



# **Integrated Impact Assessment London Environment Strategy**

Greater London Authority

## **London Environment Strategy Post Adoption Statement**

June 2018



## Integrated Impact Assessment London Environment Strategy

Project No: B2287700  
Document Title: London Environment Strategy Post Adoption Statement  
Revision: 1  
Date: June 2018  
Client Name: Greater London Authority  
Project Manager: Faye Clamp  
Author: Jennifer Wade

Jacobs UK Ltd

New City Court  
20 St Thomas Street  
London SE1 9RS  
United Kingdom  
T +44 (0)20 7939 6100  
F +44 (0)20 7939 6103  
www.jacobs.com

© Copyright 2018 Jacobs U.K. Limited. The concepts and information contained in this document are the property of Jacobs. Use or copying of this document in whole or in part without the written permission of Jacobs constitutes an infringement of copyright.

Limitation: This document has been prepared on behalf of, and for the exclusive use of Jacobs' client, and is subject to, and issued in accordance with, the provisions of the contract between Jacobs and the client. Jacobs accepts no liability or responsibility whatsoever for, or in respect of, any use of, or reliance upon, this document by any third party.

### Document history and status

Revision	Date	Description	By	Review	Approved
0	17/04/18	Post Adoption Statement	JW	JP	FC
1	03/05/18	Amendments to address GLA comments and Final LES	JW	JP	FC

## Contents

<b>1.</b>	<b>Introduction</b> .....	<b>1</b>
1.1	The London Environment Strategy (LES) .....	1
1.2	A Brief Timeline of the Process of LES Development.....	1
1.3	Purpose of the Post-Adoption Statement.....	2
<b>2.</b>	<b>Integration of Environmental and Wider Sustainability Considerations</b> .....	<b>4</b>
2.1	Consideration of Environmental and Sustainability Issues .....	4
2.2	Influence of the IIA Process .....	5
<b>3.</b>	<b>Consultation feedback</b> .....	<b>9</b>
3.1	Overview of Consultation Feedback on the Draft LES and IIA Report .....	9
3.2	Key Issue/Opinions Raised .....	14
3.2.1	Statutory Consultees .....	14
3.2.2	Other Responses.....	16
<b>4.</b>	<b>Reasons for Choosing the LES as Adopted, In Light of Reasonable Alternatives Dealt With</b> .....	<b>18</b>
4.1	Development of the LES – Alternatives Considered .....	18
4.1.1	Strategic Options .....	18
4.1.2	Alternatives since the Strategic Options stage.....	18
4.2	Reasons for Adoption of the Final LES .....	25
<b>5.</b>	<b>Monitoring</b> .....	<b>26</b>
5.1	Summary of Monitoring Proposals .....	26
<b>6.</b>	<b>Glossary</b> .....	<b>31</b>

## 1. Introduction

### 1.1 The London Environment Strategy (LES)

The Greater London Authority Act 1999 (“GLA Act”) originally required the Mayor to prepare a suite of separate environmental strategies covering six environmental aspects: biodiversity, air quality, climate change mitigation and energy, climate change adaptation, municipal waste and ambient noise. Previously, each of these was the subject of a standalone strategy. The Mayor had also published two additional strategies to cover the environmental aspects of water and business waste.

The Localism Act 2011 made changes to the GLA Act, so that the Mayor is now required to produce a single London environment strategy incorporating the six separate environmental strategies previously required. In addition to these six environmental subject areas, the London environment strategy must include a general assessment of London’s environment. The GLA has therefore revised the separate subject areas set out above into one integrated London Environment Strategy (LES). In addition to the statutorily required subject areas, the LES can include policies and proposals concerning other matters the Mayor considers relevant to London’s environment.

The adopted LES covers further issues such as commercial waste, water supply and demand and the circular economy. These issues have been integrated within the Final LES’s seven broad Policy Areas as set out below:

- Air quality;
- Green infrastructure;
- Climate change mitigation and energy;
- Waste;
- Adapting to climate change;
- Ambient noise; and
- Transition to a low carbon circular economy.

The LES is one of a number of statutory strategies that the Mayor is required to produce. These strategies are closely interlinked. For example, the Mayor’s spatial development strategy the ‘London Plan’, sets out an integrated economic, transport and social framework for the development of London over the next 20–25 years, while the Mayor’s Transport Strategy (MTS) sets out his policies and proposals for transport in London.

### 1.2 A Brief Timeline of the Process of LES Development

The preparation of the LES has been subject to procedural and legal requirements necessitating assessment of how the strategy will affect people, places, economic and environmental conditions in Greater London. To fulfil these requirements, the policies and proposals within the LES were subject to the following assessments and the findings collated into the overall IIA Report:

- Sustainability Appraisal and Strategic Environmental Assessment (SEA);
- Equalities Impact Assessment (EqIA);
- Health Impact Assessment (HIA);
- Assessment of Economic Impacts (AEI); and
- Community Safety Impact Assessment (CSIA).

In accordance with the SEA Regulations<sup>1</sup>, an assessment of the likely significant effects on the environment of implementing the LES was undertaken. During the process of undertaking the IIA, the potential impacts on biodiversity; population; human health; fauna; flora; soil; water; air; climatic factors; material assets; cultural

<sup>1</sup> The Environmental Assessment of Plans and Programmes Regulations 2004 (Statutory Instrument 1633).

heritage, including architectural and archaeological heritage; landscape and the inter-relationship between the above issues have been considered<sup>2</sup>. The IIA has also considered impacts on further issues such as equality, community safety, and the economy to meet the public sector equality duty under the Equality Act 2010, as well in accordance with Mayoral practice.

As advised by Natural England, A Habitats Regulations Assessment (HRA) was not undertaken for the LES. This is because the LES does not specify plans or strategies that direct the delivery of projects (e.g. transport schemes, development projects) that could have an impact on Special Areas of Conservation (SAC) and Special Protection Areas (SPA) designated under the Birds Directive and Habitats Directive. As the LES itself does not specify such projects, HRA is not needed. The HRA is undertaken on the policies in the London Plan and on the programmes/projects set out in the MTS.

The IIA process was undertaken alongside the preparation of the LES to help contribute to the integration of environmental, social and economic considerations in the preparation and adoption of the LES. It has done this by ensuring that inter-related issues and synergies between the above assessments and their outcomes have been identified in a systematic manner, and used to inform the LES development process.

The detailed IIA process and its methodology are described in chapter 3 of the IIA Report which accompanied the publication of the Draft LES. The report was made available for public and stakeholder consultation in the period from 11 August 2017 to 17 November 2017. The IIA Report and the Draft LES are available from: <https://www.london.gov.uk/WHAT-WE-DO/environment/environment-publications/draft-london-environment-strategy>.

### 1.3 Purpose of the Post-Adoption Statement

It is a requirement under Regulation 16 of the SEA Regulations that as soon as reasonably practicable after the adoption of a plan or programme for which an environmental assessment has been carried out under the SEA Regulations, that a statement containing the particulars set out in Regulation 16 (4) is produced. The purpose of this ‘post-adoption statement’ (PAS) is to demonstrate how the SEA, or in this case the IIA, has served to influence the drafting of the final adopted LES. This PAS has been produced after the findings of the consultation have been taken into account and the final version of the LES has been drafted. It meets the requirements of Regulation 16 of the SEA Regulations but also seeks to reflect the wider scope of the assessment in respect of its coverage of sustainability. Table 1.1 sets out the particulars that the statement is required to include under Regulation 16 (4) of the SEA Regulations, and where those requirements are met within this PAS.

**Table 1.1 How compliance with EU SEA Directive regulatory requirements is addressed in this PAS**

SEA Regulations Requirement	Where addressed in the PAS
16 (4) (a) How environmental considerations have been integrated into the plan or programme	Section 2.1 How environmental and wider sustainability considerations were identified and integrated into the LES
16 (4) (b) How the environmental report has been taken into account	Section 2.2 Influence of the IIA process.
16 (4) (c) How opinions expressed in response to: (i) the invitation referred to in Regulation 13(2)(d); (ii) action taken by the responsible authority in accordance with regulation 13(4) have been taken into account	Section 3.1 Overview of consultation feedback on consultation Draft LES and IIA Report Section 3.2 Key issues/opinions raised

<sup>2</sup> As required for the assessment of certain plans and programmes under Regulation 12 (3) of the SEA Regulations (SI 1633).

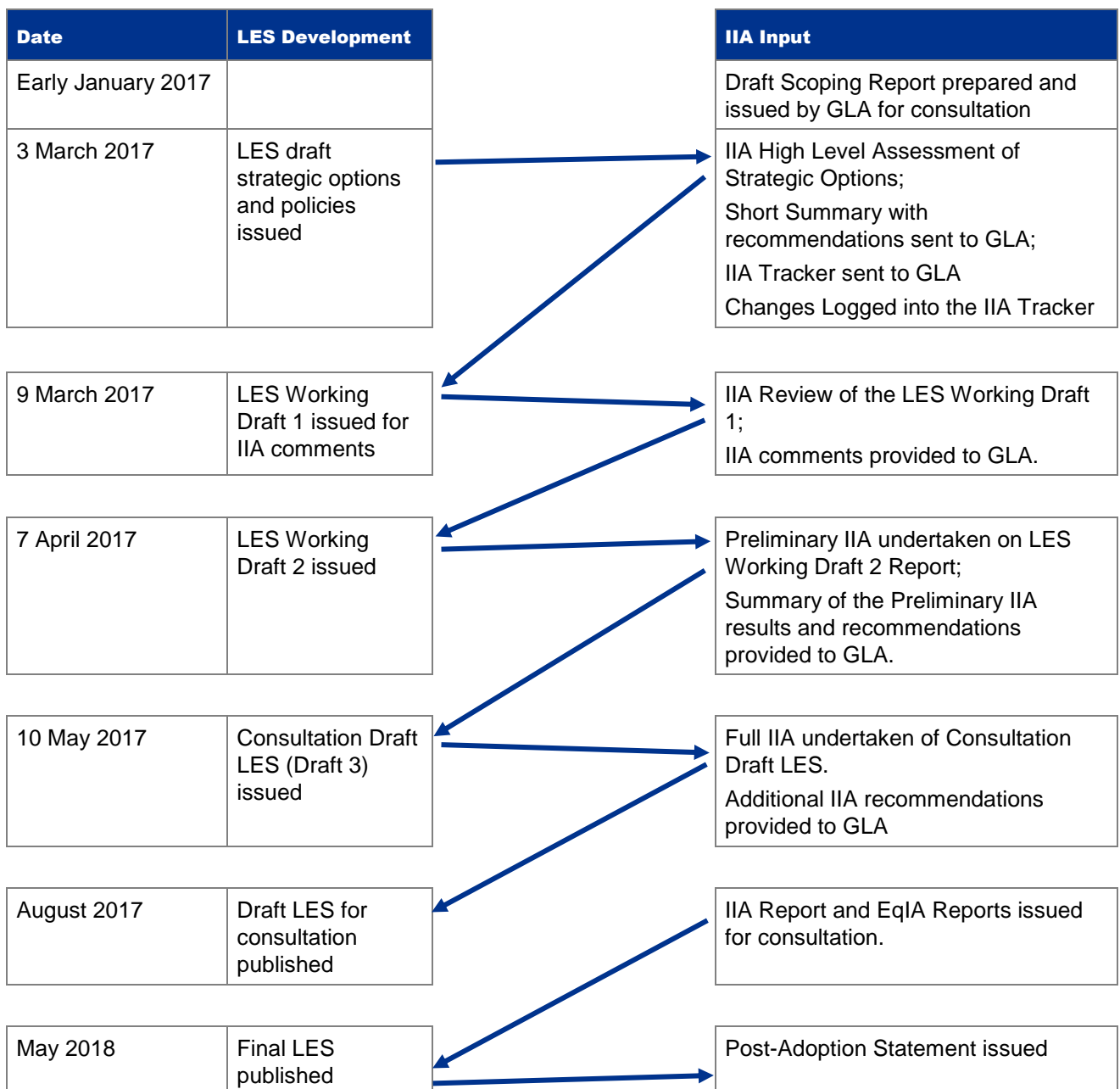
SEA Regulations Requirement	Where addressed in the PAS
16 (4) (d) How the results of any consultation entered under regulation 14 (4) have been taken into account	This Regulation deals with situations where the plan or programme is likely to give rise to significant transboundary effects between Member States. This is not applicable to the LES as no significant trans-boundary effects have been identified as arising from the proposals within the LES.
16 (4) (e) The reasons for choosing the plan or programme as adopted, in the light of the other reasonable alternatives dealt with	Section 4.1 Development of the LES – Alternatives considered Section 4.2 Reasons for Adoption of the LES
16 (4) (f) The measures that are to be taken to monitor the significant environmental effects of the implementation of the plan or programme	Section 5.1 Summary of monitoring proposals

## 2. Integration of Environmental and Wider Sustainability Considerations

### 2.1 Consideration of Environmental and Sustainability Issues

The IIA has been an iterative process to identify and report on the likely significant effects of the LES and the extent to which the implementation of the LES would contribute towards sustainable development. From the outset, the IIA process sought to actively influence the development of the LES, with the objective of enhancing the sustainability of its policies and proposals. To facilitate this, there was close and ongoing interaction between the GLA and the Jacobs IIA team to enable frequent review and iterative advice on the sustainability of the LES policies and proposals. Figure 2-1 illustrates how the IIA process has interacted with the stages of LES development to ensure it made meaningful contributions to the revision of the LES.

Figure 2-1 Interaction between Preparation of the LES and the IIA Process



The IIA Report (in Chapter 8) found that the policies and proposals in the Draft LES would have a significant (major) positive effect across six IIA objectives as identified in Table 2.1 below, with a minor positive effect identified across a further 12 of the IIA objectives. For those 12 sustainability objectives, it was concluded that the Draft LES for consultation would support them, but that the policies and/or proposals relate to actions by third parties, over which the Mayor has limited influence on the delivery of outcomes, and therefore only minor positive effects could be attributed. There were no negative effects identified for any individual Policy Areas or across the Draft LES for consultation as a whole.

The changes made in the Final LES have been considered in relation to the IIA. None of the changes made are deemed significant in terms of the overall assessment findings of the Draft LES for consultation. Therefore, the overall assessment remains the same with significant positive effects assessed for the IIA objectives set out in Table 2.1.

**Table 2.1 Significant Effects on a Strategy Wide Basis**

Topic	IIA Objective Significantly Affected	Effect
Air Quality	1. To reduce emissions and concentrations of harmful atmospheric pollutants, particularly in areas of poorest air quality and reduce exposure	Positive
Energy and Climate Change Mitigation	3. To help tackle climate change through reducing greenhouse gas emissions and moving towards a zero carbon London by 2050.	Positive
Flood Risk	5. To manage the risk of flooding from all sources and improve the resilience of people, property and infrastructure to flooding.	Positive
Materials and Waste	7. To keep materials at their highest value and use for as long as possible. To significantly reduce waste generated and achieve high reuse and recycling rates.	Positive
Natural Capital and Natural Environment	10. To protect, connect and enhance London’s natural capital (including important habitats, species and landscapes) and the services and benefits it provides, delivering a net positive outcome for biodiversity.	Positive
Infrastructure	22. To ensure that provision of environmental, social and physical infrastructure is managed and delivered to meet population and demographic change in line with sustainable development and to support economic competitiveness.	Positive

## 2.2 Influence of the IIA Process

The IIA process described above was the means by which the drafting and content of the LES was positively influenced and shaped by considerations relating to environmental and wider sustainability issues. Chapter 8 of the IIA report presents the outcome of this process, setting out for the public, stakeholders and statutory consultee bodies the findings of the assessment of the LES.

Throughout the IIA assessment process, the IIA team made a number of recommendations for improvement against the sustainability objectives. The GLA considered these recommendations, and where it considered it appropriate, incorporated them into the Draft LES for consultation. Appendix C of the IIA Report provided an iterations register. This was a summary of the recommendations made during the IIA process and the GLA’s response, including whether the recommendations were taken on board during development of the Draft LES for consultation. Three further recommendations in respect of the Draft LES for consultation were made by the IIA team following the assessment of the Preferred Option (the version of the strategy at the point where it was consulted upon). These were addressed by the GLA following the public consultation on the Draft LES for consultation. The GLA’s responses to these recommendations are set out below.



Table 2.2 IIA Recommendations on Draft LES

Subject	Recommendation	GLA Response/Changes Made	IIA Response
1	<p>The Mayor should work with industry bodies to identify opportunities for disadvantaged and underrepresented groups to develop skills and gain practical experience which will enable them to participate and benefit from the new types of employment opportunities which will arise in the low carbon economy.</p>	<p>Fairness and inclusion sit at the heart of the Mayor’s draft economic development strategy. The Mayor wants a prosperous economy that works for all Londoners – and in which neither opportunity nor achievement are limited by gender, ethnicity, sexuality, religion, disability, place of birth or background. He wants businesses and entrepreneurs to feel supported to grow and innovate, and to enjoy the certainty of knowing that London will remain globally competitive and open to business.</p> <p>This is reflected in the draft chapter 10 of the environment strategy in a number of ways including:</p> <ul style="list-style-type: none"> <li>• Through the Mayor’s Entrepreneur programme which engages university students across London on low carbon circular economy market opportunities and work with them to develop new ideas for environmental goods and services that tackle the environmental challenges that cities are facing today. This programme will also pilot an expansion for two additional prizes, one in tech and one in creative industries, encouraging students to innovate in these areas and propose lower carbon, more resource efficient solutions to the challenges that these sectors face.</li> <li>• Through the Mayor’s Civic Innovation Challenge which is being developed to stimulate SME innovation by providing market access for innovative SMEs to test with, and sell their products to, market players. The Challenge will address three of London’s big challenges: environment and climate change; inequality; and an ageing population.</li> </ul>	<p>The LES has been improved to include reference to the Mayor’s Civic Innovation Challenge and the pilot expansion for two additional prizes to encourage university students to innovate and propose lower carbon and more resource efficient solutions in the fields of technical and creative industries. These additions to the strategy partially support the IIA objectives 19 (Economic competitiveness and employment) and 20 (Education and skills). However, the strategy-wide assessment of ‘Minor positive’ and ‘Neutral’ for objectives 19 and 20 respectively are being maintained on the basis that the scale of these additions within the overall strategy is relatively limited..</p>
2	<p>It is recommended that the Final LES is strengthened with specific proposals and policies relating to developing the required skills and creating job opportunities in a low</p>	<p>This has been included in Low carbon circular economy section, highlighting the energy efficiency sector in particular, under proposal 10.1.1.c which says:</p>	<p>The LES has been improved to include the further detail as set out in the GLA’s response. These improvements are likely to further support IIA objective 19 (Economic competitiveness and</p>

Subject	Recommendation	GLA Response/Changes Made	IIA Response
	<p>carbon economy or an acknowledgment that this will be addressed in the revisions to the draft Mayor’s Economic Development Strategy. There is potential to include specific targets for apprenticeships (or to link low carbon technology providers to FE/HE establishments to develop internships/placement opportunities).</p>	<p>The Mayor will explore approaches that support innovative businesses to create solutions to London’s environmental challenges</p> <p>The Mayor will work with global networks, such as C40 and the International CleanTech Cluster Network and other cities to gain knowledge and develop ideas for how innovative businesses can help create solutions to address London’s environmental challenges. This will also aim to develop business models that will support the transition to a low carbon circular economy.</p> <p>The Mayor will work with the London Waste and Recycling Board to implement its Circular Economy Route Map with London stakeholders which, if implemented fully, could contribute £2.8 billion a year to London’s economy by 2036.</p> <p>The Mayor will also explore opportunities to support innovation in the energy efficiency supply chain, working with the sector to identify and develop appropriate support that addresses the performance gap, encourages increased demand and reduces costs.</p>	<p>employment). However, the IIA strategy-wide findings against this objective remains as ‘Minor positive’ on the basis that it is uncertain whether tangible outcomes would ensue.</p>
3	<p>The Final LES could more specifically address how the Mayor will support innovations and development and uptake of new technologies which will improve sustainability in the water sector. For example, linking to possible funding/investment routes, supporting business case development, working with water companies to undertake resource efficiency assessments of key water users, review the success of water efficiency measures in the domestic sector (beyond behaviours).</p>	<p>This has been included in chapter 8 of the environment strategy and is addressed by the following:</p> <ul style="list-style-type: none"> <li>The Mayor will expect all water companies operating in London to set out robust programmes that accelerate improvements and include measures to reduce leakage rates and the risk of major mains bursts. The Mayor will expect companies to utilise modern technology to proactively identify where there is a potential for leaks and mains bursts and to regularly report on progress.</li> <li>Domestic hot water heating accounts for approximately 25 per cent of household energy consumption. If Londoners reduce their household hot water consumption they will see an associated reduction in their energy bills. This is a</li> </ul>	<p>The LES has been improved to include these further expectations of the Mayor and details as to how water efficiency can be achieved. However, the IIA strategy-wide assessment against IIA objective 9 (Water resources and quality) is remaining as ‘Minor positive’ on the basis that the achievement of positive outcomes is still largely reliant on the actions of partner organisations.</p>

Subject	Recommendation	GLA Response/Changes Made	IIA Response
		<p>significant incentive to reduce water consumption. It is likely that this is fairly well understood by the public yet there is scope to further reiterate this message as part of including water saving initiatives in Energy for Londoners.</p> <ul style="list-style-type: none"> <li>• The retail water market for the non-domestic sector presents an opportunity to improve water efficiency in public and commercial buildings. Water retailers can incentivise water efficiency measures and encourage retrofitting through a range of mechanisms including bundling of products and services, providing targeted leak detection, roll out of water efficient products and innovation and provision of bespoke water efficiency advice. The Mayor expects water retailers to increase their offer of water efficient products and services to their customers in London.</li> <li>• The Mayor’s Water Advisory Group convenes key stakeholders including water companies, third sector and community champions that operate in London along with water regulators to ensure leadership and coordination of London’s water issues. The Mayor will include a representative from the non-domestic retail water market to this group.</li> </ul>	

### **3. Consultation Feedback**

#### **3.1 Overview of Consultation Feedback on the Draft LES and IIA Report**

The GLA has prepared a Report to the Mayor (RTM) on the public and stakeholder consultation on the Draft LES for consultation and IIA, which will be published alongside the LES.

Chapter 4 of the RTM summarises the opinions expressed in responses to consultation on the LES and IIA, with GLA's recommendations for changes to the LES considered appropriate having regard to matters raised in the responses received.

There were no major areas of policy opposition, and therefore no significant policy changes were proposed. Several consultees suggested amendments or additions to policies and proposals in the Draft LES for consultation. Those which have been incorporated into the Final LES are described in Table 3.1. In addition, the Final LES includes several clarifications to the supporting text, based on issues raised by consultees or as a result of new data availability: for information on these, see the RTM.

Table 3.1 Summary of consultation comments resulting in changes to the Final LES

Support	Summary of issues resulting in changes to the Final LES	Changes to the Final LES
<b>Air quality</b>		
<ul style="list-style-type: none"> <li>the overall ambitions and emissions reduction targets (both from transport and non-transport sources)</li> <li>addressing wood burning</li> <li>raising awareness</li> <li>the Healthy Streets Approach</li> </ul>	<ul style="list-style-type: none"> <li>consistency with the Final MTS</li> <li>need for caution and consistency over development and implementation of zero emission zones (ZEZ)</li> <li>inclusion of anti-idling policies and encouragement for uptake of cleaner vehicles via parking charges</li> <li>further suggestions of measures to reduce emissions from domestic solid fuel stoves and fires</li> <li>concern over whether current Combined Heat and Power (CHP) proposals go far enough</li> </ul>	<ul style="list-style-type: none"> <li>the Air Quality chapter has been made consistent with the Final MTS</li> <li>wording added that town centre ZEZs will be designed and delivered in partnership with the boroughs, and that detailed design work will ensure that local needs and issues are properly reflected</li> <li>addition of calls on government to help enforce anti-idling measures, link parking charges with vehicle emissions, and help further reduce emissions from solid fuel stoves and fires, and from NRMM</li> <li>chapter amended to reflect the Mayor’s support for the heating hierarchy set out in the London Plan, and provide further detail on Mayoral actions to reduce emissions from heating technologies</li> </ul>
<b>Green Infrastructure</b>		
<ul style="list-style-type: none"> <li>the concept of a National Park City</li> <li>committing to protecting existing green space and wildlife sites</li> <li>improving Green Belt quality and function</li> <li>Natural Capital Accounting and developing new financing models</li> <li>Green Infrastructure Factor and greening new developments</li> <li>developing habitat management guidance and a biodiversity monitoring framework</li> </ul>	<ul style="list-style-type: none"> <li>the draft strategy underplays the current status and intrinsic value of London’s biodiversity</li> <li>predicted climate change impacts on green infrastructure and biodiversity (i.e. potential lack of water for maintaining green infrastructure) were not addressed</li> <li>the draft strategy does not consider wildlife crime, peat use, or pesticide and herbicide use</li> </ul>	<ul style="list-style-type: none"> <li>further integration of biodiversity and increased reference to cross boundary green corridors and ecological networks</li> <li>new text on water quality, and the role that green infrastructure can play in improving it, has been added to the Green infrastructure chapter</li> <li>narrative around the environmental impacts of drought has been added to the Adapting to Climate Change chapter</li> <li>wildlife crime, peat use, and pesticide and herbicide use have been included in the GLA Group Operations chapter</li> </ul>

Support	Summary of issues resulting in changes to the Final LES	Changes to the Final LES
<b>Climate Change Mitigation and Energy</b>		
<ul style="list-style-type: none"> <li>the zero carbon by 2050 ambition</li> <li>leadership in solar power generation and the 1GW of solar capacity by 2030 target</li> <li>Fuel Poverty Action Plan</li> <li>carbon budgets</li> <li>expansion of RE:FIT to commercial sector</li> <li>decentralised energy support</li> </ul>	<ul style="list-style-type: none"> <li>interim zero carbon targets required, together with a more detailed trajectory to 2050</li> <li>need for clarity on whether the Mayor was reducing his support for gas engine CHP in London</li> <li>insufficient detail regarding how Mayor will encourage a reduction in embodied carbon emissions</li> </ul>	<ul style="list-style-type: none"> <li>inclusion of interim targets in the form of five-year carbon budgets</li> <li>addition of narrative regarding Mayor's support for heating hierarchy as set out in the London Plan</li> <li>inclusion of narrative in support of assessment of lifecycle emissions from London's infrastructure</li> </ul>
<b>Waste</b>		
<ul style="list-style-type: none"> <li>taking a circular economy approach</li> <li>taking a broader municipal waste approach (to include waste similar in nature to household waste, such as commercial waste)</li> <li>a focus on waste reduction</li> <li>cutting single use packaging (mainly plastics)</li> <li>consistent service provision, i.e. a minimum level of service for dry recyclables</li> <li>using local sites for waste disposal, where appropriate to do so</li> <li>using carbon measurements for waste, alongside weight-based measures</li> </ul>	<ul style="list-style-type: none"> <li>targets and ambitions are not ambitious enough/too ambitious and not achievable within the time given</li> <li>strategy should set out clearly what the Mayor is asking of the government</li> <li>waste authorities should be able to develop their own reduction and recycling plans</li> <li>minimum level of recycling service should apply to all properties, including flats</li> <li>more work is needed to make landlords responsible for residents' waste and recycling, including the use private sector licencing powers</li> </ul>	<ul style="list-style-type: none"> <li>adoption of stronger target to cut food waste by 50 per cent per head by 2030</li> <li>inclusion of a new section in the Waste chapter setting out the Mayor's asks of government on: changes to Duty of Care to ensure the separate presentation of business waste materials; devolution of funding and powers to London extended producer responsibility requirements; and the collection of reliable business waste data.</li> <li>chapter narrative amended to include a proposal that waste authorities must develop their own reduction and recycling plans and set their own waste reduction targets</li> <li>strengthened the minimum recycling service target to include flats</li> <li>explore ways to work with landlords and identify any requirements/changes in licencing and tenancy agreements to encourage tenants to recycle.</li> </ul>
<b>Adapting to Climate Change</b>		

Support	Summary of issues resulting in changes to the Final LES	Changes to the Final LES
<ul style="list-style-type: none"> <li>the development of indicators and the sector based approach</li> <li>green sustainable drainage systems (SuDS) and their higher prioritisation</li> <li>increasing Londoners' awareness of heat risk, including the communications protocol</li> <li>changes to the planning system, with a recognition that resilient developments are vital</li> <li>integration between adaptation and mitigation, for example delivering water efficiency measures through energy efficiency retrofit schemes</li> </ul>	<ul style="list-style-type: none"> <li>addition of new topics, such as food security, invasive non-native species, pests and pathogens, water quality and extreme cold</li> <li>requirement for greater detail on the monitoring of London's resilience to climate change impacts</li> <li>greater integration with other chapters within the strategy, for example, including the environmental impacts of drought</li> <li>suggestions that the Mayor could play a greater role in managing misconnections</li> <li>inclusion of additional targets and indicators for managing flood risk and retrofitting SuDS</li> <li>inclusion of measures to tackle water poverty</li> <li>inclusion of measures to manage heat risk in existing properties</li> </ul>	<ul style="list-style-type: none"> <li>reference to additional sectors and topics identified has been made for policies and proposals within this chapter where appropriate</li> <li>greater detail on the monitoring of resilience added</li> <li>greater cross-referencing to other LES chapters, e.g. a water quality box in the Green Infrastructure chapter, and outlining the environmental impacts of drought</li> <li>addition of proposal to work with stakeholders to raise awareness of misconnections and investigate feasibility of targeting misconnections at point of sale</li> <li>strengthened wording on monitoring of reviewed planning applications, inclusion of reference to the MTS SuDS retrofitting target and a new ambition for the replacement of impermeable surfaces with retrofitted SuDS</li> <li>inclusion of references to water poverty within the Mayor's Fuel Poverty Action Plan</li> <li>addition of proposal to promote overheating mitigation measures through existing retrofit programmes</li> </ul>
<b>Ambient Noise</b>		
<ul style="list-style-type: none"> <li>the overall ambition</li> <li>integration with other policy areas within the draft strategy</li> </ul>	<ul style="list-style-type: none"> <li>need for greater links to other chapters and topics within the strategy, particularly the Green Infrastructure and Air Quality chapters</li> <li>more information on topics that are covered as part of TfL programmes, research and guidance needed for ground borne noise and vibration to be included</li> <li>need for soundscape to be considered</li> </ul>	<ul style="list-style-type: none"> <li>further cross-references to other chapters and topics, and references to guidance on measures such as retiming deliveries added where relevant</li> <li>addition of proposal to improve noise evidence base through collaboration with other organisations, including TfL programmes, research and guidance</li> <li>inclusion of ground borne noise and vibration from tube and rail sources within transport sources of noise and vibration</li> <li>inclusion of the importance of soundscape and the role of cumulative noise impacts</li> </ul>
<b>Low Carbon Circular Economy (LCCE)</b>		

Support	Summary of issues resulting in changes to the Final LES	Changes to the Final LES
<ul style="list-style-type: none"> <li>the general Low Carbon Circular Economy approach</li> <li>responsible / green public sector procurement and its role in creating demand</li> <li>activity around green finance to support London’s ambitions, and divestment both away from fossil-fuel and into London related activity</li> <li>Mayoral leadership</li> </ul>	<ul style="list-style-type: none"> <li>need for greater reference to circular economy business models and the work that LWARB is currently undertaking</li> <li>need for further context on benefits of a circular economy for stakeholders and contribution of the circular economy to climate change mitigation and resilience and London’s economy</li> <li>role of the food sector, business collaboration and workers in the transition to a LCCE</li> <li>potential impact of the transition to a LCCE on SMEs</li> </ul>	<ul style="list-style-type: none"> <li>chapter narrative strengthened using circular economy case studies and further detail on the benefits of a circular economy, and through cross-references to other relevant strategies/awareness and promotion work</li> <li>greater emphasis added on a ‘just’ transition and the need to work with a wide range of partners and stakeholders in many different sectors (including food) and business types (e.g. SMEs)</li> </ul>



The rest of this chapter summarises the consultation responses provided by the three statutory consultee bodies on the IIA Report, and those of other respondents that made comments on the report, as well as GLA's response and the consequent actions taken in finalising the LES.

### 3.2 Key Issue/Opinions Raised

The SEA Regulations require that the 'consultation bodies' for SEA (the Environment Agency, Natural England and Historic England) are consulted along with public consultees on the Draft LES and the IIA Report incorporating the Environmental Report.

#### 3.2.1 Statutory Consultees

Table 3.2 provides a summary of comments on the IIA for the Draft LES provided by the Environment Agency, the GLA's response and any actions taken. Natural England and Historic England did not comment on the IIA.

**Table 3.2 Statutory stakeholder comments and responses**

Comment	IIA team response	Action
Further assessment of the trans-boundary impacts between London and the wider South East is needed.	<p>The SEA Regulations address situations where the plan or programme is likely to give rise to significant transboundary effects on the environment of another Member State. This is not applicable as no likely significant trans-boundary effects have been predicted from implementation of the LES.</p> <p>The SEA Regulations require that the assessment of effects on sustainability include secondary and cumulative effects where practicable. Cumulative effects have been considered throughout the entire IIA process. The assessment has considered inter-strategy cumulative effects, whereby significant effects of the LES act in combination with the effects of other Mayoral strategies, including the London Plan (2016) and the Mayor's Transport Strategy (MTS), and can be found in Table 6.16 of the IIA Report.</p>	No change
Geology and soils is an environmental challenge that is not currently addressed in the strategy, despite it being raised in the IIA.	Soils are covered within the Green Infrastructure chapter of the Final LES.	No change to IIA. Some more reference to geodiversity has now been made in the Final LES.
Groundwater should be included in the IIA's assessment of impacts on water quality and in the strategy.	Whilst groundwater is included within the scope of the IIA (see Table 4.2 of the IIA Report), plans and policies included within the LES are not location specific, hence there was a high degree of uncertainty over potential effects to groundwater. An example of this uncertainty is reported in para 6.9.3.3 of the IIA Report. It is noted that there is a link between groundwater, base flows in watercourses and water quality, but there is	No change

Comment	IIA team response	Action
	insufficient detail within the LES, as a high level overarching strategy, to make a meaningful assessment of whether groundwater levels would change.	
The IIA should include reference to, and consideration of, integrated water management.	The term 'integrated water management' was not used in the IIA report. However, the guide questions to inform the assessment against IIA objective 9 are aligned to the principles of integrated water management and as set out in section 6.6.3.2 of the IIA report, minor positive effects have been identified against IIA Objectives 2, 9, 16 and 24 relating the inclusion of measures which are also aligned with the principles of integrated water management.	No change
The IIA contains no information on general trends for water quality.	It is noted that the IIA Report did not provide detail on general trends for water quality. However, the IIA Scoping Report previously prepared reported a detailed baseline which informed the assessment objectives of the IIA. This included detail on trends in relation to water quality, with reference to the River Basin Management Plan. The understanding of the baseline developed at the scoping stage of the IIA informed the key issues in Table 4.2 of the IIA Report, which identifies the need to improve London's water quality.	No change
The SEA Guide Questions in Table 4.4 of the IIA should refer to all forms of flooding, including from tidal and fluvial sources	The SEA guide questions for IIA objective 5 make reference specifically to fluvial flooding. Tidal flood risk in London is addressed by other authorities and requires development of land outside the GLA boundary.	No change
The assessment against the London Plan in the Environmental Objectives row of Table 6.16 (Summary of Mayoral Strategy Cumulative Effects) is not comprehensive and should be expanded to include other cross-over topics, such as climate change resilience, water, waste, and air quality.	As set out in chapter 8 of the IIA report, no negative effects have been identified for any Policy Areas. Therefore, the overall significance of cumulative effects with the London Plan against environmental IIA objectives is positive.	No change.
<p>The IIA could include further recommendations to:</p> <ul style="list-style-type: none"> <li>• improve the strategy's positive outcomes from minor to major</li> <li>• recommend the development of a Strategy Action Plan</li> <li>• recommend the identification of targets for water</li> </ul>	There was regular interim advice provided to the GLA throughout Stage B of the IIA process by the IIA team. This was based on preliminary assessments of the earlier iterations of the strategy, which included alternative options on content. Amendments were made to the emerging strategy with each iteration, taking into account interim IIA recommendations.	An Implementation Plan will be published alongside the Final LES.

### 3.2.2 Other Responses

Table 3.3 provides a summary of comments on the IIA for the Draft LES provided by other stakeholders, the GLA's response and any actions taken.

**Table 3.3 Non-statutory stakeholder comments and responses**

Comment	GLA response	Action
<b>Just Space</b>		
There is a lack of information in the draft strategy on how the negative impacts identified in the IIA of water meters on low income households with high essential water use requirements will be mitigated.	The IIA recorded an uncertain effect in relation to water metering. The Draft LES included policies and proposals to increase metering and water efficiency across London.	The Final LES now includes specific reference to a need for mechanisms such as greater uptake of social tariffs to ensure 'water poverty' is not created.
<b>United Kingdom Without Incineration Network</b>		
The IIA appears to fail to take account of the potential for additional incineration capacity arising from draft Policy 7.4 to impact adversely on climate change through both direct emissions and indirectly by harming reduction, reuse and recycling.	Policy 7.3 contains proposals to reduce the climate change impact of waste activities through measures such as setting a revised greenhouse gas emissions performance standard and maintaining the existing carbon intensity floor until at least 2025 or earlier, where appropriate. Therefore, the potential impact on climate change posited in this comment is considered unlikely.	No change
<b>Julie's Bicycle</b>		
The IIA records no negative nor positive change to the creative sector. However, the creative sector is reducing emissions and responding to climate change in new, innovative ways.	The efforts of the creative sector are recognised in the draft strategy (for example, in the Lyric Hammersmith case study). However, the IIA focuses on the impacts of the draft strategy on other topics and issues, rather than sectors' contributions to the objectives of the draft strategy.	No change
<b>Association of Local Government Archaeologists</b>		
There does not appear to be a positive engagement with the historic environment in the IIA.	The historic environment is considered throughout the IIA. Table 6.9 shows the positive impact that the draft strategy will have on the historic environment, particularly related to air quality, ambient noise, waste and climate change mitigation and energy objectives.	No change
<b>Port of London Authority</b>		
The IIA suggests many either neutral or minor positive impacts of the draft strategy. To become truly sustainable all areas should be improving and supporting others to do so.	This point is acknowledged. Many of the actions proposed within the strategy will not be delivered by the Mayor, but will be reliant on third parties, with support from the Mayor.	No change
<b>Telford Homes</b>		

Comment	GLA response	Action
The strategy would benefit from a Social Value assessment.	<p>With regard to the social impacts of the draft strategy, the IIA includes:</p> <ul style="list-style-type: none"> <li>• Equality Impact Assessment</li> <li>• Health Impact Assessment</li> <li>• Consideration of Community Safety</li> </ul> <p>It is not possible to assess the likely social value of the strategy as a whole, since there are too many variables and assumptions for this to be accurate. However, it may be possible to assess the social value of specific projects or programmes.</p>	The Implementation Plan published alongside the Final LES will consider, where appropriate, the social value of specific projects or programmes included within the LES.
<b>London Regional Centre of Expertise on Education for Sustainable Development</b>		
Impacts on migrants and refugees should be specifically included.	The IIA includes Equality Impact Assessment. Whilst migrant status is not a 'protected characteristic', the full range of protected characteristics (e.g. sex, race, age, etc.) will cover all migrants and refugees.	No change
<b>Landscape Institute</b>		
The IIA Scoping Report should consider embedding the Sustainable Development Goals into its Policy Context.	The IIA Scoping Report was published for consultation in January 2017 and so it is no longer possible to amend this document.	No change
Impacts of the Mayor's Transport Strategy on the All London Green Grid should be taken into account.	The IIA conducted on the draft Mayor's Transport Strategy considered impacts on natural capital and the natural environment as a whole.	No change

## **4. Reasons for Choosing the LES as Adopted, In Light of Reasonable Alternatives Dealt With**

### **4.1 Development of the LES – Alternatives Considered**

#### **4.1.1 Strategic Options**

During initial development of the Draft LES for consultation, the GLA considered high level alternative policy approaches ('Strategic Options') for the Policy Areas under development. Table 4.1 sets out the initial Policy Areas that were considered and the alternative approaches put forward for each Policy Area as it stood in March 2017 (refer back to Figure 2.1 for stages of the LES development against the IIA process).

The Policy Area alternative approaches (referred to as Strategic Options) were each considered in relation to the IIA. The High Level assessment of these strategic options sought to identify implications in relation to the SEA, HIA, AEI, EqIA and CSIA and to put forward recommendations to the GLA. The key recommendations made by the IIA High Level Assessment are included in Table 4.1.

The GLA considered the recommendations put forward following the High Level Assessment for each Policy Area. Table 4.1 provides a summary of options, Jacobs' recommendations and the associated GLA responses.

#### **4.1.2 Alternatives since the Strategic Options stage**

The Draft LES for consultation, which constituted the GLA's Preferred Option, was developed taking into account the IIA High Level assessment of the Strategic Options and underwent a process of ongoing evaluation and refinement of policies and proposals during its preparation.

While there have been changes to the names of, and presentation of, the Policy Areas within the LES, the nature of alternatives since the Strategic Options stage have been limited to slight changes of emphasis around some commitments, the addition of some new commitments, and changes to target dates for the achievement of aims. The alternatives have therefore comprised iterative amendments.

Table 4.1 Strategic Options Considered for LES Policy Areas

Initial Policy Area under Development for the LES	Strategic Options Proposed	IIA Recommendations from High Level Assessment of Strategic Options	How the GLA Responded to the Recommendations in Developing the Consultation Draft LES
<p><b>1. Air Quality</b></p>	<p>Option 1: Impose restrictions on the quantity / type / timing of emissions allowed from buildings and or transport e.g. The Ultra-Low Emissions Zone.</p>	<ul style="list-style-type: none"> <li>• The most effective strategy [for health impacts] would be likely to involve the adoption of all four Options, as the effects of these are complementary rather than alternatives.</li> <li>• To ensure that Options 1 and 4 are more explicitly targeting the worst polluted areas of London.</li> <li>• A measure to introduce new PM<sub>2.5</sub> target for London could reduce this priority pollutant and have positive effect on human health.</li> <li>• A combination of the policy Options may be more economically effective than any single one applied alone; however, potential impact overlap may reduce the cost-effectiveness of Option 2 and 3 when applied with Option 1. Option 4 would deliver benefits when combined with all other Options.</li> </ul>	<p>The GLA considered aspects from all four options in terms of policy approach. This was agreed to be the most effective approach for addressing human health impacts. Targets for some of the pollutants identified in the IIA recommendations will also be included. The GLA will also look to include specific interventions to improve air quality around schools, hospitals and care homes.</p>
	<p>Option 2: Introduce standards that Londoners' / manufacturers / companies should be encouraged to meet e.g. Euro emissions standards for vehicles.</p>		
	<p>Option 3: Invest in or promote the use of technologies that either improve air quality or have a reduced impact e.g. Ultra-Low Emission Vehicles (ULEVs).</p>		
	<p>Option 4: Encourage Londoners' to change their behaviour to mitigate the impacts of poor air quality e.g. through promoting active travel or school education programmes.</p>		
<p><b>2. Natural Environment and Green Infrastructure</b></p>	<p>Option 1: Develop policies and proposals that promote the protection and enhancement of London's green spaces and natural habitats. An approach that focuses on the conservation of nature and improving access to and appreciation of the natural environment.</p>	<p>If health considerations play a part in decisions to optimise ecosystem services, the benefits of Option 2 could be further enhanced, through:</p> <ul style="list-style-type: none"> <li>• Targeting air pollution hotspots or vulnerable groups;</li> <li>• Choice of species to maximise environmental benefits of air quality reduction, shading, flood prevention;</li> </ul>	<p>The GLA advised that the targeting of air pollution hotspots, and the use of green corridors to funnel pedestrians away from major roads were already being considered as part of the developing LES.</p> <p>It advised that whilst the role of green infrastructure in reducing pollution was being considered, the choice of species specifically would not be considered an appropriate level of detail for a Mayoral Strategy.</p>
	<p>Option 2: Develop policies and proposals that promote the concept of green infrastructure and the greening of the urban</p>		

Initial Policy Area under Development for the LES	Strategic Options Proposed	IIA Recommendations from High Level Assessment of Strategic Options	How the GLA Responded to the Recommendations in Developing the Consultation Draft LES
	<p>environment, alongside protection of the natural environment. An approach that focuses on optimising ecosystem services to provide a range of socio-economic benefits as well as environmental outcomes.</p>	<ul style="list-style-type: none"> <li>• Creating green corridors for pedestrians to prevent funnelling of pedestrians along major roads.</li> <li>• Considerations of crime and disorder reduction and public safety are integrated into the policies, business planning and delivery of Options 1 and 2.</li> <li>• The wording of Option 2 should include safety and security in the policy.</li> <li>• Policies need to be clear about the contribution that vandalism and general anti-social behaviour make to the desirability of access to the natural environment and seek to mitigate those.</li> <li>• To ensure that Option 2 is implemented for those most vulnerable to air pollution, noise, heat and flood risk.</li> <li>• Option 2 could be enhanced through a broad-based use of ecosystem services approaches across London authorities.</li> </ul>	<p>The GLA advised that the proposed IIA framework guide questions as presented in the Scoping Report would be amended to further draw out the considerations of crime and disorder reduction.</p> <p>The comment about the need to be clear on the contribution of vandalism and anti-social behaviour on the desirability of access to the natural environment was noted by the GLA.</p> <p>The GLA confirmed that the LES would include targeted interventions for vulnerable groups.</p> <p>The GLA stated that the use of an ecosystem services approach was fundamental to the LES and that this was incorporated.</p>
<p><b>3. Adapting to Climate Change</b></p>	<p>Option 1: Reactive approach to managing climate risks and impacts:</p> <ul style="list-style-type: none"> <li>• Flood risk: focus on emergency response measures during a flood incident e.g. ensuring enough sandbags for buildings, relying on Londoners' to change their behaviour to deal with the increased incidents, providing good communication during an incident so</li> </ul>	<ul style="list-style-type: none"> <li>• Both Options would need to ensure they target vulnerable people with interventions – those that will suffer worst effects (elderly, low income groups, children) and those that will be harder to reach, e.g. due to language barriers or social isolation.</li> </ul>	<p>The GLA confirmed that the LES would include targeted interventions for vulnerable groups and that the IIA assessment framework guide questions would be amended to draw out crime and disorder reduction considerations.</p> <p>It noted the comment on option 2 benefits regarding LCEGS sector businesses.</p>

Initial Policy Area under Development for the LES	Strategic Options Proposed	IIA Recommendations from High Level Assessment of Strategic Options	How the GLA Responded to the Recommendations in Developing the Consultation Draft LES
	<p>Londoners’ know who is responsible and where to get help.</p> <ul style="list-style-type: none"> <li>Heat risk: focus on providing information to Londoners’ in the case of extreme heat events and emergency provisions such as portable cooling and bottles water.</li> <li>Drought: focus on water restriction measures such as hosepipe bans, emergency water supplies such as tankers and high energy solutions such as increased demand on desalination plants.</li> </ul> <p>Option 2: Proactive approach to managing climate risks and impacts:</p> <ul style="list-style-type: none"> <li>Flood risk: create an action plan to encourage retrofitting sustainable drainage and flood prevention policies for new developments including safeguarding and mitigation measures. Work in partnership with flood risk authorities such as the Environment Agency and London boroughs to develop, implement and monitor flood risk management plans.</li> <li>Heat risk: implement a London plan policy for ensuring new developments do not overheat and exacerbate urban heat island effect; identifying highest risk housing for boroughs; behaviour change engagement strategy to provide</li> </ul>	<ul style="list-style-type: none"> <li>Crime and disorder reduction and public safety should be integrated into the policies, planning and delivery of both Options.</li> <li>Option 2 has benefits in promoting the Low Carbon &amp; Environmental Goods (LCEGS) sector businesses in London and developing a more resilient economy.</li> </ul>	



Initial Policy Area under Development for the LES	Strategic Options Proposed	IIA Recommendations from High Level Assessment of Strategic Options	How the GLA Responded to the Recommendations in Developing the Consultation Draft LES
	<p>Londoners’ with ways of keep them and their homes cool during extreme heat events.</p> <ul style="list-style-type: none"> <li>• Drought: working with Thames Water to identify strategic new water resource for London; behaviour change and roll out of smart water meters and water efficiency devices.</li> </ul>		
<p><b>4. Climate Change Mitigation and Energy</b></p>	<p>Option 1: Low demand, centralised supply scenario to achieve net zero carbon emissions in London by 2050. This scenario reflects a similar energy system to the one we have today in 2050 which primarily relies on national supply however it assumes that there have been significant interventions to reduce building demand. These are likely to have been driven by regulatory requirements. It includes a significant uptake in electrification of heat and transport. (A Low De-Centralised Energy Uptake scenario was provided in a spreadsheet.)</p> <p>Option 2: Low demand, decentralised supply scenario to achieve net zero carbon emissions in London by 2050. This scenario demonstrates significant change to London’s energy infrastructure from how it is today. It considers more local energy generation and use of energy, this includes high uptake of heat networks using secondary heat sources and renewables.</p>	<ul style="list-style-type: none"> <li>• Both options seem to focus on lowering building energy demand but not demand for high energy transport. Co-benefits for health exist if options also focused on transport and active travel.</li> <li>• The cost-effectiveness of both policy options should be reviewed. While option 2 delivers growth to the LCEGS sector there is potential that the deployment of distributed infrastructure may weaken resilience.</li> </ul>	<p>The GLA confirmed that both options assumed electrification of transport, but Option 1 relies on centralised decarbonisation of the grid. It stated that the co-benefits for health would be drawn out in the LES policies and tested using the IIA guide questions.</p> <p>The GLA noted the comment from the AEI on the cost effectiveness of options but considered that the case of weakened resilience could be argued both ways. It agreed to consider resilience of infrastructure in the LES.</p>

Initial Policy Area under Development for the LES	Strategic Options Proposed	IIA Recommendations from High Level Assessment of Strategic Options	How the GLA Responded to the Recommendations in Developing the Consultation Draft LES
	<p>This option may also allow a wider choice of fuels for example hydrogen used for heating buildings. (A High De-Centralised Energy Uptake scenario was provided in a spreadsheet.)</p>		
<p><b>5. Ambient Noise</b></p>	<p>Option 1: Reduction in impact from or levels of noise and vibrations caused by road, rail, aircraft and water transport</p> <p>Option 2: Improvement of London’s soundscape through mechanisms such as public realm design, green infrastructure and improving biodiversity</p>	<p>To use both Options in the LES as jointly they would provide greater amount of sustainability benefits.</p>	<p>The GLA agreed that both options would be included in the LES.</p>
<p><b>6. Waste</b></p>	<p>Option 1: Improvements in traditional waste management via the linear (take, make, dispose) economy through:</p> <ul style="list-style-type: none"> <li>• Increased levels of recycling for domestic and commercial properties</li> <li>• Reduction of the proportion of waste sent to landfill</li> <li>• Increased and efficient Anaerobic Digestion (AD) of waste through Combined Heat and Power schemes (CHP).</li> </ul> <p>Option 2: Taking a resource efficiency approach through a shift to a circular economy through:</p> <ul style="list-style-type: none"> <li>• Increasing the proportion of waste converted to high value products</li> </ul>	<p>Option 1 and 2 would be likely to provide the greatest benefits if delivered together – with traditional approaches focussing on those areas where recycling effectiveness is high, building on existing success, while non-traditional approaches are utilised to build up the circular economy within London.</p>	<p>The GLA agreed that both options would be included in the LES.</p>

Initial Policy Area under Development for the LES	Strategic Options Proposed	IIA Recommendations from High Level Assessment of Strategic Options	How the GLA Responded to the Recommendations in Developing the Consultation Draft LES
	<ul style="list-style-type: none"> <li>Increasing the levels of reuse and remanufacturing across London</li> <li>Promoting and supporting SMEs and careers within the Circular Economy.</li> </ul>		

## 4.2 Reasons for Adoption of the Final LES

As identified in chapter 3, there were no major areas of opposition to the Draft LES for consultation. Therefore, the changes in the Final LES have been relatively minor and not significant in terms of the overall IIA findings.

The Final LES has been adopted because it is aligned with the sustainability objectives that formed the IIA framework, and includes minor improvements made to generally reflect consultation feedback calling for greater detail on programme delivering, funding, monitoring as well as greater integration between the Policy Areas and with other Mayoral Strategies.

Chapter 3 of this report set out how the opinions expressed from consultation feedback were taken into account, and full details of the GLA's responses to the consultation feedback are set out in the RTM as explained in chapter 3.

## 5. Monitoring

### 5.1 Summary of Monitoring Proposals

The SEA Regulations state that monitoring must be undertaken of the likely significant environmental effects of the implementation of plans and programmes in order to identify at an early stage unforeseen effects and be able to undertake appropriate remedial measures. The likely significant environmental effects of the LES are set out in Table 2.1 and were all predicted to be positive.

The GLA has prepared an Implementation Plan, which sets out those actions that the Mayor has prioritised to take forward directly between 2018 and 2023 to help implement the policies and proposals set out in the strategy. The Implementation Plan includes monitoring proposals. It is considered that these monitoring proposals are sufficient to monitor the scope of relevant factors in relation to the significantly affected IIA objectives. The relevant monitoring proposals are set out in Table 5.1, alongside relevant IIA objectives. The relevant IIA objectives presented in bold are those which were assessed as likely to be significantly affected by the LES, as presented in Table 2.1.

The Implementation Plan was published alongside the Final LES and will be updated on an annual basis.

Table 5.1 Monitoring Framework

Relevant Policy Area	Relevant IIA objective <sup>3</sup>	Target	Monitoring measure	Dataset/s to be used (dataset owner)	Reporting frequency
Air quality	<b>1. To reduce emissions and concentrations of harmful atmospheric pollutants, particularly in areas of poorest air quality and reduce exposure</b>	London will have the best air quality of any major world city by 2050, going beyond the legal requirements to protect human health and minimise inequalities	Number of legal exceedances per year	London Atmospheric Emissions Inventory (LAEI) (GLA/Transport for London (TfL))	Every 2 years for full inventory from 2019 (latest publication 2015)
				London Air Quality Network (King's College)	Real-time (with annual reporting and ratification of data). Latest report published in 2017.
			Area covered by Air Quality Focus Areas	London Atmospheric Emissions Inventory (GLA/TfL)	Every 2 years for full inventory from 2019 (latest publication 2015)
Green infrastructure	<b>10. To protect, connect and enhance London's natural capital (including important habitats, species and landscapes) and the services and benefits it provides, delivering a net positive outcome for biodiversity</b>	London will be the world's first National Park City. It will be greener by 2050 than it is today, and tree canopy cover will increase by 10 per cent	Tree cover	Near infra-red analysis of aerial imagery (GLA)	Every 5 years (to be first published in 2018)
	<b>22. To ensure that provision of environmental, social and physical infrastructure is managed and delivered to meet population and demographic change in line with</b>		Green cover	Near infra-red analysis of aerial imagery (Curio)	Every 5 years (to be first published in 2018)

<sup>3</sup> IIA objectives assessed as significantly affected by the LES are presented in bold font. All significant effects were predicted to be positive in relation to the IIA objective.

Relevant Policy Area	Relevant IIA objective <sup>3</sup>	Target	Monitoring measure	Dataset/s to be used (dataset owner)	Reporting frequency
	<b>sustainable development and to support economic competitiveness</b>		Number of trees planted through a) Mayoral funding programmes b) Others <sup>4</sup>	Programme reporting (GLA)	Every year from 2018
			Area of green spaces improved through Mayoral funding programmes a) Mayoral funding programmes b) Others <sup>5</sup>	Programme reporting (GLA)	Every year from 2018
Climate Change Mitigation and Energy	<b>3. To help tackle climate change through reducing greenhouse gas emissions and moving towards a zero carbon London by 2050</b>	London will be a zero carbon city – with a zero emission transport network and zero carbon buildings	Scope 1 and 2 greenhouse gas emissions for homes, workplaces and transport	London Energy and Greenhouse Gas Inventory (LEGGI) (GLA)  This uses data compiled by Department for Business, Energy and Industrial Strategy (BEIS) and TfL (GLA)	Annual (last published in 2018)
Waste	<b>7. To keep materials at their highest value and use for as long as possible. To significantly reduce waste</b>	London will be a zero waste city. By 2026 no biodegradable or recyclable	Household waste recycling performance	Local authority data returns (Defra)	Annual (last published in 2017)

<sup>4</sup> Including the boroughs and London Tree Partnership

<sup>5</sup> Including the boroughs and London Tree Partnership

Relevant Policy Area	Relevant IIA objective <sup>3</sup>	Target	Monitoring measure	Dataset/s to be used (dataset owner)	Reporting frequency
	<b>generated and achieve high reuse and recycling rates</b>	waste will be sent to landfill, and by 2030 65% of London's municipal waste will be recycled	Non-household waste recycling performance	Data provided by waste industry (GLA)	Annual from 2019
Adapting to Climate Change	<b>5. To manage the risk of flooding from all sources and improve the resilience of people, property and infrastructure to flooding</b>	London and Londoners will be resilient to severe weather and longer-term climate change impacts, such as flooding, heat risk and drought	Number of properties at risk of surface water flooding	Environment Agency	Annual. Last published in 2017
Low Carbon Circular Economy	19. To maintain and strengthen London's position as a leading, connected, knowledge based global city and to support a strong, diverse and resilient economic economy structure providing opportunities for all.	London's low carbon circular economy sector continues to grow	Value of sales and Gross Value Added in the low carbon and environmental goods and services sector	National and local data sets on the sector	Every 2 to 3 years from 2019
			Number of businesses in the low carbon and environmental goods and services sector	National and local data sets on the sector	Every 2 to 3 years from 2019
			Number of employees in the low carbon and environmental goods and services sector	National and local data sets on the sector	Every 2 to 3 years from 2019
Adapting to Climate Change	2. To ensure London adapts and becomes more resilient to the impacts of climate change and extreme weather events such as flood, drought and heat risks.		Amount of sustainable drainage retrofitted	Thames Water, boroughs, GLA	Every 2 years from 2018
			Number of water efficiency measures installed through Mayoral programmes	Energy for Londoners retrofit programmes (GLA)	Annual from 2018



Relevant Policy Area	Relevant IIA objective <sup>3</sup>	Target	Monitoring measure	Dataset/s to be used (dataset owner)	Reporting frequency
	9. To protect and enhance London's waterbodies by ensuring that London has a sustainable water supply, drainage and sewerage system.		Green cover – as greening brings a cooling effect	See Green Infrastructure	See Green Infrastructure
Ambient Noise	8. To minimise noise and vibration levels and disruption to people and communities across London and reduce inequalities in exposure.	The number of people adversely affected by noise will be reduced and more quiet and tranquil spaces will be promoted.	Number of people adversely affected by noise	DEFRA Noise Implementation Plan (DEFRA)	Every 5 years  (Next publication expected 2019)

## 6. Glossary

AEI - Assessment of Economic Impacts

BEIS – Department for Business, Energy and Industrial Strategy

CSIA - Community Safety Impact Assessment

EqIA - Equalities Impact Assessment

GLA - Greater London Authority

HRA - Habitats Regulation Assessment

IIA - Integrated Impact Assessment

LAEI – London Atmospheric Emissions Inventory

LEGGI – London Energy and Greenhouse Gas Inventory

LES - London Environment Strategy

LWARB – London Waste and Recycling Board

MTS – Mayor’s Transport Strategy

PAS – Post Adoption Statement

RTM - Report to the Mayor

SEA – Strategic Environmental Assessment

SME – Small and Medium Enterprises

SPG - Supplementary Planning Guidance

TfL – Transport for London

TIL - Travel in London Report