

Sustainability Appraisal (SA) for the London Borough of Barking & Dagenham Council's Local Plan

SA Report - Second Regulation 19 Consultation Version

London Borough of Barking and Dagenham Council

October 2021

Quality information

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Introduction

1. Introduction

Background

- 1.1 AECOM is commissioned to provide support for the Sustainability Appraisal (SA) of the emerging London Borough of Barking & Dagenham Council's Local Plan – henceforth referred to as 'the Local Plan'. SA is a mechanism for considering and communicating the likely effects of an emerging plan, and alternatives, with a view to avoiding and mitigating adverse effects and maximising the positives. SA of Local Plans is a legal requirement.¹

SA explained

- 1.2 It is a requirement that SA is undertaken in-line with the procedures prescribed by the Environmental Assessment of Plans and Programmes Regulations 2004.²
- 1.3 In-line with the Regulations, a report (known as the SA Report) must be published for consultation alongside the Draft Plan that essentially 'identifies, describes and evaluates' the likely significant effects of implementing 'the plan, and reasonable alternatives'.³ The report must then be taken into account, alongside consultation responses, when finalising the plan.
- 1.4 More specifically, the SA Report must answer the following three questions:
1. What has Plan-making / SA involved up to this point?
 - Including in relation to 'reasonable alternatives'.
 2. What are the SA findings at this stage?
 - i.e. in relation to the Draft Plan.
 3. What happens next?
 - What steps will be taken to finalise (and monitor) the plan?

This SA Report

- 1.5 This SA Report⁴ is published alongside the Second Revision Regulation 19 Consultation Version of the Local Plan.
- 1.6 Each of the three SA questions identified above is answered in turn below, with a 'part' of the report dedicated to each. Before answering Question 1, two initial questions are answered in order to further 'set the scene': i) What is the plan trying to achieve?; and ii) What is the scope of the SA?

¹ Since provision was made through the Planning and Compulsory Purchase Act 2004 it has been understood that local planning authorities must carry out a process of Sustainability Appraisal alongside plan-making. The centrality of SA to Local Plan-making is emphasised in the National Planning Policy Framework (2021). The Town and Country Planning (Local Planning) (England) Regulations 2012 require that an SA Report is published for consultation alongside the 'Proposed Submission' plan document.

² The SA process incorporates the SEA process. Indeed, SA and SEA are one and the same process, differing only in terms of substantive focus. SA has an equal focus on all three 'pillars' of sustainable development (environment, social and economic).

³ Regulation 12(2) of the Environmental Assessment of Plans and Programmes Regulations 2004

⁴ See **Appendix I** for further explanation of the regulatory basis for answering certain questions within the SA Report; and a 'checklist' explaining more precisely the regulatory basis for presenting certain information.

2. What is the Plan seeking to achieve?

Overview

- 2.1 The Local Plan is the key planning policy document for the London Borough of Barking and Dagenham (LBBD). The Local Plan will provide a framework for guiding development within the Borough from adoption until 2037. It will set out how the Borough will grow, through identifying the number of new homes, jobs and facilities needed to support the changing population, as well as protecting those features that communities cherish, such as conservation areas and historic buildings.
- 2.2 The Local Plan will set out the Council's spatial vision for development and strategic objectives, which will be delivered through strategic policies, development management policies and more detailed, area-specific policies. These policies will seek to address local issues specific to Barking and Dagenham and to ensure the growth ambitions of the Borough are achieved in a sustainable manner. Together with the London Plan, the Joint Waste Development Plan and any related policy and guidance documents, the Local Plan will provide comprehensive planning guidance in determining planning applications and in shaping what the area will look like over the next 18 years.

Vision and objectives of the Plan

- 2.3 The following vision has been developed for growth in the Borough:

“By 2037, we want to realise our vision for inclusive growth, to harness the growth opportunity that arises from our people, our land and our location, while ensuring it is sustainable and improves prosperity, wellbeing and participation for all. This will mean achieving our objective to deliver:

- *44,051 high-quality new homes that meet the needs of our residents and working Londoners – in the plan period – in safe and ‘liveable’ neighbourhoods, which are well supported by optimum health, education and community facilities.*
- *20,000 jobs in diverse enterprises, from media to biotech to food-based industries; re-asserting our role as a key part of London’s industrial engine and an important economic centre in our own right.*
- *463 hectares of beautiful parks and natural open spaces in combination with development of energy-efficient homes and a decarbonised energy system to make our borough the ‘Green Capital of the Capital’.*
- *7 areas characterised by distinctive neighbourhoods that are well-connected to each other and where residents and businesses are connected to the opportunity development and growth brings.*
- *0 people left behind.”*

- 2.4 A vision for each of the 7 sub-areas has been developed and is set out below. The sub-areas are also illustrated in **Figure 2.1**.

Barking and the River Roding

- 2.5 A town centre reborn with an improved station as its gateway: The potential to be a great place to live, work, shop and relax with aspiration to attract markets, merchants, makers and more. Homes, arts and culture that will better connect the Roding River side and Abbey grounds with the new town centre community.

Thames Riverside

- 2.6 A new river side community offering a great place to live, work and play, with thousands of new homes, new urban centres, two new rail stations and clipper boats to the heart of London and a second film studio. Intensified and improved industrial space will deliver more and better jobs, delivering modern space for future industries and also bringing vibrant communities together through co-location and growth of space for creative workspace.

Dagenham Dock, Freeport

- 2.7 A home to the next generation of London's sustainable industries. Anchored by London's iconic wholesale markets and the Thames Freeport, interwoven with unique international rail accessibility. An unrivalled opportunity for intensification, investment and international rail freight offering potential for thousands more green jobs. North of the railway stations a new community with new green streets and schools close to the River Thames.

Becontree and Heathway

- 2.8 The heart of the borough, the Becontree estate, will be revitalised with a new design code, and enhanced parks which retain its 100 year-old character. The centre of Dagenham, the Heathway will complement Bar king town centre as a second gateway to London.

Chadwell Heath and Marks Gate

- 2.9 Crossrail and a comprehensively redeveloped industrial estate will deliver homes for thousands of the borough's residents. Creating a community with the knowledge, skills, and passion to drive the borough's future through science, technology and the arts. Marks Gate will be sensitively improved and better connected to the borough.

Becontree Heath and Rush Green

- 2.10 A place where young and old alike can learn and train or simply follow their passion. Enhanced urban spaces to green places. Transitioning from learning to living, the suburban character of homes and streets will be strengthened, with small scale delivery of new homes to reinforce the strength of the community.

Dagenham East and Village

- 2.11 A centre for film, science and technology close to the historic heart of Dagenham. A reopened rail station will bring Hollywood to Eastbrook. At its heart, the character of the village will be reborn, sensitively creating places for people to call home, with the look, feel, and richness of an Essex market town.

Figure 2.1: Vision for the seven sub-areas in the London Borough of Barking and Dagenham



What is the Local Plan not seeking to achieve?

- 2.12 It is important to emphasise that the plan will be strategic in nature. Even the allocation of sites/ establishment of site-specific policy through this plan should also be considered a strategic undertaking, i.e. a process that omits consideration of some detailed issues (in the knowledge that they can be addressed at the planning application stage). The strategic nature of the Local Plan is reflected in the scope of the SA.

3. What is the scope of the SA?

Introduction

- 3.1 The aim here is to introduce the reader to the scope of the SA, i.e. the sustainability issues/objectives that should be a focus of (and provide a broad methodological framework for) SA.
- 3.2 Further information on the scope of the SA - i.e. a more detailed review of sustainability issues/objectives as highlighted through a review of the sustainability 'context' and 'baseline' - is presented in **Appendix II**.

Consultation on the scope

- 3.3 The Environmental Assessment of Plans and Programmes Regulations 2004 require that *"When deciding on the scope and level of detail of the information that must be included in the Environmental Report [i.e. the SA scope], the responsible authority shall consult the consultation bodies"*. In England, the consultation bodies are the Environment Agency, Historic England and Natural England.⁵ As such, these authorities were consulted on the SA scope in 2015. Since that time, the SA scope has evolved as new evidence has emerged. The SA scope was reviewed and updated in 2019 and presented in the Interim SA Report (Nov 2019).

Key issues and SA objectives

- 3.4 The baseline and context review have informed the identification of key sustainability issues and these are presented in **Appendix II**.
- 3.5 SA objectives and assessment questions were established to address the key issues. Taken together, the sustainability objectives and key questions as presented in **Table 3.1** below provide a methodological 'framework' for undertaking the appraisal of the Local Plan and reasonable alternatives.

Table 3.1: SA framework

SA theme	SA objective	Assessment questions (will the option/ proposal help to...)
Biodiversity	Protect and enhance biodiversity within and surrounding the borough, and ensure net gain in biodiversity	<ul style="list-style-type: none"> Protect SINCs, priority habitats, and priority or protected species? Contribute to the London Plan regional BAP Habitat Targets, LBAP habitat targets and/or opportunities identified in NCAs 81 and 111, and London Natural Signatures? Reduce deficiency in access to nature for local residents? Contribute to the Barking and Dagenham Green infrastructure and Biodiversity Strategy, the All London Green Grid or wildlife corridors? Ensure development can comply with the Urban Greening Factor set out in the Draft London Plan
Climate change	Improve the resilience of the borough to the potential impacts of climate change, including flooding, including by encouraging the use of SuDS	<ul style="list-style-type: none"> Reduce the risk of fluvial or tidal flooding? Reduce the risk of groundwater flooding and / or surface water flooding? Avoid locating new homes in areas of flood risk? Promote the use of SUDS? Deliver innovative design solutions, considering the latest design guidance such as the 2019 National Design Guide.

⁵ In accordance with Article 6(3) of the SEA Directive, these consultation bodies were selected because *'by reason of their specific environmental responsibilities, [they] are likely to be concerned by the environmental effects of implementing plans and programmes.'*

SA theme	SA objective	Assessment questions (will the option/ proposal help to...)
	Reduce the level of emissions which contribute to climate change	<ul style="list-style-type: none"> • Reduce CO2 emissions? • Reduce energy consumption per capita? • Increase the quantity of green cover?
Economy and employment	<p>Increase employment opportunities for local people</p> <hr/> <p>Increase access to educational and vocational training for all local residents</p> <hr/> <p>Encourage growth of local businesses and economic diversification and attract inward investment</p>	<ul style="list-style-type: none"> • Reduce unemployment overall? • Increase employment opportunities for young people? • Improve the qualifications and skills of young people? • Improve the qualifications and skills of adults? • Increase the number of local businesses? • Improve the small business economy? • Improve the local economy? • Attract inward investment? • Support economic diversification?
Environmental quality (air, soil and water quality)	<p>Reduce harmful emissions and improve air quality</p> <hr/> <p>Reduce noise and light pollution</p> <hr/> <p>Improve chemical and biological water quality</p> <hr/> <p>Remediate contaminated land</p>	<ul style="list-style-type: none"> • Maintain or improve local air quality? • Achieve the National Air Quality Strategy Objectives? • Reduce the number of people exposed to noise pollution? • Reduce light pollution, including glare, light trespass and sky glow? • Improve the ecological and chemical quality of surface and groundwater bodies? • Contribute to river restoration? • Remediate contaminated land?
Health and wellbeing	<p>Improve the health and wellbeing of LBBB residents</p>	<ul style="list-style-type: none"> • Improve overall wellbeing? • Improve participation levels in sport amongst adults? • Improve provision of allotments? • Improve accessibility of leisure centres? • Improve the provision of open space? • Promote the use of sustainable transport modes such as walking and cycling? • Support accessible and legible networks with a clear pattern of streets? • Reduce fuel poverty? • Control hot-food takeaway provision in the Borough? • Support the delivery of high-quality design and functional, accessible, and/or lifetime homes supporting long-term resident health and wellbeing
Historic environment	<p>Conserve and enhance the significance of the borough's historic environment, heritage assets (including archaeology) and their settings and the cultural environment</p>	<ul style="list-style-type: none"> • Protect, and where possible, enhance heritage assets and their settings? • Protect, and where possible, enhance conservation areas? • Protect, and where possible, enhance the wider historic environment? • Support successful integration of new homes that relate positively to their historic setting. • Support access to, interpretation and understanding of the historic environment?
Land, soil and water resources	<p>Promote the reuse of brownfield land</p> <hr/> <p>Reduce water consumption within the borough</p> <hr/> <p>Reduce amount of waste sent to landfill</p>	<ul style="list-style-type: none"> • Contribute to the reuse of brownfield land of low biodiversity value? • Reduce water consumption? • Reduce the amount of waste produced and move it up the waste hierarchy?

SA theme	SA objective	Assessment questions (will the option/ proposal help to...)
		<ul style="list-style-type: none"> • Encourage recycling of materials and minimise consumption of resources during construction?
Landscape and townscape	Protect and enhance the character, setting and quality of landscapes and townscapes	<ul style="list-style-type: none"> • Protect and enhance landscape and townscape character and distinctiveness? • Deliver high-quality design, in line with government guidance such as the 2019 National Design Guide?
Population and communities	Ensure good accessibility to social infrastructure	<ul style="list-style-type: none"> • Improve access to social, commercial, and community facilities, including leisure and recreation opportunities. • Promote the development of a range of high quality, accessible community facilities, including specialist services for disabled and older people?
	Maintain and enhance community identity	<ul style="list-style-type: none"> • Can development effectively integrate within the existing settlement pattern? • Enhance the identity of a community or settlement?
	Reduce social deprivation within the borough	<ul style="list-style-type: none"> • Provide development in the most deprived areas and stimulate regeneration? • Stimulate regeneration and secure benefits for the existing community?
	Contribute towards reducing crime and the fear of crime	<ul style="list-style-type: none"> • Reduce crime and the fear of crime? • Provide well-designed public and shared amenity spaces that feel safe for people who live, work and visit the area?
	Increase supply of housing, choice and quality of housing and affordable housing within the borough.	<ul style="list-style-type: none"> • Meet the identified needs for the borough? • Ensure an appropriate mix of dwelling sizes, types and tenures to meet the needs of all sectors of the community?
Transport and movement	Ensure LBBD is served with an integrated network of routes, for all modes of transport, with well-considered parking, servicing and utility infrastructure for all users.	<ul style="list-style-type: none"> • Reduce the need to travel through sustainable patterns of land use and development? • Encourage modal shift to more sustainable forms of travel? • Enable transport infrastructure improvements? • Facilitate working from home and remote working? • Provide improvements to and/ or reduce congestion on the existing highway network?

**Part 1: What has plan-making/
SA involved up to this point?**

4. Introduction (to Part 1)

- 4.1 Plan-making has been underway since 2015, with a wide range of evidence produced to inform the development of the draft plan. Prior to this current stage (Second Revision Regulation 19⁶), a number of Local Plan and SA documents have been published. **Table 4.1** sets these documents out.

Table 4.1: Key Local Plan/ SA documents published to date

Local Plan Documents	SA Documents
	SA Scoping Report Consultation was undertaken from 23 March to 04 May 2015
Issues and Options Document Public consultation from 14 October 2015 to 16 January 2016	
Draft Local Plan Regulation 18 Consultation version Public consultation from 29 November 2019 to 24 January 2020	Interim SA Report and Non-Technical Summary Public consultation from 29 November 2019 to 24 January 2020 ⁷
Local Plan Regulation 19 Consultation version Public consultation from 05 October to 29 November 2020	SA Report and Non-Technical Summary Public consultation from 05 October to 29 November 2020 ⁸

- 4.2 This part of the report presents information regarding the consideration of reasonable alternative spatial strategies, i.e. alternative approaches to the allocation of land to meet development needs. Please note this information is important given the requirements of the SEA Regulations, specifically the requirement to present (within the SA Report) an appraisal of 'reasonable alternatives' and 'an outline of the reasons for selecting the alternatives dealt with'.

What is the key issue for the plan?

- 4.3 Whilst the plan objectives (see chapter 2, above) are numerous and cover a range of issues, an overarching objective⁹ relates to the identification of land to meet housing and employment needs over the plan period 2019 - 2037. Determining an approach to housing and employment growth is the primary means by which the plan seeks to achieve wide ranging objectives. It is the matter at the heart of the plan.
- 4.4 Hence it is considered reasonable¹⁰ that alternatives appraisal should focus on this matter. Whilst the plan is set to establish policy to address a range of other specific issues, it was recognised as reasonable and proportionate to develop policy without formal alternatives appraisal as they are not likely to result in significant effects.

What about site options?

- 4.5 Site options - i.e. the pool of sites available, deliverable and potentially suitable for allocation through the plan - were appraised in 2019, 2020 and 2021. The role of site options appraisal within the SA process has primarily been to provide an evidence base to facilitate the

⁶ The Town and Country Planning (Local Planning) (England) Regulations 2012

⁷ <https://www.lbbd.gov.uk/sites/default/files/attachments/Reg-18-Interim-Sustainability-Appraisal-Report-28-Nov-2019.pdf>

⁸ <https://www.lbbd.gov.uk/local-plan-review>

⁹ In line with the Environmental Assessment of Plans and Programmes Regulations (2004), a decision on what 'reasonably' should be the focus of alternatives appraisal should be made in-light of the plan objectives.

¹⁰ Recent case-law (most notably Friends of the Earth Vs. Welsh Ministers, 2015) has established that planning authorities may apply discretion and planning judgement when determining what should reasonably be the focus of alternatives appraisal, recognising the need to apply a proportionate approach and ensure an SA process / report that is focused and accessible.

development of spatial strategy alternatives.¹¹ As such, site options appraisal is not given further explicit attention within this part of the report. Specific sites are discussed as part of the justification for developing alternative spatial strategies, but formal site options appraisal findings are presented only in **Appendix III**.

Reasonable alternatives considered at previous stages

- 4.6 It is important to note that SA is an iterative process, with alternatives and the emerging plan (policies and allocations) considered at each stage of plan-making. In this context, five spatial strategy options were previously identified and considered through the SA process at the last Regulation 18 plan-making stage in 2019. The findings of this work were presented in an Interim SA Report¹² and separate Non-technical Summary¹³ published alongside the Draft Local Plan Regulation 18 Consultation version in November 2019.
- 4.7 The spatial strategy options were then further developed and refined to reflect updated evidence for the Regulation 19 plan-making stage in 2020. Three spatial strategy options were identified and considered through the SA process at this stage. The findings of this work were presented in an SA Report¹⁴ and separate Non-technical Summary published alongside the Draft Local Plan Regulation 19 Consultation version in October 2020.
- 4.8 The options identified at the plan-making stages outline above and the findings of the SA are not repeated in this report. As the evidence base and policy context has continued to evolve, it is necessary to reevaluate alternatives through the SA process to inform the Second Revision Regulation 19 Consultation version of the Local Plan.

Structure of this part of the report

- 4.9 The following chapters set out the policy context and evidence as it stands, and how they have informed the development of reasonable alternatives at this current (Regulation 19) stage in plan-making, the appraisal of these alternatives and Council's outline reasons for selecting the preferred approach. This part of the report is structured as follows:
- **Chapter 5** - explains reasons for selecting the alternatives dealt with;
 - **Chapter 6** - presents an appraisal of the reasonable alternatives; and
 - **Chapter 7** - explains reasons for selecting the preferred option.

¹¹ In other words, site options appraisal was undertaken as a means to an end (i.e. development and appraisal of reasonable alternatives), rather than an end in itself. It is worth noting that site options are not 'alternatives' in that they are not mutually exclusive.

¹² <https://www.lbbd.gov.uk/sites/default/files/attachments/Reg-18-Interim-Sustainability-Appraisal-Report-28-Nov-2019.pdf>

¹³ <https://www.lbbd.gov.uk/sites/default/files/attachments/Reg-18-Interim-Sustainability-Appraisal-Report-Non-technical-Summary-2019.pdf>

¹⁴ https://lucmaps.co.uk/Hub_Components/10589_LBBB/EvidenceBase.html

5. Establishing the reasonable alternatives

Introduction

5.1 This chapter explains how the policy context and evidence base was drawn on to establish reasonable alternatives for appraisal and then consultation at the Second Revision Regulation 19 stage. Ultimately, the aim of this chapter is to present ‘an outline of the reasons for selecting the alternatives dealt with’, in accordance with the SEA Regulations.

How much growth?

- 5.2 Barking and Dagenham’s Local Plan must be in ‘general conformity’ with the London Plan. In this context, the current London Plan (2021) is the starting point for the development of potential alternatives for the emerging Local Plan.
- 5.3 A critical issue for the Local Plan – and therefore the SA – is the level of housing to be accommodated in the Borough. In terms of the level or quantum of growth to be delivered during the Local Plan period (2019 to 2037), Policy H1 in the London Plan (2021) identifies a ten-year housing target (2019 - 2029) of **19,440** dwellings for Barking and Dagenham. This equates to an annual target of 1,944 dwellings per annum (dpa).
- 5.4 The Government’s published Housing Delivery Test 2020 measurement (January 2021) identifies that there has been significant under delivery of housing in the London Borough of Barking & Dagenham (LBBD) over the last three years. As a result, in line with the NPPF, a 20% buffer needs to be added to the housing requirement for the first five years of the Local Plan period.
- 5.5 The London Plan (2021) does not identify a specific housing target beyond 2029. It states that, “*If a target is needed beyond the 10 year period (2019/20 to 2028/29), boroughs should draw on the 2017 SHLAA findings (which cover the plan period to 2041) and any local evidence of identified capacity, in consultation with the GLA, and should take into account any additional capacity that could be delivered as a result of any committed transport infrastructure improvements, and roll forward the housing capacity assumptions applied in the London Plan for small sites.*” As a result, LBBD has identified a housing target of **19,424** dwellings from 2029 to 2037, based on the 2017 GLA SHLAA Phases 4 and 5.
- 5.6 **Table 5.1** below sets out the evidence outlined above in relation to the quantum of housing growth.

Table 5.1: Housing target for LBBD

Source	Quantum of growth
London Plan 2021 identifies ten-year housing target (2019 to 2029) of 19,440 dwellings for Barking & Dagenham. NPPF and Housing Delivery test (20% buffer to the first five-year housing target 2020 to 2025).	19,440 dwellings
2017 GLA SHLAA Phase 4 and 5 (2029 to 2037)	19,424 dwellings
Total for the Local Plan period (2020 to 2037)	38,865 dwellings

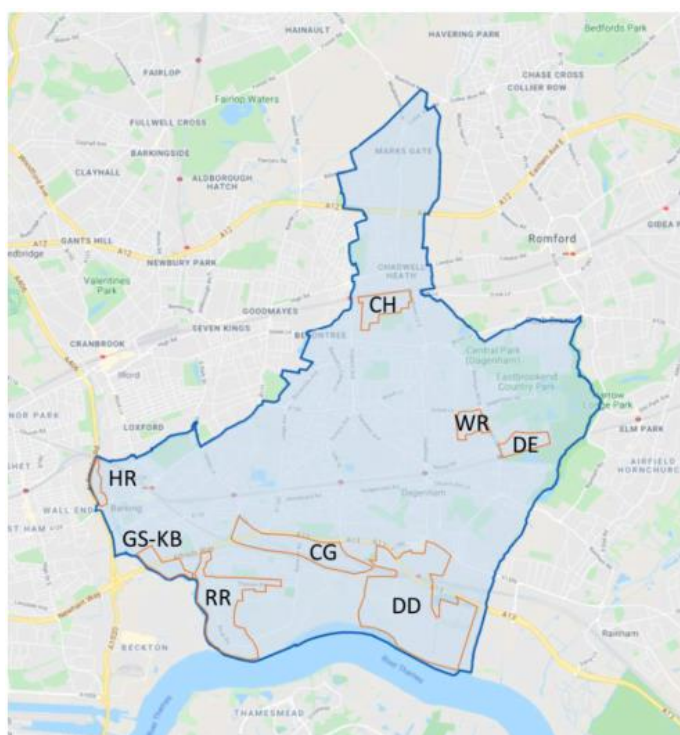
- 5.7 The total of 38,865 dwellings presents a minimum housing target to be delivered during the plan period in order to ensure that the Local Plan is in conformity with national planning policy and the London Plan (2021).
- 5.8 Alongside the evidence set out above, there is also a need to consider employment land as this will play an important role in the delivery of housing within the borough. Further to this, LBBD’s

aspirations and ambition to facilitate a transformational change in the Borough's social and economic landscape through intelligent use of its industrial land.

- 5.9 In this context, Policy E4 (Land for industry, logistics and services to support London's economic function) in the London Plan (2021) specifies that London's land and premises for industry, logistics and services fall into three categories:
- Strategic Industrial Locations (SILs);
 - Locally Significant Industrial Sites (LSIS); and
 - Non-Designated Industrial Sites.
- 5.10 Policy E4 states that the release of industrial land in order to manage issues of long-term vacancy and to achieve wider planning objectives, including the delivery of wider infrastructure, should be facilitated through the processes of industrial intensification, co-location and substitution set out in Policy E7 (Industrial intensification, co-location and substitution) and supported by Policy E5 (Strategic Industrial Locations (SIL)). *"Any release of industrial land 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."*
- 5.11 Policy E5 states that SILs should be managed pro-actively through a plan-led process. Boroughs should strategically coordinate Development Plans to identify opportunities to substitute industrial capacity and function of SSILs where evidence that alternative, more suitable, locations exist. The supporting text identifies the *"Thames Gateway as providing the greatest scope for strategically co-ordinated plan-led consolidation of SILs in order to manage down overall vacancy rates, particularly in the boroughs of Newham and Barking & Dagenham."*
- 5.12 Policy E7 encourages boroughs to explore opportunities for the intensification industrial activities in order to deliver additional capacity and to consider whether some types of industrial activities (particularly light industrial) could be co-located or mixed with residential and other uses. The supporting text states that there *"may be scope for selected parts of SILs or LSISs to be consolidated or appropriately substituted. This should be done through a carefully co-ordinated plan-led approach to deliver an intensification of industrial and related uses in the consolidated SIL or LSIS and facilitate the release of some land for a mix of uses including residential."*
- 5.13 An Industrial Land Strategy (ILS) (2021) has been prepared to inform the development of the Local Plan and support LBBD's ambitions. The purpose of the ILS was to provide a detailed assessment of the borough's stock of employment land and premises in light of current and future needs and consider how it can best be used to accommodate these needs. The ILS was prepared to show the potential approaches that LBBD could use to accommodate future industrial land demand in order to support Local Plan preparation, give direction to future masterplanning exercises in key growth locations and consider development proposals against. The ILS was prepared using a methodology that was agreed with the GLA, ensuring that the information used, and approach taken were both robust and satisfied the tests set out by the London Plan.
- 5.14 As a first step, the ILS (2021) reviewed the existing supply and identified that LBBD currently has 446.55 ha of industrial land divided between 8 clusters, which are comprised of 38 sites. The 8 clusters are set out in **Table 5.2** and presented in **Figure 5.1** on the next page.

Table 5.2: LBBD Industrial Clusters

Cluster	Designation	Plot size (ha)	Floorspace (sqm)
Castle Green (CG)	SIL	58.7	248,710
Chadwell Heath (CH)	LSIS	30.9	146,418
	SIL	179.6	509,831
Dagenham Dock (DD)	LSIS	22.5	323
	Non-designated	10.7	73,452
Dagenham East (DE)	LSIS	5.7	32,039
	SSA	14.5	0
Gascoigne South and Kingsbridge (GS-KB)	SIL	11.1	42,396
	LSIS	5.83	47,674
River Road (RR)	SIL	83.7	441,641
	LSIS	2.7	37,840
Wantz Road (WR)	LSIS	15	109,964
Hertford Road (HR)	LSIS	5.35	30,244

Figure 5.1: LBBD Industrial Clusters¹⁵

- 5.15 **Table 5.3** above demonstrates that most industrial sites in LBBD are designated as SIL, which offer a total of 330.6 ha of employment land (circa 75% of all employment land in the borough).
- 5.16 The review of the sites through the ILS identifies an under-supply of modern spaces and that the current stock is, generally, too old, the wrong specification and wrongly sized. The vast majority of existing floorspace is tertiary and/ or secondary rather than modern or prime, which holds back LBBD's employment and prosperity growth.

¹⁵ LBBD (June 2021) Industrial land Strategy

- 5.17 As part of the baseline review, the ILS also considers the amount of floorspace that would need to be relocated if released for alternative uses, the type of activities likely to be relocated as well as suitable locations for their relocation.
- 5.18 Following the baseline analysis of existing supply, the ILS considered future needs for the borough. It establishes that LBBB could face a requirement for an additional circa 50 ha of new employment land or 203,000 sqm of industrial floorspace. Based on the translation of employment forecast into floorspace and land requirement, the ILS notes that a large share of this future demand will come in the short-term (next 5 years).
- 5.19 Overall, the ILS assessed that all the sites in the study area (38 sites across 8 clusters) have a total capacity to delivery just over 3 million sqm of industrial floorspace. While this is clearly well in excess of the requirements identified above, the ILS notes that the figure does not account for the loss of land being released for alternative uses and the need to relocate the existing floorspace for those areas.
- 5.20 The ILS explores three scenarios for the release and intensification/ co-location of industrial land within the borough. **Table 5.3** provides further details on the scenarios as well as pros and cons identified through the ILS.

Table 5.3 : ILS Scenarios

Scenario	Description	Pros and Cons
1: Regeneration Vision - Full Release	<p>Full release of industrial land in line with LBBB's aspirations for transformational change. This scenario does not take account of co-location as a replacement for lost industrial space. This would result in the release of around 172.3 ha of industrial land from the following clusters:</p> <ul style="list-style-type: none"> • Castle Green (CG) - the release of 58.7 ha of SIL. • Chadwell Heath (CH) - the release of 30.9 ha of LSIS. • Dagenham Dock (DD) - the release of 24.7 ha of non-designated industrial land. • Dagenham East (DE) - the release of 14.5 ha of non-designated industrial land. • Gascoigne South and Kingsbridge (GS-KB) - the release of 5.8 ha of LSIS. • River Road (RR) - the release of a total of 32.3 ha, 1.4 ha LSIS and 30.9 ha SIL. • Wantz Road (WR) - no release of industrial land. • Hertford Road (HR) - the release of 5.4 ha of LSIS. 	<ul style="list-style-type: none"> • Could accommodate a sufficient uplift in capacity to accommodate both displaced capacity and projected future need. • Couldn't deliver sufficient headroom in the potential supply and therefore reduces flexibility. • The densification of retained sites will be less easy to control as it will rely on landowners bringing forward small sites for infill and extension.
2: Regeneration Vision - Co-location	<p>The release of industrial land identified for alternative uses as per Scenario 1; however, this scenario includes the potential capacity created through co-location as part of the future supply of space. This would result in the release of around 137.8 ha of industrial land from the following clusters:</p> <ul style="list-style-type: none"> • Castle Green (CG) - the release of 58.7 ha of SIL. • Chadwell Heath (CH) - no release of industrial land. • Dagenham Dock (DD) - the release of 22.5 ha of non-designated industrial land. • Dagenham East (DE) - the release of 14.5 ha of non-designated industrial land. • Gascoigne South and Kingsbridge (GS-KB) - the release of 5.8 ha of LSIS. • River Road (RR) - the release of a total of 30.9 ha of SIL. • Wantz Road (WR) - no release of industrial land. 	<ul style="list-style-type: none"> • Could deliver significant headroom in the potential supply and therefore greater flexibility. • Could limit location and typology choices in the market, which may impact economy in the future.

Scenario	Description	Pros and Cons
3: Proposed Allocation	<ul style="list-style-type: none"> Hertford Road (HR) - the release of 5.4 ha of LSIS. <p>The third scenario considers an approach that takes account of LBBB's aspirations but also considers the wider market, delivery and business factors that would influence the successful delivery of a sequenced intensify and release strategy. This would result in the release of around 49.9 ha of industrial land from the following clusters:</p> <ul style="list-style-type: none"> Castle Green (CG) - the release of 31.1 ha of SIL. Chadwell Heath (CH) - no release of industrial land. Dagenham Dock (DD) - no release of industrial land. Dagenham East (DE) - no release of industrial land. Gascoigne South and Kingsbridge (GS-KB) - the release of 5.8 ha of LSIS. River Road (RR) - the release of 7.6 ha of SIL. Wantz Road (WR) - no release of industrial land. Hertford Road (HR) - the release of 5.4 ha of LSIS. 	<ul style="list-style-type: none"> Could provide significant flexibility within the borough and the potential to 'cushion' any unexpected losses of space or failure of individual sites to come forward. Could 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, Through the capacity created virtually all displacement and future demand can be accommodated – without the need for co-location. The level of headroom would place a significant over supply of land and space into the market, which there is no certainty would be required.

5.21 The ILS identifies Scenario 3 as the 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.*”

5.22 Overall, the ILS recommends the retention of 389.9 ha of industrial land (including land suitable for co-location) out of 446.55 ha of industrial land currently available in LBBB. This would result in the release of circa 50 ha of industrial land.

5.23 In terms of housing land supply, LBBB's Housing Land Assessment (HLA) and housing trajectory identify available, suitable and deliverable sites that can potentially deliver 44,051 dwellings during the plan period. **Table 5.2** demonstrates how this is broken down.

Table 5.4: Housing land supply through the emerging HLA

Sources	Dwellings during plan period (2020 - 2037)
Strategic Sites ¹⁶ with planning permission (as at April 2020)	21,418
Small Sites ¹⁷ with planning permission (as at April 2020)	426
Windfall sites (less than 10 dwellings)	802
Sites options without planning permission	21,405
Total	44,051

¹⁶ Sites that can deliver more than 50 or more units in total. These sites have a total site area or remaining developable area (where applicable), of >0.25ha.

¹⁷ Sites that can deliver less than 50 units, and those sites where the total site or remaining developable area is <0.25 ha or less.

- 5.24 The HLA and housing trajectory also identify available, suitable and deliverable sites that can potentially deliver 12,235 dwellings post plan period. This is comprised of two strategic sites that will not be fully built out during the plan period:
- Castle Green (Site ID CF) is designated as SIL and identified as having the potential to deliver 450 dwellings during the plan period and 11,550 dwellings post plan period.
 - Chadwell Heath Industrial Estate (Site ID CH) is designated as LSIS and identified as having the potential to deliver 3,000 dwellings during the plan period and 685 dwellings post plan period.
- 5.25 The HLA and housing trajectory therefore identify the potential for the delivery of a total of 56,286 dwellings during the plan period and beyond.
- 5.26 The policy context and evidence set out above suggests that the SA process should explore spatial strategy options to deliver 38,865 dwellings (minimum housing target to be in conformity with national planning policy and the London Plan) up to 44,051 dwellings during the plan period (which reflect the longer term aspirations of the Council for transformational change and the ILS (2021)).

Where could the growth be located?

- 5.27 As previously stated, LBBB's Housing Land Assessment (HLA) and housing trajectory identify available, suitable and deliverable sites that can potentially deliver growth during the plan period and beyond. A number of these sites are already committed (i.e. have planning permission) as set out earlier in **Table 5.2**. **Table 5.3** below details the sites which have received planning permission.

Table 5.5: Sites with planning permission

Site ID	Site Name	Number of dwellings remaining during plan period
Barking Town Centre and the River Roding		
AJ	Gascoigne East Estate	1,943
AK	Vicarage Field	900
AL	Gascoigne Estate West	850
AM	Crown House & Linton Rd Car Pk	396
AV	Abbey Sports Centre	170
BB	Tesco Car Park	514
CD	Land at the Corner of London Rd and North St	196
DP	Former Abbey Retail Park	1,089
EA	Barking Station	198
XC	Harts Lane Estate	78
BO	Elim Pentecostal Church 194	9
BZ	174-176 Ripple Road	8
CY	Artist Housing, Linton Road	12
Thames and the Riverside		
AA	Barking Riverside	11,162
CE	Site of Old Thamesview Clinic, Bastable Avenue	34
CI	Thames Road	156
CT	Former Wivenhoe Garages, Wivenhoe Rd	7
CS	Sugden Way	13

Site ID	Site Name	Number of dwellings remaining during plan period
DI	Roxwell Road (53-135)	46
Dagenham Dock, Beam Park and Stamping Plant		
AE	Beam Park	2,166
WA	Former Dagenham Job Centre, Chequers Lane	90
Chadwell Heath and Marks Gate		
BA	Collier Row EcoGrove	76
CH	Chadwell Heath Industrial Estate	61
CO	Padnall Lake	219
HS	Former White Horse Pub	53
HW	31-35 Mill Lane	9
WC	Selinas Lane	150
Dagenham East and Dagenham Village		
BY	Rear of 5-7 Reede Road	5
DF	Wantz Road	63
HU	Land To Rear Of 127 -133 Becontree Avenue	8
DQ	Dagenham Working Mens Club	20
YC	Royal British Legion	64
Becontree		
DB	Former Sacredheart Convent	29
YS	2 Stamford Rd and Woodward Rd	56
AO	Mellish Close Garages	6
BS	St Marys Parish Church, Grafton Road	6
HY	Street Record Margaret Bondfield Avenue	15
Becontree Heath and Rush Green		
DH	Oxlow Lane and 265-285 Rainham Road North	46
BG	26 and 28 Lane to the Rear of High Road	8
BR	3 Station Rd	9
WE	Fels Farm, Dagenham Rd, Rush Green	9
HV	7, Apollo Housing	6

5.28 **Table 5.4** below sets out the 46 remaining site options identified through the HLA as not having planning permission but that are nevertheless available, suitable and deliverable during the plan period (and beyond in some cases).

Table 5.6: Sites without planning permission

Site ID	Site Name	Indicative capacity
Barking Town Centre and the River Roding		
CM	Gascoigne Industrial Area	2,296 dwellings during the plan period
BB	Tesco Car Park	986 dwellings (excluding the 514 dwellings with existing planning permission) during the plan period
XC	Harts Lane Estate	1,227 dwellings (excluding the 74 dwellings with existing planning permission) during the plan period
HA	Wickes (Hertford Road)	899 dwellings during the plan period
HN	Ripple Road and Methodist Church	252 dwellings during the plan period
DJ	Clockhouse Avenue	250 dwellings during the plan period
YM	Phoenix House, 12-14 Wakering Road	188 dwellings during the plan period
DO	Town Quay	138 dwellings during the plan period
XD	Hepworth Gardens & Southwold Drive	108 dwellings during the plan period
YA	IBIS Barking	136 dwellings during the plan period
YO	Barking Foyer	134 dwellings during the plan period
ZO	Cambridge House	117 dwellings during the plan period
HL	Hapag-Lloyd House	75 dwellings during the plan period
DG	Bamford Road	98 dwellings during the plan period
HO	14-34 London Road	29 dwellings during the plan period
WD	Former Victoria Public House, Axe St	26 dwellings during the plan period
YG	Garages at Kier Hardy Way	23 dwellings during the plan period
BZ	174-176 Ripple Road	8 dwellings during the plan period
HM	Old Granary	6 dwellings during the plan period
HZ	Hertford Road Industrial Estate	957 dwellings during the plan period
Thames and the Riverside		
CI	Thames Road	1,844 dwellings during the plan period (excluding 156 dwellings with planning permission)
CF	Castle Green	450 dwellings during and 11,550 dwellings post plan period
XK	Barking Riverside Gateway Zone	538 dwellings during the plan period
XQ	Former Volunteer Public House, Alfred's Way	112 dwellings during the plan period
DY	Chelmer Estate	28 dwellings during the plan period
Dagenham Dock, Beam Park and Stamping Plant		
XJ	Former Ford Stamping Plant	3,000 dwellings during the plan period
ZZ	GSR and Gill Sites	431 dwellings during the plan period

Site ID	Site Name	Indicative capacity
AC	Merriellands Crescent Two	324 dwellings during the plan period
Chadwell Heath and Marks Gate		
CH	Chadwell Heath Industrial Estate	2,939 dwellings (excluding the 61 dwellings with planning permission) during and 685 dwellings post plan period
WF	Sainsburys 97-131 High Rd	365 dwellings during the plan period
AS	Padnall Court and Reynolds Court	125 dwellings during the plan period
Dagenham East and Dagenham Village		
XE	Strategic Site ID XE - Ibscott Close Estate	831 dwellings during the plan period
DM	Strategic Site ID DM - Dagenham Heathway Mall	860 dwellings during the plan period
HT	Dagenham Heathway Station	178 dwellings during the plan period
CX	Strategic Site ID CX - Salisbury Road (Car Park)	50 dwellings during the plan period
DS	Strategic Site ID DS - Rainham Road South	43 dwellings during the plan period
WB	Strategic Site ID WB - Durham and Rainham Road South	34 dwellings during the plan period
ZT	Small Site ID ZT - 58 to 68 Church Street	13 dwellings during the plan period
Becontree		
AD	Dagenham Leisure Park	600 dwellings during the plan period
SR	Seabrook Road and Shipton Close	84 dwellings during the plan period
ZN	Brocklebank Lodge	76 dwellings during the plan period
ZB	Gale Street	31 dwellings during the plan period
XO	Lodge Avenue	24 dwellings during the plan period
CV	Land North of Becontree Station	49 dwellings during the plan period
Becontree Heath and Rush Green		
CW	90 Stour Road	150 dwellings during the plan period
DZ	Dagenham Labour Hall	13 dwellings during the plan period

5.29 Of the 46 site options identified through the HLA as not having planning permission and set out above:

- None are located within the Green Belt.
- One (Lodge Avenue ID XO) falls partially within Metropolitan Open Land (MOL) (Mayesbrook Park).
- Three contain areas designated as Public Open Space. Harts Lane Estate (ID XC), and Castle Green (CF) contain small areas (1.8 and 0.4% of the sites respectively) whereas Land to the West of Scrattons Farm (Site ID XF) is almost entirely designated as Public Open Space.
- Eighteen fall within Flood Zones 2 and 3, with thirteen of these sites having over 50% of their area falling within Flood Zones 2 and 3.

- Six (Cambridge House ID ZO, Clockhouse Avenue ID DJ, Old Granary ID HM, Ripple Road ID HN and Town Quay ID DO) fall within the Abbey and Barking Town Centre Conservation Area.
- One contains a Listed Building (Old Granary ID HM).
- Seven are either wholly or partially designated as SIL/ LSIS:
 - Chadwell Heath Industrial Estate Site ID CH (LSIS);
 - Castle Green Site ID CF (SIL);
 - Thames Road Site ID CI (SIL);
 - Riverside Gateway Zone Site ID XK (SIL).
 - Gascoigne Industrial Area Site ID CM (LSIS);
 - Hertford Road Industrial Estate Site ID HZ (LSIS); and
 - Wickes (Hertford Road) Site ID HA (LSIS).
- 41 are well-connected in line with the London Plan, i.e. within 800m of a Major or District Town Centre, 800m of a railway station and/ or have a PTAL rating of 3-6. Please note this includes consideration of proposed new District Centres (Barking Riverside and Merrielands Crescent in the New London Plan and the amalgamation of Merry Fiddlers, Whalebone Lane South and Althorne Way) as well as the new Barking Riverside Station and associated improvements to PTAL ratings. The 5 sites that are not well-connected include; Hepworth Gardens & Southwold Drive (ID XD), Gascoigne Industrial Area (CM), Padnall Court and Reynolds Court (ID AS), Barking Riverside Gateway Zone (ID XK) and Former Volunteer Public House (ID XQ).

What are the reasonable alternatives at this stage?

- 5.30 It is appropriate for the development of reasonable alternatives through the SA process to focus on the site options without planning permission. Amongst these sites there are likely to be choices in terms of delivering the minimum housing requirement and LBBB's aspiration for transformational change. The sites *with* planning permission and windfall should be considered a *constant* as part of any reasonable Borough-wide spatial strategy option, i.e. their future development is considered a given.
- 5.31 Taking the above into account along with the baseline information, policy context provided through the London Plan and Local Plan evidence base, it is considered appropriate that the focus in terms of the identification of reasonable alternatives through the SA process at this stage should focus initially on:
- 5.32 **The amount of designated industrial capacity that can be released/ intensified/ co-located.** LBBB has around 446.3 hectares of strategic industrial land accommodating slightly more than 1.5 million square metres of commercial floorspace, with 70% of this floorspace being located within the Strategic Industrial Locations and 22% within the Locally Significant Industrial Sites. The ILS (2021) identifies an under-supply of modern spaces and that the current stock is, generally, too old, the wrong specification and wrongly sized. The vast majority of existing floorspace is tertiary and/ or secondary rather than modern or prime, which holds back LBBB's employment and prosperity growth.
- 5.33 The amount of industrial land that can be released/ intensified/ co-located during the plan period will have an influence on the:
- **Number of jobs and new homes that can be delivered during the plan period;** and
 - **Densities of residential development at well-connected brownfield sites.** None or a limited release/ intensification/ co-location of industrial land would result in a shortfall in meeting the housing target, which would need to be made up through increased densities at well-connected brownfield sites. The London Plan identifies areas where the Council should seek to intensify uses and release land for residential and mixed-use growth. These 'well-connected' areas include sites within 800m of a Major or District Centre, 800m

of a train station and/ or have a PTAL rating of 3-6. It should be noted that proposed new District Centres (Barking Riverside and Merrielands Crescent in the Draft New London Plan as well as the amalgamation of Merry Fiddlers, Whalebone Lane South and Althorne Way) have also been taken into consideration as well as the new Barking Riverside Station and associated improvements to PTAL ratings.

- 5.34 Taking the above into account, three alternative spatial strategy options have been identified at this stage based on the evidence and realistic choices available. It is important to remember that a large proportion of development proposed under each of the options is comprised of committed development (sites with existing planning permission as well as windfall).

Option 1: No further release/ intensification/ co-location of designated industrial land and increased densities at well-connected brownfield sites

- 5.35 This option does not propose the release/ intensification/ co-location of any additional designated industrial land outside of committed development (i.e. that has existing planning permission). Under this option there would be no redevelopment of the Gascoigne Industrial Area (ID CM), Thames Road (ID CI), Chadwell Heath (ID CH), Castle Green (ID CF), Riverside Gateway (ID XK) and Hertford Road Industrial Estate (ID HZ). Only an extremely small proportion of Wickes (Hertford Road) site (ID HA) is designated as LSIS, it is assumed the designated area could be avoided and the site is therefore included under this option.
- 5.36 With the removal of four strategic sites and reduced capacity at two strategic sites the Borough would not be able to meet the minimum housing requirement identified through national planning policy and the London Plan. The shortfall could only be met by increasing densities (approx. 35%) at well-connected brownfield sites. This option would deliver 38,865 dwellings during the plan period (2020 to 2037) and does not include any sites that would deliver growth post plan period. This is the minimum housing target to be in conformity with national planning policy and the London Plan.

Option 2: Significant release of designated industrial land and standard densities across brownfield sites

- 5.37 This option proposes the full release of industrial land and includes the consideration potential capacity created through co-location as part of the future supply of space. It aligns with Scenario 2 in the ILS (2021). This option would result in the release of around 137.8 ha of designated industrial land from the following sites:
- Castle Green (Site ID CF) - the release of 58.7 ha of SIL.
 - Chadwell Heath Industrial Estate Site (Site ID CH) - no release but intensification of industrial land and co-location of employment with residential.
 - Gascoigne Industrial Area (Site ID CM) - the release of 5.8 ha of LSIS.
 - Thames Road Site (Site ID CI) - the release of 30.9 ha of SIL and intensification of remaining industrial land and co-location of employment with residential.
 - Riverside Gateway Zone (Site ID XK) - no release but intensification of industrial land and co-location of employment with residential.
 - Hertford Road Industrial Estate (Site ID HZ) - the release of 5.4 ha of LSIS.
- 5.38 This option would deliver around 44,051 dwellings during the plan period (2020 to 2037) using a standard density approach for brownfield sites and includes the delivery of a further 12,235 dwellings post plan period (11,550 dwellings at Castle Green ID CF and 685 dwellings at Chadwell Heath ID CH). This option has the potential to deliver circa 2.1 million sqm of industrial space through intensification, densification and co-location. This would provide sufficient floorspace to be provided to meet future needs of circa 1.9 million sqm of floorspace, with a headroom of circa 200,000 sqm.

Option 3: Limited release of designated industrial land and standard densities at well-connected brownfield sites

5.39 This option proposes the release of industrial land in line with the recommended approach (Scenario 3) set out in the ILS (2021). This option takes account of LBBD's aspirations but also considers the wider market, delivery and business factors that would influence the successful delivery of a sequenced intensify and release strategy for industrial land. This option would result in the release of around 49.9 ha of designated industrial land from the following sites:

- Castle Green (Site ID CF) - the release of 31.1 ha of SIL.
- Chadwell Heath Industrial Estate Site (Site ID CH) - no release but intensification of industrial land and co-location of employment with residential.
- Gascoigne Industrial Area (Site ID CM) - the release of 5.8 ha of LSIS.
- Thames Road Site (Site ID CI) - the release of 7.6 ha of SIL and intensification of remaining industrial land and co-location of employment with residential.
- Riverside Gateway Zone (Site ID XK) - no release but intensification of industrial land and co-location of employment with residential.
- Hertford Road Industrial Estate (Site ID HZ) - the release of 5.4 ha of LSIS.

5.40 This option would deliver around 44,051 dwellings during the plan period (2020 to 2037) using a standard density approach for brownfield sites and includes the delivery of a further 12,235 dwellings post plan period (11,550 dwellings at Castle Green ID CF and 685 dwellings at Chadwell Heath ID CH). It has the potential to deliver circa 2.6 million sqm of industrial space through intensification, densification and co-location but with a reduced displacement of floorspace (circa 270,000 sqm) compared to Option 2. This would provide sufficient floorspace to meet future needs of circa 1.9 million sqm, with a headroom of circa 700,000 sqm.

5.41 It should be noted that Scenario 1 in the ILS has not been taken forward for consideration through the SA as an alternative, as it does not take account of co-location as a replacement for lost industrial space. Scenario 1 couldn't deliver sufficient headroom in the potential supply and therefore reduces flexibility. As a result, it is not considered a reasonable alternative.

6. Appraising the reasonable alternatives

Introduction

6.1 This chapter presents the summary findings of the appraisal of the reasonable alternatives.

Method

- 6.2 The spatial strategy options identified in Chapter 5 were subject to a comparative appraisal under each SA theme and the detailed findings are presented in **Appendix IV**. A summary of the findings is presented in **Table 6.1**.
- 6.3 For each of the spatial strategy options, the assessment examined likely significant effects on the baseline, drawing on the sustainability objectives and themes identified through scoping (see **Table 3.1**) as a methodological framework.
- 6.4 Every effort is made to predict effects accurately; however, this is inherently challenging given the high-level nature of the options under consideration. The ability to predict effects accurately is also limited by understanding of the baseline (now and in the future under a 'no plan' scenario). In light of this, there is a need to make considerable assumptions regarding how scenarios will be implemented 'on the ground' and what the effect on particular receptors would be. Where there is a need to rely on assumptions in order to reach a conclusion on a 'significant effect' this is made explicit in the appraisal text.
- 6.5 It is important to note that effects are predicted taking into account the criteria presented within Regulations. So, for example, account is taken of the duration, frequency and reversibility of effects. Cumulative effects are also considered (i.e. where the effects of the plan in combination with the effects of other planned or on-going activity that is outside the control of the Council).
- 6.6 Based on the evidence available a judgement is made if there is likely to be a significant effect. Where it is not possible to predict likely significant effects on the basis of reasonable assumptions, efforts are made to comment on the relative merits of the alternatives in more general terms and to indicate a rank of preference. The number indicates the rank and does not have any bearing on likely significant effects. This is helpful, as it enables a distinction to be made between the alternatives even where it is not possible to distinguish between them in terms of 'significant effects'. For example, if an option is ranked as 1 then it is judged to perform better against that SA theme compared to an option that is ranked 2.

Summary appraisal findings for spatial strategy options

Table 6.1: Summary appraisal of the spatial strategy alternatives

SA theme		Option 1	Option 2	Option 3
Land, soil and water resources	Rank	3	1	1
	Significant effect?	Yes - positive	Yes - positive	Yes - positive
Environmental quality	Rank	2	1	1
	Significant effect?	No	Yes - positive	Yes - positive
Biodiversity	Rank	2	1	1
	Significant effect?	No	Uncertain	Uncertain
Landscape and townscape	Rank	2	1	1
	Significant effect?	Uncertain	Yes - positive	Yes - positive
Historic environment	Rank	2	1	1
	Significant effect?	Yes - negative	Uncertain	Uncertain
Climate change	Rank	2	1	1
	Significant effect?	No	Uncertain	Uncertain
Population and communities	Rank	2	1	1
	Significant effect?	Yes - positive	Yes - positive	Yes - positive
Economy and employment	Rank	2	1	1
	Significant effect?	Yes - negative	Yes - positive	Yes - positive
Health and wellbeing	Rank	2	1	1
	Significant effect?	No	Yes - positive	Yes - positive
Transport and movement	Rank	2	1	1
	Significant effect?	Uncertain	Yes - positive	Yes - positive

Conclusions

Significant positive effects are anticipated for all options in relation to the population and communities and land, soil and water resources themes. These effects are anticipated as a result of the delivery of new homes to meet identified needs and the associated delivery of community infrastructure, as well as the focus on brownfield/ regeneration opportunities apparent across all the options in areas that are or are predicted to be well-connected. Options 2 and 3 further provide the delivery of new homes and employment more widely across the borough, which is likely to enhance the significance of these effects.

Options 2 and 3 are considered to have a significant positive effect on the economy and employment through the intelligent use of vacant/ underused industrial land to deliver an increased number of jobs during the plan

period. Option 1 performs less well compared to the other options as it does not address the issues around an under-supply of modern employment spaces and that the current stock is, generally, too old, the wrong specification and wrongly sized.

While the regeneration of brownfield land proposed under all of the options has the potential for a positive effect on the landscape and townscape, the increased densities proposed under Option 1 and no further release of industrial land, are likely to make significant positive effects more challenging. Increased densities are likely to result in taller buildings and reduce the ability to deliver open/ green space on site. Options 2 and 3 provide a greater opportunity to deliver significant positive effects on the townscape through the regeneration of industrial land.

Option 1 would increase densities at sites that fall within and are in close proximity to designated heritage assets, including the Abbey and Barking Town Centre Conservation Area. The increased densities proposed under Option 1 are considered likely to have a significant negative effect on the historic environment. Option 1 is also less likely to deliver benefits in relation to the historic environment of the borough compared to Options 2 and 3, which proposes standard densities and regeneration of industrial land more widely across the borough.

It is also recognised that Options 2 and 3 will lead to higher levels of development within the floodplain of the River Thames, which is dependent upon existing flood defences to mitigate risks. The overall effects of this strategy remain uncertain at this stage, the benefits of directing less growth in high flood risk areas under Option 1 is recognised; however, this is also considered alongside the potential for regeneration at the Thames Riverside to improve upon existing flood defences, water attenuation and run-off rates and lead to positive effects in this respect.

Options 2 and 3 perform similarly against the SA themes in terms of rank and likely significant effects. There are pros and cons associated with both options and it is often difficult to identify significant differences between them. While Option 2 proposes a greater release of industrial land it is not certain at this stage that this would deliver additional benefits over and above Option 3 in terms of the delivery of housing, community infrastructure, open/ green space and wider employment opportunities. There is also no evidence that there would be substantial differences between the options in terms of likely effects on environmental themes including but not limited to biodiversity, environmental quality and the landscape. Both options propose co-location, but it is considered that there are suitable mitigation measures available to address impacts on human health and reduce the significance of any residual effects. Taken this into account, there is nothing to suggest that the greater level of co-location proposed under Option 3 would be likely to result in a residual effect that is significantly different to Option 2 under any of the SA themes.

7. Developing the preferred approach

- 7.1 The Council's preferred option is Option 3 (Limited release of industrial land, standard densities at brownfield sites) because it reflects the Council's ambition to be London's growth opportunity by recognising the potential to:
- **Utilise industrial areas more intelligently** - Managed release of underutilised industrial land through a sequenced intensification and release strategy for industrial land in the Borough. Option 3 has the potential to deliver circa 2.6 million sqm of industrial space through intensification, densification and co-location but with a reduced displacement of floorspace (circa 270,000 sqm) compared to Option 2. This would provide sufficient floorspace to meet future needs of circa 1.9 million sqm, with a headroom of circa 700,000 sqm.
 - **Step-up housing delivery** - by significantly increasing the number of new homes, particularly affordable homes to help meet both identified local need and London's strategic need.
 - **Unlock growth through infrastructure investment** - an increase in density in the right locations will ensure that growth is well supported by physical, social and green infrastructure. Providing strategic transport access, connectivity and capacity and improvements of the highway networks must be delivered to attract investment; enabling necessary schools and health services and other green and sustainable infrastructure to be delivered in a timely manner.
- 7.2 The emerging SA findings demonstrate that Option 3 performs similarly to the SA themes in Option 2 and more strongly against the majority of SA themes compared to Option 1. It also takes advantage of opportunities for significant positive effects in relation to the population and communities, economy, landscape and historic environment of the borough through the regeneration of vacant and underused industrial buildings.
- 7.3 While Option 1 would deliver the minimum housing target required, it would not address the issues raised through the LBBB ILS (the current stock is too old, the wrong specification and wrongly sized) and therefore would not deliver the growth aspirations of the Council. Furthermore, this option does not meet the aspirations of the Greater London Authority through taking opportunities to strengthening and intensifying the borough's extensive and underutilised industrial land.
- 7.4 The emerging SA findings demonstrate that the increased housing densities (around 35%) proposed through Option 1 could have negative effects on the townscape and historic environment of the borough, particularly the Abbey and Barking Town Centre Conservation Area, Barking Abbey Scheduled Monument and the listed buildings in the area. It would also be unable to meet the future industrial needs of the borough due to the under-supply of modern spaces and the need to address current stock which is, generally, too old, the wrong specification and wrongly sized.
- 7.5 While Option 2 would deliver the same number of homes and industrial land capacity, it does not consider the wider market, delivery and business factors that would influence the successful delivery of a sequenced intensity and release strategy. Option 3 provides the borough with significant flexibility to 'cushion' any unexpected losses of space or failure of individual sites coming forward. It would also mean that the borough is less reliant on the densification of smaller sites to meet future needs.

Part 2: What are the SA findings at this stage?

8. Introduction (to Part 2)

8.1 The aim of this chapter is to present an appraisal of the Second Revision Draft Local Plan, currently published under Regulation 19 of the Town and Country Planning (Local Planning) (England) Regulations 2012.

Methodology

8.2 The appraisal identifies and evaluates 'likely significant effects' of the plan on the baseline, drawing on the SA themes identified through scoping (see **Table 3.1**) as a methodological framework. In total, there are 10 SA themes as follows:

- Land, soil and water resources
- Environmental quality (air, soil and water quality)
- Biodiversity
- Landscape and townscape
- Historic environment
- Climate change
- Population and communities
- Economy and employment
- Health and wellbeing
- Transport and movement

8.3 Every effort is made to predict effects accurately; however, this is inherently challenging given the high-level nature of the policies under consideration and understanding of the baseline (now and in the future under a 'no plan' scenario) that is inevitably limited. Given uncertainties there is a need to make assumptions, e.g. in relation to plan implementation and aspects of the baseline that might be impacted. Assumptions are made cautiously and explained within the text (with the aim to strike a balance between comprehensiveness and conciseness/ accessibility). In many instances, given reasonable assumptions, it is not possible to predict 'significant effects', but it is nonetheless possible and helpful to comment on merits (or otherwise) of the Draft Local Plan in more general terms.

8.4 Finally, it is important to note that effects are predicted taking account of the effect characteristics and 'significance criteria' presented within Schedules 1 and 2 of the SEA Regulations.¹⁸ So, for example, account is taken of the probability, duration, frequency and reversibility of effects as far as possible. Cumulative effects are also considered, i.e. the potential for the Plan to impact an aspect of the baseline when implemented alongside other plans, programmes and projects. Explicit reference is made within the appraisal as appropriate (given the need to balance the desire of systematic appraisal with a desire to ensure conciseness/ accessibility).

Adding structure to the appraisal

8.5 Whilst the aim is essentially to present an appraisal of 'the plan' under each of the SA objectives,¹⁹ it is appropriate to also give stand-alone consideration to elements of the Plan. As such, within the appraisal narratives below, sub-headings are used to ensure that stand-alone consideration is given to distinct element of the Plan. Within these narratives, specific policies are referred to only as necessary (i.e. it is not the case that systematic consideration is given to the merits of every plan policy in terms of every sustainability objective).

¹⁸ Environmental Assessment of Plans and Programmes Regulations 2004

¹⁹ Regulations require simply an appraisal of 'the plan'.

9. Appraisal of the Second Revised Regulation 19 Plan

Introduction

- 9.1 As introduced above, the aim of this chapter is to present an appraisal of the Second Revised Regulation 19 Local Plan (hereafter referred to as the 'Draft Local Plan') under the SA themes/framework. A commentary on the spatial strategy is provided as well as an appraisal of the plan as a whole and finally a commentary on cumulative effects.

Land, soil and water resources

Appraisal of the spatial strategy

- 9.2 In terms of land and soil resources, Barking and Dagenham is predominantly an urban area, with a long history of industrial land use. There are significant areas of existing industrial land and significant opportunities for the re-use of brownfield land throughout the borough. Most of the borough's greenfield land resources are protected through the planning system as Green Belt land, Metropolitan Open Land (MOL), and parkland.
- 9.3 The spatial strategy underpinning the Draft Local Plan is defined under Policy SPDG1 (Delivering growth in Barking and Dagenham) and seeks significant redevelopment of brownfield land through the intelligent use of industrial land. Development is focused in the identified 'Transformation Areas' of Barking Town Centre and the River Roding, Barking Riverside, Thames Road, Castle Green, Chadwell Heath and Marks Gate, Dagenham Dock and Beam Park, Dagenham East, and Dagenham Heathway. Within these areas, the potential for higher density and taller development is recognised, particularly near existing and planned transport hubs. The growth strategy avoids loss of Green Belt land, MOL and parkland and, in this respect, makes efficient use of land and soil resources. Focusing development at Barking Riverside, the town centres and industrial locations across the borough will also make a significant contribution to longer-term brownfield land supplies that extend beyond the plan period, reducing future pressures on the limited greenfield land sources in the borough. Considering this, the spatial strategy is likely to deliver overall long-term significant positive effects with regards to land and soil resources.

Appraisal of the Plan as a whole

- 9.4 Whilst land resources are protected through the proposed spatial strategy as identified above, the Draft Local Plan proposes policies that will provide further support for the retention and improvement of high-quality land and soil resources. Policies DMNE1 (Parks, open spaces and play space), DMNE2 (Urban greening), DMNE3 (Nature conservation and biodiversity) and DMNE5 (Trees) will support the retention and improvement of existing and new areas of open space, natural land resources and green infrastructure, particularly where they provide natural habitats and they are biodiverse, with the potential for indirect, long-term positive effects for soil resources. The protection of rivers and waterways and adjacent habitats under Policy DMNE4 (Water environment), and the policy protection for local food growing (DMNE6 Local food growing including allotments) should also indirectly support the retention of high-quality and fertile soils, with the potential for long-term minor positive effects.
- 9.5 The 'Transformation Area' policies (Policies SPP1 – SPP7) outline expectations for significant regeneration which delivers new parks, open spaces and enhanced green infrastructure links, to support the growing population. This includes new open spaces at Thames Road, Barking Riverside, Dagenham Dock, Dagenham Village, Marks Gate and Padnall Lake, Becontree Estate and Becontree Heath, as well as new parkland at Beam Park and Chadwell Heath. The policy expectations for new greenfield and green infrastructure links are considered likely to deliver significant long-term positive effects for land and soil resources. Furthermore, the expectation under Policy SP7 (Securing a clean, green and sustainable borough) for all

“development and large-scale regeneration to facilitate the remediation of land affected by contamination” will support positive improvements to soil quality.

- 9.6 With regards to water resources, water supply in the area is managed by Northumbrian Water Limited operating in the south east of England as Essex and Suffolk Water. The Water Resources Management Plan²⁰ (WRMP) identifies that the south east supply areas are located within some of the driest areas of the country, and, as such, face particular challenges from growing demand, climate change and *“a general lack of new intrinsic water resources”*.
- 9.7 In light of these challenges, the Abberton major water resource scheme in the Essex Water Resource Zone (WRZ) is planned to increase water supply and meet growing demand, and this scheme will serve the residents of Barking and Dagenham. The planned works, which consider the effects of climate change, ensure the WRZs in the Essex and Suffolk Water area all remain in surplus across the planning horizon (to 2060).
- 9.8 Part of the package of measures in the WRMP to balance supply and demand in the area includes water efficiency targets to reduce consumption and which extends to retrofitting schemes. Given that the Draft Local Plan seeks to provide land to accommodate significant growth levels and strategic-scale regeneration opportunities, it is considered that there are significant opportunities for improvements to infrastructure and water efficiency measures in new development to assist in meeting the WRMP targets.
- 9.9 Policy DMS17 (Water management) provides direct support for the aims of the WRMP, identifying that *“all new development is required to reduce water consumption”*. The policy sets high water efficiency standards and encourages the use of rainwater and grey water systems.
- 9.10 Thames Water, who maintain wastewater services in the borough also identify that sewer flooding is an issue to be addressed in their forthcoming 5-year plan, particularly by reducing the amount of land draining into the sewers. The significant regeneration sites promoted through the Draft Local Plan also provide significant opportunities to reduce land drainage into sewers, to support the objectives of the Thames Water 5-year plan for 2020 to 2025.
- 9.11 Draft Strategic Policy SP7 (Securing a clean, green and sustainable borough) identifies the Council's intention to work with developers and key stakeholders to improve wastewater infrastructure. Under Policy DMS17 (Water management) major development is required to demonstrate adequate water supply and wastewater infrastructure capacity *“taking into consideration the cumulative impacts of current and proposed development”*. The policy also outlines high expectations for surface water management, including strict use of permeable surfaces, management as close to source as possible, and achieving a greenfield run-off rate equivalent in development. The policy thus directly addresses one of the key issues for the borough in relation to wastewater infrastructure; that being land drainage into sewers. Further, the significant focus on regeneration of industrial land is likely to deliver the remediation of contaminated land with improved drainage features which is considered likely to improve the current baseline situation and lead to significant long-term positive effects.
- 9.12 The Draft Local Plan further seeks to better manage and minimise waste arising from new development, by promoting sustainable waste management, the principles of a circular economy and the use of sustainable materials (Draft Strategic Policy SP7 Securing a clean, green and sustainable borough). Policy DMS18 (Demolition, construction and operational waste) identifies measures that will contribute to minimising waste; including a requirement for construction waste management plans and strategies for waste minimisation, collection and recycling.
- 9.13 Overall, the spatial strategy which targets large scale regeneration opportunities is likely to deliver significant positive effects in terms of efficient land use, with brownfield land supplies extending beyond the Plan period and the delivery of new open spaces. Strategic regeneration sites are also considered likely to increase the viability of water/ wastewater infrastructure improvements and improve drainage in support of both the WRMP and the Thames Water 5-year Plan. The proposed policy framework, which maximises the potential for new

²⁰ Essex and Suffolk Water (2019) Final Water Resources Management Plan 2019 [online] available at: <https://www.nwg.co.uk/responsibility/environment/wrmp/current-wrmp-2015-2020/>

development supporting efficiency measures and integrating with the environment and infrastructure capacities, is considered likely to lead to significant long-term positive effects.

Appraisal of cumulative effects

- 9.14 There is the potential for development proposed through the Draft Local Plan to interact with development proposed in other plans and projects to have both a negative and positive cumulative effect on the water environment. Water resources are generally managed at a catchment level and there is close working between the Environment Agency and water companies to monitor the situation and plan ahead for new infrastructure to meet predicted demands. The Draft Local Plan provisions, alongside the provisions of the London Plan, seek to protect the overall water environment and ensure cumulative negative effects do not arise.
- 9.15 Strategic and local regeneration is also identified through the Integrated Impact Assessment (IIA) of the London Plan for its potential to support the re-use of buildings and promote protection to the environment, through green space provision and conservation of the Green Belt and in this respect positive cumulative effects are anticipated overall.
- 9.16 The avoidance of development in the Green Belt will also support the neighbouring authority, Havering, in retaining high-quality soils, and maintaining open land between settlements and good access to green spaces in this respect.

Environmental quality (air, soil and water quality)

Appraisal of the spatial strategy

- 9.17 In terms of soil quality, Barking and Dagenham, with its long history of industrial land use has significant areas which are regarded as potentially contaminated. The spatial strategy underpinning the Draft Local Plan is defined under Policy SPDG1 (Delivering growth in Barking and Dagenham) which seeks significant redevelopment of brownfield land through the intelligent use of industrial land. Development is focused at 'Transformation Areas' at Barking Town Centre and the River Roding, Barking Riverside, Thames Road, Castle Green, Chadwell Heath and Marks Gate, Dagenham Dock and Beam Park, Dagenham East, and Dagenham Heathway. Focusing development at these areas will make a significant contribution to the restoration of contaminated land, supporting improved soil quality and other sustainability objectives with the potential for long-term significant positive effects.
- 9.18 In terms of water quality, the baseline information identifies that the Roding and Beam Rivers are subject to a relatively high degree of environmental stress; however, water quality has improved since 2013. The spatial strategy of the Draft Local Plan seeks development in and around these sensitive water environments, and development has the potential to affect water quality and efforts to make improvements in line with Water Framework Directive (WFD) objectives. Both the Mayes Brook catchment and Gores Brook catchment need to improve their ecological quality to achieve WFD targets, and the 'Urban and Transport' and 'Domestic General Public' are the main sectors identified which hinder progress by means of physical modification of waterbodies, diffuse source pollution and point source pollution. Construction and urban development, particularly lasting increases in urban run-off discharges have the potential for long-term negative effects on water quality.
- 9.19 In terms of air quality, the whole borough is declared as an Air Quality Management Area (AQMA). Careful management of growth is required to improve congestion and promote more sustainable modes of transport that minimise impacts on air quality. By focusing development in town centres and well-connected areas, growth is supported by good access to sustainable transport modes, and a reduced need to travel given presence, and proposed increase, of services, facilities and jobs. Through delivering large scale regeneration schemes such as that permitted at Barking Riverside (Site AA), infrastructure improvements are made viable, which includes the new Barking Riverside Overground station, and Crossrail improvements at Chadwell Heath. By directing housing and employment development to areas of highest PTAL, growth is supported by connectivity and opportunities for residents to travel by more sustainable means. Despite this, the cumulative land provisions for up to 50,000 new homes

have significant potential to increase vehicle usage, traffic and congestion and lead to long-term negative effects.

- 9.20 New housing development in areas of previous industrial land use also have the potential to reduce noise and light pollution which can be associated with certain industrial uses.

Appraisal of the Plan as a whole

- 9.21 As discussed above, the spatial strategy makes significant use of brownfield and previously developed land opportunities, which is likely to bring about significant long-term positive effects for soils through avoidance of existing high-quality resources, and contaminated land remediation to improve soil and water quality. Draft Strategic Policy SP7 (Securing a clean, green and sustainable borough) ultimately expects *“development and large-scale regeneration to facilitate the remediation of land affected by contamination”*, and is supported by Policy DMS15 (Land contamination) where *“development proposals on, or adjacent to land potentially affected by previous contaminative land use will be required to apply the latest government guidance on land contamination”* and to prepare *“remediation proposals to deal with any contamination.”* Remediation proposals must be agreed with the Council prior to the commencement of any works.
- 9.22 Indirect positive effects are also anticipated for soil quality as a result of the retention and improvement of existing and new areas of open space, natural land resources, green infrastructure and fertile soils as promoted through Policies DMNE1 (Parks, open spaces and play space), DMNE2 (Urban greening), DMNE3 (Nature conservation and biodiversity), DMNE4 (Water environment), DMNE5 (Trees), and DMNE6 (Local food growing, including allotments).
- 9.23 The spatial strategy of the Draft Local Plan is identified for its potential to affect water quality in the borough, particularly the Roding and Beam Rivers which are subject to a relatively high degree of environmental stress. Policy mitigation will be essential to reducing the extent and significance of these effects, and the Draft Local Plan responds with the provisions of proposed Policy SP7 (Securing a clean, green and sustainable borough), as well as Policies DMNE4 (Water environment), DMS16 (Flood risk and defences), and DMS17 (Water management).
- 9.24 Under Draft Strategic Policy SP7 developers are encouraged to adopt innovative approaches to managing flood risk, and work with key stakeholders to *“reduce flood risk (including through the use of Sustainable Drainage Systems), improve wastewater infrastructure in line with the Council’s Infrastructure Delivery Plan, and reduce mains water consumption”*. Policy DMS16 further identifies that all development should *“seek to deliver a neutral impact or reduction in flood risk, on and off-site, by demonstrably giving sufficient consideration from the outset of design, and during pre-application discussions with the Environment Agency (EA) and Thames Water and the Council”*. Under this policy any development required to undertake Flood Risk Assessment must also demonstrate consideration of future flood risk. Additionally, any development proposals along the Thames are expected to maintain and enhance existing flood defences, including demonstrating *“where opportunities exist to realign or set back defences”*.
- 9.25 Policy DMNE4 requires any development within or adjacent to rivers and waterways to; *“contribute to achieving the objectives of the Thames River Basin Management Plan, Water Framework Directive or updated equivalent”, “protect and enhance biodiversity”, “improve water quality, including reducing or minimising pollution from adjacent land and roads”, “improve the ecological status of waterbodies”,* and provide naturalised buffers between development and waterbodies. This is supported by Policy DMS17 which identifies that as a minimum, development must *“utilise permeable surfaces”* and seek Council advice as to their preference on Sustainable Drainage Systems. Even minor development is required to incorporate Sustainable Drainage Systems and greenfield run-off rates are expected in proposals, with run-off managed as close to its source as possible.
- 9.26 The policy mitigation outlined above is considered likely to ensure that development does not lead to long-term adverse effects for water quality in the borough. The mitigation, particularly the required use of Sustainable Drainage Systems, should ensure that there are no lasting effects arising from diffuse source pollution and point source pollution, and the protection and enhancement of biodiversity in these areas should support the identified policy aims to improve

- the ecological quality of waterbodies. As a result of the potential for improvements, particularly in ecological water quality, the potential for minor long-term positive effects is also recognised.
- 9.27 The Draft Local Plan recognises the constraints on development with regards to the entire borough being a declared AQMA. Strategic Policy SP7 (Securing a clean, green and sustainable borough) encourages “*innovative approaches*” to reducing air pollution, outlining expectations for development to be net zero carbon and employ low carbon technologies. Further support for improved air quality is provided through Development Management Policy DMSI4 (Air quality) which identifies that “*major development proposals must achieve or improve upon the ‘air quality neutral’ benchmark (in line with Policy SI 1 of the London Plan and LBBD’s latest Air Quality Action Plan), by avoiding people’s exposure to poor air quality*”. The policy recognises that this can be achieved through; effective design solutions, appropriate plant, machinery and technology, facilitating the use of low or zero emission transport, improving traffic management, and providing new green infrastructure. Where neutral benchmarks cannot be achieved on site, Policy DMSI4 alternatively requires a financial contribution for offsetting arrangements.
- 9.28 Draft Strategic Policy SP8 (Planning for integrated and sustainable transport) seeks to support the delivery of the Mayor’s strategic target to achieve improved air quality by 2041 with “*75% of all trips (based on the citywide target of 80%) in Outer London to be made by walking, cycling or public transport*”, and detailed guidance is provided through Policy DMT1 (Making better connected neighbourhoods) which seeks to enhance sustainable transport access and use, including active travel opportunities. Under this policy, “*any development which is like to have a significant impact on the borough’s transport network will be required to submit a robust Transport Assessment (TA) or Transport Statement (TS) and a Travel Plan*”. Any development which is considered likely to have an adverse impact in terms of congestion, safety, air quality, and noise, as well as the operation of public transport is required “*to contribute and deliver appropriate transport infrastructure or effective mitigation measures, including a reduction of vehicular parking spaces (in line with the London Plan)*”. Major development proposals are expected to be located “*where employment, housing and supporting facilities and services are within easy reach of each other by sustainable modes, reducing the need to travel and ensuring people are connected to places by, and with, high-quality, safe and attractive cycling and walking routes, both new and existing*”, with active travel routes creating connections to areas of green infrastructure in the borough. Cycle routes are also encouraged to be protected from road transport and walkways where possible. The measures to improve the quality and extent of active travel opportunities and minimise the impacts of new development on congestion, are also considered likely to deliver long-term benefits for air quality. The Plan’s focus on the intelligent use of industrial land allows for significant employment growth alongside housing growth, which is also considered for its potential to enhance local connections and more sustainable journeys to work, indirectly supporting improved air quality in the longer term.
- 9.29 Policy DMSI3 (Nuisance) also seeks to manage the effects of noise and light pollution. The policy seeks to address potential noise and light impacts in the process of development, including through ensuring an appropriate location. Further to this, the policy identifies that where appropriate, development proposals should work with the council to “*manage noise by identifying and protecting areas of tranquillity that have remained relatively undisturbed by noise and are valued for their recreational and amenity value for this reason*”.
- 9.30 Considering the above, significant positive effects are anticipated overall as a result of land remediation to the benefit of soil and water quality in the borough. Minor long-term positive effects are also anticipated overall in relation to water quality, given the opportunities for biodiversity enhancement, and the wider application of SUDs. Whilst air quality remains a constraint to development, the spatial strategy responds by targeting development at areas of highest PTAL, and the policy framework asserts a strong emphasis on active travel opportunities and will scrutinise development in areas of highest air quality sensitivity. The strategic regeneration sites are also anticipated to deliver accessibility improvements and more locally accessible employment opportunities which is likely to indirectly support long-term improvements to air quality across the borough. As a result, the Draft Local Plan is considered on balance, to support localised improvements to air quality with the potential for minor long-term positive effects.

Appraisal of cumulative effects

- 9.31 Proposed growth within the Plan area has the potential to interact with development proposed through Local Plans and projects in the surrounding boroughs and the wider region potentially resulting in impacts on environmental and community receptors, which do not follow administrative boundaries. Sensitive environments such as rivers and waterbodies require cross-boundary consideration to ensure that impacts are not displaced, and opportunities to plan for natural resources strategically across administrative boundaries are not overlooked.
- 9.32 The catchment level of planning for rivers and waterbodies is reported through the River Basin Management Plan, and it will be important for all areas within the catchment to collectively seek to meet catchment planning aims and objectives to avoid cumulative negative effects and maximise the potential for long-term cumulative positive effects.
- 9.33 The Draft Local Plan also seeks collaborative working with the Greater London Authority and Transport for London to ensure that strategic transport infrastructure improvements are coordinated across the Greater London region, including the new Overground station at Barking Riverside and Crossrail improvements at Chadwell Heath station. The Draft Local Plan seeks to integrate housing and economic growth with strategic infrastructure improvements to maximise accessibility and support for improved air quality; supporting the realisation of cumulative positive effects.
- 9.34 Effective consultation with stakeholders including the Environment Agency, GLA, TfL and the surrounding boroughs will be key to ensuring that the interactions between plans and projects are identified and addressed so that significant cumulative negative effects do not arise and any opportunities for positive effects are maximised.

Biodiversity

Appraisal of the spatial strategy

- 9.35 In terms of designated biodiversity, the borough contains numerous Sites of Importance for Nature Conservation (SINC), three of which are Sites of Metropolitan Importance for Nature Conservation, and many of which are also designated Local Nature Reserves. The Borough also lies within identified SSSI Impact Risk Zones, which require development in the west of the Borough of over 100 homes to consult further with Natural England.
- 9.36 The spatial strategy of the Draft Local Plan defined under Policy SPDG1 (Delivering growth in Barking and Dagenham) seeks significant development in identified 'Transformation Areas' at Barking Town Centre and the River Roding, Barking Riverside, Thames Road, Castle Green, Chadwell Heath and Marks Gate, Dagenham Dock and Beam Park, Dagenham East, and Dagenham Heathway. Smaller scale regeneration opportunities are also planned for at existing residential neighbourhoods, including at Becontree Estate and Dagenham Village.
- 9.37 The HRA has identified one impact pathway (recreational pressure) on the Epping Forest SAC and some of the proposed development sites at Barking Town Centre and The Roding lie within the 6.2km recreational buffer associated with the SAC.
- 9.38 The Barking Riverside site (Site AA) contains the Ripple Local Nature Reserve and SINC habitats, and any loss of designated land would lead to long-term negative effects for biodiversity. There is also the potential for impacts on the River Thames and Tidal Tributaries SINC and a number of protected species; however, it is recognised that these issues have already been explored and addressed as the site has already been granted planning permission. The adjacent Thames Road site also contains connecting habitats as part of the SINC and wildlife corridor network. Any loss of habitats here could contribute to a cumulative fragmentation of ecological connectivity in this area, and it will be important to ensure that development retains and enhances habitats, and strategic coordination is considered across the wider Thames Riverside area. The Thames Riverside Area Policy (Policy SPP2) identifies the requirement for "*high-quality, new open space across the entire site, divided between public parks and a more natural landscape*" as well as "*east-west green links connecting existing*

- green infrastructure assets*” which is considered likely to avoid significant negative effects arising.
- 9.39 The Padnall Lake site (Site CO) also contains designated SINC habitats associated with the lake. An Ecological Assessment²¹ has sought to investigate the effects of removing the mounded land adjacent to the designated SINC, to release this area of land for development, and identify any necessary mitigation measures in this respect. The assessment has found that development at the mounded land is likely to have zero impact on nearby SINC. Despite this, a loss of semi-improved neutral grassland and tall herb vegetation is expected, and mitigation is recommended in the form of habitat enhancement south of the lake (in the area to be retained). The Chadwell Heath and Marks Gate Area Policy (Policy SPP4) identifies that development must contribute to *“enhancing areas for wildlife and biodiversity around Padnall Lake as part of any future development masterplans.”* The provisions which require enhancement could be considered for long-term minor positive effects.
- 9.40 Harts Lane Estate (Site XC) contains habitats associated with the River Roding which runs through the site. The potential for habitat loss is minor given that the habitats follow the watercourse; however, it will be important to ensure that development provides an appropriate buffer and supports continued habitat management and improvement to minimise the negative effects arising in terms of disturbance, noise, light and air pollution. This is likely to be equally important for sites adjacent to the River Roding, such as Abbey Retail Park (Site AU), Tesco car park (Site BB), and Town Quay (Site DO). The Barking and the River Roding Area Policy (Policy SPP1) requires the introduction of urban greening in development across this area as well as enhanced biodiversity value throughout the Gascoigne Estate, a green link between Harts Lane and the River Roding to Barking Park.
- 9.41 Most of the proposed allocation sites (for housing, employment and Gypsy and Traveller sites) connect with areas designated as a SINC or identified as part of a wildlife corridor, Habitat Improvement Area or Habitat Stepping Stone. It will be important for development to retain and enhance any habitats on or adjacent to sites and provide suitable compensation or mitigation to minimise negative effects associated with habitat loss, disturbance, noise, light and air pollution.
- 9.42 It is thus recognised that most of the development sites have the potential to affect designated sites through disturbance including increased recreational pressures, noise, light and air pollution. Further to this, the spatial strategy targets many regeneration sites that will deliver in excess of 100 homes, where development will be required to consult further with Natural England.
- 9.43 However, all development has the potential to create new ecological links that potentially connect with existing designated biodiversity sites and bring about strategic improvements to ecological connectivity in the Borough. Given the strategic scale of development being proposed, such benefits have the potential to deliver significant cumulative positive effects for biodiversity.
- 9.44 In the north of the borough around Chadwell Heath, development is again within the vicinity of designated biodiversity sites and has the potential to affect the sites through disturbance including increased recreational pressures, noise, light and air pollution. Chadwell Heath is recognised as an area of deficiency in access to nature, and any large-scale development that can support delivery of new nature spaces will support improvements in this respect with the potential for long-term positive effects. The Chadwell Heath and Marks Gate Area Policy (Policy SPP4) requires the delivery of improvements to the green infrastructure network here, including *“a green spine through the area connected to a variety of public realm spaces including parks and squares”*.
- 9.45 Development is also proposed in the east of the borough, and of note this includes Beam Park (Site AE), the former Ford Stamping Plant (Site XJ) and employment development at Here and East Film Studios (Site ZW). The sites have the potential through the regeneration of

²¹ BeFirst (2020) Ecological Assessment of mounded land to the east of Padnall Lake

brownfield land to extend the natural habitats of the Beam Valley and Eastbrookend parklands and enhance ecological connectivity in this respect.

- 9.46 In terms of BAP Priority Habitats, the Plan area contains varying types of habitat, including coastal mudflats along the Thames and its tributaries, coastal and floodplain grazing marsh grassland habitats within Barking Riverside, lowland fens at Beam Park Country Park, and areas of deciduous woodland around Barking Riverside, within Beam Valley Country Park, and at Barking Park. The habitats will come under significant pressure as a result of development at the 'Transformation Areas', particularly Barking Riverside where (given the extent of habitats here) although it is recognised that development here has already largely gained planning permission.

Appraisal of the Plan as a whole

- 9.47 The HRA previously identified that in the Regulation 18 and previous Regulation 19 consultation versions of the Local Plan there was *"no mention of mitigation required for the developments within the 6.2 km core recreational catchment area of the SAC and therefore, it is recommended that a paragraph stating compliance with the Interim Mitigation Advice from Natural England (March 2019) and when released the Full Mitigation Strategy, is inserted into Policy SP1."* The current Regulation 19 version of the Plan directly addresses this recommendation through Policy DMNE1 (Parks, open spaces and play space) identifying that *"development of 100 dwellings or greater which falls within the 3km to 6.2km Recreational Pressure 'Zone of Influence' (Zol) around Epping Forest SAC... will be required to mitigate the impacts of recreational pressure upon the SAC in compliance with Natural England's Interim Mitigation Advice and any subsequent Full Mitigation Strategy"*. Mitigation is expected in the form of Suitable Alternative Natural Greenspace (SANG) within the footprint of the development site. Where on-site provisions are constrained, contributions will be required for Strategic Access Management and Monitoring (SAMM) of the SAC.
- 9.48 The appraisal of the spatial strategy has identified the potential for development to result in negative effects for habitats. In response, Strategic Policy SP6 (Green and blue infrastructure) seeks to *"maximise the creation of new and improved green and blue infrastructure and address deficiencies in quantity, quality and access"*. The policy seeks to ensure *"development protects and enhances significant ecological features, achieves biodiversity net gain, and maximises opportunities for urban greening"*.
- 9.49 Parks and open spaces are directly protected under Policy DMNE1 (Parks, open spaces and play space), and Policy DMNE3 (Nature conservation and biodiversity) identifies that *"development should not lead to adverse effects on the integrity of Epping Forest Special Area of Conservation (SAC), or loss or degradation of Sites of Importance for Nature Conservation (SINCs), including Local Nature Reserves"*. This policy defines the requirement for development to demonstrate a minimum of 10% biodiversity net gain using the DEFRA metric or an agreed equivalent and requires the preparation of a long-term monitoring and management plan of biodiversity net gain sites for a period of 30 years. Policy DMNE2 (Urban greening) further outlines the potential measures that can support urban greening, whilst identifying an expectation for proposals to calculate a site's 'Urban Greening Factor' and achieve a minimum target score.
- 9.50 The policy directions, particularly the requirement for demonstrable net gain, should ensure that the potential negative effects arising as a result of the spatial strategy are avoided/ mitigated and overall, the cumulative contribution of net gain across the spatial strategy development sites is likely to lead to positive effects for biodiversity.
- 9.51 Further measures are outlined under Policy DMNE3 for development proposals, including the requirements to *"provide wider environmental net gain where possible"*, *"contribute to the strategic network of green and blue spaces"* and *"create new, appropriately located nesting and roosting sites for wildlife"* are considered likely to support cumulative positive effects for biodiversity.
- 9.52 Protection is also provided for biodiversity under Policy DMNE4 (Water environment) which seeks to *"protect and enhance biodiversity and geomorphology in and along watercourses,*

banks and waterways, adjacent terrestrial habitats, the foreshore and the floodplain” and under Policy DMNE5 (Trees) which identifies that development proposals “should retain existing trees, shrubs and ‘vegetation of value’ where possible”.

- 9.53 As identified in the appraisal of the spatial strategy, indirect minor negative effects are also anticipated for biodiversity as a result of increased disturbance, including recreational pressures, noise, light and air pollution, as likely by-products of growth. The Draft Local Plan proposes a number of policies that will address these effects and reduce the potential for negative effects arising. Policy DMNE1 (Parks, open spaces and play space) requires all major and strategic development to “*contribute to the delivery of sufficient new publicly accessible open space on site*” which should “*provide multiple benefits, including recreation, food growing, SUDs, improvements to biodiversity and links to green infrastructure*”. The requirement for new open and multifunctional space in development should reduce the extent of negative effects arising in terms of recreational pressures on existing sites.
- 9.54 This is also considered alongside the spatial strategy which proposes the intelligent use of industrial land for residential and mixed-use development. It is recognised that housing development has the potential to reduce noise and light pollution in comparison to some industrial land uses.
- 9.55 Policies DMSI3 (Nuisance) and DMSI4 (Air quality) also seek to manage the effects of noise, light and air pollution. Policy DMSI3 requires proposals to “*manage noise by identifying and protecting areas of tranquillity that have remained relatively undisturbed by noise and are valued for their recreational and amenity value for this reason*”, and Policy DMSI4 seeks to achieve the ‘air quality neutral’ benchmark for building emissions. The policies provide indirect support, minimising the potential for indirect negative effects in this respect.
- 9.56 Considering the above, and in particular the policy provisions which seek to deliver demonstrable biodiversity net gain alongside significant, strategic-scale development opportunities, minor long-term positive effects are anticipated in relation to biodiversity, which have the potential to become significant cumulative positive effects across all of the development sites.

Appraisal of cumulative effects

- 9.57 In the IIA for the London Plan, growth in Opportunity Areas is recognised for its potential to cumulatively affect biodiversity and air quality. However, by requiring demonstrable biodiversity net gain in development, the London Plan and Draft Local Plan significantly reduce this potential. Alternatively, the cumulative effects of net gain across the spatial strategy sites and wider London area are considered likely to be positive and long-term.
- 9.58 As a national body, Natural England provide strategic direction and advice which is not limited to administrative boundaries. A large proportion of the development sites are required to consult further with Natural England (by virtue of their size and location in the borough) which will reduce the potential for negative cumulative effects arising and maximise the potential for positive effects.

Landscape and townscape

Appraisal of the spatial strategy

- 9.59 In terms of landscape, the borough is predominantly urban with a strong presence of industrial land, particularly in the south. The eastern boundary and northern most tip of the borough is flanked by Green Belt land, and Barking Park, Mayesbrook Park and Parsloes Park are also areas of designated Metropolitan Open Land (MOL). There are also a number Tree Preservation Orders dispersed across the borough.
- 9.60 The spatial strategy of the Draft Local Plan is defined under Policy SPDG1 (Delivering growth in Barking and Dagenham) which seeks significant regeneration of previously developed land through the intelligent use of industrial land. Development is focused at ‘Transformation Areas’; at Barking Town Centre and the River Roding, Barking Riverside, Thames Road, Castle Green,

Chadwell Heath and Marks Gate, Dagenham Dock and Beam Park, Dagenham East, and Dagenham Heathway. This largely avoids development within the Green Belt and reinforces the use of and need for the MOL as parkland serving local resident open space requirements. The Collier Row Road site for Gypsy and Traveller pitches is the only site being considered within the Green Belt and is not anticipated to lead to any loss/ release of Green Belt land. The brownfield housing land supply also extends the plan period, to provide longer-term protection for greenfield land resources and landscape character.

- 9.61 A potential for loss of urban trees is identified and several of the sites identified in the Plan contain Tree Preservation Orders. It will be important for development to retain and enhance trees wherever possible as a significant contributor to landscape character.
- 9.62 The focus of development in the south and west of the Borough will utilise significant regeneration opportunities. Development at Barking and the River Roding will see the release of industrial land to deliver around 15,000 new homes in total when complete (beyond the Plan period) and much of this development is already committed. As a riverside location, new high-quality housing can benefit from the setting and views and improve the riverside approach for existing development north and west of the site. In this respect, there is significant potential for townscape improvements. The site does however contain The Ripple Local Nature Reserve, which would need to be retained in development to avoid negative effects on landscape character in this area.
- 9.63 Similarly, housing development in and around Barking Town Centre focuses on brownfield land opportunities that can also bring about townscape improvements. Many of these opportunities surround the historic core and designated conservation area, and in particular, development west of the Abbey and Barking Town Centre Conservation Area at Abbey Retail Park could significantly improve upon the townscape setting. Alongside housing development, Town Centres are also likely to be a focus for retail and some employment development, which should continue to support their central role and viability to continue to operate as attractive centres including in other designated historic townscape settings such as Dagenham Village.
- 9.64 Significant regeneration schemes at Beam Park and the former Stamping Plant are also considered likely improve townscape settings and provide better connections between development here and the Beam Valley parklands just north of the site.
- 9.65 Greenfield loss is largely limited to development at Padnall Lake (Site CO) in the north of the Borough, where a potential for long-term negative effects as a result of development in a previously undeveloped area is recognised. However, this is not significant at the strategic scale.

Appraisal of the Plan as a whole

- 9.66 As a starting point, the Draft Local Plan identifies through Draft Strategic Policy SPDG1 (Delivering growth in Barking and Dagenham) 'Transformation Areas' which include, Barking Town Centre and the River Roding, Barking Riverside, Thames Road, Castle Green, Chadwell Heath and Marks Gate, Dagenham Dock and Beam Park, Dagenham East, and Dagenham Heathway. The approach of regeneration-led development, as identified through the appraisal of the spatial strategy, is considered to have significant potential for townscape improvements, and this will ultimately be guided by the design criteria outlined by the Draft Local Plan. Policy SPDG1 identifies that the Council are seeking to deliver liveable and low-emission neighbourhoods, "*which promote good streetscape, healthy streets, and road safety.*" Policies SPP1 – SPP7 provide further detailed townscape criteria to support development within each of the 'Transformation Areas'. This includes renewal of the Barking Station, new public spaces and new green infrastructure links. High-quality new open spaces are anticipated within many of the Transformation Areas, as well as two new District Centres at Barking Riverside and Merriellands Crescent.
- 9.67 Chapter 4 of the Draft Local Plan is dedicated to design parameters that will significantly influence and shape the regeneration opportunities. Strategic Policy SP2 (Delivering a well-designed, high-quality and resilient built environment) identifies that the Council will "*promote high-quality design*", "*adopting a design-led approach to optimising density and site potential by*

responding positively to local distinctiveness". The policy further seeks the protection of important views, the championing of sustainable design and construction principles, and the use local context and interpreting local character to inform "*detail, materials and landscape..*"

- 9.68 Development management policies provide further detailed guidance for specific aspects of design. Policy DMD1 (Securing high-quality design) identifies the Council's support for development proposals "*that make a positive contribution to the character of the surrounding area*" informed by the latest design guidance. It is also identified under this policy that, where appropriate, development proposals should demonstrate early engagement with the Barking & Dagenham Quality Review Panel (QRP).
- 9.69 Policy DMD2 (Tall buildings) further sets the criteria underpinning successful development of tall buildings and identifies 'Tall Building Locations' within the Policies Map which will further inform development at the 'Transformation Areas'. Policy DMD5 (Local views) further seeks positive contributions to the characteristics and composition of local views of significant landmarks relevant to the development proposal, requiring Accurate Visual Representations (AVRs) where necessary to demonstrate likely impacts. Further to this, criteria for shop fronts and advertisements/ signage are identified under Policies DMD3 (Development in town centres) and DMD7 (Advertisements and signage), and householder extensions and alterations are guided by Policy DMD6 (Householder extensions and alterations).
- 9.70 Alongside the detailed design policies, the Draft Local Plan further seeks 'urban greening' (Policy DMNE2) and green/ blue infrastructure improvements that will support a high-quality living environment (Strategic Policy SP6). This includes new open spaces and new parkland at Beam Park as identified through the 'Transformation Area' policies (Policies SPP1 – SPP7).
- 9.71 Overall, the spatial strategy seeks significant regeneration on brownfield sites that have good potential to bring about townscape renewal and improvements. It is predicted that there will be long term significant positive effects in line with Draft Local Plan policies relating to high quality design and managing important views, as well as extended and improved green infrastructure, new parks and open spaces. The benefits of the housing land supply extending beyond the plan period for landscape are also recognised, by means of the long-term protection provided for greenfield land in the borough.

Appraisal of cumulative effects

- 9.72 The spatial strategy complements the London Plan policies D1 (London's form, character and capacity for growth), HC1 (Heritage conservation and growth), G1 (Green infrastructure) and G5 (Urban greening) which support the protection of valued and accessible environments and social wellbeing through the provision of green space and active transport opportunities. In this respect, positive cumulative effects are anticipated.
- 9.73 The IIA for the London Plan further identifies that strategic and local regeneration supports the re-use of buildings and protection to the environment, through green space provision and conservation of the Green Belt. As the Draft Local Plan places significant emphasis on regeneration opportunities, significant positive cumulative effects are anticipated in this respect.
- 9.74 The combined effects of the high-quality design policies are also recognised for their potential for positive economic growth through the provision of sustainable housing design with integrated green spaces, including wider improvements to the public realm.

Historic environment

Appraisal of the spatial strategy

- 9.75 There are numerous Listed Buildings, four conservations areas, many historic parks, gardens, and cemeteries/ churchyards within the borough. The spatial strategy of the Draft Local Plan as defined under Policy SPDG1 (Delivering growth in Barking and Dagenham), seeks significant regeneration of previously developed land focused at the 'Transformation Areas' of; Barking Town Centre and the River Roding, Barking Riverside, Thames Road, Castle Green, Chadwell Heath and Marks Gate, Dagenham Dock and Beam Park, Dagenham East, and Dagenham Heathway.
- 9.76 Abbey and Barking Town Centre and Dagenham Village Conservation Areas are likely to be affected by the proposed spatial strategy, though largely through development outside of their boundaries and encompassing their setting. Two sites in the Draft Plan; Clockhouse Avenue (Site DJ) and Ripple Road and Methodist Church (Site HN) are located wholly within Abbey and Barking Town Centre Conservation Area, and two further sites; Vicarage Field (Site AK) and Crown House & Linton Road car park (Site AM) lie partially within. Development at these sites should take account of the Abbey and Barking Town Centre Conservation Area Appraisal and factors that influence design in this location. Development in proximity to Barking Abbey Scheduled Monument should also consider appropriate archaeological investigation prior to development. Further to this, the Barking Station (Site EA) and Harts Lane Estate (Site XC) sites each contain a Listed Building and in this respect development at the two sites is considered to have a slightly increased potential for negative effects and mitigation would be required.
- 9.77 Whilst development encroaches on historic townscape assets and settings, particularly the Abbey and Barking Town Centre Conservation Area, it seeks a regenerative approach that avoids the loss of greenfield land, including parks, gardens and cemeteries. Ultimately there is a potential for negative effects, particularly upon the industrial historic landscape; however, high-quality design could also provide significant opportunities to improve upon townscape settings and the setting of designated and non-designated assets.

Appraisal of the Plan as a whole

- 9.78 The Draft Local Plan seeks to address the potential negative impacts arising from development on the historic environment, with Policy DMD4 providing detailed guidance for development that has a potential to affect designated and non-designated assets and their settings, including Archaeological Priority Areas (APAs). Under this policy development must undertake a Heritage Impact Assessment and "*agree an appropriate strategy for conserving and/ or where appropriate, enhancing*" the Borough's designated and non-designated heritage assets, "*in a manner appropriate to their significance*". Attention is drawn to the Council's Conservation Area Appraisals and Management Plans, as well as the Townscape and Socioeconomic Study (2017) (or its updated equivalent). The policy further identifies that all parts of the Borough are categorised into an Archaeological Priority Area and "*all new development must protect, or enhance, and promote archaeological heritage (both above and below ground) within the borough*", requiring appropriate archaeological investigation and assessment prior to the determination of proposals. Alongside the provisions of the NPPF and the London Plan, the Policy is considered likely to ensure that no significant negative effects arise with regards to the historic environment.
- 9.79 As identified in the appraisal of the spatial strategy, the significant redevelopment and regeneration opportunities promoted through the Draft Local Plan have the potential to promote significant townscape improvements to the benefit of the historic environment and setting of designated heritage assets. High-quality design will be a key factor in successful regeneration that complements the historic environment, and, in this respect, the Draft Local Plan provides ample steer in elements of design that are crucial considerations.

- 9.80 Draft Strategic Policy SP2 (Delivering a well-designed, high-quality and resilient built environment) identifies that the Council will promote “*high-quality design*”, “*incorporating and interpreting local character*” and “*preserving or enhancing the borough’s heritage*”, protecting conservation areas, historic assets and identified view and vistas and “*adopting a design-led approach to optimising density and site potential by responding positively to local distinctiveness*”. The policy further seeks the championing of sustainable design and construction principles, and the use of local context to inform detail, materials and landscape.
- 9.81 Development management policies provide further detailed guidance for specific aspects of design, including Policy DMD1 (Securing high-quality design) which requires early engagement with the Barking and Dagenham Quality Review Panel (QRP) and Policy DMD2 (Tall buildings) guiding successful development of tall buildings. The policies cumulatively seek to address the different approaches required across the different locations of the Plan area and at different scales of development.
- 9.82 The retention and improvement and parks and open spaces is also sought through Policy DMNE1 (Parks, open spaces and play space) providing support for spaces that are identified as assets of the historic environment or which contribute to the overall setting.
- 9.83 Considering the policy framework and the opportunities identified through the spatial strategy, it is considered likely that development will lead to long-term positive effects for the historic environment; however, it is recognised that there remains an element of uncertainty until site-level proposals arise and detailed impact assessments can be undertaken.

Appraisal of cumulative effects

- 9.84 The IIA for the London Plan recognises that due to land availability constraints in London, housing growth has the potential to negatively affect heritage conservation. Policy provisions of the London Plan, including Policy HC1 (Heritage conservation and growth) seek to avoid negative effects arising. Policy HC1 requires consultation with Historic England and other relevant statutory bodies to develop evidence that forms an understanding of London’s historic environment, with a focus on conserving, enhancing and improving access to historical and heritage assets, landscapes and archaeology. The effective integration of new development will be crucial in avoiding cumulative negative effects.
- 9.85 The Draft Local Plan spatial strategy will deliver significant regeneration of brownfield land in and around designated and non-designated heritage assets, with the potential to have positive effects on the townscape and historic environment. This might include the removal of eyesores, improving signage and understanding of designated heritage assets as well as indirect benefits through improvements to the public realm and movement within Conservation Areas. The collective policies for heritage protection and enhancement, and high-quality design are considered likely in this respect to bring about significant positive cumulative effects for London’s historic environment.

Climate change

Appraisal of the spatial strategy

- 9.86 In terms of climate change adaptation, much of the land in the south of the borough around the River Thames is subject to high flood risk, lying within Flood Risk Zone 3 and relying on flood defences for protection. The spatial strategy underpinning the Draft Local Plan as defined under Policy SPDG1 (Delivering growth in Barking and Dagenham), seeks significant regeneration of previously developed land focused at ‘Transformation Areas’ at Barking Town Centre and the River Roding, Barking Riverside, Thames Road, Castle Green, Chadwell Heath and Marks Gate, Dagenham Dock and Beam Park, Dagenham East, and Dagenham Heathway. Much of this focused growth is however set to be located within Flood Risk Zone 3 with the potential for significant negative effects. This includes significant areas of land around the River Roding and in the south of the borough around Barking Riverside (Site AA), the Ford Stamping Plant (Site XJ), Beam Park (Site AE), Marrieland’s Crescent Two (Site AC), and GSR & Gill Sites (Site ZZ), as well as numerous smaller sites.

- 9.87 Surface water flood risk is more widely dispersed across the borough, and most of the proposed development sites will need to consider the application of Sustainable Drainage Systems to minimise the risks arising in respect of this.
- 9.88 In terms of climate change mitigation, the spatial strategy focuses development in areas of high accessibility, including Barking Town Centre and Barking Riverside with its planned new Overground station connection. Development is planned in areas with good rail and bus access, surrounded by services and employment opportunities which should reduce the need to travel.
- 9.89 The focus of development in the south and west of the borough which provides opportunities for strategic scale development, makes strategic infrastructure improvements far more viable. The scale of development in these locations is considered to provide significant opportunities for sustainable transport and access improvements as well as active travel opportunities. It also makes sustainable energy infrastructure improvements, such as district heating schemes more viable as a means of addressing emissions arising from the residential sector. Strategic scale green infrastructure improvements can also be planned alongside development that increase resilience by supporting multiple benefits (e.g. potentially, biodiversity, urban cooling, flood risk and air quality attenuation). As such, it is considered that there is ample opportunity for development that realises reduced per capita carbon emissions.

Appraisal of the Plan as a whole

- 9.90 With regards to flood risk, Draft Strategic Policy SP7 (Securing a clean, green and sustainable borough) seeks to encourage “*innovative approaches*” to tackling climate change and managing flood risk, and detailed guidance is provided under Policy DMSI6 (Flood risk and defences) and DMSI7 (Water management) to address flood risk impacts, including surface-water flood risk.
- 9.91 All major development is required to incorporate SUDs and, in smaller-scale development where feasible, furthermore, it is identified that advice should be sought from the Council as to SUDs preferences (as the Lead Local Flood Authority). Under these policies, positive reductions in flood-risk are sought on and off-site by integrating flood constraints into design from the outset. A Flood Risk Assessment is sought alongside any proposals for development at risk of flooding, including from future flood risk.
- 9.92 The policies further seek to address changing climate impacts. Attention is drawn to the Thames Estuary 2100 Plan which protects land adjacent to flood defences, allowing an element of futureproofing. Development should be targeted at areas of lowest flood risk within sites, and basements will not be permitted in Flood Zone 3b.
- 9.93 Wider measures to increase green infrastructure (Policy SP6 Green and blue infrastructure and Policy DMNE2 Urban greening) and deliver new open and multi-functional spaces (Policy SP6 and Policy DMNE1 Park, open spaces and play space), alongside an embedded principle for securing demonstrable biodiversity ‘net gain’ in development (Policy DMNE3 Nature conservation and biodiversity) will also indirectly support reduced flood risk and climate change adaptation, particularly in terms of surface water flood risk with the widespread application of SUDs, and new green infrastructure supporting enhanced ecological networks in the borough.
- 9.94 In terms of climate change mitigation, the Draft Local Plan seeks to address emissions arising from all sectors; transport, domestic and industrial/ commercial.
- 9.95 Draft Strategic Policy SP8 (Planning for integrated and sustainable transport) seeks to support the delivery of the Mayor’s strategic target of 75% of all trips in Outer London to be made by walking, cycle or public transport by 2041, and detailed guidance is provided through Policy DMT1 (Making better connected neighbourhoods) which seeks to enhance sustainable transport access and use, including active travel opportunities. Under this policy, a robust transport assessment and a Travel Plan is sought for any development which is likely to have a significant impact on the borough’s transport network. Any development which is considered likely to have an adverse impact in terms of congestion, safety, air quality, noise, and/ or the operation of public transport is required “*to contribute and deliver appropriate transport infrastructure or effective mitigation measures*”. Strategic development proposals are expected

- to consider locating employment, housing and supporting facilities within easy reach of each other and ensure they are connected *“by, and with, high-quality, safe and attractive cycling and walking routes, both new and existing”*, with green infrastructure integrated into active travel routes. Cycle routes are also protected from and encouraged to be segregated from road transport where possible.
- 9.96 Policy DMT2 (Car parking) identifies the Council’s intention to manage and control parking to promote sustainable travel patterns and address congestion. Minimum cycle parking standards, as set out in the London Plan, are sought to be exceeded where possible under Policy DMT3 (Cycle parking), whilst limits are placed on car parking in line with vehicular parking standards. Futureproofing is also sought with infrastructure requirements for electric and other ultra-low emission vehicles. Where PTAL is high, *“car-free or car-light development”* is planned, and where the road network cannot accommodate the increased additional cars from a development, mitigation or fees to implement Controlled Parking Zones will be required.
- 9.97 Improved sustainable transport access is also sought through industrial and commercial development, with Policy DMT4 (Deliveries, servicing and construction) identifying that development must *“explore the use of alternative delivery and servicing practices and emerging technologies, including: freight consolidation and re-timing of deliveries; freight movements by water (see Local Plan Policy DMNE 4 Water Environment), the use of cargo bikes, cycle freight, electric and low or zero-emission vehicles, and the use of delivery lockers in residential developments”*. Major development is expected to demonstrate this as part of a Construction Logistics Plan and Delivery and Servicing Plan.
- 9.98 Improvements in air quality are further sought through Policy DMSI4 (Air quality) which identifies that *“major development proposals must achieve or improve upon the ‘air quality neutral’ benchmark (in line with Policy SI 1 of the London Plan and LBBD’s latest Air Quality Action Plan) by avoiding people’s exposure to poor air quality”*. The Draft Local Plan identifies Air Quality Focus Areas and, under Policy DMSI4, development proposals in these areas *“will be closely scrutinised as to the approach to air quality and will be expected to help reduce air pollution in the area”*. Where neutral benchmarks cannot be achieved on site, Policy DMSI4 alternatively requires a financial contribution for offsetting arrangements.
- 9.99 Alongside targeted reduced emissions from the transport and industrial/ commercial sectors, measures to enhance sustainable energy infrastructure and maximise resource efficiency are also sought. Draft Strategic Policy SP7 (Securing a clean, green and sustainable borough) seeks to ensure development *“supports and connects into the borough’s strategic District Energy Networks and associated infrastructure, utilising low or zero carbon fuel sources and heat recovery”* where possible. This is significant in terms of the proposed spatial strategy which identifies numerous strategic scale development opportunities which make energy infrastructure projects more viable. Under Policy DMSI2 (Energy, heat and carbon emissions) major development is expected to *“contribute to, and where possible exceed, the borough’s target of becoming carbon neutral by 2050 by maximising energy efficiency and carbon reductions on-site and demonstrating the achievement of net zero carbon buildings and neighbourhoods”*. Further to this, development proposals are expected to *“address an area’s energy infrastructure requirements, as identified in the Council’s latest Infrastructure Delivery Plan”, “prioritise decentralised energy”, and “adhere to the London Plan’s heating hierarchy”*. Applying to all development, Policy DMSI2 expects proposals *“to incorporate as much low carbon and renewable energy technologies as possible with minimal impact on the environment”*.
- 9.100 Considering the above, the policy framework provides a good steer for future-proofing development in the borough, and the delivery of significant strategic scale development opportunities are likely to support the realisation of infrastructure improvements that deliver reduced per capita emissions and long-term positive effects.
- 9.101 However, it is recognised that significant development is proposed within Flood Risk Zone 3. The policy framework seeks to capture and adequately assess the associated constraints and ensure that they are integrated into design from the outset. This is also considered alongside the targeting of brownfield redevelopment which can provide opportunities to improve existing conditions that impact upon flood risk (such as extent of hard surfacing). Until site level details

arise, which identify the measures that will avoid increasing flood risk and impacts to people and properties, an element of uncertainty is recognised.

Appraisal of cumulative effects

- 9.102 The growth proposed in the south of borough will lead to increased levels of development within areas of high flood risk, close to the River Thames. Development in the fluvial flood zone has the potential to increase flood risk without appropriate drainage strategies, and any new flood defences have the potential to displace flood risks. It will be important in this respect to ensure that any development in areas of high flood risk are carefully planned in collaboration with the Environment Agency to address any impacts downstream or in the wider catchment area. The growth in this area is aligned with the wider growth strategy of the London Plan, as part of the London Riverside Opportunity Area, and collaborative working across the Opportunity Area which extends into Havering can support integrated measures to address flood risk.
- 9.103 In terms of cumulative effects of new development in relation to surface water, the provisions of the NPPF (2019) alongside the London Plan and Draft Local Plan should realise wider spread application of SUDs and measures to address surface water flood risk at source/ on site. This is considered likely to support cumulative long-term positive effects.
- 9.104 The Draft Local Plan also seeks collaborative working with the GLA and TfL to ensure that strategic transport infrastructure improvements are coordinated across the Greater London region, including the new Overground station at Barking Riverside and Crossrail improvements at Chadwell Heath station. The Draft Local Plan seeks to integrate housing and economic growth with strategic infrastructure improvements to maximise accessibility and provide support for improved air quality; supporting the realisation of cumulative positive effects.
- 9.105 The IIA for the London Plan identifies that improved energy infrastructure will collectively increase energy efficiency and help mitigate against the social and environmental effects of energy production and consumption. Given the opportunities identified for energy infrastructure improvements through the spatial strategy of the Draft Local Plan and the supporting policy framework, significant positive cumulative effects are anticipated in this respect.
- 9.106 The IIA further identifies that more attractive transport routes, parks and tree-lined streets and green infrastructure will contribute to London's resilience to climate change impacts such as flooding and the urban heat island effect.

Population and communities

Appraisal of the spatial strategy

- 9.107 The spatial strategy as defined under Policy SPDG1 (Delivering growth in Barking and Dagenham) seeks to identify land to deliver a minimum of 44,051 new homes, meeting the identified needs of the borough in full, and exceeding them to provide an extra element of flexibility in delivery. As a result, the spatial strategy is considered likely to deliver significant positive effects for communities by means of access to new, high-quality and affordable housing. Many of the sites identified in the Draft Local Plan will also deliver development and stimulate regeneration in areas of higher deprivation, including areas within the Barking Town Centre and the River Roding, Dagenham East and Dagenham Dock and Chadwell Heath 'Transformation Areas'
- 9.108 Under Policy SPDG1, development is largely focused in the south and west of the Borough, with significant development areas identified at Barking Riverside (including Castle Green) and in and around Barking Town Centre but also extending east to deliver significant growth in Dagenham East.
- 9.109 The location of significant development at Barking Town Centre ensures high levels of accessibility of achieved, with good access to rail and bus transport networks, employment opportunities and a range of service and facility provisions. The strategic scale of development at Barking Riverside is likely to deliver a range of accessibility improvements in this area, which

includes a new Overground station connection, a new District Centre/ community service and facility provisions and green infrastructure improvements. Development is targeted at areas of high or improving PTAL (including Chadwell Heath in line with the planned Crossrail improvements), which, considered alongside a reduced need to travel are likely to bring about significant benefits for local communities in the long-term.

- 9.110 The integration of housing development in Town Centres, and as part of strategic mixed-use development opportunities is considered likely to support social cohesion, and as a result of brownfield regeneration also support an improved townscape and strengthened local identity. Integrated housing can also support reduced crime and fear of crime with a stronger presence of people, particularly in the evening, and as a result of natural surveillance.
- 9.111 A new and improved Barking Riverside location also provides ample opportunities for high-quality living environments in a natural riverside setting, providing benefits for communities in this respect. Similarly, development at Dagenham Dock (including Site AE – Beam Park) has significant potential to provide new and improved areas of open space that connect with the nearby parkland, supporting high-quality living environments for residents.

Appraisal of the Plan as a whole

- 9.112 As identified above Policy SPDG1 (Delivering growth in Barking and Dagenham) seeks to identify land to deliver a minimum of 44,051 new homes and around 20,000 new jobs, meeting the identified needs of the borough in full, and exceeding them to provide an extra element of flexibility in delivery. As a result, significant positive effects for communities are considered likely by means of access to new housing and employment. The policy framework proposed through the Draft Local Plan seeks to support communities in the delivery of this housing by ensuring high-quality design and affordable housing that targets local needs in a high-quality living environment, that is well connected and reduces the need to travel.
- 9.113 From the outset, Strategic Policy SPDG1 identifies the Council's intentions *"to deliver more sustainable travel programmes including Liveable Neighbourhoods, and continuing our School Streets Programme, which promote good streetscape, healthy streets, and road safety"*. Chapter 5 is dedicated to supporting the delivery of the right mix of housing. Strategic Policy SP3 (Delivering homes that meet people's needs) seeks to optimise housing supply, including the supply of affordable housing - pushing for 50% on-site provision. The policy supports proposals *"that meet the needs of specific communities, including older people, disabled and vulnerable people, LGBT community, students, families and private rented sectors (PRS) and Gypsies and Travellers"* and targets people who live and work primarily in Barking and Dagenham.
- 9.114 Policy DMH1 (Affordable housing) provides detailed guidance with regards to affordable housing, expecting all developments of 10 or more homes to meet the affordable housing provision set out by Policy SP3. Under this policy affordable housing provisions of a range of tenures and sizes are sought to promote integration and address local needs. Policy DMH2 (Housing mix) requires all development *"to provide a range of unit sizes (including family housing) in accordance with the Council's preferred housing size mix table"*.
- 9.115 The provisions of Policy DMH3 (Specialist housing for older persons) support the retention and delivery of specialist housing to meet an identified need and outlines criteria underpinning this type of development including, an agreement for occupation by a relevant operator, delivering a range of tenures, and high-quality design. The housing stock is sought to be further balanced by Policies DMH4 (Purpose-built shared housing) and DMH5 (Houses in multiple occupations (HMOs)), particularly by seeking to ensure that HMOs do not erode the stock of family housing. Policy DMH6 (Gypsy and traveller Accommodation) seeks to retain and expand the existing site at Eastbrookend Country Park and develop up to two new sites (Collier Row Road and/ or Choats Road) for Gypsy and Traveller accommodation to meet their long-term needs. Criteria underpinning development decisions are identified, which will support the delivery of sites to accommodate the specialist needs. This includes a suitable, accessible and safe site, and employing high-quality design and environmental enhancement that avoids amenity impacts. This will be particularly relevant to the Collier Road site, which is notably located within designed Green Belt land.

- 9.116 Alongside housing development that addresses community needs, the Draft Local Plan supports the provision of new employment floorspace, and the development of social infrastructure to the benefit of local communities.
- 9.117 Chapter 7 of the Draft Local Plan is proposed to support delivery of a resilient economy. The Draft Strategic Policy SP5 (Promoting inclusive economic growth) identifies a *“focus on growing a thriving and productive enterprise and small business economy, alongside new business investment, and ensuring the delivery of at least 20,000 new jobs and a wider employment base”*. Populations and local communities are likely to benefit from increased access to employment as a result, and this is considered alongside the intentions to provide *“employment and training opportunities for local people”*. The policy identifies that whilst the focus of investment will be physical improvements, it will also seek to deliver the *“long-term social infrastructure and education required for producing talented, entrepreneurial individuals locally.”* This is supported by the outlined expectations for new educational facilities in development at many of the ‘Transformation Areas’ as demonstrated through Policies SPP1 – SPP7.
- 9.118 Draft Strategic Policy SP4 (Delivering social and cultural infrastructure facilities in the right locations) identifies the Council’s intention to secure *“enhanced or new social and cultural infrastructure facilities to meet the needs arising from development”* and expects development to plan and deliver the appropriate social infrastructure in line with the Council’s latest Infrastructure Delivery Plan. Social infrastructure improvements that are supported through the policy includes development which; contributes to the capacity, quality, usability, sustainability and accessibility of existing and enhanced infrastructure, is delivered in advance of arising needs, promotes the growth and expansion of educational facilities, improves healthcare access, and delivers innovative approaches such as multi-functional spaces. The policy is supported by Policies DMS1 (Protecting and enhancing existing facilities) and DMS2 (Planning for new facilities), which provides greater detail in retaining existing facilities as well as parameters for new development, including being accessible and well-connected and co-located or integrated where possible. The Policy identifies that *“development proposals for residential and mixed-use development including provision of social, community and cultural facilities will need to submit a community needs strategy”*. The community needs strategy aims to ensure that development adequately assesses the needs arising and demonstrates how such needs are being met through any proposal. The expectations for new social and community infrastructure are reiterated through Policies SPP1 – SPP7 which guide development in the ‘Transformation Areas’. Given the strategic-scale development opportunities promoted through the spatial strategy, it is considered likely that in line with the policy context, new development at the sites will deliver new and improved social infrastructure and support local communities in this respect, with the potential for long-term positive effects.
- 9.119 All development is sought to improve upon accessibility levels and provide opportunities for active travel. Draft Strategic Policy SP8 (Planning for integrated and sustainable transport) seeks to support the delivery of the Mayor’s strategic target of 75% of all trips in London to be made by walking, cycling or public transport by 2041, and identifies that the Council *“will work proactively with the GLA, TfL, C2C, Network Rail and other network operators/ stakeholders to develop strategic transport plans which enhance growth by improving local connectivity across the borough and the wider London area.”*
- 9.120 Alongside the strategic direction, Policy DMT1 (Making better connected neighbourhoods) requires all development which is considered likely to have an adverse impact in terms of congestion, safety and air quality/ noise, and/ or the operation of public transport *“to contribute and deliver appropriate transport infrastructure or effective mitigation measures”*. Under this policy *“development proposals should be located where employment, housing and supporting facilities and services are within easy reach of each other by sustainable modes, reducing the need to travel and ensuring people are connected to places by, and with, high quality, safe and attractive cycling and walking routes, both new and existing”*, with green and blue infrastructure integrated into active travel. This will support communities in the long-term with increased accessibility and reduced deprivation in this respect, with the potential for long-term positive effects.

- 9.121 Development that supports an improved living environment is also sought through the Draft Local Plan, through the delivery of high-quality design and an improved public realm in new development (Strategic Policy SP2 (Delivering a high-quality and resilient built environment) and Policy DMD1 (Securing high-quality design)). Wider measures to enhance green infrastructure (Policy DMNE2 (Urban greening)) and deliver new open and multi-functional spaces (Strategic Policy SP6 (Green and blue infrastructure) and Policy DMNE1 (Parks, open spaces and play space)), alongside an embedded principle for demonstrable biodiversity 'net gain' in development (Policy DMNE3 (Nature conservation and biodiversity)) will provide increased access to nature and recreational spaces to support local communities, benefiting them in the long-term.
- 9.122 Considering the above, development is sought to improve the connections between housing, employment and social infrastructure, whilst also improving the living environment including green infrastructure and recreational spaces. The spatial strategy provides strategic-scale development opportunities that are better placed to deliver new provisions or supporting infrastructure, alongside the policy framework which guides development to maximise the benefits for local communities, significant long-term positive effects are anticipated overall with regards to local communities.

Appraisal of cumulative effects

- 9.123 In line with the London Plan, the Draft Local Plan seeks significant redevelopment at Barking Riverside as part of the London Riverside Opportunity Area. The IIA for the London Plan identifies that cumulatively, growth across the Opportunity Areas will contribute to developing London's social infrastructure and Green Infrastructure and support the provision of strategic transport infrastructure. Redevelopment and estate regeneration in line with Policy H1, will also support the delivery of infrastructure and regeneration of housing within the Wider South-East (WSE). Accessible housing is also considered to support local amenities to all Londoner's which could create a more inclusive society and reduced level of poverty. In this respect, positive cumulative effects are anticipated.
- 9.124 Policy SD2 (Collaboration in the Wider South East) of the London Plan supports a strategic approach to governance, to enhance the understanding of regional and sub-regional economic, social, and environmental challenges and opportunities. It also aims to emphasise the role of WSE partners in collaboration with the Mayor, to address shared concerns regarding housing and infrastructure, the environment, and industrial capacity.
- 9.125 Cumulatively, the development proposed through the Draft Local Plan will contribute to meeting the wider housing and regeneration aims of the London Plan. Exceeding the target figure of the London Plan will provide additional flexibility and benefit the wider Housing Market Area (HMA). On this basis, significant cumulative positive effects are anticipated.
- 9.126 The development of new and improved centres and an expanded employment base will also support wider neighbouring communities that look to Barking and Dagenham to access goods and services and employment opportunities with the potential for long-term positive effects.
- 9.127 Intentions to deliver additional Gypsy and Traveller pitches outlined through the Draft Local Plan align with Policy H14 of the DNLP, and the IIA for the London Plan identifies that this supports Policy G4 (Open space) by allowing Gypsies and Travellers designated pitches that would result in reduced use of green and open land across the WSE.

Economy and employment

Appraisal of the spatial strategy

- 9.128 The spatial strategy of the Draft Local Plan is centred around the adoption of a more intelligent use approach to existing industrial land in the borough, particularly in areas of high accessibility and areas in much need of regeneration/ renewal.
- 9.129 Employment growth is predominantly sought through renewal and intensification at the best performing and highly accessible locations, in particular Dagenham Dock (including the

Thames Freeport in Dagenham) but also at town centres, and by introducing a mix of commercial uses in closer proximity to housing, as part of mixed-use developments.

- 9.130 The Industrial Land Strategy has identified that more intelligent use of the industrial land in the borough can free up much needed land to support the delivery of around 50,000 new homes, but also increase job opportunities, with 20,000 new jobs anticipated over the plan period. On this basis, overall significant long-term positive effects are considered likely in relation to economy and employment.

Appraisal of the Plan as a whole

- 9.131 As identified above, most new employment development is focused around Dagenham Dock, Barking Town Centre, and as part of new mixed-use developments; as part of a focus on renewal and intensification of the borough's industrial land.
- 9.132 Chapter 7 of the Draft Local Plan supports the delivery of a resilient economy. The Draft Strategic Policy SP5 (Promoting inclusive economic growth) identifies a *“focus on growing a thriving and productive enterprise and small business economy, alongside new business investment, and ensuring the delivery of at least 20,000 new jobs and a wider employment base”*. This includes through supporting a new town centre hierarchy, maintaining an effective supply of employment land and floorspace, strengthening and intensifying the borough's extensive and underutilised Strategic Industrial Land (SIL) and Locally Significant Industrial Sites (LSIS), and facilitating the rationalisation of Safeguarded Wharves. The policy seeks to *“evolve, diversify, and contribute to a more thriving and more inclusive local economy”* by supporting appropriate town centre uses, providing flexible, affordable workspace, avoiding vacant or under-utilised buildings and spaces by encouraging better utilisation of industrial sites, and providing employment and training opportunities for local people.
- 9.133 Policy DME1 (Utilising the borough's employment land more efficiently) outlines the criteria for SIL, LSIS, and other employment sites outside of these designations. With regards to other employment sites, the policy seeks to resist development proposals which would result in the net loss of viable employment floorspace, particularly affordable and low-cost workspace as appropriate and in line with London Plan Policy E7 (Industrial intensification, co-location and substation). The provision of affordable workspace is further secured through Policy DME2 (Providing flexible, affordable workspace) which will support the needs of residents in this respect. The policy identifies that *“development of 1,000 sqm employment floorspace or greater will be required to incorporate an appropriate provision of affordable workspace on-site, offered at below market rate, for shared workspace or small business units through Section 106 agreements, subject to development viability”*. This space must *“provide units in turnkey form which are accepted by the Council or the registered workspace provider following completion.”* Acceptable turnkey spaces are expected to be secure, vacant, and fully glazed with functional lighting, essential services (e.g. water and electricity) connected and provided with access to high-speed broadband. The policy seeks to ensure a broader range of employment space is provided throughout the borough, meeting local needs for smaller, flexible and affordable spaces. As a result, long-term positive effects are anticipated for the economy and local employment.
- 9.134 The functions of town centres are directly protected through Policy DME3 (Encouraging vibrant, resilient, and characterful town centres) to reinforce their multifaceted role delivering community, cultural, retail and leisure uses. Active ground floor frontages are required under the policy, which also identifies a requirement for impact assessments in retail and leisure development exceeding 500 sqm outside of the designated town centres, again to protect their role.
- 9.135 Policy DME4 (Visitor accommodation) identifies the parameters for the development of new visitor accommodation, including avoidance of impacts on amenity and local character and ensuring that proposals accord with principal land uses and not compromise regeneration visions.
- 9.136 Through the spatial strategic and Policy framework, housing and employment development is located in areas that maximise PTAL, and wider accessibility improvements are sought. Draft

Strategic Policy SP8 (Planning for integrated and sustainable transport) identifies that the Council “*work proactively with the GLA, TfL, C2C, Network Rail and other network operators/ stakeholders to develop strategic transport plans which enhance growth by improving local connectivity across the borough and the wider London area.*” The policy seeks to safeguard and improve existing land and buildings “*used for active travel (walking and cycling), public transport or related support functions*” and “*identifying and safeguarding new sites, space and route alignments, as well as supporting infrastructure.*” The strategic guidance seeks to support the delivery of the Mayor’s strategic target for 75% of all trips in London to be made by walking, cycling or public transport by 2041.

- 9.137 Alongside the strategic direction, under Policy DMT1 (Making better connected neighbourhoods) “*strategic and major development proposals should be located where employment, housing and supporting facilities and services are within easy reach of each other by sustainable modes, reducing the need to travel and ensuring people are connected by, and with, high quality, safe and attractive cycling and walking routes*”, with green infrastructure integrated into active travel routes.
- 9.138 Ensuring high levels of accessibility better connects local employment / job opportunities to the benefit of the economy and the borough’s workforce. As a result, long-term positive effects are anticipated in this respect.
- 9.139 Development that supports an improved built environment is also sought through the Draft Local Plan, through both the delivery of high-quality design and an improved public realm in new development (Strategic Policy SP2 (Delivering a high-quality and resilient built environment) and Policy DMD1 (Securing high-quality design)). Wider measures to increase green infrastructure (Policy DMNE2 (Urban greening)) and deliver new open and multi-functional spaces (Strategic Policy SP6 (Green and blue infrastructure) and Policy DMNE1 (Parks, open spaces and play space)), alongside an embedded principle for demonstrable biodiversity ‘net gain’ in development (Policy DMNE3 (Nature conservation and biodiversity)) will provide improvements to the local environment that are considered likely to support inward investment and long-term positive effects.
- 9.140 Overall, whilst industrial land release to housing development has the potential to undermine the economy and employment, the releases have been carefully planned through the Industrial Land Strategy and alongside the policy provisions seek to avoid any overall net loss in employment space, and instead seek to deliver net gains through intensification and renewal. As a result, significant long-term positive effects are anticipated, particularly for the local workforce through ensuring a wide range of employment choices, in highly accessible locations and attractive environments.

Appraisal of cumulative effects

- 9.141 The Draft Local Plan seeks to balance jobs growth with growth in homes, which will cumulatively support positive long-term effects, particularly in terms of access. The London Plan allows for managed release of some surplus industrial land for housing and other complementary uses and consolidating the offer of the remaining industrial land. In this respect, the housing sites promoted through the Draft Local Plan accord with the provisions of the London Plan to support cumulative positive effects. The proposals to optimise densities and bring vacant land back into use will support the aims to maintain and support strategic and local industrial land and economic and employment bases prominent in the wider Greater London area.
- 9.142 New education and training opportunities will likely lead to significant long-term positive effects in terms of improving access to education for residents and wider communities which look to Barking and Dagenham for employment and training opportunities. This will contribute positively towards maintaining the high skillset of the borough and will ensure education and training facilities suit the varied employment base
- 9.143 The London seeks significant development at Barking Riverside as part of the London Riverside (Thames Estuary North and South) Opportunity Area. The IIA of the London Plan

identifies that cumulatively the growth of Opportunity Areas supports the growth of local, regional, national and international businesses.

Health and wellbeing

Appraisal of the spatial strategy

- 9.144 In terms of the health of residents, the borough is known to contain significant areas of deprivation, with over 12,000 children living in low income families. Life expectancy for both men and women is lower than the England average and avoidable mortality rates are the highest in London.
- 9.145 In the most recent Indices of Deprivation (IoD) published in 2019 a significant number of the Lower Super Output Areas (LSOAs) within the borough were in the second decile, and four LSOAs were in the first decile. The first decile represents the most deprived 10% of LSOAs, and the second decile the most deprived 20% of LSOAs nationally.
- 9.146 The spatial strategy of the Draft Local Plan as defined under Policy SPDG1 (Delivering growth in Barking and Dagenham) seeks to identify land to deliver a minimum of 44,051 new homes and 20,000 new jobs, meeting the identified needs of the borough in full, and exceeding them to provide an extra element of flexibility in delivery. As a result, the spatial strategy is considered likely to deliver significant positive effects for resident health and deprivation by means of access to new, high-quality and affordable housing and employment opportunities. Many of the sites identified in the Draft Plan will target and stimulate regeneration in areas of higher deprivation, including areas within the Barking and River Roding, Dagenham East and Dagenham Dock and Chadwell Heath 'Transformation Areas'.
- 9.147 Policy SPDG1 seeks significant regeneration of previously developed land focused at seven 'Transformation Areas' at Barking Town Centre and the River Roding, Barking Riverside, Thames Road, Castle Green, Chadwell Heath and Marks Gate, Dagenham Dock and Beam Park, Dagenham East, and Dagenham Heathway. The location of significant development at Barking Town Centre ensures high levels of accessibility are achieved, with good access to rail and bus transport networks, employment opportunities and a range of service and facility provisions. The high levels of accessibility alongside a reduced need to travel are considered likely to bring about significant health benefits for local communities.
- 9.148 The focus of development in the south and west of the Borough and the strategic scale land release/ development sites make strategic infrastructure improvements and development gains far more viable. The scale of development in this location is considered to provide significant opportunities for access improvements, active travel opportunities and new health, leisure and community facilities. Strategic scale green infrastructure improvements can also be planned alongside development that increase access and support health and wellbeing in this respect and address current shortages in areas with poor access; with the potential for significant long-term positive effects. Strategic scale development is also considered to have greater potential to deliver energy infrastructure improvements, such as new District Heating Systems, that can reduce energy consumption and fuel poverty.

Appraisal of the Plan as a whole

- 9.149 From the outset, Strategic Policy SPDG1 (Delivering growth in Barking and Dagenham) outlines the Council's intention to deliver Liveable Neighbourhoods "*which promote good streetscape, healthy streets, and road safety.*" In development the Council is seeking "*the delivery of other social and sustainable infrastructure, identified in the Council's most up-to-date Infrastructure Delivery Plan*" prioritising expanded education provision and primary healthcare facilities."
- 9.150 Existing and new healthcare facilities are protected/ supported through Policies DMS1 (Protecting and enhancing existing facilities) and DMS2 (Planning for new facilities). With strategic regeneration sites being promoted through the spatial strategy, the potential for significant infrastructure enhancements (including new healthcare provisions) is recognised and

- demonstrated through the expectations of the Area Policies SPP1 – SPP7 guiding development at the ‘Transformation Areas’, and significant long-term positive effects are anticipated.
- 9.151 The Draft Local Plan seeks development that facilitates healthy and active lifestyles. This ranges in scope of influence from for example, Policy DMNE6 supporting opportunities for local food growing and allotments, Policy DMNE1 protecting and enhancing the borough’s network of parks, open spaces and play space; to policies which seek high-quality design (e.g. Policy DMD1 Securing high-quality design) and improvements to accessibility and active travel networks (e.g. Policy DMT1 Making better connected neighbourhoods).
- 9.152 Strategic Policy SP8 (Planning for integrated and sustainable transport) seeks to support the delivery of the Mayor’s strategic target of 75% of all trips in London to be made by walking, cycling or public transport by 2041. Under Policy DMT1 (Making better connected neighbourhoods) *“strategic and major development proposals should be located where employment, housing and supporting facilities and services are within easy reach of each other by sustainable modes, reducing the need to travel and ensuring people are connected to places by, and with, high quality, safe and attractive cycling and walking routes”*, with green infrastructure integrated into active travel routes. Cycle routes are also encouraged to be segregated from road transport where possible. Improved active travel opportunities is considered likely to support resident health and wellbeing in the long-term, and positive effects are anticipated in this respect.
- 9.153 The Draft Local Plan seeks the delivery of high-quality design and an improved public realm in new development (Strategic Policy SP2 (Delivering a high-quality and resilient built environment) and Policy DMD1 (Securing high-quality design)). Wider measures to increase green infrastructure (Policy DMNE2 (Urban greening)) and deliver new open and multi-functional spaces (Strategic Policy SP6 (Green and blue infrastructure) and Policy DMNE1 (Parks, open spaces and play space)), alongside an embedded principle for demonstrable biodiversity ‘net gain’ in development (Policy DMNE3 (Nature conservation and biodiversity)), will provide improved access to nature as well as leisure and recreational facilities, to the benefit of resident health in the long-term.
- 9.154 Chapter 5 is dedicated to ultimately supporting the delivery of the right mix of housing and this will support health indicators with respect to access to high-quality and affordable housing with the potential for long-term positive effects. Similarly, the employment growth anticipated through Strategic Policy SP5 (Promoting inclusive economic growth), which includes the promotion of flexible and affordable workspace (Policy DME2), is likely to increase access to employment and support health indicators in this respect.
- 9.155 As identified through the spatial strategy appraisal, the strategic-scale development opportunities, through economies of scale, provide opportunities to support energy infrastructure improvements that can contribute to reducing fuel poverty. Strategic Policy SP7 (Securing a clean, green and sustainable borough) seeks development that *“supports and connects into the borough’s strategic District Energy Networks and associated infrastructure, utilising low or zero carbon energy sources and heat recovery”* where possible. Expanded upon under Policy DMS12 (Energy, heat and carbon emissions), development proposals are expected to *“address an area’s energy infrastructure requirements, as identified in the Council’s latest Infrastructure Delivery Plan”*, with major development expected to adhere to the London Plan’s heating hierarchy. The identified opportunities, alongside the policy provisions are considered likely to support reduced poverty as a result and long-term positive effects for resident health and wellbeing in this respect.
- 9.156 Overall, it is considered that the Draft Local Plan is underpinned by a number of strategic and detailed policy directions that seek to ensure new development supports the health and wellbeing of residents. The delivery of new housing, employment and social infrastructure, and improved accessibility and active travel opportunities, is considered likely to deliver significant long-term positive effects for resident health and wellbeing.

Appraisal of cumulative effects

- 9.157 The Draft Local Plan supports Policies D8 (Public realm), G5 (Urban greening), and S1 (Developing London's social infrastructure) of the London Plan. Its accompanying IIA identifies positive effects in terms of the provision of a London environment with health and wellbeing in mind. Additionally, the combination of these policies may create inclusive communities which actively influence health and wellbeing. The embedded Healthy New Town Principles in the policy framework of the Draft Local Plan, which have emerged from the Barking Riverside development as part of the wider London Riverside Opportunity Area within the London Plan, support integrated health considerations and realisation of positive cumulative effects in respect of the wider London environment.
- 9.158 The Draft Local Plan will interact with other Local Plans, the London Plan and wider strategies to improve access to housing, employment and wider infrastructure (including health and recreation facilities as well as open space). Delivering improvements on underused brownfield land in deprived areas will also further enhance the cumulative positive effects. Cumulative effects are also anticipated in relation to improvements to accessibility; resulting from the in-combination effects of enhancements to public transport and active travel opportunities.

Transport and movement

Appraisal of the spatial strategy

- 9.159 The Borough is served by the A12 and A13 which link the Plan area with central London, South Essex and the rest of East England. Seven stations in the Plan area form part of the London Underground System, three of which also form part of the National Rail system. There are planned improvements to the rail network in the borough which include a new Overground station at Barking Riverside and upgrades at the existing Chadwell Heath station to become part of the Crossrail System.
- 9.160 The proposed spatial strategy of the Draft Local Plan seeks to maximise development in the most sustainable locations. Policy SPDG1 seeks significant regeneration of previously developed land focused at the 'Transformation Areas' of Barking Town Centre and the River Roding, Barking Riverside, Thames Road, Castle Green, Chadwell Heath and Marks Gate, Dagenham Dock and Beam Park, Dagenham East, and Dagenham Heathway, particularly as locations where PTAL is high.
- 9.161 The location of significant development at Barking Town Centre ensures high levels of accessibility are achieved, with good access to rail and bus transport networks, employment opportunities and a range of service and facility provisions. The high levels of accessibility alongside a reduced need to travel are considered likely to bring about significant benefits in terms of transport and movement.
- 9.162 The focus of development in the south and west of the Borough and the strategic scale land release/ development sites make strategic infrastructure improvements far more viable. The scale of development in this location is considered to provide significant opportunities for infrastructure development, access improvements, and active travel opportunities. Strategic scale green infrastructure improvements can also be planned alongside development that increase green cover and support active travel opportunities.
- 9.163 Development at Barking Riverside will be supported by the new Overground station connection that will improve PTAL scorings. In this respect, long-term positive effects are anticipated in relation to transport and movement by increasing sustainable transport access in this part of the Borough.

Appraisal of the Plan as a whole

- 9.164 Draft Strategic Policy SP8 (Planning for integrated and sustainable transport) identifies that the Council "*will work proactively with the GLA, TfL, C2C, Network Rail and other network operators/ stakeholders to develop strategic transport plans which enhance growth by improving local connectivity across the borough and the wider London area*". The policy seeks

to safeguard and improve existing land and buildings and identify and safeguard “*new sites, space and route alignments, as well as supporting infrastructure which allow for a modal shift of freight.*” The strategic guidance seeks to support the Mayor’s target of 75% of all trips in London to be made by walking, cycling or public transport by 2041.

- 9.165 Alongside the strategic direction, Policy DMT1 (Making better connected neighbourhoods) requires all development which is likely to have a significant impact on the borough’s network to submit a robust transport assessment and a travel plan. Further to this, where development will have an adverse impact on the highway network in terms of congestion, safety, air quality and noise, proposals will be required to “*contribute and deliver appropriate transport infrastructure or effective mitigation measures*” including a reduction of vehicular parking. Under this policy “*development proposals should be located where employment, housing and supporting facilities and services are within easy reach of each other by sustainable modes, reducing the need to travel and ensuring people are connected to places by, and with, high-quality, safe and attractive cycling and walking routes*”, with green infrastructure integrated into active travel routes. Cycle routes are also encouraged to be segregated from road transport where possible.
- 9.166 Policies DMT2 (Car parking) and DMT3 (Cycle parking) identifies the Council’s intention to manage and control parking to promote sustainable travel patterns and address congestion. Cycle parking standards are promoted in line with the London Plan (with maximum standards sought), whilst limits are placed on car parking in line with vehicular parking standards. Futureproofing is also sought with infrastructure requirements for electric and other Ultra-Low Emission vehicles. Where PTAL is high, car-free or car-light development is encouraged, and where the road network cannot accommodate the increased additional cars from a development, mitigation or fees to implement Controlled Parking Zones will be required.
- 9.167 Improved sustainable transport access is also sought through industrial and commercial development, with Policy DMT4 (Deliveries, servicing and construction) identifying that development must “*explore the use of alternative delivery and servicing practices and emerging technologies, including: freight consolidation and retiming of deliveries; freight movements by water [...], the use of carbo bikes, cycle freight, electric and low or zero-emission vehicles; and the use of delivery lockers in residential development*”. Major development is expected to demonstrate this as part of Outline Construction Logistics Plan and a Delivery and Servicing Plan. The employment growth being proposed through the Draft Local Plan will increase the number of employment opportunities within the borough in highly accessible locations and as part of mixed-use development. This can ultimately support reduced vehicle movements in the borough by encouraging more local and sustainable trips for journeys to work.
- 9.168 The Transport Impact Assessment (TIA) 2020 identifies that the local and strategic road network is currently near capacity. Ultimately any new growth will negatively affect road network capacity; however, the strategic scale development proposals are considered for their potential to provide the necessary infrastructure enhancements to accommodate future growth in the borough. When considering this alongside the spatial strategy’s focus on development in highly accessible locations, and the policy measures to reduce reliance on the private vehicle and improve active travel opportunities in line with the Mayor’s targets for sustainable transport use, significant long-term positive effects are anticipated in relation to transportation and movement overall. Active travel opportunities as part of accessible development are likely to become increasingly important for development in light of the CV19 pandemic.

Appraisal of cumulative effects

- 9.169 The cumulative effect of growth across all of the proposed housing sites is likely to place significant pressure on the existing road infrastructure network which is currently largely operating at, or over, capacity.
- 9.170 In line with the London Plan, the Draft Local Plan seeks significant redevelopment at Barking Riverside as part of an Opportunity Area. The IIA for the London Plan identifies that cumulatively, growth across the Opportunity Areas will contribute to developing London’s social infrastructure and Green infrastructure and support the provision of strategic transport infrastructure.

- 9.171 The IIA considers that strategic and local regeneration which aims to reduce private vehicle use and increase the use of active and public transport, will benefit London's air quality, decrease noise disturbances and promote healthy lifestyles. It also supports the economic regeneration of areas by providing accessible and affordable connectivity across London.
- 9.172 In this respect, the regeneration-led spatial strategy of the Draft Local Plan is considered likely to lead to positive cumulative effects. A focus on development in highly accessible locations and alongside strategic transport infrastructure improvements such as the new Overground station at Barking Riverside and Crossrail improvements at the existing Chadwell Health Station is considered likely to improve accessibility and movement across the wider region. Support is provided for improved sustainable access for out-commuting and in-commuting populations with the potential for positive cumulative effects.

10. Summary appraisal findings

Introduction

10.1 This chapter provides a summary of the detailed appraisal findings for the Draft Local Plan set out in the preceding chapter.

Summary appraisal findings

10.2 Overall, the spatial strategy focuses on the regeneration of brownfield land through both intensification and re-use, is considered likely to bring about a number of significant long-term positive effects. The following points are considered the key elements of the strategy that are likely to realise these effects:

- Brownfield-led development, minimising the use of greenfield land, and avoiding Green Belt and MOL loss, leading to significant positive effects in terms of efficient land use, land remediation and improved soil quality.
- Townscape renewal, particularly within the Barking Town Centre and Barking Riverside, benefiting townscape character and the historic environment.
- Strategic-scale development opportunities which, through economies of scale, provide significant opportunities to improve transport and energy infrastructure.
- An embedded principle for demonstrable biodiversity 'net gain' and wider environmental net gain – cumulatively leading to significant positive effects across the development sites and locations.
- Significant new housing development to meet and exceed forecasted needs and including a mix of housing sizes, types and tenures to meet identified local needs.
- Significant employment growth, through the intelligent use of industrial land targeted at the best performing areas in highly accessible locations and supporting a more diversified employment base.
- Enhanced town centres, with integrated housing supporting their social, cultural, retail and leisure role and improving accessibility for residents/ reducing the need to travel.
- High-quality design informed by early engagement.

10.3 While the Draft Local Plan performs well against the majority of SA objectives, it is recognised that significant levels of development are proposed within areas of high fluvial flood risk (Flood Risk Zone 3). The avoidance of significant negative effects in this respect is wholly dependent upon successful implementation of the policy protections, and innovative responses from developers.

10.4 The previous iteration of the SA recommended that the Local Plan embed the recommendations arising from the HRA. These recommendations have now been incorporated into the policy framework. No new recommendations are made at this stage.

10.5 **Table 10.1** below sets out a summary of the appraisal findings for the Draft Local Plan 'as a whole' against each SA theme.

Table 10.1: Summary appraisal findings

SA theme	Commentary	Residual significant effect?
Land, soil and water resources	Overall, the spatial strategy which targets large scale regeneration opportunities is likely to deliver significant positive effects in terms of efficient land use, with brownfield land supplies extending beyond the Plan period and the delivery of new open spaces. Strategic regeneration sites are also considered likely to increase the viability of water/ wastewater infrastructure improvements and	Yes - Positive

SA theme	Commentary	Residual significant effect?
	improve drainage in support of both the WRMP and the Thames Water 5-year Plan. The proposed policy framework, which maximises the potential for new development supporting efficiency measures and integrating with the environment and infrastructure capacities, is considered likely to lead to significant long-term positive effects.	
Environment al quality (air, soil and water quality)	The regeneration of industrial land promoted through the Draft Local Plan is likely to deliver land remediation to the benefit of soil quality in the Plan area. In terms of water quality, whilst development is proposed within sensitive water environments, the policy provisions outlined in the plan seek to ensure that no negative effects arise. The widespread application of SUDs, as well as biodiversity enhancement opportunities and the provision of new naturalised buffers between development and waterbodies should support improved water quality overall, both chemically and ecologically.	Yes - Positive
	Air quality is a significant constraint with the entire borough being a declared AQMA and in response the Draft Local Plan places a strong emphasis on sustainable connections. The spatial strategy targets areas of highest PTAL, and the policy framework places significant emphasis on improving active travel opportunities and sustainable transport connections. The air quality of the borough has been categorised and development within Air Quality Focus Areas will be particularly scrutinised under this policy framework. As a result of policy mitigation, localised improvements to air quality are anticipated over the Plan period.	
Biodiversity	The Draft Local Plan seeks to protect features, habitats and species that underpin biodiversity in the borough. Alongside this the policy provisions embed the principle for demonstrable biodiversity 'net gain' and wider environmental net gain. Cumulatively across the development sites this is considered to have the potential for significant long-term positive effects.	Yes - Positive
Landscape and townscape	Overall, the spatial strategy seeks significant regeneration on brownfield sites that have good potential to bring about townscape renewal and improvements. It is predicted that there will be long term significant positive effects in line with Draft Local Plan policies relating to high quality design and managing important views, as well as extended and improved green infrastructure, new parks and open spaces. The benefits of the housing land supply extending beyond the plan period for landscape are also recognised, by means of the long-term protection provided for greenfield land in the borough .	Yes - Positive
Historic environment	The spatial strategy seeks significant regeneration on brownfield sites that have good potential to bring about townscape renewal and improvements that are likely to benefit the settings of historic environment assets, both designated and non-designated, and in particular, the Abbey and Barking Town Centre Conservation Area. A significant long-term positive effect is anticipated in line with Draft Local Plan policies relating to high quality design, managing important views and the protection and enhancement of the historic environment. However, there is an element of uncertainty until project level heritage impact/ archaeological assessments have been carried out.	Yes - Positive
Climate change	The policy framework provides a good steer for future-proofing development in borough, and the strategic scale development opportunities have good potential to realise sustainable transport improvements, and energy infrastructure improvements. Despite this, a high level of growth is located within areas of high fluvial flood risk where careful planning, mitigation and innovative design responses will be required. As a result, an uncertain effect is identified at this stage.	Uncertain
Population and communities	The Draft Local Plan seeks to deliver new housing in excess of the identified needs, as a result significant long-term positive effects are anticipated. The spatial strategy and supporting policy framework seek to improve the connections between housing, employment and social infrastructure which will benefit local communities in the long-term. This is also considered alongside improvements to the natural and built environment which support high-quality living environments.	Yes - Positive

SA theme	Commentary	Residual significant effect?
Economy and employment	Whilst industrial land release to housing development has the potential to undermine the economy and employment, the policy provisions seek to ensure no overall net loss in employment space, and instead seek to deliver net gains through intensification and renewal. The policy framework is considered to have significant potential to deliver long-term positive effects, particularly for the local workforce through ensuring a wide range of employment choices, in highly accessible locations and attractive environments.	Yes - Positive
Health and wellbeing	The Draft Local Plan is underpinned by strategic and detailed directions that seek to ensure new development supports the health and wellbeing of residents. The delivery of new housing, employment and social infrastructure, and improved accessibility and active travel opportunities, is considered likely to deliver significant long-term positive effects for resident health and wellbeing. The regeneration of brownfield land also presents opportunities to improve accessibility to open/ green spaces.	Yes - Positive
Transport and movement	The local and strategic road network in the borough is already operating at, or over capacity. Ultimately any new growth will negatively affect road network capacity; however, the strategic regeneration proposed offers the potential to provide the necessary infrastructure enhancements to accommodate future growth in the borough. When considering this alongside the spatial strategy's focus on development in highly accessible locations, and the policy measures to reduce reliance on the private vehicle and improve active travel opportunities in line with the Mayor's targets for sustainable transport use, significant long-term positive effects are anticipated in relation to transportation and movement overall.	Yes - Positive

Part 3: What happens next?

11. Next steps and monitoring

Introduction (to Part 3)

11.1 The aim of Part 3 is to explain the next steps in the plan-making/ SA process as well as potential monitoring measures.

Next Steps

11.2 This SA Report will accompany the Second Revision Regulation 19 Local Plan for public consultation in October until the 28th November 2021. Any comments received will be reviewed and then taken into account as part of the iterative plan-making and SA process.

11.3 The representations received along with further evidence base work, including further SA work (if necessary), will inform the submission version of the Local Plan.

Monitoring

11.4 It is anticipated that monitoring will be undertaken as part of the Council's Authority Monitoring Report (AMR). No significant negative effects are anticipated at this stage, which would require extended monitoring arrangements over and above this existing process.

Appendices

Appendix I: Regulatory requirements

As discussed in Chapter 1 of the main report, Schedule 2 of the Environmental Assessment of Plans Regulations 2004 explains the information that must be contained in the SA Report; however, interpretation of Schedule 2 is not straightforward. **Table A** links the structure of this report to an interpretation of Schedule 2 requirements, whilst **Table B** explains this interpretation.

Table A: Questions answered by the SA Report, in accordance with an interpretation of regulatory requirements

Questions answered		As per the regulations...the SA Report must include...	
Introduction	What's the plan seeking to achieve?	<ul style="list-style-type: none"> An outline of the contents, main objectives of the plan and relationship with other relevant plans and programmes 	
	What's the SA scope?	What's the sustainability 'context'?	<ul style="list-style-type: none"> Relevant environmental protection objectives, established at international or national level Any existing environmental problems which are relevant to the plan including those relating to any areas of a particular environmental importance
		What's the sustainability 'baseline'?	<ul style="list-style-type: none"> Relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan The environmental characteristics of areas likely to be significantly affected Any existing environmental problems which are relevant to the plan including those relating to any areas of a particular environmental importance
		What are the key issues and objectives that should be a focus?	<ul style="list-style-type: none"> Key environmental problems / issues and objectives that should be a focus of (i.e. provide a 'framework' for) assessment
Part 1	What has plan-making / SA involved up to this point?	<ul style="list-style-type: none"> Outline reasons for selecting the alternatives dealt with (and thus an explanation of the 'reasonableness' of the approach) The likely significant effects associated with alternatives Outline reasons for selecting the preferred approach in light of alternatives assessment / a description of how environmental objectives and considerations are reflected in the Plan 	
Part 2	What are the SA findings at this current stage?	<ul style="list-style-type: none"> The likely significant effects associated with the Submission Plan The measures envisaged to prevent, reduce and offset any significant adverse effects of implementing the Submission Plan 	
Part 3	What happens next?	<ul style="list-style-type: none"> A description of the monitoring measures envisaged 	

Table B: Questions answered by the SA Report, in accordance with regulatory requirements

<u>Schedule 2</u>	<u>Interpretation of Schedule 2</u>	
<i>The report must include...</i>	<i>The report must include...</i>	
1. an outline of the contents, main objectives of the plan and relationship with other relevant plans and programmes;	An outline of the contents, main objectives of the plan and relationship with other relevant plans and programmes	i.e. answer - <i>What's the plan seeking to achieve?</i>
2. the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan	Any existing environmental problems which are relevant to the plan including, in particular, those relating to any areas of a particular environmental importance	i.e. answer - <i>What's the 'context'?</i>
3. the environmental characteristics of areas likely to be significantly affected;	The relevant environmental protection objectives, established at international or national level	
4. any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC;	The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan'	i.e. answer - <i>What's the 'baseline'?</i>
5. the environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan and the way those objectives and any environmental considerations have been taken into account during its preparation;	The environmental characteristics of areas likely to be significantly affected	
6. the likely significant effects on the environment including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors;	Any existing environmental problems which are relevant to the plan including, in particular, those relating to any areas of a particular environmental importance	i.e. answer - <i>What are the key issues & objectives?</i>
7. the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan;	Key environmental problems / issues and objectives that should be a focus of appraisal	
8. an outline of the reasons for selecting the alternatives dealt with and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information	An outline of the reasons for selecting the alternatives dealt with (i.e. an explanation of the 'reasonableness of the approach')	i.e. answer - <i>What has Plan-making / SA involved up to this point?</i> [Part 1 of the Report]
9. a description of the measures envisaged concerning monitoring.	The likely significant effects associated with alternatives, including on issues such as... ... and an outline of the reasons for selecting the preferred approach in light of the alternatives considered / a description of how environmental objectives and considerations are reflected in the draft plan.	
	The likely significant effects associated with the draft plan	i.e. answer - <i>What are the assessment findings at this current stage?</i> [Part 2 of the Report]
	The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects of implementing the draft plan	
	A description of the measures envisaged concerning monitoring	i.e. answer - <i>What happens next?</i> [Part 3 of the Report]

Whilst Tables A and B signpost *broadly* how/ where this report presents the information required of the SA Report by the Regulations, as a supplement it is also helpful to present a discussion of *more precisely* how/where regulatory requirements are met - see **Table C**.

Table C: ‘Checklist’ of how (throughout the SA process) and where (within this report) regulatory requirements have been, are and will be met.

Regulatory requirement	Discussion of how requirement is met
Schedule 2 of the regulations lists the information to be provided within the SA Report	
1. An outline of the contents, main objectives of the plan or programme, and relationship with other relevant plans and programmes;	Chapter 2 (‘What’s the plan seeking to achieve’) presents this information. The relationship with other plans and programmes is also set out in Appendix II (Scoping Information).
2. The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme;	These matters were considered in detail at the scoping stage, which included consultation on a Scoping Report published in 2015.
3. The environmental characteristics of areas likely to be significantly affected;	The outcome of scoping was an ‘SA Framework’, and this is presented within Chapter 3 (‘What’s the scope of the SA’).
4. Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC.;	More detailed messages from the Scoping Report - i.e. messages established through context and baseline review - are presented within Appendix II. The scoping information was updated in 2019.
5. The environmental protection, objectives, established at international, Community or national level, which are relevant to the plan or programme and the way those objectives and any environmental, considerations have been taken into account during its preparation;	The Scoping Report (2015) presents a detailed context review, and explains how key messages from the context review (and baseline review) were then refined in order to establish an ‘SA framework’. The scoping information was updated in 2019 and is presented in Appendix II. The context review informed the development of the SA framework and topics, presented in Chapter 3, which provide a methodological ‘framework’ for appraisal. With regards to explaining “how... considerations have been taken into account” - <ul style="list-style-type: none"> • Chapters 4 and 5 explain how reasonable alternatives were established in 2019 in-light of available evidence. • Chapter 6 sets out the summary findings of the appraisal of the reasonable alternatives, with the detailed appraisal provided in Appendix V. • Chapter 7 explains the Council’s ‘reasons for supporting the preferred approach’, i.e. explains how/why the preferred approach is justified in-light of alternatives appraisal (and other factors). • Chapter 9 sets out the findings of the appraisal of the draft plan and Chapter 10 provides a summary of the findings.
6. The likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors. (Footnote: These effects should include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects);	<ul style="list-style-type: none"> • Chapter 6 sets out the summary findings of the appraisal of the reasonable alternatives (in relation to the spatial strategy, which is the ‘stand-out’ plan issue and hence that which should be the focus of alternatives appraisal/ consultation), with the detailed appraisal provided in Appendix IV. • Chapter 9 sets out the findings of the appraisal of the draft plan and Chapter 10 provides a summary of the findings. <p>As explained within the various methodology sections, as part of appraisal work, consideration has been given to the SA scope, and the need to consider the potential for various effect characteristics/dimensions.</p>

Regulatory requirement**Discussion of how requirement is met**

7. The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme;	Where necessary, mitigation measures are identified within the alternatives appraisal (in Chapter 6 and Appendix IV) and appraisal of the Draft Local Plan (Chapters 9 and 10).
8. An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information;	Chapters 4 and 5 deal with 'Reasons for selecting the alternatives dealt with', in that there is an explanation of the reasons for focusing on particular issues and options. Also, Chapter 7 explains the Council's 'reasons for selecting the preferred option' (in light of alternatives appraisal). Methodology is discussed at various places, ahead of presenting appraisal findings, and limitations/assumptions are also discussed as part of appraisal narratives.
9. Description of measures envisaged concerning monitoring in accordance with Art. 10;	At this stage no additional monitoring measures are identified as being necessary over and above those already being considered by the Council.
10. A non-technical summary of the information provided under the above headings	The NTS is provided in a separate document.

The SA Report must be published alongside the Draft Plan, in accordance with the following regulations

authorities with environmental responsibility and the public, shall be given an early and effective opportunity within appropriate time frames to express their opinion on the Draft Plan or programme and the accompanying environmental report before the adoption of the plan or programme (Art. 6.1, 6.2)	An Interim SA Report was published alongside the Regulation 18 Local Plan for public consultation from 29 November 2019 to 24 January 2020. At the current time, this SA Report is published alongside the Draft Local Plan, under Regulation 19, so that representations might be made ahead of submission.
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The SA Report must be taken into account, alongside consultation responses, when finalising the plan.

The environmental report prepared pursuant to Article 5, the opinions expressed pursuant to Article 6 and the results of any transboundary consultations entered into pursuant to Article 7 shall be taken into account during the preparation of the plan or programme and before its adoption or submission to the legislative procedure.	The Council has taken into account Interim SA Report when preparing the Regulation 18 version of the Local Plan for publication. Appraisal findings presented within this current SA Report will inform a decision on whether or not to submit the plan, and then (on the assumption that the plan is submitted) will be taken into account when finalising the plan at Examination (i.e. taken into account by the Inspector, when considering the plan's soundness, and the need for any modifications).
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Appendix II: Scoping information

The Environmental Assessment of Plans and Programmes Regulations 2004 require that “When deciding on the scope and level of detail of the information that must be included in the Environmental Report [i.e. the SA scope], the responsible authority shall consult the consultation bodies”. In England, the consultation bodies are the Environment Agency, Historic England and Natural England.²² As such, these authorities were consulted on the SA scope in 2015. Since that time, the SA scope has evolved as new evidence has emerged - however, the scope remains fundamentally similar to that agreed through the dedicated scoping consultation in 2015. The scoping information has been updated in 2019 to reflect new and/ or updated evidence.

Review of Policies, Plans and Programmes

	Objectives or requirements of the plan or programme	Implications for the Local Plan and SA
International		
European Strategic Environmental Assessment Directive (2001/42/EC)	The Directive seeks to protect the environment and contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development. The Directive requires the environmental assessment of plans and programmes which are likely to have significant effects on the environment.	SA will incorporate Strategic Environmental Assessment to be carried out to inform the preparation of the Local Plan.
EU Biodiversity Strategy 1998	This strategy aims to anticipate, prevent and attack the causes of significant reduction or loss of biodiversity at the source. Targets for biodiversity are set by member states.	The Local Plan should seek to address those issues highlighted with spatial implications. The SA will need to include an objective to protect and enhance existing areas of biodiversity value.
EU Biodiversity Action Plan 2006	The EU Biodiversity Action Plan addresses the challenge of integrating biodiversity concerns into other policy sectors in a unified way. It specifies a comprehensive plan of priority actions and outlines the responsibility of community institutions and Member States in relation to each. It also contains indicators to monitor progress and a timetable for evaluations. The European Commission has undertaken to provide annual reporting on progress in delivery of the Biodiversity Action Plan.	The Local Plan should seek to address those issues highlighted with spatial implications. The SA will need to include an objective to protecting existing areas of biodiversity value.
United Nations Convention (Ramsar) on	Lists wetlands of international importance based on ecological and hydrological criteria	The Local Plan will need to consider how to protect and enhance any wetlands.

²² In accordance with Article 6(3) of the SEA Directive, these consultation bodies were selected because ‘by reason of their specific environmental responsibilities, [they] are likely to be concerned by the environmental effects of implementing plans and programmes.’

Wetlands of International Importance (1971)	Promotes the conservation and wide use of the wetlands included in the list	The SA will need to address the requirements of this convention.
European Habitats Directive (92/43/EEC)	Maintain or restore designated natural habitat types, and habitats of designated species. Take appropriate steps to avoid degrading or destroying Special Areas of Conservation	The Local Plan will need to consider how to protect and enhance the boroughs natural spaces. The SA will need to comply with this Directive.
European Birds Directive (2009/147/EEC)	Identifies 181 endangered species and sub-species for which the Member States are required to designate Special Protection Areas	The Local Plan will need to consider how to protect local endangered species and their habitats. The SA will need to comply with this Directive.
European Air Quality Directive (2008/50/EC)	To maintain and improve ambient air quality, including the establishment of air quality standards for a specific set of pollutants PM10, PM2.5 and NO2.	New developments should help achieve stringent air quality targets. SA objectives will need address air quality
Urban Waste Water Directive (91/271/EEC)	To protect the environment from the adverse effects of sewage discharges. The Directive regulates the collection and treatment of waste water from homes and industry and sets standards for collection and treatment of wastewater.	The Local Plan should seek to promote the objective contained within the waste water directive. SA objectives will need to address water quality
European Water Framework Directive (2000/60/EC)	Sustainable use of water and long term protection of water resources. Member States must aim to reach good chemical and ecological status in inland and coastal waters by 2015 and reduce pollution to surface water and groundwater.	The Local Plan will need to protect local waterways and seek to improve quality of surface water. SA objectives will need to address water quality
European Flood Risk Directive (2007/60/EC)	Aims to reduce and manage the risks that floods pose to human health, the environment, cultural heritage and economic activity. It requires Member States to assess whether all water courses and coast lines are at risk from flooding, to map the flood extent and assets and humans at risk in these areas, and to take adequate and coordinated measures to reduce this flood risk. The Directive shall be carried out in coordination with the Water Framework Directive, most notably through flood risk management plans and river basin management plans, and also through coordination of the public participation procedures in the preparation of these plans.	The Local Plan will need to take into account local flood risk zones, including through the preparation of an SFRA. SA objectives will need to address flood risk and its impacts.
Doha amendment to the Kyoto Protocol on Climate Change (2012)	Places greenhouse gasses emission reduction targets of 20% for the UK.	The Local Plan must consider the impact of climate change, and how to contribute to reductions in greenhouse gas emissions. SA objectives will need to address green house gas reduction

The Future We Want Rio+20 United Nations Conference on Sustainable Development (2012)	Recognizes the importance of the three Rio conventions for advancing sustainable development. Urges all parties to the United Nations Framework Convention on Climate Change and parties to the Kyoto Protocol there to fully implement their commitments, as well as decisions adopted under those agreements.	The Local Plan must consider the impact of climate change, and how to contribute to reductions in greenhouse gas emissions. SA objectives will need to cover sustainable development
Renewable Energy Directive (2009/28/EC)	Establishes a common framework for the use of energy from renewable sources in order to limit greenhouse gas emissions and to promote cleaner transport. It sets national indicative targets for renewable energy production from individual member states. The UK has committed to sourcing 15% of its energy from renewable sources by 2020.	The Local Plan will seek to contribute towards meeting renewable energy targets. SA objectives will need to address green house gas reduction
Energy Performance of Buildings (Directive 2010/31/EU)	Requires moving towards new and retrofitted nearly zero energy buildings by 2020 (2018 in the case of Public buildings), and the application of a cost optimal methodology for setting minimum requirements for both the building's envelope and the technical systems.	The Local Plan should promote energy efficiency of buildings within policies. SA objectives will need to address green house gas reduction
The European (Valletta) Convention on the Protection of the Archaeological Heritage (Revised) (2000).	To provide for the maintenance of an inventory of the country's archaeological heritage To provide for archaeological participation in planning policies designed to ensure well balanced strategies for the protection, conservation and enhancement of sites of archaeological interest; To ensure that in development schemes affecting archaeological sites, sufficient time and resources are allocated for an appropriate scientific study to be made of the site and for its findings to be published	The Local Plan should protect, conserve and enhance the Borough's Archaeological assets. The SA objectives will to address the importance of the borough's archaeological heritage.
European Waste Framework Directive (2008/98/EEC)	The Directive sets a revised framework for waste management in the EU, aimed at encouraging reuse and recycling of waste. It includes a five step hierarchy of waste management options, with waste prevention as the preferred option, and then reuse, recycling, recovery (including energy recovery) and safe disposal, in descending order. The Directive sets a 50% target for household recycling and reuse and 70% target for non hazardous construction and demolition waste, both of which must be reached by the UK by 2020.	The Local Plan should reflect the waste hierarchy and have regard to the principles and aspirations set out in the strategy. The SA objectives will need to address the issue of sustainable waste management.
European Directive on the Management of Waste from Extractive Industries (2006/21/EC)	Produce a waste management plan which sets out predictions of the amount of waste likely to be generated and methods of management Ensure safety measures are in place that protect the environment and avoid possible accidents Create a site restoration plan	The Local Plan will need to comply with the provisions of this Directive. The SA objectives will need to take this Directive into account.

	Guarantee sufficient funds are available to restore the land to a satisfactory state	
European Landscape Convention (Florence Convention)	Promotes the protection, management and planning of European landscapes and organises European co-operation on landscape issues.	The Local Plan should protect and enhance local and regional landscapes, whether they have heritage, natural, or other value.
National		
Planning and Compulsory Purchase Act 2004	Introduced reforms to streamline and speed up planning system including LDFs and Sustainability Appraisal	SA and Local Plan needs to comply with the act
Planning Act 2008	Created Infrastructure Planning Commission and established Community Infrastructure Levy	Mayoral and Council CIL apply and need to be taken into account in preparing Local Plan
Localism Act 2011	The Localism Act introduces a number of measures to provide greater decision making powers at the local level, creating space for Local Authorities to lead and innovate, and giving people the opportunity to take control of decisions that matter to them.	The Local Plan will need to meet the requirements of the action including the Duty to Cooperate.
The Town and Country Planning (Local Planning) (England) Regulations 2012	The Regulations (a) consolidate the existing Town and Country Planning (Local Development)(England) Regulations 2004 and the amendments made to them; and (b) make new provision and amendments to take account of the changes made by the Localism Act 2011.	The Local Plan will need to satisfy the regulations.
National Planning Policy Framework 2019 and National Planning Practice Guidance (General)	Together, the <u>National Planning Policy Framework</u> and <u>National Planning Practice Guidance</u> set out the government's national planning policies and guidance for new development. They aim to help create the homes and jobs that the country needs, while protecting and enhancing the natural and historic environments. Includes a presumption in favour of sustainable development	The Local Plan and its preparation including the SA will need to be compliant with the NPPF and NPPG
National Planning Policy Framework 2019 and National Planning Practice Guidance (Housing)	Local Plan needs to meets the full, objectively assessed needs for market and affordable housing in the housing market area identify and update annually a supply of specific deliverable sites sufficient to provide five years worth of housing against their housing requirements identify a supply of specific, developable sites or broad locations for growth, for years 6-10 and, where possible, for years 11-15 deliver a wide choice of high quality homes, widen opportunities for home ownership and create sustainable, inclusive and mixed communities, local planning authorities	Local Plan will need to comply with these requirements in order to be found sound. Number, type, tenure and affordability of housing is key sustainability issues and will need to be addressed by the SA objectives
National Planning Policy Framework 2019 and National Planning Practice Guidance	Planning policies should recognise and seek to address potential barriers to investment, including a poor environment or any lack of infrastructure, services or housing. Sets out six objectives that local plans should address including setting out a clear economic vision and strategy for their area and setting	Will need to review supply of industrial land and also contain a clear strategy to address barriers to investment

(Economic Development)	criteria, or identifying strategic sites, for local and inward investment to match the strategy and to meet anticipated needs over the plan period. Also makes clear that planning policies should avoid the long term protection of sites allocated for employment use where there is no reasonable prospect of a site being used for that purpose	The SA will need to test whether the Local Plan policies increase employment opportunities for local people and tackles barriers to inward investment for businesses. The SA will need to translate national policy on economy and employment into meaningful local objectives under the economic sphere.
National Planning Policy Framework 2019 and National Planning Practice Guidance (biodiversity and geodiversity)	The planning system should contribute to and enhance the natural and local environment by: protecting and enhancing valued landscapes, geological conservation interests and soils; recognising the wider benefits of ecosystem services; minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures; preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability; and remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.	The Local Plan will need to be based on a sound understanding of the borough's biodiversity and geodiversity ensuring that valued assets are given the necessary protection and opportunities to enhance biodiversity and geodiversity are planned for. SA objectives will need to address biodiversity conservation, enhancement and restoration and also geological issues.
National Planning Policy Framework 2019 and National Planning Practice Guidance (air quality)	Planning policies should sustain compliance with and contribute towards EU limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and the cumulative impacts on air quality from individual sites in local areas. Planning decisions should ensure that any new development in Air Quality Management Areas is consistent with the local air quality action plan.	Local Plan will need to ensure new development helps achieve compliance with EU air quality targets SA objectives will need address air quality
National Planning Policy Framework 2019 and National Planning Practice Guidance (flooding)	Inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk, but where development is necessary, making it safe without increasing flood risk elsewhere. Local Plans should be supported by Strategic Flood Risk Assessment and develop policies to manage flood risk from all sources	Understanding of flood risk will be aided by the Council's emerging Strategic Flood Risk Assessment and the existing preliminary flood risk assessment and surface water management plan. SA objectives will need to address flood risk and its impacts.
National Planning Policy Framework 2019 and National Planning	Local planning authorities should adopt proactive strategies to mitigate and adapt to climate change, taking full account of flood risk, coastal change and water supply and demand considerations	The Local Plan will need to comply with this national policy in ensuring new development mitigates and

Practice Guidance (climate change)	To support the move to a low carbon future, local planning authorities should: plan for new development in locations and ways which reduce greenhouse gas emissions; actively support energy efficiency improvements to existing buildings; and when setting any local requirement for a building's sustainability, do so in a way consistent with the Government's zero carbon buildings policy and adopt nationally described standards. To help increase the use and supply of renewable and low carbon energy, local planning authorities should recognise the responsibility on all communities to contribute to energy generation from renewable or low carbon sources	adapts to climate change taking full account of flood risk, water supply and demand considerations SA objectives will need take account of causes of climate change, flood risk and water supply
National Planning Policy Framework 2019 and National Planning Practice Guidance (culture)	Identifies the arts, culture and tourism as main town centre uses.	Local Plan will need to allocate a range of suitable sites to meet the scale and type of retail, leisure, commercial, office, tourism, cultural, community and residential development needed in town centres The SA objectives will need to address culture both as an economic driver and a social benefit
National Planning Policy Framework 2019 and National Planning Practice Guidance (design)	Emphasises that it is important to plan positively for the achievement of high quality and inclusive design for all development, including individual buildings, public and private spaces and wider area development schemes.	The Local Plan will need to create socially inclusive environments which enables all groups to enjoy the urban and natural environments equally irrespective of their age, gender, race, disability, religion or sexuality. The SA objectives will need to address the issue of creating inclusive environments.
National Planning Policy Framework 2019 and National Planning Practice Guidance (pollution)	A core planning principle of the NPPF is contributing to conserving and enhancing the natural environment and reducing pollution.	The Local Plan will need to ensure that new development minimises pollution and its adverse impacts on the natural environment and human health The SA objectives will need to address minimisation of pollution
National Planning Policy Framework 2019 and National Planning Practice Guidance (heritage)	Emphasises that heritage assets are an irreplaceable resource and should be conserved in a manner appropriate to their significance. States that good design is indivisible from good planning" and that local plans should "develop robust and comprehensive policies that set out the quality of development that will be expected for the area	The Local Plan will need to be based on a thorough understanding of the borough's heritage and aim to secure high quality design in recognition that today's new buildings are tomorrows heritage. The SA objectives will need to consider the protection and enhancement of the borough's heritage.
National Planning Policy Framework 2019 and National Planning	Contains policies focused on achieving sustainable development and giving people a choice about how they travel. Supports low carbon travel and use of transport statements and assessments in determining best solution for new developments.	In the interests of climate change and air quality the Local Plan will need to encourage a modal shift to more sustainable forms of transport whilst ensuring that this

Practice Guidance (transport)	Seeks to ensure developments that generate significant movement are located where the need to travel will be minimised and the use of sustainable transport modes can be maximised Provides advice on ensuring the right amount of car parking is provided particularly to support town centres.	is not to the detriment of the ability of people to access jobs or the future health of town centres. The SA objectives will need to address the issue of creating a sustainable transport system.
National Planning Policy Framework 2019 and National Planning Practice Guidance (minerals)	NPPF sets out the national policies to ensure that there is a sufficient supply of material to provide the infrastructure, buildings, energy and goods that the country needs.	The Local Plan will need to be consistent with the NPPF in planning for future minerals extraction. The SA objectives will need to take into account the availability of resources to deliver growth in a sustainable way.
National Planning Policy for Traveller Sites 2015	Sets out that Local Plans should make their own assessment of need for the purposes of planning: identify and update annually, a supply of specific deliverable sites sufficient to provide five years' worth of sites against their locally set targets identify a supply of specific, developable sites or broad locations for growth, for years six to ten and, where possible, for years 11-15 consider production of joint development plans that set targets on a cross-authority basis, to provide more flexibility in identifying sites, particularly if a local planning authority has special or strict planning constraints across its area (local planning authorities have a duty to cooperate on planning issues that cross administrative boundaries) relate the number of pitches or plots to the circumstances of the specific size and location of the site and the surrounding population's size and density protect local amenity and environment	The Local Plan should address the requirements of national planning policy for traveller sites. The SA objectives will need to reflect this policy.
National Planning Policy for waste 2014	Makes clear the Local Planning Authorities should use a proportionate evidence base, identify need for waste management facilities and identify suitable sites and areas, In London this means having regard to the apportionments set out in the London Plan and providing sufficient capacity to manage these arisings.	In the process of preparing the Local Plan consideration will need to be given of whether the Joint Waste Plan needs updating. The Joint Waste Plan has proven successful so far in delivering the sites to meet the London Plan apportionment. The SA objectives will need to address the issue of sustainable waste management.
National Policy Statements EN1 – EN6	Overarching National Policy Statement (EN1) Sets out need for all types of new energy infrastructure Fossil Fuel Electricity Generating Infrastructure (EN2)	The Local Plan needs to take account and be consistent with these statements The SA objectives will need to take these statements into account.

	<p>Provides primary policy for decision making on fossil fuel generating stations over 50MW</p> <p>Renewable Energy Infrastructure (EN3)</p> <p>Covers renewable energy for on-shore wind, biomass and waste generating infrastructure over 50MW and off-shore over 100MW</p> <p>Gas supply infrastructure and Gas and Oil pipelines (EN4)</p> <p>Electricity Networks (EN5)</p> <p>Covers above ground power lines of 132KV and over</p> <p>Nuclear power generation (EN6)</p> <p>Covers nuclear generating stations over 50MW and lists the sites judged potentially suitable for deployment of new nuclear power stations by the end of 2025</p>	
Historic Environment Good Practice Advice In Planning Note 1 – The Historic Environment in Local Plans (2015)	Provides information to assist local authorities, planning and other consultants, owners, applicants and other interested parties in implementing historic environment policy in the National Planning Policy Framework (NPPF) and the related guidance given in the National Planning Practice Guidance (PPG).	The principles set out in this guidance will be taken into account in the preparation of the Local Plan and undertaking the SA.
Securing the Future – United Kingdom Government Sustainable Development Strategy 2005	<p>Sets out five guiding principles to achieve sustainable development</p> <p>Living with environmental limits</p> <p>Ensuring a strong healthy and just society</p> <p>Achieving a sustainable economy</p> <p>Promoting good governance</p> <p>Using sound science responsibility</p>	These guiding principles will be taken into account in preparing the Local Plan and undertaking the SA
Housing Act 2004	<p>Makes the following provisions:</p> <p>Regulates houses in multiple occupation</p> <p>Introduces Home Information Packs</p> <p>Provides the legal framework for Tenancy Deposit Schemes</p>	The Local Plan will need to take account of and reflect the Provisions of the Act.
Laying the foundations: a housing strategy for England 2011	The housing strategy sets out a package of reforms to: get the housing market moving again lay the foundations for a more responsive, effective and stable housing market in the future support choice and quality for tenants improve environmental standards and design quality	<p>The number, type, size and affordability of new housing will have a major impact on implementing the national housing strategy and the Local Plan has a key role to play in this regard</p> <p>SA objectives will need to take into account this strategy</p>
Housing White Paper (Fixing our broken housing market) 2017	The Housing White Paper proposes the new standardised methodology for calculating housing need and a focus on increasing densities in the most sustainable locations, particularly near transport hubs such as train stations.	The Local Plan should look to deliver higher densities at or near transport hubs and other sustainable locations where appropriate.

Countryside and Rights of Way Act 2000	Places a duty on local authorities to take reasonably practicable steps to further the conservation, restoration or enhancement of those species and habitats identified as priorities for biological conservation	The Local Plan will need to consider how to protect and enhance the boroughs biodiversity. SA objectives will need to address biodiversity conservation, enhancement and restoration.
Natural Environment White Paper – The Natural Choice: securing the value of nature (2011)	Aims mainstream the value of nature across our society by: facilitating greater local action to protect and improve nature; creating a green economy, in which economic growth and the health of our natural resources sustain each other, and markets, business and Government better reflect the value of nature; strengthening the connections between people and nature to the benefit of both; and showing leadership in the European Union and internationally, to protect and enhance natural assets globally.	Local Plan will need to take into account and address the aims of this strategy SA objectives will need to take into account this White Paper.
National Biodiversity Strategy: Biodiversity 2020: a strategy for England's wildlife and ecosystem services (2011)	The mission for this strategy, for the next decade, is: to halt overall biodiversity loss, support healthy well-functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people. It aims to deliver this through action in four areas6: a more integrated large-scale approach to conservation on land and at sea putting people at the heart of biodiversity policy reducing environmental pressures improving our knowledge	The Local Plan will need to be based on a sound understanding of the borough's biodiversity ensuring that valued assets are given the necessary protection and opportunities to enhance biodiversity and are planned for. SA objectives will need to address biodiversity protection and need to support healthy ecosystems,
25 Year Environment Plan 2018	The Government's 25 Year Environment Plan sets out a strategy for managing and enhancing the natural environment and embeds 'net gain' principles as key to environmental considerations.	The Local Plan should look to identify and encourage opportunities to embed environmental net gain into new developments.
Natural Environment and Rural Communities Act 2006	The Natural Environment and Rural Communities Act 2006 sets up the framework for conservation of the natural environment, including establishing Natural England. It sets up the organisational structure for nature conservation and includes the main tools and legislation for achieving this.	The Local Plan should seek to protect the landscapes and priority species identified in the Action Plan. The SA will need to comply with the requirements of this Act.
Nature Nearby - Accessible Natural Greenspace Guidance (NE265) (2010)	Recommends the amount and quality of accessible natural green spaces needed and provides advice on delivery.	The Local Plan can help achieve the recommended levels of access to natural greenspace. SA objectives will need to address levels of access to natural greenspace.

National Character Area Profiles: NCA Profile:111 Northern Thames Basin (NE466) and NCA Profile: 81 Greater Thames Estuary (NE473)	<p>NCA's provide both a strong environmental evidence base and a summary of integrated, sustainable opportunities for the future management of an area.</p>	<p>The Local Plan should make use of the evidence base provided in the relevant NCA Profiles and seek integration of the opportunities identified into the Local Plan where possible.</p>
National pollinator strategy: for bees and other pollinators in England (2014)	<p>This strategy sets out a 10 year plan to help pollinating insects survive and thrive. One of the five key areas in the plan, Supporting pollinators across towns, cities and the countryside, includes:</p> <ul style="list-style-type: none"> • Working with large-scale landowners, and their advisers, contractors and facility managers, to promote simple changes to land management to provide food, shelter and nest sites. • Ensuring good practice to help pollinators through initiatives with a wide range of organisations and professional networks including managers of public and amenity spaces, utility and transport companies, brownfield site managers, local authorities, developers and planners. • Encouraging the public to take action in their gardens, allotments, window boxes and balconies to make them pollinator-friendly or through other opportunities such as community gardening and volunteering on nature reserves. 	<p>The Local Plan should seek opportunities to integrate initiatives to support pollinators into policies and site specific allocations.</p> <p>The SA objectives should assess inclusion of initiatives to support pollinators.</p>
Air Quality Standards Regulations (2010)	<p>Sets out the ways in which the EU Air Quality Directive 2008/50/EC will be complied with and managed at national level.</p>	<p>Local Plan is key means of achieving these targets SA objectives will need address air quality</p>
UK Air Quality Strategy (2007)	<p>The strategy sets health-based air quality standards a range of air pollutants reflecting the European standards. The pollutants covered are: Benzene; 1,3-butadiene; carbon monoxide (CO); Lead; nitrogen dioxide (NO₂); Ozone; Particles (PM₁₀); sulphur dioxide (SO₂); polycyclic aromatic hydrocarbons. Performance against these objectives is monitored where people are regularly present and might be exposed to air pollution.</p>	<p>Local Plan is key means of achieving these targets SA objectives will need address air quality</p>
UK Plan for Tackling Roadside Nitrogen Oxide Concentrations 2017	<p>The Plan presents a series of actions to bring NO₂ below the legally require limit.</p>	<p>Local Plan is key means of achieving these targets SA objectives will need address air quality</p>
Clean Air Strategy 2019	<p>The Government's Clean Air Strategy sets out proposals for tackling all sources of air pollution.</p>	<p>Local Plan is key means of achieving these targets SA objectives will need address air quality</p>

Flood and Water Management Act 2010	The Act introduced a comprehensive management structure to protect people, homes and businesses from flood risk. It established Lead Local Flood Authorities (LLFA) and Risk Management Authorities (RMA) with different roles and responsibilities in flood risk and water management. Alongside new duties in preparing new plans called Preliminary Flood Risk Assessments (PFRA) and investigating flooding events, the LLFA is now responsible for providing advice on surface water flooding and SUDs	Local Plan will need to ensure new development is based on a sound understanding of flood risk and protects people homes and businesses from its effects. SA objectives will need to address flood risk and its impacts.
Flood Risk Regulations 2009	Introduces Lead Local Flood Authorities, who gain new powers and responsibilities such as: Developing Flood Risk Management Strategies Designation and registration of assets Investigation of flooding	Will help increase understanding of flood risk in the borough and the assets which provide protection. SA objectives will need to address flood risk and its impacts.
Climate Change Act 2008	Places a duty on the United Kingdom to reduce its carbon dioxide and other emissions by at least 26 per cent by 2020 and at least 60 per cent by 2050, compared to 1990 baseline level (which includes other greenhouse gases).	The Local Plan will need to ensure new developments helps achieve these targets by promoting sustainable development and a low carbon lifestyle and economy. SA objectives will need to address green house gas reduction
Energy Act 2008	The Energy Act 2008 updates energy legislation to: reflect the availability of new technologies and emerging renewable technologies correspond with the UK's changing requirements for secure energy supply protect our environment and the tax payer as the energy market changes	The Local Plan will need be based on an understanding of the spatial implications of the act locally SA objectives will need to address the relevant parts of this Act.
Energy Act 2011	The Act has three principal objectives: tackling barriers to investment in energy efficiency; enhancing energy security; and enabling investment in low carbon energy supplies.	The Local Plan will need be based on an understanding of the spatial implications of the act locally
UK Renewable Energy Strategy (2009)	Sets targets for increasing proportion of electricity, heat and transport energy generated from renewable by Put in place the mechanisms to provide financial support for renewable electricity and heat worth around £30 billion between now and 2020: Drive delivery and clear away barriers Increase investment in emerging technologies and pursue new sources of supply: Create new opportunities for individuals, communities and business to harness renewable energy:	Local Plan should aim to help to increase proportion of energy generated from renewable resources SA objectives will need to address the relevant parts of this Act.

Creating a sporting habit for life – Youth Sports Strategy 2012	Aims to increase consistently the number of young people developing sport as a habit for life.	The Local Plan will be underpinned by the Council's play pitch strategy which will help ensure the right level of play pitch provision is provided with new development taking into account existing provision The SA objectives will need to address the health and wellbeing of the boroughs residents
Equality Act 2010	Requires that regard is given to the desirability of reducing socioeconomic inequalities; reform and harmonise equality law and restate the greater part of the enactments relating to discrimination and harassment related to certain personal characteristics.	The Local Plan will need to ensure that it promotes equal opportunities. The SA objectives will need to promote equality
Marmot Review 'Fair Society, Healthy Lives', February 2010	Identifies six key priorities to focus policy on addressing inequalities Give every child the best start in life. Enable all children, young people and adults to maximise their capabilities and have control over their lives. Create fair employment and good work for all. Ensure a healthy standard of living for all. Create and develop healthy and sustainable places and communities Strengthen the role and impact of ill health prevention.	The Local Plan will need to ensure the location and design of new development enables people to lead healthy lifestyles, maximise access to employment opportunities, improves living standards and creates healthy environments where children can reach their maximum potential. The SA objectives will need to address health and wellbeing.
Regional		
The submission New London Plan	The New London Plan will be the new spatial development strategy for Great London when it is adopted. The submission New London Plan has undergone Examination in Public but has not yet been adopted. The plan period will be 2016-2041. As with the existing adopted London Plan, the New London Plan will be an integrated economic, environmental, transport and social framework for the development of the capital to 2041. It forms part of the development plan for Greater London. London boroughs' local plans need to be in general conformity with the London Plan, and its policies guide decisions on planning applications by councils and the Mayor. A key implication for the Local Plan will be the increased housing target in the New London Plan which sets a ten year housing completions target for Barking & Dagenham of 2,264 homes per year.	The Local Plan is required to be in general conformity with the submission New London Plan as it will likely have substantial weight and may well be adopted during the preparation of the Local Plan. However, until the New London Plan is adopted the current adopted London Plan remains part of the planning policy context of the Local Plan.
London Plan 2016 (general)	The London Plan is the overall strategic plan for London, and it sets out a fully integrated economic, environmental, transport and social framework for the	The Local Plan is required to be in general conformity with the London Plan. The SA will need to include

	development of the capital to 2031. It forms part of the development plan for Greater London. London boroughs' local plans need to be in general conformity with the London Plan, and its policies guide decisions on planning applications by councils and the Mayor.	objectives covering economic, environmental and social spheres.
London Plan 2016 (general)	Sets a revised annual housing target for Barking and Dagenham of 1,236 new homes a year. This has been revised up from 1,065 a year originally set at the start of the plan period in 2011.. Seeks to maximise affordable housing provision subject to viability and other concerns.	There is a gap between housing need and housing capacity which borough's are expected to address through maximising housing supply in the Local Plan. The SA will test the impact of maximising housing supply on sustainability indicators.
London Plan 2016 (general)	Sets out the Mayor's policies which policies seek to support development and growth of London's diverse economy, enabling it to contribute to the prosperity of the UK and provide Londoners with the goods, services and job opportunities they will need.	The Local Plan is required to be in general conformity with the London Plan and its Alterations. The SA will need to test whether the Local Plan policies increase employment opportunities for local people and tackles barriers to inward investment for businesses. The SA objectives will need to take the London Plan into account
London Plan 2016 (general)	The London Plan encourages and promotes the management, enhancement and creation of green space for biodiversity, and promotes public access and appreciation of nature. The Mayor has set up the concept of a Blue Ribbon Network for the Thames and London's waterways and the land alongside them. This will establish principles concerning the use and management of the water and land beside it. The Blue Ribbon Network along with green and open spaces create the Green Grid.	The Local Plan will need provide the appropriate protection to the borough's network of Site of Importance for Nature Conservation and also policies for Blue Ribbon Network and the Green Grid for which there is more detailed advice. SA objectives will need to take into account the enhancements and creation of green space for biodiversity and the promotion of public access and appreciate of nature. SA objectives also need to cover importance of Blue Ribbon Network.
London Plan 2016 (general)	Sets out the Mayor's policies for tackling air pollution and improving air quality in London. The Mayor will work with strategic partners to ensure that the spatial, climate change, transport and design policies of the plan support implementation of the Air Quality and Transport strategies to achieve reductions in pollutant emissions and minimise public exposure to pollution.	Local Plan is a key means of improving air quality SA objectives will need address air quality
London Plan 2016 (general)	Aims to address current and future flood issues and minimise risks in a sustainable and cost effective way. Boroughs should utilise Strategic Flood Risk Appraisals to identify areas where particular flood risk issues exist and develop actions and policy approaches	The Local Plan is required to be in general conformity with the London Plan and its Alterations.

	aimed at reducing these risks, particularly through redevelopment of sites at risk of flooding and identifying specific opportunities for flood risk management measures. Boroughs should, in line with the Flood and Water Management Act 2010, utilise Surface Water Management Plans to identify areas where there are particular surface water management issues and develop actions and policy approaches aimed at reducing these risks.	SA objectives will need to address flood risk and its impacts.
London Plan 2016 (general)	Sets out the Mayor's policies on for tackling climate change, particularly in relation to the built environment. The plan seeks to strongly influence the way in which new development in London responds to the challenge of climate change, and creates opportunities for existing areas with respect to both mitigation and adaptation.	The Local Plan is required to be in general conformity with the London Plan and its Alterations. The SA objectives will need to address climate change mitigation and adaptation
London Plan 2016 (general)	Sets out policies to support the continued success of London's diverse range of arts, cultural, professional sporting and entertainment enterprises and the cultural, social and economic benefits that they offer to its residents, workers and visitors.	The Local Plan is required to be in general conformity with the London Plan and its Alterations. The SA objectives will need to address culture both as an economic driver and a social benefit
London Plan 2016 (general)	The London Plan aims to tackle health, social and educational inequalities within London. Specifically, section 3 on London's People features policy 3.1 'Ensuring Equal Life Chances for All'. Within that policy, guidance is provided on DPD preparation. The policy states: "In preparing DPDs, boroughs should engage with local groups and communities to identify their needs and make appropriate provision for them". It is worth noting that the London Plan was prepared in keeping with national equalities and disabilities legislation and was subject to a full Equalities Impact Assessment during its preparation.	The Local Plan is required to be in general conformity with the London Plan and its Alterations. The Local Plan should promote equal opportunities across all policy areas. The SA objectives will need address health, social and education inequalities.
London Plan 2016 (general)	London's issues with pollution are acknowledged in the London Plan and it is one of the Mayor's strategic objectives to ensure that London is a city that becomes a world leader in improving the environment locally and globally, taking the lead in tackling climate change, reducing pollution, developing a low carbon economy, consuming fewer resources and using them more effectively. The Mayor sets out that London should be a city that leads in the reduction of pollution and has a suite of relevant environmental policies related to pollution, air quality and climate change.	The Local Plan is required to be in general conformity with the London Plan and its Alterations. The Local Plan will need to minimise pollution from development. The SA objectives will need to address minimisation of pollution
London Plan 2016 (general)	Emphasises that good quality design will be essential and must respond sensitively to local context. Aims to ensure improvement to quality of life for all Londoners and all of London – enabling growth and change, while also supporting the retention of London's heritage and distinctiveness, and making living here a better and more enriching experience for all.	The Local Plan is required to be in general conformity with the London Plan and its Alterations. The SA objectives will need to address the issue of heritage.

<p>London Plan 2016 (general)</p>	<p>The Overall aim is to have a city where it is easy, safe and convenient for everyone to access jobs, opportunities and facilities. The London Plan sets out an indicative list of transport schemes such as Crossrail 2 and sets out detailed car and cycle parking standards.</p>	<p>The Local Plan is required to be in general conformity with the London Plan and its alterations. The Local Plan will need to implement the London Plan parking, disabled parking and cycle parking standards locally. It is also an opportunity to provide the evidence base for future schemes for inclusion in the London Plan such as those already include in the draft London Riverside Opportunity Area Planning Framework.</p> <p>The SA objectives will need to address the issue of creating a more comprehensive sustainable transport system.</p>
<p>London Plan 2016 (general)</p>	<p>Applies the waste hierarchy waste management which starts from the position that the best approach is to reduce the amount of waste that arises in the first place. Where this is not possible, he supports an approach based on the waste hierarchy that emphasises reuse, and then recycling and composting, before energy recovery and disposal. Manage as much of London's waste within London as practicable, working towards managing the equivalent of 100 per cent of London's waste within London by 2031 Create positive environmental and economic impacts from waste processing Work towards zero biodegradable or recyclable waste to landfill by 2031. Municipal waste recycling - the Mayor wishes to see London achieve 60 per cent recycling of municipal waste by 2031.</p> <p>The London Plan sets out waste apportionment figures by borough.</p>	<p>The Local Plan is required to be in general conformity with the London Plan and its Alterations. The Local Plan will need to reflect the waste hierarchy and contribute to the targets set by the Mayor. The SA objectives will need to address the issue of sustainable waste management based on the waste hierarchy and focused on achieving this targets.</p>
<p>London Riverside Opportunity Area Planning Framework</p>	<p>Contains five key objectives A strategic approach to the release of underused Strategic Industrial Land and the designation of new SIL to create up to 26,5000 new homes and 16,000 new jobs Improved transport infrastructure and services to unlock development High quality public and private realm Expediting the development of publicly owned land Maximising housing investment</p>	<p>Must be read in conjunction with the London. It forms a material consideration and therefore must be taken into account in preparing the Local Plan.</p>

London Housing Strategy 2018	Contains five key priorities: building homes for Londoners; delivering genuinely affordable homes; high quality homes and inclusive neighbourhoods; a fairer deal for private renters and leaseholders; and tackling homelessness and helping rough sleepers.	The Local Plan will need to address the priorities of the Housing Strategy in particular increase the pace of housing delivery, increase supply of purpose built private rented housing and building homes that working Londoners can afford. The SA objectives will need to take this strategy into account
Mayors Economic Development Strategy (2018)	Sets out a strategy for achieving the Mayor's vision for London's economy in 2041, with the central objectives of creating a fairer, more inclusive economy, creating the conditions for growth and supporting London's wide range of economic sectors.	Need to have regard to these objectives in setting out policies for economic development and skills The SA objectives will need to take the strategy into account.
London Enterprise Panel's Jobs and Growth Plan 2013	Focuses on four key priorities skills & employment: to ensure Londoners have the skills to compete for and sustain London's jobs; small & medium sized enterprises: to support and grow London's businesses; science & technology: for the capital to be recognised globally as world leading hub; for science, technology and innovation - creating new jobs and growth; and infrastructure: to keep London moving and functioning.	The Local Plan will need to have regard to these priorities in setting out policies for economic development and skills and the infrastructure required to support this The SA objectives will need to take account of this Plan.
Mayor's Biodiversity Strategy 2002	Aims to take responsibility to conserve London's wildlife and its habitats and involve Londoners in a greater understanding, enjoyment and participation in nature. Identifies five priority areas: Biodiversity for people Nature for its own sake Economic benefits Functional benefits Sustainable development	The Local Plan will need to address these priority areas in order to contribute to achieving the aim of the Mayor's Biodiversity Strategy. SA objectives need for consider these five priority areas.
London Biodiversity Action Plan	11 habitat types are identified, each with its own Habitat Action Plan.	Local Plan will need to ensure it is based on a sound understand of the borough's biodiversity, The SA will need to review the significance of these 11 habitat types locally.
London Environment Strategy 2018	The Environment Strategy seeks ambitious and wide ranging improvement to London's built and natural environment. The strategy seeks integrated solutions to air and noise pollution, protection of green spaces and climate change	Local Plan is a key means of delivering improvements to the built and natural environment.

	adaptation and mitigation, including a target of becoming net zero in carbon emissions by 2050.	SA objectives will need address a range of key environmental issues.
Clearing London's Air – Mayor's Air Quality Strategy (2010)	This Air Quality Strategy sets out actions to improving London's air quality and includes measures aimed at reducing emissions from transport, homes, workplaces and new developments. It also sets out how Londoners can reduce their own emissions, and, especially for vulnerable people, reduce their risk of exposure.	Local Plan is a key means of improving air quality SA objectives will need address air quality
Securing London's water future: The Mayor's water strategy 2011	Aims to promote improved water management – both in terms of the water we want (such as drinking water) and the water we don't want (such as sewage and floodwater in the wrong place). This strategy considers all aspects of water management and how they interact.	The Local Plan will need to ensure all new development is water efficient and manages rainwater and the disposal of waste water sustainably. SA objectives will need to address water quality and management of waste water
Managing Risks and Increasing Resilience: The Mayor's climate change adaptation strategy 2011	The aim of the London Climate Change Adaptation Strategy is to assess the consequences of climate change on London and to prepare for the impacts of climate change and extreme weather to protect and enhance the quality of life of Londoners. The strategy sits alongside other Mayoral and national strategies to prepare for climate risks and opportunities and to reduce greenhouse gas emissions, especially the London Climate Change Mitigation and Energy Strategy.	The Local Plan will need to promote and facilitate new development and infrastructure that is located, designed and constructed for the climate it will experience over its design life The SA objectives will need to address climate change adaptation
Delivering London's Energy Future: the Mayor's climate change mitigation and energy strategy 2011	This strategy has been developed with four objectives: to reduce CO2 emissions to mitigate climate change; to maximise economic opportunities from the transition to a low carbon capital; to ensure a secure and reliable energy supply for London; and to meet, and where possible exceed, national climate change and energy objectives.	The Local Plan will need to promote local carbon lifestyles and economies and ensure the energy needs of new and existing development are provided for securely. The SA objectives will need to take into account climate change mitigation.
Mayor's Cultural Strategy: Cultural Metropolis (2014 update)	This update to 2010's Cultural Metropolis, the Mayor's Culture Strategy, summarises recent achievements, assesses progress against objectives, updates with new evidence and also outlines further actions. It recognises that challenges still remain, and that hard work is needed to maintain London's position as a global leader for culture.	Barking has the potential to be an important cultural hub in East London building on the emerging Cultural Industries Quarter, the Broadway Theatre and the new leisure centre. The Local Plan will need to ensure that the central importance of culture is captured in future plans for Barking Town Centre and other regeneration areas including underused buildings and vacant land. The SA objectives will need to address culture both as an economic driver and a social benefit
Equal life chances for all 2014	Highlights the Mayor's commitment to tackling inequality; improving life chances, and removing barriers that prevent people from reaching their full potential. Aims	The Local Plan will need to ensure that it helps increase social mobility and creates environments and

	to ensure that equality is mainstreamed into everything the organisation does, including how it obtains goods and services.	opportunities which allow local residents to achieve their full potential. Local labour and skills policies will be particularly important in this regard. The SA objectives will need to promote equality.
Mayor's Transport Strategy 2018	The 2018 Transport Strategy has a central aim of encouraging and enabling modal shift away from cars and towards increased walking, cycling and public transport use to deliver a range of outcomes including reducing inactivity, cleaning up the air, limiting contribution to climate change, connecting communities and revitalising high streets.	The Local Plan will have regard to the principles and aspirations set out in the strategy. The SA objectives will need to address the issue of creating a sustainable transport system.
London's Wasted Resource: The Mayor's Municipal Waste Management Strategy 2011	Has the following key objectives: Provide Londoners with the knowledge, infrastructure and incentives to change the way they manage municipal waste: to reduce the amount of waste generated, encourage the reuse of items that are currently thrown away, and to recycle or compost as much material as possible. Minimise the impact of municipal waste management on our environment and reduce the carbon footprint of London's municipal waste. Unlock the massive economic value of London's municipal waste through increased levels of reuse, recycling, composting and the generation of low carbon energy from waste. Manage the bulk of London's municipal waste within London's boundary, through investment in new waste infrastructure.	The Local Plan will need to ensure that the design of new development helps minimise waste and in conjunction with the joint waste plan that the London Plan apportionment is planned for. The SA objectives will need to take this strategy into account.
Making Business Sense of Waste: The Mayor's Business Waste Management Strategy	Set the overall direction for the management of business waste in London for the period 2010 to 2031 focus on waste reduction and the more efficient management of resources to reduce the financial and environmental impact of waste manage as much of London's waste within its boundaries as practicable, by taking a strategic approach to developing new capacity boost recycling performance and energy generation to deliver environmental and economic benefits to London	The Local Plan will need to ensure that the design of new development helps minimise waste and in conjunction with the joint waste plan that the London Plan apportionment is planned for. The SA objectives will need to take this strategy into account.
Mayor's Ambient Noise Strategy	Champions more active management of 'ambient' or 'environmental noise' - long term noise, mainly from transport sources. Focuses on better management of transport systems, better town planning, and better design of buildings.	The Local Plan will need to address the issue of ambient noise. The SA objectives will need to include consideration of the impact of new development on ambient noise levels.

Better Environment Better Health a GLA guide for London's Boroughs Barking and Dagenham	Focuses on seven environmental issues and their relationship to health: Green spaces Active travel & transport Surface water flood risk Air quality Healthy food Fuel poverty Overheating	The Local Plan will need to consider how environments can be created which improve health and wellbeing outcomes The SA objectives will need to address health and wellbeing and the role the environment plays in this.
Thames Estuary 2100 Plan	Sets out recommendations for flood risk management for London and the Thames estuary through to the end of the century and beyond.	Barking and Dagenham is with Action Zone 4 and the Local Plan will need to address the relevant recommendations contained in this section. SA objectives will need to address flood risk and its impacts.
The Thames River Basin Management Plan 2015	Prepared under the Water Framework Directive. It is the first of a series of six-year planning cycles. The plan describes the river basin district, the pressures the water environment faces and what actions will be taken to address the pressures. It sets out what improvements are possible by 2021. The plan highlights the programme of investigations to be undertaken. This will identify more actions, particularly those associated with diffuse pollution, for delivery during the first cycle.	The Local Plan will need to take account of actions identified to improve the water environment in the current and emerging Thames River Basin Management Plans. SA objectives will need to address potential impacts on the water environment.
Mayor of London Housing SPG 2016	Provides guidance on how to implement the housing policies in the 2016 London Plan (LP). In particular, it provides detail on how to carry forward the Mayor's view that "providing good homes for Londoners is not just about numbers. The quality and design of homes, and the facilities provided for those living in them, are vital to ensuring good liveable neighbourhoods"	Local Plan will need to deliver the Mayor's ambition for high quality and spacious new homes. The SA objectives should reflect the aspiration for provide the good quality new homes in liveable neighbourhoods
Land for Industry and Transport SPG 2012	The SPG provides guidance on industrial land requirements as well as on possibilities, appropriate processes and suitable locations for release of any surplus industrial land. The SPG further discusses how the requirements of different sectors can be addressed to enhance their competitiveness, and to carrying forward the Mayor's broader concerns for improvements to the overall quality of London's environment by emphasising the importance of good design for industrial development. The SPG also provides guidance to identify and protect land for transport functions including sites and routes which could be critical in developing infrastructure to widen transport choice.	The Local Plan will need to have regard to the classification of SIL in the SPG and also the industrial land release benchmarks in review current designations. Following the guidance will help ensure the Local Plan is in general conformity with the London Plan. The SA objectives will need to consider the impact of releasing industrial land on the local economy.
All London Green Grid SPG 2012	The All London Green Grid (ALGG) is a policy framework to promote the design and delivery of green infrastructure across London. It has been developed to	Local Plan will need to maximise opportunities to increase access to green infrastructure.

	support London Plan policies on green infrastructure and urban greening, and those relating to open spaces, biodiversity, trees & woodland, and river corridors	SA objectives will need to address the importance of the All London Green Grid.
London's Foundations SPG 2012	Explaining the process for identifying sites of national, regional and local geological importance, identifying important geological sites for protection and advising boroughs on how to promote as well as protect geodiversity.	Local Plan will need to protect the areas of geological importance identified in the borough. SA objectives will need to address geodiversity.
Accessible London: Achieving an Inclusive Environment. Mayor's Supplementary Planning Guidance (2014)	Provides guidance on the implementation of London Plan Policy 7.2 An inclusive environment and of other policies in the Plan with specific reference to inclusive design. It also provides guidance on Lifetime Neighbourhoods to support London Plan Policy 7.1 Building London's neighbourhoods and communities. The Accessible London SPG provides advice to boroughs, developers, designers and planning applicants on implementing inclusive design principles effectively and on creating an accessible environment in London, with particular emphasis on the access needs of disabled and older people.	Addressing the advice in the SPG will help the Local Plan achieve general conformity with the London Plan. The SA objectives will need to address the issue of creating inclusive environments.
Planning for Equality and Diversity in London. Mayor's Supplementary Planning Guidance (2007)	This SPG: provides guidance to boroughs, partners and developers on the implementation of policies in the London Plan which relate to equalities issues and addressing the needs of London's diverse communities; sets out some of the tools for promoting equality and diversity in planning processes; highlights the spatial impacts of wider socio-economic issues such as poverty and discrimination in the planning context; sets out overarching principles and the key spatial issues for planning for equality; and examines in greater detail the spatial needs of London's diverse communities and identifies how spatial planning can be used to try and address these.	Barking and Dagenham is becoming an increasingly diverse borough and therefore it is essential that the Local Plan is based on a thorough understanding of the needs of the different communities which comprises the borough and plans accordingly. This will help build pride, respect and cohesion across the borough. The SA objectives will need to promote equality and diversity.
The Mayor's Health Inequalities Strategy 2018	The Health Inequalities Strategy presents a London-wide strategy for tackling identified 'unfair differences' in health outcomes across the city, focussing on the five core themes of healthy children, healthy minds, healthy places, healthy communities and healthy living.	The Local Plan should seek to deliver development which provides opportunities for healthier lifestyles and access to healthcare facilities for all, including enhancing existing access where possible. The SA objectives should seek improvements to unequal health outcomes
The Control of Dust and Emissions during Construction and Demolition SPG 2014	This SPG seeks to reduce emissions of dust, PM10 and PM2.5 from construction and demolition activities in London. It also aims to manage emissions of nitrogen oxides (NOx) from construction and demolition machinery by means of a new non-road mobile machinery Ultra Low Emissions Zone (ULEZ).	The Local Plan will need to consider how to minimise and control dust emissions during construction. The SA objectives will need to address minimisation of pollution

Shaping Neighbourhoods Character and Context SPG 2014	This guidance sets out an approach and process to help understand the character and context of a place so that its results can inform the planning and design process, and guide change in way which is responsive to individual places and locations.	The Local Plan will need to be based on an understanding of the character and context of Barking and Dagenham as a place. The SA objectives will need to address the issue of how development can reinforce local character.
Sustainable Design and Construction SPG 2014	This SPG provides guidance on the implementation of London Plan policy 5.3 Sustainable Design and Construction as well as policies relating to environmental sustainability.	The Local Plan will need to consider how the principles of sustainable design and construction will be achieved. The SA objectives will need to assess the issues of sustainable design and construction, optimising land use, energy and carbon emissions, renewable energy, water efficiency, materials and waste, biodiversity, climate change adaptation, greening the city and pollution management.
Local		
LBBB Vision and Priorities	The vision for the borough is: One borough; One community; London's growth opportunity The three corporate priorities that support the vision are: Encouraging civic pride Enabling social responsibility Growing the borough	The Local Plan will implement the spatial dimensions of the Council's vision and priorities. The SA under the economic and social spheres will take into account these three priorities
LBBB Housing Strategy 2012-2017	Contains four key objectives Delivering social and economic regeneration through building high quality homes and thriving communities Investing in new Council housing and establishing new ways to deliver affordable housing Good quality services Sustainable communities	The Local Plan will need to take account of these four objectives. The SA objectives will need to reflect the importance of creating sustainable communities.
LBBB Growth Strategy 2013-2023	Sets out how over 17,000 new homes and 10,000 new jobs will be delivered by 2023. The strategy objectives are:	A key Council priority is Growing the Borough and therefore the Local Plan will need to ensure is delivers

	<p>Attracting investment Creating a higher skilled workforce Building businesses Widening the housing choice The strategy sets out the vision for Barking and Dagenham, explains why growth is essential and what it aims to deliver, sets out the key growth sectors before going into detail about how the above four objectives will be delivered.</p>	<p>the four objectives set out in the Growth Strategy and the new homes and jobs targets. The SA will need to test whether the Local Plan policies increase employment opportunities for local people and tackles barriers to inward investment for businesses.</p> <p>The SA will need to address the impact of meeting these targets for new homes and jobs and devise appropriate objectives to test this.</p>
Barking and Dagenham LBAP for 2010-2015.	<p>Contains three objectives To make biodiversity a central part of regeneration programmes and the planning process. To improve access to the natural environment and raise awareness of the borough's natural assets. To protect and manage the biodiversity in parks and green spaces.</p>	<p>Need to address the opportunities for protecting and enhancing biodiversity set out in the plan. Not only designated sites and nature reserves but also initiatives such as SUDs and Green Roofs.</p> <p>SA objectives will need to address biodiversity and access to it.</p>
Biodiversity Survey of the London Borough of Barking and Dagenham 2017	<p>Provides a habitat survey of all Sites of Interest for Nature Conservation (SINCs) in the borough as well as identifying potential new areas for SINCs and wildlife corridors.</p>	<p>The Local Plan should look for opportunities to provide biodiversity net gain where possible, potentially through the designation and enhancement of SINCs and wildlife corridors.</p>
Barking and Dagenham Air Quality Action Plan June 2004	<p>Details the steps the Council will take to reduce levels of nitrogen oxide and fine particulate matter primarily within the Air Quality Management Area</p>	<p>The Local Plan will need to ensure new development helps improve air quality and the achievement of EU targets SA objectives will need to address air quality particularly in hotspot locations</p>
Barking and Dagenham Strategic Flood Risk Assessment Level 12008	<p>Contains a number of recommendations for managing flood risk through the development control, Local Plan preparation and emergency planning processes. It provides detail flood risk mapping for the major regeneration sites in the borough which enabled these to be sequentially tested and the exceptions test to be carried out. The SFRA is currently being updated and is due to be complete in May 2015 and will be a key evidence base for the Local Plan.</p>	<p>The SFRA is an important study in ensuring that National and Regional policy requirements in managing flood risk are met and in particular ensuring new sites satisfy the sequential and exception tests. SA objectives will need to address flood risk and its impacts.</p>
Barking and Dagenham Strategic Flood Risk Assessment Level 2 2017	<p>Provides a detailed assessment of flood risk at the strategic development sites identified by the Council.</p>	<p>The SFRA is an important study in ensuring that National and Regional policy requirements in managing flood risk are met and in particular ensuring new sites satisfy the sequential and exception tests.</p>

		SA objectives will need to address flood risk and its impacts.
Conservation Area Appraisals for Dagenham Village, Chadwell Heath Anti-Aircraft Gun Site, Abbey Road Riverside and Abbey and Barking Town Centre	These four appraisal review the overall extent of each conservation area and contain proposals for the preservation and enhancement of each including management proposals	<p>The Local Plan will need to address the management proposals of each appraisal to ensure that new development preserves or enhances the conservation areas they are within</p> <p>The SA objectives will need to consider the protection and enhancement of the borough's heritage.</p>
Celebrating our past, looking forward with pride: A Heritage Strategy for Barking and Dagenham 2013 – 2016	This strategy provides a framework to focus work over three years to use Barking and Dagenham's heritage to improve the quality of life of local people.	<p>The Local Plan will need to consider how access to heritage in the borough can be protected and enhanced.</p> <p>The SA objectives will need to consider the protection and enhancement of the borough's heritage.</p>
Barking and Dagenham Local Implementation Plan 2019-2021/22	<p>Outlines the Council's continuing strategy to achieve a safe, sustainable and accessible transport system for the benefit of all those living and working in Barking and Dagenham. It includes eight objectives:</p> <p>There are ten objectives for the third LIP:</p> <ul style="list-style-type: none"> A. Enhancing public transport connectivity to enable growth; B. Improving accessibility for all key services and facilities; C. Encouraging active travel to improve health; D. Facilitating green travel to improve air quality and reduce the impact on the environment; E. Reducing the number of casualties on our roads; F. Improving safety and security across the transport network; G. Managing our road space more efficiently to tackle congestion; H. Transforming the public realm to create healthy, inclusive places. 	<p>The Local Plan is a key means for delivering these objectives by integrating decisions about land use with transport. This is particularly the case for the key regeneration areas in London Riverside which are reliant on the provision of new public transport and road links to unlock their potential.</p> <p>At a more detailed level the design of new development can help encourage people lead healthy lifestyles by making it easier to walk and cycle and reduce reliance on more polluting forms of transport.</p> <p>The SA objectives will need to address the issue of creating a sustainable transport system.</p>
Joint Waste Plan 2012	Sets out the strategy, policies and sites for managing the London Plan waste apportionment for Barking and Dagenham, Havering, Redbridge and Newham. Aims for self sufficiency.	<p>The Local Plan will need to consider whether to update the Plan and incorporate it.</p> <p>The SA objectives will need to address sustainable waste management.</p>

Barking and Dagenham Municipal Waste Strategy 2005-2020	This strategy recognises waste as a key environmental concern and outlines the Council's commitment to dealing with it in accordance with the waste hierarchy. This document, together with the joint Waste Development Plan highlights the Council's determination to contribute to self-sufficiency in sustainable waste management in the east London sub-region. This strategy also highlights the efforts the Council has made, and continues to make, to achieve the standards for sustainable waste management set by the Mayor on his Municipal Waste Management Strategy.	The Local Plan will need to address this strategy The SA objectives will need to take this strategy into account.
Local Economic Assessment	Provide a sound understanding of the economic conditions in the area and how they affect the well-being of residents and businesses. It reflects the economic character of the area and takes into account the wider or geographical economic forces affecting the area.	Provides an important evidence base for the Local Plan The SA objectives will need to address economic development
Children and Young People's Plan	Sets out five priorities: Ensure children and young people in our borough are safe Narrowing the gap - raise attainment and realise aspiration for every child Improve health and wellbeing, with a particular focus on tackling obesity and poor sexual health Improve support and fully integrate services for vulnerable children, young people and families (particularly children in care and children with disabilities) Challenging child poverty - preventing poor children becoming poor adults	The Local Plan will need to address child poverty and consider how to create environments where children can fulfil their potential
Health and Wellbeing Strategy 2019-2023	Sets out a vision for improving the health and wellbeing of residents and reducing inequalities at every stage of people's lives by 2023. It aims to help residents improve their health by identifying the key priorities based on the evidence in our Joint Strategic Needs Assessment (JSNA), what can be done to address them and what outcomes are intended to be achieved.	The Local Plan will need to ensure the location and design of new development enables people to lead healthy lifestyles, maximise access to employment opportunities, improves living standards and creates healthy environments where children can reach their maximum potential. The SA objectives will need to address health and wellbeing and spatial health inequalities.
Joint Strategic Needs Assessment	Under the priority areas of the Marmot Review examine the health and wellbeing priorities for the borough. Under these six sections it examines the key aspects of inequalities and the key themes that need addressing in Barking and Dagenham. It also examines the position on the majority of the Public Health Outcome Framework indicators.	The Local Plan will need to ensure the location and design of new development enables people to lead healthy lifestyles, maximise access to employment opportunities, improves living standards and creates healthy environments where children can reach their maximum potential. The SA objectives will need to address health and wellbeing and spatial health inequalities.

Barking and Dagenham Economic Development Study 2014	Identifies potential release of industrial land up to 132 hectares and by 2032 up to 19,131 square metres of convenience and comparison floorspace focused in Barking Town Centre, Dagenham and Chadwell Heath.	The Local Plan will need to review existing industrial land allocations and town centre boundaries in addressing the conclusion of the study. The SA objectives will need to be enable the impact of these suggested changes on the social, environmental and economic spheres to be tested.
Barking and Dagenham Surface Water Management Plan	Recommends that a policy on SuDS and existing policies on local flood risk are reviewed in light of the findings of the SWMP Identifies across the borough the homes and businesses at risk of surface water flooding and measures to mitigate this risk	The Local Plan will need be based on a through understanding of all sources of flood risk and the location and design of development will need to minimise flood risk. The SA objectives will need to address all sources of flooding
Barking and Dagenham Community Safety Strategy 2019-2022	Sets out six priorities Keeping children and young people safe Reducing re-offending Standing up to hate, intolerance and extremism Tackling crimes that affect people the most Tackling serious violence Tackling violence against women and girls	The Local Plan will need to create safer environments by ensuring new development maximises natural surveillance, active frontages and other similar measures. The SA objectives will need to address these priorities and the framework will need to consider whether of the success measures can be used as indicators in the SA framework

Baseline information

Characteristics of the borough

LBBD covers 3778.2 hectares and is in east London on the North bank of the River Thames and within the M25 London. Although it is an Outer London Borough it displays many of the socio-economic characteristics of an inner London Borough.

The neighbouring London boroughs are Newham, to the West, Redbridge, to the North and Havering, to the East. Bexley and Greenwich are situated south of the River Thames, directly opposite LBBD. The figure below shows the location of Barking and Dagenham within the wider area.

Position of the London Borough of Barking and Dagenham within Greater London



LBBD is largely urban in character with significant areas of industrial land. The majority of new development will involve the reuse of brownfield sites for housing or mixed use development. 33% of the borough is green space and this contains some impressive areas of wildlife habitat, including Eastbrookend Country Park and The Chase, Beam Parklands and the River Thames.

Demographic analysis

In 2011 the population of the borough was 185,900, 2.27% of London's total population (8.2 million). This is an increase in population of 20,200 or 10.9% between 2001 and 2011 (ONS July 2012).

The 2017 mid-year population estimate for the borough is 210,711. This is an increase of around 13.3% from the 2011 population and suggests that the overall rate of population growth in the borough is increasing,

The borough's population is forecast to increase to 267,100 by 2031, 316,600 by 2041, and 322,500 by 2050. ([GLA 2016-based population projections – Housing-linked projection incorporating data from the 2016 SHLAA \(July 2017\)](#)).

Abbey ward has the largest population of all LBBD wards at 12,786 residents whilst Parsloes ward has the lowest at 9,839 (2011 Census Barking and Dagenham Ward Level Analysis)

Gascoigne has the largest proportion of 0-4 year olds at 13.2%. Eastbrook ward as the lowest percentage of 0-4 year olds at 7.2%. in Gascoigne this drops to 7.2% in Eastbrook. The borough average is 10.0%. 2011 Census Barking and Dagenham Ward Level Analysis

Gascoigne also has the largest proportion of 0-9 year olds at 22.8% of the population, dropping to 13.3% in Eastbrook. The average for the borough is 17.8%, much higher than the average for London.

Abbey has the lowest proportion of residents aged 65 plus representing 5.0% of the ward population. Chadwell Heath has the highest proportion at 15.6%. The average for the borough is 10.4%, which is much lower than the average for London.

The wards with the greatest population growth between 2001 and 2011 were Gascoigne with 31.5%, Longbridge with 28.1%, Thames with 24.3% and Abbey with 23.9%. The wards with the lowest population growth were Becontree with 0.16%, Eastbrook with 3.26% and River with 5.5%.

Between 2001 and 2011 the 0 – 15 years age group increased by 25.9%. (Census 2001, Census 2011).

Between 2001 and 2011 the 0 - 4 years age group grew by 48.9%. (Census 2001, Census 2011). This age group is projected to increase by 10.8% (rounded) from the 2011 baseline by 2021, 13.5% by 2026, 16.7% by 2031, 24.8% by 2041, and 29% by 2050 (GLA 2016-based population projections - Central Trend-based projection(July 2017)).

Population growth from 2001 to 2011 in Barking and Dagenham

Ward	Population 2001	Population 2011	% Change 2001 - 2011
Gascoigne	9471	12452	31.5
Longbridge	8954	11478	28.2
Thames	8627	10728	24.3
Abbey	10320	12786	23.9
Eastbury	10186	11624	14.1
Valence	8850	9867	11.5
Heath	9719	10786	11.0
Alibon	9359	10385	11.0
Mayesbrook	9385	10342	10.2
Village	9794	10787	10.1
Whalebone	9677	10575	9.3
Goresbrook	10410	11267	8.2
Parsloes	9104	9839	8.1
Chadwell Heath	9369	10021	7.0
River	10350	10923	5.5
Eastbrook	10175	10506	3.3
Becontree	11527	11545	0.2

Sources: Population 2001: 2009 Round of Demographic Projections - SHLAA (revised) (27/09/2010). Population 2011: ONS Census 2011

Between 2001 and 2011 the 5 – 9 age group increased by 15%. (Census 2001, Census 2011). This age group is projected to increase by 38.9% (rounded) from the 2011 baseline by 2021, 42.3% by 2026, 45.1% by 2031, 52.1% by 2041, and 60.5% by 2050 (GLA 2016-based population projections - Central Trend-based projection (July 2017)).

Between 2001 and 2011 the 10 – 14 age group increased by 14.9%. This age group is projected to increase by 47.4% (rounded) from the 2011 baseline by 2021, 50.5% by 2026, 52.9% by 2031, 58.3% by 2041, and 66.2% by 2050 (GLA 2016-based population projections - Central Trend-based projection (July 2017)).

Between 2001 and 2011 the number of people aged 65 and over, decreased from 24,400 to 19,300, equal to 10.3 % of the population. The number of people in this age group is projected to increase to

26,900 by 2031, representing 10.6% of the projected population. ([GLA 2016-based population projections – Central Trend-based projection \(July 2017\)](#))

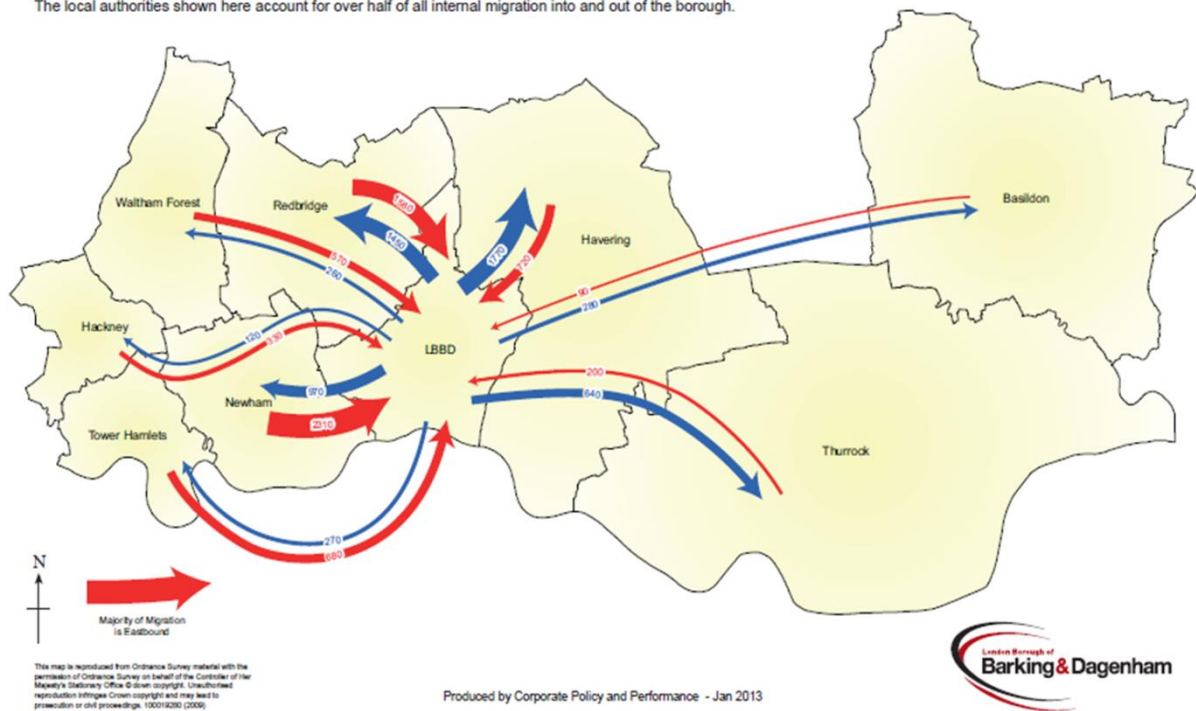
The working age population (16 – 64 years) is projected to increase by 20.4% (rounded) from the 2011 baseline by 2021, 30.1% by 2026, 37.3% by 2031,

47.4% by 2041, and 52.5% by 2050. (GLA 2016-based population projections - Central Trend-based projections, (July, 2017)).

Internal Migration to and from Barking and Dagenham to 2010 to 2011

Key movement of people between Barking and Dagenham and other local authorities.
2011: (Figures fed into 2011 Mid Year Estimates) derived from Patient Register Database.

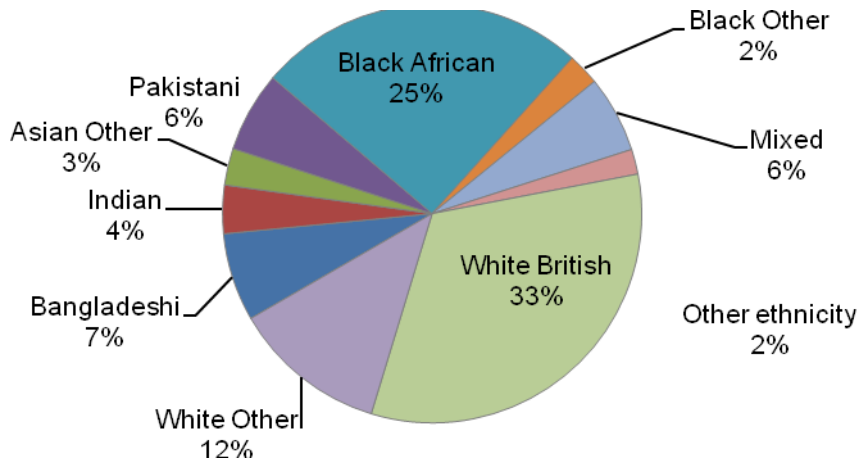
The local authorities shown here account for over half of all internal migration into and out of the borough.



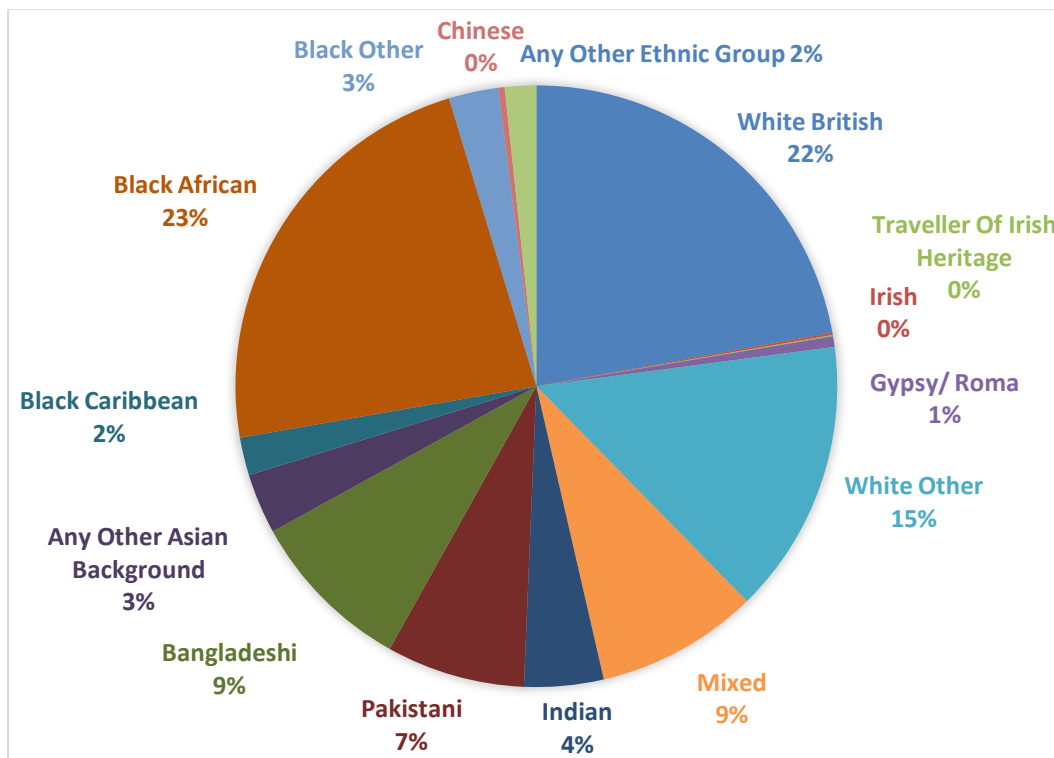
Nearly half of the borough’s population is White (49.5%) which is slightly higher than the average for London (44.9%) (Census 2011).

The national school statistics (June, 2018) reported that 37.5% of pupils in Barking and Dagenham local schools are White, 27.6% are Black, and 23.7% are Asian. 77.4% of pupils were classified as Minority Ethnic Pupils, compared with 45% in 2007.

Percentage of children on school roll by ethnic group (2014 Spring School Census)

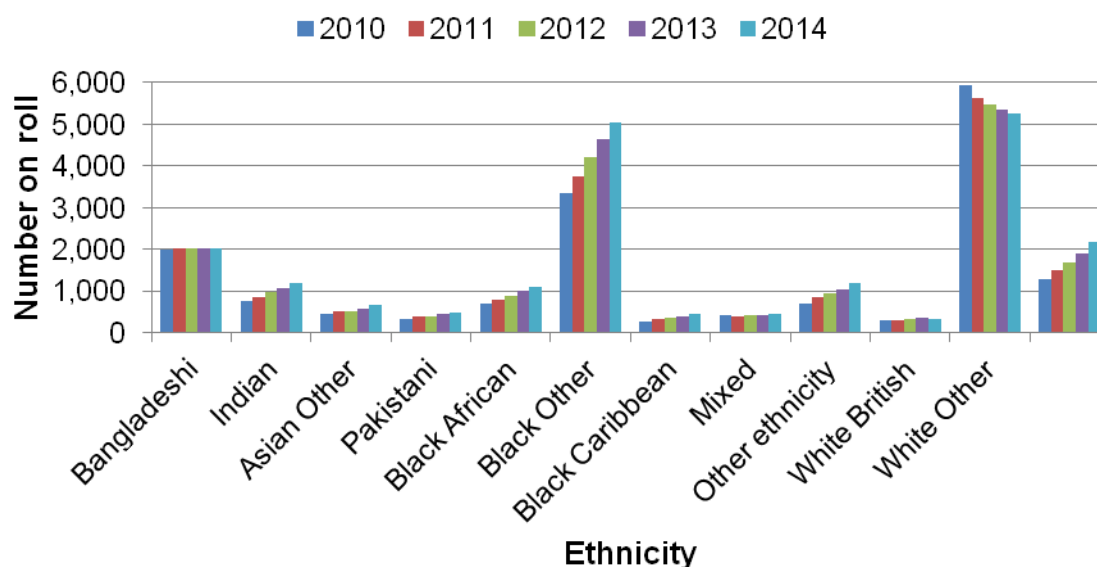


Percentage of children on school roll by ethnic group (2018 National School Statistics)



The primary school population has seen the biggest changes in ethnicity and these changes are expected to flow through secondary schools in the coming years.

Number of children aged 5 to 10 years on school roll by ethnic group (2014 Spring School Census)



The proportion of the White: British Ethnic Group varies from 69.0% of the population in Eastbrook to 15.8% in Abbey. The White: Other Ethnic Group varies from 13.0% of the population in Gascoigne to 4.8% in Eastbrook. The borough average is 7.8%, which is lower than the average for London. The proportion of Mixed White and black African ethnic groups varies from 2.2% of the population in Gascoigne to 1.5% in Abbey, Chadwell Heath and Thames wards. The borough average is 1.1%, which is slightly higher than the London average.

BAME by age group as a proportion of total population (GLA 2016-based housing-led ethnic group projections (November, 2017))

Age range	LBBD		Newham	Havering
	2021	2031	2031	2031
0 – 9	12.4%	12.2%	11.9%	4.4%
10 – 19	9.4%	10.1%	9.4%	3.7%
20 – 29	7.4%	8.1%	12.3%	2.8%
30 – 39	9.3%	9%	13.4%	3.1%
40 – 49	7.9%	8.7%	10.2%	2.9%
50 – 59	5%	6.3%	7%	2.1%
60 – 69	2.2%	3.6%	4.9%	1.5%
70 – 79	0.8%	1.5%	2.8%	0.8%
80 – 89	0.3%	0.5%	1.1%	0.3%
90+	0.04%	0.1%	0.3%	0.05%
Total BAME	54.7%	60.2%	73.3%	21.7%

In the 2011 Census 56% of people in the borough stated they are Christian and 18.9% stated they had no religion. 13.7% of the population stated they are Muslim. Other religions in the borough are: Hindu (2.4%); Sikh (1.6%); Bhudist (0.5%); Jewish (0.2%) and Other (0.3%). 6.4% of the population did not state their religion.

The Christian religion was the most prevalent religion in every ward. The wards with the highest proportion of Christians were Eastbrook (64%), River (63.1%), Village (62.5%) and Heath (62.3%). The wards with the lowest proportion of Christians were: Abbey (36.8%) and Gascoigne (47.2%).

Abbey ward had the highest proportion of residents who are Muslims at 34.5% compared to all other wards. This was closely followed by Longbridge ward at 32.0%. The ward with the lowest percentage of Muslim residents is Eastbrook ward at 5.3%.

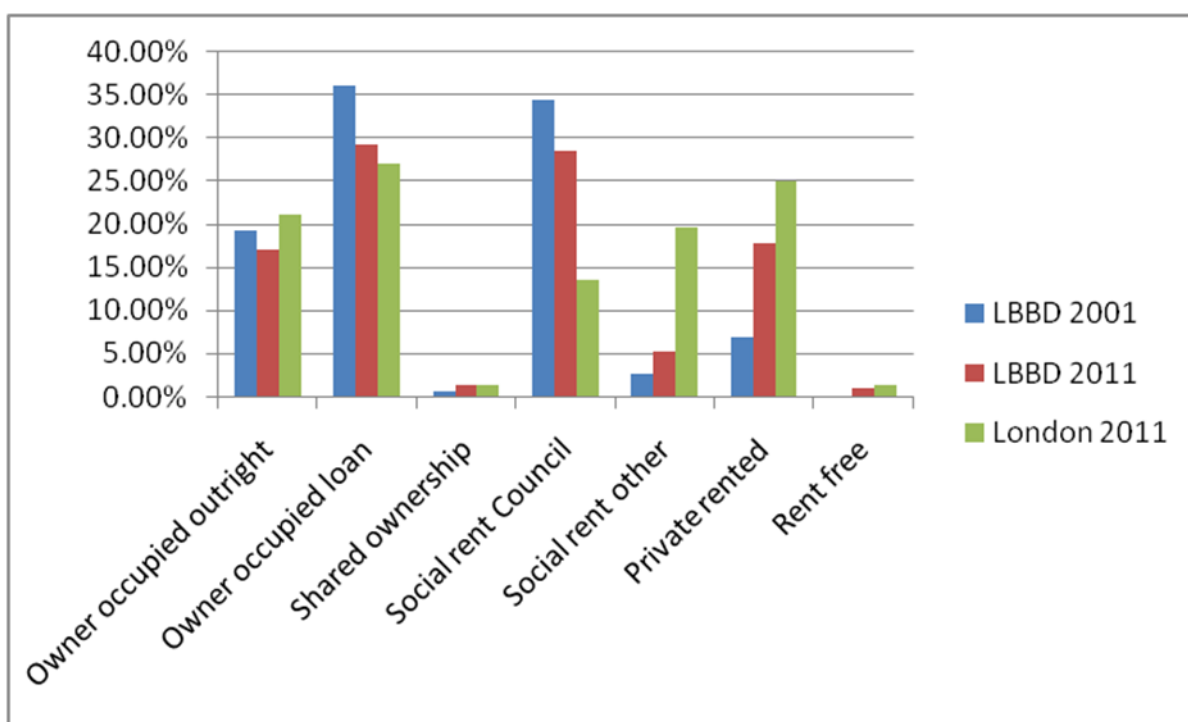
The highest percentage of residents with no religion is in Alibon and Parsloes wards, both with 23.7%. This drops to 9.2% in Abbey ward. Mayesbrook has the largest proportion of residents choosing to not state a religion at 7.5%. This drops to 5.3% in Abbey. The borough average is 6.4%, which is lower than the average for London.

Housing

The number of households in Barking and Dagenham is expected to increase from 70,079 in 2011 to a projected 99,587 in 2031 (GLA Central Trend Household projections 2017-based). In percentage terms this equates to over 42 percent growth to the year 2031, an annual growth of over 1,475 new households each year over the twenty year period (2011 to 2031).

The total number of households at the 2011 census stood at 71,079 (ONS 2011). 46.4 percent own their own home, 33.7 percent socially rent (local authority, housing association or other), private rented 16.6 percent, shared ownership at 1.3 percent with 2.1 percent live rent free.

Housing tenures 2001-2011



The housing stock owned by the Council stood at 17,770 dwellings in 2018 (DCLG 2018) a reduction of 3.6 percent since 2014.. Reductions are mostly due to selling properties through right to buy as well as demolition and renewal programmes. Decrease in home ownership and Council social rent offset by increase in housing association rent and two fold increase in private rented between 2001-2011.

The LBB D Housing Strategy 2012 – 2017 established that 33.6% of rented homes in the public sector are non decent. The Private Sector House Condition Survey (2009) established that 37.9%, of the private sector stock (owner occupied and rented) in the borough is non decent (LBB D Housing Strategy 2012 – 2017). However, showing an upward trend, the 2016-2017 Authority Monitoring Report identifies that over the course of that year 1005 homes have been built to the Lifetime Homes Standard.

The mean average house price in Barking and Dagenham has recovered since the beginning of the recession. In April 2008 house prices stood at £254,556 (April 2008 price level), by December 2014 prices increased to £265,912 (December 2014 price level), an increase of over 4 percent although the data is not adjusted for inflation (Land Registry). Sales (transactions) of the Boroughs homes have fallen since the economic downturn (Q2 2008). The ten years since the start of the recession average monthly transactions in the Borough stood at 261 (April 1998 to April 2008) whereas since the beginning of the recovery (the UK was officially in recession from Q2 of 2008 to Q3 of 2009) (October 2009) to December 2014 monthly transactions have stood at only 134. Earnings have also fallen

since the recession in the Borough. In 2009 weekly earnings for residents of the Borough stood at £523.70 however by 2014 earnings reduced to £517.80 (ONS 2014) (figures not adjusted for inflation).

Zoopla identify that in the last 12 months, there were 1,108 house sales recorded in Barking and Dagenham, with an average price paid of £305,567 or a current average value of £301,656. The statistics reflect a £9,442 decrease in value equating to -3.04%.

The number of households in temporary accommodation was 1,727 in Dec 2018 (CLG 2018).

Applicants on the household register increased greatly in the previous decade. In 2001 there were some 2,157 on the housing register by 2010 this increased to 11,375 (SHMA 2011). This was the equivalent to 17 percent of all households in the Borough, higher than the London average of 11 percent (SHMA 2011).

The Barking and Dagenham Housing Needs Survey 2011 indicates a priority need for family-sized affordable housing, three and four bedroom properties, including social and intermediate housing. (LBBD Housing Strategy 2012 – 2017).

According to VOA (2014), average renting in the Borough is £864, the lowest in London. When considering property size, studios were priced on average £613, one bedroom £709, two bedroom £872, three bedroom £1,144 and four bedroom £1311. Zoopla identifies in 2019 that the average rental price in the Borough is £1,290pcm, indicating a significant increase in rental prices since 2014. Housing rental prices range from £615 pcm for a 1-bed, £1,286pcm for a 2-bed and £1,527pcm for a 3-bed. Flats are typically more expensive, with the average rent for a 1-bed flat at £1,000pcm, a 2-bed flat at £1,263pcm and a 3-bed flat at £1,608pcm.

According to the Strategic Housing Market Assessment (SHMA 2011) the Borough is characterised by a significantly higher rate of population churn relative to London as a whole. In 2007 the rate of internal migration turnover (the sum of in and out migration) was 128 per 1,000 over double London's figure of 57. Most in migration into the Borough came from Newham, Redbridge, Tower Hamlets, Havering and Waltham Forest.

The average household size in the Borough was 2.7 people per household. This is higher than Havering with 2.4 people per household but lower than Redbridge with 2.8 people per household and Newham with 3.0 people per household. In terms of the type of accommodation households live in, 19,214 of the Borough's households live in one bedroom households, 18,641 live in two bedroom households, 12,641 live in three bedroom households, 10,516 live in four bedroom households and 8,693 live in a household with five people or more (ONS 2011).

Human Health

The general health of the population in Barking and Dagenham improved very slightly between 2001 (79.2% recorded as in "good health" and 20.8% in "not good health") and 2011 (81% recorded as in "good health" and 19% in "not good health"). (ONS <http://www.ons.gov.uk/ons/guide-method/census/2011/census-data/index.html> 2001 – 2011 Census Comparator Tool)

The Public Health England Local Authority Health Profile for Barking and Dagenham in 2018 indicates that the health of people in the Borough is varied compared with the England average. The borough is one of the 20% most deprived local authorities in England and about 23% (12,700) of children live in low income families. Life expectancy for both men and women is lower than the England average.

Health summary for Barking and Dagenham (Public Health England, 2018)

- Significantly worse than England average
- Not significantly different from England average
- Significantly better than England average
- Not compared



	Indicator names	Period	Local count	Local value	Eng value	Eng worst		Eng best
Life expectancy and causes of death	1 Life expectancy at birth (Male)	2014 – 16	n/a	77.5	79.5	74.2		83.7
	2 Life expectancy at birth (Female)	2014 – 16	n/a	81.9	83.1	79.4		86.8
	3 Under 75 mortality rate: all causes	2014 – 16	1,455	424.2	333.8	545.7		215.2
	4 Under 75 mortality rate: cardiovascular	2014 – 16	355	104.3	73.5	141.3		42.3
	5 Under 75 mortality rate: cancer	2014 – 16	527	163.6	136.8	195.3		99.1
	6 Suicide rate	2014 – 16	34	6.9	9.9	18.3		4.6
Injuries and ill health	7 Killed and seriously injured on roads	2014 – 16	113	18.6	39.7	110.4		13.5
	8 Hospital stays for self-harm	2016/17	194	95.3	185.3	578.9		50.6
	9 Hip fractures in older people (aged 65+)	2016/17	133	627.7	575.0	854.2		364.7
	10 Cancer diagnosed at early stage	2016	233	45.2	52.6	39.3		61.9
	11 Diabetes diagnoses (aged 17+)	2017	n/a	84.5	77.1	54.3		96.3
	12 Dementia diagnoses (aged 65+)	2017	882	64.0	67.9	45.1		90.8
Behavioural risk factors	13 Alcohol-specific hospital stays (under 18s)	2014/15 – 16/17	23	12.7	34.2	100.0		6.5
	14 Alcohol-related harm hospital stays	2016/17	797	496.6	636.4	1,151.1		388.2
	15 Smoking prevalence in adults (aged 18+)	2017	27,300	18.7	14.9	24.8		4.6
	16 Physically active adults (aged 19+)	2016/17	n/a	53.3	66.0	53.3		78.8
	17 Excess weight in adults (aged 18+)	2016/17	n/a	62.8	61.3	74.9		40.5
Child health	18 Under 18 conceptions	2016	108	27.9	18.8	36.7		3.3
	19 Smoking status at time of delivery	2016/17	304	8.4	10.7	28.1		2.3
	20 Breastfeeding initiation	2016/17	2,876	73.6	74.5	37.9		96.7
	21 Infant mortality rate	2014 – 16	46	4.0	3.9	7.9		0.0
	22 Obese children (aged 10–11)	2016/17	934	29.2	20.0	29.2		8.8
Inequalities	23 Deprivation score (IMD 2015)	2015	n/a	34.6	21.8	42.0		5.0
	24 Smoking prevalence: routine and manual occupations	2017	n/a	29.1	25.7	48.7		5.1
Wider determinants of health	25 Children in low income families (under 16s)	2015	12,660	23.0	16.8	30.5		5.7
	26 GCSEs achieved	2015/16	1,368	55.4	57.8	44.8		78.7
	27 Employment rate (aged 16–64)	2016/17	86,000	65.8	74.4	59.8		88.5
	28 Statutory homelessness	2016/17	214	2.8	0.8			
	29 Violent crime (violence offences)	2016/17	5,216	25.8	20.0	42.2		5.7
Health protection	30 Excess winter deaths	Aug 2013 – Jul 2016	274	23.6	17.9	30.3		6.3
	31 New sexually transmitted infections	2017	1,382	1,027.9	793.8	3,215.3		266.6
	32 New cases of tuberculosis	2014 – 16	174	28.7	10.9	69.0		0.0

The infant mortality rate per 1000 live births was 3.7 between 2015 and 2017, slightly higher than London (3.3) but lower than the rate for England (3.9) (PHE, Public Health Profiles).

The 2018 Barking and Dagenham Joint Strategic Needs Assessment (JSNA) identifies that the leading causes of death between 2014–2016 are Ischaemic heart disease (e.g. heart attack), Dementia and Alzheimer’s disease, lung cancer, chronic lower respiratory disease and stroke. The order of the same five leading causes differs at England and London level, with lung cancer and chronic lower respiratory diseases contributing significantly more to the burden of deaths in Barking and Dagenham than in England and London.

The JSNA identifies that the age-standardised mortality rates in 2016 were 1,003.3 per 100,000 in Barking and Dagenham compared with 959.8 per 100,000 in England and 859.4 per 100,000 in London. Applying these rates to the same population structure means Barking and Dagenham would have around a 17% greater risk of dying than the London average and around a 5% greater risk than the England average. Furthermore, across 2014–16, 27.2% of deaths in Barking and Dagenham were classed as avoidable, compared with 22.8% across England and 25.3% across London. Barking and Dagenham’s age-standardised avoidable mortality rate is the highest in London and 30th highest of 324 areas across England.

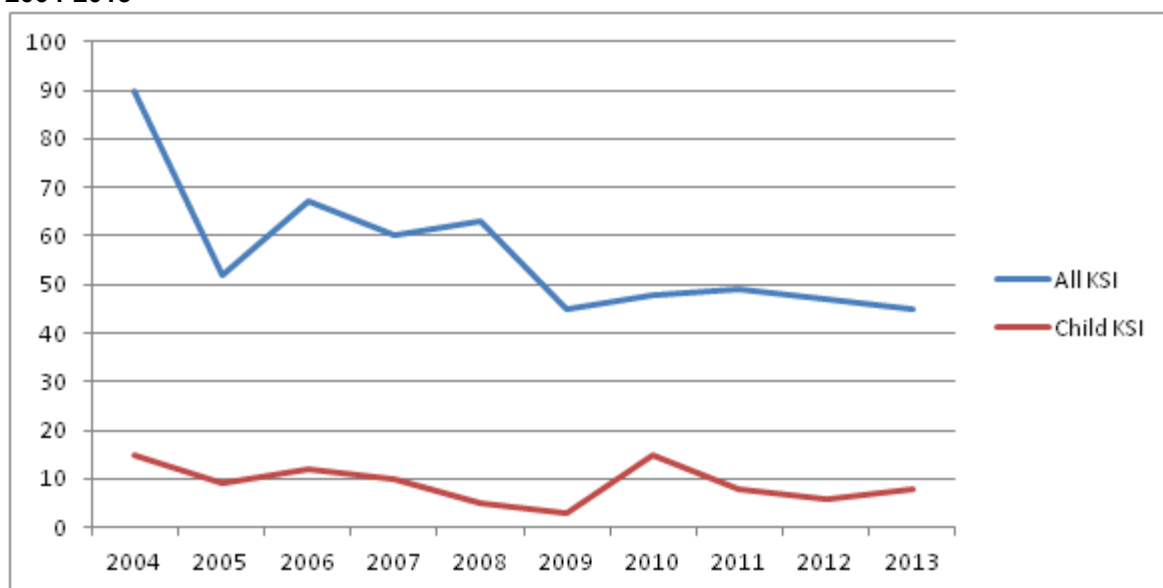
Life expectancy in Barking and Dagenham for males is 77.5 years and for females this is 81.9 years. Both are the lowest in London. Alongside this Barking and Dagenham is one of the most deprived areas in the country, ranked 11th most deprived in England (IMD, 2015). The areas within Barking and Dagenham are fairly uniformly deprived and within the borough there is not a large amount of inequality due to deprivation. Life expectancy for males is estimated to be 3.2 years greater in the least deprived part of the borough compared with the most deprived and for females this is 1.1 years. Both are the smallest gaps in England.

The average size of GP patient list in the borough is 5,831.9 patients registered per GP (AMR 2016/17). This is an increase of 3.8% from the previous year's figure of 5,620.8.

There are few fatal accidents within the borough and serious and slight accidents have reduced in recent years, although the rate of reduction has slowed and there has been little change since 2009 (JSNA 2014).

Available figures show that between 2005 and 2013 locally there was a reduction in Killed or Seriously Injured (KSI) of 50% compared to the London Average of 44.3%. For children the KSI had reduced by 46.66%, a slightly lower reduction than the London Average of 49.69% due to a rise of two incidents in 2013. (JSNA 2014). The 2018 Public Health Profile further indicates that between 2015 and 2017 Barking and Dagenham had significantly fewer KSI incidents when compared to average for the region and for England.

Killed and Seriously Injured (KSI) on roads in London Borough of Barking and Dagenham, 2004-2013



Source : <http://data.london.gov.uk/dataset/road-casualties-severity-borough/resource/a883bd65-c504-43bd-9032-efd71349385e>

The percentage of people whose day-to-day activities are limited decreased from 19.9% to 16.4% between 2001 and 2011 (ONS, 2013 <http://www.ons.gov.uk/ons/guide-method/census/2011/census-data/index.html> 2001 – 2011 Census Comparator Tool).

In 2014, 8,442 adults (aged 18-64 years) in Barking and Dagenham were estimated to be living with a moderate physical disability and an estimated further 2,334 adults with a serious physical disability. By 2020, it is estimated that there will be an additional 1,154 people aged 18-64 years with moderate physical disability and an additional 360 with serious physical disability in the borough. (JSNA 2014). The 2018 JSNA identifies that Barking and Dagenham has the 3rd highest proportion of people self-reporting bad or very bad health, and the 3rd highest proportion of working-age residents on long-term sick leave relative to London in 2017 at 5.8% or 1 in 17.

Data from the Mental Health Minimum Dataset (MHMDS) provided by the Health and Social Care Information Centre (HSCIC) showed that 4,247 (2,830 per 100,000 population) borough residents accessed care for mental health services in 2011/12. (JSNA 2014). The 2018 JSNA identifies that 5% of respondents to the GP Patient Survey in Barking and Dagenham reported feeling isolated from others in the last 12 months and aims to reduce social isolation to benefit long-term resilience.

It is expected that there will be an increase in the numbers of people needing to access mental health services in the coming years. Locally modelled estimates predict that the number will increase by 19.5% by 2025. (JSNA 2014)

Projected number of clients accessing mental health services, Barking and Dagenham, 2014-2025

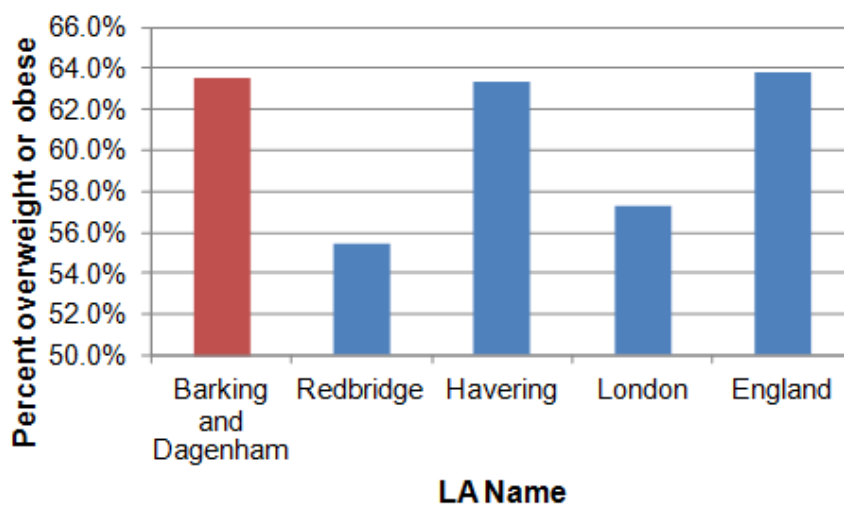
Year	Projected population	Projected number of people accessing mental health services [1]	Projected number of patients on Mental Health Register [2]
2014	199,990	4,445	1,480
2015	204,335	4,542	1,512
2016	208,576	4,636	1,543
2017	212,709	4,728	1,574
2018	216,365	4,809	1,601
2019	219,916	4,888	1,627
2020	223,361	4,964	1,653
2021	226,707	5,039	1,678
2022	229,952	5,111	1,702
2023	233,095	5,181	1,725
2024	236,112	5,248	1,747
2025	239,028	5,313	1,769

Source: GLA SHLAA 2013 population estimates. [1] Projected from number of clients accessing services (2.2% of the resident population) [2] Based on Quality and Outcomes Framework (QOF) GPs Register, with a borough prevalence of 0.74% of the population in 2013.

8,720 people resident in the borough claimed Employment and Support Allowance (ESA) and Incapacity Benefits in February 2014, with the 7.1% rate being the third highest in London. About 42% of these claimants were claiming sickness benefits for mental and behavioural disorders and form the largest subgroup among people claiming these benefits. The second largest subgroup is those with 'diseases of the musculoskeletal system and connective tissue', at 18% (JSNA 2014). In 2016 this had reduced to 7,987 or 6.1% of residents claiming ESA and Incapacity Benefits. This remains higher than the average for London but is on par with the average for England (NOMIS, 2018).

General practices report the overall prevalence of adults over the age of 16 years who have a BMI of over 30 (obese) through the QOF framework. This recorded 13.6% of adults in the borough as obese. The overall QOF prevalence trend is higher than the average in other outer north-east London boroughs and compared to London. Adult obesity remains an outstanding issue to be tackled in the borough as identified in the 2018 JSNA.

Prevalence of overweight and obese adults in Barking and Dagenham and neighbouring boroughs, 2012



Source: National Obesity Observatory

According to the National Child Measurement Programme (NCMP), in 2012 /13 Barking and Dagenham had the fifth highest proportion of overweight and obese children in Reception class (25.9%) and the fourth highest proportion in Year 6 classes in Primary School (40.1%) in England. There is variation across the borough but every ward is above the national average in both Reception and Year 6. Updates from the 2018 JSNA indicate that Barking and Dagenham have the highest levels of Year 6 obesity in England.

Obesity: Three year rolling averages LBBB wards 2009/10-11

Ward	2009/10-11/12 % Obese in Reception	2009/10-11/12 % Obese in Year Six
Abbey	14.7%	25.4%
Alibon	10.3%	23.9%
Becontree	13.1%	26.0%
Chadwell Heath	15.5%	21.7%
Eastbrook	10.4%	24.9%
Eastbury	15.3%	27.5%
Gascoigne	15.2%	24.1%
Goresbrook	18.2%	23.7%
Heath	13.3%	24.0%
Longbridge	14.5%	25.8%
Mayesbrook	12.2%	22.0%
Parsloes	15.1%	23.1%
River	13.4%	29.9%
Thames	12.8%	23.8%
Valence	14.8%	27.6%
Village	12.7%	22.2%
Whalebone	12.9%	26.1%

Source: Health and Social Care Information Centre – National Child Measurement Programme

The level of participation of the borough's residents in physical activity on at least 3 days a week in moderate intensity sport and active recreation in 2014 was 13.1%, a 4% reduction from the level recorded in the October 2008 Active People Survey (Sport England).

Participation in at least 30 minutes sport at moderate intensity at least once a week London boroughs, 2012/13 shows Barking and Dagenham has the least participation. Only 24.5% of adults in Barking and Dagenham participate in physical activity, the lowest rate of all London boroughs and lower than the national and regional averages (36.0% and 35.3% respectively). The parts of the borough with the lowest uptake of exercise are the north of Barking, Thames View and River wards (JSNA 2014). This is reiterated in the 2018 JSNA which identifies that Barking and Dagenham have the lowest percentage of physically active adults in England between 2016 and 2017.

Children in the borough have a statistically significant lower uptake of physical activity than national and London averages. Only 54% of children in Barking and Dagenham participate in at least 3 hours of sport which is 4% less than the national and London average (JSNA 2014).

Percentage of school children who participate in at least 3 hours of high quality PE and school sport within and beyond the curriculum, outer north east London boroughs, London and England, 2009/10

Area Name	Indicator value	Lower 95% CI	Upper 95% CI	Significance
England	55.13	55.09	55.16	
London	55.24	55.14	55.34	Higher
Barking and Dagenham LB	54.27	53.69	54.85	Lower
Havering LB	50.64	50.10	51.18	Lower
Redbridge LB	49.99	49.51	50.47	Lower
Waltham Forest LB	61.26	60.73	61.79	Higher

Source: Annual Survey of School Sport Partnerships, 2009/10 via APHO health profiles

Analysis of Cycling Potential (TfL 2010) between 2005 and 2008 found that only 4% of potential cycle trips by borough residents were realised.

Current cycle trips 2005-8	Potential cycle trips	Proportion of potential realised
3,100	68,800	4%

Access to nature and open spaces have important benefits for mental and physical health. Nearly 50 percent of wards in the borough have 10% or more homes with deficient access to nature. Nearly 30 per cent of wards have 50% or more homes with deficient access to nature.

Access to Local, small or pocket parks is significantly lower for Barking and Dagenham residents when compared to the average percentage for London. Nearly 65 per cent of wards have 50% or more homes with deficient access to local parks.

Culture and Community

Barking Town Centre is the cultural centre of the Borough with important cultural assets such as the seventh century Barking Abbey. It is also the principal entertainment centre of the Borough, with many pubs and restaurants. The Town Centre also includes a Theatre (the Broadway Theatre).

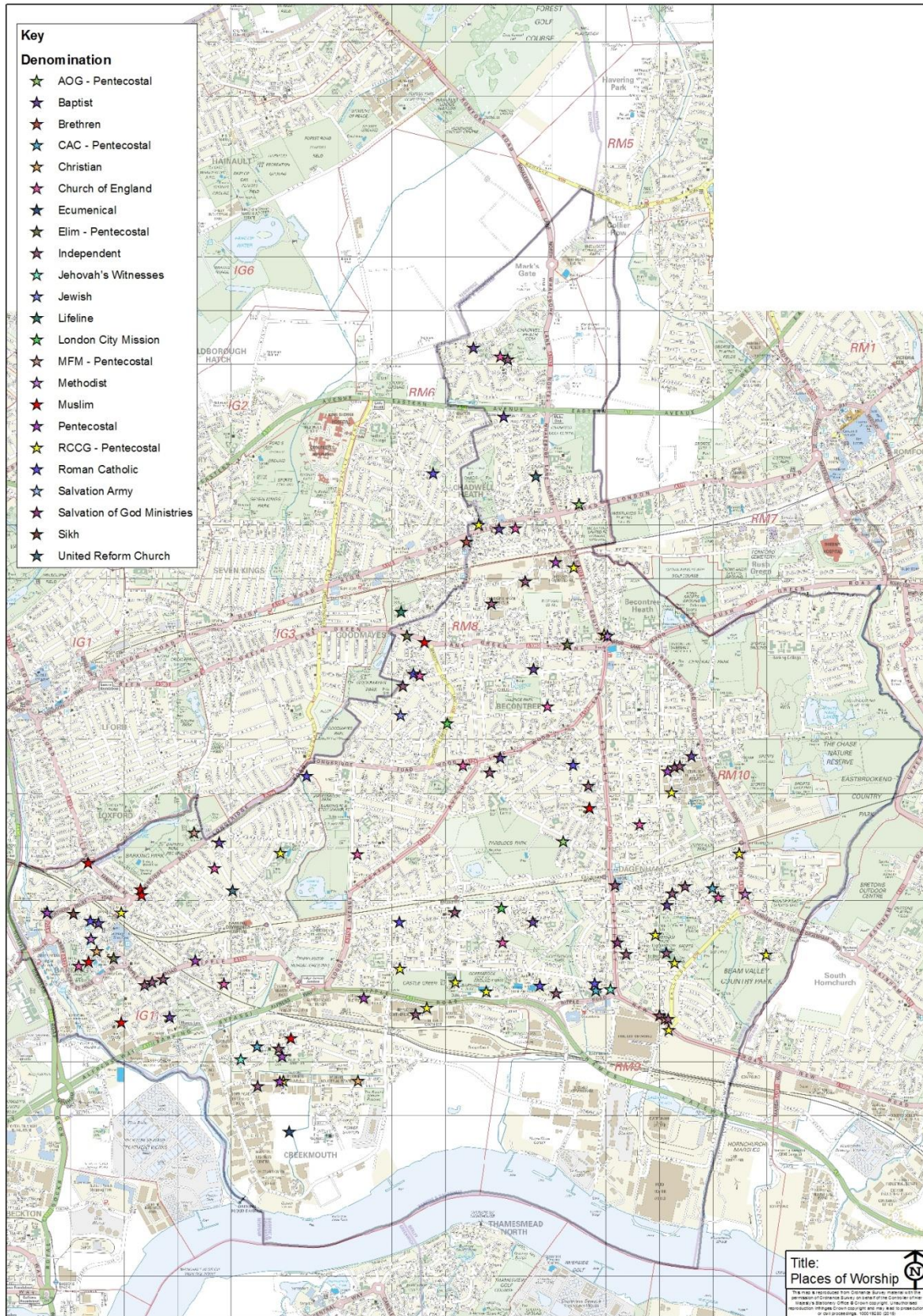
The Borough is served by two main leisure centres; The Abbey Leisure Centre and Becontree Heath Leisure Centre. The Borough is home to numerous community and social clubs. The Valance House Museum is an important local resource, for local history and the Eastbury Manor House is also open to the public and provides a wealth of information on Elizabethan Architecture and Design. Both venues have recently received funding from the Heritage Lottery Fund and the Council to improve both venues.

There are 25 parks and open spaces within the Borough, the majority of which are located in the eastern side of the borough, in the boroughs green belt.

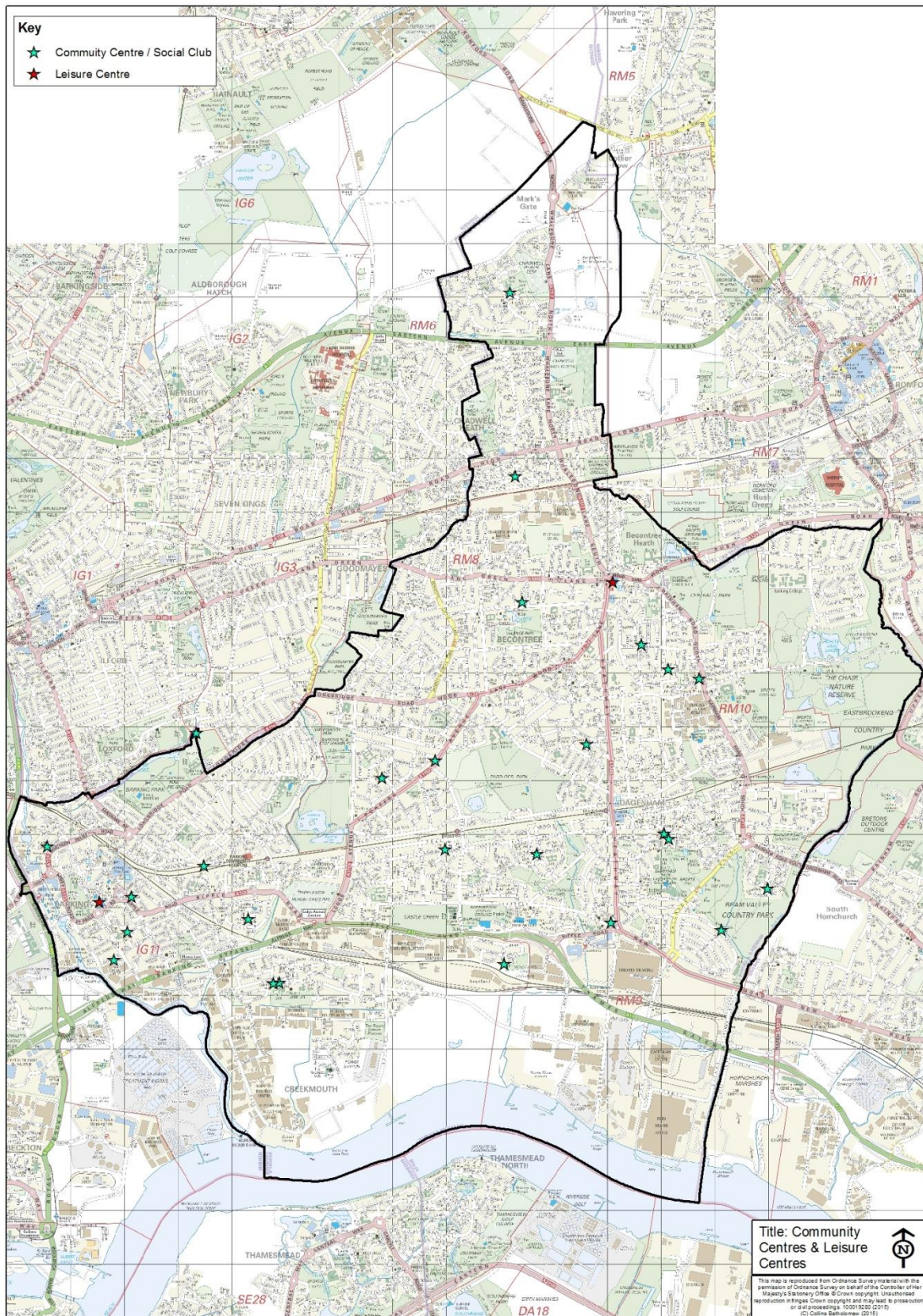
There were 1,406 million visits to the Boroughs library in 2014 with 684,957 items issued. Usage of the Boroughs museums has increased. Since reopening in 2010, total usage of Valance House has increased from 34,610 in 2010/11 to 67,396 in 2011/12 and there has been further strong growth in visits.

There are numerous places of worship in the Borough this includes; Churches, Mosques, Gurdwaras and other religious buildings. There locations are set out on a map on the next page.

Places of Worship in Barking and Dagenham



Community Centres and Leisure Centres in Barking and Dagenham



Education, Skills and Training

The Borough has 2,856 nursery places which are located in schools across Barking and Dagenham. Additionally, the Borough also includes a range of other early year care. Ofsted reported that 56% of Childminders in the Borough were good or outstanding in 2011.

There are eighteen children centres in the Borough. Additionally, Valance Library, Dagenham Library and Barking Learning Centre also provide resources from children.

An additional need for 2065 places for 2 year olds by September 2014 was identified by the council. There is a significant shortage of places for 2 year olds in Heath and Village Wards. (LBBD Cabinet Report June 2014).

There are 48 schools in the Borough which cater for primary schools in the Borough. Additionally, there are nine secondary schools in the borough (Infrastructure Study 2011). A total of 18,643 children (reception to year six) attended the borough's primary schools in 2010/11 (PLASC data). In total these schools catered for 10,920 in 2010/11 (PLASC data) school children for Years 7 – 11 (not including 6th Form).

Since the academic year 2007/08 to June 2014, 4,500 additional primary aged pupils were accommodated. This is equivalent to 150 new classes across all year groups in the primary phase. (LBBD Cabinet Report June 2014).

Demand forecasting in the 'Review of School Places January 2019 Report' identify a primary school capacity of 4137 in 2019 and a demand forecast of 3687 identifying primary school capacity.

The 'Review of School Places January 2019 Report' identifies a secondary school capacity of 3420 and demand forecast of 3360, identifying secondary school capacity in contrast to previous trends.

Although the Borough retains a statutory duty to ensure that there are enough school places available in the borough to accommodate all children who live here and might require one, it no longer has the powers to open new maintained schools. Thus, all new schools will need to be academies/free schools. Where the requirement for a new school in order to meet basic need is identified, the Local Authority will have to fund the purchase of any site and construction of a building to accommodate a free school.

65.5% of pupils in Barking and Dagenham achieved five or more A* - C at GCSE at the end of Key Stage Four in 2013/14. This is below the Outer London average of 71.3%.

NVQ level two and above qualifications were attained by 66.9% of the Boroughs residents aged between ages 16 – 64 in 2018 (NOMIS, 2018).

8.2% of the Boroughs residents have no qualifications in 2018 a reduction from 15.7% identified in 2013 (NOMIS, 2014 and NOMIS, 2018).

Deprivation, Poverty and Crime

Barking and Dagenham is ranked as the eleventh most deprived Local Authority in England, according to the Index of Multiple Deprivation (2015), with areas within the wards of Heath, Village, Thames and Gascoigne being within the 10% most deprived Lower Super Output Areas (LSOA) in England.

In November 2016, 12.8 % of the working aged population claimed out-of-work benefits.

In 2012, 20.2% of those in employment earned less than £7 per hour (Annual Population Survey, 2014). In 2018, the average hourly pay for full-time workers in Barking and Dagenham was £14.20, which although in line with the national average, is significantly less than the London average of £17.55.

Number of working age persons (16 to 64) claiming benefits decreased between 2010 and 2014, but increased overall in 2018 to 12.8% compared to 8.3 % in May 2010.

14.2% of nursery and primary school children claimed free school meals and 15.5% of secondary school children claimed for free school meals.

The rate of new personal insolvencies 25 per 10,000 people in 2013; this was increased significantly since 2001, when the rate was 5 per 10,000 people. However, the rate has decreased since 2010, when it reached a peak of 31.6 per 10,000 people. This rate continues to decrease at less than 25 per 10,000 in 2017, however in comparison to the rest of London this is the second highest rate in London.

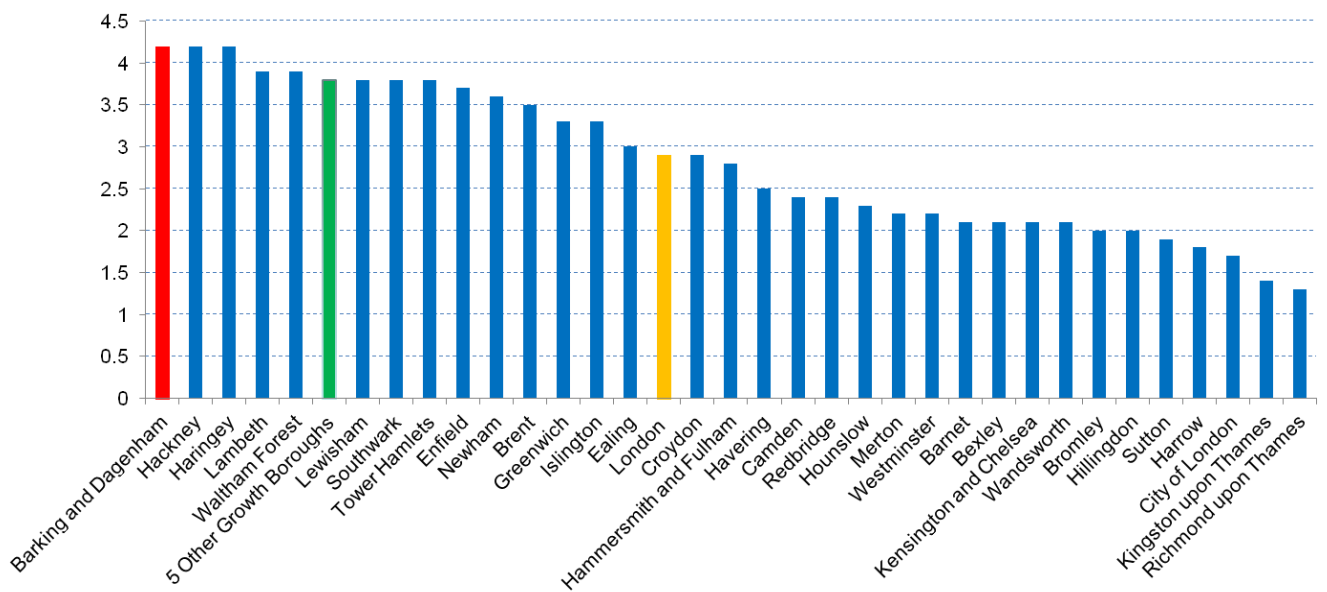
Ambulance service incidents recorded in 2014 and 2012 showed a decrease in all types of assault from 893 in 2012 to 716 in 2014, this equates to a 19.8% decline. However, binge drinking has increased from 473 incidents 2012 to 560 incident in 2014 (London Ambulance Service, 2014). In 2017 there were a total of 1.13 million incidents attended by the London Ambulance Service.

13.7% of the Boroughs households were workless in 2017, meaning they did not have an economically active person. Decreasing from 26.3% in 2012 (NOMIS, 2018).

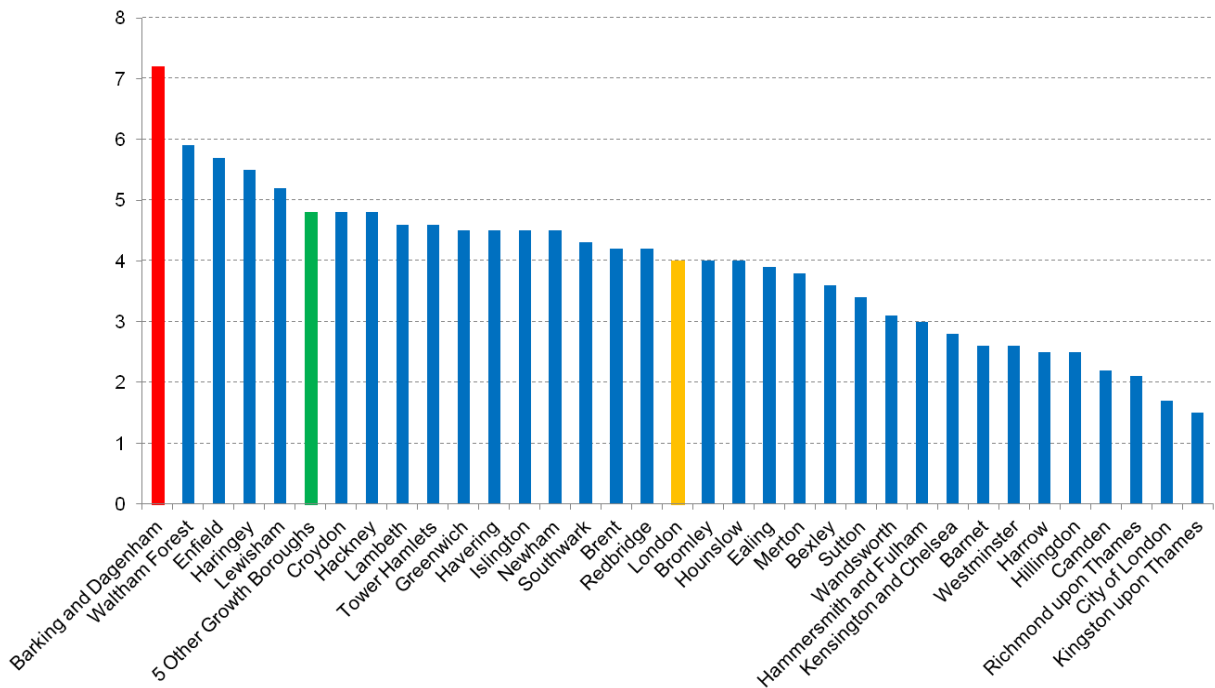
24% of children in Barking and Dagenham were living in workless households in 2013. This is significantly down on recent years, in 2007 this figure stood at 27.1%. In 2010 the figure was 33.6% before falling to 24% in 2013 (ONS 2013).

Claimant count unemployment

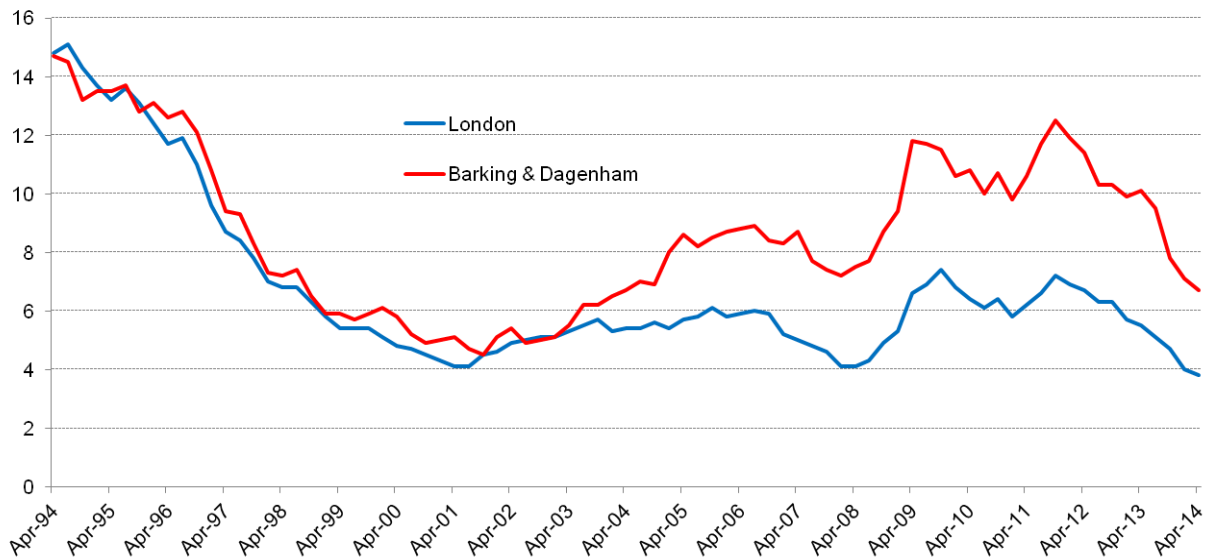
Claimant rate (%) - March 2014



% 18-24 year olds claiming JSA: March 2014



18-24 Claimant count unemployment rate (%) over 1994-2014



The crime rate in the Borough in 2013/14 was 82.6 crimes per thousand. Crime has decreased significantly over the last ten years with the crime in the Borough at 133.2 per thousand in 2003/04 (Metropolitan Police, 2014). The annual crime count in Barking and Dagenham had increased in 2016/17 by approximately 1% from the previous year equating to 164 offences reported.

The wards which had the highest number of notable offences in the twelve months to January 2015 were; Abbey, Gascoigne, River and Thames. Mayesbrook had the lowest number of notable incidents (Metropolitan Police, 2015).

Economic Profile and Trends

In 2013 there were 5,055 active businesses within the Borough. The Borough has seen good growth in the number of businesses. In 2009 they were 3,895 active businesses (ONS, 2013) at 23% growth in the four year period.

In 2018, 6,630 enterprises, and 7,785 local units were identified as active businesses in the Borough, the majority of which were micro-businesses employing 0 to 9 people (92.8% of enterprises and 88.4% of local units).

Barking and Dagenham recorded 55,180 workforce jobs in 2013, representing a decrease of 2% from its 1997 level. This compares with a positive job growth of 26.7% and 13.6% across Greater London and the UK over this period (NLP, 2014). However, job growth in the Borough is expected to grow over the coming decades. 10,640 jobs are expected to over the nineteen year period to 2031, equivalent to 560 jobs per year (NLP, 2014). However, in 2017 a further loss of 180 jobs was recorded reducing the total to 55,000 (NOMIS, 2018).

The main industries in the Borough are; wholesale and retail trade, followed by education, administrative and support service activities, and human health and social work activities.

In terms of sector growth; administrative and support service activities, construction, wholesale and retail, transportation and storage, accommodation and food service activities, and information and communication are the sectors which have seen the most growth, in percentage terms and in terms of workforce job change between 2015 and 2017. Manufacturing, public administration and defence, arts, entertainment and recreation, and real estate activities have all had a declining work force over the past three years (NOMIS, 2018).

In 2018-19, 73.2% of Barking and Dagenham residents aged 16-64 were economically active. 6.1% were unemployed. 26.8% of residents aged 16-64 were economically inactive and of these people; 27.8% were students, 39.4% were looking after family/ home, 16.8% were long-term sick, and 83.7% did not want a job (NOMIS, 2018).

Young people (16 to 18 year olds) not in employment, education or training was 5.8% in 2013 (DfE, 2013).

Median gross weekly earnings of the Boroughs residents stand at £571.50 representing an annual percentage change of 2.7%, though this remains significantly below the London median gross weekly pay of £670.80 (NOMIS, 2018).

The majority of businesses (890) of businesses in the borough turnover between £50,000 and £99,000. Over 850 turnover £100,000 to £249,000. Despite this, the Business Survey 2009 found that more than a quarter (28%) of Barking & Dagenham businesses are not registered for VAT with 5% of all businesses not VAT registered but having a turnover of £50,000 or more (Local Economic Assessment, 2011).

In Barking & Dagenham, 25.5% of workforce had a skills gap in 2009, compared to London where employees reported a skills gap of 16.8% and nationally 19%.

Accessibility and Transport

In 2001, some 63% of Barking and Dagenham's working residents worked outside the Borough indicating a very high rate of out-commuting. In total, just over 41,400 residents worked elsewhere, predominantly in the London Boroughs of Havering (15%), Redbridge (14%), Newham (11%) and Tower Hamlets (10%) as well as the more central Boroughs of the City of London (9%) and Westminster (8%) (NLP, 2014).

Since 2001, out commuting has increased with the Annual Population Survey (2011) indicating that out commuting stood at 52,474 in 2011. The structure of out commuting also appears to have changed over the ten year period with the majority of residents working in the City of London (15%) followed by Havering (14%), Newham (13%) Redbridge (10%) (NOMIS, 2014).

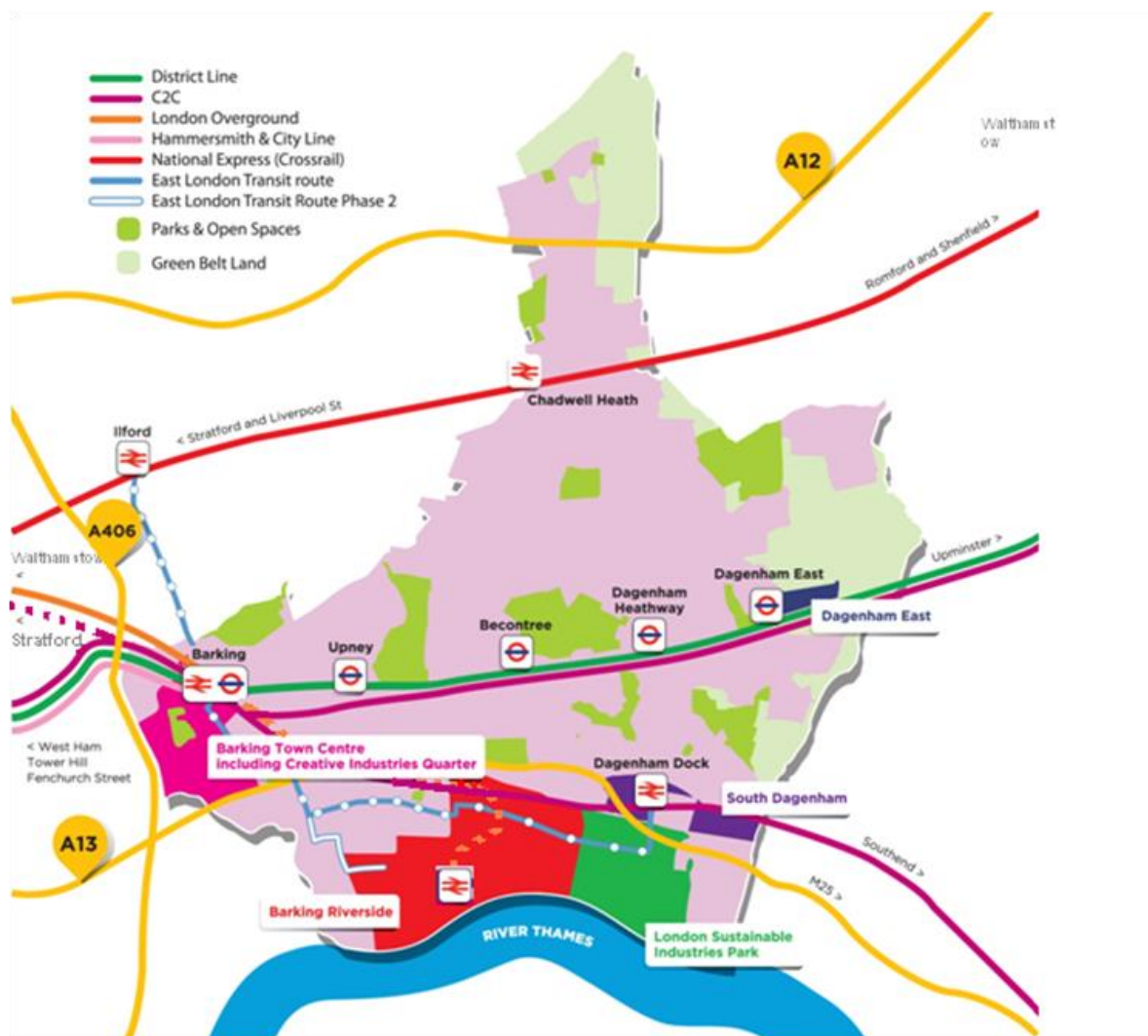
In 2001, approximately 27,800 workers commuted into Barking and Dagenham (NLP, 2014) by 2011, this increased, albeit modestly, to 28,705. The vast majority of in commuters came from Havering (41%), Redbridge (8%) and Newham (3%) (NOMIS, 2014).

39.6% of households have access to a car or van. This level of car and van ownership is significantly under the Outer London Average of 78% of households having access to a car or van (ONS, 2011).

The Borough has seven stations, seven form part of the London Underground System (Barking, Upney, Becontree, Dagenham Heathway and Dagenham East. Three stations form part of the National Rail system. Barking Station and Dagenham Dock are located on the Fenchurch Street to South Essex Line and Chadwell Heath is located on the Great Eastern Line which will also soon be part of the Crossrail System.

The majority of the borough has a PTAL of 1a, 1b and 2. Barking Station has a PTAL of 6a and other stations in the borough have PTALS of 3 or 4. In general there are poor north-south transport links in the borough. TfL 2012: <http://www.tfl.gov.uk/cdn/static/cms/documents/barking-dagenham-2012-ptals.pdf>

The Borough is served by the A12 and A13 which link the Borough with central London, South Essex and the rest of East England.



Town Centres

Barking is considered a 'Major Centre' in the emerging draft London Plan (2019). Additionally, the Borough contains three district centres; defined within the London Plan, Green Lane, Dagenham Heathway and Chadwell Heath. The Borough also includes 36 neighbourhood centres.

The current Local Plan also classifies Barking Riverside to include a new district and neighbourhood centre future years.

The Borough only retains 26% of its comparison goods expenditure. The Borough leaks comparison expenditure to the following locations Romford, Lakeside, Beckton, Ilford, Stratford and Central London (NLP, 2014).

The Borough's Town Centres serve an important role in providing leisure and retail needs. Barking is the largest town centre which had 266 units in 2013 (NLP, 2014).

Biodiversity, flora and fauna geodiversity and landscape

Barking and Dagenham has 25 Sites of Importance for Nature Conservation, including three Sites of Metropolitan Importance for Nature Conservation: the River Thames and tidal tributaries; the Chase and Eastbrookend Country Park; and the Ripple Nature Reserve (Greenspace Information for Greater London, 2014).

Green belt protects 531 hectares or 14% of the borough.

The Beam River defines a large extent of the borough's eastern boundary and the River Roding (known in its lower reaches as the Barking Creek) defines the south-west boundary. Other watercourses that flow through Barking and Dagenham or adjoin watercourses in the borough Barking & Dagenham, or adjoin watercourses within the borough, are: Loxford Water, Gores Brook, Mayes Brook & The Ship and Shovel Sewer.

There are eight Local Nature Reserves in the borough, all of which are Sites of Importance for Nature Conservation:

Beam Valley

Dagenham Village Churchyard

Eastbrookend Country Park

Mayesbrook Park, South

Parsloes Park Squatts

Ripple Nature Reserve

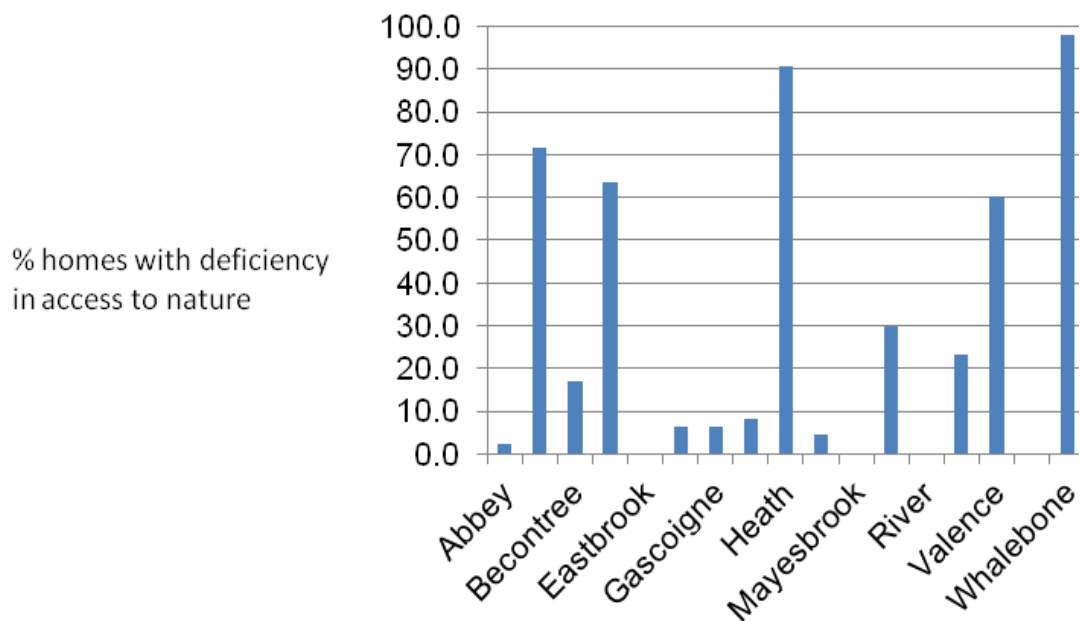
Scrattons Ecopark and extension

The Chase – Dagenham

There is one Potential Regionally Important Geological/Geomorphological Site in the borough - GLA 37: Mark's Warren Farm Quarry Complex (for Pleistocene Black Park Gravel). RIGS are non-statutory designated sites for geology and geomorphology and are the geological equivalent of Sites of Metropolitan Importance for Nature Conservation.

Areas of deficiency in access to nature are defined as built-up areas more than one kilometre actual walking distance from an accessible Metropolitan or Borough Site of Interest for Nature Conservation (SINC). The chart below shows that wards with the least access to nature are Whalebone (98%), Heath (90.5%), Alibon (71.7%), Chadwell Heath (63.6%) and Valence (60.3%). The wards with the most access to nature are Eastbrook, River, Village and Abbey.

% homes with deficiency in access to nature



Ward	% homes with deficiency in access to nature
Abbey	2.2
Alibon	71.7
Becontree	17.2
Chadwell Heath	63.6
Eastbrook	0.0
Eastbury	6.4
Gascoigne	6.3
Goresbrook	8.3
Heath	90.5
Longbridge	4.4
Mayesbrook	0.0
Parsloes	29.8
River	0.0
Thames	23.2
Valence	60.3
Village	0.0
Whalebone	98.0

The adopted London Plan set regional BAP Habitat Targets for 2020 to enhance and increase the areas of priority habitats. In Barking and Dagenham these habitats include: Floodplain grazing marsh; Acid grassland; Reedbeds; Woodland; Orchards; Meadows and pastures; Tidal Thames; Rivers and streams; Standing water; Fen, marsh and swamp; and Open Mosaic habitats on previously developed land.

Geographic information for designated sites and priority habitats is available on the MAGIC web site (<http://www.natureonthemap.naturalengland.org.uk/>) It is presented as an interactive map which can be explored using various mapping tools.

Protected species that can be found in the borough include:

Bats	Brown long-eared; Common pipistrelle; Daubenton's; Leisler's; Nathusius'; Natterer's; Noctule; Serotine; Soprano; Whiskered/Brandt's
Badger	
Brown Hare	
Harvest Mouse	
Hedgehog	
Shrew	Common; Pygmy; Water
Water Vole	
Birds	Black redstart; Bullfinch; Corn bunting; Cuckoo; Dunnock; Grasshopper warbler; Grey partridge; Hawfinch; Herring gull; House sparrow; Lapwing; Lesser redpoll; Lesser spotted woodpecker; Linnet; Marsh tit; Marsh warbler; Peregrine; Reed bunting; Sand martin; Skylark; Song thrush; Spotted flycatcher; Starling; Swift; Tree pipit; Tree sparrow; Turtle dove; Wood warbler; Yellow wagtail; Yellowhammer; Avocet; Barn owl; Bearded tit; Cetti's warbler; Common tern; Firecrest; Garganey; Hobby; Kingfisher; Little ringed plover; Pintail;
Reptiles	Adder; Common lizard; Grass snake; Slow worm
Amphibians	Common frog; Common toad; Great Crested Newt; Smooth newt
Fish	Atlantic salmon; River lamprey; Sea lamprey; Twaite shad; Bullhead
Stag Beetle	

The London Regional Landscape Framework (May 2009) has been developed by Natural England and sets out the main landscape character types for London. There are four landscape character types within Barking and Dagenham:

Essex Plateau – Mosaics of ancient woodland, wood pasture and acid grassland within the former royal hunting forests" at Epping Forest and Havering.

North Thames Terraces – Flat, open grassland, stepping up from the Thames, with narrow sinuous strips of woodland marking the alignment of tributary creeks. Examples include Mayesbrook Park, Romford Line railsides and The Chase.

Lower Thames Floodplain – A vast, flat riverside zone of grazed saltmarshes grading to reedswamp, mudflats and the wide tidal Thames - the most striking and immediately visible natural element in London. Examples include the Goresbrook, the Ripple Nature Reserve and Barking Creek.

Roding River Valley – The narrow, sinuous course of the upper Roding where the riverbanks are lined with willows.

National Character Area Profiles:

Natural England has published 159 National Character Area profiles for England. Each profile describes the topography, geology, soils, rivers, coastal features, habitats, agricultural uses, species, built environment and history of that NCA. They also provide an assessment of provisioning, regulating and cultural ecosystem services. Statements of environmental opportunity provide suggested actions that can protect and enhance the natural environment.

NCA Profile:111 Northern Thames Basin (NE466) and NCA Profile 81 Greater Thames Estuary (NE473) cover Barking and Dagenham.

Open and green space

There are 25 parks and open spaces in the borough covering 485 hectares. This corresponds to 2.80 hectares per 1000 population.

There are 4 Metropolitan parks: Barking Park, Mayesbrook Park, Parsloes Park and Beam Parklands. There is one country park - Eastbrookend Country Park.

There are 10 district parks – Valence Park, St. Chad’s Park, Central Park, Goresbrook Park, Castle Green, Rippleside Cemetery, Ripple Nature Reserve, Greatfields Park and Old Dagenham Park.

In 2014, 5 parks were awarded a Green Flag: St. Chad’s Park, Barking Park, Mayesbrook Park, Abbey Green, and Beam Parklands. One park, Padnell Green, was awarded a Green Pennant. Valence House and Garden was also awarded a Green Flag.

The wards with the least access to a Metropolitan Park are Abbey, Gascoigne and Chadwell Heath. The analysis of public open space is based on access to designated green/public open space and therefore excludes farmland, and other types of green space outside of the public open space category definitions within the London Plan.

Percentage of homes deficient in access to parks:

Ward	Metropolitan Park	District Park	Local, Small or Pocket Park
Abbey	97.6	0.3	15.7
Alibon	0.0	17.8	84.3
Becontree	0.0	36.4	57.5
Chadwell Heath	50.8	100.0	25.9
Eastbrook	0.0	0.0	60.7
Eastbury	3.8	46.8	89.5
Gascoigne	91.4	86.5	46.9
Goresbrook	0.0	22.3	42.4
Heath	0.1	9.9	59.3
Longbridge	5.3	0.6	74.1
Mayesbrook	0.0	0.0	57.7
Parsloes	0.0	3.3	52.8
River	0.0	14.1	39.6
Thames	30.2	98.0	72.9
Valence	0.0	82.3	71.8
Village	0.0	0.0	23.4
Whalebone	25.8	73.8	92.5

London Borough of Barking and Dagenham	17.9	34.8	56.9
London (average)	19.4	43.3	45.5

Access to Local, small or pocket parks is significantly lower for Barking and Dagenham residents when compared to the average for London.

There are 16 allotment sites in Barking and Dagenham, covering approximately 16 hectares.

The percentage of the population of the borough utilising outdoor space for exercise/health reasons was 7.8% in 2013/14 and 11.3% in 2012/13. This compares with the London average of 11.8% in 2013/14 and 10.5 in 2012/13.

Heritage

Barking and Dagenham has 50 listed buildings and structures on the statutory list. These are categorised as follows:

- 3 Grade I listed buildings
- 4 Grade II* listed buildings
- 40 Grade II listed buildings
- 1 Scheduled Monument
- 2 Certificates of Immunity

The borough has 123 buildings on its Local List and was last updated in December 2013. The list includes residential and commercial properties, schools, churches, public houses, underground stations, stench posts and an Edward VIII Pillar box, all considered to be of special architectural or historic interest.

The 2011/2012 and, 2012/213 AMR reported no loss of listed or locally listed buildings (Indicator reference 35).

The borough has 4 conservation areas each with their own Conservation Area Appraisal

Abbey and Barking Town Centre

Abbey Road Riverside

Chadwell Heath Anti-aircraft Gun Site

Dagenham Village

The Barking Abbey Ancient Monument Site- parts of Abbey Green and the remains of Barking Abbey are designated a Scheduled Ancient Monument.

There are seven statutorily listed Heritage Assets on Historic England's Heritage At Risk Register (2018) (, a reduction from nine in 2013 (Heritage At Risk Register October 2013). The seven statutorily listed Heritage Assets at risk are:

- **Chadwell Heath Anti-Aircraft Gun Site, Marks Gate**
Designation: Conservation Area, LB grade II
Condition: Very bad
Vulnerability: Medium
- **Church of St Peter and St Paul, Crown Street, Dagenham**
Listed Place of Worship grade II*, CA
Condition: Very bad
Priority Category: C - Slow decay; no solution agreed

- **Barking Abbey**
Scheduled Monument, LB grade II, CA
Condition: Generally satisfactory but with significant localised problems
Principal Vulnerability: Vandalism
- **The Warren Stone, Whalebone Lane North, Chadwell Heath**
Listed Building grade II
Condition: Poor
Priority Category: D - Slow decay; solution agreed but not yet implemented
- **The Old Vicarage, Crown Street, Dagenham**
Listed Building grade II, CA
Condition: Poor
Priority Category: F - Repair scheme in progress and (where applicable) end use or user identified; functionally redundant buildings with new use agreed but not yet implemented.
- **Chadwell Heath anti-aircraft gun site, Whalebone Lane North (off), Chadwell Heath**
Listed Building grade II, CA
Condition: Poor
Priority Category: C - Slow decay; no solution agreed
- **The Marks Stones, Whalebone Lane North, Chadwell Heath**
Listed Building grade II
Condition: Very bad
Priority Category: D - Slow decay; solution agreed but not yet implemented

Comparison of the Heritage At Risk Register between 2012 and 2018 indicates there has been little change in the condition or priority categories of the above assets during this time. However, **The Old Vicarage** and the **Magistrates Court** have been brought back into use removed from the Heritage At Risk Register. The **Chadwell Heath Anti-Aircraft Gun Site** is situated within a quarry site which is in the process of being restored. The Marks Gate Local Agenda 21 community group are working with council and Historic England to improve the protection of this heritage asset. **The Marks Stones** and **The Warren Stone** are required to be reinstated once the quarry restoration is complete.

The borough has a number of historic parks including:

Barking Park opened in April 1898 and is designated as Metropolitan Open Land. Its area is almost 30 hectares and includes a 910 metre long lake, ornamental areas, tree lined avenues, playing fields and facilities for boating, bowls and football. A Heritage Lottery grant in March 2011 was awarded to establish an oral history and photographic library, create a heritage trail throughout the park and conserve and display a historic rowing boat found during the restoration project.

Mayesbrook Park was opened in 1934 to provide open space for the Becontree Housing Estate. The park is designated as Metropolitan Open Land and now features one of the largest river restoration projects in London. This was a flagship project for the London Rivers Action Plan and the UK's first climate change park.

Parsloes Park is designated as Metropolitan Open Land and covers approximately 43 hectares. It derives its name from the Passelewe family, who owned the land in the 13th century. From the 17th century to the early 20th century the land was owned by the Fanshawe family, one of the leading families of the district. The estate was acquired by the London County Council; 107 acres became a public park and the remainder was developed to become part of the Becontree Estate. Parsloes Park was officially opened in July 1935.

St Chad's Park originated in 1831 and was gradually expanded until 1928 when the Council added 34 acres by purchasing part of Blackbush Farm. Part of the park is a registered common. Abbey Green provides a park setting for Barking Abbey and St Margaret's Church close to Barking Town Centre. The Abbey Playing Fields were proposed by the Council in 1943 and in 1944 were included in Sir Patrick Abercrombie's Greater London Plan as part of a green wedge between Barking and East Ham. The park was largely completed by 1974.

Quaker Gardens was a Quaker Burial Ground created in 1672 by the Barking Meeting of the Society of Friends. Elizabeth Fry (1780 – 1845), prison reformer and Quaker Minister, was originally buried here. In 1980 remaining headstones and monuments were removed and the burial ground became a small public garden.

Rippleside Cemetery was opened in 1886 by the Barking Parish Burial Board. It has retained the original Lodge, chapel, gates and some original railings.

St Peter and St Paul's parish church, set in the heart of Dagenham Village, was built in the early 13th century. The church was largely rebuilt from 1800 – 1805 and only the Chancel and the north chapel date from the middle ages. The churchyard features a number of tombs, some dating from the 17th century, and is managed today as a Local Nature Reserve.

Valence Park has an area of 24 acres and is adjacent to Valence House, an early 17th century manor house, now a museum. The gardens of the house feature a moat, a period style Herb Garden, and an apiary. There are a number of significant trees, including the Holm Oak, a veteran tree, recognised as one of the Great Trees of London.

The borough has also 97 Tree Preservation Orders.

Climatic factors including flooding

CO2 emissions for the borough were estimated to be 2.8 kt per capita for Barking and Dagenham in 2017 (DECC 2018). This is significantly lower than the average for London (5.2 kt per capita) and for England (7.0kt per capita). Of the 581.6kt CO2 emitted in 2017, the domestic sector was the biggest contributor followed by industry and commercial.

Between 2008 and January 2015 a total of 41,564 Energy Performance Certificates were lodged for Barking and Dagenham, amounting to a total of 3830285 m2 floor area. 97 per cent (40,317) of these lodgements were dwelling certificates, accounting for 2836032 m2 floor area (74 per cent of total floor area). (Live tables on Energy Performance of Buildings Certificates, DCLG – <https://www.gov.uk/government/statistical-data-sets/live-tables-on-energy-performance-of-buildings-certificates> accessed 06/03/2015)

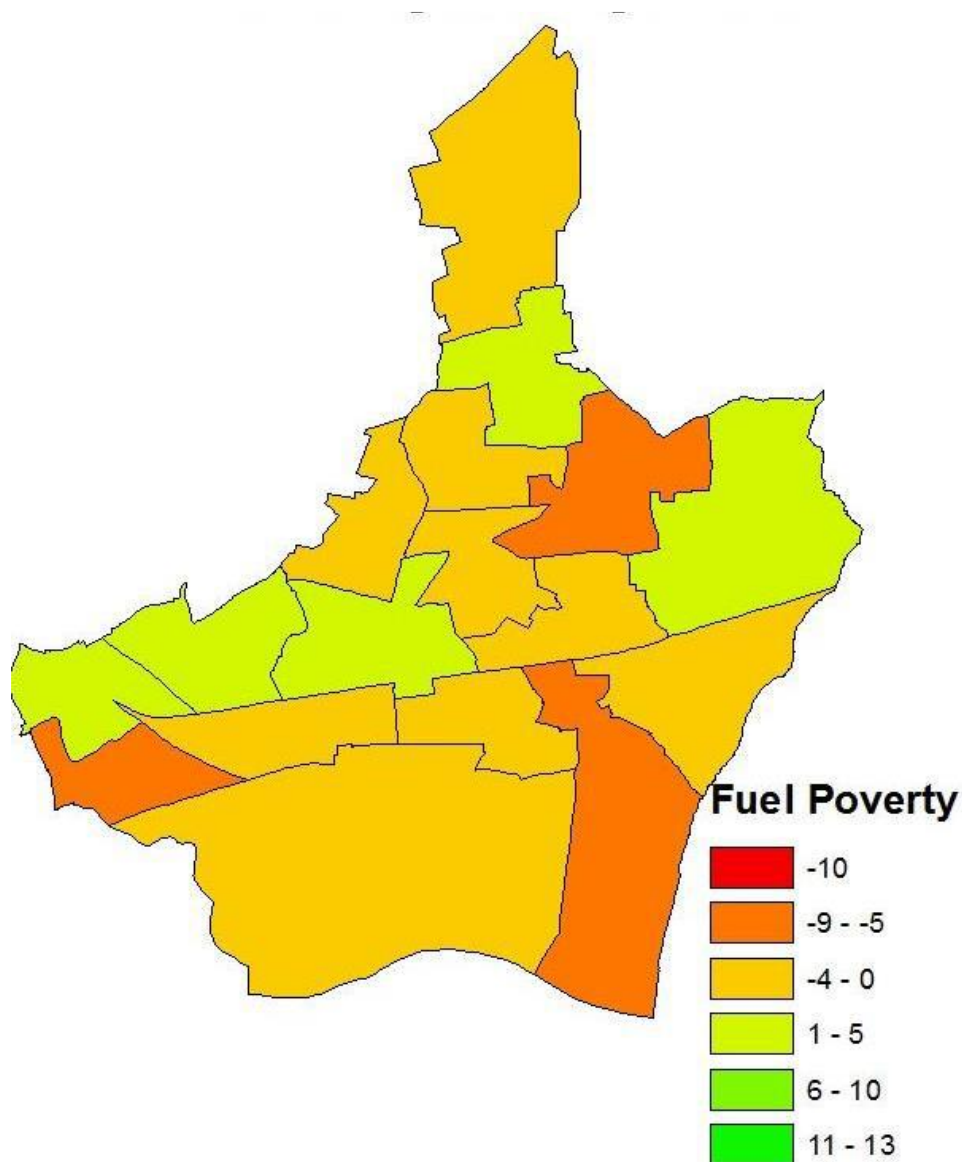
Between 2008 and January 2015 the largest proportion of EPC certificates for dwellings were issued for energy efficiency rating D (44%), followed by C (24%), E (15%), B (13%), F (2.5%), G (0.8%) and A (0.3%). (Live tables on Energy Performance of Buildings Certificates, DCLG – <https://www.gov.uk/government/statistical-data-sets/live-tables-on-energy-performance-of-buildings-certificates> accessed 06/03/2015)

Households in Barking and Dagenham spending more than 10% of their income on energy bills fell from almost 9,000 households in 2009 to 6,985 by 2012 moving the borough from having the highest fuel poverty in the capital to joint seventh (JSNA). The updated 2018 JSNA identifies that fuel poverty affects an estimated 8,433 households in Barking and Dagenham (around 1 in 9 or 11.6% of households in the Borough). This is the sixth highest proportion in London and the 67th highest of 152 local authorities in England.

A Fuel Poverty Risk score has been developed by the GLA using data based on twelve indicators (2013): Housing (dwellings without central heating, un-insulated cavity walls, lofts with less than 150mm insulation); Health (Health Deprivation & Disability domain (ID2010), Standardised Mortality Ratio, incapacity benefit claimant rate); Older people (people aged 60 and over, older people claiming pension credit); Worklessness (unemployment); and Poverty (income support claimant rate).

None of the wards in the borough are at low risk of fuel poverty. There are no stark disparities between wards but Gascoigne ward is 606 out of 625 wards in London and at significantly greater risk. However, redevelopment of the Gascoigne estate has begun and will see 1,575 homes built by 2024 which should help address this issue.

Six Barking and Dagenham wards are at a high risk of fuel poverty and the ward of Village, in particular, shows a significant downward trend.

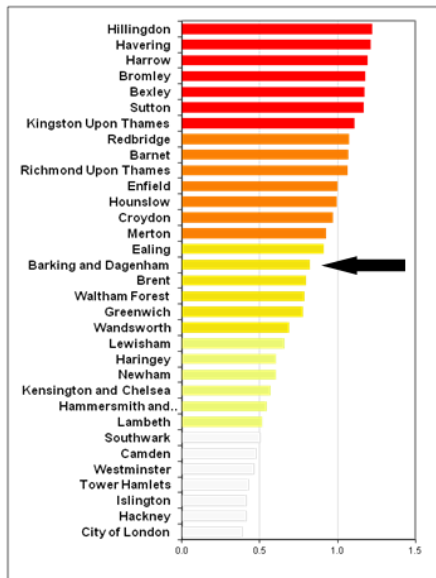


The Average Public Transport Accessibility score for the borough in 2012 was 3.0. the same as the average for outer London (London Borough Profiles, London Datastore).

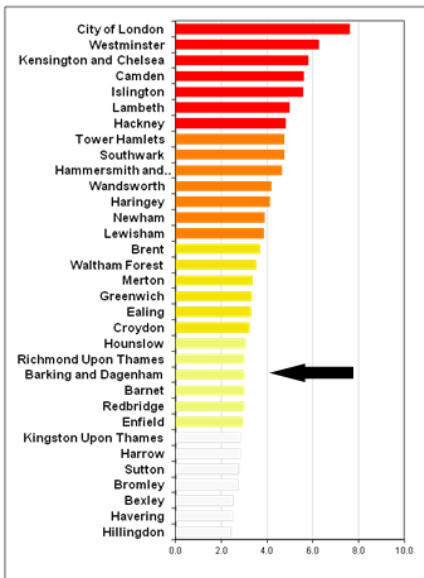
Car ownership in the borough equates to 0.8 cars per household (Census 2011) which is lower than the average for outer London (1.0 cars per household) and lower than the average for England (1.1 cars per household). (London Borough Profiles, London Datastore)

The percentage of adults in the borough who cycle at least once per month was 9.3, lower than the average for London (14.3%) (2012/13)

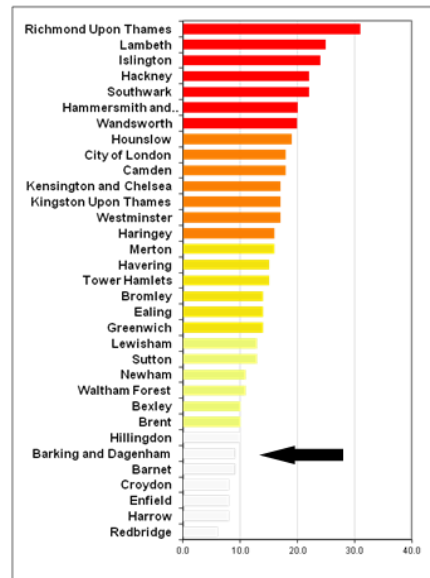
Number of cars per household (Census 2011)



Average Public Transport Accessibility score 2012



% of adults who cycle at least once per month 2011/2012



Source: London Borough Profiles, London Datastore

One of the objectives of the All London Green Grid is adapting to climate change by using the network of open spaces to minimize flood risk and reduce the impact of the “heat island effect”. This can be achieved by increasing flood storage capacity, reducing rates of water-run-off, increasing vegetative cover, including street trees and using flood defences structures to create paths.

The River Roding, Beam River and River Thames form the Borough’s westerly, easterly and southern boundaries respectively. Other watercourses that flow within Barking & Dagenham, or adjoin watercourses within the borough, are: Loxford Water, Gores Brook, Mayes Brook & The Ship and Shovel Sewer.

The number of new homes approved or completed in flood risk areas in 2013/2014 is shown in the table below (AMR 2013/14) and more recent updates indicate that there has been an increase in the number of homes approved and completed in Flood Zone 3 (AMR 2016/17):

Number of new homes approved/completed in flood risk areas 1, 2 and 3			
Outcome Units	Flood Zone 3	Flood Zone 2	Flood Zone 1
Completions	229	0	642
Percentage	26%	0%	74%
Approvals	110	0	681
Percentage	14%	0%	86%

Housing completions within Flood Zones



Source: Environment Agency 2014

Housing Approvals within Flood Zones



Source: Environment Agency 2014

Air, water and soil pollution

The Roding and Beam Rivers are subject to a relatively high degree of environmental stress. The water quality in the middle and lower Roding is influenced by misconnections and urban run-off discharges. The Beam is predominantly an urban watercourse, which has been heavily modified by the use of culverts and concrete banks. The water quality (particularly the chemical quality) of the main rivers in the Borough has improved since 2013.

River Beam (from Ravensbourne to Thames)	2009 Cycle 1	2013 Cycle 2	2016 Cycle 2
Overall Water Body	Moderate	Bad	Moderate
Ecological	Poor	Bad	Moderate
Chemical	Good	Fail	Good
Lower Roding (Loughton to Thames)	2009 Cycle 1	2013 Cycle 2	2016 Cycle 2
Overall Water Body	Not available	Moderate	Moderate
Ecological	Not available	Moderate	Moderate
Chemical	Not available	Fail	Good
Mayesbrook River	2009 Cycle 1	2013 Cycle 2	2016 Cycle 2
Overall Water Body	Not available	Moderate	Moderate
Ecological	Not available	Moderate	Moderate
Chemical	Not available	Fail	Good
Goresbrook	2009 Cycle 1	2013 Cycle 2	2016 Cycle 2
Overall Water Body	Moderate	Moderate	Moderate
Ecological	Moderate	Moderate	Moderate
Chemical	Not assessed	Fail	Good

Source: Environment Agency Catchment Data Explorer accessed 05/03/2015 & 24/07/19:

<http://environment.data.gov.uk/catchment-planning/OperationalCatchment/senet77>

Barking and Dagenham is served by Beckton Sewage Treatment Works located in the London Borough of Newham, It currently serves 3.5 million people and is undergoing improvements that will enable the site to treat 60 per cent more sewage than it does at present and allow for a ten per cent population increase until 2021. (<http://www.thameswater.co.uk/about-us/10098.htm> accessed 05/03/2015)

In 2008, the whole borough was designated an Air Quality Management Area (AQMA) for both NO₂ and PM₁₀. The 2012 Updating and Screening Assessment report concluded that the Council should maintain its AQMA.

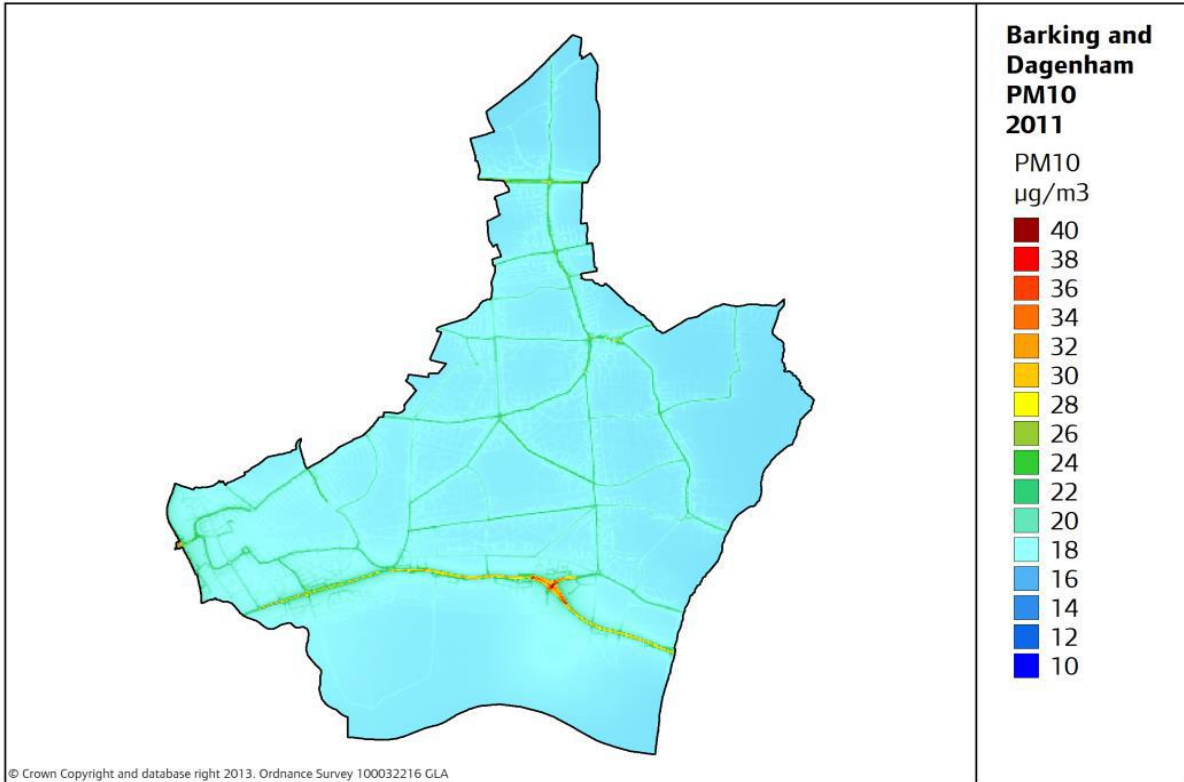
The main sources of atmospheric pollutants are from road transport, although there are important industrial sources in the south of the Borough and close to its boundaries. The principal roads include sections of the A13, A12, and A406 trunk roads; plus the Borough Principal Roads: A124, A118, A1153, A123, A1112 and A1083.

The other major sources of emissions in the Borough include those from residential and commercial premises, which mainly relate to gas boilers used for space and water heating; and construction sites, including dust and machinery emissions.

Air quality is monitored at two automatic monitoring sites in the borough. Both sites are located close to residential areas and therefore represent relevant public exposure. However neither location represents worst-case exposure. The 2011 concentrations at these sites are shown in the table below. The annual mean limit value for NO₂ and for PM₁₀ is 40 micrograms per meter cubed (g/m³). Concentrations of both PM₁₀ and NO₂ are all below limit. (Air Quality In Barking & Dagenham A Guide For Public Health Professionals GLA September 2013)

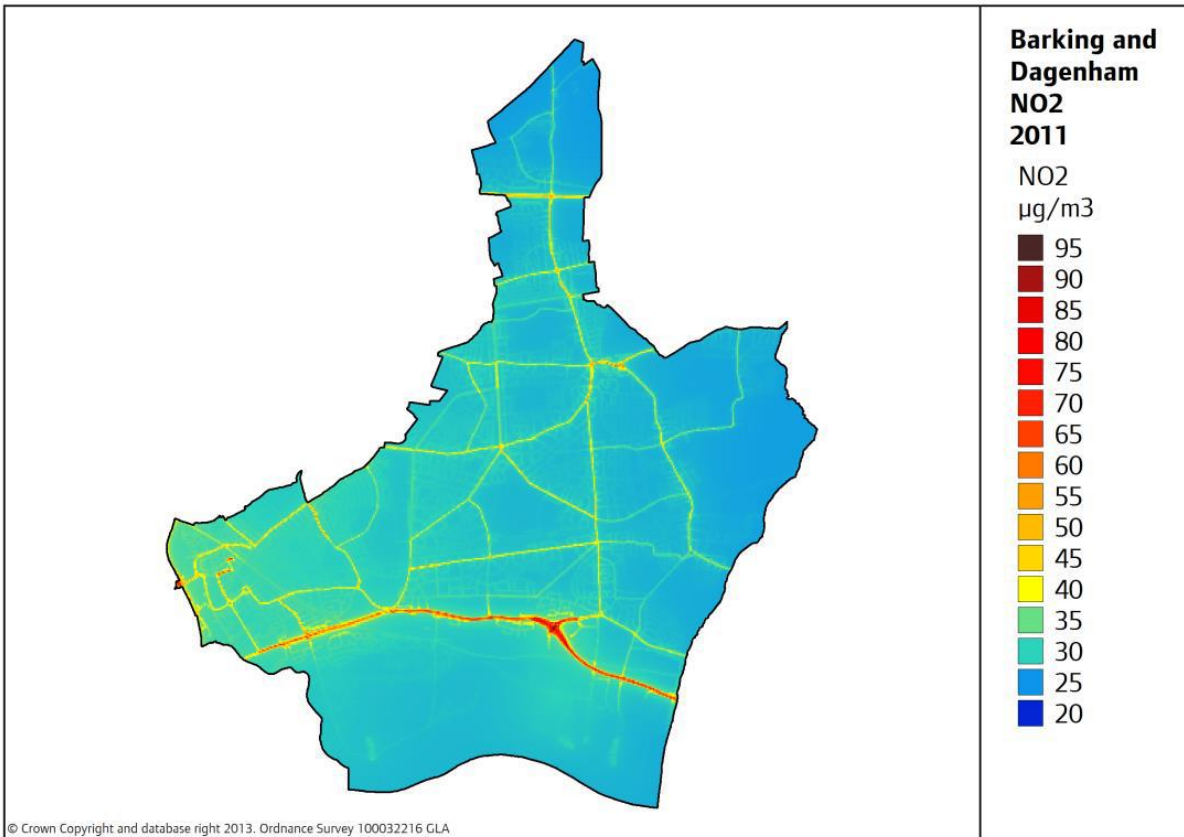
Location	Pollutants	Annual mean NO₂ concentration 3 2011	Annual mean PM₁₀ concentration 3 2011
Rush Green	NO₂	25	
Scrattons Farm	NO₂, PM₁₀	37	24

Source: www.londonair.org.uk

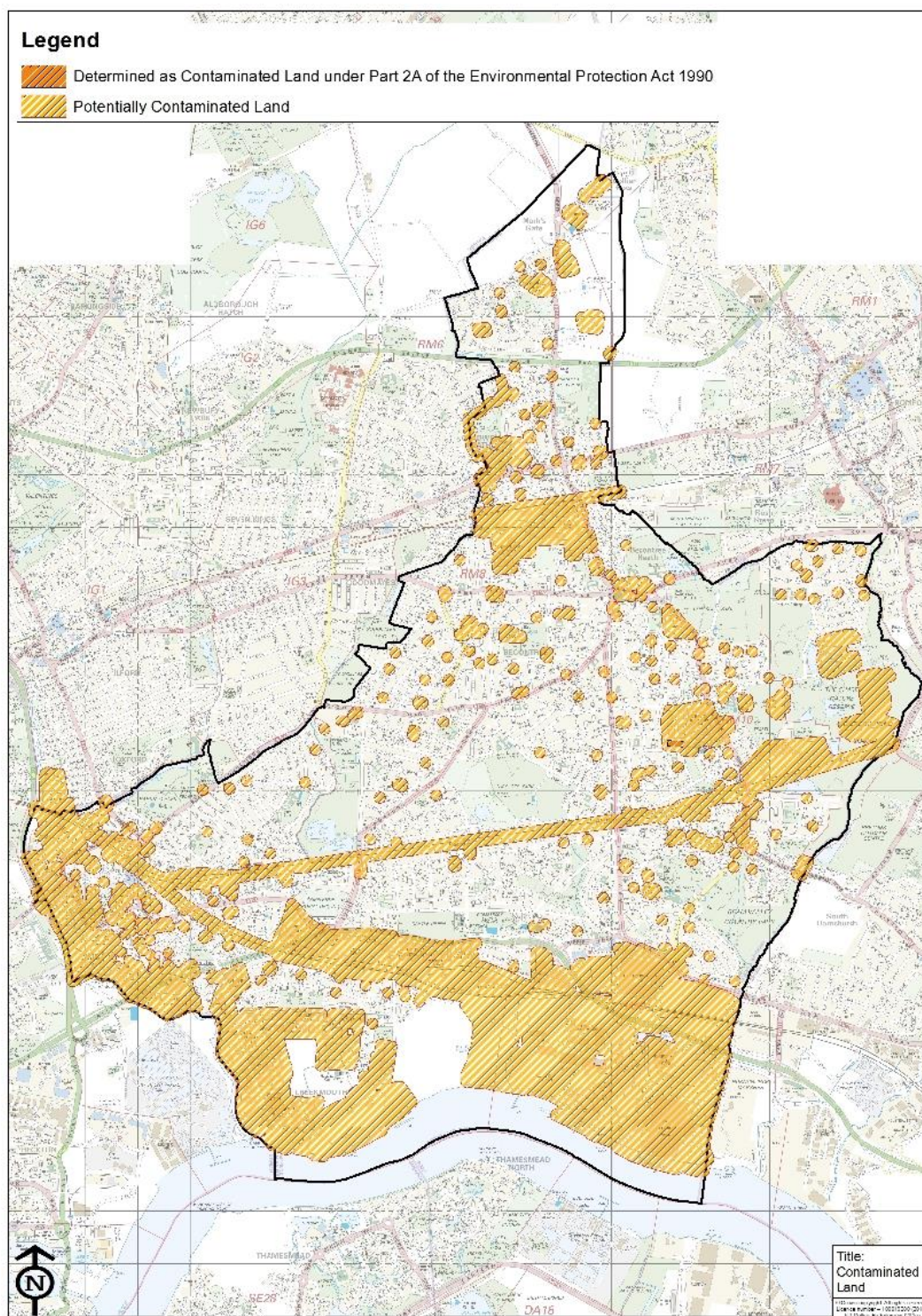


Annual mean concentrations of PM10 in LB Barking & Dagenham 2011

Annual mean concentrations of NO2 in LB Barking & Dagenham 2011



Barking and Dagenham has a long history of industrial land use. As the map below demonstrates, the majority of potential contaminated land is associated with past and current industrial uses (2010).



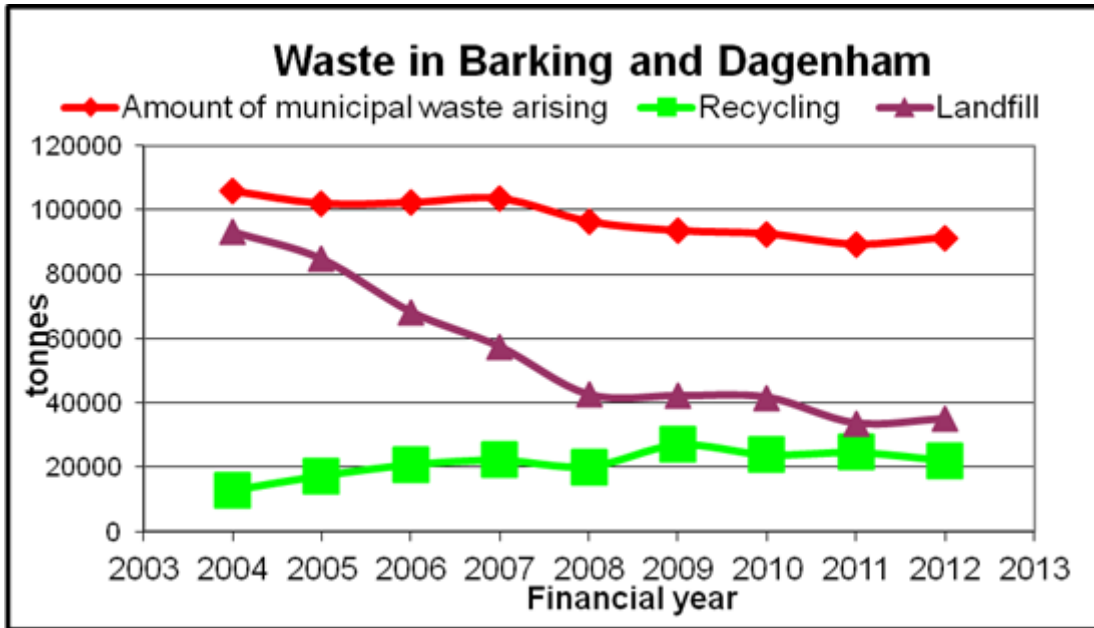
In 2012/13 the percentage of the population in Barking and Dagenham that made complaints about noise disturbance was 26.6%. This was significantly higher than the average for London (17.6%) and neighbouring boroughs Havering (5.2%) and Redbridge (16.6%) but similar to Newham (23.2%). (Public Health Outcomes Framework Indicators).

The percentage of the population of the borough exposed to road, rail and air transport noise of 55 dB(A) or more during the night-time was 11.2% in 2011 and 11.6% in 2006. This was significantly lower than the average for London, 15.3% in 2011 and 18.9% in 2006.

The percentage of the population of the borough exposed to road, rail and air transport noise of 65dB(A) or more, during the daytime was 7.8% in 2011 and 7.7% in 2006. This was significantly lower than the average for London, 11.5% in 2011 and 12.5% in 2006.

Waste and recycling

Barking and Dagenham produced 96,605 tonnes of municipal waste in 2013/14. 23% of this waste was recycled but the 2010 target of recycling 27% of waste was not achieved. The amount of waste going to landfill reduced from 38% in 2011/12 to 32% in 2012/13. (AMR). In 2017 the 2015 target of recycling 30% of waste was still not achieved, however the amount of waste recycled had increased from 18% to 24%. The total amount of waste has increased but the percentage of waste going to landfill has reduced from 28% to 11% (AMR, 2016/17).



The borough’s main disposal site for household waste and recycling is the Frizlands Lane Reuse and Recycling Centre. There are over 70 public access recycling banks in Barking and Dagenham where foil, glass, paper, cardboard, plastic bottles, textiles and toner cartridges can be recycled. There are five sites that recycle beverage cartons and 12 battery recycling boxes in public buildings.

Appendix III: SA of site options

Developing the appraisal methodology

Given the number of site options and limited site-specific data availability it was not possible to simply discuss ('qualitative analysis') the merits of each site option under the SA framework.²³

As such, work was undertaken to develop a methodology suited to site options appraisal, whilst also reflecting the SA framework and topics as best as possible. The methodology essentially involved employing GIS datasets and measuring ('quantitative analysis') how each site option related to various constraint and opportunity features.

Two GIS tools were used to undertake the appraisal of site options depending on the feature and measurements required. These provided either a:

- Straight line distance from a feature to a site option and percentage overlap of any features within a site option. Measurements were taken from the closest boundary of the site option and the feature.
- or
- Distances calculated from a site option to a feature along a real-world network of roads and urban footpaths using Open Street Map. The network analyst tool helps to provide approximate real-world walking distances. Measurements are taken from the boundary of the site where it is within 20m of the road/ footpath network and is therefore assumed to have access.

The site options appraisal methodology is presented in **Table A** below. It sets out the criteria and thresholds as well as the GIS tool used and provides further commentary as necessary. The table recognises data limitations. It is important to be clear that the aim of categorising the performance of site options is to aid differentiation, i.e. to highlight instances of site options performing relatively well/ poorly. The intention is not to indicate a 'significant effect'.²⁴

²³ Qualitative analysis of site options would only have been possible were time/resources available to generate data/understanding for all site options through site visits and discussion with promoters. Without this data/understanding, any attempt at qualitative analysis would have led to a risk of bias (e.g. sites that are being proactively promoted may have been found to perform favourably).

²⁴ Whilst Regulations require that the SA process identifies and evaluates significant effects of the draft plan and reasonable alternatives, there is no assumption that significant effects must be identified and evaluated for all site options considered.

Table A: Site options appraisal methodology

Criteria	'RAG' rules	Data and measurement	Commentary
Green Belt and Metropolitan Open Land (MOL)	<p>R = intersects with the GB or MOL</p> <p>G = does not intersect with the GB or MOL</p>	Data provided by Barking and Dagenham Borough Council. Straight line distance/ overlap measurement.	It is recognised that the Green Belt (GB) and Metropolitan Open Land (MOL) are policy designations and have no bearing on the sustainability of a site. However, it is useful to flag sites that fall within the GB or MOL as this will be a consideration in future stages when establishing spatial strategy alternatives for consideration through plan-making and the SA process.
Biodiveristy			
European site (SAC, SPA or Ramsar site)	<p>R = <200m</p> <p>A = <5km</p> <p>G = >5km</p>	Data provided by Natural England and includes sites lying outside of the Borough. Straight line distance/ overlap measurement.	It is recognised that distance in itself is not a definitive guide to the likelihood or significance of effects on a European site. This will be dependent on a variety of information, some of which is not available at this stage, such as the precise scale, type, design and layout of development as well as level of mitigation to be provided. It is also important to note that the Local Plan will be subject to Habitats Regulations Assessment and this will consider the likelihood of proposed development having a significant effect on European sites.
Site of Special Scientific Interest (SSSI)	<p>R = <200m</p> <p>A = <1km</p> <p>G = >1km</p>	Data provided by Natural England and includes sites lying outside of the borough. Straight line distance/ overlap measurement.	As above, it is recognised that distance in itself is not a definitive guide to the likelihood or significance of effects on a European site. This criterion will help to highlight the SSSI that lies in closest proximity to the site and together with the criterion below for SSSI Impact Zones, it will help to differentiate between sites.
SSSI Impact Risk Zones (SSSI IRZ)	<p>R = Within a SSSI IRZ for all development</p> <p>A = Within a SSSI IRZ for the type and scale of development likely to be proposed</p> <p>G = Not within an SSSI IRZ</p>	Data provided by Natural England and includes sites lying outside of the borough. Straight line distance/ overlap measurement.	Impact Risk Zones (IRZs) are a GIS tool developed by Natural England to make a rapid initial assessment of the potential risks to SSSIs posed by development proposals. They define zones around each SSSI which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts. The IRZs also cover the interest features and sensitivities of European sites, which are underpinned by the SSSI designation and "Compensation Sites", which have been secured as compensation for impacts on Natura 2000/Ramsar sites. LPAs have a duty to consult Natural England before granting planning permission on any development that is in or likely to affect a SSSI. As such IRZs enable a consideration of whether a proposed development is likely to affect a SSSI and determine whether they will need to consult Natural England to seek advice on the nature of any potential SSSI impacts and how they might be avoided or mitigated.
Local Nature Reserve (LNR)	<p>R = Includes or is adjacent</p> <p>A = <50m</p> <p>G = >50m</p>	Data provided by Natural England and includes sites lying outside of the borough. Straight line distance/ overlap measurement.	There are a number of Local Nature Reserves (LNRs) situated within the Borough and the RAG distances reflect this along with the assumption that these are of less significance and therefore less sensitive than internationally and nationally designated biodiversity.
SINC	<p>R = <400m</p> <p>A = 400m to 800m</p>	Data provided by Barking & Dagenham Borough Council and Greenspace Information for Greater London CIC and	There are a number of SINCS situated within the Borough and the RAG distances reflect this along with the assumption that these are of less significance and therefore less sensitive than internationally and nationally designated biodiversity.

Criteria	'RAG' rules	Data and measurement	Commentary
	G = >800m	includes sites lying outside of the Borough. Straight line distance/ overlap measurement.	
BAP priority habitat	R = <400m A = 400m to 800m G = >800m	Data provided by Natural England and includes sites lying outside of the borough. Straight line distance/ overlap measurement.	This seeks to flag if a development at a site could result in the loss of and therefore fragmentation of BAP priority habitats. It also helps to flag if there is the potential for disturbance to priority habitats within 50m of the site.
Climate Change			
Flood risk	R = > 50% intersects with Flood risk zone 2 or 3 A = < 50% intersects with Flood risk zone 2 or 3 G = Flood risk zone 1	Data provided by the Environment Agency. Straight line distance/ overlap measurement.	This criterion will help to identify sites that fall within high flood risk areas. N.B. While it is important to avoid development in flood zones, there is the potential to address flood risk at the development management stage, when a 'sequential approach' can be taken to ensure that uses are compatible with flood risk. There is also the potential to design-in Sustainable Drainage Systems (SuDS).
Landscape and Historic Environment			
Conservation Area	R = Intersects or is adjacent A = <50m G = >50m	Data provided by Barking and Dagenham Borough Council and does not include conservation areas outside the Borough. Straight line distance/ overlap measurement.	It is appropriate to 'flag' a red where a site is within, intersects or is adjacent to a Conservation Area. It is also appropriate to flag sites that might more widely impact on the setting of a Conservation Area and a 50m threshold has been assumed. It is recognised that distance in itself is not a definitive guide to the likelihood or significance of effects on a heritage asset. It is also recognised that the historic environment encompasses more than just designated heritage assets. Whilst there is good potential to highlight where development in proximity to a heritage asset might impact negatively on that asset, or its setting, a limitation relates to the fact that it has not been possible to gather views from heritage specialists on sensitivity of assets / capacity to develop each of the sites. This is a notable limitation as potential for development to conflict with the setting of historic assets / local historic character can only really be considered on a case-by-case basis rather than through a distance based criteria. It will also sometimes be the case that development can enhance heritage assets.
Scheduled Monument	R = Intersects or is adjacent A = <50m G = >50m	Data provided by Historic England and includes assets lying outside of the Borough. Straight line distance/ overlap measurement.	As above. There is one Scheduled Monument within the Borough.
Listed building	R = Intersects or is adjacent A = <50m G = >50m	Data provided by Historic England and includes assets lying outside of the	As above. There are a large number of listed buildings within the Borough.

Criteria	'RAG' rules	Data and measurement	Commentary
		Borough. Straight line distance/ overlap measurement.	
Tree Preservation Orders (TPO)	<p>R = Intersects with TPOs</p> <p>A = <20m</p> <p>G = Does not intersect with TPOs</p>	Data provided by Barking and Dagenham Borough Council and does not include TPOs outside the Borough. Straight line distance/ overlap measurement.	It is appropriate to 'flag' a red where a site intersects with a TPO.
Population and Community			
Proximity to a school	<p>R = >800m</p> <p>A = 400-800m</p> <p>G = <400m</p>	Data provided by the Barking and Dagenham Borough Council and does not include features outside the Borough. Network analyst measurement.	Highlights walking distance to primary schools. Department for Transport guidance ²⁵ suggests 800m as a walkable distance for those accessing community facilities.
Proximity to a retail centre	<p>R = >800m</p> <p>A = 400-800m</p> <p>G = <400m</p>	Data provided by the Barking and Dagenham Borough Council and does not include features outside the Borough. Network analyst measurement.	Highlights walking distance to a retail centre (Major Centre, District Centres or Neighbourhood Centres). There is no clear guidance on distance thresholds, and it is recognised that these facilities will often be reached by car or public transport. The thresholds therefore reflect the spread of the data.
Proximity to a leisure centre	<p>R = >800m</p> <p>A = 400-800m</p> <p>G = <400m</p>	Data provided by the Barking and Dagenham Borough Council and does not include features outside the Borough. Network analyst measurement.	Highlights walking distance to a leisure centre. Department for Transport guidance ²⁶ suggests 800m as a walkable distance for those accessing community facilities.
Deprivation	<p>R = Site does not intersect with an 'output area' that is relatively deprived</p> <p>A = Any of the site intersects with an 'output area' that is relatively deprived i.e. in the 20-40% (2nd quintile) most deprived in the district.</p> <p>G = Any of the site intersects with an 'output area' that is relatively</p>	Data provided by Ministry of Housing, Communities and Local Government and includes features outside the Borough. Straight line distance/ overlap measurement.	Highlights site options that fall within an area of deprivation. Development in an area of relative deprivation (as measured by the Index of Multiple Deprivation) may support regeneration. However, it is recognised that this will be dependent on a variety of factors, including the level of improvements delivered in terms of community facilities.

²⁵ WebTag (December 2015) Unit A4.2 paragraph 6.4.5, Department for Transport

²⁶ WebTag (December 2015) Unit A4.2 paragraph 6.4.5, Department for Transport

Criteria	'RAG' rules	Data and measurement	Commentary
	deprived (i.e. in the 0-20% (1st quintile) most deprived in the district		
Health and Wellbeing			
Public open space	R = >400m A = 50-400m G = 0-50m	Data provided by Barking and Dagenham Borough Council and includes features outside the Borough. Network analyst measurement.	Highlights the walking distance of site options to important areas of public open space (including allotments). It is recognised that there may be other areas of open or green space that are not considered through this criterion. 400m is assumed to be a walkable distance for most.
Loss of public open space	R = Loss of public open space G = No loss of public open space	Data provided by Barking and Dagenham Borough Council. Straight line distance/ overlap measurement.	The presumption is that a loss of open space (including allotments) will lead to a negative impact in relation to a range of SA topics. However it should be noted that some loss of open space may not necessarily be a negative effect if green infrastructure enhancements are initiated on-site or nearby but this is uncertain at this stage.
GP/Health centre	R = >800m A = 400-800m G = <400m	Data provided by the Barking and Dagenham Borough Council and does not include features outside the Borough. Network analyst measurement.	Highlights walking distance to GPs/health centres. Department for Transport guidance ²⁷ suggests 800m as a walkable distance for those accessing community facilities.
Transport and Movement			
Public Transport Accessibility Levels (PTALS)	R = PTAL 1-2 (0.01 to 10.00) A = PTAL 3-4 (10.01 to 20.00) G = PTAL 5-6 (20.01 to 40.01+)	Data provided by the London Datastore. Straight line distance/ overlap measurement.	PTALS are a detailed and accurate measure of the accessibility of a point to the public transport network, taking into account walk access time and service availability. The method is essentially a way of measuring the density of the public transport network at any location within Greater London. Each area is graded between 0 and 6b, where a score of 0 is very poor access to public transport, and 6b is excellent access to public transport. The RAG thresholds reflect this.
Economy and employment			
Key strategic employment areas	R = >800m A = 400-800m G = <400m	Data provided by the Barking and Dagenham Borough Council and does not include features outside the Borough. Network analyst measurement.	Highlights walking distance to key strategic employment areas (Major Centre, District Centres, Strategic Industrial Locations and Locally Significant Industrial Sites). There is no clear guidance on distance thresholds, and it is recognised that these facilities will often be reached by car or public transport. The thresholds therefore reflect the spread of the data.
Loss of Strategic Industrial Land (SIL)	R = Loss of Strategic Industrial Land	Data provided by Barking and Dagenham Borough Council. Straight line distance/ overlap measurement.	Considers the loss of designated industrial land.

²⁷ WebTag (December 2015) Unit A4.2 paragraph 6.4.5, Department for Transport

Criteria	'RAG' rules	Data and measurement	Commentary
	G = No loss of Strategic Industrial Land		
Loss of Locally Significant Industrial Sites (LSIS)	R = Loss of Locally Significant Industrial Sites G = No loss of Locally Significant Industrial Sites	Data provided by Barking and Dagenham Borough Council. Straight line distance/ overlap measurement.	Considers the loss of designated industrial land.

Appraisal findings

Table B presents appraisal findings in relation to the site options that have been a focus of plan-making. Specifically, the table presents an appraisal of the site options in terms of the appraisal criteria set out in Table A, with performance categorised on a simple 'RAG' scale.

Table B: Appraisal findings for site options

Site Name	Housing Site ID	Economic Site ID	Green Belt and Metropolitan Open Land	European Site (SAC, SPA, or Ramsar Site)	Site of Special Scientific Interest (SSSI)	SSSI Impact Risk Zone	Local Nature Reserve	Site of Importance for Nature Conservation (SINC)	BAP Priority Habitat	Flood Risk	Conservation Area	Scheduled Monument	Listed Building	Tree Preservation Order (TPO)	Proximity to a School	Proximity to a Retail Centre	Proximity to a Leisure Centre	Deprivation	Proximity to a Public Open Space	Loss of Public Open Space	Proximity to a GP/ Health Centre	Public Transport Accessibility Levels (PTAL)	Proximity to a Key Strategic Employment Area (Network Analyst)
Thames View Health Centre, Barking Creekmouth	CE	E086																					
Thames Road Mixed Use	CG	E075																					
Former Ford Stamping Plant	CI	E030																					
Wantz Road	XJ	E011																					
Sebastian Court	DF	N/A																					
Bamford Road	CP	N/A																					
Rainham Road South	DG	E033																					
Oxlow Lane	DS	N/A																					
5335 Roxwell Road	DH	N/A																					
Padnall Lake	DI	N/A																					
Chadwell Heath Industrial Estate	CO	E023																					
Clockhouse Avenue	CH	E004																					
Former Royal British Legion, Rectory Road	DJ	E037																					
	YC	E084																					

Site Name	Housing Site ID	Economic Site ID	Green Belt and Metropolitan Open Land	European Site (SAC, SPA, or Ramsar Site)	Site of Special Scientific Interest (SSSI)	SSSI Impact Risk Zone	Local Nature Reserve	Site of Importance for Nature Conservation (SINC)	BAP Priority Habitat	Flood Risk	Conservation Area	Scheduled Monument	Listed Building	Tree Preservation Order (TPO)	Proximity to a School	Proximity to a Retail Centre	Proximity to a Leisure Centre	Deprivation	Proximity to a Public Open Space	Loss of Public Open Space	Proximity to a GP/ Health Centre	Public Transport Accessibility Levels (PTAL)	Proximity to a Key Strategic Employment Area (Network Analyst)
Sugden Way	CS	N/A																					
Land North of Becontree Station	CV	E093																					
Town Quay	DO	E083																					
90 Stour Road	CW	E008																					
Dagenham Heathway Mall	DM	E010																					
Abbey Retail Park North	DP	E046																					
Castle Green	CF	E053																					
Gascoigne Industrial Area	CM	E036																					
Chelmer estate	DY	N/A																					
Becontree Heath Iceland	DT	N/A																					
Dagenham Labour Hall	DZ	N/A																					
Dagenham police station	DX	N/A																					
Fiddlers corner	DU	N/A																					
Artist Housing, Linton Road	CY	N/A																					
Naseby Road, Ellen Wilkinson House	CZ	N/A																					
Former Sacred Heart Convent	DB	N/A																					
Dagenham working men's club	DQ	N/A																					
Barking Station	EA	E070																					
Barking Riverside	AA	E044																					
Dagenham Leisure Park	AD	E031																					
Beam Park	AE	E050																					

Site Name	Housing Site ID	Economic Site ID	Green Belt and Metropolitan Open Land	European Site (SAC, SPA, or Ramsar Site)	Site of Special Scientific Interest (SSSI)	SSSI Impact Risk Zone	Local Nature Reserve	Site of Importance for Nature Conservation (SINC)	BAP Priority Habitat	Flood Risk	Conservation Area	Scheduled Monument	Listed Building	Tree Preservation Order (TPO)	Proximity to a School	Proximity to a Retail Centre	Proximity to a Leisure Centre	Deprivation	Proximity to a Public Open Space	Loss of Public Open Space	Proximity to a GP/ Health Centre	Public Transport Accessibility Levels (PTAL)	Proximity to a Key Strategic Employment Area (Network Analyst)
Vicarage Field	AK	E026																					
Abbey Sports Centre	AV	E060																					
Crown House	AM	E073																					
Phoenix House	YM	E025																					
Collier Row EcoGrove	BA	N/A																					
Merrilands Crescent Two	AC	N/A																					
Gascoigne Estate West	AL	E047																					
Gascoigne Estate East	AJ	E039																					
Padnall Court and Reynolds Court	AS	N/A																					
Tesco Car Park, Barking	BB	E082																					
Wickes (Hertford Road)	HA	N/A																					
30 – 58 Durham Road	WB	N/A																					
2-20 Seabrook Road and 1-27 Shipton Close	SR	N/A																					
Fels Farm	WE	E002																					
41-59 (Odd) Hepworth Gardens and 38-64 (Even) Southwold Drive	XD	N/A																					
Ibescott Close Estate and highways land at Rainham Road South/Ballards Road	XE	N/A																					
Land to the West of Scrattons Farm	XF	N/A																					
IBIS Barking, Highbridge Road	YA	N/A																					
The Barking Foyer	YO	E071																					

Site Name	Housing Site ID	Economic Site ID	Green Belt and Metropolitan Open Land	European Site (SAC, SPA, or Ramsar Site)	Site of Special Scientific Interest (SSSI)	SSSI Impact Risk Zone	Local Nature Reserve	Site of Importance for Nature Conservation (SINC)	BAP Priority Habitat	Flood Risk	Conservation Area	Scheduled Monument	Listed Building	Tree Preservation Order (TPO)	Proximity to a School	Proximity to a Retail Centre	Proximity to a Leisure Centre	Deprivation	Proximity to a Public Open Space	Loss of Public Open Space	Proximity to a GP/ Health Centre	Public Transport Accessibility Levels (PTAL)	Proximity to a Key Strategic Employment Area (Network Analyst)
2 Stamford Road	YS	E085																					
497-515 Gale Street	ZB	E032																					
Brocklebank Lodge	ZN	N/A																					
58 to 68 Church Street	ZT	N/A																					
GSR and Gill Sites	ZZ	E013																					
Selinas Lane (Green Burn Site)	WC	E041																					
Former Dagenham Job Centre Chequers Lane	WA	N/A																					
17476 Ripple Road	BZ	N/A																					
3 Station Road	BR	N/A																					
Rear of 5-7 Reede Road	BY	N/A																					
9731 High Road	WF	E043																					
Barking Rugby Club	RC	N/A																					
Cambridge House	ZO	E034																					
Elim Pentecostal Church 194	BO	N/A																					
Former Volunteer Public House	XQ	N/A																					
Former Wivenhoe Garages, Wivenhoe Rd	CT	N/A																					
Former Victoria Public House	WD	E001																					
Garages at Kier Hardy Way	YG	N/A																					
Hapag-Lloyd House at 48A Cambridge Road in Barking Town Centre	HL	N/A																					
Lodge Avenue	XO	E024																					

Site Name	Housing Site ID	Economic Site ID	Green Belt and Metropolitan Open Land	European Site (SAC, SPA, or Ramsar Site)	Site of Special Scientific Interest (SSSI)	SSSI Impact Risk Zone	Local Nature Reserve	Site of Importance for Nature Conservation (SINC)	BAP Priority Habitat	Flood Risk	Conservation Area	Scheduled Monument	Listed Building	Tree Preservation Order (TPO)	Proximity to a School	Proximity to a Retail Centre	Proximity to a Leisure Centre	Deprivation	Proximity to a Public Open Space	Loss of Public Open Space	Proximity to a GP/ Health Centre	Public Transport Accessibility Levels (PTAL)	Proximity to a Key Strategic Employment Area (Network Analyst)
Mellish Close Garages	AO	N/A																					
Land To The Rear of 26 And 28 High Road	BG	N/A																					
Salisbury Road (Car Park)	CX	N/A																					
St Marys Parish Church, Grafton Road	BS	N/A																					
Barking Riverside Gateway Zone	XK	E012																					
Old Granary	HM	N/A																					
Ripple Road and Methodist Church	HN	N/A																					
14-34 London Road	HO	N/A																					
8a Brooke Avenue	WJ	E006																					
Plot 62 SEGRO Park	N/A	E015																					
Plot 63 SEGRO Park	N/A	E016																					
Plot 70 SEGRO Park	N/A	E020																					
Plot 67 SEGRO Park	N/A	E019																					
Plot 65 SEGRO Park	N/A	E018																					
Plot 64 SEGRO Park	N/A	E017																					
River Road	N/A	E058																					
Welbeck Wharf	N/A	E027																					
Thames Road Economic Use	N/A	E029																					
Barking Power Station	N/A	E014																					
79 Whalebone Lane South	N/A	E005																					
Coopers Arms	N/A	E051																					

Site Name	Housing Site ID	Economic Site ID	Green Belt and Metropolitan Open Land	European Site (SAC, SPA, or Ramsar Site)	Site of Special Scientific Interest (SSSI)	SSSI Impact Risk Zone	Local Nature Reserve	Site of Importance for Nature Conservation (SINC)	BAP Priority Habitat	Flood Risk	Conservation Area	Scheduled Monument	Listed Building	Tree Preservation Order (TPO)	Proximity to a School	Proximity to a Retail Centre	Proximity to a Leisure Centre	Deprivation	Proximity to a Public Open Space	Loss of Public Open Space	Proximity to a GP/ Health Centre	Public Transport Accessibility Levels (PTAL)	Proximity to a Key Strategic Employment Area (Network Analyst)
Here and East Film Studios	N/A	E038																					
Dagenham Dock	N/A	E052																					
Dagenham East	N/A	E055																					
Anchor Retail Store	N/A	E072																					
Wantz Road Estate	N/A	E059																					
Former site of White Horse Public House and Omnibus Park, North Street	CD	E028																					
Harts Lane Estate	XC	E057																					
Kingsbridge Estate	CL	E022																					
Pondfield House	RA	N/A																					
Scrattons Farm	HP	N/A																					
Town Quay Wharf	HQ	E077																					
Former White Horse Pub, Chadwell Heath	HS	E079																					
Hertford Road	HZ	E081																					
City Pavilion and Elmstead Nurseries, Collier Row	HR	E078																					
	N/A	E088																					
	N/A	E089																					
	N/A	E090																					
Land To Rear Of 127 33 Becontree Avenue	HU	N/A																					
7 Apollo House	HV	N/A																					
31 -35 Mill Lane	HW	N/A																					

Site Name	Housing Site ID	Economic Site ID	Green Belt and Metropolitan Open Land	European Site (SAC, SPA, or Ramsar Site)	Site of Special Scientific Interest (SSSI)	SSSI Impact Risk Zone	Local Nature Reserve	Site of Importance for Nature Conservation (SINC)	BAP Priority Habitat	Flood Risk	Conservation Area	Scheduled Monument	Listed Building	Tree Preservation Order (TPO)	Proximity to a School	Proximity to a Retail Centre	Proximity to a Leisure Centre	Deprivation	Proximity to a Public Open Space	Loss of Public Open Space	Proximity to a GP/ Health Centre	Public Transport Accessibility Levels (PTAL)	Proximity to a Key Strategic Employment Area (Network Analyst)	
Street Record Margaret Bondfield Avenue	HY	N/A																						
Dagenham Heathway Station	HT	E080																						
Polar Ford	RB	N/A																						

Appendix IV: SA of spatial strategy options

Introduction

As explained within 'Part 1' of the main report (Chapters 4 to 7), a focus of work has been on the development and appraisal of Borough-wide spatial strategy alternatives, with a view to informing determination of the preferred strategy. Three alternative spatial strategy options have been identified at this stage based on the evidence and realistic choices available. It is important to remember that a large proportion of development proposed under each of the options is comprised of committed development (sites with existing planning permission as well as windfall). The three spatial strategy options are described below.

Option 1: No further release/ intensification/ co-location of designated industrial land and increased densities at well-connected brownfield sites

This option does not propose the release/ intensification/ co-location of any additional designated industrial land outside of committed development (i.e. that has existing planning permission). Under this option there would be no redevelopment of the Gascoigne Industrial Area (ID CM), Thames Road (ID CI), Chadwell Heath (ID CH), Castle Green (ID CF), Riverside Gateway (ID XK) and Hertford Road Industrial Estate (ID HZ). Only an extremely small proportion of Wickes (Hertford Road) site (ID HA) is designated as LSIS, it is assumed the designated area could be avoided and the site is therefore included under this option.

With the removal of four strategic sites and reduced capacity at two strategic sites, the Borough would not be able to meet the minimum housing requirement identified through national planning policy and the London Plan. The shortfall could only be met by increasing densities (approx. 35%) at well-connected brownfield sites. This option would deliver 38,865 dwellings during the plan period (2020 to 2037) and does not include any sites that would deliver growth post plan period. This is the minimum housing target to be in conformity with national planning policy and the London Plan.

Option 2: Significant release of designated industrial land and standard densities across brownfield sites

This option proposes the full release of industrial land and includes the consideration of potential capacity created through co-location as part of the future supply of space. It aligns with Scenario 2 in the ILS (2021). This option would result in the release of around 137.8 ha of designated industrial land from the following sites:

- Castle Green (Site ID CF) - the release of 58.7 ha of SIL.
- Chadwell Heath Industrial Estate Site (Site ID CH) - no release but intensification of industrial land and co-location of employment with residential.
- Gascoigne Industrial Area (Site ID CM) - the release of 5.8 ha of LSIS.
- Thames Road Site (Site ID CI) - the release of 30.9 ha of SIL and intensification of remaining industrial land and co-location of employment with residential.
- Riverside Gateway Zone (Site ID XK) - no release but intensification of industrial land and co-location of employment with residential.
- Hertford Road Industrial Estate (Site ID HZ) - the release of 5.4 ha of LSIS.

This option would deliver around 44,051 dwellings during the plan period (2020 to 2037) using a standard density approach for brownfield sites and includes the delivery of a further 12,235 dwellings post plan period (11,550 dwellings at Castle Green ID CF and 685 dwellings at Chadwell Heath ID CH). It has the potential to deliver circa 2.1 million sqm of industrial space through intensification, densification and co-location. This would provide sufficient floorspace to meet future needs of circa 1.9 million sqm, with a headroom of circa 200,000 sqm.

Option 3: Limited release of designated industrial land and standard densities at well-connected brownfield sites

This option proposes the release of industrial land in line with the recommended approach (Scenario 3) set out in the ILS (2021). This option takes account of LBBD's aspirations but also considers the wider market, delivery and business factors that would influence the successful delivery of a sequenced 'intensify and release' strategy for industrial land. This option would result in the release of around 49.9 ha of designated industrial land from the following sites:

- Castle Green (Site ID CF) - the release of 31.1 ha of SIL.
- Chadwell Heath Industrial Estate Site (Site ID CH) - no release but intensification of industrial land and co-location of employment with residential.
- Gascoigne Industrial Area (Site ID CM) - the release of 5.8 ha of LSIS.
- Thames Road Site (Site ID CI) - the release of 7.6 ha of SIL and intensification of remaining industrial land and co-location of employment with residential.
- Riverside Gateway Zone (Site ID XK) - no release but intensification of industrial land and co-location of employment with residential.
- Hertford Road Industrial Estate (Site ID HZ) - the release of 5.4 ha of LSIS.

This option would deliver around 44,051 dwellings during the plan period (2020 to 2037) using a standard density approach for brownfield sites and includes the delivery of a further 12,235 dwellings post plan period (11,550 dwellings at Castle Green ID CF and 685 dwellings at Chadwell Heath ID CH). It has the potential to deliver circa 2.6 million sqm of industrial space through intensification, densification and co-location but with a reduced displacement of floorspace (circa 270,000 sqm) compared to Option 2. This would provide sufficient floorspace to meet future needs of circa 1.9 million sqm, with a headroom of circa 700,000 sqm.

Appraisal methodology

For each of the options, the assessment examines **likely significant effects** on the baseline, drawing on the sustainability objectives identified through scoping (see **Table 3.1** in the main report) as a methodological framework. **Green** is used to indicate significant positive effects, whilst **red** is used to indicate significant negative effects. If no colour is used, then no residual significant effects are predicted.

Every effort is made to predict effects accurately; however, this is inherently challenging given the high-level nature of the policy approaches under consideration. The ability to predict effects accurately is also limited by understanding of the baseline (now and in the future under a 'no plan' scenario). Considering this, there is a need to make assumptions regarding how scenarios will be implemented 'on the ground' and what the effect on receptors would be. Where there is a need to rely on assumptions in order to reach a conclusion on a 'significant effect' this is made explicit in the appraisal text.

Where it is not possible to predict likely significant effects based on reasonable assumptions, efforts are made to comment on the relative merits of the alternatives in more general terms and to indicate a **rank of preference**. The number indicates the rank and does not have any bearing on likely significant effects. This is helpful, as it enables a distinction to be made between the alternatives even where it is not possible to distinguish between them in terms of 'significant effects'.

Finally, it is important to note that effects are predicted considering the criteria presented within the Regulations.²⁸ So, for example, account is taken of the duration, frequency and reversibility of effects. Cumulative effects are also considered (i.e. where the effects of the plan in combination with the effects of other planned or on-going activity that is outside the control of the Draft Local Plan).

²⁸ Schedule 1 of the Environmental Assessment of Plans and Programmes Regulations 2004.

Appraisal findings for spatial strategy options

A comparative appraisal of the options was carried out under each SA theme. The findings are presented in the tables below.

SA theme: Land, soil and water resources			
	Option 1	Option 2	Option 3
Rank	2	1	1
Significant effect?	Yes - positive	Yes - positive	Yes - positive

Discussion

In terms of land and soil resources, the spatial strategy across all options performs well by maximising the use of brownfield land. As a result, all of the options are considered likely to lead to significant long-term positive effects for soil resources, through efficient land use and a regeneration-led scheme. Options 2 and 3 are ranked more favourably given their potential to release more brownfield land opportunities overall, extending beyond the plan period (e.g. Castle Green CF) and reducing the need for greenfield or Green Belt development in the future. No further industrial land release under Option 1 may put increased pressure for development on existing public open spaces, Green Belt and/ or MOL land if the significant density increases proposed cannot be achieved on-site.

Similarly, by maximising brownfield development locations, that are well-connected in terms of existing infrastructure and water resource connections, the options are all considered to perform well with regards to water resources. While Options 2 and 3 would deliver more growth during and beyond the plan period and therefore increased pressure on water resources, the difference it is not considered likely to arise in an additional significant negative effect compared to Option 1.

Early identification of sites for growth planned for beyond the Plan period (under Options 2 and 3) will also support water companies in long-term planning for water infrastructure. Water resources are generally managed at a catchment level and there is close working between the Environment Agency and water companies to monitor the situation and plan ahead for new infrastructure to meet predicted demands. This includes the production of a Regional Water Resource Plan for the south east. As a result, no significant negative effects are identified.

SA theme: Environmental quality

	Option 1	Option 2	Option 3
Rank	2	1	1
Significant effect?	No	Yes - positive	Yes - positive

Discussion

In terms of air quality, the entire borough is designated as an AQMA making air quality a constraint for development. All options seek to utilise brownfield development opportunities within the urban area and promote development within highly accessible areas.

The intelligent use of vacant/ underused industrial land under Options 2 and 3 will maximise housing and employment development, distributing growth more widely across the borough. The additional locations in the south west of the Borough can increase the viability of planned transport improvements (the new Barking Riverside Overground station); supporting increased accessibility within existing key employment areas. This is likely to contribute to more localised and sustainable journeys to work, especially as part of mixed-use developments, to the benefit of air quality. The large-scale regeneration schemes are also considered likely to improve accessibility in more areas of the borough, by targeting more areas with strategic development which can support strategic community infrastructure improvements.

Significantly increased densities at well-connected sites are required to meet the shortfall in housing needs (with no intelligent use of industrial land) under Option 1. As a result, Option 1 will not deliver the same level of employment growth in the borough and is therefore less likely to increase local accessibility to jobs and reduce the effects of traffic/ congestion associated with travel to work on air quality. Option 1 is not considered to perform as well as Options 2 or 3 and is noted for a potential to increase levels of out-commuting (with lower levels of employment growth alongside significant levels of new housing). Options 2 and 3, would deliver significantly more industrial floorspace and additional land for other employment uses. As a result, they are considered to perform better than Option 1 in this regard.

Traffic modelling indicates that most of the road network in the borough is operating either at, or over capacity. While Option 1 will deliver less growth during the plan period it is less likely to deliver potential opportunities associated with the other options. Through the addition of strategic growth locations, Options 2 and 3 can support the timely provision of infrastructure enhancements to support a growing population across more areas of the borough. Initial studies have shown that the A13 needs improvements and there is an opportunity for tunnelling to not only deliver improved traffic flows but also unlock more land for development. This could have a positive effect on air quality in this area in the longer-term post the emerging Local Plan period. This opportunity is linked to the regeneration of the Castle Green industrial estate (Site ID CF) and therefore delivered through Options 2 and 3. On this basis, Options 2 and 3 are considered for potential positive effects of greater significance when compared to Option 1. While Option 1 does take advantage of increased densities in well-connected areas, it will not deliver the same level of new employment opportunities and would also not deliver improvements to the road network associated with the Castle Green site and the A13.

In terms of soil quality, the regeneration-led strategies utilising brownfield land opportunities apparent across all options will promote opportunities to remediate areas of potentially contaminated land and lead to significant long-term positive effects with regards to soil quality. Industrial land, given its former uses, is considered to have greater potential for contamination and the greater levels of remediation required under Options 2 and 3 are thus likely to bring about positive effects of enhanced significance for soil quality when compared to Option 1. Option 2 would release more industrial land for other uses and therefore presents a greater opportunity for the remediation of any contaminated land at those industrial sites and therefore more widely across the borough.

In terms of water quality, Option 1 removes the Thames Road (Site CI) site by the River Thames. By removing this site within the floodplain of the River Thames, the potential for negative effects in terms of pollution and run-off during construction and operation are avoided. However, development and regeneration at the sites also present opportunities to improve water attenuation and drainage, including through reduced hard surfacing, and improved application of SUDs, and deliver positive effects in this respect. The exclusion of this site under Option 1 may therefore miss opportunities to improve water quality in the Thames floodplain when compared to Options 2 and 3. When considered alongside a likely remediation of soils in this area (and thus improved soil quality) the combined effects under Options 2 and 3 could improve water quality in Thames Riverside area.

The removal of Gascoigne Industrial Area (Site CM) under Option 1 will reduce the level of development adjacent to the River Roding and reduce the potential for negative effects on water quality in this respect. Whilst the potential for negative effects on water quality is reduced under these options so too is the potential to improve upon existing run-off rates and promote wider application of SUDs. It is recognised that policy and on-site mitigation measures supporting Options 2 and 3 can ensure that development ultimately supports improved water quality, and a wider application of SUDs in new development will provide benefits for water quality in the long-term. Option 2 could provide greater opportunities for the integration of SUDs and other innovative mitigation measures as more industrial land will be released and therefore available to deliver these measures alongside growth.

Overall, there is little to differentiate between Options 2 and 3 in relation to environmental quality. They are considered to perform more positively compared to Option 1 given their potential for enhanced positive effects in terms of soil remediation and improved drainage supporting improved water quality as well as taking advantage of opportunities for potential improvements to the A13. Increasing densities on certain brownfield sites under Option 1 could have negative implications for water quality, as a result of increased hard surfacing in comparison to lower density options (for example in accommodating additional car parking needs and utility areas, as well as more dwellings). This could also be a concern when comparing Option 3 to Option 2, with Option 3 relying more on co-location and intensification to reduce the amount of designated industrial land that is released. Option 1 will also deliver less employment growth which may have negative effects for air quality through increased congestion as a result of out-commuting. In this respect, Option 1 is ranked less favourably than Options 2 and 3. It is difficult to identify any significant differences between Options 2 and 3 at this stage under this SA theme.

SA theme: Biodiversity

	Option 1	Option 2	Option 3
Rank	2	1	1
Significant effect?	No	Uncertain	Uncertain

Discussion

In terms of site allocations, the removal of Hertford Road Industrial Estate (Site XC) under Option 1 reduces the amount of land subject to development within the 6.2km recreational impact buffer for the Epping Forest SAC. However, despite this, the increased densities proposed under this option will increase the overall number of homes delivered within the buffer, thus leading to negative effects of increased significance when compared to Options 2 and 3.

It is also noted that the increased densities proposed under Option 1 will ultimately reduce the potential to suitably mitigate the effects of development on-site, for example, through the delivery of well-designed open space/ green infrastructure within the development. However, if it is not possible within the development, there are alternatives that can be explored by the developer, such as improving and upgrading current green spaces within the vicinity of the development to provide a Suitable Alternative Natural Greenspace style experience.

Thus, whilst Option 2 and 3 propose greater land take within the recreational impact buffer zone of the Epping Forest SAC, the standard densities will reduce the overall number of new homes delivered in this area and provide sufficient space for the delivery of on-site open space/ green infrastructure. On this basis, Options 2 and 3 perform better when compared to Option 1 in terms of potential impacts on European sites.

Committed development at Barking Riverside in the south of the Borough around the River Thames is recognised for potential habitat loss – particularly coastal mudflats along the Thames and its tributaries, and coastal and floodplain grazing marsh grassland habitats. The exclusion of the large Thames Road site (Site CI) under Option 1 removes the potential for further habitat loss in this area. However, it is recognised that existing habitats are only identified in a small corner of the site (in the south east) and could effectively be retained and enhanced in any development scheme if the site is progressed. There are therefore no significant differences between the options in this respect.

It is considered that there is little to differentiate Options 2 and 3 in terms of biodiversity. They provide the greatest opportunity to deliver biodiversity net gain across the borough through the regeneration of industrial land compared to Option 1, as a result of increased densities over a smaller number of sites. This could also be an issue for Option 3 which proposes an increased level of co-location and intensification of uses compared to Option 2 which releases more industrial land for growth and the delivery of mitigation or net gain. However, this is uncertain at this stage and it is difficult to identify significant differences between Options 2 and 3 in this regard.

Taking the above into account, Options 2 and 3 are considered to perform equally under this theme followed Option 1. While it is unlikely that any of the options would have a significant negative effect on biodiversity once mitigation is taken into account, the uncertainty in relation to Options 2 and 3 relate to their potential to deliver a positive effect rather than a negative one through biodiversity net gain.

SA theme: Landscape and townscape

	Option 1	Option 2	Option 3
Rank	2	1	1
Significant effect?	Uncertain	Yes - positive	Yes - positive

Discussion

As a largely urban environment with a strong industrial context the effects of the spatial strategies under each option relate predominantly to the townscape. All the options are seeking significant regeneration of brownfield land opportunities, including the regeneration of existing areas of vacant land with significant potential for positive townscape improvements. It should be noted that by providing a housing land supply that extends beyond the plan period under Options 2 and 3, longer-term protection is provided for the borough's greenfield land resources, and this is likely to lead to longer-term benefits for wider landscape character.

There are Tree Preservation Orders present on a number of sites including Sainsburys 97- 131 High Road (Site WF), Brocklebank Lodge (Site ZN) and Dagenham Leisure Park (Site AD) sites (under all options) and Harts Lane Estate (Site XC), Gascoigne Industrial Area (Site CM), Thames Road (Site CI) and Chadwell Heath Industrial Estate (Site CH) under Options 2 and 3. The trees are recognised for their contribution to both ecological networks and landscape character, and development should seek to retain protected trees on-site to avoid negative effects arising. Not all of the above sites are progressed under Option 1, which is therefore recognised as having greater potential to avoid negative effects in this respect, when compared to Options 2 and 3.

However, Options 2 and 3 include additional areas of industrial land release, the redevelopment/regeneration of which could significantly enhance the townscape character. Under Options 2 and 3, extended development of the Thames Riverside area (when considered in combination with the committed development at Barking Riverside) could lead to long-term positive effects in terms of townscape renewal. Under Options 2 and 3, more areas of the borough, and more vacant and under-utilised industrial land are targeted for renewal, providing significant opportunities for enhancement, including through extended provisions of new open spaces and landscaped areas.

The regeneration schemes across all options can have significant positive effects for townscape, for example through regeneration of vacant sites, including those around the historic core of Barking Town Centre. However, increased densities may present a significant challenge in accommodating higher levels of development in less space and a greater presence of taller buildings are considered more likely under Option 1, which could well be to the detriment of townscape features such as local views and vistas. The effects ultimately remain uncertain and dependent upon aspects such as design and layout. However, at this stage, the higher density option (Option 1) can be viewed less favourably for its increased potential for negative effects in comparison to the lower (standard) density options (Options 2 and 3). This could also be an issue for Option 3 when compared to Option 2, as Option 3 proposes increased co-location, intensification and higher densities to reduce the amount of industrial land released. However, it is important to note that co-location can improve the transition between different development types and integrate them more effectively through a landscaped public realm that provides connectivity to wider areas. The difference between these options on the landscape is uncertain though at this stage and would be dependent on the layout and design of development.

Increasing densities at well-connected sites, is also likely to mean that historic townscapes, such as the Abbey and Barking Town Centre and Dagenham Village Conservation Areas come under increased pressure from higher growth levels, and it will be important to ensure that development is designed sensitively to respond to the context and setting. Whilst the overall effects remain uncertain, the increased pressure on historic townscapes is reflected in the ranking of the options.

The exclusion of any further designated industrial land release under Option 1 is likely to mean that this land continues in industrial related uses, and opportunities to address areas that may negatively

impact upon townscape may be missed. However, it is considered that opportunities for regeneration and intensification of employment uses at these sites still exist, which can also contribute to improved townscapes.

SA theme: Historic environment

	Option 1	Option 2	Option 3
Rank	2	1	1
Significant effect?	Yes - negative	Uncertain	Uncertain

Discussion

In terms of the historic environment, all options propose significant brownfield regeneration schemes, and therefore have the potential to improve upon existing townscape settings to the indirect benefit of designated and non-designated assets.

Notably, the Ibscott Close Estate site (Site ID XE) lies adjacent to Dagenham Village Conservation Area, and all sites at Barking Town Centre either lie within or surrounding the Abbey and Barking Town Centre Conservation Area.

Differing effects across the options may be identified, however; of key significance are the likely cumulative effects in relation to the Abbey and Barking Town Centre Conservation Area, which is a key feature of the historic environment that is likely to face pressure in light of the growth strategies, and which falls within the most well-connected area in the borough. The regeneration of key sites in and around the Conservation Area has significant potential to improve upon townscape settings and movement networks in the area, to the indirect benefit of heritage settings. However, increasing densities (under Option 1) also has the potential to negatively affect the townscape through increased massing, taller buildings and potential effects on local views.

The effects ultimately remain uncertain and dependent upon aspects such as design and layout. However, at this stage, the higher density Option 1 can be viewed less favourably for its potential for negative effects of significance in comparison to the lower (standard) density options (Option 2 and 3), and the ranking of options reflects this. Option 3 proposes increased co-location, intensification and higher densities to reduce the amount of industrial land released. Compared to Option 2 this could have localised impacts of greater significance on the historic environment. However, Option 2 would release a greater level of industrial land and as a result could have impacts on the historic environment more widely across the borough, both positive and negative. It should also be noted that co-location can improve the transition between different development types and integrate them more effectively through a landscaped public realm that provides connectivity to wider areas. This could have positive effects on the historic environment. The difference between Options 2 and 3 in terms of the likely significant effects on the historic environment are uncertain at this stage and would be dependent on the layout and design of development.

Options 2 and 3 are considered most likely to be able to avoid any significant effects arising in relation to the historic environment setting and also provide more opportunities for enhancement, though uncertainty remains at this stage.

SA theme: Climate change

	Option 1	Option 2	Option 3
Rank	2	1	1
Significant effect?	No	Uncertain	Uncertain

Discussion

In terms of climate change adaptation, Option 1, which proposes no further release of designated industrial land, will reduce the overall level of development in the south-west of the Borough within the floodplain of the River Thames (by removal of Site CI – Thames Road). This area of the Borough lies largely within Flood Risk Zone 3 and is reliant upon flood defences. On this basis, Option 1 could be considered to perform better with regards to climate change adaptation overall when compared to Options 2 and 3. However, this needs to be considered alongside the potential for development in the floodplain to improve upon existing flood defences, as well as water attenuation and run-off rates to support reduced flood risk.

The main flood constraint outside of this area relates to surface water flooding, and all options should seek to adopt SUDs that improve run-off rates and water attenuation. Increased densities at sites in this respect could reduce the effectiveness of SUDs; for example, through an increased need for hard surfacing associated with increased parking needs, or utility areas. Whilst no significant negative effects are anticipated under any of the options overall, the ranking of the options do reflect this assumption (with Options 2 and 3 performing marginally better in this respect).

In terms of climate change mitigation, the further release of designated industrial land under Options 2 and 3 will maximise housing and employment development in the borough including around planned transport improvements (the new Barking Riverside Overground station and Crossrail upgrades at Chadwell Heath); supporting accessible development and making further infrastructure improvement opportunities in this area more viable (given the strategic scale of development at these sites) with the potential for long-term positive effects in terms of accessible development. However, increased densities at alternative locations (under Option 1) is targeted at well-connected areas only, so no significant differences between the options can be drawn at this stage.

Given the strategic development opportunities under all options, there are good opportunities for strategic infrastructure improvements that support reduced emissions from both the transport and residential sectors and positive effects have the potential to be realised in this respect. The realisation of these effects, however, will largely relate to the planning policy framework, site-level viability and developer interest.

The removal of the Thames Road site (ID CI) under Option 1 can be considered for its potential to reduce the viability of significant infrastructure improvements/ opportunities in the Thames and Riverside sub-area, including accessibility improvements, and improvements such as District Heating Networks. However, this is also considered alongside the potential increased viability of such opportunities in areas subject to density increases.

Overall, whilst Option 1 will reduce the level of development within the existing floodplain, the increased densities proposed under this option may reduce the effectiveness of drainage schemes elsewhere across the borough. It also offers less opportunities to improve drainage across the borough. Options 2 and 3 are therefore considered to rank better overall, by virtue of their ability to enhance existing flood defences, improve run-off rates and water attenuation, and provide greater strategic opportunities for improvements to energy and heat networks. However, the overall effects of development under these options remain uncertain until site level investigation and mitigation proposals arise.

SA theme: Population and communities

	Option 1	Option 2	Option 3
Rank	2	1	1
Significant effect?	Yes - positive	Yes - positive	Yes - positive

Discussion

All options will deliver new homes to meet the identified needs with the potential for significant long-term positive effects in this respect. Options 2 and 3 will provide additional growth during and beyond the plan period, which can also be considered for increased levels of flexibility (relevant considering strategic sites/ brownfield sites that may have longer lead-in times) and provide greater certainty for residents moving into a later plan period. As a result, marginally enhanced positive effects could be considered under Options 2 and 3 compared to Option 1.

Options 2 and 3 are considered more likely to deliver a suitable mix of housing types given the additional strategic sites for regeneration as well as the increased densities being proposed under Option 1. Option 2 would result in a greater release of industrial land and therefore could provide a greater opportunity to deliver a suitable mix of homes compare to Option 3, which has a reduced level of industrial land release through increased levels of co-location and intensification. The targeted regeneration of brownfield sites across all options can also support successful integration and reduced social deprivation by securing benefits for existing communities, particularly those in areas of higher deprivation. Increased residential development in the Major and District Centres, and industrial locations can also reduce crime and fear of crime through increased presence of people (particularly in the evening) and active surveillance.

The additional release of designated industrial land under Options 2 and 3 is considered for its potential to support housing growth with increased employment growth in highly accessible locations, as well as significant potential for new and improved infrastructure, service and facility provisions, including new community and open spaces. It's possible that Option 2 could provide more land for the delivery of community facilities and open space compared to Option 3 as it would release a greater amount of industrial land for other uses. However, this is uncertain at this stage and there is no evidence to suggest that this would be the case.

Increased densities within well-connected areas under Option 1 is considered for its potential to support communities with good access to social infrastructure, transport infrastructure thus supporting a reduced need to travel. However, increased densities are likely to reduce the potential to deliver new provisions on-site to support the higher levels of growth in certain locations. This could also be an issue for Option 3 which proposes increased levels of co-location, intensification and densities to reduce the amount of industrial land that is released. However, this is uncertain at this stage as a result Options 2 and 3 are considered to perform similarly with Option 1 performing more poorly.

SA theme: Economy and employment

	Option 1	Option 2	Option 3
Rank	3	1	1
Significant effect?	Yes - negative	Yes - positive	Yes - positive

Discussion

All options will support housing growth with growth in employment opportunities within the borough in highly accessible areas. Whilst Options 2 and 3 present an increased release of designated industrial land, the Industrial Land Strategy (ILS) identifies that intelligent use of this land will ensure that the releases result in greater levels of employment growth overall. Intelligent use will also target the best performing and most accessible employment areas in the borough with growth and renewal, increasing local accessibility and inward investment and supporting reduced levels of out-commuting.

Option 1 is not likely to meet the future needs of the borough and would not address the issues identified through the ILS. This includes an under-supply of modern spaces and the need to address current stock which is, generally, too old, the wrong specification and wrongly sized. Further to this, the vast majority of existing floorspace is tertiary and/ or secondary rather than modern or prime, which holds back LBBD's employment and prosperity growth.

According to the ILS, Option 2 has the potential to deliver circa 2.1 million sqm of industrial space through intensification, densification and co-location. This would provide sufficient floorspace to meet future needs of circa 1.9 million sqm, with a headroom of circa 200,000 sqm. The ILS found that while this option would deliver sufficient headroom in the potential supply and therefore flexibility, it could limit the location and typology choices in the market, which may impact the economy in the future.

Option 3 has the potential to deliver circa 2.6 million sqm of industrial space through intensification, densification and co-location but with a reduced displacement of floorspace (circa 270,000 sqm) compared to Option 2. This would provide sufficient floorspace to meet future needs of circa 1.9 million sqm, with a headroom of circa 700,000 sqm. The ILS found that this option would deliver significant flexibility and could help 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. The plot ratios could potentially be more in line with industry norms compared to Option 2. The ILS determined that the level of headroom provided through Option 3 would result in a significant over supply of land and space into the market for which there is no certainty would be required.

Looking beyond industrial land and towards other types of employment uses, Option 2 could provide more opportunities compared to Option 3 in terms of delivering a wider range of employment types given the increased level of industrial land release.

Overall, greater numbers of new jobs and positive effects of greater significance for the economy are anticipated under Options 2 and 3, when compared to Option 1. Option 1 will not address the issues identified through the Industrial Land Strategy, which includes an under-supply of modern employment spaces and the need to address current stock which is, generally, too old, the wrong specification and wrongly sized. There are positive and negative effects associated in relation to both Options 2 and 3 in terms of their approaches to industrial land within the borough and these are set out within the ILS. Both of the options have the potential for significant positive effects, with Option 3 being the preferred approach emerging from the ILS and Option 2 having the potential to deliver a wider range of employment types through the release of more industrial land to alternative employment uses. As a result, these options have been ranked the same.

SA theme: Health and wellbeing

	Option 1	Option 2	Option 3
Rank	3	1	1
Significant effect?	No	Yes - positive	Yes - positive

Discussion

All options will regenerate significant areas of brownfield land and deliver new high-quality housing with the potential to positively affect health indicators relating to housing, particularly within areas of higher deprivation. All options include Land West of Scrattons Farm (Site XF) which would result in the loss of public open space.

Whilst all of the options perform generally well in terms of accessibility, given the urban context of the borough, Options 2 and 3 are noted for greater areas of strategic industrial land release and regeneration, that can bring about greater health benefits in terms of increased numbers of new jobs and improved access to employment opportunities, new healthcare and social infrastructure and facilities, improved energy networks which support reduced fuel poverty, new areas of open space and increased green infrastructure links.

The co-location of residential and industrial uses proposed under Options 2 and 3 will have impacts on human health which will need to be addressed. This includes issues around noise and air pollution along with vibrations caused by industrial activities. However, the majority of these can be addressed through good design and the incorporation of appropriate mitigation measures. The delivery of open and green space can also be a challenge depending on the density of development and the site. Option 2 may provide more opportunities for the delivery of open and green space around co-located developments given the increased level of industrial land that would be released but this is uncertain.

The higher densities proposed under Option 1 will make on-site open and green space provisions more difficult to achieve in development. Significant density increases may also result in health issues in a post Covid-19 world. Taking the above into account, Options 2 and 3 are considered to provide better opportunities to deliver significant long-term positive effects in relation to health and wellbeing compared to Option 1 and the ranking of options reflects this. At this stage it is difficult to differentiate between Options 2 and 3 in terms of the rankings for this SA theme.

SA theme: Transport and movement

	Option 1	Option 2	Option 3
Rank	2	1	1
Significant effect?	Uncertain	Yes - positive	Yes - positive

Discussion

All options seek to utilise brownfield development opportunities within the urban area and promote significant levels of development within accessible areas. To meet the shortfall in delivering housing needs during the plan period Option 1 proposes significantly increased densities at well-connected brownfield sites. While increased densities and levels of growth within well-connected areas would in the first instance appear to be positive in relation to the transport and movement theme there a number of potential drawbacks. The first is that Option 1 is less likely to improve access to employment opportunities and improved community infrastructure across the borough compared to Options 2 and Option 3. As a result, residents are likely to continue commuting out of the borough for employment under Option 1, whereas the other options are more likely to reduce the need to travel.

The intelligent use of industrial land proposed under Options 2 and Option 3 provide opportunities for regeneration that will deliver additional employment opportunities alongside housing growth (maximising accessibility and alternatives modes in journeys to work) and strategic scale infrastructure improvements. These options also take advantage of potential opportunities to improve the capacity of the A13, with initial studies suggesting that tunnelling a section of the A13 could release land for development at Castle Green as well as improve traffic flows. However, it is important to note that these benefits are unlikely to be realised during the plan period. Despite this it is an important consideration given that the Transport Impact Assessment (2020) has identified that much of the borough's infrastructure currently operates at, or over capacity. So, consideration of long-term opportunities for transport infrastructure improvements are essential in the context of meeting housing and employment needs in the borough.

Options 2 and 3 will maximise housing and employment development in areas of the borough where transport improvements are planned (the new Barking Riverside Overground station and Crossrail upgrades at Chadwell Heath); supporting accessible development and making further infrastructure improvement opportunities in this area more viable (given the strategic scale of development in these areas) with the potential for long-term positive effects. At this stage it is not possible to significantly differentiate between Options 2 and 3 in terms of their ranking under this SA theme.

Summary findings

SA theme		Option 1	Option 2	Option 3
Land, soil and water resources	Rank	3	1	1
	Significant effect?	Yes - positive	Yes - positive	Yes - positive
Environmental quality	Rank	2	1	1
	Significant effect?	No	Yes - positive	Yes - positive
Biodiversity	Rank	2	1	1
	Significant effect?	No	Uncertain	Uncertain
Landscape and townscape	Rank	2	1	1
	Significant effect?	Uncertain	Yes - positive	Yes - positive
Historic environment	Rank	2	1	1
	Significant effect?	Yes - negative	Uncertain	Uncertain
Climate change	Rank	2	1	1
	Significant effect?	No	Uncertain	Uncertain
Population and communities	Rank	2	1	1
	Significant effect?	Yes - positive	Yes - positive	Yes - positive
Economy and employment	Rank	2	1	1
	Significant effect?	Yes - negative	Yes - positive	Yes - positive
Health and wellbeing	Rank	2	1	1
	Significant effect?	No	Yes - positive	Yes - positive
Transport and movement	Rank	2	1	1
	Significant effect?	Uncertain	Yes - positive	Yes - positive

Conclusions

Significant positive effects are anticipated for all options in relation to the population and communities and land, soil and water resources themes. These effects are anticipated as a result of the delivery of new homes to meet identified needs and the associated delivery of community infrastructure, as well as the focus on brownfield/ regeneration opportunities apparent across all the options in areas that are or are predicted to be well-connected. Options 2 and 3 further provide the delivery of new homes and employment more widely across the borough, which is likely to enhance the significance of these effects.

Options 2 and 3 are considered to have a significant positive effect on the economy and employment through the intelligent use of vacant/ underused industrial land to deliver an increased number of jobs during the plan period. Option 1 performs less well compared to the other options as it does not address the issues around an under-supply of modern employment spaces and that the current stock is, generally, too old, the wrong specification and wrongly sized.

While the regeneration of brownfield land proposed under all of the options has the potential for a positive effect on the landscape and townscape, the increased densities proposed under Option 1 and no further release of industrial land, are likely to make significant positive effects more challenging. Increased densities are likely to result in taller buildings and reduce the ability to deliver open/ green space on site. Options 2 and 3 provide a greater opportunity to deliver significant positive effects on the townscape through the regeneration of industrial land.

Option 1 would increase densities at sites that fall within and are in close proximity to designated heritage assets, including the Abbey and Barking Town Centre Conservation Area. The increased densities proposed under Option 1 are considered likely to have a significant negative effect on the historic environment. Option 1 is also less likely to deliver benefits in relation to the historic environment of the borough compared to Options 2 and 3, which proposes standard densities and regeneration of industrial land more widely across the borough.

It is also recognised that Options 2 and 3 will lead to higher levels of development within the floodplain of the River Thames, which is dependent upon existing flood defences to mitigate risks. The overall effects of this strategy remain uncertain at this stage, the benefits of directing less growth in high flood risk areas under Option 1 is recognised; however, this is also considered alongside the potential for regeneration at the Thames Riverside to improve upon existing flood defences, water attenuation and run-off rates and lead to positive effects in this respect.

Options 2 and 3 perform similarly against the majority of SA themes in terms of rank and likely significant effects. There are pros and cons associated with both options and it is often difficult to identify significant differences between them. While Option 2 proposes a greater release of industrial land it is not certain at this stage that this would deliver additional benefits over and above Option 3 in terms of the delivery of community infrastructure, open/ green space and wider employment types. There is also no evidence that there would be substantial differences between the options in terms of likely effects on environmental themes including but not limited to biodiversity, environmental quality and the landscape. Both options propose co-location, but it is considered that there are suitable mitigation measures available to address impacts on human health and reduce the significance of any residual effects. Taken this into account, there is nothing to suggest that the greater level of co-location proposed under Option 3 would be likely to result in a residual effect that is significantly different to Option 2.

