and displacement). This exercise takes the existing plans for the borough's regeneration as established in Be First's regeneration vision (see Chapter 6) as its starting point.

8.7 The analysis has sought to strike a balance between both the quantum of space provided and also nature/location of space businesses will require. This qualitative understanding of future needs (from relocation and forecast demand) builds on the analysis of Chapters 4 and 5 of this report, which clearly

establishes the suitability of development typologies and locations for uses that the borough will need to accommodate in the future.

Scenario 1: Regeneration Vision - Full Release

8.8 In this first scenario, we have tested the impact of a full release of industrial land identified for alternative uses as per data presented in Table 58. Critically this scenario takes a purist view of industrial floorspace provision and does not consider co-location typologies as a replacement for lost industrial space. As we have shown elsewhere in this report this does not reflect the reality of the space needs in the borough going forward but provides a useful starting point for the scenario testing.

8.9 Assuming full release of all the sites, this would generate a requirement to relocate as much as c.680,000sqm of industrial space within the retained industrial land designations.

8.10 As seen in Table 66, if this full release scenario were followed the retained industrial land could accommodate a sufficient uplift in capacity to accommodate both displaced capacity (c.1.7mn sqm) and projected future need (c.200,000sqm).

Table 66 – Floorspace Capacity, Regeneration Vision - Full Release

	Proposal	Plot size (ha)	Capacity (sqm)			
			Intensification	Planning	Retained + Higher Density	Total Floorspace
CG1	Release	0.0	0	0	0	0
CG2	Release	0.0	0	0	0	0
CG3	Release	0.0	0	0	0	0
CG4	Release	0.0	0	0	0	0
CG5	Release	0.0	0	0	0	0
CG6	Release	0.0	0	0	0	0
CH1	Release	0.0	0	0	0	0
CH2	Release	0.0	0	0	0	0
CH3	Release	0.0	0	0	0	0
DD1	SIL	10.3	0	0	61,800	61,800
DD2	NDS	8.5	40,808	0	49,445	90,253
DD3	Release	0.0	0	0	0	0
DD4	Release	0.0	0	0	0	0
DD5	SIL	17.3	0	0	103,800	103,800
DD6	SIL	11.8	66,036	24,451	40,181	130,668
DD7	SIL	76.2	0	0	457,200	457,200
DD8	SIL	64.0	0	19,999	384,000	403,999
DE1	Release	0.0	0	0	0	0
DE2	LSIS	5.7	0	0	32,039	32,039
DE3	Release	0.0	0	0	0	0
DE4	Release	0.0	0	0	0	0
GS1	Release	0.0	0	0	0	0
KB1	SIL	11.1	66,272	0	41,595	107,867
RR1	Release	0.0	0	0	0	0
RR2	SIL	1.3	0	0	14,308	14,308
RR3	LSIS	3.9	32,605	0	11,281	43,886
RR4	SIL	8.3	17,596	11,362	52,463	81,421
RR5	SIL	15.7	97,702	615	75,137	173,453
RR6	SIL	23.4	43,476	185	120,242	163,903
RR7	SIL	1.6	0	0	9,600	9,600
RR8	Release	0.0	0	0	0	0
RR9	Release	0.0	0	0	0	0
RR10	Release	0.0	0	0	0	0
WR1	LSIS	3.2	0	0	27,533	27,533
WR2	LSIS	2.5	0	0	10,000	10,000
WR3	LSIS	5.8	0	725	46,106	46,831
WR4	LSIS	3.4	0	0	30,497	30,497
HR1	Release	0.0	0	0	0	0
TOTAL		**274.0**	**364,494**	**57,337**	**1,567,227**	**1,989,058**

Source: Avison Young, 2021

8.11 However, whilst technically feasible, this strategy does present two significant delivery risks. Firstly, there is little 'headroom' in the potential supply. This would mean that 100% of sites envisaged for intensification would need to come forward in the manner considered in this report – given the market remains relatively unproven for these typologies at present a greater degree of over supply may be preferable.

8.12 Secondly, the 'densification' of retained sites will be less easy for Be First or the Council to predict and control as it would rely on individual private businesses and landowners bringing forward small sites for infill and extension. Taken alongside the lower headroom overall all this would present a risk and would need monitoring over time to understand whether the required space delivery is being achieved

Scenario 2: Regeneration Vision - Colocation

8.13 In this second scenario we have tested the impact of a release of industrial land identified for alternative uses as per Scenario 1 however we now included the potential capacity created through co-location as part of the future supply of space. As established elsewhere in this report the nature of demand in the future would, in part at least, be able to locate within a co-location scheme.

8.14 Given there is no standard/consistent approach for establishing this capacity we have made a broad assumption that a colocation scheme would achieve a plot ratio of 0.4, allowing for other ground floor requirements such as residential entrances, bike and bin stores and access/public realm. Assuming release of all the sites and considering colocation, this would generate a requirement to relocate as much as 549,056 sqm of industrial space in remaining sites.

8.15 As seen in Table 67, and based on these assumptions, there is the potential c.2.1mn sqm of industrial space through intensification, densification and co-location. This would provide sufficient floorspace to be provided to meet future needs of c.1.9mn sqm of floorspace, with a headroom of c.200,000sqm.

8.16 This headroom is significant, given it broadly equates to the total amount of forecast future demand within the borough (203,000sqm). In the region of 140,000sqm of this additional supply would come from co-location which given the forecast nature of demand would most likely be appropriate – however it would limit location and typology choices in the market, which may impact the economy int the future.

Table 67 – Floorspace Capacity, Regeneration Vision - Colocation

	Proposal	Plot size (ha)	Capacity (sqm)			
			Intensification	Planning	Retained + Higher Density	Total Floorspace
CG1	Release	0.0	0	0	0	0
CG2	Release	0.0	0	0	0	0
CG3	Release	0.0	0	0	0	0
CG4	Release	0.0	0	0	0	0
CG5	Release	0.0	0	0	0	0
CG6	Release	0.0	0	0	0	0
CH1	Colocation	7.6	20,691	0	22,729	43,419
CH2	Colocation	8.9	0	0	35,600	35,600
CH3	Colocation	14.4	0	112	57,600	57,712
DD1	SIL	10.3	0	0	61,800	61,800
DD2	NDS	8.5	40,808	0	49,445	90,253
DD3	Release	0.0	0	0	0	0
DD4	Colocation	2.2	0	0	8,800	8,800
DD5	SIL	17.3	0	0	103,800	103,800
DD6	SIL	11.8	66,036	24,451	40,181	130,668
DD7	SIL	76.2	0	0	457,200	457,200
DD8	SIL	64.0	0	19,999	384,000	403,999
DE1	Release	0.0	0	0	0	0
DE2	LSIS	5.7	0	0	32,039	32,039
DE3	Release	0.0	0	0	0	0
DE4	Release	0.0	0	0	0	0
GS1	Release	0.0	0	0	0	0
KB1	SIL	11.1	66,272	0	41,595	107,867
RR1	Colocation	1.4	0	0	5,600	5,600
RR2	SIL	1.3	0	0	14,308	14,308
RR3	LSIS	3.9	32,605	0	11,281	43,886
RR4	SIL	8.3	17,596	11,362	52,463	81,421
RR5	SIL	15.7	97,702	615	75,137	173,453
RR6	SIL	23.4	43,476	185	120,242	163,903
RR7	SIL	1.6	0	0	9,600	9,600
RR8	Release	0.0	0	0	0	0
RR9	Release	0.0	0	0	0	0
RR10	Release	0.0	0	0	0	0
WR1	LSIS	3.2	0	0	27,533	27,533
WR2	LSIS	2.5	0	0	10,000	10,000
WR3	LSIS	5.8	0	725	46,106	46,831
WR4	LSIS	3.4	0	0	30,497	30,497
HR1	Release	0.0	0	0	0	0
TOTAL		**308.5**	**385,185**	**57,449**	**1,697,555**	**2,140,189**

Source: Avison Young, 2021

Scenario 3: Proposed Allocation

8.17 The third scenario considers an approach that is somewhat independent of Be First's Regeneration Vision. Whilst it does take these into account, we have considered the wider market, delivery and business factors that would influence the successful delivery of a sequenced intensify and release strategy.

8.18 Based on our analysis of the scale and nature of future demand and the types of land and property needed to accommodate it we have identified an alternate release strategy, which over time would both allow a larger degree of flexibility in the borough but also enable regeneration to occur.

8.19 By reconsidering some of the sites earmarked for release for colocation Table 68 shows that there is the potential to deliver c.2.6mn sqm of space within the borough, with a much reduced 'displacement' of floorspace (c.270,00sqm). This would result in a headroom provision of space of c.700,000sqm of floorspace, which is significantly higher than other scenarios and over 3 times the level of projected demand.

8.20 This scenario has a number of pros and cons.

8.21 On the positive side it provides significant flexibility within the borough and the potential to 'cushion' any unexpected losses of space or failure of individual sites to come forward. It would also mean that the borough is less reliant on the densification of smaller sites to meet future needs. Plot ratios would also (potentially) be more in line with industry norms, with a plot ratio of 0.5 across all retained sites being sufficient to meet needs (other scenarios have a higher average plot ratio requirement). Finally, through the capacity created on SIL virtually all displacement and future demand can be accommodated – without the need for co-location.

8.22 On the more negative side this level of head room would place a significant over supply of land and space into the market, which there is no certainty would be required. This may, in effect, challenge the delivery of intensified typologies which will, to a degree, rely on a more limited land supply to attract businesses. It also has significant implications for the borough's regeneration aims, limiting land that is available to deliver homes, different types of jobs and community facilities.

Table 68 – Floorspace Capacity, Proposal

	Proposal	Plot size (ha)	Capacity (sqm)			
			Intensification	Planning	Retained + Higher Density	Total Floorspace
CG1	SIL	7.9	37,641	1,712	38,610	77,963
CG2	Release	0.0	0	0	0	0
CG3 (east)	Release	0.0	0	0	0	0
CG3 (Euro Hub)	SIL	13.2	101,134	0	0	101,134
CG4	Release	0.0	0	0	0	0
CG5	Release	0.0	0	0	0	0
CG6	Release	0.0	0	0	0	0
CH1	Colocation	7.6	20,691	0	22,729	43,419
CH2	Colocation	8.9	0	0	35,600	35,600
CH3	Colocation	14.4	0	112	57,600	57,712
DD1	SIL	10.3	0	0	61,800	61,800
DD2	NDS	8.5	40,808	0	49,445	90,253
DD3	Colocation	22.5	0	0	90,000	90,000
DD4	Colocation	2.2	0	0	8,800	8,800
DD5	SIL	17.3	0	0	103,800	103,800
DD6	SIL	11.8	66,036	24,451	40,181	130,668
DD7	SIL	76.2	0	0	457,200	457,200
DD8	SIL	64.0	0	19,999	384,000	403,999
DD8	SIL	64.0	0	19,999	384,000	403,999
DE1	Colocation	3.5	0	0	14,000	14,000
DE2	Colocation	5.7	0	0	22,800	22,800
DE3	SIL	6.0	0	0	36,000	36,000
DE4	Colocation	5.0	0	0	20,000	20,000
GS1	Release	0.0	0	0	0	0
KB1	SIL	11.1	66,272	0	41,595	107,867
RR1	Colocation	1.4	0	0	5,600	5,600
RR2	Colocation	1.3	0	0	5,200	5,200
RR3	LSIS	3.9	32,605	0	11,281	43,886
RR4	SIL	8.3	17,596	11,362	52,463	81,421
RR5	SIL	15.7	97,702	615	75,137	173,453
RR6	SIL	23.4	43,476	185	120,242	163,903
RR7	SIL	1.6	25,227	0	-4,193	21,034
RR8	Colocation	7.9	10,899	4,105	29,256	44,260
RR9	Colocation	15.4	0	602	61,600	62,202
RR10	Release	0.0	0	0	0	0
WR1	LSIS	3.2	0	0	27,533	27,533
WR2	LSIS	2.5	0	0	10,000	10,000
WR3	LSIS	5.8	0	725	46,106	46,831
WR4	LSIS	3.4	0	0	30,497	30,497
HR1	Release	0.0	0	0	0	0
TOTAL		**389.9**	**560,086**	**63,868**	**1,954,882**	**2,578,835**

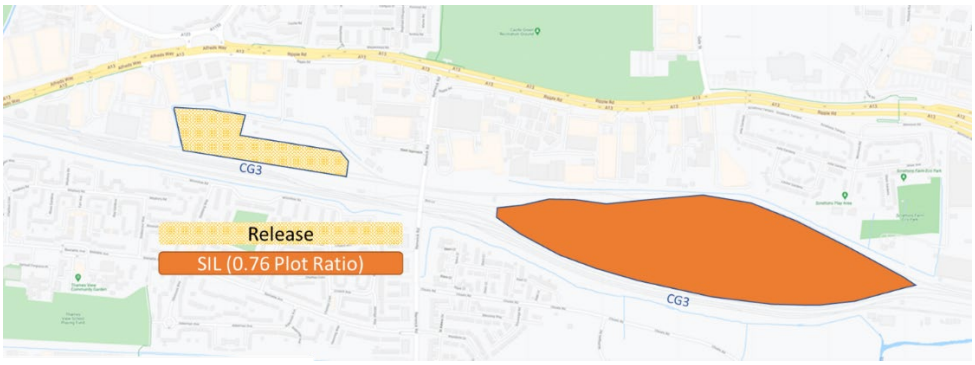
Source: Avison Young, 2021

8.23 Looking at this scenario in more detail the key changes are

- Sites DE1, DE2 and DE4 are suggested for co-location, which is not incongruous with the current aspiration for a mixed-use employment area that supports the film industry within the borough.

- Site CG1 would be retained as SIL, reflecting the potential to leverage the sites access to the A13, (relative) segregation from residential uses and the more challenging context to bring forward a residential development in.
- Site CG3 (east) will be released whilst CG3 (Euro Hub) would be retained as SIL designation, which reflects both its importance as a rail head, but also the wider delivery challenges of the site for residential. This can be seen in Figure 33.

Figure 33: CG3, Partial Release



Source: Avison Young, 2021

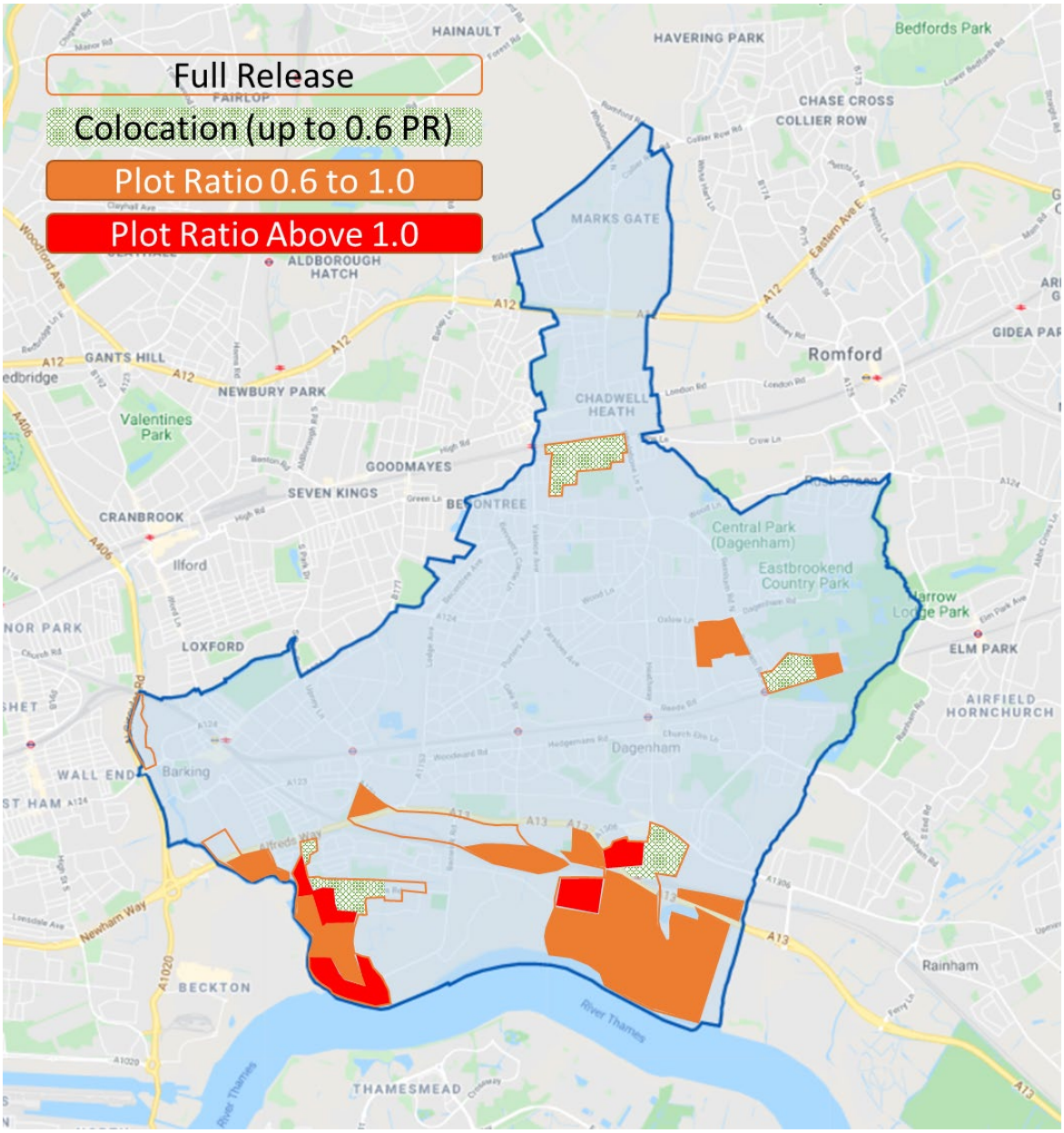
8.24 Sites identified for colocation or release all have the potential to be retained as SIL or LSIS. Whilst we believe that their retention is not necessary to support the regeneration vision of LBBD as sufficient land has been identified to respond to future demand.

8.25 The release of Castle Green is dependent on the delivery of the tunnelling of the A13 and the new station. The release of the land should be considered in the longer-term and therefore Castle Green could be retained as SIL in the forthcoming Plan, with the view to review its allocation in later iterations of the Plan.

8.26 We note Be First and LBBD's vision for DD3 (Ford Stamping Plant). The masterplan supports the full release of the land for alternative use. However, as identified through our capacity assessment (chapter 7 and 8) and sequencing (chapter 9), the demand for industrial space in the short-term will be particularly important, with limited scope to deliver additional floorspace. We therefore estimate that the full release of DD3 may be challenging in the short-term. We assumed that around 18,000 sqm of additional industrial floorspace may need to be delivered in DD3 to accommodate future demand, with limited possibilities to deliver this floorspace on alternative sites. In the medium and long terms, the balance of industrial land is expected to be largely positive, therefore providing opportunities to relocate all industrial space expected on DD3 on alternative sites and therefore the majority of the site for alternative uses. We have therefore suggested that DD3 is retained as colocation site, with options for a full release following the monitoring of the situation should short-term demand be able to be accommodated on other sites.

8.27 Figure 34 shows a high-level map of LBBD and indicative plot ratio by area.

Figure 34: Proposed densities



Source: Avison Young, 2021

8.28 Table 69 shows the evolution of floorspace by site as proposed under this scenario. For each site, the table reports the current floorspace and current plot ratio as well as the estimated future floorspace and associated plot ratio. Finally, the change in plot ratio from current to future level is presented in the last column.

Table 69 – Evolution of Floorspace by Site

	Current Use	Proposal	Size (ha)	Current Floorspace (sqm)	Current Plot Ratio	Future Floorspace (sqm)	Future Plot Ratio	Change in Plot Ratio
CG1	SIL	SIL	7.9	51,858	0.66	77,963	0.99	
CG2	SIL	Release	8.3	67,781	0.82	0	0	
CG3 (east)	SIL	Release	6.4	49,264	0.25	0	0	
CG3 (Euro Hub)	SIL	SIL	13.2			101,134	0.76	
CG4	SIL	Release	6.0	10,126	0.17	0	0	
CG5	SIL	Release	5.4	18,185	0.34	0	0	
CG6	SIL	Release	11.4	51,496	0.45	0	0	
CH1	LSIS	Colocation	7.6	47,645	0.63	43,419	0.57	
CH2	LSIS	Colocation	8.9	44,787	0.50	35,600	0.40	
CH3	LSIS	Colocation	14.4	53,986	0.37	57,712	0.40	
DD1	SIL	SIL	10.3	51,011	0.50	61,800	0.60	
DD2	NDS	LSIS	8.5	59,105	0.70	90,253	1.06	
DD3	LSIS	Colocation	22.5	323	0.00	90,000	0.40	
DD4	NDS	Colocation	2.2	14,347	0.65	8,800	0.40	
DD5	SIL	SIL	17.3	10,507	0.06	103,800	0.60	
DD6	SIL	SIL	11.8	0	0.00	130,668	1.11	
DD7	SIL	SIL	76.2	193,410	0.25	457,200	0.60	
DD8	SIL	SIL	64.0	254,903	0.40	403,999	0.63	
DE1	NDS	Colocation	3.5	0	0.00	14,000	0.40	
DE2	LSIS	LSIS	5.7	32,039	0.56	22,800	0.40	
DE3	NDS	Colocation	6.0	0	0.00	36,000	0.60	
DE4	NDS	Colocation	5.0	0	0.00	20,000	0.40	
GS1	LSIS	Release	5.8	47,674	0.82	0	0	
KB1	SIL	SIL	11.1	42,396	0.38	107,867	0.97	
RR1	LSIS	Colocation	1.4	9,282	0.66	5,600	0.40	
RR2	SIL	Colocation	1.3	14,308	1.10	5,200	0.40	
RR3	LSIS	LSIS	3.9	28,558	0.73	43,886	1.13	
RR4	SIL	SIL	8.3	42,960	0.52	81,421	0.98	
RR5	SIL	SIL	15.7	87,293	0.56	173,453	1.10	
RR6	SIL	SIL	23.4	105,577	0.45	163,903	0.70	
RR7	SIL	SIL	1.6	9,117	0.57	21,034	1.31	
RR8	SIL	Colocation	7.9	39,003	0.49	44,260	0.56	
RR9	SIL	Colocation	15.4	120,001	0.78	62,202	0.40	
RR10	SIL	Release	7.6	23,383	0.31	0	0	
WR1	LSIS	LSIS	3.2	27,533	0.86	27,533	0.86	
WR2	LSIS	LSIS	2.5	6,416	0.26	10,000	0.40	
WR3	LSIS	LSIS	5.8	45,381	0.78	46,831	0.81	
WR4	LSIS	LSIS	3.4	30,497	0.90	30,497	0.90	
HR1	LSIS	Release	5.4	30,244	0.57	0	0	
TOTAL			**389.9***	**1,720,396**	**0.39**	**2,578,835**	**0.67**	

** Excluding land released*
Source: Avison Young, 2021

8.29 Table 70 summarises future industrial floorspace capacity (as assessed by Avison Young) by cluster where industrial land will be retained. With the exception of Castle Green and Kingsbridge (which will be smaller and contained sites), all clusters show an overall plot below 0.8 with clusters turning towards colocation (i.e. Chadwell Heath) having plot ratios closer to 0.4.

Table 70 – Future Capacity Floorspace (sqm) by Cluster

	Future Capacity (sqm)	Land Retained (ha)	Plot ratio
Castle Green	179,098	21.1	0.85
Chadwell Heath	136,732	30.9	0.44
Dagenham Dock	1,346,520	212.8	0.63
Dagenham East	92,800	20.2	0.46
Gascoigne South	0	0.0	N/A
Kingsbridge	107,867	11.1	0.97
River Road	600,959	78.9	0.76
Wantz Road	114,861	14.9	0.77
Hertford Road	0	0.0	N/A
Total	**2,578,835**	**389.9**	**0.67**

Source: Avison Young, 2021

8.30 It can be noted that this scenario represents one of the possible scenarios and that a wide range of alternative options could be deliverable (i.e. some land considered here for release could be retained, in order to release land considered for retention as LSIS of SIL ; some land considered for release could be retained as LSIS or SIL therefore increasing the potential industrial floorspace capacity; or some land considered for LSIS could be retained as SIL, also increasing the potential industrial floorspace capacity).

8.31 This scenario offers one possibility, which Avison Young judges both deliverable, provides sufficient industrial floorspace to accommodate future growth and is coherent with future needs and regeneration aspirations.

8.32 In chapter 9, we will discuss any divergence between our recommendations and LBBD/Be First's aspirations for regeneration and whether the regeneration vision could be accommodated fully.

9. Sequencing and Deliverability

9.1 Having established the quantum of industrial floorspace that could be created in LBBD, in this section we consider the sequencing of delivery both from a quantitative and qualitative perspective to identify how both the scale and nature of floorspace needs can be achieved over time, reflecting the demand and land release scenario set out in the previous chapter.

9.2 In terms of sequencing, we divide the delivery period into three categories:

- **Short-term** deliveries consist of the following:
  - are schemes that are currently in the planning pipeline
  - sites that are in public ownership
  - densification of the existing floorspace (through infill development, vertical and horizontal extensions).
- The short-term period can be assumed to be roughly the next 5-year period (up to end of 2026). Delivery of floorspace in the short-term is the most predictable and likely delivery.
- **Medium-term** deliveries consist of:
  - Privately owned sites that have been identified as having supportive conditions for intensification
  - Further publicly owned sites with similar conditions, but which are more complex than those in the short term.
  - Densification of existing sites not included in the short term, which would reflect the market for such development maturing
- Medium-term deliveries can be assumed to happen in 5 to 10 years from now (2027 to 2032) and can be considered as relatively likely as they have a range of supportive conditions for redevelopment.
- **Long-term** deliveries are the most complex sites, or those with strong existing offers. The long term is considered to be beyond 2032 and, as such, a lower level of reliance can be placed on them. Within the long-term portfolio sites are likely to require improvements to the market and other external factors to bring them (for example the regeneration of Castle Green is heavily reliant on the tunnelling of the A13 and delivery of the new station at Castle Green).

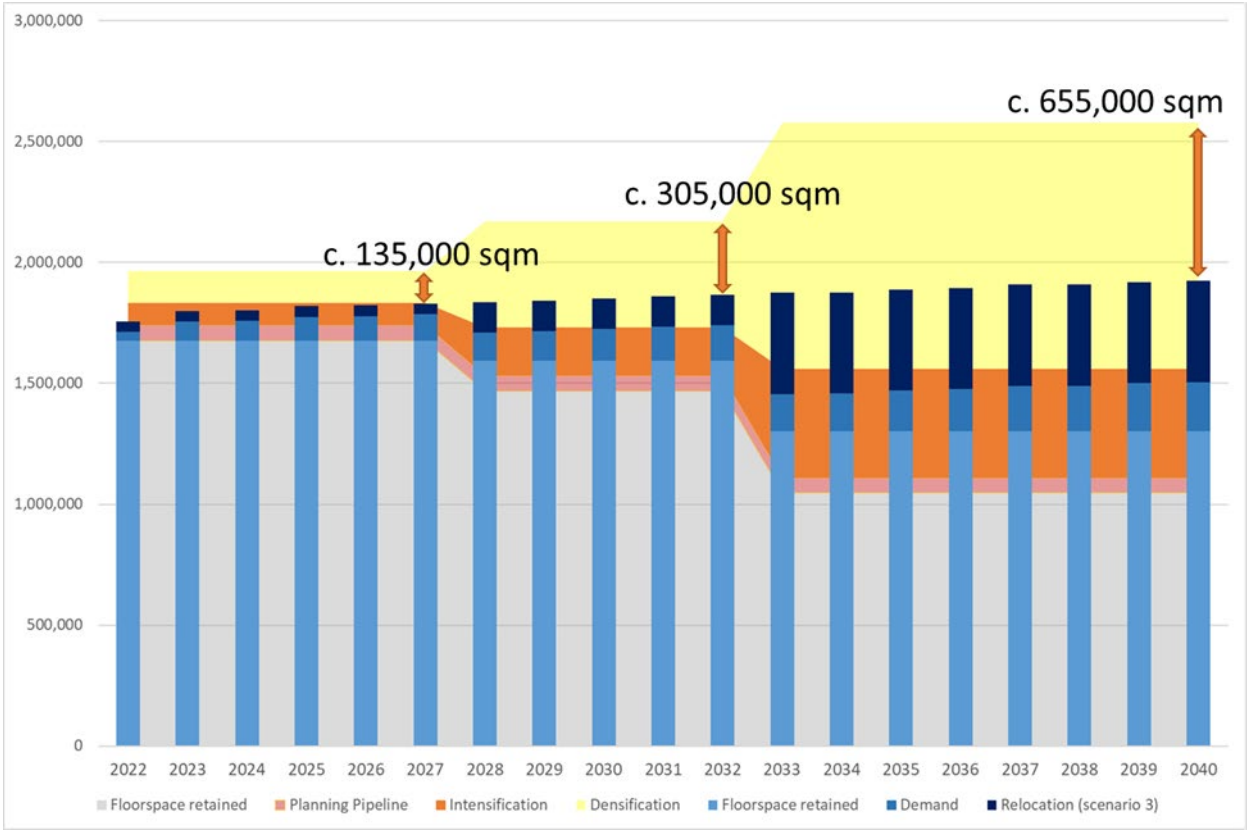
9.3 It should be noted that the sequencing presented below represents one potential strategy for how the wider vision for the borough can be achieved and is intended to act to demonstrate that the borough can achieve multiple aims of regeneration without harming the industrial economy.

Accommodating Future Growth

9.4 For this assessment we have based the future demand and supply analysis on Scenario 3, which has been set out in the previous chapter. This analysis set out that there was significant capacity that could be created through intensification, densification and co-location across sites in the borough. Here we evolve this analysis to consider how the demand-supply relationship would work over time to provide reassurance that, at each stage, there will be sufficient space available for businesses to occupy.

9.5 As shown in Figure 35, at each stage of the plan period there is likely to be an 'oversupply' of space compared to demand.

Figure 35: Future Capacity versus Future Demand (sqm)



Source: Avison Young, 2021

9.6 Demand is shown via the chart's bars, which capture each component of need over the period to 2040, namely:

- "Floorspace Retained" – the light blue shading which represents the scale of space that will remain 'as is' in the future.

- "Demand" – the medium blue shading which represents the forecast future growth of the industrial sector.
- "Relocation" – the dark blue shading which represents the scale of floorspace required to accommodate activity displaced under Scenario 3.
- Future needs for relocation (as per scenario 3).

9.7 Supply is shown via the shading in the chart, the future capacity to accommodate demand is comprised of:

- "Floorspace Retained" – the grey shading which reflects the existing floorspace that will remain on retained industrial sites.
- "Planning Pipeline" – the pink shading which reflects the space currently with, or in the process of obtaining, planning consent.
- "Intensification" – the orange shading which represents the additional floorspace delivered through industrial intensification on identified plots
- "Densification" – the yellow shading which represents the potential additional floorspace created via infill development, vertical and horizontal extensions.

9.8 As shown, there is sufficient capacity in the short, medium and long term to accommodate growth needs and displacement.

9.9 In the short-term sites already in the planning pipeline and the intensification of public sector sites only would be sufficient to accommodate all future floorspace demand (including relocation) set out in Scenario 3. This gives considerable confidence to that need being met, given much of the capacity is in the direct control of the GLA and Be First.

9.10 Also in the short term there is the potential for densification to occur, and there is evidence of this happening through the planning data. Densification of sites beyond the current pipeline would result in additional space being created beyond what is required, however there is less reliability of this happening.

9.11 Over the whole time period, by combining the planning pipeline, intensification opportunities and general densification we would expect the following levels of 'over-supply' to be created:

- Short term (to 2027) = 135,000 sqm
- Medium term (to 2032) = 305,000 sqm
- Long term (to 2040) = 655,000 sqm

9.12 It should also be noted that the capacity that could be delivered in the short-term would be sufficient to accommodate all future demand (and needs for relocation) in the short, medium and long-term if densification is fully realised.

Sequencing

9.13 Table 71 an indicative summary of the sequencing of floorspace gain and release. As noted above, this is an illustrative example of how capacity can be created, and the numbers presented should be treated in that light.

9.14 This table seeks to establish one approach to the creation of a sufficient amount of space in the short and medium term to enable sites to be released for regeneration. In terms of sequencing we have made an assumption for the purposes of this illustration that River Road will be a priority given the advanced stage of the masterplanning exercise. Accordingly, this table demonstrates that sites identified for release and colocation in River Road could be released in the short term, with reprovision of the floorspace in alternative areas.

9.15 It should be noted that this is an assumption made solely for this illustration and to enable the sequencing to follow a clear and logical path. We recognise that, in reality, there will be a range of sites coming forward in different locations, at this point however we expect the broad principles of space needs (type/quantum), and relocation opportunities will remain consistent.

9.16 The table indicates the existing floorspace (Start) as identified in the baseline analysis of supply. The quantum of floorspace to be delivered in the short term is provided and is composed of floorspace gained from the planning pipeline, additional floorspace (uplift) that could be generated through the intensification of plots with short term opportunities and general densification of the rest of the area.

9.17 Floorspace gain in the medium and long term comes from industrial intensification or general density uplift.

9.18 We have assumed that general density uplift will be of maximum 10% of current floorspace in the short term and a further 20% in the medium term; or the equivalent of 0.2 plot ratio in the short term and 0.4 plot ratio in the long term for vacant or low-density sites (i.e. DD3). Additional general density uplift identified would be delivered in the long term.

9.19 The sum of the changes in short, medium and long term and the start position (existing floorspace) equates to the long term floorspace capacity (End).

Table 71 – Sequencing of Capacity (sqm)

	Start	Short Term (change)				Medium Term (change)			Long Term (change)			End
		Planning Pipeline	Intensification	Densification	Total	Intensification	Densification	Total	Intensification	Densification	Total	
CG1	51,858	1,712	0	1,712	3,424	22,681	0	22,681	0	0	0	**77,963**
CG2	67,781	0	0	0	0	0	0	0	0	-67,781	-67,781	**0**
CG3 (east)	49,264	0	0	0	0	0	0	0	0	-49,264	-49,264	**0**
CG3 (Euro Hub)		0	0	0	0	0	0	0	87,402	13,732	101,134	**101,134**
CG4	10,126	0	0	0	0	0	0	0	0	-10,126	-10,126	**0**
CG5	18,185	0	0	0	0	0	0	0	0	-18,185	-18,185	**0**
CG6	51,496	0	0	0	0	0	0	0	0	-51,496	-51,496	**0**
CH1	47,645	0	0	0	0	11,908	-16,133	-4,225	0	0	0	**43,420**
CH2	44,787	0	0	0	0	0	-9,187	-9,187	0	0	0	**35,600**
CH3	53,986	112	0	3,614	3,726	0	0	0	0	0	0	**57,712**
DD1	51,011	0	0	5,101	5,101	0	5,101	5,101	0	587	587	**61,800**
DD2	59,105	0	0	0	0	0	0	0	31,148	0	31,148	**90,253**
DD3	323	0	0	17,935	17,935	0	35,871	35,871	0	35,871	35,871	**90,000**
DD4	14,347	0	0	0	0	0	-5,547	-5,547	0	0	0	**8,800**
DD5	10,507	0	0	18,659	18,659	0	37,317	37,317	0	37,317	37,317	**103,800**
DD6	0	24,451	66,036	8,036	98,523	0	16,073	16,073	0	16,073	16,073	**130,668**
DD7	193,410	0	0	19,341	19,341	0	19,341	19,341	0	225,108	225,108	**457,200**
DD8	254,903	19,999	0	25,490	45,490	0	25,490	25,490	0	78,116	78,116	**403,999**
DE1	0	0	0	0	0	0	0	0	0	14,000	14,000	**14,000**
DE2	32,039	0	0	-3,000	-3,000	0	-6,239	-6,239	0	0	0	**22,800**
DE3	0	0	0	7,200	7,200	0	14,400	14,400	0	14,400	14,400	**36,000**
DE4	0	0	0	4,000	4,000	0	8,000	8,000	0	8,000	8,000	**20,000**
GS1	47,674	0	0	-6,000	-6,000	0	-15,000	-15,000	0	-26,674	-26,674	**0**
KB1	42,396	0	0	4,240	4,240	59,396	1,836	61,231	0	0	0	**107,867**
RR1	9,282	0	0	0	0	0	-3,682	-3,682	0	0	0	**5,600**
RR2	14,308	0	0	0	0	0	0	0	0	-9,108	-9,108	5,200
RR3	28,558	0	0	0	0	15,328	0	15,328	0	0	0	**43,886**
RR4	42,960	11,362	15,737	4,296	31,395	0	4,296	4,296	0	2,770	2,770	**81,421**
RR5	87,293	615	0	615	1,230	0	0	0	84,930	0	84,930	**173,453**
RR6	105,577	185	0	10,558	10,743	0	10,558	10,558	31,711	5,314	37,025	163,903
RR7	9,117	0	0	0	0	0	0	0	11,917	0	11,917	21,034
RR8	39,003	4,105	10,899	0	15,004	0	-2,905	-2,905	0	-6,842	-6,842	44,260
RR9	120,001	602	0	-11,560	-10,958	0	-23,120	-23,120	0	-23,722	-23,722	**62,202**
RR10	23,383	0	0	-23,383	-23,383	0	0	0	0	0	0	**0**
WR1	27,533	0	0	0	0	0	0	0	0	0	0	**27,533**
WR2	6,416	0	0	642	642	0	642	642	0	2,301	2,301	**10,000**
WR3	45,381	725	0	725	1,450	0	0	0	0	0	0	**46,831**
WR4	30,497	0	0	0	0	0	0	0	0	0	0	**30,497**
HR1	30,244	0	0	0	0	0	0	0	0	-30,244	-30,244	**0**
TOTAL	**1,720,396**	**63,868**	**92,672**	**88,221**	**244,761**	**109,313**	**97,111**	**206,424**	**247,109**	**160,147**	**407,256**	**2,578,837**

Source: Avison Young, 2021

9.20 Table 72 shows the evolution of floorspace by cluster. This table is useful to understand the capacity of a cluster to relocate space from one site to another within its own boundaries and whether relocation to other clusters will be necessary to allow for release of sites.

9.21 A substantial amount of floorspace is expected to be lost in Castle Green following the release of sites in the long term. Chadwell Heath, Gascoigne South and Hertford Road are also expected to see a reduction of industrial floorspace to support mixed use regeneration (Chadwell Heath) or release of the sites (Gascoigne South and Hertford Road).

9.22 Sufficient additional floorspace capacity will be created in other clusters (or retained sites within the same cluster) to accommodate the relocated employment. As already stated, overall there is sufficient capacity in the borough in each timeframe to accommodate needs.

Table 72 – Change in Floorspace (sqm) by Cluster

	Short Term	Medium Term	Long Term	TOTAL
Castle Green	3,424	22,681	-95,718	-69,612
Chadwell Heath	3,726	-13,412	0	-9,686
Dagenham Dock	205,048	133,646	424,220	762,914
Dagenham East	8,200	16,161	36,400	60,761
Gascoigne South	-6,000	-15,000	-26,674	-47,674
Kingsbridge	4,240	61,231	0	65,471
River Road	24,514	475	96,971	121,477
Wantz Road	2,092	642	2,301	5,034
Hertford Road	0	0	-30,244	-30,244
Total	**244,761**	**206,424**	**407,256**	**858,441**

Source: Avison Young, 2021

9.23 Table 73 shows how relocation could be sequenced between the different sites, with employment floorspace being relocated from released industrial sites towards alternative (retained) industrial areas in the borough.

9.24 This table does not aim to provide a prediction of the future displacement of space as it would be impossible to do so (as the relocation of businesses cannot be dictated) but rather to demonstrate that the proposed release of industrial land in LBBD will not compromise the growth of the industrial sector in the area and that the relocation of businesses to suitable sites (in line with their requirements in term of access, location to supply chain and customer, surrounding area, etc.) is achievable.

Table 73 – Suggested Relocation

From...	To...		
	Short Term	Medium Term	Long Term
GS1	KB1, CG1	KB1	KB1
DE2	WR2, WR3, CH3	DD3	/
RR9	RR4, RR6, RR8, DD6	RR5, RR6, DD3	RR5, RR6
RR10	RR4, RR6, RR8, DD6	/	/
CH1	/	CH3, RR6	/
CH2	/	CH3, RR6	/
DD4	/	DD3	/
RR1	/	RR4	/
CG2, CG3, CG4, CG5, CG6	/	/	CG1 & CG3, DD2, DD3, DD5, DD6
RR2	/	/	RR5
RR8	/	/	RR7
HR1	/	/	RR5, RR6, KB1

Source: Avison Young, 2021

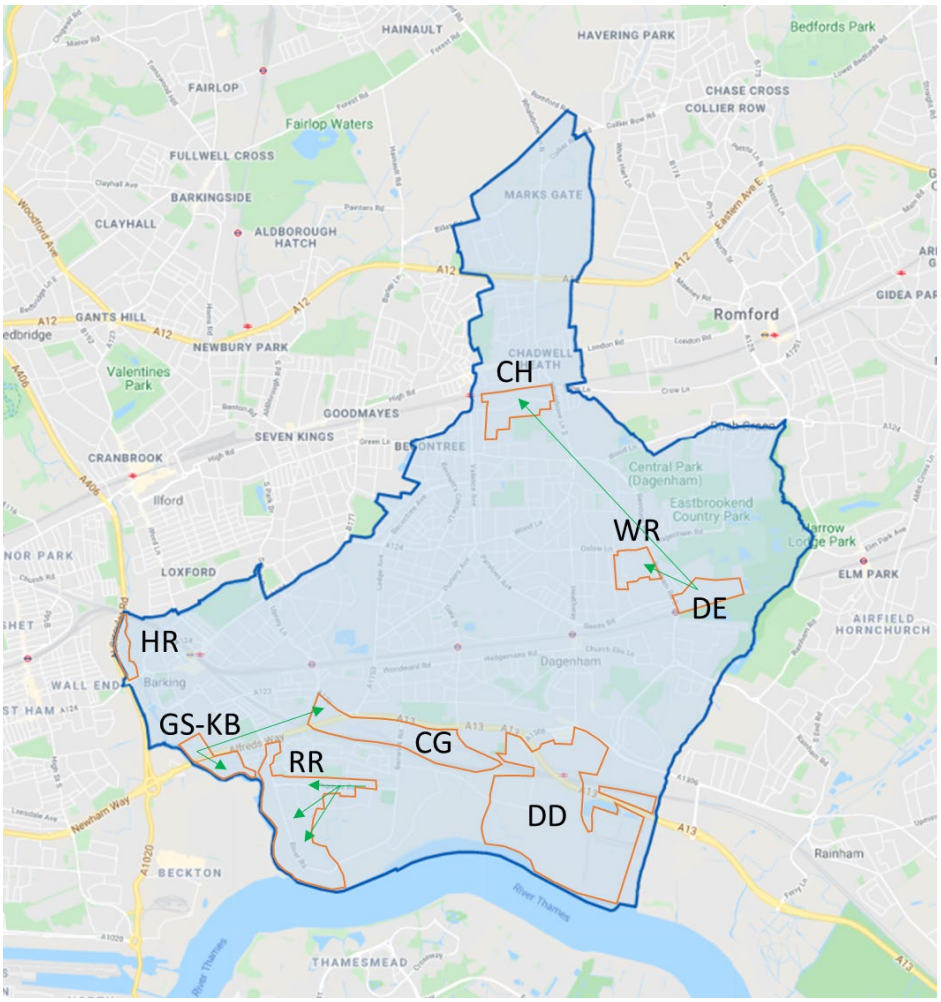
9.25 This table can be broken down into three steps: short-term relocation (up to 2027), medium-term relocation (up to 2032) and long-term relocation (beyond 2032).

Short-Term Displacements

9.26 We anticipate that, in the short-term (2022 to 2027), about 44,000 sqm of industrial floorspace would need to be relocated from released (or co-location) sites to accommodate the regeneration vision of the borough.

9.27 In the meantime, a net additional 248,000 sqm of industrial floorspace could be delivered, providing sufficient space to accommodate demand from future growth and requirements for relocation. LBBD could deliver an excess of 140,000 sqm in the short-term, taking into consideration demand from future growth.

Figure 36: Short-term displacement



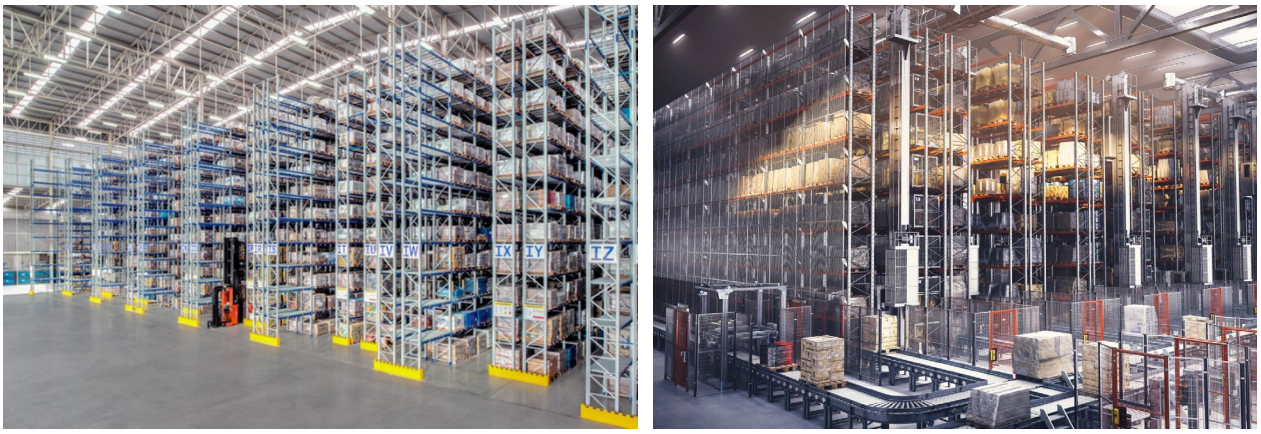
Source: Avison Young, 2021

9.28 **Gascoigne South** is suggested to be released, with relocation of existing floorspace over short, medium and long-term. We assumed that 10% to 15% of existing floorspace could be re-provided in the short term on alternative sites.

9.29 Existing floorspace in Gascoigne South is mainly composed of medium and larger warehouses for distribution activities, with some other smaller units for service activities. Access to the strategic road network will remain main requirement for those businesses. These uses can potentially be accommodated within intensified environments for example multi-storey industrial buildings with lift servicing for lighter distribution activities or warehousing with vertical storage solutions.

9.30 Vertical storage would be form of densification as it allows (through increased automation) the potential to accommodate a higher quantum of goods on a single floor without the need for physical access to higher racking, therefore increasing density by creating “virtual” upper floors.

Figure 37: Vertical Storage



9.31 The most suitable locations for relocation are Kingsbridge (just across the A13), which would be retained as SIL, and Castle Green (Site 1), which is proposed to be retained as SIL. These locations are prime for distribution activities, with direct access to the strategic road network (A13 and indirectly the North Circular) and will be sought after by medium logistics businesses servicing the East and North East London markets.

9.32 Smaller service activities could be relocated in the parts of River Road retained for industrial use or proposed for colocation (RR1 to RR9).

9.33 Based on our assessment, Kingsbridge and Castle Green (Site 1) could accommodate an additional c.8,000 sqm in the short-term; River Road could provide an additional c.25,000 sqm in the short-term. This is well above what would be required to relocate businesses from Gascoigne South in the short-term.

9.34 We understand from discussion with LBBD and Be First that there is limited scope for immediate release of this site. Therefore, we could consider no short-term release of this site (but no uplift in capacity either), which would increase the short-term balance of land/floorspace surplus identified in Figure 35 by 6,000sqm (loss of space assumed following proposed release). Gascoigne South could still be considered for release in the longer term should there be a demand/rationale for it.

9.35 We would also expect to see some displacement from **River Road** (mainly RR10 and to a lesser extent from RR9) as the regeneration vision for the area is implemented. RR10 is considered to be released to residential, with RR9 and RR8 (to its east) to be considered for co-location - providing a buffer between residential and industrial activities in River Road.

9.36 Businesses currently located in RR10 are mainly distribution and logistics businesses (including DHL) services businesses (such as machine hire) and light manufacturing/wholesale businesses. Businesses

currently located in RR9 operate within the same type of activities but tend to be smaller in size (small and medium businesses).

9.37 Whilst larger logistics businesses will have a requirement for a standalone property, recent examples have shown that this type of activity can be accommodated in intensified industrial space, pushing the plot ratio above 1. A perfect example would be the proposed SEGRO Park multi-storey warehouses which will accommodate this type of industry. For a major occupier such as DHL, the option of vertical shelving could also deliver additional "operational space" (whilst keeping the footprint of the building the same).

9.38 Other businesses could also be relocated into multi-storey facilities, with ground floor allocated to logistics and distribution and upper floor to production and storage. A system of cargo lifts would be required to allow the transport of goods between floors. Most standard good lifts provide a capacity of up to 1,000 kg (sufficient for small and medium size manufacturing/wholesale businesses) but more advanced and bespoke lifts can provide capacity in excess of 10 tonnes.

Figure 38: Cargo Lifts

9.39 Similarly, typologies such as the Belartza in San Sebastian or the Binck Twins in The Hague, provide a light ramp access, these approaches would deliver stacked industrial space able to accommodate light manufacturing/wholesale/light distribution activities.

9.40 We have estimated that c.34,000 sqm could need to be relocated from RR10 and RR9 in the short-term with most floorspace being displaced within River Road cluster itself. An important share of this floorspace could be delivered through intensification on publicly owned land in RR4 and RR8 – delivering in the region of 25,000 sqm based on our assessment. Additional floorspace within River Road will be generated through general densification (including infill development), which would allow for the relocation of the remaining floorspace (circa 9,000 sqm).

9.41 Additionally, space to be delivered in DD6 through the planning pipeline (i.e. SEGRO Park) or intensification could also accommodate part (or all) of the floorspace displaced from River Road (RR9 and RR10) in the short-term, with c.25,000 sqm of consented floorspace (planning pipeline) and another c.66,000 sqm that could be delivered through intensification on public owned land.

9.42 DD6 is currently mainly undeveloped and therefore would provide some reassurance that additional floorspace can be delivered to accommodate at least the short-term phase of the vision.

9.43 Whilst RR10 is proposed to be released fully to residential, RR9 is suggested to be retained for colocation. The majority of current businesses in RR9 are suitable for vertical colocation with alternative uses, including residential. This is particularly true for services activities (such as machinery hire or trade counters). In 2018, the GLA published an industrial intensification study[12] which shows what co-location could look like in RR9. The Travis Perkins development in King's Cross is a good example of this. The development delivers a double height ceiling ground floor for mixed industrial activities, with residential above. The development also provides an internal yard for operation activities of businesses at ground floor.

Figure 39: Travis Perkins, King's Cross

Source: We Made That, "Industrial Intensification and Co-Location Study: Design and Delivery Testing"

9.44 The Gewerbehof Laim (Munich), introduced in chapter 7 provides an alternative approach to colocation with concentration of industrial uses within one development and partial release of plots of land to pure residential (horizontal colocation).

9.45 We have assumed that a small quantum of industrial floorspace would be moved out of **Dagenham East**. Whilst this site is marked for co-location, it would be expected that released space/land would primarily be considered to deliver ancillary activities to the film studio as opposed to a release for

[12] We Made That, "Industrial Intensification and Co-Location Study: Design and Delivery Testing"

residential. We have assumed that this small quantum of space could be re-provided in Wantz Road (infill development) and Chadwell Heath (through densification and development of currently undeveloped or underdeveloped land).

9.46 Dagenham East is host to a small number of digital and high technology businesses (suppliers, software developers, etc.) which could be attracted to a Chadwell Heath, where there is potential for a new cluster of businesses in the e-gaming and digital industry.

9.47 We note that the masterplan for River Road / Thames Road assumes the partial retention of the **River Road 8 (RR8)** site. The masterplan for the area assumes that the western part of RR8 would be retained as SIL whilst the eastern part of RR8 would become a colocation site (similarly to RR9). Under our preferred scenario in this report, we have assumed that RR8 would be considered for colocation in its entirety. This is shown in Figure 40 where orange highlights show the colocation area and red highlights show SIL retention in RR8 and RR9 as part the masterplan for the area. The recommendations made in this report does not prevent the retention of part of RR8 as SIL (i.e. the western part). The retention of the western half of RR8 would increase the industrial floorspace capacity in LBBD and therefore provide further contingency to accommodate future growth.

Figure 40: Thames Road Masterplan – RR8 proposal

Source: Avison Young, 2021

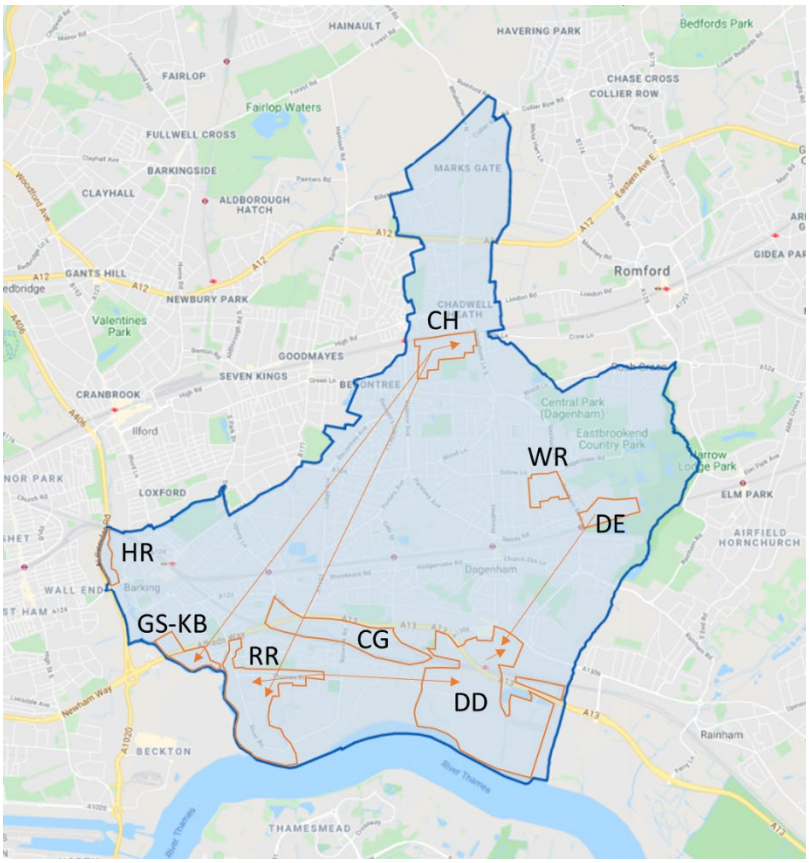
9.48 The retention of Gascoigne South and the retention of part of River Road 8 could allow the full release of DD3 in Dagenham Dock as per the vision for the area. We understand that the preparation for the redevelopment of this site is well under way and would require the full release of this site (as opposed to colocation). The main obstacle to release of this site was the industrial floorspace capacity in LBBD in the short-term. Our assessment has demonstrated that capacity in the medium and long-term could deliver a wide surplus of floorspace. Assuming the retention of GS1 and part of RR8, the full release of DD3 will not hinder short-term growth, as sufficient land to deliver sufficient industrial floorspace would be retained to respond to short-term demand.

Medium-Term Displacements

9.49 We anticipate that, in the medium-term (2027 to 2032), about 82,000 sqm of industrial floorspace would need to be relocated from released (or colocation) sites to accommodate the regeneration vision of the borough.

9.50 In the meantime, a net additional 83,000 sqm of industrial floorspace could be delivered (excluding the loss of floorspace from the Ford Site which is currently vacant and will not need to be re-provided), bringing the excess floorspace capacity in LBBD to 185,000 sqm, taking into consideration demand from future growth.

Figure 41: Medium-term displacement



Source: Avison Young, 2021

9.51 In the medium-term, we envisage that displacement will continue to take place from **Gascoigne South** with further land being redeveloped for alternative uses. Existing businesses displaced could be relocated in Kingsbridge within new high-density developments (i.e. floorspace identified through industrial intensification). Whilst the land identified with potential for industrial intensification is in private ownership, we have estimated that as much as four times the amount of floorspace required to relocate activities from Gascoigne South could be delivered in Kingsbridge. This therefore leaves ample leeway and flexibility in terms of delivery.

9.52 We would also expect to see the continuation of relocation of some minor activities from **Dagenham East** (DE2) to Dagenham Dock, particularly the services industry. It is expected that Dagenham Dock will deliver a large amount of additional floorspace in the medium-term through densification primarily. DD3 alone, which is currently vacant land and proposed for colocation, could accommodate this demand from relocation with a potential of 50,000 sqm of floorspace to be delivered on this site in the short and medium term.

9.53 Whilst 50,000 sqm of additional floorspace to be delivered in DD3 may seem like an ambitious target, it should be noted that the site is currently vacant (only c.300 sqm of commercial floorspace) and measures 22.5 ha. The assessed capacity to be delivered in the short and medium term would bring the plot ratio on this site to only 0.24.

9.54 Similarly, we expect that relocation of space will continue between colocation sites in **River Road** (i.e. RR1, RR8, RR9) to other sites in River Road and Dagenham Dock.

9.55 Activities currently located in future colocation sites in River Road are mostly suitable for colocation with residential. However, industrial floorspace will need to be reduced in those areas in order to allow for a reconfiguration of the sites and allow the delivery of alternative floorspace (residential).

9.56 It is suggested that displaced floorspace (c.29,000 sqm) could be relocated partly in River Road (i.e. RR4 and RR6 would deliver another c. 15,000 sqm of additional space in the medium-term through densification) and/or in Dagenham Dock, with DD3 having the potential to deliver a substantial amount of floorspace in a colocation configuration. The northern part of DD3 (close to the strategic road network) could be dedicated to pure industrial activities (heavy traffic) whilst the rest of the site is considered for vertical co-location between lighter industrial activities (services, wholesale, trade counters) and residential. Travis Perkins King's Cross (Figure 39) is an example of vertical colocation of the two uses.

9.57 As the masterplan for **Chadwell Heath** is implemented, we would expect to see the relocation of industrial floorspace away from the station. We have assumed that the current Network Rail site would be retained as industrial site (delivering space for light industrial activities) but that the rest of Chadwell Heath would become a co-location area. The vision for Chadwell Heath is to co-locate residential with industrial activities that could be associated with the e-gaming industry (as per the vision for the area and potential redevelopment of the Muller Site as an e-gaming centre).

9.58 We envisage a relocation of activities from CH1 and CH2 partially to CH3 (away from the station), with a potential concentration of the heavier industrial uses along Whalebone Lane, which provides an access to the A12, and River Road. Industrial activities to be retained in Chadwell Heath could benefit

from the (future) character of the area as a dynamic local centre, supporting the growth of a strategic economic sector (e-gaming).

9.59 As mentioned in paragraph 9.45, activities to be located in Chadwell Heath could include digital and high technology businesses (suppliers, software developers, etc.) as well as industrial activities supporting the dynamism of a local town centre such as the craft industry (i.e. creative, food and beverage). An example of successful regeneration is Druid Street in Bermondsey (the Beer Mile). The take-over of railway arches by the craft beer industry (and craft food industry to a lesser extent) has dramatically changed the perception and economic dynamism of the area which has now become a leisure destination in South London, competing with much more established places such as Borough Market or Bermondsey Street. Most of those activities are compatible with residential use, providing adequate mitigation measure against noise pollution.

Figure 42: Bermondsey Beer Mile

Source: WeDigTravel, 2017

9.60 Aside from the somewhat 'bespoke' approach at Bermondsey Street other examples of colocation between residential and industrial activities are becoming common in London, for example Bow Enterprise Park and Caxton Works have delivered both light industrial space and residential (both with a mix of traditional occupiers and newer sectors), and Bernard Works (South Tottenham) proposing properties with combined lease on industrial space on ground floor and residential above for the creative industries.

Figure 43: Bernard Works, South Tottenham

Source: Projekt

9.61 Activities which cannot be accommodated within mixed use development or in horizontal co-location with residential should be relocated to the eastern part of Chadwell Heath or River Road (i.e. RR6).

9.62 Some activities could be relocated from Dagenham Dock (DD4) to other sites in the cluster (such as DD3) to accommodate the vision for regeneration around the station and accommodate co-location with residential. Current activities on DD4 are for self-storage mainly and open yard space (car parking) which could be accommodated within multistorey industrial developments.

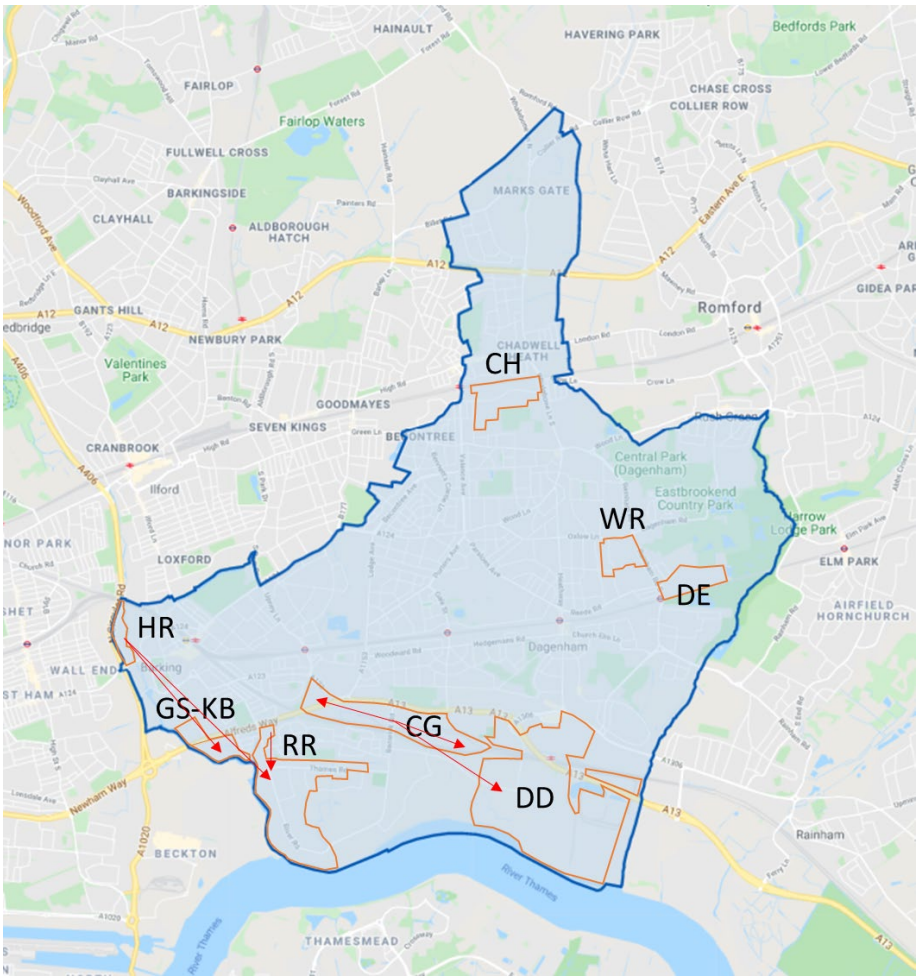
9.63 We have assessed that a minor amount of floorspace could need to be relocated from **River Road** (RR1) to deliver co-location on this site (c. 3,500 sqm). Current activities in RR1 are trade counters and wholesale mainly, which could be accommodated within RR4, RR5 or in Dagenham Dock (DD3).

Long-Term Displacements

9.64 We anticipate that, in the long-term, about 293,000 sqm of industrial floorspace would need to be relocated from released (or co-location) sites to accommodate the regeneration vision of the borough.

9.65 In the meantime, a net additional 240,000 sqm of industrial floorspace could be delivered (excluding the loss of floorspace from the Ford Site which is currently vacant and will not need to be re-provided). The excess floorspace capacity in LBBD in the long term (2032 to 2040) could reach c.370,000 sqm.

Figure 44: Long-term displacement



Source: Avison Young, 2021

9.66 We assumed that the relocation of industrial space from **Gascoigne South** to places like Kingsbridge would carry on over the long-term. Given that some industrial buildings in the area are of good quality and proximity to the strategic road network (valuable for those businesses), this is not an unlikely scenario. Kingsbridge should have delivered sufficient floorspace by the medium-term to accommodate the remaining floorspace displaced from Gascoigne South.

9.67 Similarly, we expect the relocation of some industrial activities from **River Road** (RR8 and RR9) to carry on over the long-term, whilst the regeneration and change of use to residential in RR10 could be completed over the short to medium-term. Similarly to the medium-term, displaced floorspace could be relocated in other parts of River Road. We have identified plots of land in RR5, RR6 and RR7 with potential for intensification but within the longer term. Whilst some of the plots are in private ownership, some are in public ownership. The delivery of this additional floorspace is therefore in the control of the public sector following the expiration of existing leases.

9.68 The release of **Hertford Road** has been assessed. This could be possible in the long-term with the reprovision of space in areas such as River Road (RR5, RR6) and Kingsbridge. Current activities in

Hertford Road are concentrated around services and trade (to be relocated to River Road) and medium size distribution activities (to be relocated to Kingsbridge).

9.69 We expect to see some displacement taking place at **Castle Green** in the long-term from sites considered for release, in alignment with the delivery of infrastructure (tunnelling of A13, new station). The most logical approach would be to relocate floorspace within retained sites in Castle Green. Particularly, the Ford Site in CG1 (in public ownership) is identified with a potential for industrial intensification and could deliver in the region of 23,000 sqm in the medium-term. A further 101,000 sqm of floorspace could be delivered in CG3 (Euro Hub). Overall, future capacity on retained sites in Castle Green could accommodate in the region of 180,000 sqm.

9.70 It is clear that this will not be sufficient to re-accommodate all floorspace currently existing in Castle Green (c.250,000 sqm) and that part of this floorspace will need to be re-provided elsewhere in the borough.

9.71 Additional floorspace delivered in CG3 (Euro Hub) would be particularly valuable for larger industrial activities benefiting from a direct access to the rail network (freight of heavy goods). Intervention might be required to improve accessibility to this site. Some of the logistics and distribution activities currently located in Castle Green and which will need to be relocated could be accommodated in CG1 (i.e. Ford Site). Remaining floorspace, could be accommodated across additional floorspace delivered in Dagenham Dock.

Qualitative Considerations

Castle Green

9.72 Additional floorspace delivered in remaining sites in Castle Green (CG1 and CG3 Euro Hub) will not be sufficient to accommodate all relocation from this cluster following the release of sites CG2, CG3 (excluding Euro Hub), CG4, CG5 and CG6.

9.73 CG1 should be prioritised for larger B8 (logistics and distribution) activities. CG3 (Euro Hub) should be considered to accommodate more heavy industrial activities such as manufacturing. Full advantage should be made of the rail connectivity of the site through the development of rail freight infrastructure for the transport of heavy goods. This site could be considered for advanced manufacturing activities.

9.74 Manufacturing activities should be aimed to be concentrated in Dagenham Dock, other activities such as light industrial, services and trade counters could be accommodated in River Road.

9.75 CG2 could be considered for retention for industrial use (SIL) given the surroundings of the site which make it less desirable for residential use (thin strip of land with rail to the south, A13 to the north). Should CG2 be retained for industrial use, all floorspace displaced from other sites in Castle Green could be re-allocated within the cluster. We would also recommend prioritising the development of large logistics and distribution activities on this site (similarly to CG1), with lower scale development for wholesale and the industrial service industry on the eastern side of the site (as approaching future residential).

Table 74 – Future Floorspace by Site, Castle Green

	Proposal	Timing	Description & Justification
CG1	SIL	Medium Term	Gain of floorspace through intensification possible. Advise to keep Site as SIL designation as potential to accommodate for redevelopment and intensification, providing space for relocation of businesses from other Sites in Cluster. Site is ideally located with access to strategic road network. Future tunnelling of A13 could start to the east of the south western side of CG1 to keep access to road network. Suggestion is to prioritise site for large logistics and distribution.
CG2	Release	Long Term	Transport and logistics activities to be moved to CG1. Light industrial and wholesale activities to be relocated in River Road. Site could be considered for retention to industrial (with priority for logistics and distribution activities) given its location and surroundings.
CG3 (East)	Release	Long Term	Bulk of activities could be relocated into CG3 Euro Hub (i.e. Express Concrete, DB Schenker). Light industrial and wholesale activities to be relocated in River Road.
CG3 (Euro Hub)	SIL	Long Term	Suitable for heavy industrial/manufacturing activities. Advantage should be made of connection to the rail (rail freight infrastructure). Access to the site will be required to attract investment.
CG4	Release	Long Term	Bulk of activities to be relocated in River Road and site to be released for alternative uses in the long term and in parallel to tunnelling of A13 of opening of new station at Castle Green
CG5	Release	Long Term	Bulk of activities to be relocated in River Road and site to be released for alternative uses in the long term and in parallel to tunnelling of A13 of opening of new station at Castle Green
CG6	Release	Long Term	Bulk of activities to be relocated in River Road and site to be released for alternative uses in the long term and in parallel to tunnelling of A13 of opening of new station at Castle Green

Source: Avison Young, 2021

Chadwell Heath

9.76 All sites in Chadwell Heath are considered for co-location. The opening of Crossrail should be used as catalyst for the regeneration of the area in the medium term, with a concentration of industrial activities on selected plots and partial release to residential.

9.77 Chadwell Heath should be considered for light industrial and light manufacturing activities such as the craft of food and beverage product activities. These types of activities could be delivered in parallel to the regeneration vision for the area, with industrial activities reinforcing the local character of the area and contributing to the vibrancy of the neighbourhood.

9.78 Examples of these would be Shoreditch, where residential is delivered alongside light manufacturing and creative space (workshops, light food manufacturing units, artist studios etc.) or Druid Street in Bermondsey ("the beer mile") which is contributing to the regeneration of the area by giving it an identify and creating a leisure destination at the weekend (micro-breweries double up as bars, food and non-alcoholic beverage are offered by neighbouring businesses or artisans on Maltby Market).

9.79 We are also aware that the former Muller plot is considered to accommodate space for the e-gaming industry, which again could be delivered in parallel to alternative uses to create a vibrant town centre in Chadwell Heath.

We have assumed that a small amount of floorspace will be displaced from Chadwell Heath in the medium term. It would be recommended to relocate larger B8 space/wholesale sites in priority to places such as Dagenham Dock (consolidation with the wholesale market activities), where better access to the strategic road network is provided.

Table 75 – Future Floorspace by Site, Chadwell Heath

	Proposal	Timing	Description & Justification
CH1	Colocation	Medium Term	This site is proposed for colocation, with a focus on industrial activities on the Network Rail plot (north of the site, along the railway) where industrial intensification could be delivered. Given the lack of connectivity of the area via the road network, activities should be focuses on light industrial and light manufacturing activities. It is proposed that overall, a small proportion of floorspace could be lost whilst the existing floorspace is consolidated to release space for alternative use.
CH2	Colocation	Medium Term	Given the nature of activities and landownership in this area, the release of land to alternative use is expected to be complicated. The focus of the area could be on industrious space (workshop, studios) delivered as part of mixed-use developments for example (light industrial lower floors with residential above).
CH3	Colocation	Short Term	It is proposed that this area is considered for colocation. Small gain in industrial floorspace could be delivered in this area, with for instance potential of the former Muller plot to deliver significant modern industrial floorspace. Similarly to CH2, it is advised that the focus of this area is on industrious space, particular focus on digital activities could be considered (link to proposed use of the former Muller plot for e-gaming). Mixed of co-working space, shared workshop and light manufacturing facilities with supporting amenities could deliver a coherent mix for the area, whilst contributing the regeneration of the area. Consolidation and densification of industrial floorspace should be considered to release land for alternative uses (such as residential).

Source: Avison Young, 2021

Dagenham Dock

9.80 It is suggested that DD1 is retained as SIL area. This site is a well-established industrial site with flagship occupiers. The site has excellent access to the A13.

9.81 DD2 has some potential for colocation, particularly eastwards of the river (The Gores) in the long term, which would deliver a cohesive approach to the regeneration aspirations around Dagenham Dock Station (north of the A13).

9.82 It is proposed that activities on DD6, DD7 and DD8 focus on heavy industrial (manufacturing) and logistic activities. Plots to the south of the cluster (along the River Thames) should be protected for aggregate, waste management and energy/utilities uses, taking advantage of the existing dock infrastructure for movement of materials and resources from and to the sites. The southern area should be protected for those standalone activities.

9.83 Dagenham Dock will be essential to accommodate relocated floorspace and enable the regeneration vision across LBBD. Substantial industrial floorspace could be delivered in this cluster, although our assessment identified an amount of floorspace well in excess of future requirement (leaving some flexibility in the delivery process).

Table 76 – Future Floorspace by Site, Dagenham Dock

	Proposal	Timing	Description & Justification
DD1	SIL	Medium Term	Retention to SIL and reinforcement of logistics activities on site
DD2	LSIS	Long term	Proposed for industrial use, with potential in longer term for colocation or partial release of eastern section of the site to alternative use
DD3	Colocation	Medium Term	Site is proposed for colocation. Whilst regeneration vision was for full release of the site to residential, partial retention of the site for industrial use is advisable to accommodate future demand and relocation
DD4	Colocation	Medium Term	Site is proposed for colocation as per regeneration vision for the site (mixed use residential, commercial and industrial). This site is suitable for lighter industrial activities (industrious workshops)
DD5	SIL	Medium Term	Proposed by Be First for 100,000 sqm of consolidated wholesale market (sui generis) and connected/supporting uses including food processing, logistics, food education and retail. Our assessment as estimated that the site could deliver c.103,000 sqm. It is therefore proposed that the site is retained as SIL land to deliver Be First's vision for the consolidated market (and supporting uses).
DD6	SIL	Short Term	Retention of site and expansion of SEGRO Dagenham Dock business park or similar activities.
DD7	SIL	Long Term	Focus on advanced manufacturing and manufacturing activities with some logistics and distribution. Southern strip (along the Thames) should be protected for standalone activities requiring access to fluvial infrastructure (i.e. aggregate, waste management, oil etc.)
DD8	SIL	Long Term	Focus on logistics and wholesale activities (link to consolidated wholesale market) in DD5). Southern strip (along the Thames) should be protected for standalone activities requiring access to fluvial infrastructure (i.e. aggregate, waste management, oil etc.)

Source: Avison Young, 2021

Dagenham East

9.84 This cluster should predominantly be considered for activities relating to the film studio (supply chain), with delivery of small production/manufacturing workshops and creative studios to support the film

industry. The delivery of the film studio should be used as a catalyst for the creation of a creative centre of excellence in Dagenham East.

9.85 DE1, DE2 and DE4 could be considered for partial release or colocation with other employment use (particularly DE2 as other sites are to be occupied by the film studio), taking advantage of the connectivity to the residential neighbourhood to the north of Dagenham East and the Underground Station as well as the future film studio. This would for example be the provision of office space for marketing activities, digital agencies or recruitment/casting agencies working in direct line with the film industry.

9.86 DD3 is currently occupied by a large data centre and planning application has been granted for the delivery of additional data centre space. It is therefore unlikely that major change can be expected in the short or medium term from this site. The site is proposed to be retained as SIL as it is situated away from residential neighbourhoods.

9.87 The majority of the additional floorspace to be delivered in this cluster will come from the film studio and supporting activities.

9.88 Additional floorspace delivery could be accelerated in this cluster, with the construction of the film studio being underway.

Table 77 – Future Floorspace by Site, Dagenham East

	Proposal	Timing	Description & Justification
DE1	Colocation	Medium Term	Site considered to deliver a comprehensive mixed-use development involving a film studios and related ancillary uses.
DE2	Colocation	Medium Term	Site considered to deliver a comprehensive mixed-use development involving a film studios and related ancillary uses.
DE3	SIL	Medium Term	Currently occupied by data centre, with pipeline for further data centre space. Site to be designated as SIL to deliver heavier industrial activity in Dagenham East away from residential areas.
DE4	Colocation	Medium Term	Site considered to deliver a comprehensive mixed-use development involving a film studios and related ancillary uses.

Source: Avison Young, 2021

Gascoigne South & Kingsbridge

9.89 The focus for Kingsbridge should be on logistics and distribution activities (small and large), with potential for some minor standalone activities particularly on the southern side of the site.

9.90 A significant amount of additional floorspace could be delivered in the short and medium terms in Kingsbridge and could accommodate all floorspace to be displaced from Gascoigne South as well as additional floorspace from other clusters such as Castle Green.

9.91 Kingsbridge would also be a prime location to accommodate demand pushed out of Newham, particularly logistics to the Greater London Market and last mile delivery, thanks to direct access to the A13 (to Inner London) and North Circular.

Table 78 – Future Floorspace by Site, Gascoigne South & Kingsbridge

	Proposal	Timing	Description & Justification
GS1	Release	Long Term	
KB1	SIL	Short Term	Protection as SIL site to accommodate relocation from Gascoigne South and take full advantage of access to strategic road network and location of the site on western boundary of LBBD. Floorspace delivered on this site could also accommodate demand pushed out from LB Newham (particularly logistics industry serving the Greater London Market).

Source: Avison Young, 2021

River Road

9.92 River Road is expected to deliver a fair amount of additional industrial floorspace despite the release of RR10 and colocation in RR1, RR8 and RR9. Additional space will be achieved in the short and medium terms through the planning pipeline and industrial intensification and in the medium to long term through more general densification of the area.

9.93 The main focus of River Road as a cluster should be for manufacturing activities and green technologies, light distribution, wholesale and trade counters. Provision of land for standalone activities (aggregates, specialised construction, waste management) should be made in protected wharf, particularly in RR5 which provides docking infrastructure on the Thames.

9.94 RR1 is considered for co-location and could provide mixed use development, with industrious floorspace on lower floors and alternative uses (such as residential) above. This would improve connectivity between the residential community west of River Road (south of the A13) and the rest of the residential community already existing in and around the cluster.

9.95 The same recommendation is made for RR2 to deliver some coherence in the regeneration vision. Although, we assume that the regeneration and redevelopment of RR2 will take longer than RR1 due to the high level of fragmentation in the area.

9.96 RR3 is suggested to remain under LSIS designation. It is our understanding that Be First has plans for the redevelopment of the site.

9.97 RR4, RR6, RR7 are expected to deliver industrial space for smaller occupiers concentrated in larger developments (such as Industria). Floorspace delivered in the area should be flexible to allow the accommodation or relocated businesses from elsewhere in the borough (mainly Castle Green and

Gascoigne South) as well as deliver high quality space responding to the requirements of modern businesses. Those sites will provide floorspace for the relocation of activities currently located in RR10 and RR9.

9.98 RR5 is expected to accommodate larger businesses. The southern edge of the site, along the Thames should be protected for standalone activities such as waste management, recycling and production of aggregates for example.

Table 79 – Future Floorspace by Site, River Road

	Proposal	Timing	Description & Justification
RR1	Colocation	Medium Term	Site considered for colocation, with minor loss of industrial space to allow delivery of alternative uses (such as residential). Industrious space should be considered and improvement to connectivity east-west should be at the centre of the redevelopment focus.
RR2	Colocation	Long Term	Site considered for colocation, with minor loss of industrial space to allow delivery of alternative uses (such as residential). Industrious space should be considered and improvement to connectivity east-west should be at the centre of the redevelopment focus. Redevelopment may be slower than in RR1 due to fragmentation of the site.
RR3	LSIS	Medium Term	Retain as LSIS with current plans of redevelopment of the site assumed to be progressed for delivery in the short to medium term.
RR4	SIL	Short Term	Retention as SIL. The site is expected to deliver short term industrial floorspace through the planning pipeline (i.e. Industria) and potential for industrial intensification on Council-owned land.
RR5	SIL	Long Term	Retention as SIL. The site is expected to delivery industrial floorspace in the long term through industrial intensification. Southern extremity of the site should be considered and protected for standalone activities such as waste management and aggregates production, taking advantage of existing docking infrastructure
RR6	SIL	Long Term	Retention as SIL to accommodate larger occupiers (wholesale, trade counters, services).
RR7	SIL	Long Term	Long term industrial intensification could be achieved on this site subject to the relocation of the London City Bond and end of the lease.
RR8	Colocation	Medium Term	Colocation is proposed for this site, as per regeneration vision. Whilst this site is considered for colocation, it is expected that additional industrial floorspace could be delivered in this area, particularly on the southern side of the site or through the delivery of mixed-use developments.
RR9	Colocation	Medium Term	Colocation is proposed for this site, as per regeneration vision. This site located between RR8 and RR10 will mark the transition between industrial and residential. It is assumed that some industrial floorspace will be lost from this site (to be reaccommodated on nearby sites) to deliver a greater share of housing and community space.
RR10	Release	Medium Term	Release of land to residential as proposed in regeneration vision

Source: Avison Young, 2021

Wantz Road

9.99 There is limited change proposed for Wantz Road. Overall, we believe that development could be and will be modernised to respond to the requirement of modern businesses, but we would expect the area to retain is role as a light industrial estate and trade counter activities.

Table 80 – Future Floorspace by Site, Wantz Road

	Proposal	Timing	Description & Justification
WR1	LSIS	N/A	No change proposed for this cluster. Minor floorspace gain could be achieved through general densification (although limited). Cluster expected to remain light industrial and trade counters area.
WR2	LSIS	Long Term	
WR3	LSIS	Short Term	
WR4	LSIS	N/A	

Source: Avison Young, 2021

Hertford Road

9.100 The site is proposed for release to alternative uses as per the regeneration vision for LBBD although the site enjoys direct access to the north circular and would deliver good quality space for last mile delivery activities and trade counters servicing the North East of London.

Table 81 – Future Floorspace by Site, Hertford Road

	Proposal	Timing	Description & Justification
HR1	Release	Long Term	Sufficient industrial floorspace capacity to accommodate release of this site as per regeneration vision.

Source: Avison Young, 2021

Appendix I
Employment Change 2020-2040

Change in Employment 2020-2040, LBBD (2-digit SIC Codes)	B1b/c, B2	B8	Waste	TOTAL
10: Manufacture of food products	0	0	0	**0**
11: Manufacture of beverages	0	0	0	**0**
12: Manufacture of tobacco products	0	0	0	**0**
13: Manufacture of textiles	0	0	0	**0**
14: Manufacture of wearing apparel	0	0	0	**0**
15: Manufacture of leather and related products	0	0	0	**0**
16: Manufacture of wood and of products of wood and cork; manufacture of articles of straw and plaiting materials	0	0	0	**0**
17: Manufacture of paper and paper products	0	0	0	**0**
18: Printing and reproduction of recorded media	(103)	0	0	**(103)**
19: Manufacture of coke and refined petroleum products	0	0	0	**0**
20: Manufacture of chemicals and chemical products	0	0	0	**0**
21: Manufacture of basic pharmaceutical products and pharmaceutical preparations	0	0	0	**0**
22: Manufacture of rubber and plastic products	33	0	0	**33**
23: Manufacture of other non-metallic mineral products	100	0	0	**100**
24: Manufacture of basic metals	0	0	0	**0**
25: Manufacture of fabricated metal products, except machinery and equipment	0	0	0	**0**
26: Manufacture of computer, electronic and optical products	0	0	0	**0**
27: Manufacture of electrical equipment	0	0	0	**0**
28: Manufacture of machinery and equipment n.e.c.	0	0	0	**0**
29: Manufacture of motor vehicles, trailers and semi-trailers	874	0	0	**874**
30: Manufacture of other transport equipment	0	0	0	**0**
31: Manufacture of furniture	0	0	0	**0**
32: Other manufacturing	0	0	0	**0**
33: Repair and installation of machinery and equipment	0	0	0	**0**
35: Electricity, gas, steam and air conditioning supply	0	0	0	**0**
36: Water collection, treatment and supply	0	0	0	**0**

37: Sewerage	0	0	9	**9**
38: Waste collection, treatment and disposal activities; materials recovery	0	34	193	**227**
39: Remediation activities and other waste management services	0	0	136	**136**
41: Construction of buildings	0	363	0	**363**
42: Civil engineering	0	0	0	**0**
43: Specialised construction activities	830	0	0	**830**
45: Wholesale and retail trade and repair of motor vehicles and motorcycles	0	246	0	**246**
46: Wholesale trade, except of motor vehicles and motorcycles	0	726	0	**726**
52: Warehousing and support activities for transportation	0	175	0	**175**
53: Postal and courier activities	0	41	0	**41**
59: Motion picture, video and television programme production, sound recording and music publishing activities	0	0	0	**0**
71: Architectural and engineering activities; technical testing and analysis	0	0	0	**0**
72: Scientific research and development	0	0	0	**0**
74: Other professional, scientific and technical activities	13	0	0	**13**
81: Services to buildings and landscape activities	54	0	0	**54**
82: Office administrative, office support and other business support activities	0	5	0	**5**
TOTAL	**1,801**	**1,590**	**339**	**3,730**

Appendix II
Cluster / Typology matching

	Typology A	Typology B	Typology C	Typology D	Typology E	Typology F	Typology G
CG1	X	X	X	X	X	X	X
CG2	X	X	X	X	X	X	X
CG3							X
CG4							X
CG5	X	X	X	X	X	X	X
CG6	X	X	X	X	X	X	X
CH1	X	X					X
CH2	X	X	X	X	X	X	X
CH3	X	X	X	X	X	X	X
DD1							X
DD2			X	X	X	X	X
DD3			X		X		X
DD4			X	X	X	X	X
DD5							
DD6			X	X	X	X	X
DD7	X	X	X	X	X	X	X
DD8				X			
DE1	X	X	X	X	X	X	X
DE2	X	X	X	X	X	X	X
DE3	X	X	X	X	X	X	X
DE4	X	X	X	X	X	X	X
GS1	X	X	X	X	X	X	X
KB1			X	X	X	X	X
RR1	X	X	X	X	X	X	X
RR2			X	X	X	X	X
RR3		X					X
RR4	X	X	X	X	X	X	X
RR5	X	X	X	X	X	X	X
RR6	X	X	X	X	X	X	X
RR7			X	X	X	X	X
RR8	X	X	X	X	X	X	X

	Typology A	Typology B	Typology C	Typology D	Typology E	Typology F	Typology G
RR9	X	X	X	X	X	X	X
RN10	X	X	X	X	X	X	X
WR1			X	X	X	X	X
WR2							X
WR3	X	X					X
WR4	X	X	X	X	X	X	X
HR	X	X	X	X	X	X	X

Appendix III
Growth Industry / Typology matching

	Typology A	Typology B	Typology C	Typology D	Typology E	Typology F	Typology G
29: Manufacture of motor vehicles, trailers and semi-trailers		X		X			X
43: Specialised construction activities	X	X				X	X
46: Wholesale trade, except of motor vehicles and motorcycles	X	X		X	X		X
41: Construction of buildings	X	X				1	X
45: Wholesale and retail trade and repair of motor vehicles and motorcycles	X			X			X
38: Waste collection, treatment and disposal activities; materials recovery							
52: Warehousing and support activities for transportation	X	X		X	X		X
23: Manufacture of other non-metallic mineral products	X	X	X		X	X	
81: Services to buildings and landscape activities	X	X			X	X	X
22: Manufacture of rubber and plastic products	X	X			X	X	
53: Postal and courier activities	X	X		X	X	X	X
74: Other professional, scientific and technical activities	X	X	X		X	X	X
82: Office administrative, office support and other business support activities	X	X	X		X	X	
18: Printing and reproduction of recorded media	X	X	X	X	X	X	X

Appendix IV
Site Selection

Legend:

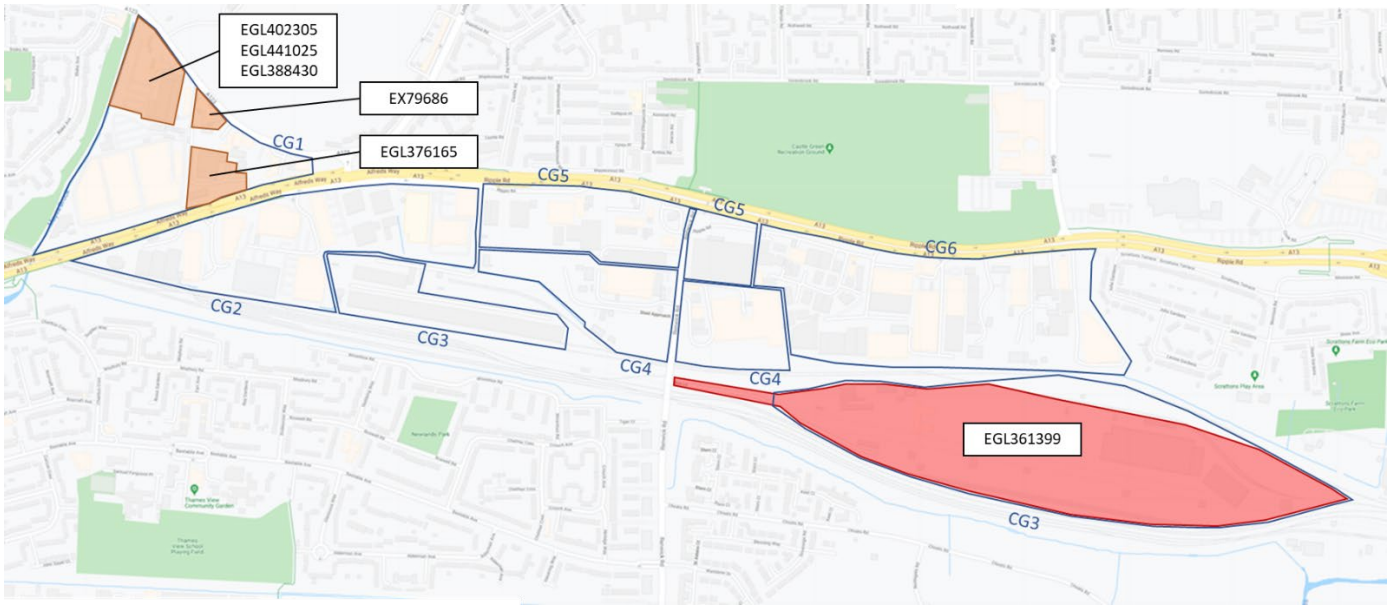
Cluster

Short Term Site

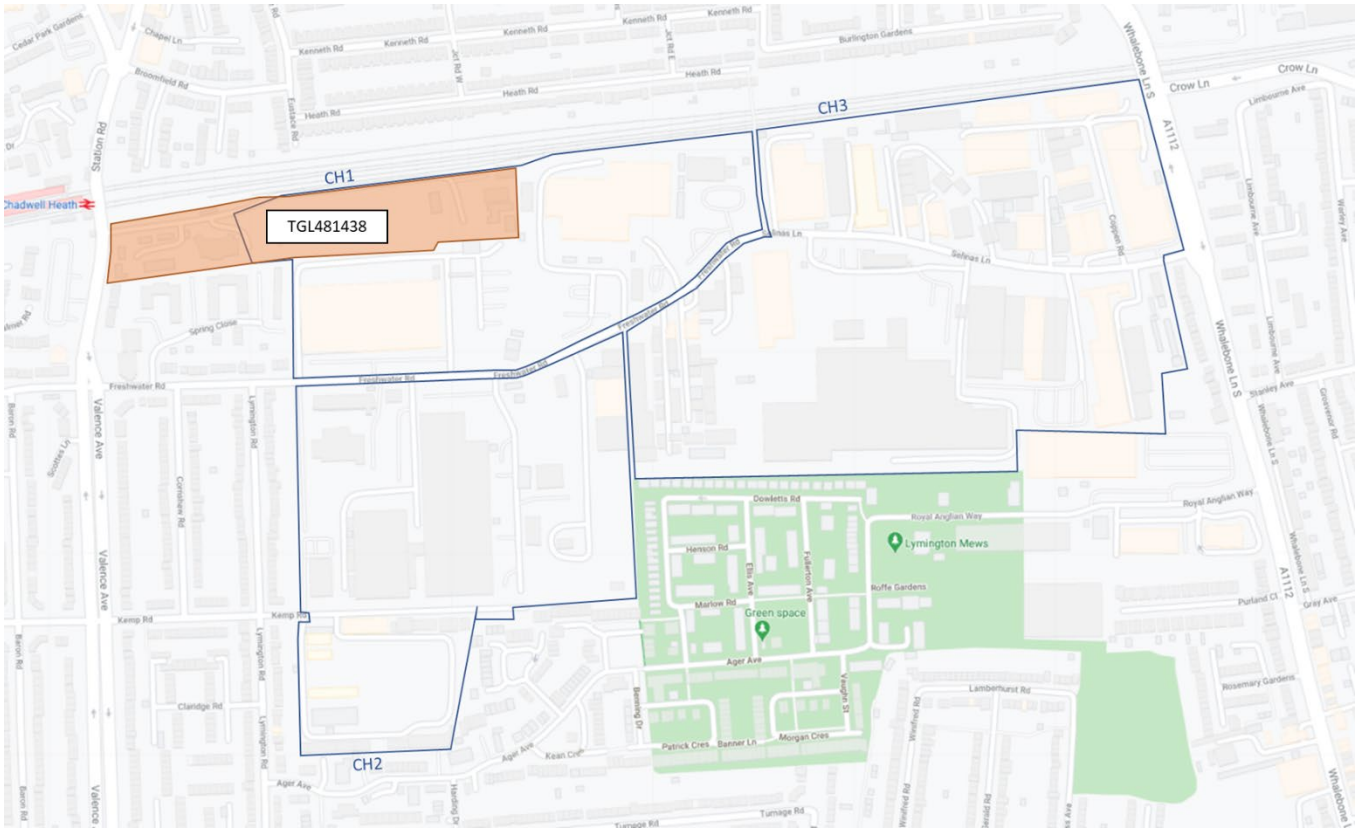
Medium Term Site

Long Term Site

Castle Green

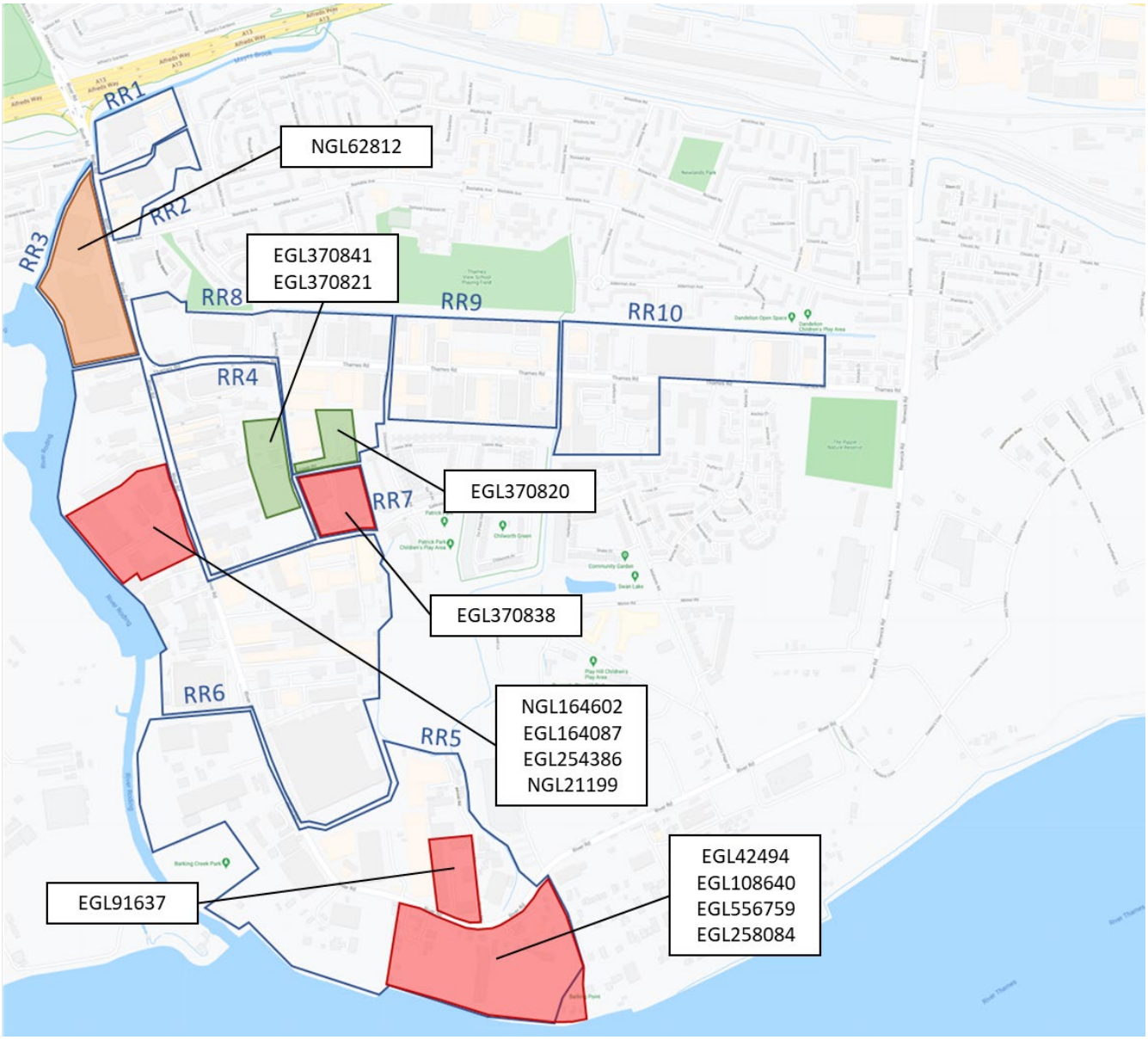


Chadwell Heath



Dagenham Dock

River Road


RR1
RR2
RR3
RR4
RR5
RR6
RR7
RR8
RR9
RR10
NGL62812
EGL370841
EGL370821
EGL370820
EGL370838
NGL164602
EGL164087
EGL254386
NGL21199
EGL91637
EGL42494
EGL108640
EGL556759
EGL258084

Gascoigne South & Kingsbridge

Appendix V
CoStar Building Rating System

The CoStar Building Rating System provides a national rating for commercial buildings. Properties are evaluated and rated using a universally recognized 5 Star scale based on the characteristics of each property type, including: architectural attributes, structural and systems specifications, amenities, site and landscaping treatments, third party certifications and detailed property type specifics. The extensive, standardized property information collected by CoStar Research makes such a national building rating system possible.

This structure allows CoStar to actively and continuously preserve the timeliness and consistency of building ratings as an integrated function of CoStar Research, through a centrally managed process which ensures an up-to-date reflection of commercial real estate activity.

Through a series of mechanisms, CoStar compares the details of a property against a set of definitions[13] that describe expected levels of quality for each rating, within each property type.

These mechanisms include:

- CoStar Research - Researchers examine building specifications, images, brochures, and floor plans to ensure that building ratings are consistent. Field Researchers are located across the entire US and UK conducting site inspections and grading various aspects of a property.
- Rating Models - Analyses on property and market level data are used to support the determination of a building rating.
- Analytic Quality Assurance - Building ratings are continuously reviewed through a series of checks for inconsistences with respect to aggregated rating trends, as well as the ongoing integration of up-to-date property information.
- Market Advisors - CoStar engages industry professionals though local advisory meetings to gather input on the rating system, confirm individual ratings and collect first-hand knowledge on specific buildings.

[13] https://www.costar.com/docs/default-source/brs-lib/costar_buildingratingsystem-definition.pdf?sfvrsn=12a507a4_2

Contact Details

Enquiries
Bart Monhonval
D +44 (0)20 7911 2312 | **M** +44 (0)7771 345 424
bart.monhonval@avisonyoung.com

Visit us online
avisonyoung.co.uk

Avison Young
65 Gresham Street, London EC2V 7NQ