

# **Sustainability Appraisal (SA) of the Edmonton Leaside Area Action Plan (AAP)**

**SA Report**

March 2017

**REVISION SCHEDULE**

Rev	Date	Details	Prepared by	Reviewed by	Approved by
1	March 2017	SA Report published alongside the 'proposed submission' version of the Edmonton Leaside Area Action Plan (AAP).	Mark Fessey Principal Consultant	Steve Smith Technical Director	Steve Smith Technical Director

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## INTRODUCTION

## 1 BACKGROUND

- 1.1.1 AECOM is commissioned by London Borough of Enfield (LBE) to undertake Sustainability Appraisal (SA) in support of the emerging Edmonton Leaside Area Action Plan (AAP). Once adopted, the AAP will provide a framework for the future for Edmonton Leaside, one of London's most significant regeneration opportunities.
- 1.1.2 SA is a mechanism for considering and communicating the impacts of a draft plan, and alternatives, with a view to avoiding and mitigating adverse impacts and maximising the positives. SA of the AAP is a legal requirement.<sup>1</sup>

## 2 SA EXPLAINED

- 2.1.1 It is a requirement that SA is undertaken in-line with the procedures prescribed by the Environmental Assessment of Plans and Programmes Regulations 2004, which transposed into national law EU Directive 2001/42/EC on Strategic Environmental Assessment (SEA).<sup>2</sup>
- 2.1.2 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'.<sup>3</sup> The report must then be taken into account, alongside consultation responses, when finalising the plan.
- 2.1.3 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?

### 2.1 This SA Report<sup>4</sup>

- 2.1.1 This document is the SA Report for the Edmonton Leaside AAP and, as such, each of the three SA questions is answered in turn below, with a 'part' of the report dedicated to each.
- 2.1.2 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?

<sup>1</sup> 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 SA in parallel with the production of local plans, including AAPs; and the centrality of SA to local plan-making is emphasised in the National Planning Policy Framework (2012). The Town and Country Planning (Local Planning) Regulations 2012 require that an SA Report is published for consultation alongside the 'Proposed Submission' version of the plan.

<sup>2</sup> Procedurally SA and SEA are one and the same, on the basis that there is no legislation or guidance to suggest that SA process should differ from the prescribed SEA process. SA and SEA differ only in terms of substantive focus. SA has an equal focus on all three 'pillars' of sustainable development (environment, social and economic), whilst SEA involves a degree of focus on the environmental pillar. SA can therefore be said to 'incorporate' SEA.

<sup>3</sup> Regulation 12(2) of the Environmental Assessment of Plans and Programmes Regulations 2004

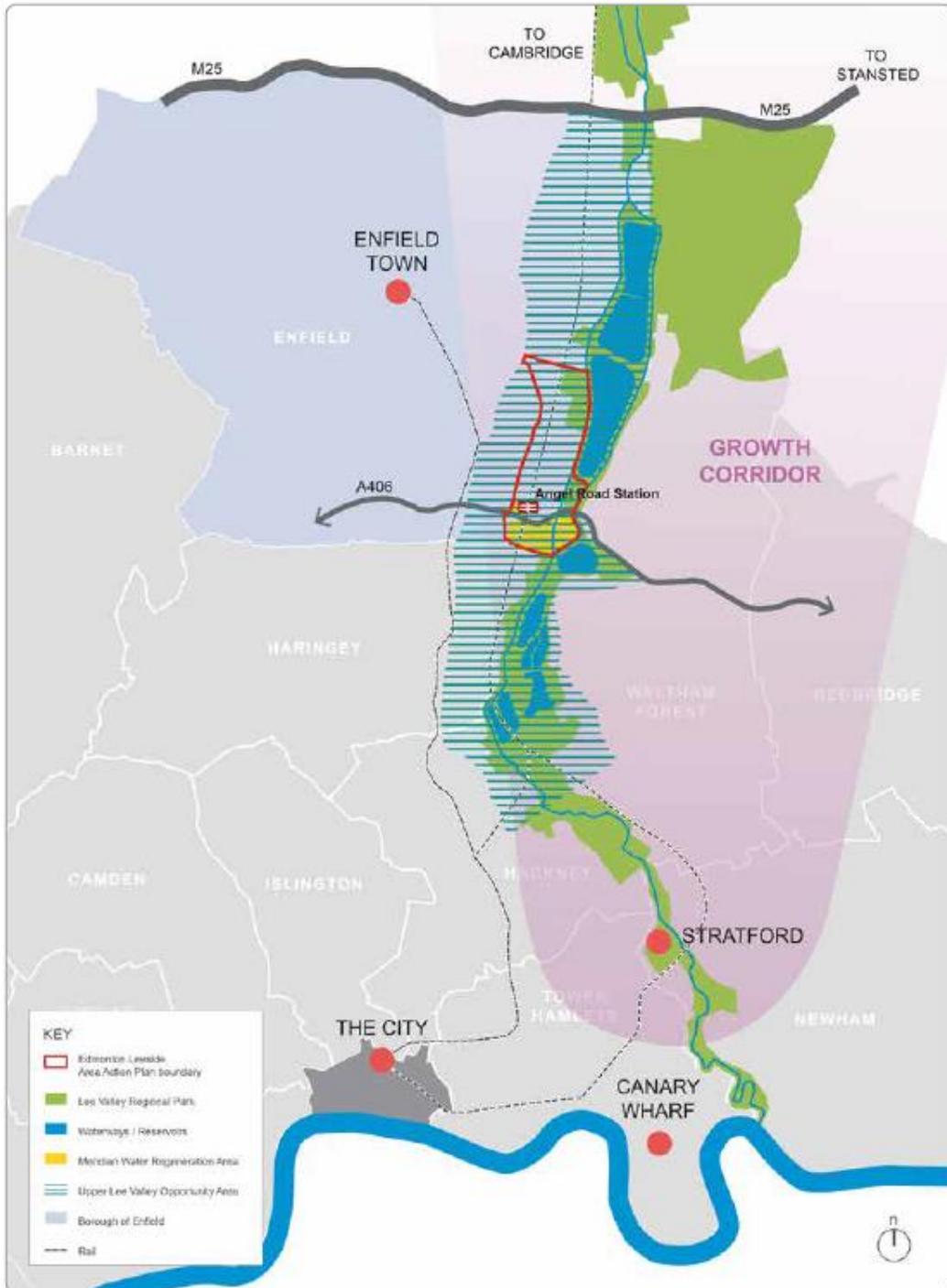
<sup>4</sup> See **Appendix I** for further explanation of the regulatory basis for answering certain questions within the SA Report, and a 'checklist' explaining more precisely where within this report certain regulatory reporting requirements are met.

**3 WHAT IS THE PLAN SEEKING TO ACHIEVE?**

**3.1 Overview**

3.1.1 Once adopted, the AAP will provide a framework for the future for Edmonton Leaside, one of London’s most significant regeneration opportunities. Strategically located at the heart of the Mayor’s Upper Lee Valley Opportunity Area and the London-Stansted corridor (see Figure 3.1) and long established as a significant employment location, some parts of the area will see transformational change.

*Figure 3.1: Edmonton Leaside – Upper Lee Valley and London-Stansted Corridor*



- 3.1.2 In particular, there will be ‘transformational change at **Meridian Water**. This is an underutilised area to the south of the North Circular Road that is beginning its transformation into a new urban quarter supporting thousands of new homes and jobs, along with new schools, health centre and other community facilities.
- 3.1.3 In addition to Meridian Water, the aim is to plan for **other key sites**, namely: 1) the industrial estates to the north of Meridian Water (opportunity to improve quality and support business/employment growth); 2) Angel Road Retail Park (opportunity to develop as a mixed employment use); 3) Edmonton Eco Park (need to support to waste services / opportunity to support use of waste heat as part of a decentralised energy network); 4) Deephams Sewage Treatment Works (need to support the upgrade); Pickett’s Lock (opportunity to add to the existing high quality leisure offer / a need to account for environmental sensitivities).
- 3.1.4 Finally, the aim is to establish **area-wide / thematic policy** in relation to: 1) Improving transport connections and movement (rail and station upgrades, better bus services, and greater improved pedestrian and cycle connections); 2) Promoting a Low Carbon Future (delivering large number of new homes and jobs presents a considerable opportunity); and 3) Blue and green areas (the River Lee Navigation, the Lee Valley Regional Park and other water and green spaces, which can become much more accessible and attractive).
- 3.1.5 Edmonton Leaside and Meridian Water will form a key part of the developing Upper Lee Valley (ULV) area, which can become a popular place to live, work and visit, creating a vibrant new area within London and the wider region. This area of the Lee Valley should be seen as integral to the All London Green Grid and the Blue Ribbon Network as articulated by the GLA. Other strategic partners include neighbouring London Boroughs, in particular London Borough of Haringey (an AAP is in production for the Tottenham area).

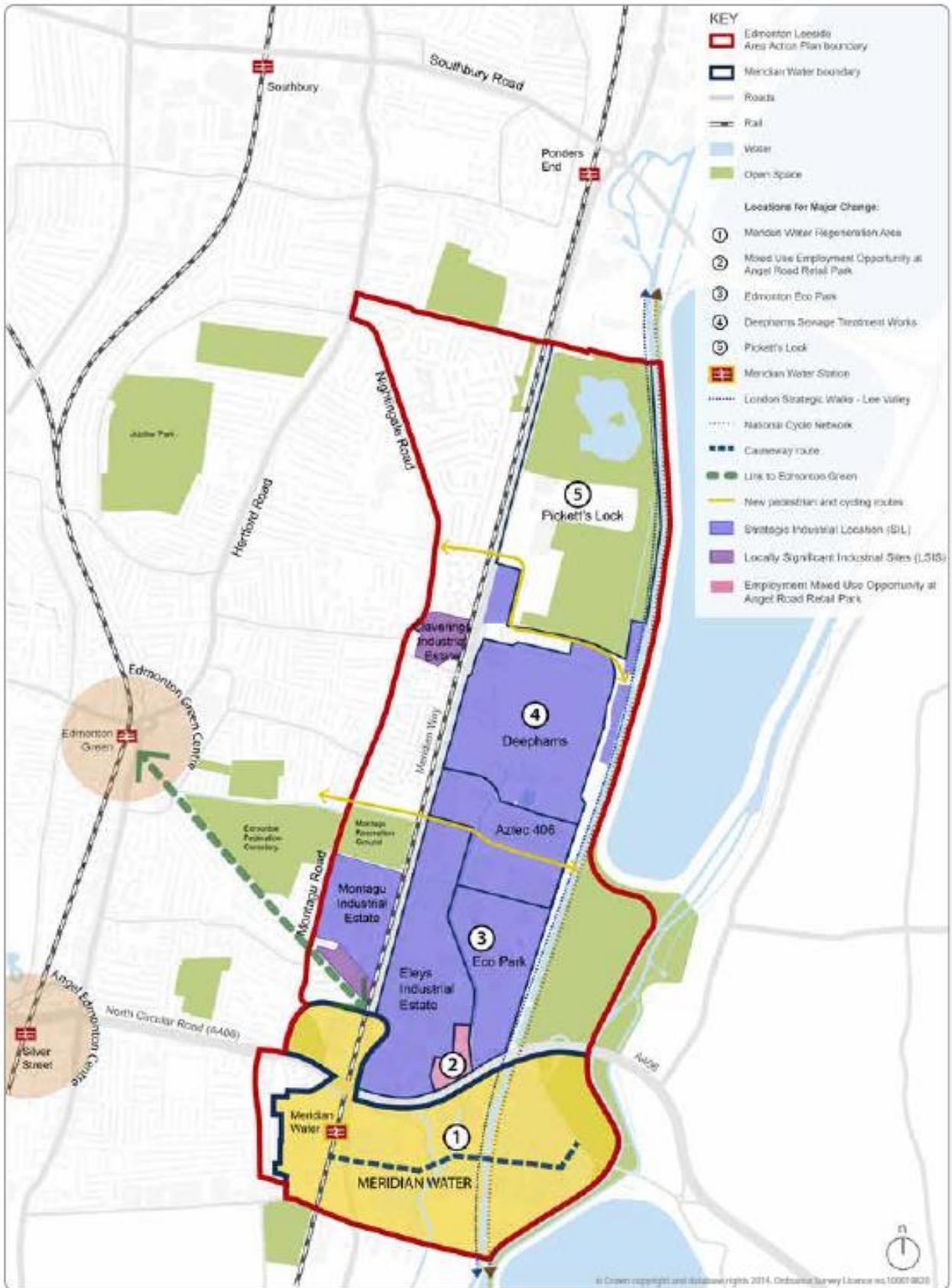
## 3.2 Vision

- 3.2.1 The AAP aims to achieve the following vision -

*“Edmonton Leaside will be a thriving community of residents and businesses. Optimising the opportunities for growth in the Upper Lee Valley, in particular through improvements in rail infrastructure, the area will be transformed. Edmonton Leaside will have a reputation for leading the way in sustainable living, working and recreation – from a new community at Meridian Water to 21st Century energy generation, better connected integrated public transport, and strong business and economic growth supporting a greater diversity of new jobs. Edmonton Leaside will be an exemplar of how joined-up approaches to investment can maximise opportunities for a range of new homes, jobs and opportunities for local people.”*

- 3.2.2 A spatial expression of this vision statement is presented in **Figure 3.2**.

Figure 3.2: The vision for Edmonton Leaside



**3.3 Objectives**

3.3.1 There are five plan objectives, each with accompanying sub-objectives – see **Table 3.1**.

*Table 3.1: The AAP objectives*

AAP objectives	Sub-objectives
Building a Sustainable Urban Neighbourhood	<ul style="list-style-type: none"> <li>• Deliver thousands of new homes in Meridian Water through a phased programme to help meet existing and future housing needs;</li> <li>• Ensure diversity in the type, size and tenure of housing, including affordable housing to meet local needs;</li> <li>• Embody the principles of good design to ensure a robust relationship between a variety of uses and activities, high quality public realm, and intuitive movement patterns;</li> <li>• Enable distinctive place-making by maximising the local identity, and character;</li> <li>• Support the delivery of new educational facilities at Meridian Water and encourage links with local businesses and residents; and</li> <li>• Ensure that everyone has good access to health, leisure and community facilities of a high standard within close proximity to their home;</li> <li>• Provide well-connected, well-designed pedestrian and cycle routes that encourage people to choose ‘active travel modes</li> </ul>
Facilitating Economic Growth	<ul style="list-style-type: none"> <li>• Support the development and growth of new industrial sectors at Meridian Water, in particular of high job-density, high value added sectors;</li> <li>• Increase the capacity, quality and density of existing employment land through improvement of existing industrial estates;</li> <li>• Ensure Edmonton Leeside is attractive to regional, national and international investors in order to deliver thousands of new jobs across the area;</li> <li>• Strengthen the business community by supporting a culture of enterprise, entrepreneurship, innovation and sustainable business growth;</li> <li>• Deliver a new town centre at Meridian Water with an appropriate mix of uses without undermining the primary retail function of nearby district centres; and</li> <li>• Ensure that employment opportunities are accessible and local residents are supported to increase their skills and qualifications to progress into work.</li> </ul>
Connectivity	<ul style="list-style-type: none"> <li>• Enhance connectivity between Edmonton Leeside and the surrounding area to make it a joined up place in the borough and regional context;</li> <li>• Deliver transformational improvements to Angel Road Station;</li> <li>• Support the planned upgrade to the West Anglia Route to four trains per hour, rising later to eight trains per hour;</li> <li>• Deliver a new spine road - ‘The Causeway’ - connecting across Meridian Water and beyond;</li> <li>• Improve accessibility through public transport provision and greater ease of vehicular movements along the existing road networks;</li> <li>• Deliver new improved bus routes, frequency and quality of bus services;</li> <li>• Improve access, and utilise the blue and green networks, for pedestrians and cyclists with better routes and connections to surrounding areas and within Edmonton Leeside; and</li> <li>• Deliver state of the art telecommunications and IT networks</li> </ul>

AAP objectives	Sub-objectives
Delivering Sustainable Regeneration	<ul style="list-style-type: none"> <li>• Promote low carbon living and working;</li> <li>• Provide sustainable movement and transport networks;</li> <li>• Support the delivery and connection to the Lee Valley Heat Network to enable sustainable growth of neighbourhoods and industry;</li> <li>• Support sustainable waste management at the Edmonton EcoPark. Encourage cleaner air; and</li> <li>• Provide the conditions for increased biodiversity;</li> </ul>
Celebrating the Lee Valley Waterways and Open Spaces	<ul style="list-style-type: none"> <li>• Improve access to the Lee Valley Regional Park;</li> <li>• Improve the quality and links to existing open spaces;</li> <li>• Create new open spaces where feasible;</li> <li>• Use the watercourses and waterways to enable distinctive place-making, especially Meridian Water;</li> <li>• Create a linked network of blue and green spaces which improve green infrastructure and habitats;</li> <li>• Encourage the sustainable use of the waterways; and</li> <li>• Manage flood risk.</li> </ul>

What the plan is not trying to achieve?

3.3.2

It is important to emphasise that the AAP will be strategic in nature. Even the allocation of sites for development is a strategic undertaking, i.e. one that omits consideration of some detailed matters, in the knowledge that they can be addressed later (i.e. through pre-application discussions and then at the formal planning application stage). The strategic nature of the AAP is reflected in the scope of the SA.

## 4 WHAT IS THE SCOPE OF THE SA?

### 4.1 Introduction

4.1.1 The aim here is to introduce the reader to the scope of the SA, i.e. the sustainability issues / objectives that are a focus of (and provide a 'framework' for) appraisal work.

4.1.2 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

4.1.3 The SEA Regulations 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.<sup>5</sup>

4.1.4 As such, these authorities were consulted on the SA scope in 2014, when an SA Scoping Report was published for consultation. Comments received were subsequently taken into account, i.e. adjustments were made to the SA scope.<sup>6</sup>

### 4.2 What are the key issues / objectives that should be a focus of SA?

4.2.1 **Table 4.1** presents the sustainability objectives established through SA scoping, i.e. in-light of context/baseline review and consultation. Taken together, these sustainability objectives provide a methodological 'framework' for appraisal.

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<sup>5</sup> In-line 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.'*

Table 4.1: The SA framework

Sustainability objectives	Supporting criteria <i>Will the site/policy proposal under consideration...</i>
Reduce <b>air</b> pollution and ensure air quality continues to improve	<ul style="list-style-type: none"> <li>• Contribute to a reduction of levels of NO2 and PM10 in Central Leaside?</li> <li>• Reduce congestion and reliance on the private car?</li> <li>• Encourage the use of sustainable transport?</li> </ul>
<b>Reduce disturbance from noise</b>	
Meet the challenge of <b>climate change</b>	<ul style="list-style-type: none"> <li>• Limit emissions of greenhouse gases?</li> <li>• Reduce reliance on the private car?</li> <li>• Encourage the use of sustainable transport?</li> <li>• Encourage development of a decentralised energy network (DEN)?</li> <li>• Ensure that new development is prepared for the impacts of climate change?</li> <li>• Ensure that development does not increase vulnerability to flooding?</li> <li>• Use of SUDS and green roofs?</li> </ul>
Conserve and enhance <b>biodiversity</b> in the AAP's area and beyond	<ul style="list-style-type: none"> <li>• Protect and enhance areas of biodiversity identified on the Core Strategy Policies map?</li> <li>• Alleviate fragmentation and link areas of biodiversity?</li> </ul>
<b>Protect enhance and make accessible for enjoyment, the area's green and open spaces</b>	
<b>Protect and enhance heritage and cultural assets in Central Leaside and surrounding area</b>	
Achieve the sustainable management of <b>waste</b>	<ul style="list-style-type: none"> <li>• Support the proximity principle in relation to waste?</li> <li>• Reduce waste arising's?</li> <li>• Increase the re-use of materials?</li> <li>• Increase recycling and composting, or recovery of energy from waste?</li> <li>• Support redevelopment of Edmonton EcoPark for handling of waste?</li> </ul>
Achieve sustainable <b>water</b> resources management	<ul style="list-style-type: none"> <li>• Improve the quality of water in the borough?</li> <li>• Reduce the demand for water?</li> <li>• Support the upgrade of Deephams STW?</li> </ul>
Meet the requirements of <b>sustainable design and construction</b>	<ul style="list-style-type: none"> <li>• Increase energy efficiency in buildings?</li> <li>• Reduce the demand for water?</li> <li>• Increase the proportion of energy generated from renewable sources?</li> </ul>
Improve <b>land use</b> efficiency	<ul style="list-style-type: none"> <li>• Promote re-use of previously developed land and existing buildings?</li> </ul>
Ensure the opportunity for all to live in a decent, sustainably constructed and affordable <b>home</b>	<ul style="list-style-type: none"> <li>• Provide for warm, weatherproof homes with modern facilities?</li> <li>• Ensure energy / resource efficiency during construction and afterwards?</li> <li>• Provide affordable housing, including social housing?</li> <li>• Ensure the housing mix includes sufficient family housing</li> <li>• Reduce the number of people in temporary accommodation?</li> <li>• Support the regeneration of the Meridian Water area?</li> </ul>

Sustainability objectives	Supporting criteria <i>Will the site/policy proposal under consideration...</i>
Improve the <b>health</b> and well-being and reduce inequalities in health	<ul style="list-style-type: none"> <li>• Assist in reducing health inequalities within the area and between Central Leaside and other areas, accounting for climate change?</li> <li>• Address rising levels of childhood obesity?</li> <li>• Increase the level of active adults and children?</li> <li>• Improve access to health services, in particular to a GP?</li> <li>• Improve access to green / open spaces and the natural environment?</li> </ul>
Reduce <b>poverty</b> and social exclusion	<ul style="list-style-type: none"> <li>• Assist in the regeneration of deprived areas?</li> </ul>
Raise <b>educational achievement</b> levels	<ul style="list-style-type: none"> <li>• Ensure there are sufficient school places available for the growing number of school-aged children?</li> </ul>
Reduce <b>crime</b> , anti-social behaviour and fear of crime	<ul style="list-style-type: none"> <li>• Address issues, especially in those areas where crime is highest?</li> </ul>
Improve <b>accessibility</b> for all to services and facilities	<ul style="list-style-type: none"> <li>• Improve access to key services for all?</li> </ul>
Sustain <b>economic growth</b> and competitiveness	<ul style="list-style-type: none"> <li>• Support existing businesses?</li> <li>• Attract new businesses to the area?</li> <li>• Support the regeneration of the Meridian Water area, Picketts Lock site and Angel Road Retail Park?</li> <li>• Increase the numbers of higher paid jobs?</li> <li>• Increase the employment opportunities for young people?</li> <li>• Develop workforce skills necessary to support and grow the economy?</li> </ul>
Ensure high and stable levels of <b>employment</b>	<ul style="list-style-type: none"> <li>• Protect and enhance SIL and LSIS?</li> <li>• Help people to acquire the skills needed to find and remain in work?</li> </ul>
Increase the <b>skill levels</b> of the workforce	<ul style="list-style-type: none"> <li>• Reduce the proportion of adults of working age with no qualifications?</li> <li>• Decrease the numbers of young people Not in Education, Employment or Training (NEETs)</li> </ul>
Improve <b>transport</b> infrastructure and reduce road congestion	<ul style="list-style-type: none"> <li>• Improve green transport networks for cyclists and pedestrians?</li> <li>• Reduce the need to travel?</li> <li>• Reduce congestion and reliance on the private car?</li> <li>• Encourage people to use sustainable forms of transport?</li> <li>• Improve east west access throughout the area?</li> <li>• Improve north south access throughout the area?</li> <li>• Encourage businesses to allow more employees to work at home and work flexible hours.</li> </ul>

## **PART 1: WHAT HAS PLAN-MAKING / SA INVOLVED UP TO THIS POINT?**

## 5 INTRODUCTION (TO PART 1)

- 5.1.1 Plan-making has been underway since 2008, with several consultations having been held prior to this current formal publication stage, i.e. publication of the Proposed Submission AAP under Regulation 19 of the Local Planning Regulations. SA has been undertaken alongside plan-making, with SA outputs published alongside past consultation documents.<sup>7</sup>
- 5.1.2 Rather than recap the entire 'story', the intention here is to explain the work undertaken in 2016 and early 2017, when finalising the Proposed Submission AAP for publication.
- 5.1.3 Specifically, in-line with regulatory requirements, there is a need to explain how work was undertaken to develop and then appraise **reasonable alternatives**, and how the Council then took into account appraisal findings when finalising the draft plan.<sup>8</sup>
- 5.1.4 More specifically still, this part of the report aims to present information regarding the consideration of reasonable **alternative approaches to housing growth in Meridian Water**. This has proved itself, over time, to be the key, overriding issue at the heart of the plan. Hence it is considered reasonable that alternatives appraisal should focus on this matter.<sup>9</sup>
- 5.1.5 Whilst the plan will set policy to address a range of **other issues**, both site specific and AAP-wide / thematic, these policy areas were *not* a focus of alternatives appraisal, in the run-up to finalising the Proposed Submission AAP. Further information is provided in **Box 5.1**.

### Structure of this part of the report

- 5.1.6 This part of the report is structured as follows:

**Chapter 6** - Explains reasons for selecting the alternatives dealt with

**Chapter 7** - Presents an appraisal of the reasonable alternatives

**Chapter 8** - Explains reasons for selecting the preferred option.

<sup>7</sup> Notably, a proposed submission version of the plan was published in 2014, alongside an SA Report, under Regulations 19 of the Local Planning Regulations; however, the decision was taken subsequently not to submit the plan / SA Report for examination. The decision was also taken to rename the plan, from 'Central Leaside AAP' to 'Edmonton Leaside AAP'.

<sup>8</sup> In line with the Environmental Assessment of Plans and Programmes Regulations (2004), there is a need to present appraisal findings in relation to 'reasonable alternatives', as well as 'an outline of the reasons for selecting the alternatives dealt with'.

<sup>9</sup> 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.

*Box 5.1: Matters that were not a focus of alternatives appraisal, in the run-up to finalising the AAP*

As explained within Section 3 ('What's the plan seeking to achieve?'), a major focus of plan-making work has been on Meridian Water, and as part of this there has been formal consideration given to 'reasonable alternatives'. Other policy areas have not necessitated the same level of attention, and did not necessitate formal consideration of alternatives in the run-up to finalising the Proposed Submission AAP.

The bullet points below consider 'other policy areas' in turn. The intention is to explain briefly how/why a preferred approach emerged, and hence why there was no reasonable need give formal consideration to alternatives, in the run-up to finalising the Proposed Submission AAP. In each case, strategic priorities and the preferred policy approach are firmly justified, and it is difficult to envisage alternatives.

- Industrial Estates to the north of Meridian Water – Given loss of Strategic Industrial Land (SIL) in Meridian Water, and a need to support ongoing industrial capacity in Edmonton Leaside, SIL will continue to be protected in Edmonton Leaside beyond the Meridian Water boundary. Furthermore, additional SIL locations are identified for designation. The sites for designation to the north and east of Deephams STW are already industrial in character and will benefit from a designated status. Designating the Deephams STW site as SIL will consolidate and strengthen the protection of the area, recognising that the utilities infrastructure at Deephams is an industrial-type use which is appropriate for SIL. The Deephams STW designation, in combination with the new designations to the north and east, provides a continuous, coherent area of SIL, and will result in 38.1 hectares of additional SIL in Edmonton Leaside. Within the Meridian Water boundary there is set to be a reduction of 18 hectares of SIL, and so the net effect will be a significant increase in SIL. This is appropriate, given that demand for space within Enfield's industrial estates is expected to continue, with local agents confirming that shrinking availability of stock in Central London is forcing occupiers to outer London boroughs such as Enfield.
- Angel Road Retail Park – Given the London Plan (2016) position on need for retail floorspace (paragraph 4.42a), the declining retail role of this site, and its location, it is considered appropriate to de-designate the site as a retail park, and promote the site for a mixed employment led uses approach. New development of commercial spaces could cater for small businesses and support ancillary uses to strengthen the vitality and viability of other employment uses. Small scale walk to services could be introduced, such as a crèche or café, which meet the day to day needs of the industrial occupiers.
- Edmonton Eco Park - Policy context is already established by Core Strategy policies 20 and 22, DMD policies 51 and 52, London Plan Policy 5.5, and Enfield's Edmonton Eco Park Planning Brief. The role of the AAP is to present supplementary policy to ensure that development is acceptable in planning terms.
- Deephams STW – There is a need for capacity upgrades to meet statutory water quality requirements and the needs of a growing population. The Council is designating Deephams STW as Strategic Industrial Land (SIL) in order to consolidate and strengthen the protection of the area for industrial uses.
- Pickett's Lock – The proposal is to deliver a step change in leisure, sport and recreational uses at Pickett's Lock whilst respecting its Green Belt designation and ecological assets including Sites of Metropolitan Importance for Nature (SMINs) and the nearby Site of Special Scientific Interest (SSSI) at Chingford reservoirs. Proposals to improve the west-east movement network to underpin the revitalisation of Picketts Lock will be supported. In particular, the creation of a new pedestrian and cycle route across the West Anglia Main Line, A1055 Meridian Way and the River Lee Navigation.
- Transport connections and movement – Numerous measures are promoted, with the priorities being to increase connectivity, support sustainable modes of travel and deliver a high quality public realm.
- Promoting a Low Carbon Future – The overarching priority is to capitalise on the opportunity created by the scale of housing and employment growth envisaged. The primary opportunity relates to delivery of a decentralised heat network, which necessitates establishment of an energy centre on the EcoPark site; delivering a network route linking the EcoPark energy centre to the Meridian Water development; and securing future connections towards Alma Estate and Haringey/ Northumberland Park.
- Blue and green areas - The watercourses within Edmonton Leaside provide opportunities to create a distinctive and attractive sense of place. Waterfront developments should capitalise on the location, in particular at Meridian Water. Policy must capitalise on this opportunity, whilst equally recognising that there are environmental considerations, notably in respect of biodiversity and flood risk.

## 6 DEVELOPING THE REASONABLE ALTERNATIVES

### 6.1 Introduction

- 6.1.1 This chapter gives seeks to explain the process of developing the reasonable alternative approaches to housing growth at **Meridian Water** that are a focus of appraisal in Chapter 7. This chapter firstly gives consideration to the 'background', before going on to explain the process of developing the reasonable alternatives.

### 6.2 Background

- 6.2.1 Two sub-headings below address the lessons learned from past consultations, before a third sub-heading discusses the latest understanding of housing need and other strategic 'drivers' of housing growth in Meridian Water.

#### Discover Central Leaside: Towards a draft Area Action Plan (2012)

- 6.2.2 This was not the first stage of AAP development, with there having been consultation on 'issues and options' in 2008, and also a series of consultations on the Meridian Water Masterplan; however, it is appropriate to 'pick up the story' at this point.

- 6.2.3 Subsequent to adoption of the Enfield Core Strategy in 2010, the Council focused work on progressing the AAP, culminating in the 'Discover Central Leaside' consultation in 2012. The document was prepared to re-engage the community and stakeholders and update on the significant progress made in respect of evidence-base and understanding. The proposal for Meridian Water was in accordance with the recently adopted Core Strategy policy of delivering in the region of 5,000 new homes and 1,500 new jobs.

- 6.2.4 In total of 77 separate representations from businesses, public bodies and residents were received for the 'Discover Central Leaside' consultation, and a further 36 for the Meridian Water Masterplan, which was consulted-on alongside.

#### Proposed Submission Central Leaside Area Action Plan (2014)

- 6.2.5 The 2014 strategy broadly reflected the Core Strategy aspirations, with Table 5.1 establishing a housing capacity range of 4,950 to 5,400 homes. The spatial approach within Meridian Water was closely aligned with the Meridian Water Masterplan (2013), with a policy presented for each of the five distinct neighbourhoods envisaged.

- 6.2.6 An SA Report was published alongside the AAP, presenting an appraisal of the AAP and reasonable alternatives. Strategic Industrial Land (SIL) in Meridian Water was the focus of alternatives appraisal, as this was understood to be a key issue. Specifically, alternatives appraisal explored whether Harbet Road Industrial Estate should be de-designated, and whether replacement SIL should be provided within Meridian Water. Development and appraisal of alternatives was informed by findings from a range of evidence base documents, such as the Employment Land Review (2012) and the Industrial Estates Strategy (2014).

- 6.2.7 Consultation on the Proposed Submission Central Leaside AAP (2014), and accompanying SA Report, took place from 5th January to 16<sup>th</sup> March 2015. In total, 22 submissions were received. A summary of these representations, and the Council's response, is provided in the Consultation Statement available at the current time.

### Housing need and other strategic considerations

- 6.2.8 The borough, as across London as a whole, has experienced much higher population growth than previously envisaged. Latest projections by the ONS indicate an increase in population from around 325,000 in 2014 to around 400,000 by 2032, requiring the borough to accommodate an additional 25,000 to 35,000 households.
- 6.2.9 Accordingly, the London Plan (2016) increased the borough's housing target to 798 p.a., from the 2011 plan figure of 560 p.a. Future iterations of the London Plan are expected to further increase the housing requirements for London, and understanding of housing need is also being established through Enfield's emerging Strategic Housing Market Assessment (SHMA).
- 6.2.10 Meridian Water's Housing Zone status, achieved in 2015, is another consideration when considering growth quantum options. Housing Zone status supports the delivery of infrastructure projects, and led to a funding package being agreed for a third rail track and a new Meridian Water station – both of which will increase train frequency to the area and enable the potential for Crossrail 2 in later phases of development.
- 6.2.11 Given Housing Zone status / assumed infrastructure delivery, London Plan Policy 2.13 is also an important consideration. This policy expects development proposals in opportunity areas to realise the scope for intensification associated with proposed improvements to public transport. Higher growth is also supported by London Plan Policy 3.7 which encourages higher densities for larger sites which create a neighbourhood with a distinctive character.
- 6.2.12 In light of changing circumstances, a Local Plan for Enfield is in preparation, which will supersede the Core Strategy once adopted. Finally, it is important to note that Enfield has now selected a master developer for Meridian Water, with detailed work having been undertaken that suggests greater capacity than previously envisaged. An outline planning application has been submitted for the new station and a mixed use development west of the railway lines, and with this a benchmark has been set for the wider Meridian Water area.

### 6.3 Developing the reasonable alternatives

- 6.3.1 This section firstly gives consideration to an initial step taken in 2016, namely modelling work to examine 32 development scenarios, before explaining how this work was drawn-upon to establish reasonable alternatives for appraisal (and consultation).

#### Development scenario modelling

- 6.3.2 The Council recognised that the changing circumstances since adoption of the Core Strategy, including population growth and the new London Plan, indicated support for a significantly higher number of housing units at Meridian Water. However, it was equally recognised that higher density redevelopment could lead to tensions with certain sustainability objectives, e.g. in relation to sustainable transport and community infrastructure, at least in the shorter term.
- 6.3.3 As such, the Council determined a need to undertake technical modelling work, to provide understanding and evidence in relation to the growth potential at Meridian Water. A series of 32 housing growth quantum scenarios were assessed, **varying in terms of 1) housing quantum; 2) employment quantum; and 3) the proportion of Harbet Road EIL retained.**
- 6.3.4 Modelling results are shown in **Table 6.1**. For each of the 32 scenarios, the table reports:
- **Total public & private shared amenity** - LBE targets 2.37 Ha / 1000 residents as a target for public open space. However, given the proximity of the 4,000 Ha of the Lea Valley Regional Park (LRVP) and other amenity areas, such as Kenninghall open space, 1 Ha / 1000 was considered acceptable (i.e. < 1 Ha / 1000 is reported as **red** in the table).
  - **Private amenity** - The London Plan Housing SPG (2015) requires a minimum of 5m<sup>2</sup> of private outdoor space to be provided for 1-2 person dwellings and an extra 1m<sup>2</sup> for each additional occupant. In addition 10m<sup>2</sup> of amenity space per child is required. Assuming a

housing mix of 74% 1 or 2-bed units to 26% 3+ bed units, 12m<sup>2</sup> / unit would be needed (7m<sup>2</sup> for amenity and 5m<sup>2</sup> child allowance), i.e. < 12m<sup>2</sup> / unit is reported as **red**.

- **Residential parking provision ratio** - Based on the Public Transport Accessibility Level (PTAL) range, there is a need for 49% of homes to have a parking space, based on a lower provision ratio near the station and a higher one further to the east. Scenarios that would significantly over provide parking (>80%) are reported as **red**.
- **Non-residential parking spaces** - A general rate of 15 cars per 1000 full time equivalent (FTW) employees is proposed. All scenarios easily meet the parking standard.
- **Average storey heights** - Above eight storeys, even with careful modulation of building mass and the use of some taller buildings, there are likely to be problems in respect of standards of light, amenity and street enclosure, i.e. > 8 storeys is reported as **red**. N.B.
  - The scenarios, and hence the analysis reported in **Column E**, assume the square footage required to accommodate a housing mix of 74 : 26, as proposed by the Council's appointed master developer, whilst **Column H** illustrates the additional height required if a different housing mix were applied with a greater emphasis on family housing, namely the Enfield Core Strategy mix of 40 : 60.
- **Net density across site** – Scenarios that would achieve a net density > 225 dwellings per hectare (dph) were reported as **red**. This is on the basis of the Sustainable Residential Quality (SRQ) density matrix from the London Plan (2016), which establishes this as the maximum density for homes: in an urban character area / setting; with a mid-range number of habitable rooms per home; and with a PTAL range of 4 to 6.

Table 6.1: Modelling the implications of Meridian Water housing growth scenarios

Scenario	Scenarios				A	B	C	D	E	F	G	H
	Dwellings	No. Jobs	SIL/ Industry	Total Public & Private Shared Amenity HA/1000 Res	Private Amenity m2/unit	Residential parking %/unit *	Non residential parking Spaces/ 1000 FTE's	Average storey heights Developer Mix	Net Density across site - dph	Assessment against standard - Incidence of failure	Average storey heights - LBE mix	
1.1	a	5000	3000	100%	0.98	18	104%	183	6.7	148	3	7.7
	b		6000	100%	0.98	18	104%	91	7.6	148	2	8.5
1.2	a	8000	3000	100%	0.61	14	65%	183	10.1	237	4	11.6
	b		6000	100%	0.61	14	65%	91	11.0	237	3	12.4
1.3	a	10000	3000	100%	0.39	11	52%	183	12.3	296	5	14.2
	b		6000	100%	0.39	11	52%	91	13.3	296	4	15.1
1.4	a	12000	3000	100%	0.41	12	43%	183	14.6	356	4	16.8
	b		6000	100%	0.41	12	43%	91	15.5	356	3	17.7
2.1	a	5000	3000	50%	1.51	20	104%	183	5.8	130	2	6.6
	b		6000	50%	1.51	20	104%	91	6.5	130	1	7.3
2.2	a	8000	3000	50%	0.94	15	65%	183	8.6	208	3	9.9
	b		6000	50%	0.94	15	65%	91	9.4	208	2	10.6
2.3	a	10000	3000	50%	0.75	14	52%	183	10.5	260	4	12.1
	b		6000	50%	0.75	14	52%	91	11.3	260	3	12.8
2.4	a	12000	3000	50%	0.63	13	43%	183	12.4	312	4	14.3
	b		6000	50%	0.63	13	43%	91	13.2	312	3	15.1
3.1	a	5000	3000	25%	1.80	21	104%	183	4.9	114	2	5.6
	b		6000	25%	1.80	21	104%	91	5.6	114	1	6.2
3.2	a	8000	3000	25%	1.13	16	65%	183	7.3	182	1	8.4
	b		6000	25%	1.13	16	65%	91	8.0	182	1	9.0
3.3	a	10000	3000	25%	0.90	15	52%	183	8.9	227	4	10.3
	b		6000	25%	0.90	15	52%	91	9.6	227	3	10.9
3.4	a	12000	3000	25%	0.75	14	43%	183	10.5	272	4	12.2
	b		6000	25%	0.75	14	43%	91	11.2	272	3	12.8
4.1	a	5000	3000	0%	2.14	24	104%	183	4.1	96	2	4.6
	b		6000	0%	2.14	24	104%	91	4.6	96	1	5.1
4.2	a	8000	3000	0%	1.33	18	65%	183	6.1	154	1	7.0
	b		6000	0%	1.33	18	65%	91	6.6	154	0	7.5
4.3	a	10000	3000	0%	1.07	16	52%	183	7.4	192	1	8.5
	b		6000	0%	1.07	16	52%	91	7.9	192	0	9.0
4.4	a	12000	3000	0%	0.89	14	43%	183	8.7	231	4	10.1
	b		6000	0%	0.89	14	43%	91	9.3	231	3	10.6
Comfortably meets the standard.				>2.37 Ha/1000	>20m2/unit	40-60%	>30 cars/FTE	<6	94-185dph	1 or less	<6	
Requires high quality or innovative design & execution				1-2.37 Ha/1000	12-20m2/unit	60-80%	15-30 cars/FTE	6-8	185-225dph	2	6-8	
The scenario does not meet the standard.				<1 Ha/1000	<12m2/unit	<40% or >80%	<15 cars/FTE	>8	>225dph	3 or more	>8	

The reasonable alternatives

- 6.3.5 In light of the modelling work, the task was to select a small, manageable number of 'reasonable alternative' scenarios for appraisal.<sup>10</sup>
- 6.3.6 As per the scenarios subjected to modelling, it was determined that the reasonable alternatives should vary in respect of –
  - **housing quantum** – the decision was taken to rule-out the more extreme ('bookend') options, in light of the modelling work and other factors, and hence reflect **two options** across the alternatives: 8,000 or 10,000 homes; and
  - **employment quantum** – the decision was taken to reflect **two options** as per the modelling work, namely 3,000 or 6,000 jobs.
- 6.3.7 Unlike the modelled scenarios, it was determined that the reasonable alternatives -
  - should reflect **housing mix** as a variant, with **two options** reflected: balanced mix (i.e. 50 : 50 as per the recommendation of the emerging Enfield Strategic Housing Market Assessment, SHMA) or a mix weighted to smaller homes (i.e. 74 : 26, as per the master developer proposal);<sup>11</sup> and
  - need not formally reflect Harbet Road SIL retention as a variant; however, a scenario involving lower housing growth, higher employment growth and weighted housing mix (i.e. Option 4 in Table 6.2) would naturally enable some SIL retention.
- 6.3.8 Ultimately, eight reasonable alternatives were established for appraisal (and consultation) – see **Table 6.2**. These alternatives were determined to be the 'reasonable' alternatives in that their appraisal would facilitate effective discussion of important issues and opportunities.

Table 6.2: The reasonable alternatives

Option	Housing quantum	Employment quantum	Housing mix
1	8,000	Lower	Balanced
2	8,000	Lower	Weighted to smaller
3	8,000	Higher	Balanced
4	8,000	Higher	Weighted to smaller
5	10,000	Lower	Balanced
6	10,000	Lower	Weighted to smaller
7	10,000	Higher	Balanced
8	10,000	Higher	Weighted to smaller

<sup>10</sup> There was a desire to keep the number of reasonable alternatives to a minimum, in order to ensure conciseness and support readability / accessibility to a wide audience. As such, it was recognised that more extreme, 'bookend' scenarios could not feature.

<sup>11</sup> Another development mix option considered, but ultimately not reflected in the alternatives, was the option of 40% 1 or 2-bed units to 60% 3+ bed units, as per the adopted Enfield Core Strategy.

## 7 APPRAISING REASONABLE ALTERNATIVES

### 7.1 Introduction

7.1.1 The aim of this chapter is to present summary appraisal findings in relation to the reasonable alternatives described above. Detailed appraisal findings are presented in **Appendix III**.

### 7.2 Summary alternatives appraisal findings

7.2.1 **Table 7.1** presents summary appraisal findings in relation to the eight reasonable alternatives available to the Council to choose between when finalising the Proposed Submission Plan. Detailed appraisal methodology is explained in Appendix IV, but in summary:

Within the table the alternatives are appraised in terms of the topics established through 'scoping' – see Table 4.1. Within each topic row, the alternatives are ranked in order of preference (1 being best) and the performance of each option is also classified in terms of 'significant effects' (using **red/green** shading).

Table 7.1: Summary appraisal of the reasonable alternatives

Topic	Categorisation / Rank of preference							
	Option 1 8,000; Lower; Balanced	Option 2 8,000; Lower; Weighted	Option 3 8,000; Higher; Balanced	Option 4 8,000; Higher; Weighted	Option 5 10,000; Lower; Balanced	Option 6 10,000; Lower; Weighted	Option 7 10,000; Higher; Balanced	Option 8 10,000; Higher; Weighted
Air	2	2	★1	2	2	2	8	★1
Noise	2	2	★1	2	2	2	8	★1
Climate change	7	8	★1	2	2	2	★1	★1
Biodiversity	2	★1	4	2	6	4	8	6
Open spaces	★1	★1	★1	★1	★1	★1	8	★1
Heritage	=							
Waste	=							
Water	2	★1	4	2	6	4	8	6
Sustainable design	=							
Land use efficiency	7	8	★1	2	2	2	★1	★1
Housing	3	7	3	7	★1	3	★1	3
Health	★1	6	★1	6	★1	★1	8	★1
Poverty	2	★1	2	2	2	2	2	2
Education	=							
Crime	=							
Accessibility	★1	★1	★1	★1	★1	★1	2	★1
Economic growth	5	5	★1	★1	5	5	4	★1
Employment	?							
Skills	=							
Transport	=							

Topic	Categorisation / Rank of preference							
	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6	Option 7	Option 8
	8,000; Lower; Balanced	8,000; Lower; Weighted	8,000; Higher; Balanced	8,000; Higher; Weighted	10,000; Lower; Balanced	10,000; Lower; Weighted	10,000; Higher; Balanced	10,000; Higher; Weighted

**Conclusions**

The appraisal finds the potential to confidently distinguish the alternatives in terms of twelve out of twenty objectives. Focusing on the six objectives under which it is possible to establish a ‘significant’ distinction, summary findings are as follows –

- Air – Meridian Water performs well as a location for major growth, and so lower growth options are not supported. However, modelling work serves to indicate that there is a threshold level of density, above which design objectives will not be achieved, with implications for air quality (and also noise, health and accessibility). As such, **Option 7**, which would involve highest density, performs poorly.
- Water – Meridian Water includes an extensive area of flood risk, hence there is a need to ensure sufficient space for flood risk avoidance and mitigation measures. As such, **Option 7**, which would involve highest density, performs poorly.
- Land use efficiency – There is a need to maximise residential and employment floorspace, given that Meridian Water is an area of under-used land. As such, **Options 3, 7 and 8** perform well.
- Housing – There is a need to maximise the number of houses delivered across the spectrum of household sizes and types. As such, **Options 5 and 7** perform well.
- Economic growth – There is a need to maximise the number of new jobs delivered on-site, whilst also ensuring a good mix of employment uses. As such, **Option 3, 4 and 8** perform well.

Whilst it is not possible to conclude ‘significant’ effects, it is also important to note the potential to differentiate the alternatives in terms of –

- Climate change – There is a need to maximise residential and employment floorspace at Meridian Water, given low carbon opportunities. As such, **Options 3, 7 and 8** perform well.
- Biodiversity – Meridian Water is a sensitive location within the Lee Valley, and so a lower growth strategy could be called for in this respect. As such, **Option 2** performs well.
- Poverty / employment – there are certain arguments to suggest that a lower growth strategy (Option 2) performs well, given that it would enable some retention of the Harbet Road SIL.

Whilst Option 3 scores highest on a simply tally, judgment on the weight accorded to the sustainability objectives must be used in decision-making.

## 8 DEVELOPING THE PREFERRED OPTION

### 8.1 Introduction

8.1.1 The aim of this Chapter is to present the Council's response to the alternatives appraisal / the Council's reasons for supporting the proposed submission approach in light of alternatives.

### 8.2 The Council's outline reasons

8.2.1 The Council has provided the following text -

*“Delivering Meridian Water requires the Council to achieve a balance between a variety of land uses. Meridian Water must become a viable, sustainable neighbourhood which has the potential for 10,000 new homes and over 6,000 new jobs. The mix of uses must include new schools, healthcare facilities, transport infrastructure, retail, leisure and green spaces. The restrictions of SIL designation make it incompatible with the delivery of a sufficient quantum of housing, jobs and supporting infrastructure, and the EL AAP therefore removes this designation. Furthermore the housing mix must also be appropriate to delivery of a viable approach which meets the required level of development, and as such the ELAAP supports delivery, where supported by evidence, of a mix weighted towards smaller homes, rather than a balanced mix of homes (as recommended by the emerging SHMA) or a mix weighted towards family homes (as per the Enfield Core Strategy policy).”*

## **PART 2: WHAT ARE THE SA FINDINGS AT THIS STAGE?**

## 9 INTRODUCTION (TO PART 2)

9.1.1 The aim of this part of the report is to present an appraisal of the Proposed Submission AAP. Firstly there is a need to explain the appraisal methodology.

### 9.2 Methodology

9.2.1 The appraisal identifies and evaluates 'likely significant effects' of the proposed submission approach on the baseline, drawing on the sustainability topics and objectives identified through scoping (see Table 4.1) as a methodological framework. To reiterate, the topics are:

- Air
- Noise
- Climate change
- Biodiversity
- Open spaces
- Heritage
- Waste
- Water
- Sustainable design and construction
- Land use efficiency
- Housing
- Health
- Poverty
- Education
- Crime
- Accessibility
- Economic growth
- Employment
- Skills
- Transport

9.2.2 Every effort is made to predict effects accurately; however, this is inherently challenging given the high level nature of the policy approaches 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. The aim is 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 possible to comment on merits (or otherwise) of the draft plan in more general terms. Finally, it is important to note that effects are predicted taking account of the criteria presented within Schedule 1 of the SEA Regulations.<sup>12</sup> 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 draft AAP to impact an aspect of the baseline when implemented alongside other plans, programmes and projects. Effect characteristics are described within the appraisal as appropriate, balancing the important objective of achieving conciseness and accessibility to the public.

#### Adding structure to the appraisal

9.2.3 Within each of the twenty appraisal narratives below, two sub-headings are used to structure the appraisal. Under the first sub-heading – "*Commentary on plan policies*" – specific components of the plan (the plan presents policies across nine chapters) and specific policies are discussed as appropriate. Under the second sub-heading – "*Appraisal of the AAP as a whole*" – conclusions are drawn on the effects of the proposed AAP, as required by regulations.<sup>13</sup>

N.B. Specific policies are referenced as appropriate, but it is not the case that each of the 28 policies within the AAP is appraised in terms of each of the 20 sustainability topic headings. Indeed, not all policies are referenced within the appraisal, as not all have the potential to lead to significant, or notable effects at the strategic scale.

<sup>12</sup> Environmental Assessment of Plans and Programmes (SEA) Regulations 2004

<sup>13</sup> The SEA Regulations require an appraisal of 'the plan and reasonable alternatives'.

## 10 APPRAISAL OF THE PROPOSED SUBMISSION AAP

### 10.1 Introduction

10.1.1 The appraisal of the Proposed Submission Plans (SIR plus SALP) is presented below under 20 topic headings ('the SA framework'), with each narrative split using three sub-headings.

### 10.2 Air

Reduce air pollution and ensure air quality continues to improve

#### Commentary on plan policies

- 10.2.1 Taller buildings in Meridian Water could potentially lead to wind and micro-climates with a bearing on air quality. As explained within Policy EL1 (Housing in Meridian Water): *"The demand upon the available land at Meridian Water means that a rising number of units will lead to a **greater average building height**."*
- 10.2.2 However, Policy EL1 goes on to state that: *"Development proposals **must not result in building heights which lead to poor spatial and design performance**, or negatively impact the amenity of other buildings and public realm in terms of light amenity. Density levels and building heights will vary spatially across Meridian Water, depending upon specific site character, including transport capacity, access to supporting services and location. Higher density development should be situated in areas with higher levels of accessibility to public transport and/or where it can capitalise most appropriately on features such as... open space."*
- 10.2.3 Policy EL11 (Building Form at Meridian Water) add considerable detail in respect of **building configuration**, requiring that development proposals: *"Ensure buildings conform to a height-to-width ratio appropriate for the street, with an **aspect ratio of 1:1 to 1:1.5**, achieved through design solutions such as upper storey set-backs, accent towers and breaks in blocks, as well as raised podium courtyards used to maximise aspect and access to daylight and sunlight."*
- 10.2.4 The policy also deals with **tall buildings**, notably requiring that development proposals: avoid creating a 'wall' of tall buildings; include measures to mitigate wind and microclimate issues in their surroundings; and *"Ensure that development adjacent to the North Circular Road provides a buffer for buildings deeper within the Meridian Water area, while providing a high-quality frontage to the road."*
- 10.2.5 Policy EL17 (Redevelopment of the EcoPark site) requires that development proposals within the **EcoPark** site: *"Enable efficient and effective operation of the site to meet regulatory requirements for health and safety, air quality and environmental protection."*

#### Appraisal of the AAP as a whole

- 10.2.6 Recognising that the whole of the Enfield is designated as an Air Quality Management Area (AQMA), there are number of considerations.
- First and foremost, there is a need to minimise **car use** amongst new residents, so as to minimise air pollution on-site and offsite.
  - Secondly, there is a need to design the development so as to facilitate good flows of car traffic, and also prevent concentrations of air pollution through supporting good **air flows**, with implications for tall buildings and street widths.
  - Thirdly, there is a need to recognise that the North Circular road at Meridian Water's northern edge is a major **source of pollution**, and hence sensitive land uses – namely residential and educational uses – should be buffered.

- 10.2.7 With regards to car movements, there will be **good potential for car free developments** in close proximity to the new Meridian Water station, where PTAL will be high, relative to other locations in London (once transport upgrades are in place). PTAL will be lower to the eastern extent of Meridian Water, but still relatively good; plus it is anticipated that design measures can be implemented that maximise ease of movement west across the site, towards the station. Release of SIL land is supportive of this movement objective.
- 10.2.8 With regards to design considerations, detailed modelling work and consideration of design options has served to demonstrate that acceptable standards can be achieved. Specifically, it should be possible to achieve a street width to building height ratio of 1 : 1-1.5, and ensure that taller buildings are mostly located adjacent to public open space or waterways. The **average storey height will be around 8 storeys**, which will necessitate careful management.
- 10.2.9 Finally, with regards to **buffering the North Circular**: there is policy in place to ensure that this occurs, and it is likely that office blocks will be used for this purpose.
- 10.2.10 In conclusion, the AAP area, and Meridian Water in particular, is an appropriate location for housing and employment growth in the London context, from a PTAL and therefore air quality perspective. Nonetheless, high density development, coupled with nearby sources of pollution, will create some challenges. The plan is supported, from an air quality perspective, but **significant effects are not predicted**.

**10.3 Noise**

Reduce disturbance from noise

Commentary on plan policies

- 10.3.1 Policy EL11 (Building Form at Meridian Water) deals with **tall buildings**, notably requiring that development proposals: *“Ensure that development adjacent to the North Circular Road provides a buffer for buildings deeper within the Meridian Water area, while providing a high-quality frontage to the road.”*
- 10.3.2 Policy EL17 (Redevelopment of the EcoPark site) requires that development proposals within the **EcoPark** site: *“Operate within permitted limits on nuisance risks such as noise and odour.”*
- 10.3.3 Policy EL18 (Deephams Sewage Treatment Works, **STW**) references the need for: *“Measures to minimise noise impacts of the site.”*

Appraisal of the AAP as a whole

- 10.3.4 Issues are similar to those discussed under ‘Air quality’, in that there is a need to minimise car movements, buffer the North Circular road and enable space within the ‘footprint’ of the site for open space, wider streets and high quality public realm more generally. As per the discussion under ‘Air quality’, the plan is supported but **significant effects are not predicted**.

**10.4 Climate change**

Meet the challenge of climate change

Commentary on plan policies

- 10.4.1 Policy EL17 (Redevelopment of the EcoPark site) requires that development proposals within the **EcoPark** site:
  - *“Minimise emissions to air and water, including carbon dioxide emissions, through the use of advanced waste management technologies, environmental improvements, and sustainable design and construction techniques such as green roofs and walls...”*

- “Maximise energy and resource efficiency in construction and operation, and use design to facilitate materials reuse and recycling at end of life/ decommissioning.”
- “Support the implementation of the Lee Valley Heat Network (LVHN) as set out in Policy EL26.”

- 10.4.2 Policy EL18 (Deephams Sewage Treatment Works, **STW**) references renewable energy generation opportunities, and also the possibility of a connection to the Lee Valley Heat Network.
- 10.4.3 Policy EL26 (The Lee Valley Heat Network) supports the following key measures to support the heat network: 1) The establishment of an energy centre on the EcoPark site; 2) A network route linking the EcoPark energy centre to the Meridian Water development; and 3) Future connections, for example towards Alma Estate and Haringey/ Northumberland Park. **All major developments shall connect to or contribute towards the LVHN** in accordance with Policy DMD 52 and the Decentralised Energy Network Technical Specification Heat Network SPD. The policy goes on to list a number of specific measures that must be implemented at the EcoPark site, including: “Enable heat/energy from the new energy recovery facility (ERF), when it is built, to be captured and supplied to the LVHN energy centre.” Importantly, the policy then goes on to require that: “To **enhance the resilience of the LVHN**, any development of over 300 dwellings with an individual connection to the network should provide an area that could be used in an emergency to park a truck mounted boiler sized at 20 metres by 6 metres.”

#### Appraisal of the AAP as a whole

- 10.4.4 Climate change mitigation objectives dictate a need to minimise: A) per capita CO<sub>2</sub> emissions from transport; and B) per capita CO<sub>2</sub> emissions from the built environment.
- 10.4.5 In relation to (A), as discussed above under ‘Air quality, it is essentially the case that transport upgrades will result in good PTAL levels, and hence the AAP area, and Meridian Water in particular, is an appropriate location at which to maximise growth, from a perspective of wishing to support ‘sustainable transport’, i.e. modal shift away from use of the private car.
- 10.4.6 In relation to (B), there is an established opportunity to supply low carbon heat and electricity to homes and businesses locally, given the Edmonton EcoPark proposals. As such, there is a strong argument for maximising growth, and also delivering a good mix of homes to employment (as this helps to ensure a stable demand throughout the day).
- 10.4.7 With regards to climate change adaptation, a key consideration is flood risk, which is given stand-alone consideration under the ‘water’ heading, below. There are also other climate change adaptation issues, in particular around rising temperatures and the resulting need for good design, to include good air circulation / ventilation and shading. See discussion of design related issues under the ‘air’ and ‘noise’ headings, above.
- 10.4.8 In conclusion, an overriding consideration would seem to be the need to capitalise on the opportunity that presents itself, given the EcoPark site, to supply low carbon heat and electricity. As such, it would seem appropriate to maximise residential growth, and also deliver the higher employment growth quantum figure.
- 10.4.9 It is **not possible to conclude ‘significant’ effects**, as climate change mitigation is a global issue, and hence local actions can only have a minor effect.

## 10.5 Biodiversity

Conserve and enhance biodiversity in the AAP's area and beyond

### Commentary on plan policies

- 10.5.1 Policy EL8 (Managing Flood Risk in Meridian Water) states that: *“**SuDS features** should be connected and integrated with landscape as much as possible and planted to enhance biodiversity.”*
- 10.5.2 Policy EL9 (Leisure Facilities and Open Space at Meridian Water) requires that “habitat is incorporated to enhance biodiversity” and also that: *“Where appropriate... new **wetland habitat** is incorporated, including boardwalks and pontoons to provide access.”*
- 10.5.3 Policy EL11 (Building Form at Meridian Water) requires that development proposals: “Provide, where practical roof gardens or **green/brown roofs**... [and] **green walls** where practical to provide visual interest, mitigate climate change and support biodiversity.”
- 10.5.4 Policy EL12 (Public Realm at Meridian Water) requires that development proposals optimise the potential of **the water network**, including through: *“Enhancing the existing watercourses across the site including environmental remediation, biodiversity enhancements, and the **naturalisation of banks** where appropriate.”*
- 10.5.5 Policy EL18 (Deephams Sewage Treatment Works) references the need for *“incorporation of appropriate landscape treatment and to use opportunities to enhance **ecological links** to the wider Edmonton Leaside area.”*
- 10.5.6 Policy EL20 (Revitalising Open Space at Picketts Lock) supports *“the reuse or redevelopment of existing **open space at Pickett’s Lock**.”* The policy references the potential to *“enhance ecological links to the wider Edmonton Leaside area.”*
- 10.5.7 Policy EL27 (Watercourses at Edmonton Leaside) states that development proposals at waterfront locations must, amongst other things: “Protect and enhance habitats and biodiversity, through measures including **softening of river channel edges**.” The policy also states that: *“Proposals for the restoration or the increased use of the River Lee Navigation, Pymmes Brook and Salmons Brook as the Lee Valley waterways within Edmonton Leaside will be supported in line with London Plan policies on the **Blue Ribbon Network** and DMD policy 63 on the protection and improvement of watercourses and flood defences.”*
- 10.5.8 Policy EL28 (New and Existing Green Spaces) states that: *“The land on either side of the North Circular Road to the east and northeast of Meridian Water has been identified as offering potential for the creation of **new open space**. There is also potential to improve the access and functions at existing green and open spaces including at **Picketts Lock** and **Kenninghall Open Space**. Proposals will be supported that improve the access across and between existing and new green spaces, developing a **network of ‘green chains’** comprising footpath networks and cycle paths. Green chains can be used to improve east west connectivity between the Lee Valley Regional Park and the rest of Edmonton Leaside and beyond. New development may be expected to make appropriate financial contributions to improving green and open spaces, in line with the Section 106 SPD.”*

### Appraisal of the AAP as a whole

- 10.5.9 There are considerable **biodiversity opportunities**, given the location of Edmonton Leaside within the Lee Valley - integral to the All London Green Grid and the Blue Ribbon Network – and adjacent to the Lee Valley Regional Park (LVRP). A number of opportunities are set to be capitalised upon. Notably, the Pymmes and Salmon Brooks, which lie within the Meridian Water site, offer the potential for naturalisation.

- 10.5.10 However, there are potentially further opportunities to be considered, for example better use of the open space area that lies within the AAP area to the east of the River Lee Navigation / north of Meridian Water / south of Chingford Reservoir. It is **recommended** that this be examined more closely, albeit it is recognised that there will be the potential for further work subsequent to plan adoption.
- 10.5.11 Finally it is important to mention **Picketts Lock**, which is a major area of open space. The proposal is to deliver a step change in leisure, sport and recreational uses at Pickett's Lock whilst respecting its Green Belt designation and ecological assets including Sites of Metropolitan Importance for Nature (SMINs) and the nearby Site of Special Scientific Interest (SSSI) at Chingford reservoirs. On balance there is little reason to suggest risk to biodiversity; however, this matter is worthy of further examination and monitoring.
- 10.5.12 In conclusion, the sensitive nature of the area arguably lends support for a more restrained approach to growth; however, on balance it is apparent that growth is necessary to support the realisation of the opportunities that exist. The plan is supported, from a biodiversity perspective, but **significant effects are not predicted**.

## 10.6 Open spaces

Protect enhance and make accessible for enjoyment, the area's green and open spaces

### Commentary on plan policies

- 10.6.1 Policy EL5 (Community Facilities in Meridian Water) recognises that high density development creates some challenges: *“Due to the high density of development at Meridian Water, innovative design of buildings and outdoors space may be necessitated to make efficient use of land. This might include fully exploring multiple storey buildings, multiple use games areas (MUGA) and **design options** such as locating play space on the roof. Meeting the need for outdoor sports pitches through **off-site provision** should be fully considered. The pitches must be provided at a distance of not more than 400m from the school entrance and be able to be conveniently and safely accessed.”*
- 10.6.2 Policy EL9 (Leisure Facilities and Open Space at Meridian Water) sets out additional detail, in respect of making provision for open spaces and children's play spaces, recognising that: *“The pressure on land availability may result in **some open space being provided beyond Meridian Water**, requiring development proposals to show how good linkages to this space can be provided.”* Development proposals must demonstrate: *“The provision of sufficient open space within Meridian Water - including parks and linear spaces which **incorporate a wide variety of uses and amenities** - in proportion to the quantum of residential development proposed; or how provision can be met through improvements to the accessibility and **quality of existing open space**.”* The policy also commits to exploring options for **Banbury Reservoir**, including: *“Improved pedestrian access around the reservoir... with green links and connections to South Chingford and Higham Hill.”*
- 10.6.3 In respect of **waterways and water frontages**, Policy EL12 (Public Realm at Meridian Water) requires that development proposals optimise the potential of the water network through: active frontages facing towards the water, in particular along the River Lee Navigation; ensuring the space between the buildings and the water promotes uses including walking, cycling; and incorporating waterways as a focal element of public space.
- 10.6.4 Policy EL19 (Revitalising Developed Areas at Picketts Lock) identifies the area as suitable to deliver a large **significant new development at Picketts Lock** that will *“provide a destination attraction for Edmonton Leaside and beyond.”* The policy commits to close working with the Lee Valley Regional Park Authority. Policy EL20 (Revitalising Open Space at Picketts Lock) supports *“the reuse or redevelopment of **existing open space at Pickett's Lock**.”* In particular, the use of the green spaces and waterways will be encouraged, with a number of specific measures proposed with a view to **attracting a greater number of visitors**.

- 10.6.5 Policy EL27 (Watercourses at Edmonton Leaside) states that development proposals at **waterfront locations** must positively address the waterfront through providing an active frontage and “provide, where suitable, cultural and leisure uses including cafes, bars and restaurants and high quality public open spaces at the waterfront.”

#### Appraisal of the AAP as a whole

- 10.6.6 Higher density development, within the Meridian Water site in particular, will fail to deliver the area of open space on-site that is expected by London Borough of Enfield (2.37ha per 1000 residents); however, this is not considered to be a major problem, given two significant areas of open space on-site and excellent access to the extensive resource of the LVRP. Modelling work has found that at least **1ha open space per 1000 residents** will be achieved.
- 10.6.7 Another consideration is the need to ensure access east across the site to the **LVRP**, which necessitates release / redevelopment of at least half of the existing Harbet Road SIL. In this respect, the AAP performs well, in that opportunities are set to be realised in full.
- 10.6.8 In conclusion, the plan is supported, from an open space perspective, with a degree of uncertainty given the reliance on masterplanning and design measures yet to be determined. **Significant effects are not predicted.**

## 10.7 Heritage

Protect and enhance heritage and cultural assets in Central Leaside and surrounding area

#### Commentary on plan policies

- 10.7.1 Policy EL11 (Building Form at Meridian Water) deals with **tall buildings**, notably requiring that development proposals: “Demonstrate the appropriateness of the site for one or more tall building, identifying the role and contribution of tall buildings as part of an **overall vision for a place**, and the wider area (not limited to Meridian Water boundary), and an assessment of the chosen location, against other possible sites appropriate for tall buildings.”
- 10.7.2 Policy EL12 (Public Realm at Meridian Water) sets out to ensure that: “The new and existing characteristics and features of Meridian Water must be optimised to create a coherent **public realm** across the site and into the wider surrounding area.” The policy includes a specific requirement that development proposals: “Demonstrate an understanding of the **industrial heritage** and archaeology of the area.”

#### Appraisal of the AAP as a whole

- 10.7.3 There are no designated heritage features, but the industrial heritage of the area remains apparent, to some extent, and is worthy of conservation. In particular, there is a need to recognise the heritage value of the River Lee Navigation.
- 10.7.4 Proposals are set to utilise the River Lee Navigation as a resource, e.g. with a towpath added on the western side to enable access to the river. Equally, the junction of ‘the Causeway’ (i.e. the main east-west spine through Meridian Water) is set to be developed as a ‘Making District’ reflecting the industrial heritage.
- 10.7.5 In conclusion, there is little to suggest that the high density development proposed will compromise the potential for the limited heritage assets that exist to be integrated as a masterplanning and design consideration. There is set to be a degree of conservation-led masterplanning, and hence the plan is supported, from a heritage perspective. However, **significant effects are not predicted.**

## 10.8 Waste

Achieve the sustainable management of waste

### Commentary on plan policies

10.8.1 Policy EL6 (The Causeway, Meridian Water) states that development proposals must: *“Give consideration to the possibility of including the latest **waste disposal systems**, for both household and business waste collection.”*

10.8.2 Policy EL17 (Redevelopment of the EcoPark site) requires that development proposals: *“Provide enhanced and sustainable **waste treatment facilities** to meet the waste management needs of north London’s residents as part of a network of waste management sites.”*

### Appraisal of the AAP as a whole

10.8.3 Enfield is London’s second largest waste management and recycling hub and contains **Edmonton EcoPark**, a sub-regional facility that is one of London’s largest recycling and sustainable waste management facilities. The principal requirement for the future development of the EcoPark is to treat waste in the most sustainable way possible; however the treatment of waste also presents a significant opportunity to generate additional community benefits through the provision of heat.

10.8.4 For this reason the EcoPark has been identified as the key **low carbon heat source** for initial development of the Lee Valley Heat Network (LVHN). The AAP is supportive of the LVHN, but it is not thought that the effect will be to compromise waste management objectives in any way. The future waste management infrastructure requirements of the EcoPark site are currently awaiting consent from the Secretary of State, as part of the North London Waste Management Plan. In parallel with this work, energetik is in the process of agreeing a heat supply agreement and lease at the EcoPark. In **conclusion**, the plan is supported, from a waste perspective, but **significant effects are not predicted**.

## 10.9 Water

Achieve sustainable water resources management

### Commentary on plan policies

10.9.1 Policy EL8 (Managing Flood Risk in Meridian Water) seeks to secure *“an integrated and sustainable approach to the management of development and flood risk through complementary flood mitigation and water management measures.”* Notably, development proposals must *“demonstrate a **coordinated relationship** with surrounding interfaces, including utilities corridors; proposed ground levels and buildings; carriageways, cycleway and footway corridors; landscape features; building drainage; as well as managing health and safety risks.*

10.9.2 The policy also states that: *“Any land identified as potential for **offsite flood storage** should preferably be located close to the proposed development site and preferably lie within the Edmonton Leaside area, so minimising the disruption to local flow patterns and flood mechanisms which could otherwise result due to displacement of water. Planning obligations will be sought for any development where there is a risk of flooding and flood mitigation infrastructure is required.”*

10.9.3 Policy EL9 (Leisure Facilities and Open Space at Meridian Water) requires consideration given to the potential at **open spaces** for *“SUDs and flood storage... in line with Policy EL8.”*

- 10.9.4 Policy EL12 (Public Realm at Meridian Water) requires that development proposals: *“Ensure **public realm surfaces** are porous and/ or enable natural drainage; and Incorporate water features as a key element in public spaces.”* Policy EL12 also requires that development proposals optimise the potential of the water network as an element of the public realm, including through: *“Maximising opportunities for **flood mitigation strategies**.”*
- 10.9.5 Policy EL18 (Deephams Sewage Treatment Works) seeks to ensure that the Deephams Sewage Works upgrade *“caters for population growth in the catchment area, meets water quality standards in the Environmental Permit set by the Environment Agency to meet **water quality targets**, and will significantly reduce odour emissions from the site.”*
- Appraisal of the AAP as a whole**
- 10.9.6 With regards to water resources and water quality, a key issue locally is the need to upgrade **Deephams Sewage Treatment Works**, and thereby increase sewage treatment capacity to accommodate population growth and attain a significant reduction in water pollution (and odour emissions). Policy EL18 is supportive, although the AAP will have a limited role.
- 10.9.7 Another consideration is the need to support good management of the watercourses, and high quality **Sustainable Urban Drainage Systems (SuDS)**. In this respect the AAP is set to deliver considerable improvements, in accordance with wider efforts along the Lee Valley (e.g. as part of the Love the Lee campaign). However, it is inevitably the case that there will be competing objectives, e.g. the need to balance the objective of **naturalising the water courses** with the objective of safe access.
- 10.9.8 In conjunction with the green infrastructure, waterways must be managed to minimise flood risk, and ensure resilience against climate change. Fluvial risk is a key consideration to the development of Meridian Water, along with other forms of flooding, such as surface water, as set out in the Level 2 SFRA. This is a key consideration that has informed masterplanning and design work to date, and it will be a key consideration through subsequent planning applications. The plan states: *“As a large area of previously developed land with extensive flood risk, redevelopment at Meridian Water represents an excellent opportunity to improve flood risk management that will benefit future users of the area.”*
- 10.9.9 However, it remains the case that avoidance of flood risk areas should be a priority, ahead of mitigation. As such, it is appropriate to conclude **uncertain effects** at this stage, in respect of flood risk. It is also noted that the Environment Agency is currently updating its requirements for climate change allowances to a higher level than those used to prepare the Level 2 SFRA.

## 10.10 Sustainable design and construction

Meet the requirements of sustainable design and construction

### Commentary on plan policies

- 10.10.1 Sustainable design and construction is referenced within the following policies -
- Policy EL17 (Redevelopment of the EcoPark site) – “sustainable design and construction techniques such as green roofs and walls”
  - Policy EL18 (Deephams Sewage Treatment Works, STW) – “Promote renewable energy generation and sustainable design and construction.”

### Appraisal of the AAP as a whole

- 10.10.2 The development of Edmonton Leaside will deliver a large number of new homes and jobs, presenting an opportunity to provide a place which promotes sustainable lifestyles through well-designed buildings and spaces, and maximises energy efficiency and use of low and zero carbon energy generation technologies. All developments will need to comply with the environmental and energy standards set out in the London Plan and Local Plan documents.
- 10.10.3 In conclusion, masterplanning of large scale redevelopment will lead to opportunities to achieve high standards of sustainable design and construction; however, detail is yet to be determined and so **significant effects are not predicted** at this stage.

### 10.11 Land use efficiency

#### Improve land use efficiency

#### Commentary on plan policies

- 10.11.1 Meridian Water comprises one of the largest areas of underused and brownfield regeneration land in London, with large areas of derelict land alongside industrial accommodation of varying age and quality. In the context of a significant and worsening housing shortage across Greater London, the case for comprehensive, residential-led redevelopment is compelling.
- 10.11.2 As explained within Policy EL1 (Housing in Meridian Water): *“The demand upon the available land at Meridian Water means that a rising number of units will lead to a **greater average building height**.”* However, Policy EL1 goes on to state that: *“Development proposals must not result in building heights which lead to poor spatial and design performance, or negatively impact the amenity of other buildings and public realm in terms of light amenity. **Density levels** and building heights will vary spatially across Meridian Water, depending upon specific site character, including transport capacity, access to supporting services and location. Higher density development should be situated in areas with higher levels of accessibility to public transport and/ or where it can capitalise most appropriately on features such as views and open space.”*
- 10.11.3 Policy EL2 (Economy and Employment in Meridian Water) states: *“Where appropriate, the Council will explore and support **meanwhile uses**, in existing buildings or temporary structures, for the development of new types of employment.”*
- 10.11.4 Policy EL15 (Improving Existing Industrial Areas) deals with the **existing industrial areas** outside of Meridian Water. Of the five discreet industrial areas listed within the policy, detail is presented in relation to –
- Montagu Industrial Estate (SIL) (northern section) - Pursue a major upgrade to improve outdated infrastructure and to provide **new buildings** that will meet modern business needs.
  - Claverings (LSIS) - Provide **new buildings** that meet modern business needs with related environmental and social benefits.

### Appraisal of the AAP as a whole

- 10.11.5 Meridian Water comprises one of the largest areas of underused land in London, with large areas of derelict land alongside industrial accommodation of varying age and quality. It would seem appropriate to maximise residential floor space in Meridian Water, and also deliver a high employment growth quantum figure. Also, it is understood that employment growth will be achieved with some use made of existing industrial buildings. Taking these factors into account, it seems fair to conclude **significant positive effects**.

## 10.12 Housing

Ensure the opportunity for all to live in a decent, sustainably constructed and affordable home

### Commentary on plan policies

- 10.12.1 In respect of affordable housing, **Policy EL1** (Housing in Meridian Water) proposes a realistic, viability led approach. The policy explains that: *“All residential development proposals at Meridian Water will be expected to achieve a minimum of **35%** affordable housing, measured as a proportion of the total number of units, or in part based upon the proportion of habitable rooms. During initial phases of development at Meridian Water, due to site remediation costs and low property values, viability requirements for development proposals may reduce the proportion of affordable housing below the Council’s adopted policy. As the development of Meridian Water proceeds rising property values are expected to improve viability, enabling a higher proportion of affordable housing to be achieved, meeting the Council’s **40%** requirement across Meridian Water as a whole. The Council will seek to maximise affordable housing at Meridian Water over the lifetime of the project and work towards the Mayor of London’s requirement that **50%** of development proposals are affordable housing.”*
- 10.12.2 In respect of quantum and mix, **Policy EL1** (Housing in Meridian Water) proposes to maximise the number of homes delivered, but not at the mix required by existing Core Strategy Policy (60% larger homes to 40% smaller) or the mix recommended by the emerging Strategic Housing Market Assessment (50:50). The policy explains that: *“The mix of units in terms of number of habitable rooms is also a key determining factor in the number units which can be delivered, with evidence demonstrating the trade-off between the proportion of larger units and overall number of units achievable. The evidence shows that, **subject to mix and tenure**, sufficient supporting infrastructure, the de-designation of industrial land and the achievement of high quality urban design, **10,000 new homes** could be provided at Meridian Water.”* [emphasis added]. This approach is viability-led, with the policy going on to explain that: *“Development proposals must demonstrate viability requirements if the Local Plan policy requirements are not fully met. For initial phases of Meridian Water, development proposals must deliver a minimum of **25% 3+** bed dwellings and opportunities to deliver a higher proportion should be explored. During the development of Meridian Water improving levels of supporting services, the developing sense of place and rising viability are expected to enable a **higher proportion of 3+ bedroom housing** to be achieved.”*

### Appraisal of the AAP as a whole

- 10.12.3 The AAP performs well in that the number of new homes is set to be maximised within the Meridian Water area; however, it is **not possible to conclude significant positive effects** as the **mix of housing** delivered will not be in-line with requirements (as established at the Enfield scale). It is recognised that a bespoke housing mix at Meridian Water has been deemed appropriate on the basis that it can unlock the potential of the site and meet the high costs needed to deliver the necessary quality and infrastructure requirements.

## 10.13 Health

Improve the health and well-being and reduce inequalities in health

### Commentary on plan policies

- 10.13.1 Policy EL5 (Community Facilities in Meridian Water) should also help to **realise the opportunity** that presents itself, through development of a major new community at Meridian Water. In respect of healthcare, in addition to setting out the requirement for sufficient provision in quantitative terms (*“The calculation of healthcare facility floorspace requirements will be on the basis of the quantum and mix of housing proposed”*), the policy makes the following qualitative requirements: *“The primary healthcare facilities should be easily **accessible for all Meridian residents and preferably located in the new town centre or at a community hub. Development proposals may be expected to make a financial contribution towards provision of primary healthcare facilities. The potential for **co-location** of health services may allow local residents more flexible access to services.***”
- 10.13.2 Policy EL7 (Rail and Bus Improvements, Meridian Water) seeks the achievement of *“major improvements to **Angel Road station** supporting the regeneration of Meridian Water and wider area.”* This will include a focus on: *“Safe, secure and **Disability Discrimination (DDA) compliant accesses** integrated with the station.”*
- 10.13.3 Policy EL11 (Building Form at Meridian Water) deals with the matter of **access to sunlight**, requiring that development proposals:
- *“Ensure that no more than 10% of all north facing residential units are single-aspect.”*
  - *Ensure blocks maximise east and west facade lengths and minimise north and south façade lengths.”*
  - *Ensure the massing and orientation of residential blocks allows direct sunlight penetration into at least 70% of shared open space.”*
  - *Ensure that that for perimeter block buildings the layout and massing allows direct sunlight penetration into the internal courtyard.”*
  - *Ensure communal areas in terraced blocks receive direct sunlight.”*
- 10.13.4 Policy EL17 (Redevelopment of the EcoPark site) requires that development proposals within the **EcoPark** site:
- *“Operate within permitted limits on nuisance risks such as noise and odour.”*
  - *“Enable efficient and effective operation of the site to meet regulatory requirements for health and safety, air quality and environmental protection.”*
- 10.13.5 Policy EL18 (Deephams Sewage Treatment Works) seeks to ensure that the Deephams Sewage Works upgrade *“caters for population growth in the catchment area, meets water quality standards in the Environmental Permit set by the Environment Agency to meet water quality targets, and will significantly reduce **odour emissions** from the site.”*
- 10.13.6 See further discussion under ‘Open space’ and ‘Accessibility’.
- 10.13.7 Regeneration and change, in particular at Meridian Water, provides the opportunity to support health objectives, and should help to address some existing issues in the Edmonton area. In particular, access to open space will improve, and delivery of other **community and social infrastructure** will also help to enable residents to live healthy and active lifestyles.

- 10.13.8 On this basis, it would seem appropriate to maximise residential development, as per the AAP strategy. There will be some challenges, in respect of ensure achievement of **light, amenity and open space** standards, but modelling work serves to indicate that achievement of standards will be possible.
- 10.13.9 In conclusion, the plan is supported, from a health perspective; however, it is **not possible to conclude 'significant' effects**, given the wide ranging nature of health determinants.

#### 10.14 Poverty

##### Reduce poverty and social exclusion

###### Commentary on plan policies

- 10.14.1 Policy EL17 (Redevelopment of the EcoPark site) requires that development proposals within the **EcoPark** site: *“Use a design-led approach to provide a distinctive and well-functioning environment with a high quality of design, landscaping materials and finish, integrated with proposals in the **wider area of regeneration**.”* Also, it is noted that benefits of decentralised energy for local people and businesses include:
- Protection against future energy price rises;
  - Durable cost and carbon savings – with potential knock-on benefits for inward investment, business advantage and job creation;
  - Security of energy supply; and
  - Addressing fuel poverty and reducing health inequalities.
- 10.14.2 Policy EL23 (Enhancing the Bus Network and Services) seeks to improve bus routes to secure more east-west and north-south connections. As part of this, there is a commitment to: *“Provide links between **areas where there is high unemployment** and employment opportunities such as Edmonton Leaside and Brimsdown.”*

###### Appraisal of the AAP as a whole

- 10.14.3 This new neighbourhood will be an inclusive development and a well-integrated extension of **Edmonton**. The wider community will benefit from new community infrastructure and employment, and there will be improved access to the waterways and parklands of the Lee Valley; however, it is not clear that the effect will be to support regeneration objectives.
- 10.14.4 Residents of **Northumberland Park**, an area of regeneration focus to the immediate south of Meridian Water within London Borough of Haringey (and falling within the area of the currently emerging Tottenham AAP) will benefit from employment on the Meridian Water site, and across the wider AAP area; however, there is some uncertainty in this respect given that residents may be more dependent on lower skilled jobs more associated with the existing SIL.
- 10.14.5 In conclusion, whilst there is considerable uncertainty, it seems fair to conclude that a lower growth approach that involves retention of the existing Harbet Road SIL could perform better than the proposed approach, from a regeneration perspective. Effects are quite indirect, however, and so **significant effects are not predicted**.

## 10.15 Education

### Raise educational achievement levels

#### Commentary on plan policies

- 10.15.1 Policy EL5 (Community Facilities in Meridian Water) sets out to realise the opportunity that presents itself, through development of a major new community at Meridian Water. It states that: *“The Council’s strong expectation and preference is for the **need to be met within the Meridian Water boundary**. The calculation of pupil places required will be on the basis of child yield according to the quantum, tenure and mix of housing proposed. As the Meridian Water development is built and grows it is vital to monitor child yields and update the school places requirements to meet the educational need. Financial contributions may be sought to ensure the need for school places is met.”*

#### Appraisal of the AAP as a whole

- 10.15.2 New schools will be delivered on-site to **meet the needs of the new community**. Schools may struggle to achieve space standards; however, there is an expectation that the existing open spaces – in particular the ‘Green Belt Park’ area at the eastern extent of Meridian Water – can be used by schools. A secondary school would need 0.9 Ha plus 50m<sup>2</sup> per pupil to meet DoE **space standards**. In comparison, a popular new school in Hackney - Mossbourne Academy – is situated on a site of just 2.5 Ha, but benefits from its location beside Hackney Downs Park. In conclusion, the plan is supported, but **significant effects are not predicted**.

## 10.16 Crime

### Reduce crime, anti-social behaviour and fear of crime

#### Commentary on plan policies

- 10.16.1 Policy EL11 (Building Form at Meridian Water) requires that development proposals: *“Have a direct, positive and productive relationship with the public realm, providing **natural surveillance**.”*
- 10.16.2 Policy EL12 (Public Realm at Meridian Water) requires that development proposals: *“Support community safety by avoiding the creation of isolated or **underused spaces** [and incorporate] a range of sensitive and responsive **lighting** across the site to contribute to the sense of place and security.”*
- 10.16.3 Policy EL15 (Improving Existing Industrial Areas) identifies crime as a particular issue on the **Eley Estate (SIL)**, to be addressed through any development proposals.

#### Appraisal of the AAP as a whole

- 10.16.4 The challenge of achieving certain design objectives has already been discussed above, e.g. under the ‘air’; however, it is not clear that there would be implications for crime, or fear of crime. It should be possible to create a horizontal and vertical use mix in accordance with **‘designing out crime’** objectives. Another important consideration is the potential to address some existing crime issues within the industrial estates. In conclusion, the plan is supported, but **significant effects are not predicted**.

## 10.17 Accessibility

Improve accessibility for all to services and facilities

### Commentary on plan policies

- 10.17.1 Policy EL3 (Meridian Water Town Centre) explains that: *“There will be **a new town centre** at Meridian Water to provide the location for retail and other A-Class uses and designed as a hub for the community. The new town centre will provide primarily for the local needs of Meridian Water, with potential to develop a café and restaurant culture.”*
- 10.17.2 Policy EL5 (Community Facilities in Meridian Water) should also help to **realise the opportunity** that presents itself, through development of a major new community at Meridian Water. For example, the policy states the need to: *“Support co-location and multifunctional uses so that they can accommodate a variety of different uses.”* The policy also recognises the need for innovative approaches, given high density development. For example: *“During out-of-school hours, the Council will support the efficient **use of educational space for community use**, provision for sports and social activities and places of religious worship.”*
- 10.17.3 Policy EL6 (The Causeway, Meridian Water) seeks to *“maximise **connectivity across Meridian Water.**”* It is split into three parts, dealing with: Design; the Causeway as a place for interaction and communities; and the Causeway as an infrastructure corridor. Requirements presented under each part of the policy have wide ranging ‘accessibility’ implications. Notably, development proposals must –
- *“Demonstrate how resident and employee access to supporting uses is maximised, including retail, health centres, open space and schools.”*
  - *“Show how **the Causeway is utilised as a key location** for community infrastructure and the clustering of A-Class uses [i.e. shops].”*
- 10.17.4 Policy EL9 (Leisure Facilities and Open Space at Meridian Water) explains that: *“Meridian Water has the potential to deliver **a significant leisure offering**, including for example a public leisure centre, private health club, sports pitches, tennis courts, and facilities for boating.”*
- 10.17.5 Policy EL11 (Building Form at Meridian Water) deals with **tall buildings**, notably requiring that development proposals: *“Set out the relationship to transport infrastructure, the capacity of public transport, the quality of links between transport and the site, and the feasibility of making improvements, where appropriate).”*
- 10.17.6 Policy EL19 (Revitalising Developed Areas at Picketts Lock) identifies the area as suitable to deliver *“a large **significant new development** that will provide a destination attraction for Edmonton Leaside and beyond. Pickett’s Lock is considered suitable for a potential range of new and improved leisure, sport and recreation uses, including a health and fitness centre, 5-a-side football pitches, a snowdome, an ice rink, conference/exhibition spaces, self-catering accommodation, a hotel and commercial ten-pin bowling.”*
- 10.17.7 See further discussion under ‘Education’, ‘Health’ and ‘Open space’.

### Appraisal of the AAP as a whole

- 10.17.8 Significant amounts of land are required for supporting infrastructure at Meridian Water. **Required and non-negotiable uses** include nurseries, primary schools, secondary schools, open space and healthcare; whilst **optional, but desirable, uses** include swimming pools, sports courts, library, arts and culture space. Modelling work has served to indicate that required infrastructure can be delivered, along with a range of optional infrastructure, assuming a housing mix weighted towards smaller homes (as opposed to family homes with a higher child yield).

- 10.17.9 Beyond Meridian Water, the redevelopment of **Picketts Lock** represents an opportunity to better capitalise on an underused resource, and ensure that this becomes a central destination within the wider Lee Valley Regional Park.
- 10.17.10 In conclusion, the plan is supported, but **significant effects are not predicted**. The high growth quantum will lead to a range of challenges, and the potential to address all of these remains somewhat uncertain at this stage.

## 10.18 Economic growth

### Sustain economic growth and competitiveness

#### Commentary on plan policies

- 10.18.1 Policy EL2 (Economy and Employment in Meridian Water) proposes to **de-designate SIL** and LSIS land, but to deliver a very large increase in the quantum of jobs on-site. The policy states: *“To support the scale of development at Meridian Water and deliver the requirement for net new jobs the economy will undergo **transformational change**. There must be an efficient and effective configuration of land uses which supports the growth of key economic sectors and results in a strong and diverse economy. As such the restrictive SIL and LSIS industrial land designations within the Meridian Water boundary are not compatible with either the economic and employment objectives, or the wider aims of transformational change. The evidence shows that, subject to sufficient supporting infrastructure and the achievement of high quality urban design, **6,000 to 7,000 net new jobs** could be delivered at Meridian Water.”*
- 10.18.2 The policy goes on to explain that the ‘transformational change’ will include a shift to: “Higher value added activities and industries that yield higher job densities, in particular in the B1(a), B1(b) and B1(c) use classes.” This means **a shift to offices**, research and development of products and processes, and light industry appropriate in a residential area.
- 10.18.3 The risk is that some will lose out as a result of ‘transformational change’; however, the policy goes on to require mitigation, in the form of: *“A contribution to local labour initiatives and employment **skills training**, including of Meridian Water construction jobs for the local population, in line with the Council’s S106 Planning Obligations Supplementary Planning Document. Where appropriate, the Council will explore and support **meanwhile uses**, in existing buildings or temporary structures, for the development of new types of employment.”*
- 10.18.4 Policy EL15 (Improving Existing Industrial Areas) deals with the industrial areas outside of Meridian Water. The overarching policy is that: *“New development in the industrial estates of Edmonton Leaside will be expected to take advantage of the strategic position in the Upper Lee Valley Corridor and Stansted Corridor to drive prosperity and growth. Development should deliver buildings and services to meet modern business needs, a better **range of employment opportunities**, which could secure **higher job densities** and opportunities for local people.”* Of the five discreet industrial areas listed within the policy, detail is presented in relation to –
- Montagu Industrial Estate (SIL) (northern section) - Pursue a **major upgrade** to improve outdated infrastructure and to provide new buildings that will meet modern business needs.
  - Claverings (LSIS) - Provide new buildings that meet modern business needs with related environmental and social benefits. There are a range of options to be explored, including more flexible workspace, with detailed proposals to be brought forward through a masterplan. There is support for a proactive approach in encouraging **creative/cultural uses** through flexible lease terms and assisting with artistic and cultural set-ups.

- 10.18.5 Policy EL16 (Angel Road Retail Park) supports **de-designation of the site as a retail park**, and promotion of the site for a mixed employment led uses approach. This is appropriate, given the London Plan (2016) position on need for retail floorspace (paragraph 4.42a), the declining retail role of this site, and its location. New development of commercial spaces could cater for small businesses and support ancillary uses to strengthen the vitality and viability of other employment uses. Small scale walk to services could be introduced, such as a crèche or café, which meet the day to day needs of the industrial occupiers.
- 10.18.6 Policy EL18 (Deephams Sewage Treatment Works, STW) supports **designating Deephams STW as Strategic Industrial Land (SIL)** in order to consolidate and strengthen the protection of the area for industrial uses.

#### Appraisal of the AAP as a whole

- 10.18.7 From an economic growth perspective, it would seem that the main priority is to maximise the number of jobs on site, recognising the regional growth ambition to maximise **new jobs in higher value sectors**. Edmonton Leaside is strategically located at the heart of the Mayor's Upper Lee Valley Opportunity Area and the London-Standed corridor.
- 10.18.8 More generally, Edmonton Leaside and Meridian Water will form a key part of the developing **Upper Lee Valley area**, which can become a popular place to live, work and visit, creating a vibrant new area within London and the wider region. There is an opportunity for the area to be known for high quality residential environments, low carbon energy, integrated public transport, and a diversity of jobs.
- 10.18.9 Loss of SIL at Harbet Road is an economic growth consideration, as there are concerns that piecemeal **loss of SIL** across London will lead to an imbalance in employment land types over time; however, the Deephams STW designation, in combination with the new designations to the north and east, provides a continuous, coherent area of SIL, and will result in 38.1 hectares of additional SIL in Edmonton Leaside. Within the Meridian Water boundary there is set to be a reduction of 18 hectares of SIL, and so the **net effect will be a significant increase in SIL**. This is appropriate, given that demand for space within Enfield's industrial estates is expected to continue, with local agents confirming that shrinking availability of stock in Central London is forcing occupiers to outer London boroughs such as Enfield.
- 10.18.10 In conclusion, the plan performs well and it is possible to conclude **significant positive effects**.

### 10.19 Employment

Ensure high and stable levels of employment

#### Commentary on plan policies

- 10.19.1 Policy EL2 (Economy and Employment in Meridian Water) supports the **de-designation of Harbet Road SIL**. Current full-time equivalent employment at Meridian Water has been estimated as part of the evidence base modelling with reference to up to date and accurate information including the Office of National Statistics' (ONS) Business Register Employment Survey (BRES) and drawing from previous analyses that relied on other methods but that came to similar conclusions. This analysis showed an estimated 1,100 industrial jobs, mainly within the SIL. However, a large area of SIL land was cleared in 2015/16 for re-development, and as such the present number is likely to be lower, although this should be seen in the context of a temporary measure.

- 10.19.2 Policy EL2 also references the good potential for **meanwhile uses**. The large scale and extended timeframe of development at Meridian Water, combined with the control offered by Council ownership of significant land holdings, provides an opportunity for imaginative meanwhile uses to have an important role in activating the site, including in creating new types of employment. Meanwhile uses will inhabit existing buildings and spaces, as well as temporary structures, such as shipping containers.
- 10.19.3 The supporting text to Policy EL2 explains that: *“The absence of an industrial land designation does not preclude the operation of **industrial sectors within the B2 and B8 uses**. Such uses could be accommodated at the eastern part of Meridian Water where the manoeuvring of heavy goods vehicles (HGVs) can be through direct access to Harbet Road...”* However, this matter is not referenced within the policy itself. It is **recommended** that some detail could be added.
- 10.19.4 The supporting text to Policy EL2 also states: “The de-designation of all employment land at Meridian Water would potentially lead to the **displacement of some jobs** which would need to be replaced across the Edmonton Leaside area.” However, the policy itself states only: *“This policy should be read in conjunction with Policy EL15.”* It is **recommended** that some detail could be added, specific to Meridian Water.
- 10.19.5 Policy EL15 (Improving Existing Industrial Areas Policy) states: “Where development requires existing businesses to be relocated, the Council will work with owners (and occupiers), prior to any redevelopment taking place, to **relocate to appropriate premises** in employment or mixed use areas defined within the AAP, or other locations within the borough.” The supporting text expands on the relocation strategy, explaining that the Council will work with occupiers and owners to help relocate existing businesses, including within the Meridian Water boundary. This will ensure that -
- The scale, character and diversity of affected businesses are recognised;
  - The alternative locations that have been identified to accommodate relocated businesses suit their specific needs; and
  - Robust processes are put in place to provide support to businesses during their relocation to minimise potential adverse effects, for example to access support networks. There should be particular regard for small businesses to help them relocate within the existing development if possible, and allow them to return if temporarily displaced.
- 10.19.6 EL23 (Enhancing the Bus Network and Services) seeks to improve bus routes to secure more east-west and north-south connections. As part of this, there is a commitment to: *“Provide links between **areas where there is high unemployment** and employment opportunities such as Edmonton Leaside and Brimsdown.”*

#### Appraisal of the AAP as a whole

- 10.19.7 A primary consideration here relates to the needs of those who will rely on the existing businesses on-site, which may include workers suited to light industry jobs, who may find it difficult to find a replacement job within the vicinity. On this basis, there is an argument to suggest that a lower growth quantum could be preferable, as the reduced floorspace requirements could enable retention of some or all of the existing Harbet Road SIL. However, the strength of this argument is not clear, given that plans for the wider AAP area include designation of new areas of SIL, and generally support for the extensive areas of industry / light industry that exist. In conclusion, **uncertain effects** are predicted.

## 10.20 Skills

Increase the skill levels of the workforce

### Commentary on plan policies

10.20.1 Policy EL17 (Redevelopment of the EcoPark site) requires that development proposals within the **EcoPark** site: *“Ensure local access to employment and training opportunities, through employment initiatives and other measures including transportation improvements”*

### Appraisal of the AAP as a whole

10.20.2 An objective is to strengthen the business community by supporting a culture of enterprise, entrepreneurship, innovation and sustainable business growth. **Edmonton EcoPark** will be a key site, in that its expansion will require new employees with specialist skills. It can be anticipated that there will be the potential to train employees from the local area. The plan is supported, but **significant effects are not predicted**.

## 10.21 Transport

Improve transport infrastructure and reduce road congestion

### Commentary on plan policies

10.21.1 Policy EL6 (The Causeway, Meridian Water) seeks to “maximise **connectivity across Meridian Water**.” It is split into three parts, dealing with: Design; the Causeway as a place for interaction and communities; and the Causeway as an infrastructure corridor. Requirements presented under each part of the policy have wide ranging ‘transport’ implications, and implications for the achievement of other sustainability objectives. Notably, development proposals must –

- *“Actively contribute to enable the delivery of the Causeway through design, layout, orientation and facilitation.”*
- *“Demonstrate how safe and convenient access to the station across the A1055/ Meridian Way can be improved in line with the growth proposed.”*
- *“Prioritise pedestrian and cycle users, wherever practical and feasible.”*

10.21.2 Policy EL7 (Rail and Bus Improvements, Meridian Water) seeks the achievement of “*major improvements to **Angel Road station** supporting the regeneration of Meridian Water and wider area.*” Changes will include the following:

- *“Angel Road station relocated south and renamed ‘Meridian Water Station’ - to create an integrated transport hub with the new bus interchange on Meridian Way.”*
- *“... new entrances [to the station] on both sides of the railway to the east and west which will connect to the Causeway (see Policy EL6).”*
- *“Improved bus interchange connecting Meridian Water to the wider North London region.”*

10.21.3 Policy EL12 (Public Realm at Meridian Water) sets out to ensure that: *“The new and existing characteristics and features of Meridian Water must be optimised to create a **coherent public realm** across the site and into the wider surrounding area.”* The policy includes a specific requirement that development proposals: *“Support safe access to existing and proposed public realm, both within and adjacent to Meridian Water, in particular through the provision of pedestrian and cycle only routes.”*

- 10.21.4 **Meridian Way** represents the main existing north south connection through the site. Its role will be maintained, however, its character will be transformed as a 'pedestrian-friendly' environment and "a transformation from highway to high street". It will be critical to the success of the early development phases to revise the street section in order to: create active frontages prioritising employment spaces at ground floor; create a permeable frontage for cyclists and pedestrians; provide additional crossing points; reduce traffic speed; reinforce and capitalise on the new train station; and improve existing junctions.
- 10.21.5 **The Causeway** will carry all modes of transport: pedestrians, cycles, buses and private vehicles. The Causeway will not, however, be designed as the primary traffic route, but as a spine that privileges and accentuates its public realm. It will have generous pavements, dedicated cycle lanes, and be framed by ground floor activities. The design should reflect its dual role as a route and as a destination, supporting along its length retail, leisure, community and cultural uses, complementing the character of the neighbourhoods that are adjacent to it.
- 10.21.6 Policy EL5 (Community Facilities in Meridian Water) states that: *"Within Meridian Water, **schools** should be located so as to be accessible for pupils whilst considering the movements and traffic flow of other land uses in the area."*
- 10.21.7 Policy EL17 (Redevelopment of the EcoPark site) requires that development proposals within the **EcoPark** site: *"Mitigate local transport impacts, and support, where viable, sustainable forms of transport including **water borne transport**."*
- 10.21.8 Policy EL21 (Improving the Quality of the Pedestrian and Cycling Environment) seeks to secure a **"step-change to the quality of the existing pedestrian and cycle environment"**. New developments must be connected across Edmonton Leeside, including to public transport hubs the industrial estates and Pickett's Lock; and also surrounding areas of Enfield. There is also the specific requirement that: *"Development proposals which include or are adjacent to Towpath Road and along the **River Lee towpath** must deliver significant improvements to the continuous north-south route for pedestrians and cyclists from Tottenham Hale, through Meridian Water, to Enfield Lock."*
- 10.21.9 Policy EL22 (Proposed Route - Improvement Principles) list three key **cycle routes**, and establishes measures, to be taken account of by development proposals, to ensure their effective implementation.
- 10.21.10 Policy EL23 (Enhancing the Bus Network and Services) seeks to improve bus routes to secure more east-west and north-south connections. **Enhanced bus services** will be provided to Edmonton Green town centre, and Tottenham Hale via Meridian Water. Existing routes will be reorganised so that they run along the Causeway (where accessible by buses), through Meridian Water. There is a commitment to ensuring that: *"Integration of bus and rail services is improved, and to ensure that major new developments have good access - of **no more than 640m** from the development - to a bus stop."*
- 10.21.11 Policy EL24 (Use of the Waterways for Transportation) states that: *"Where suitable, the Council will support opportunities for **waterborne traffic**, on the River Lee Navigation."*
- 10.21.12 Policy EL28 (New and Existing Green Spaces) states that: *"The land on either side of the North Circular Road to the east and northeast of Meridian Water has been identified as offering potential for the creation of new open space. There is also potential to improve the access and functions at existing green and open spaces including at Picketts Lock and Kenninghall Open Space. Proposals will be supported that improve the access across and between existing and new green spaces, developing a **network of 'green chains'** comprising footpath networks and cycle paths. Green chains can be used to **improve east west connectivity** between the Lee Valley Regional Park and the rest of Edmonton Leeside and beyond. New development may be expected to make appropriate financial contributions to improving green and open spaces, in line with the Section 106 SPD."*

### Appraisal of the AAP as a whole

- 10.21.13 Development of Meridian Water will support: a new train station, Meridian Water Station, as a result of the re-location of the existing Angel Road Station; improved bus services based mainly on the extension of the existing lines provided in the surrounding areas, which currently enter the site to a limited extent; a network of walking and cycling routes to enable far better access across Meridian Water, with permeability across the major transport routes that currently act as barriers (e.g. Meridian Way, North Circular); and a transformed road network that includes a new route over the River Lee Navigation. **Significant positive effects** are predicted.

## 11 CONCLUSIONS AT THIS CURRENT STAGE

- 11.1.1 The appraisal finds that the Proposed Submission Plan would result in significant positive effects in respect of: **Land use efficiency** (given good use made of one of the most significant resources of under used land in London); **Economic growth** (given delivery of 6,000 new jobs in a strategically important location); and **Transport** (given the potential to deliver major upgrades, in particular in respect of upgraded rail connectivity). The plan also performs well in a number of other respects, including: **Climate change mitigation** (given support the Lee Valley Heat Network); **Biodiversity** (given the potential to enhance waterways and areas of open space); and **Accessibility** (given good potential to deliver required facilities on-site, and also deliver certain upgrades, in particular at Picketts Lock, that will benefit surrounding communities). However, the merits of the plan are uncertain in respect of: Housing (given that the housing mix will be weighted strongly towards smaller homes, contrary to local policy and the evidence of need established by the emerging Enfield Strategic Housing Market Assessment, SHMA); **Flood risk** (given that the Meridian Water area includes extensive areas of flood risk) and also, to a lesser extent, **Employment** (given de-designation of Harbet Road SIL). The 'balance' between competing objectives reflected within the AAP will be explored during its Examination in Public, and it will also be possible to give explicit consideration to the three minor recommendations made within the appraisal above.

## **PART 3: WHAT ARE THE NEXT STEPS (INCLUDING MONITORING)?**

### 13 INTRODUCTION (TO PART 3)

13.1.1 The aim of this chapter is to explain next steps in the plan-making / SA process.

### 14 PLAN FINALISATION

14.1.1 Subsequent to publication stage, the main issues raised will be identified and summarised by the Council, who will then consider whether the plan can still be deemed to be 'sound'. Assuming that this is the case, the AAP (and the summary of representations received) will be submitted for Examination. At Examination a government appointed Planning Inspector will consider representations (in addition to the SA Report and other submitted evidence) before determining whether the AAP is sound (or requires further modifications).

14.1.2 If found to be 'sound' the AAP will be formally adopted by the Council. At the time of Adoption an 'SA Statement' will be published that sets out (amongst other things) *'the measures decided concerning monitoring'*.

### 15 MONITORING

15.1.1 At the current time, there is a need to present 'measures envisaged concerning monitoring'.

15.1.2 The AAP document states that: “

*“The Council has a statutory requirement to prepare a Monitoring Report on the progress of local planning policy documents, the extent to which policies within these documents are being implemented, and their effectiveness. The Council will prepare an annual Monitoring Report on the Edmonton Leaside AAP that will:*

- *Assess the extent to which policies in the AAP are being implemented;*
- *Set out, where a policy is not being implemented, the reasons why and what steps will be taken to ensure it is implemented;*
- *Make available up-to-date information collected for monitoring purposes;*
- *Identify the significant effects of implementing policies in the AAP and whether they are intended; and*
- *Set out whether policies are to be amended or replaced.”*

15.1.3 Given appraisal findings presented within this report, it is suggested that there might be a particular focus on air quality monitoring. Enfield Council currently has four real-time air quality monitoring stations providing real-time data for nitrogen dioxide, PM (10) and sulphur dioxide. There are also a series of nitrogen dioxide diffusion tubes located throughout the Borough. These are used to provide indicative levels of this pollutant but are not as accurate as analysers. Pollutant levels vary year on year due to a number of factors; the most important are variations in traffic emissions and weather conditions. This is why it is important to monitor over a long period of time and have site continuity.

15.1.4 Monitoring of biodiversity in the Pickett's Lock area is another matter highlighted in the appraisal above as potentially worthy of monitoring. However, it is recognised that this is a matter that does not lend itself to monitoring to the same extent as air quality. The Council might want to discuss biodiversity monitoring arrangements with partner organisations.

## APPENDIX I - REGULATORY REQUIREMENTS

As discussed in Chapter 2 above, 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 this SA Report, in-line with an interpretation of regulatory requirements

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

Table B: Questions answered by this SA Report, in-line 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>	
(a) 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>
(b) 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 The relevant environmental protection objectives, established at international or national level	i.e. answer - <i>What's the 'context'?</i>
(c) the environmental characteristics of areas likely to be significantly affected;		
(d) 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;		
(e) 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 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	i.e. answer - <i>What's the 'baseline'?</i>
(f) 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	
(g) 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	i.e. answer - <i>What are the key issues &amp; objectives?</i>
(h) 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') 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.	i.e. answer - <i>What has Plan-making / SA involved up to this point?</i> [Part 1 of the Report]
(i) a description of the measures envisaged concerning monitoring.	The likely significant effects associated with the draft plan The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects of implementing the draft plan	i.e. answer - <i>What are the assessment findings at this current stage?</i> [Part 2 of the Report]
	A description of the measures envisaged concerning monitoring	i.e. answer - <i>What happens next?</i> [Part 3 of the Report]

i.e. answer – What's the scope of the SA?

Whilst Tables A and B signpost broadly how/where this report meets regulatory requirements. 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 and where 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	
a) An outline of the contents, main objectives of the plan or programme, and relationship with other relevant plans and programmes;	Chapter 3 (‘What’s the plan seeking to achieve’) presents this information.
b) 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. The Scoping Report was updated post consultation, and is available on the website.
c) The environmental characteristics of areas likely to be significantly affected;	The outcome of scoping was an ‘SA framework’, and this is presented within Chapter 4 (‘What’s the scope of the SA’) in a slightly updated form.
d) 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.;	Also, more detailed messages from the Scoping Report - i.e. messages established through context and baseline review - are presented (in an updated form) within Appendix II.
e) 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;	<p>The Scoping Report 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’.</p> <p>The SA framework is presented within Chapter 4 (‘What’s the scope of the SA’). Also, messages from the context review are presented within Appendix II.</p> <p>With regards to explaining “<i>how... considerations have been taken into account</i>” -</p> <ul style="list-style-type: none"> <li>• Chapter 6 explains how reasonable alternatives were established in 2016 in-light of earlier consultation/SA.</li> <li>• Chapter 8 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).</li> </ul>

Regulatory requirement	Discussion of how requirement is met
<p>f) 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);</p>	<ul style="list-style-type: none"> <li>• Chapter 7 presents alternatives appraisal findings (in relation to Meridian Water, which is the 'stand-out' plan issue and hence that which should be the focus of alternatives appraisal/consultation).</li> <li>• Chapters 10 presents the Draft Plan appraisal. 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.</li> </ul>
<p>g) 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;</p>	<p>Chapter 10 presents recommendations.</p>
<p>h) 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;</p>	<p>Chapters 5 and 6 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.</p> <p>Also, Chapter 8 explains the Council's 'reasons for selecting the preferred option' (in-light of alternatives appraisal).</p> <p>Methodology is discussed at various places, ahead of presenting appraisal findings, and limitations are also discussed as part of appraisal narratives.</p>
<p>i) description of measures envisaged concerning monitoring in accordance with Art. 10;</p>	<p>Chapter 13 presents measures envisaged concerning monitoring.</p>
<p>j) a non-technical summary of the information provided under the above headings</p>	<p>The NTS is a separate document.</p>

Regulatory requirement	Discussion of how requirement is met
<p>The SA Report must be published alongside the draft plan, in-line with the following regulations</p> <p>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)</p>	<p>A report, essentially presenting the information required of the SA Report, was published alongside an earlier version of the AAP, in 2014.</p> <p>At the current time, the SA Report is published alongside the Proposed Submission AAP, under Regulation 19, so that representations might be made ahead of submission.</p>
<p>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.</p>	<p>The SA Report must be taken into account, alongside consultation responses, when finalising the plan.</p> <p>The Council has taken into account the 2014 report, alongside consultation responses received, when finalising the AAP for publication.</p> <p>Appraisal findings presented within this current SA Report will inform a decision on whether or not to submit the AAP, and then (on the assumption that the AAP is submitted) will be taken into account when finalising the AAP at Examination (i.e. taken into account by the Inspector, when considering the AAP's soundness, and the need for any modifications).</p>

## APPENDIX II - CONTEXT AND BASELINE REVIEW

### Introduction

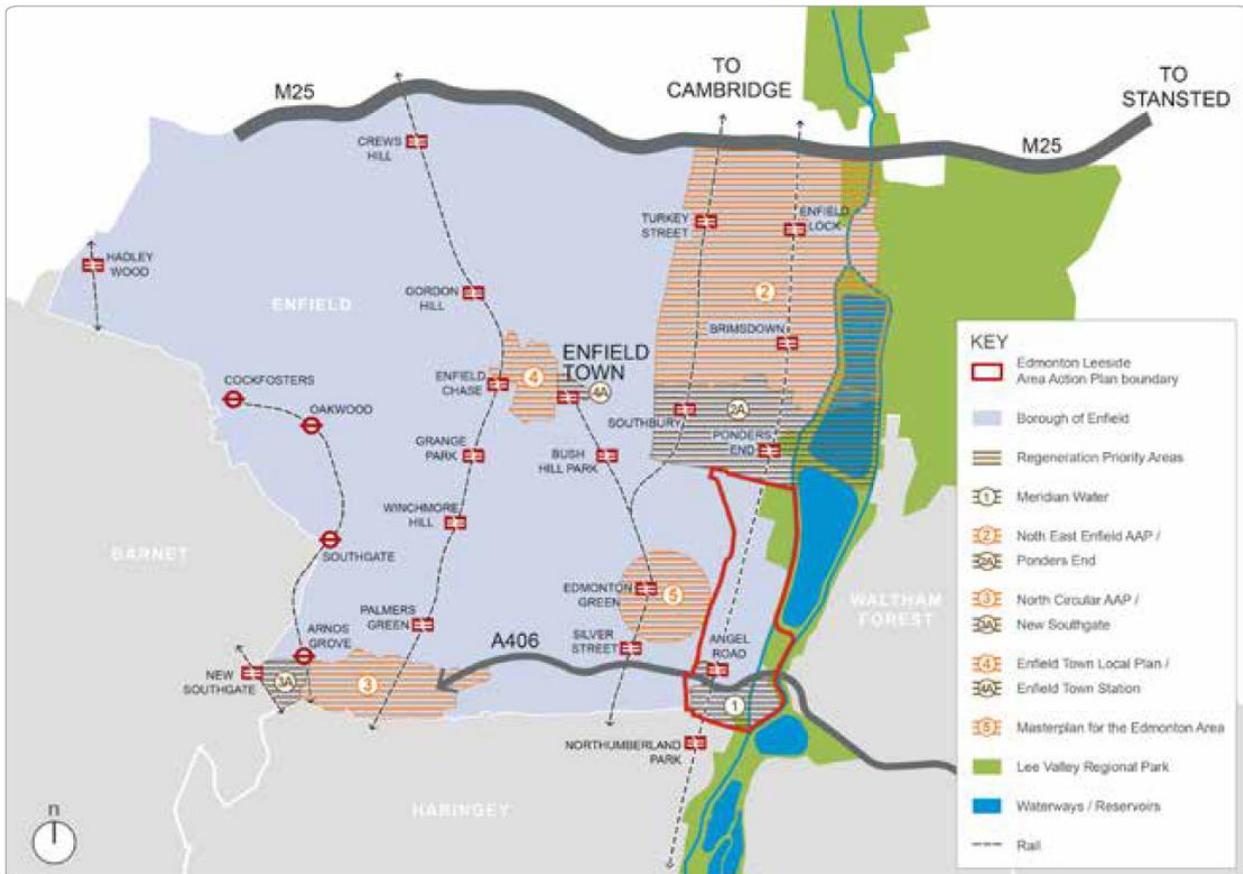
The aim of this appendix is to present summary information from the SA Scoping Report, updated as appropriate. Specifically, under each of the SA topic headings that comprise the SA framework, there is a brief discussion of key international, national, regional and local sustainability issues.

The first sub-heading provides an overview of ‘place and character’, and then the subsequent sub-headings deal with elements of the SA framework (see Table 4.1) in turn.

### Overview of place and character

Edmonton Leaside is located in the south eastern part of Enfield borough, bordering the London boroughs of Haringey and Waltham Forest. The River Lee Navigation and Lee Valley Regional Park run through the eastern part of the AAP area, while other significant features include Angel Road (Meridian Water) Station, Deephams Sewage Treatment Works and Edmonton EcoPark. A raised section of the North Circular Road (A406) is a major feature running east west through the area. Established town centres close to Edmonton Leaside include Angel Edmonton and Edmonton Green to the west in Enfield, and Wood Green in Haringey and Walthamstow in Waltham Forest.

Figure A: Edmonton Leaside within Enfield

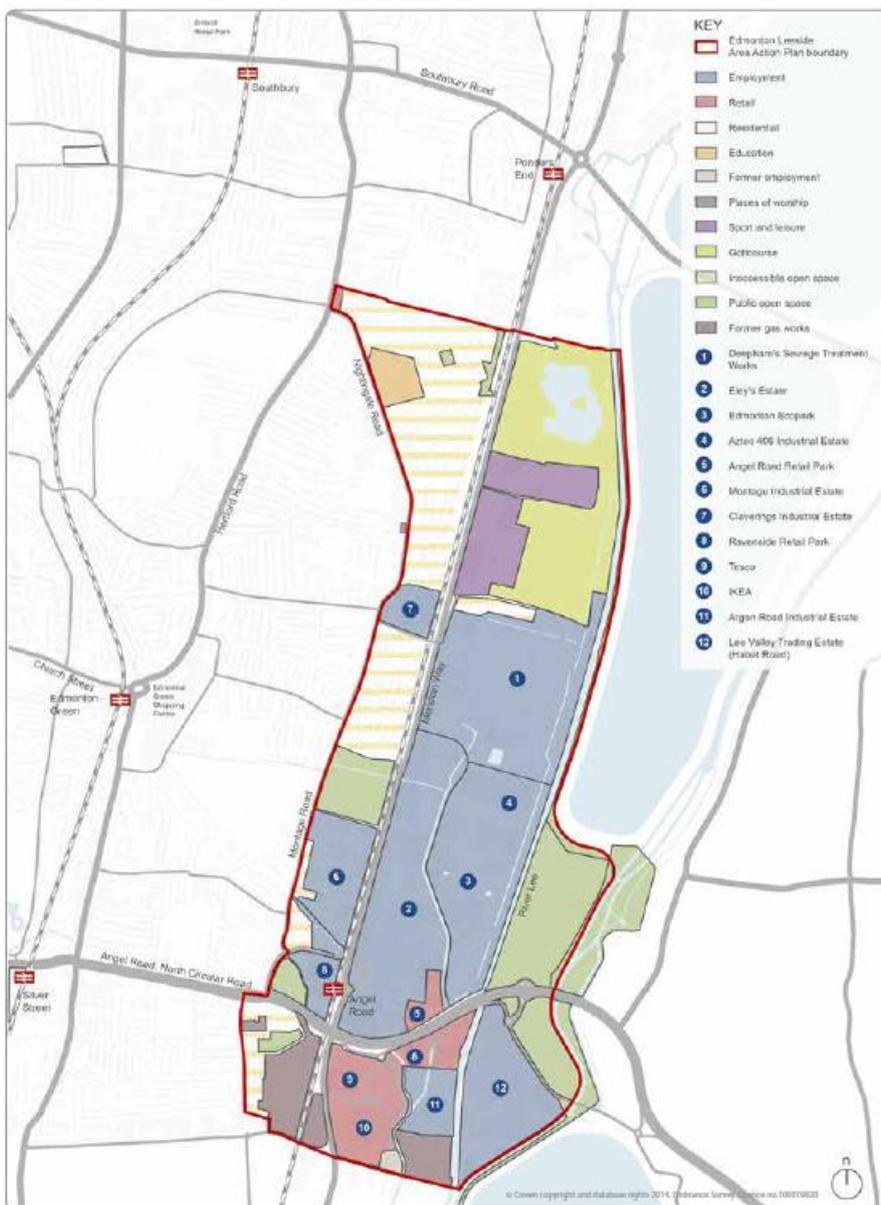


The area surrounding the River Lee Navigation has a long history of managed exploitation of its waterways from the marshes and river through to river straightening, tow paths, the Navigation, flood defence measures and reservoirs. This relationship with the water has led to a rich industrial heritage evident in the form and structures of the waterways themselves as well as through archaeological artefacts. Edmonton Leaside lies within an Area of Archaeological Importance, while the Montagu Road Cemeteries Conservation Area is directly adjacent to the west of the AAP boundary.

As a result of the historic pattern of development, Edmonton Leaside contains a high proportion of industrial land and key infrastructure such as the Edmonton EcoPark waste facility and Deephams Sewage Treatment Works.

Transport links dominate and dissect the area east-west, with the North Circular Road, and north-south with Meridian Way and West Anglia Main Line operating from Liverpool Street to Stansted (with few stopping services). This leads to poor north/south and east/west connectivity across and through the area.

Figure B: Existing land uses



## Air and noise pollution

The NPPF states that both new and existing development should be prevented from contributing to, or being put at unacceptable risk from, or being adversely affected by unacceptable levels of pollution.

Focusing on 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 (AQMAs) and the cumulative impacts from individual sites in local areas. Subsequently, planning decisions should ensure that any new development is consistent with a local air quality action plan.

The Air Quality Regulations 2000 and Amendment Regulations 2002 set out objective levels for six air pollutants of concern to health. The objectives are set at levels below which even the most sensitive individual would not feel adverse effects upon their health. All local authorities are required to periodically review and assess air pollution levels for the six pollutants in their geographic areas. These pollutants are: Nitrogen dioxide; PM (10); Sulphur dioxide; Carbon monoxide; Lead; and 1,3-butadiene.

The pollutants above arise from a variety of sources; the main source for nitrogen dioxide, PM (10), benzene, 1,3-butadiene and carbon monoxide in Enfield is road traffic. Road traffic is also a main source of noise pollution, although industrial uses also have localised effects.

The first round of air quality review and assessment for Enfield was completed in 2001 when the Council's Stage III air quality report concluded that it was likely that the borough would exceed the air quality objectives for nitrogen dioxide annual average objective and PM (10) 24-hourly average objective in the borough along heavily trafficked routes. The report also concluded that there was relevant public exposure along these routes above the averaging period for both pollutants. Consequently the Council declared the whole of the borough as an AQMA for nitrogen dioxide and PM (10).

An AQMA declaration is a legal requirement where there are predictions of exceedances of an air quality objective. The AQMA is purely an administrative area where the Council will work towards meeting the air quality objectives. The reason the whole borough was declared as an AQMA was because the areas of exceedance were widespread and could not easily be tied down to small areas. The Council then undertook a Stage IV report which provided source apportionment for both pollutants allowing the Council to then produce an Air Quality Action Plan.

The subsequent rounds of review and assessment have all concluded that the Council's AQMA is still appropriate and that the borough continues to have exceedances of the objectives for nitrogen dioxide and PM (10). The main source of pollution in the borough, and indeed country-wide, is road traffic. Typically in the borough these are the major trunk roads which are owned by Transport for London (TfL). The only real way of reducing pollution from traffic is to reduce vehicle numbers and improve the vehicle fleet to the most environmentally-friendly vehicles available.

The Council can, and has, taken actions to improve air quality, the most important being supporting the implementation of the London Low Emission Zone (LEZ). Other actions include assisting Enfield's schools in developing school travel plans.

Car ownership in Edmonton Leaside is lower than the average for Enfield and London. As a result fewer people travel to work by car; however those that do own a car are more dependent on it for accessing employment opportunities than residents elsewhere in Enfield, suggesting limited other transport options.

## Climate change

The NPPF states that local planning authorities should adopt a proactive approach to mitigating and adapting to climate change in line with the objectives and provisions of the Climate Change Act 2008.<sup>14</sup> With regards to mitigation, planning plays a key role in helping shape places to secure radical reductions in greenhouse gas emissions, supporting the delivery of renewable and low carbon energy and associated infrastructure. With regards to adaptation, planning plays a key role in helping shape places to minimise vulnerability and provide resilience to the impacts of climate change. Local plans should take account of climate change over the long term, including factors such as flood risk, coastal change, water supply and changes to biodiversity and landscape.

<sup>14</sup> HMSO (2008) Climate Change Act 2008.

The NPPF, the London Plan and Enfield Council's local planning documents (particularly Policy DMD 52, the Decentralised Energy Network Technical Specification Heat Network SPD and the EcoPark SPD) together provide a planning policy framework that is strongly supportive of promoting the development of low carbon decentralised heat networks.

There are considerable opportunities locally to deliver low carbon infrastructure. The Council has created Lee Valley Heat Network Operating Ltd (LVHN Ltd), trading as energetik, which was officially launched in July 2014 to deliver the Lee Valley, Montmorency, Alma Road and New Avenue Heat Networks. Research demonstrates that there is a unique opportunity to deliver a commercially sustainable decentralised energy network that would put the Upper Lee Valley at the forefront of energy production in London.

The LVHN will initially use a combination of heat from combined heat and power plants (CHP) and then heat from the new Energy Recovery Facility (ERF) at the Edmonton EcoPark when it is operational, predicted to be 2025. LVHN will move energy in the form of hot water through a system of pipes to buildings and industry across the Lee Valley. Over time the network has the potential to connect additional heat sources and heat demands elsewhere in the Lee Valley, such as the Alma Road Combined Heat and Power satellite scheme, North Middlesex Hospital and the Northumberland Park Development.

Key issues for policy on heat networks include the establishment of an energy centre on the EcoPark site; delivering a network route linking the EcoPark energy centre to the Meridian Water development; and secure future connections towards Alma Estate and Haringey/ Northumberland Park.

### Biodiversity

At the European level, the EU Biodiversity Strategy was adopted in May 2011 in order to deliver an established new Europe-wide target to 'halt the loss of biodiversity and the degradation of ecosystem services in the EU by 2020'.

Within the NPPF it is stated that planning policy should: Contribute to the government's commitment to halt the overall decline in biodiversity by minimising impacts and achieving net gains in biodiversity wherever possible; Promote the 'preservation, restoration and recreation of priority habitats, ecological networks' and the 'protection and recovery of priority species'; and Plan for biodiversity at a landscape-scale, across local authority boundaries.

The Lee Valley forms an important component of the London-wide green and blue infrastructure network, with the Upper Lee Valley Opportunity Area Planning Framework (OAPF, 2013) setting out the objective to deliver "a fully accessible network of green and blue spaces which open up the Lee Valley Regional Park. The networks between them will be improved benefitting both people and wildlife." Key assets include the watercourses, and Pickett's Lock which is associated with Sites of Metropolitan Importance for Nature (SMINs), and is in adjacent to Chingford Reservoirs Site of Special Scientific Interest (SSSI).

### Open spaces

Watercourses, waterways and green spaces are a feature of the area, with the main features being the River Lee Navigation, Picketts Lock, under-used open / green spaces at the AAP area's south-eastern extent, to the east of the Lee Navigation (including within the Meridian Water area), several smaller areas of open space and also the smaller water courses of Salmons Brook and Pymmes Brook. The River Lee Navigation is the spine of Lee Valley Regional Park (LVRP), which is managed for open space / access, as well as for biodiversity and a range of other uses; however, access to the LVRP from the AAP area, and from Edmonton Green to the west, is currently poor. Pickett's Lock is currently underutilised and suffers from low footfall as a result of its relative inaccessibility. Residents in the AAP area show the highest levels of dissatisfaction with open space in the borough. The strategic location of Meridian Water in the Upper Lee Valley provides an opportunity to contribute to the London Green Grid and Blue Ribbon Network.

### Heritage

The NPPF states that: "Local planning authorities should set out in their Local Plan a positive strategy for the conservation and enjoyment of the historic environment, including heritage assets most at risk through neglect, decay or other threats."

The area surrounding the River Lee Navigation has a long history of managed exploitation of its waterways from the marshes and river through to river straightening, tow paths, the Navigation, flood defence measures and reservoirs. This relationship with the water has led to a rich industrial heritage evident in the form and structures of the waterways themselves as well as through archaeological artefacts.

## Waste

The National Planning Policy for Waste (2014) states that when determining planning applications for non-waste developments (i.e. any development whose end function is not directly related to waste management), local authorities should ensure that:

- the likely impact of proposed, non-waste related developments on existing waste management facilities, and on-sites and areas allocated for waste management, is acceptable and does not prejudice the implementation of the Waste Hierarchy and/or the efficient operation of facilities; and
- new, non-waste developments make sufficient provision for waste management and promote good design to secure the integration of waste management facilities with the rest of the development and, in less developed areas, with the local landscape. This includes providing adequate storage facilities at residential premises, for example, by ensuring that there is sufficient and discrete provision for bins, to facilitate a high quality household collection service.

Enfield is London's second largest waste management and recycling hub and contains Edmonton EcoPark, a sub-regional facility that is one of London's largest recycling and sustainable waste management facilities.

The principal requirement for the future development of the EcoPark is to treat waste in the most sustainable way possible; however the treatment of waste also presents a significant opportunity to generate additional community benefits through the provision of heat. For this reason the EcoPark has been identified as the key low carbon heat source for initial development of the LVHN. The future waste management infrastructure requirements of the EcoPark site are currently awaiting consent from the Secretary of State, as part of the North London Waste Management Plan. In parallel with this work, energetik is in the process of agreeing a heat supply agreement and lease at the EcoPark.

## Water

### Water resources and water quality

The NPPF states that both new and existing development should be prevented from contributing to, or being put at unacceptable risk from, or being adversely affected by unacceptable levels of water pollution. The Water Framework Directive (WFD) through the River Basin Management Plans (RBMPs) sets out the environmental objectives which will need to be met for surface and ground water bodies in order to comply with the requirements of the Directive. The aims and objectives of WFD are to: achieve the overall 'good' status of waters; and prevent deterioration and enhance the quality of the Water Environment.

A key issue locally is the need to upgrade Deephams Sewage Treatment Works, and thereby increase sewage treatment capacity to accommodate population growth and attain a significant reduction in water pollution and odour emissions.

It is also noted that Thames21 is working with Enfield Council to improve the Salmons Brook. Sustainable Urban Drainage Systems (SuDS) are being designed to improve water quality and reduce flood risk. The systems, including wooded wetlands and ponds, have been co-designed with local people as part of the Love the Lea campaign.

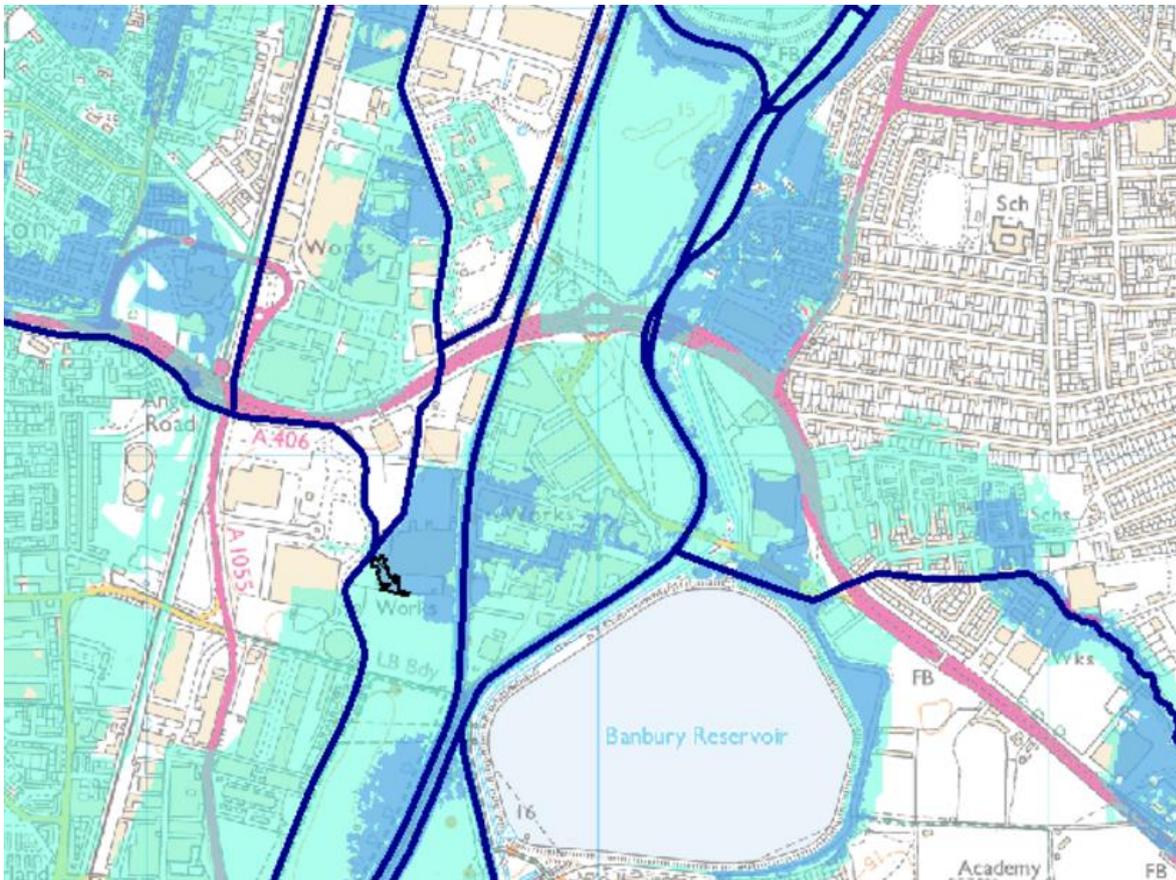
### Flood risk

In keeping with the NPPF and its accompanying Technical Guidance (Flood Risk and Coastal Change Planning Practice Guidance [PPG]), there is a need to undertake a sequential approach to development, supporting sites in flood risk zones only where it can be demonstrated that there is no lower risk alternative.

Edmonton Leaside has areas of Flood Zones 2 and 3 (medium to high flood risk), and several watercourses including the Lee Navigation, Lee Cut, Lee flood relief channel, Salmons Brook and Pymmes Brook.

Enfield’s Level 2 Strategic Flood Risk Assessment (SFRA) presents and summarises the flood risk at Meridian Water, together with requirements and recommendations for flood risk management. Development proposals must respond directly to the findings and requirements of the SFRA and maintaining compliance with the policies set out in the NPPF, London Plan, Core Strategy, Development Management Document and the requirements of the Environment Agency.

*Water courses and flood risk zones (light blue = FZ2; dark blue = FZ3) in and around Meridian Water*



**Land use efficiency**

The NPPF states that both new and existing development should be prevented from contributing to, or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil pollution or land instability. The NPPF also stipulates that the planning system should contribute to and enhance the natural and local environment by: Protecting and enhancing valued landscapes, geological conservation interests and soils; and Remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

The AAP area comprises a large amount of former industrial and potentially contaminative uses.

**Housing**

Local planning authorities should significantly boost the supply of housing and seek to ensure that ‘full, objectively assessed needs for market and affordable housing’ are met. With a view to creating ‘sustainable, inclusive and mixed communities’ authorities should ensure provision of affordable housing onsite or externally where robustly justified. Plans for housing mix should be based upon ‘current and future demographic trends, market trends and the needs of different groups in the community’. Larger developments are suggested as sometimes being the best means of achieving a supply of new homes.

A significant number of new homes are needed in Enfield over the coming years and decades in order to meet existing and future housing need. The London Plan (2016) recognises the pressing need to deliver at least 49,000 additional homes across the capital each year, but identified capacity for only 42,000 per year. The Mayor has stated that the next London Plan will aim to deliver at least 50,000 homes per annum.

Affordable housing is critical to meeting the housing needs of the borough and supporting a sustainable community at Meridian Water. The Council seeks 40% affordable housing units in new developments, applicable on sites capable of accommodating ten or more dwellings, as set out by Core Policy 3 and DMD 1. The Mayor is seeking to raise the London wide proportion of affordable housing to 50%.

The Council seeks a mix of housing sizes as set out in Core Policy 5, with the policy also stating that density of residential development proposals should be balanced with the need to ensure the most efficient use of land whilst respecting the accessibility of transport and other infrastructure.

## Health

Key messages within the NPPF include the social role of the planning system in supporting vibrant and healthy communities and to take account of and support local strategies to improve health, social and cultural wellbeing for all.

Planning for good health is high on the agenda, following the 'Marmot Review' of health inequalities in England, which concluded that there is 'overwhelming evidence that health and environmental inequalities are inexorably linked and that poor environments contribute significantly to poor health and health inequalities'. Planning for good health can complement planning for biodiversity (green infrastructure) climate change mitigation (walking/cycling).

Enfield has significant health inequalities across the borough, with the existing population at Edmonton Leaside and the wider Edmonton area experiencing relatively lower life expectancy than the national average, and higher rates of health issues, such as obesity. The proportion of residents that are disabled in the AAP area is higher than the rest of Enfield. The area also has the highest number of disability allowance claimants in the borough.

Childhood obesity has become an increasingly significant issue within Enfield. Barriers to active travel (walking and cycling) and difficulties accessing open spaces are likely contributors. Regeneration and change provides the opportunity to address broad healthy lifestyle issues; and the delivery of community and social infrastructure can enable residents to live healthy and active lifestyles. This will mean, for example encouraging the use of active and sustainable modes of transport such as walking and cycling, providing new open and play space to facilitate active and passive recreation opportunities, and ensuring access to healthy food.

## Poverty

The NPPF states that local authorities should use evidence to assess locations of deprivation which may benefit from planned remedial action. The Indices of Multiple Deprivation (2010) show, the AAP area is in the 20% most deprived areas nationally. A growing population and increased housing delivery in the Upper Lee Valley, including Northumberland Park and Tottenham Hale in Haringey, will place additional pressure on Enfield's infrastructure.

## Education

The NPPF states that "the government attaches great importance to ensuring that a sufficient choice of school places is available to meet the needs of existing and new communities. Local planning authorities should take a proactive, positive and collaborative approach to meeting this requirement, and to development that will widen choice in education".

New housing will lead to an increase in the number of school age children that will require Early Years, Primary and Secondary School provision. There is forecast demand for primary and secondary school places – the provision of two new 2 FE (Forms of Entry) primary schools and one 8 FE secondary school (with 6<sup>th</sup> form) will be necessary.

## Crime

The NPPF states that local and neighbourhood plans should develop robust and comprehensive policies which set out the quality of development that will be expected for the area. It is expected that new development will create safe and accessible environments where crime and disorder, and the fear of crime, do not undermine quality of life or community cohesion.

Upper Edmonton and Edmonton Green wards have the highest rates of crime and anti-social behaviour in the borough. Crime has been identified as a key issue on some of the area’s industrial estates, from petty crime and vandalism to the theft of expensive equipment and the fear of serious crime.

**Economic growth, employment and skills**

The planning system can make a contribution to building a strong, responsive economy by ensuring that sufficient land of the right type is available in the right places and at the right time to support growth and innovation; and by identifying and coordinating development requirements, including infrastructure provision.

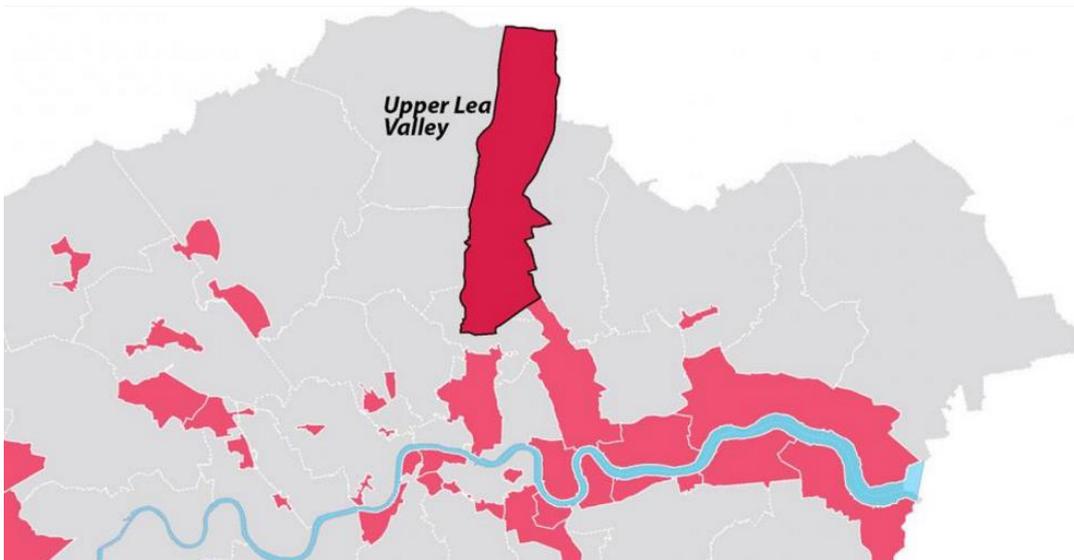
The NPPF emphasises the need to: Capitalise on ‘inherent strengths’, and meet the ‘twin challenges of global competition and of a low carbon future’; Support new and emerging business sectors, including positively planning for ‘clusters or networks of knowledge driven, creative or high technology industries’; and Support competitive town centre environments, and only consider edge of town developments in certain circumstances.

The Upper Lee Valley Opportunity Area Planning Framework (OAPF) was adopted in July 2013.

The OAPF sets out eight objectives:

- growth at Tottenham Hale, Blackhorse Lane, Meridian Water in Central Leaside and Ponders End
- optimised development and redevelopment opportunities along the A10/A1010 Corridor, in particular the Tottenham High Road Corridor and Northumberland Park
- over 15,000 new jobs by 2031 across a range of industries and a green industrial hub creating greater learning and employment opportunities over 20,100 new well designed homes by 2031
- full integration between the existing communities and the new jobs, homes and services provided as part of the new developments a Lee Valley Heat Network linked to the Edmonton Eco Park
- significant investment and improvements to transport infrastructure, including four trains per hour on the West Anglia Main Line and improvements to help people walk and cycle more easily through the area
- a fully accessible network of green and blue spaces which open up the Lee Valley Regional Park. The networks between them will be improved benefitting both people and wildlife.

Figure C: The Upper Lee Valley OAPF area



Unemployment levels in the Edmonton Leaside wards are higher than the borough average. Unemployment levels are up to three times higher in Edmonton Green. Almost a third of residents hold no educational qualifications at all, with only 1 in 5 residents holding degree level qualifications or higher.

The manufacturing base declined markedly following the economic recessions of recent years and competition from lower-cost developing nations. However, Edmonton Leaside has retained a distinctly industrial character, and seen growth in sectors such as food and drink manufacturing and green and low carbon industries. The industrial sector employs over 91,000 people in Enfield, with major manufacturers such as Coca Cola located in Edmonton Leaside.

The Upper Lee Valley contains London's second largest reservoir of industrial employment land, classified as SIL (Strategic Industrial Sites) or LSIS (Locally Significant Industrial Locations). The majority of the industrial estates are well used and have limited vacancies.

Some of the borough's old industrial sites have been successfully redeveloped into modern business parks that accommodate a wide range of firms. However, Enfield's manufacturing sector remains one of the largest in London, meaning industrial estates still remain a vital source of employment for local residents.

## Transport

The NPPF states that the transport system should be balanced in favour of sustainable transport modes, giving people the choice in how they travel.

The following points summarise the transport baseline -

- The Liverpool Street to Stansted railway line runs north south through Edmonton Leaside with a station at Angel Road (to be renamed Meridian Water). The station has few stopping services which greatly reduces rail accessibility in the area.
- The railway line forms a barrier to east-west movement for pedestrians and cyclists and Angel Road (future Meridian Water) station is relatively inaccessible as a result. Barriers and inaccessibility are key causes for low rates of walking and cycling locally.
- The A406 North Circular runs east-west through the south of Edmonton Leaside linking the area to other parts of north London. It forms a barrier to north-south movement through the site between Meridian Water and the rest of Edmonton Leaside.
- Meridian Way (the A1055) is the main north-south road through Edmonton Leaside linking the A406 and M25; however, along with the railway line it forms a barrier to east-west movement.
- There is a need to reduce conflict between residential and commuter traffic with road freight; particularly along Nightingale Road and Montagu Road.
- East-west and north-south journeys are disrupted by numerous barriers to movement, in particular the railway line, the A406, Meridian Way, the large industrial estates and the Lee Valley waterways and reservoirs.
- Meridian Water is poorly connected with its surroundings and as a result of the barriers fewer people walk or cycle to work in Edmonton Leaside than the rest of the borough or London.
- Accessibility to public transport in the area is generally low, with an infrequent north-south rail service and a relatively low number of bus routes. Bus linkages are particularly weak to the east of the area where there are fewer road linkages.
- Residents of Edmonton Leaside are almost twice as likely to travel to work by bus than the average resident of the borough or London.

Focusing on Angel Road Station, the existing station offers users a very poor quality experience due to a number of critical issues:

- The station is surrounded by a dual carriageway to the north, east and south and is adjacent to a scrap metal yard to the west, which severely restricts the station's accessibility and isolates it from the surrounding areas of housing, industry, retail and leisure;
- The current entrance is accessed via steep steps on the north side of Conduit Lane (the flyover to the north of the station), which then leads pedestrians back under the flyover and along a long narrow pathway, which follows the train line southbound to the platforms, a route which is long and fails to provide a sense of security for users;
- The train frequencies for Angel Road/ Meridian Water do not meet the Mayor's aspiration for a minimum four train per hour suburban service in London, with no trains calling at the station between 10:00 and 15:30; and
- The station is lacking in basic facilities such as real time passenger information.

## APPENDIX III - ALTERNATIVES APPRAISAL

### Introduction

As explained within ‘Part 1’ above, a focus of work has been on the development and appraisal of alternative approaches to development at Meridian Water, with a view to informing finalisation of the Proposed Submission AAP.

The reasonable alternatives, as understood at the current time, are presented in the table below.

#### *The reasonable alternatives*

Option	Housing quantum	Employment quantum*	Housing mix
1	8,000	Lower	Balanced
2	8,000	Lower	Weighted to smaller
3	8,000	Higher	Balanced
4	8,000	Higher	Weighted to smaller
5	10,000	Lower	Balanced
6	10,000	Lower	Weighted to smaller
7	10,000	Higher	Balanced
8	10,000	Higher	Weighted to smaller

Whilst Chapter 7 presents summary appraisal findings, this Appendix presents detailed appraisal findings.

### Appraisal methodology

For each of the options, the assessment identifies / evaluates ‘likely significant effects’ on the baseline, drawing on the sustainability topics/objectives identified through scoping (see Table 4.1) as a methodological framework.

**Green** is used to indicate significant positive effects, whilst **red** is used to indicate significant negative effects. 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). 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 will be.<sup>15</sup> 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 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**. 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 taking into account the criteria presented within the SEA Regulations.<sup>16</sup> 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 Edmonton Leaside AAP).

<sup>15</sup> Considerable assumptions are made regarding infrastructure delivery, i.e. assumptions are made regarding the infrastructure (of all types) that will come forward in the future alongside (and to some extent funded through) development.

<sup>16</sup> Schedule 1 of the Environmental Assessment of Plans and Programmes (SEA) Regulations 2004.

Appraisal findings

Detailed appraisal findings are presented across 20 appraisal tables below, with each table dealing with one of sustainability objectives of the SA framework established through scoping (see Table 4.1). A final table then presents a summary and conclusions.

Within each topic row, the alternatives are ranked in order of preference (1 being best) and the performance of each option is also classified in terms of ‘significant effects’ (using red/green shading).

Reduce <u>air</u> pollution and ensure air quality continues to improve								
	Option 1 8,000; Lower; Balanced	Option 2 8,000; Lower; Weighted	Option 3 8,000; Higher; Balanced	Option 4 8,000; Higher; Weighted	Option 5 10,000; Lower; Balanced	Option 6 10,000; Lower; Weighted	Option 7 10,000; Higher; Balanced	Option 8 10,000; Higher; Weighted
Rank	2	2	★1	2	2	2	8	★1
Significant effects?	No						Yes	No
Discussion	<p>Recognising that the whole of the Enfield is designated as an Air Quality Management Area (AQMA), there are number of considerations.</p> <ul style="list-style-type: none"> <li>• First and foremost, there is a need to minimise car use amongst new residents, so as to minimise air pollution on-site and offsite.</li> <li>• Secondly, there is a need to design the development so as to facilitate good flows of car traffic, and also prevent concentrations of air pollution through supporting good air flows, with implications for tall buildings and street widths.</li> <li>• Thirdly, there is a need to recognise that the North Circular road at Meridian Water’s northern edge is a major source of pollution, and hence sensitive land uses – namely residential and educational uses – should be buffered.</li> </ul> <p>With regards to car movements, there will be good potential for car free developments in close proximity to the new Meridian Water station at the site’s western extent, where PTAL will be high, relative to other locations in London (once transport upgrades are in place). PTAL will be lower to the east, but still relatively good; plus it is anticipated that design measures can be implemented that maximise ease of movement west across the site, towards the station. Release of SIL land is supportive of this movement objective.</p> <p>With regards to design considerations, there is an argument in favour of a minimising residential and employment floorspace (i.e. Option 2), thereby reducing pressure for tall buildings and enabling maximum land for wider streets and open space; however, detailed modelling work and consideration of design options has served to demonstrate that acceptable standards can be achieved under higher floorspace options. Specifically, it should be possible to achieve a street width to building height ratio of 1 : 1-1.5, and ensure that taller buildings are mostly located adjacent to public open space or waterways. Under Option 8 the average storey height will be around 8 storeys, which would necessitate careful management.</p> <p>Finally, with regards to buffering the North Circular: this is an argument in favour of higher employment growth, as taller office blocks will serve as an effective barrier.</p> <p>In <b>conclusion</b>, Meridian Water is an appropriate location for housing and employment growth in the London context, from a PTAL perspective. There is an air quality argument for employment growth (buffer the North Circular), although it is difficult to conclude that there are any air quality arguments for a weighted housing mix. As such, Option 8 and Option 3 are judged to perform on a par. Option 7 performs least well, and would result in significant negative effects, as density / building heights would be well in excess of what is necessary to achieve good air flows. Other options are judged to perform broadly on a par.</p>							

Reduce disturbance from <u>noise</u>								
	Option 1 8,000; Lower; Balanced	Option 2 8,000; Lower; Weighted	Option 3 8,000; Higher; Balanced	Option 4 8,000; Higher; Weighted	Option 5 10,000; Lower; Balanced	Option 6 10,000; Lower; Weighted	Option 7 10,000; Higher; Balanced	Option 8 10,000; Higher; Weighted
Rank	2	2	★1	2	2	2	8	★1
Significant effects?	No							
Discussion	<p>Issues are similar to those discussed above in relation to air quality, in that there is a need to minimise car movements, buffer the North Circular road and enable space within the ‘footprint’ of the site for open space, wider streets and high quality public realm more generally.</p> <p>In <b>conclusion</b>, it is possible to place the alternatives in the same order of performance as under the air quality heading; however, it is not possible to conclude that higher density development / taller buildings under Option 7 would lead to significant negative effects.</p>							

Meet the challenge of <u>climate change</u>								
	Option 1 8,000; Lower; Balanced	Option 2 8,000; Lower; Weighted	Option 3 8,000; Higher; Balanced	Option 4 8,000; Higher; Weighted	Option 5 10,000; Lower; Balanced	Option 6 10,000; Lower; Weighted	Option 7 10,000; Higher; Balanced	Option 8 10,000; Higher; Weighted
Rank	7	8	★1	2	2	2	★1	★1
Significant effects?	No							
Discussion	<p>Climate change mitigation objectives dictate a need to minimise: A) per capita CO<sub>2</sub> emissions from transport; and B) per capita CO<sub>2</sub> emissions from the built environment.</p> <p>In relation to (A), the relative merits of the alternatives have already been discussed above. It is essentially the case that transport upgrades will result in good PTAL levels, and hence Meridian Water is an appropriate location at which to maximise growth, from a perspective of wishing to support ‘sustainable transport’, i.e. modal shift away from use of the private car.</p> <p>In relation to (B), there is an established opportunity to supply low carbon heat and electricity to homes and businesses in Meridian Water, given the Edmonton EcoPark proposals. As such, there is a strong argument for maximising growth, and also delivering a good mix of homes to employment (as this helps to ensure a stable demand throughout the day).</p> <p>With regards to climate change adaptation, a key consideration is flood risk, which is given stand-alone consideration under the ‘water’ heading, below. There are also other climate change adaptation issues, in particular around rising temperatures and the resulting need for good design, to include good air circulation / ventilation and shading. See discussion of design related issues under the ‘air’ and ‘noise’ headings, above.</p> <p>In <b>conclusion</b>, an overriding consideration would seem to be the need to capitalise on the opportunity to supply low carbon heat and electricity. As such, it would seem appropriate to maximise residential floor space in Meridian Water, and also deliver the higher employment growth quantum figure. It is not possible to conclude ‘significant’ effects, as climate change mitigation is a global issue / local actions can only have a minor effect.</p>							

Conserve and enhance <u>biodiversity</u> in the ELAAP's area and beyond								
	Option 1 8,000; Lower; Balanced	Option 2 8,000; Lower; Weighted	Option 3 8,000; Higher; Balanced	Option 4 8,000; Higher; Weighted	Option 5 10,000; Lower; Balanced	Option 6 10,000; Lower; Weighted	Option 7 10,000; Higher; Balanced	Option 8 10,000; Higher; Weighted
Rank	2	★1	4	2	6	4	8	6
Significant effects?	No							
Discussion	<p>There are considerable biodiversity opportunities, given the location of Meridian Water adjacent to the Lee Valley Regional Park (LVRP). Particular opportunities relate to Pymmes and Salmon Brooks, which lie within the site, to the west of the River Lee Navigation. There is understood to be potential for naturalisation of the brooks' banks, and also the potential to develop multifunctional greenspace (i.e. greenspace of importance for amenity, recreation and drainage / flood alleviation, as well as biodiversity) alongside the brooks.</p> <p>In <b>conclusion</b>, the sensitive nature of Meridian Water lends support for a restrained approach to growth (i.e. Option 2). It seems likely that Meridian Water is relatively sensitive in the London Context, i.e. alternative locations for growth would be better suited to higher density development. There is little basis upon which to conclude significant effects though, e.g. it is not possible to conclude the likelihood of higher density development (Option 7) negatively impacting a designated site, or the achievement of London-wide green/blue infrastructure objectives.</p>							

Protect enhance and make accessible for enjoyment, the area's <u>green and open spaces</u>								
	Option 1 8,000; Lower; Balanced	Option 2 8,000; Lower; Weighted	Option 3 8,000; Higher; Balanced	Option 4 8,000; Higher; Weighted	Option 5 10,000; Lower; Balanced	Option 6 10,000; Lower; Weighted	Option 7 10,000; Higher; Balanced	Option 8 10,000; Higher; Weighted
Rank	★1	★1	★1	★1	★1	★1	8	★1
Significant effects?	No							
Discussion	<p>Higher density development would fail to deliver the area of open space on-site that is expected by LBE (2.37ha per 1000 residents); however, this is not considered to be a major problem, given two significant areas of open space on-site and excellent access to the extensive resource of the LVRP. Modelling work has found that only the highest densities of development would result in less than 1ha open space per 1000 residents. Another consideration is the need to ensure access east across the site to the LVRP, which necessitates release / redevelopment of at least half of the existing Harbet Road SIL.</p> <p>In <b>conclusion</b>, Option 7 performs poorly on the basis of modelling work, which indicates that it would be difficult to achieve on-site open space standards. There would, however, be excellent access to the LVRP, and so significant negative effects are not predicted.</p>							

**Protect and enhance heritage and cultural assets in Central Leaside and surrounding area**

	<b>Option 1</b>	<b>Option 2</b>	<b>Option 3</b>	<b>Option 4</b>	<b>Option 5</b>	<b>Option 6</b>	<b>Option 7</b>	<b>Option 8</b>
	8,000; Lower; Balanced	8,000; Lower; Weighted	8,000; Higher; Balanced	8,000; Higher; Weighted	10,000; Lower; Balanced	10,000; Lower; Weighted	10,000; Higher; Balanced	10,000; Higher; Weighted
Rank	=							
Significant effects?	<b>No</b>							
Discussion	<p>There are no designated heritage features on-site, but the industrial heritage of the area remains apparent, to some extent, and is worthy of conservation. In particular, there is a need to recognise the heritage value of the River Lee Navigation.</p> <p>There is a need to utilise the River Lee Navigation as a resource, e.g. with a towpath added on the western side to enable access to the river at least to pedestrians. Equally, the junction of 'the Causeway' (i.e. the main east-west spine through the development) with the Lee Navigation should be developed as a 'Making District' reflecting the industrial heritage.</p> <p>In <b>conclusion</b>, all alternatives perform broadly on a par, and there is no reason to suggest the likelihood of significant effects. There is little to suggest that higher density development would compromise the potential for the limited heritage assets that exist to be integrated as a masterplanning and design consideration.</p>							

**Achieve the sustainable management of waste**

	<b>Option 1</b>	<b>Option 2</b>	<b>Option 3</b>	<b>Option 4</b>	<b>Option 5</b>	<b>Option 6</b>	<b>Option 7</b>	<b>Option 8</b>
	8,000; Lower; Balanced	8,000; Lower; Weighted	8,000; Higher; Balanced	8,000; Higher; Weighted	10,000; Lower; Balanced	10,000; Lower; Weighted	10,000; Higher; Balanced	10,000; Higher; Weighted
Rank	=							
Significant effects?	<b>No</b>							
Discussion	<p>It should be possible to achieve sustainable waste management, to include on-site facilities to enable waste storage and separation of waste streams, under all alternatives.</p> <p>In <b>conclusion</b>, the alternatives perform on a par, and significant effects are not predicted.</p>							

Achieve sustainable <u>water resources</u> management								
	Option 1 8,000; Lower; Balanced	Option 2 8,000; Lower; Weighted	Option 3 8,000; Higher; Balanced	Option 4 8,000; Higher; Weighted	Option 5 10,000; Lower; Balanced	Option 6 10,000; Lower; Weighted	Option 7 10,000; Higher; Balanced	Option 8 10,000; Higher; Weighted
Rank	2	1	4	2	6	4	8	6
Significant effects?	No							
Discussion	<p>In respect of water resources and water quality, consultation with the relevant water authorities has not highlighted constraints in respect of potable water availability, sewage capacity or waste water treatment capacity. Necessary upgrades to Deephams Sewage Treatment Works are anticipated.</p> <p>With regards to flood risk, fluvial risk is a key consideration to the development of Meridian Water, along with other forms of flooding, such as surface water, as set out in the Level 2 SFRA. This is a key consideration that has informed masterplanning and design work to date, and it will be a key consideration through subsequent planning applications. The plan states: <i>“As a large area of previously developed land with extensive flood risk, redevelopment at Meridian Water represents an excellent opportunity to improve flood risk management that will benefit future users of the area.”</i> However, it remains the case avoidance of flood risk areas should be a priority, ahead of mitigation.</p> <p>In <b>conclusion</b>, it is appropriate to suggest a lower density growth approach (Option 2) as preferable, leaving more space for flood risk avoidance and mitigation. It is appropriate to conclude the possibility of the highest density growth option leading to <b>significant negative effects</b>, and conclude <b>uncertain effects</b> for other options. It is also noted that the Environment Agency is currently updating its requirements for climate change allowances to a higher level than those used to prepare the Level 2 SFRA.</p>							

Meet the requirements of sustainable design and construction								
	Option 1 8,000; Lower; Balanced	Option 2 8,000; Lower; Weighted	Option 3 8,000; Higher; Balanced	Option 4 8,000; Higher; Weighted	Option 5 10,000; Lower; Balanced	Option 6 10,000; Lower; Weighted	Option 7 10,000; Higher; Balanced	Option 8 10,000; Higher; Weighted
Rank	=							
Significant effects?	No							
Discussion	<p>It should be possible to achieve high standards of sustainable design and construction, to include features that help to minimise per capita CO<sub>2</sub> emissions and water usage, under all alternatives.</p> <p>In <b>conclusion</b>, the alternatives perform on a par, and significant effects are not predicted.</p>							

Improve land use efficiency								
	Option 1 8,000; Lower; Balanced	Option 2 8,000; Lower; Weighted	Option 3 8,000; Higher; Balanced	Option 4 8,000; Higher; Weighted	Option 5 10,000; Lower; Balanced	Option 6 10,000; Lower; Weighted	Option 7 10,000; Higher; Balanced	Option 8 10,000; Higher; Weighted
Rank	7	8	★1	2	2	2	★1	★1
Significant effects?	No		Yes	No			Yes	
Discussion	<p>Meridian Water comprises one of the largest areas of underused land in London, with large areas of derelict land alongside industrial accommodation of varying age and quality.</p> <p>In <b>conclusion</b>, it would seem appropriate to maximise residential floor space in Meridian Water, and also deliver the higher employment growth quantum figure. It is understood that the higher employment growth quantum figure would be achieved with some use made of existing industrial buildings. Taking these factors into account, it seems fair to conclude that the three best performing options would lead to significant positive effects.</p>							

Ensure the opportunity to live in a decent, sustainably constructed and affordable home								
	Option 1 8,000; Lower; Balanced	Option 2 8,000; Lower; Weighted	Option 3 8,000; Higher; Balanced	Option 4 8,000; Higher; Weighted	Option 5 10,000; Lower; Balanced	Option 6 10,000; Lower; Weighted	Option 7 10,000; Higher; Balanced	Option 8 10,000; Higher; Weighted
Rank	3	7	3	7	★1	3	★1	3
Significant effects?	No				Yes	No	Yes	No
Discussion	<p>Meridian Water must deliver new homes comprising different types, sizes and tenure options to meet a range of needs arising from a diverse population, including families, as set out by Core Policy 38. The Core Policy would suggest a need to deliver a higher proportion of family homes (three plus bedrooms) than smaller homes (one or two bedrooms); however, the emerging Enfield SHMA suggests that the need across the Borough is for a 50/50 balance.</p> <p>In <b>conclusion</b>, a primary consideration would appear to be the delivery of a housing mix in accordance with existing policy, or at least a 'balanced' mix as advised by the emerging SHMA. Equally, there is a need to maximise housing growth on-site, given a paucity of alternative sites in London. This leads to a conclusion that Options 5 and 7 perform best, and would result in significant positive effects.</p>							

Improve the health and well-being and reduce inequalities in <u>health</u>								
	Option 1 8,000; Lower; Balanced	Option 2 8,000; Lower; Weighted	Option 3 8,000; Higher; Balanced	Option 4 8,000; Higher; Weighted	Option 5 10,000; Lower; Balanced	Option 6 10,000; Lower; Weighted	Option 7 10,000; Higher; Balanced	Option 8 10,000; Higher; Weighted
Rank	★1	6	★1	6	★1	★1	8	★1
Significant effects?	<b>No</b>							
Discussion	<p>It would seem appropriate to maximise residential floorspace at Meridian Water, from a health perspective, given the potential to deliver a sustainable new community with good access to services and facilities, including via walking and cycling, and also good access to open/green space. However, there is a need to ensure achievement of light, amenity and street enclosure standards. In this respect, modelling work serves to indicate that it would be difficult to achieve standards under a higher growth scenario that delivers a balanced housing mix.</p> <p>In <b>conclusion</b>, options that would maximise residential floorspace perform well, and broadly on a par. Option 7 performs relatively poorly, on the basis that certain standards would be difficult to achieve; however, it is not possible to conclude 'significant' negative effects, given the wide ranging nature of health determinants.</p>							

Reduce <u>poverty</u> and social exclusion								
	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6	Option 7	Option 8
	8,000; Lower; Balanced	8,000; Lower; Weighted	8,000; Higher; Balanced	8,000; Higher; Weighted	10,000; Lower; Balanced	10,000; Lower; Weighted	10,000; Higher; Balanced	10,000; Higher; Weighted
Rank	2	★1	2	2	2	2	2	2
Significant effects?	<b>No</b>							
Discussion	<p>Residents of Northumberland Park, an area of regeneration focus to the immediate south of Meridian Water within London Borough of Haringey (and falling within the area of the currently emerging Tottenham AAP) will benefit from employment on the Meridian Water site; however, there is some uncertainty in this respect given that residents may be more dependent on lower skilled jobs more associated with the existing SIL.</p> <p>In <b>conclusion</b>, whilst there is considerable uncertainty, it seems fair to conclude that a lower growth approach that involves retention of the existing Harbet Road SIL could perform best, from a regeneration perspective. Effects are quite indirect, however, and so significant effects are not predicted.</p>							

Raise <u>educational achievement</u> levels								
	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6	Option 7	Option 8
	8,000; Lower; Balanced	8,000; Lower; Weighted	8,000; Higher; Balanced	8,000; Higher; Weighted	10,000; Lower; Balanced	10,000; Lower; Weighted	10,000; Higher; Balanced	10,000; Higher; Weighted
Rank	=							
Significant effects?	<b>No</b>							
Discussion	<p>New schools will be delivered on-site to meet the needs of the new community. Schools may struggle to achieve space standards; however, there is an expectation that the existing open spaces – in particular the ‘Green Belt Park’ area at the eastern extent of Meridian Water – can be used by schools. A secondary school would need 0.9 Ha plus 50m<sup>2</sup> per pupil to meet DoE standards. In comparison, a popular new school in Hackney - Mossbourne Academy – is situated on a site of just 2.5 Ha, but benefits from its location beside Hackney Downs Park.</p> <p>In <b>conclusion</b>, the alternatives perform on a par, and significant effects are not predicted.</p>							

Reduce crime, anti-social behaviour and fear of <u>crime</u>								
	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6	Option 7	Option 8
	8,000; Lower; Balanced	8,000; Lower; Weighted	8,000; Higher; Balanced	8,000; Higher; Weighted	10,000; Lower; Balanced	10,000; Lower; Weighted	10,000; Higher; Balanced	10,000; Higher; Weighted
Rank	=							
Significant effects?	No							
Discussion	<p>The possibility that certain design objectives may be compromised under higher growth scenarios has already been discussed above, e.g. under the ‘air’, ‘noise’ and ‘health’ headings; however, it is not clear that there would be implications for crime, or fear of crime. Under all scenarios it should be possible to create a horizontal and vertical use mix in accordance with ‘designing out crime’ objectives.</p> <p>In <b>conclusion</b>, the alternatives perform on a par, and significant effects are not predicted.</p>							

Improve <u>accessibility</u> for all to services and facilities								
	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6	Option 7	Option 8
	8,000; Lower; Balanced	8,000; Lower; Weighted	8,000; Higher; Balanced	8,000; Higher; Weighted	10,000; Lower; Balanced	10,000; Lower; Weighted	10,000; Higher; Balanced	10,000; Higher; Weighted
Rank	★ 1	★ 1	★ 1	★ 1	★ 1	★ 1	2	★ 1
Significant effects?	No							
Discussion	<p>Significant amounts of land are required for supporting infrastructure at Meridian Water, including schools, retail and healthcare. Required and non-negotiable uses include nurseries, primary schools, secondary schools, open space and healthcare; whilst optional, but desirable, uses include swimming pools, sports courts, library, arts and culture space.</p> <p>Modelling work has served to indicate that high density scenarios would not enable delivery all of the ‘optional but desirable’ types of community infrastructure. Under such a scenario existing nearby infrastructure should be able to absorb some of the demand from the development at Meridian Water; however, due to the considerable presence of infrastructure on and around the perimeter of the site, mobility outwards from the site is limited. In addition, in some instances community infrastructure in the surrounding areas is already at capacity.</p> <p>In <b>conclusion</b>, the need to deliver community infrastructure on-site indicates a need to avoid highest density growth, i.e. Option 7. It is difficult to differentiate the other alternatives, and significant effects are not predicted.</p>							

Sustain <u>economic growth</u> and competitiveness								
	Option 1 8,000; Lower; Balanced	Option 2 8,000; Lower; Weighted	Option 3 8,000; Higher; Balanced	Option 4 8,000; Higher; Weighted	Option 5 10,000; Lower; Balanced	Option 6 10,000; Lower; Weighted	Option 7 10,000; Higher; Balanced	Option 8 10,000; Higher; Weighted
Rank	5	5	★1	★1	5	5	4	★1
Significant effects?	No		Yes		No			Yes
Discussion	<p>From an economic growth perspective, it would seem that the main priority is to maximise the number of jobs on site, recognising that these new jobs will be in higher value sectors that are a focus of regional growth ambitions. It is also recognised that there will be a mix of employment uses, to include some light industrial and ‘making’ uses.</p> <p>Loss of SIL is an economic growth consideration, as there are concerns that piecemeal loss of SIL across London will lead to an imbalance in employment land types over time; however, this is considered a secondary consideration here (however, see further discussion under the ‘employment’, below).</p> <p>In <b>conclusion</b>, there is a need to support options that would deliver the ‘higher’ employment growth quantum, and it is also fair to assume that the option involving highest density development (Option 7) could compromise objectives relating to a mix of employment uses on-site. 6,000 new jobs on-site is a highly significant quantum.</p>							

Ensure high and stable levels of <u>employment</u>								
	Option 1 8,000; Lower; Balanced	Option 2 8,000; Lower; Weighted	Option 3 8,000; Higher; Balanced	Option 4 8,000; Higher; Weighted	Option 5 10,000; Lower; Balanced	Option 6 10,000; Lower; Weighted	Option 7 10,000; Higher; Balanced	Option 8 10,000; Higher; Weighted
Rank	?	?	?	?	?	?	?	?
Significant effects?	No							
Discussion	<p>A primary consideration here relates to the needs of those who will rely on the existing businesses on-site, which may include workers suited to light industry jobs who may find it difficult to find a replacement job within the vicinity.</p> <p>Having made these introductory comments, there is an argument to suggest that the lowest growth option (Option 4) should be supported, as the minimal floorspace requirements could enable retention of some or all of the existing Harbet Road SIL. However, the strength of this argument is not clear, given that plans for the wider AAP area include designation of new areas of SIL, and generally support for the extensive areas of industry / light industry that exist.</p> <p>It is very <b>difficult to draw a conclusion</b> here, and so uncertain effects are recorded. Any effects are unlikely to be significant.</p>							

Increase the <u>skill</u> levels of the workforce								
	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6	Option 7	Option 8
	8,000; Lower; Balanced	8,000; Lower; Weighted	8,000; Higher; Balanced	8,000; Higher; Weighted	10,000; Lower; Balanced	10,000; Lower; Weighted	10,000; Higher; Balanced	10,000; Higher; Weighted
Rank	=							
Significant effects?	No							
Discussion	It is not thought that the alternatives will have a bearing on the achievement of this objective. In <b>conclusion</b> , the alternatives perform on a par, and significant effects are not predicted.							

Improve transport infrastructure and reduce road congestion								
	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6	Option 7	Option 8
	8,000; Lower; Balanced	8,000; Lower; Weighted	8,000; Higher; Balanced	8,000; Higher; Weighted	10,000; Lower; Balanced	10,000; Lower; Weighted	10,000; Higher; Balanced	10,000; Higher; Weighted
Rank	=							
Significant effects?	Yes							
Discussion	<p>Development of Meridian Water will support: a new train station, Meridian Water Station, as a result of the re-location of the existing Angel Road Station; improved bus services based mainly on the extension of the existing lines provided in the surrounding areas, which currently enter the site to a limited extent; a network of walking and cycling routes to enable far better access across Meridian Water, with permeability across the major transport routes that currently act as barriers (e.g. Meridian Way, North Circular); and a transformed road network that includes a new route over the River Lee Navigation. It should be possible to achieve these transport priorities under all scenarios.</p> <p>With regards to car parking, LBE policy has favoured a high parking ratio up to and beyond 200%, however the public transport improvements and mix of uses on site can justify an average ratio of around 49%, which can be efficiently housed under podium courtyards and partially on street. Lower growth scenarios could achieve additional car parking; however, it is not clear that this is necessary, i.e. it would seem appropriate to depart from LBE policy.</p> <p>In <b>conclusion</b>, the alternatives perform broadly on a par and all would result in significant positive effects.</p>							

Topic	Categorisation / Rank of preference							
	Option 1 8,000; Lower; Balanced	Option 2 8,000; Lower; Weighted	Option 3 8,000; Higher; Balanced	Option 4 8,000; Higher; Weighted	Option 5 10,000; Lower; Balanced	Option 6 10,000; Lower; Weighted	Option 7 10,000; Higher; Balanced	Option 8 10,000; Higher; Weighted
Air	2	2	★1	2	2	2	8	★1
Noise	2	2	★1	2	2	2	8	★1
Climate change	7	8	★1	2	2	2	★1	★1
Biodiversity	2	★1	4	2	6	4	8	6
Open spaces	★1	★1	★1	★1	★1	★1	8	★1
Heritage	=							
Waste	=							
Water	2	★1	4	2	6	4	8	6
Sustainable design	=							
Land use efficiency	7	8	★1	2	2	2	★1	★1
Housing	3	7	3	7	★1	3	★1	3
Health	★1	6	★1	6	★1	★1	8	★1
Poverty	2	★1	2	2	2	2	2	2
Education	=							
Crime	=							
Accessibility	★1	★1	★1	★1	★1	★1	2	★1
Economic growth	5	5	★1	★1	5	5	4	★1
Employment	?							
Skills	=							
Transport	=							

Topic	Categorisation / Rank of preference							
	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6	Option 7	Option 8
	8,000; Lower; Balanced	8,000; Lower; Weighted	8,000; Higher; Balanced	8,000; Higher; Weighted	10,000; Lower; Balanced	10,000; Lower; Weighted	10,000; Higher; Balanced	10,000; Higher; Weighted

**Conclusions**

The appraisal finds the potential to confidently distinguish the alternatives in terms of twelve out of twenty objectives. Focusing on the six objectives under which it is possible to establish a ‘significant’ distinction, summary findings are as follows –

- Air – Meridian Water performs well as a location for major growth, and so lower growth options are not supported. However, modelling work serves to indicate that there is a threshold level of density, above which design objectives will not be achieved, with implications for air quality (and also noise, health and accessibility). As such, **Option 7**, which would involve highest density, performs poorly.
- Water – Meridian Water includes an extensive area of flood risk, hence there is a need to ensure sufficient space for flood risk avoidance and mitigation measures. As such, **Option 7**, which would involve highest density, performs poorly.
- Land use efficiency – There is a need to maximise residential and employment floorspace, given that Meridian Water is an area of under-used land. As such, **Options 3, 7 and 8** perform well.
- Housing – There is a need to maximise the number of houses delivered across the spectrum of household sizes and types. As such, **Options 5 and 7** perform well.
- Economic growth – There is a need to maximise the number of new jobs delivered on-site, whilst also ensuring a good mix of employment uses. As such, **Option 3, 4 and 8** perform well.

Whilst it is not possible to conclude ‘significant’ effects, it is also important to note the potential to differentiate the alternatives in terms of –

- Climate change – There is a need to maximise residential and employment floorspace at Meridian Water, given low carbon opportunities. As such, **Options 3, 7 and 8** perform well.
- Biodiversity – Meridian Water is a sensitive location within the Lee Valley, and so a lower growth strategy could be called for in this respect. As such, **Option 2** performs well.
- Poverty / employment – there are certain arguments to suggest that a lower growth strategy (Option 2) performs well, given that it would enable some retention of the Harbet Road SIL.

Whilst Option 3 scores highest on a simply tally, judgment on the weight accorded to the sustainability objectives must be used in decision-making.