



Consultation Draft London Environment Strategy

Greater London Authority

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In Association with Temple Group Limited

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1. Introduction

1.1 Integrated Impact Assessment (IIA)

- 1.1.1.1 The Mayor's Greater London Authority (GLA) is preparing the Mayor's London Environment Strategy (LES) (refer to chapter 2). The GLA has commissioned Jacobs UK Limited (Jacobs) to undertake an Integrated Impact Assessment (IIA) of the likely impacts of the Mayor's policies and proposals, as set out in its draft LES for consultation. Jacobs, together with Temple Group Limited, has formed an IIA team to undertake the assessment and provide recommendations throughout the process to the GLA on how to improve the environmental, economic and social performance of the draft LES for consultation during its development through to its adoption by the Mayor. This document is the IIA Report, which reports the findings of the IIA, to be consulted upon alongside the draft LES for consultation. Information on the purpose and content of the LES is outlined in chapter 2.
- 1.1.1.2 The IIA process fulfils the statutory requirement for carrying out a Strategic Environmental Assessment¹ (SEA) of the draft LES published for consultation, whilst enabling other types of impact assessments to be carried out and reported in a single process to provide efficiencies and simplify the outcomes and recommendations for the decision-makers. This IIA conforms with requirements of an environmental report required for SEA purposes. The following types of assessment have been covered by the IIA of the draft LES for consultation:
- Sustainability Appraisal and Strategic Environmental Assessment (SEA);
 - Health Impact assessment (HIA);
 - Equalities Impact Assessment (EqIA);
 - Assessment of Economic Impacts (AEI); and
 - Community Safety Impact Assessment (CSIA).
- 1.1.1.3 An explanation of what each of these types of assessment involves is provided in chapter 3 (Section 3.4). A separate EqIA Report, summarising the findings of that assessment, will be published alongside the IIA Report.
- 1.1.1.4 An IIA can also include undertaking a Habitats Regulations Assessment (HRA). This is excluded from the IIA for the LES as the GLA sought advice from Natural England as the Government Agency responsible for Natura 2000 sites, and was informed that undertaking an HRA would not be necessary because HRA is required for those 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.
- 1.1.1.5 As the LES itself does not specify such projects, HRA is not needed as the HRA is undertaken on the policies in the London Plan and on the programmes/projects set out in the Transport Strategy.
- 1.1.1.6 Information on the scope and approach of the IIA is set out in chapter 3 of this IIA Report.

1.2 Structure of the IIA Report

- 1.2.1.1 Schedule 2 of the SEA Regulations (The Environmental Assessment of Plans and Programmes Regulations 2004 (SI 1633 the "SEA Regulations")) sets out the information to be included in environmental reports which report the findings of an SEA process. This IIA Report has been structured as set out in Table 1.1, to meet these requirements.

¹ The Environmental Assessment of Plans and Programmes Regulations 2004 (SI 1633)

Table 1.1 Location of Information Required by SEA Regulations in this IIA Report

Requirement of SEA Regulations (Schedule 2)	Location in this IIA Report
1. An outline of the contents and main objectives of the plan or programme, and of its relationship with other relevant plans and programmes.	Chapter 2
2. The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme.	Chapter 4 and appendix A
3. The environmental characteristics of areas likely to be significantly affected.	Chapter 4
4. Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Council Directive 79/409/EEC on the conservation of wild birds(a) and the Habitats Directive.	Chapter 4
5. The environmental protection objectives, established at international, Community or Member State 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.	Chapter 4
6. The likely significant effects on the environment, including short, medium and long-term effects, permanent and temporary effects, positive and negative effects, and secondary, cumulative and synergistic effects, on issues such as— (a) biodiversity; (h) air; (b) population; (i) climatic factors; (c) human health; (j) material assets; (d) fauna; (k) cultural heritage, including architectural and (e) flora; archaeological heritage; (f) soil; (l) landscape; and (g) water; (m) the interrelationship between the issues referred to in sub-paragraphs (a) to (l).	Chapter 6
7. The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme.	Chapter 6
8. An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information.	Chapter 3 and Chapter 5
9. A description of the measures envisaged concerning monitoring in accordance with regulation 17 ² .	Chapter 7
10. A non-technical summary of the information provided under paragraphs 1 to 9.	Non-Technical Summary

² 17.—(1) The responsible authority shall monitor the significant environmental effects of the implementation of each plan or programme with the purpose of identifying unforeseen adverse effects at an early stage and being able to undertake appropriate remedial action.
(2) The responsible authority's monitoring arrangements may comprise or include arrangements established otherwise than for the express purpose of complying with paragraph (1).

2. The Draft LES for Consultation

2.1 Requirement for the LES

2.1.1.1 The Greater London Authority Act 1999 (“GLA Act”, as amended) 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. Each of these aspects previously had its own standalone strategy, and the Mayor had also published two additional strategies to cover the environmental aspects of water and business waste (Table 2.1).

Table 2.1 Current Strategies to be Revised and Replaced by the LES

Strategy	Year of Publication
Statutory Strategies	
Biodiversity	2002
Air Quality	2010
Climate Change Mitigation and Energy	2011
Climate Change Adaptation	2011
Municipal Waste	2011
Ambient Noise	2004
Non-statutory Strategies	
Business Waste	2011
Water	2011

2.1.1.2 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. The GLA has therefore been revising the separate subject areas set out above into one integrated London Environment Strategy. As well as setting out his policies and proposals for those areas the LES must also include a general assessment of London’s environment.

2.2 Outline of Content of the Draft LES for Consultation

2.2.1.1 The draft LES for consultation sets out that the Mayor wants London's environment to be as good as or even better than the countryside that surrounds it. He wants it to be:

- **Greener:** All Londoners should be able to enjoy the very best parks, trees and wildlife. Creating a greener city is good for everyone – it will improve people’s health and quality of life, support the success of businesses and attract more visitors to London.
- **Cleaner:** Londoners want their city to be clean, attractive and healthy – living in a big city does not mean they should accept a dirty and polluted environment. The Mayor will clean up London’s air, water and energy in a way that is fair, protects the health of Londoners, and contributes to the fight against climate change.
- **Ready for the future:** Water, energy and raw materials for the products we consume will be less readily available in the future, and climate change will mean higher temperatures, more intense rainfall and water shortages. The Mayor will make sure the city does not waste valuable resources, is prepared for the future and is safeguarded for future generations.

- 2.2.1.2 In addition to the six environmental subject areas that the LES is statutorily required to cover, the LES can also contain policies and proposals concerning other matters the Mayor considers relevant to London's environment. The draft LES for consultation covers further issues such as green infrastructure, commercial waste, and water supply and demand. These issues have been integrated within the draft LES's seven broad Policy Areas: Green Infrastructure and Natural Capital; Air Quality; Ambient Noise; Adapting to Climate Change; Waste; Climate Change Mitigation and Energy and, Transition to a low carbon circular economy.
- 2.2.1.3 Water issues are addressed within the Adapting to Climate Change Policy Area of the draft LES for consultation. The GLA decided to combine these two Policy Areas after Jacobs had completed its assessment. Consequently, in this IIA the assessment of water policies is presented under a separate Water Policy Area. In combining the two policy areas no changes were made to the content of the Water policies or proposals.
- 2.2.1.4 The draft LES for consultation has been shaped by the consideration of three interrelated factors:
- Population growth
 - Economic growth
 - Climate change
- 2.2.1.5 The draft LES for consultation has sought to work within the context provided by these three factors; setting out a vision to shift London's economic and population growth from being pressures on the environment to establishing clear opportunities, as well as addressing London's resilience to climate change.
- 2.2.1.6 The Policy Areas include aims and objectives that give strategic direction to its more detailed policies and proposals. The aims set out in the draft LES for consultation are detailed below:
- London will be a National Park City where more than half of its area is green; where the natural environment is protected and the network of green infrastructure is managed to benefit all Londoners. (Policy Area for Green Infrastructure)
 - 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. (Policy Area for Air Quality)
 - Improve the quality of life of Londoners by reducing the number of people adversely affected by noise and promoting more quiet spaces. (Policy Area for Ambient Noise)
 - London and Londoners are resilient to severe weather and longer-term climate change impacts. This will include flooding, heat risk and drought. (Policy Area for Adapting to Climate Change)
 - London will be a zero waste city so that by 2026 no biodegradable or recyclable waste will be sent to landfill and by 2030 65 per cent of its municipal waste will be recycled. (Policy Area for Waste)
 - London will be a zero carbon city by 2050, with energy efficient buildings, clean transport and clean energy. (Policy Area for Climate Change Mitigation and Energy)
 - Enable the transition to a low carbon circular economy. (Policy Area for Transition to a Low Carbon Circular Economy)

2.3 Role of the Mayor and Delivery of the LES

2.3.1.1 The LES is one of a number of strategies that the Mayor of London is required to produce. The other Mayoral Strategies are set out in (Table 2.3). The majority of these are currently subject to revision or review and the Mayor has to ensure consistency between them. The Mayor heads the GLA Group of organisations which include his Functional Bodies (London Fire Brigade, Mayor’s Office for Policing and Crime, Transport for London, and the two development corporations³). They must have regard to the LES and other relevant strategies when exercising their functions. The Mayor approves their budgets and capital spending plans and has a number of other specific responsibilities (e.g. setting TfL’s fares) and has powers to require them to take action. The LES has relevance to other organisations outside the GLA Group, such as the London boroughs who have to have regard the LES (e.g. its air quality provisions) and statutory waste authorities and the London Waste and Recycling Board who have to act in general conformity with its provisions concerning municipal waste.

Table 2.2 Other Mayoral Strategies

Other Mayoral Strategies
London Plan (Spatial Development Strategy)
Mayor’s Transport Strategy
Economic Development Strategy
Housing Strategy
Culture Strategy
Health Inequalities Strategy
Policing and Crime Plan

2.3.1.2 The Mayor wants London to be a ‘City for all Londoners’. His work includes:

- making it easier for people to move in and around the city
- improving London’s environment
- helping the capital’s businesses to thrive
- providing Londoners with more affordable housing
- giving young people in London more opportunities

2.3.1.3 One of the Mayor’s most important roles is leadership. As a consequence, the delivery of much of the vision set out in the LES will depend upon the indirect influence of the Mayor in this leadership capacity, through his ability to bring together stakeholders to deliver initiatives and programmes identified in the LES that would benefit Londoners and London’s environment.

2.3.1.4 The delivery of the Mayor’s environment vision, aims and objectives, as set out in the LES, will be through the mechanisms described in the LES as well as through other Mayoral Strategies, London borough plans and a range of delivery partners. It is important to recognise the different ways in which the Mayor will be able to deliver and influence positive impact, each of which will play an important role in the combined potential overall impact of the LES. This is reflected in the proposals within the draft LES for consultation, which refer to different types of delivery mechanism and approach. In broad terms, the IIA has considered the following types of delivery mechanism based on the interpretation of the proposals within the LES:

- i. Direct delivery (where the Mayor has a lead delivery role, for example with the funding or resources available to deliver the proposal through the GLA)

³ The London Legacy Development Corporation and the Old Oak & Park Royal Development Corporation

- ii. Delivery through another strategy or plan (for example where the proposal has links or references to another plan or deliver mechanism, such as the London Plan, Mayor's Transport Strategy, Supplementary Planning Guidance etc). In these cases detail of how the proposal will be delivered will be included elsewhere
- iii. Supporting roles (where the proposal places a reliance on collaboration with and/or lending support to initiatives led by others)
- iv. Advocacy or influence (for example where the proposal states the Mayor will use his influence to encourage behaviour change or certain decisions by third parties)

2.3.1.5 This understanding of the different ways through which proposals in the LES would be delivered has been a key consideration in the approach to the assessment adopted in the IIA. The approach to the IIA, including how significance has been considered, is explained in chapter 3.

3. Approach and Method

3.1 Approach for IIA

- 3.1.1.1 The guidance of the then Office of the Deputy Prime Minister (ODPM), *A Practical Guide to the Strategic Environmental Assessment Directive*, 2005, has been used as the main guidance in terms of the approach and stages of assessment followed for the IIA. This guidance has been used to help meet statutory requirements for SEA. The other aspects of assessment covered by the IIA have therefore been carried out according to the stages of SEA, even though they cover broader issues relating to sustainable development (economic and social). The IIA has been used as a tool to ensure the LES decision-making process takes account of a broader range of perspectives, objectives and constraints.
- 3.1.1.2 The IIA has taken an “objectives-led” approach. The use of objectives is not a specific requirement of the SEA Directive but nevertheless is a recognised way of considering the environmental effects of a plan or programme and comparing the effects of alternatives. The IIA objectives serve a different purpose from the objectives of the plan or programme, though in the case of this IIA and the draft LES for consultation, some of the objectives overlap in terms of desired sustainability outcomes. The IIA objectives have been used to help show whether the objectives of the draft LES for consultation are predicted to be beneficial in terms of sustainability, to compare the effects of alternatives, or to suggest improvements.
- 3.1.1.3 The GLA has determined that each of the Mayoral strategies will be assessed against a similar set of IIA objectives for consistency, although there is some flexibility to scope in or out some of the IIA objectives depending on relevance to the specific Mayoral strategy being assessed. Stages of the IIA
- 3.1.1.4 The IIA has been undertaken according to the main stages of SEA as set out in the former ODPM’s *2005 A Practical Guide to the Strategic Environmental Assessment Directive*. The application of this staged approach to the IIA has helped to ensure the environmental, social, economic, health, community safety, and equality consequences of each of the LES proposed Policy Areas have been identified at suitable stages to allow opportunity for the GLA to address concerns and opportunities during its preparation of the draft LES for consultation (refer to chapter 5 for further information on how the IIA process has helped to shape the development of the draft LES for consultation) .
- 3.1.1.5 Figure 3.1 illustrates the stages of the IIA, along with the formal outputs of each stage. This IIA Report represents the completion of Stage C and is now subject to consultation alongside the draft LES for consultation.
- 3.1.1.6 The draft LES for consultation has been developed through a series of iterations from some initial high level strategic options to the Consultation Draft being consulted upon alongside this IIA Report.
- 3.1.1.7 In addition to the three ‘formal’ outputs of the IIA process (see Figure 3.1), there has also been regular interim advice provided to the GLA throughout Stage B of the IIA process by the IIA team. This advice has been based on preliminary assessments of the earlier iterations (‘working drafts’) of the LES, which have included alternative options on content. Amendments have been made to the emerging LES with each iteration, taking into account interim IIA recommendations.

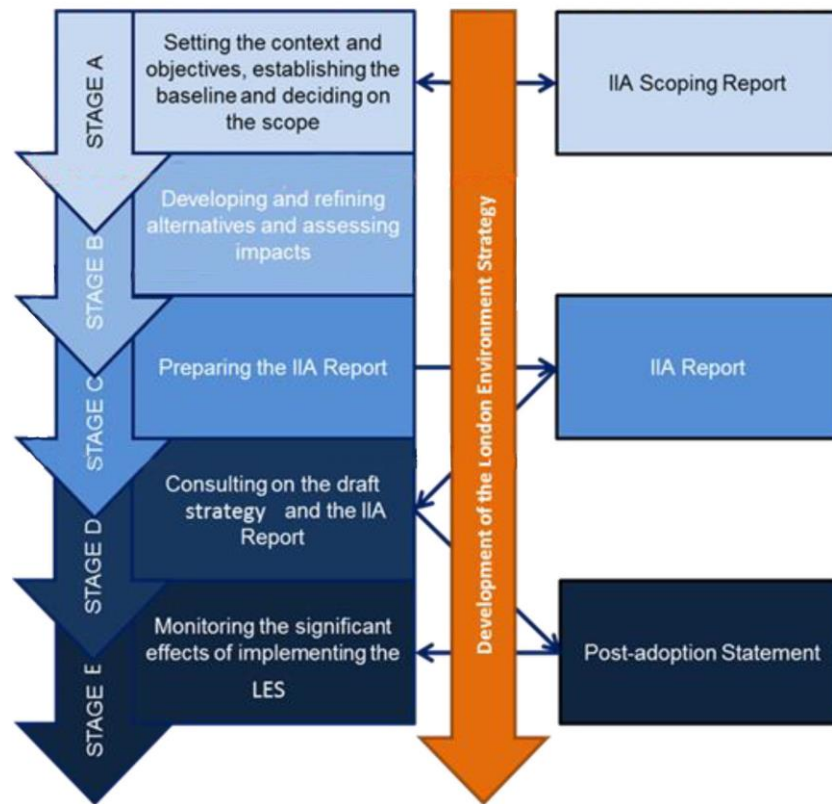


Figure 3.1 Stages of the IIA Process

3.1.2 Stage A: Scoping

3.1.2.1 The scoping stage was carried out by the GLA. The IIA Scoping Report sets out the understanding of the policy, plan and programme (PPP) context and baseline environment, before identifying the key issues. This context has been revised and updated and is reported in chapter 4 of this IIA Report.

3.1.2.2 The GLA and Transport for London held a workshop with stakeholders on 14 June 2016 to identify key issues and consider a consistent set of IIA objectives which could apply to all relevant Mayoral strategies. Officers from the GLA’s environment team (among others) attended the workshop. This directly informed the 24 IIA objectives that were set out in the IIA scoping report. Those objectives have been applied as part of this IIA. As part of the scoping stage the GLA also developed a series of guide questions to inform the assessment against the objectives. The Scoping Report was consulted on in January 2017 and responses to the scoping consultation are set out in the Iterations Register (Appendix C).

3.1.3 Stage B: Developing and Refining Alternatives and Assessing Impacts

- 3.1.3.1 Stage B took place between January and June 2017. Working drafts of the LES were subjected to interim assessment by the IIA team and recommendations were fed back to GLA. The GLA responses to these recommendations were recorded in an Iterations Register, which can be found in Appendix C. The main points in time where the IIA process interacted with the development of the LES are illustrated in Table 3.1.
- 3.1.3.2 As indicated in Table 3.1, two working drafts of the LES have been assessed by the IIA team prior to the assessment reported within this IIA Report. The main ways in which Stage B has contributed to shaping the draft LES are set out in Appendix C.

Table 3.1 Interaction between Preparation of the Draft LES for Consultation and the IIA Process

Date	LES Development	IIA Input
Early January 2017		Draft Scoping Report prepared and issued by GLA for consultation
3 March 2017	LES draft strategic options and policies issued	IIA High Level Assessment of Strategic Options; Short Summary with recommendations sent to GLA; IIA Tracker sent to GLA Changes Logged into the IIA Tracker
9 March 2017	LES Working Draft 1 issued for IIA comments	IIA Review of the LES Working Draft 1; IIA comments provided to GLA.
7 April 2017	LES Working Draft 2 issued	Preliminary IIA undertaken on LES Working Draft 2 Report; Summary of the Preliminary IIA results and recommendations provided to GLA.
10 May 2017	Draft LES for consultation (Draft 3) issued	Full IIA undertaken of draft LES for consultation.
11 August	Final draft LES for consultation published <i>(the version assessed in this IIA Report)</i>	IIA Report and EqIA Reports issued for consultation

3.1.3.3 The draft LES for consultation (dated 5 May 2017) represents the GLA's 'Preferred Option'. Chapter 6 presents the findings of the IIA of the draft LES for consultation, which has assessed the draft LES for consultation on a Policy Area by Policy Area basis before considering the overall effect of the LES (all Policy Areas in combination) across all sustainability topics.

3.1.4 Stage C: Preparing the IIA Report

3.1.4.1 The results of Stage B have been reported in this IIA Report. In preparing this Report, Jacobs has taken account of material amendments made to the draft LES for consultation by GLA in response to the final Stage B assessment.

3.1.4.2 In most cases the changes were minor wording changes to policies and proposals. To ensure that the IIA remained valid, a review of the altered objectives, policies and proposals was made by the IIA team to check if any were considered to be material changes (i.e. changes that could affect the results of the IIA). Where it was considered the changes were material, the assessment has been revised and this IIA report was updated to reflect those changes.

3.1.4.3 The IIA has not been updated to reflect minor, non-material changes to the wording of the LES. It is not considered that these differences affect the validity of the results of the IIA.

3.2 Consultation

3.2.1.1 The draft LES for consultation has been developed in collaboration with the other statutory Mayoral strategies. This has been in the form of a Strategy Coordination Working Group consisting of project managers for each of the strategies and also a Strategy Coordination Steering Group consisting of heads of units for the strategies.

3.2.1.2 The GLA has produced a matrix that maps the key policies from the environment strategy against the other statutory strategies to identify any areas of synergy or conflict. Where any areas of conflict were identified, these have been resolved in the draft LES for consultation.

3.2.1.3 The GLA's environment team ran a number of pre-consultation workshops with stakeholders including: Friends of the Earth, Just Space, London boroughs and the City of London, GLA Group, London First, Environmental NGOs and the Institute of Environmental Analytics. These events were a mixture of presentations, workshops and roundtable discussions. The aim of the pre-consultation events was to gather early input from a selection of stakeholders that the GLA could feed into the development of policies and proposals in the draft LES for consultation.

3.2.1.4 The draft LES for consultation has now been published for consultation. It is subject to a 14 week public consultation during which time the GLA will be gathering feedback through an online form, discussions on Talk London, events and workshops (refer to chapter 9). All of this information will then be fed in to the final LES.

3.3 Types of Assessment in this IIA

3.3.1 Strategic Environmental Assessment (SEA)

3.3.1.1 Undertaking an SEA for new or revised plans is a statutory requirement under the Environmental Assessment of Plans and Programmes Regulations 2004 ("the SEA Regulations" SI2004/1633). The objective of SEA is:

*"to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development"*⁴

⁴ European Directive 2001/42/EC (the 'SEA Directive') which is transposed into UK law via the SEA Regulations.

- 3.3.1.2 The SEA Regulations require a report to be prepared, and made available to the public, which identifies, describes and evaluates the likely significant effects on the environment of implementing the strategy and the reasonable alternatives taking into account the objectives and the geographical scope of the strategy.
- 3.3.1.3 An assessment of the likely significant effects on the environment has been undertaken taking into account issues such as biodiversity, flora and fauna; population; human health; soil; water; air; climatic factors; material assets; cultural heritage; landscape and the inter-relationship between these issues.
- 3.3.1.4 The IIA process has been based on the principles of SEA but has included greater coverage of social and economic aspects of sustainable development.

3.3.2 Equality Impact Assessment (EqIA)

- 3.3.2.1 The Equality Act 2010 (Equality Act) requires public authorities to work to eliminate discrimination and promote equality in all their activities. Under Section 149 of the Equality Act a public authority has a duty to ensure that all decisions are made in such a way as to minimise unfairness, and do not have disproportionately negative impacts on people because of their protected characteristics or background.
- 3.3.2.2 The duty requires the Mayor (and GLA) to have due regard to the need to eliminate unlawful discrimination, harassment and victimisation as well as to advance equality of opportunity and foster good relations between people who share a protected characteristic and those who do not under section 149 of the Equality Act 2010. This may involve, in particular, removing or minimising any disadvantage suffered by those who share a relevant protected characteristic, taking steps to meet the needs of such people; and encouraging them to participate in public life or in any other activity where their participation is disproportionately low, including tackling prejudice and promoting understanding. The protected characteristics and groups are listed and defined in Table 3.2. Compliance with the duty may involve treating people with a protected characteristic more favourably than those without the characteristic.
- 3.3.2.3 An EqIA forms an integral part of this IIA and likely disproportionate effects on equality groups listed in Table 3.2 have been identified through assessing a range of issues potentially influenced by the draft LES for consultation. It should be noted that in addition to the protected characteristics identified under the Equality Act 2010, the GLA also considers people in lower income groups as part of EqIA, in order to ensure that the needs of Londoners on lower incomes are considered in policy and plan making. A separate EqIA Report has been prepared and submitted alongside this IIA Report.

Table 3.2 : Protected characteristics under the Equality Act 2010

Protected characteristics	Explanation
Age	Where this is referred to, it refers to a person belonging to a particular age (for example 32 year olds) or range of ages (for example 18 to 30 year olds).
Disability	A person has a disability if she or he has a physical or mental impairment which has a substantial and long-term adverse effect on that person's ability to carry out normal day-to-day activities.
Gender reassignment	The process of transitioning from one gender to another.
Marriage and civil partnership	Marriage is no longer restricted to a union between a man and a woman but now includes a marriage between a same-sex couple. Same-sex couples can also have their relationships legally recognised as 'civil partnerships'.
Pregnancy and	Pregnancy is the condition of being pregnant or expecting a baby.

Protected characteristics	Explanation
maternity	Maternity refers to the period after the birth, and is linked to maternity leave in the employment context. In the non-work context, protection against maternity discrimination is for 26 weeks after giving birth.
Race	Refers to the protected characteristic of Race. It refers to a group of people defined by their race, colour, and nationality (including citizenship) ethnic or national origins.
Religion and belief	Religion has the meaning usually given to it but belief includes religious and philosophical beliefs including lack of belief (such as Atheism). Generally, a belief should affect your life choices or the way you live for it to be included in the definition.
sex ⁵	A man or a woman.
Sexual orientation	Whether a person's sexual attraction is towards their own sex, the opposite sex or to both sexes.

3.3.3 Health Impact Assessment (HIA)

3.3.3.1 HIA is a means of establishing the likely health effects of plans, programmes and projects. Section 41(4) of the GLA Act states that in preparing or revising any strategy the Mayor shall have regard to the effect which the proposed strategy or revision would have on the health of persons in Greater London.

3.3.3.2 The purpose of HIA is to assist decision-makers in understanding the health impacts of a plan or project. It seeks to inform and enhance the decision-making process, making decisions more holistic and robust by:

- Highlighting practical ways to enhance the positive health, health equality and well-being effects of a plan;
- Avoiding or reducing the negative health, health inequality and well-being effects.

3.3.3.3 The HIA has considered the likely significant effects on human health through assessing issues such as air quality; biodiversity, flora and fauna; climate change; crime and security; connectivity; employment; flood risk; physical activity; housing; inclusion; landscape, townscape and public realm; noise and vibration; water resources and quality.

3.3.4 Assessment of Economic Impacts (AEI)

3.3.4.1 One of the purposes of the GLA Act Section 30 (2) (a) is to promote economic development and wealth creation in Greater London. The draft LES for consultation should therefore consider the likely effects on London's economy.

3.3.4.2 While there is no statutory guidance on considering economic impacts, economic development is a key element of sustainability. The AEI element has sought to identify the likely significant effects on society and the economy resulting from the proposed draft LES for consultation policies, using the IIA framework.

⁵ Sex is the protected characteristic and not gender.

3.3.5 Consideration of Community Safety

- 3.3.5.1 While there is no specific requirement for consideration of community safety to be carried out by the Mayor in the preparation or revision of a plan or programme, the Crime and Disorder Act 1998 (as amended) and the Police and Justice Act 2006 (as amended) makes provision for preventing and combating crime and disorder. The IIA has therefore considered the impacts of the draft LES for consultation on crime and safety.

3.4 Method of Assessment

3.4.1 Use of IIA Framework

- 3.4.1.1 The method of assessment has made use of an IIA framework which was developed by the GLA during the scoping stage (Stage A) and consulted upon early in 2017.
- 3.4.1.2 The IIA framework includes a series of guide questions, related to the IIA objectives, against which to assess whether the Policy Areas help to achieve or conflict with each objective. As noted above, the guide questions included in the IIA framework have been further developed and refined by Jacobs during Stage B of the IIA from the initial set of questions presented in the IIA Scoping Report.
- 3.4.1.3 The IIA objectives and final assessment guide questions which were used during Stage B are set out in section 4.3. Matrices were used to record the assessment for each Policy Area. Within the assessment matrix the guide questions were coloured to indicate which of the elements of the IIA the question addresses:
- **Green = SEA**
 - **Purple = EQIA**
 - **Orange = HIA**
 - **Blue = AEI**
 - **Pink = CSIA**

3.4.2 Qualitative Assessment

- 3.4.2.1 The assessment has taken a qualitative approach since there is insufficient detail in either the draft LES for consultation Policy Areas or specific aspects of the baseline likely to be affected to inform a quantified assessment. As a consequence the assessment matrices include a description of the effect predicted, largely based on the professional judgement of the assessors. Where possible evidence in the form of research or existing guidance has been referred to and referenced in the description of the effects predicted for each of the IIA objectives.

3.4.3 Spatial and Temporal Scope

- 3.4.3.1 The spatial scope refers to the geographic area that has been covered by the IIA. The principal spatial scope for the IIA is the Greater London Authority area. The IIA also took account of potential impacts on adjoining areas as appropriate. Figure 3.2 shows a map of the Greater London Authority area.

Figure 3.2: Greater London Authority area (TfL, 2016)



3.4.3.2 The LES covers the period to 2050 and this was therefore also the timeframe for the IIA. Where possible, significant effects identified were categorised as short term (0-5 years), medium term (6-15 years) and long term (16 years or more) in the descriptions provided in the assessment matrices.

3.4.4 Compatibility Assessment of Objectives

3.4.4.1 The IIA has included compatibility assessments to test: (a) the internal compatibility of the 24 IIA objectives (section 4.4 and appendix D); and (b) the compatibility of the IIA objectives with the strategy objectives in the draft LES for consultation (section 6.2 and appendix d). In each case the compatibility assessment has been undertaken through the use of a matrix and colour coded to illustrate which objectives are compatible, which are judged to be in potential conflict and for which compatibility is uncertain. An explanation of the assessment findings is then reported in the relevant sections of this IIA Report.

3.4.5 Policy Area Assessment

3.4.5.1 The draft LES for consultation has been assessed by Policy Area. This approach was agreed between the IIA team and the GLA in February 2017, when the structure of the draft LES for consultation was established. By taking the approach of assessing the draft LES for consultation by Policy Area, it has enabled recommendations put forward through the iterative process of assessment to be considered by the GLA's Policy Area leads. It should be noted however, that not all IIA objectives and guide questions are relevant to scope covered by each and every Policy Area. For this reason, some Policy Areas scored a lot of neutral assessments against particular IIA objectives. The high number of neutral assessments reflects that the full suite of 24 IIA objectives was used in the assessment framework, many of which were not relevant to the scope of some of the individual Policy Areas. However, all of the IIA objectives were relevant in some way to the assessment of the draft LES for consultation.

3.4.5.2 In undertaking the assessment, the IIA team assessors recorded their assessments in a set of matrices for each Policy Area. Seven sets of assessment matrices were prepared and have been used to inform the results presented in this IIA Report (Chapter 6).

3.4.6 Strategy Wide Assessment

- 3.4.6.1 After assessing the Policy Areas, a strategy-wide assessment was undertaken in order to identify the performance of the strategy as a whole against each IIA objective. The results of this are set out in section 6.11.

3.4.7 Cumulative Effects

- 3.4.7.1 The cumulative effects of implementation of the draft LES for consultation against the adopted London Plan and the consultation draft Mayor's Transport Strategy has been considered and assessed. This is reported in section 6.12. Other Mayoral Strategies are in the process of revision but not sufficiently advanced so as to be capable of assessment.

3.4.8 Approach to Significance

- 3.4.8.1 In determining the significance of impacts in the IIA, account has been taken of the criteria set out in Annex II of the SEA Directive which includes the scale or magnitude of change, the value and vulnerability of receptors affected and the probability, duration, frequency and reversibility of impacts.
- 3.4.8.2 The IIA has also taken into account the nature of the proposals within the Policy Areas. A greater level of significance has normally been applied where the Policy Area includes specific activities or funded proposals within the Mayor's direct control, since there is more certainty that the proposals will translate into action. Where the proposals relate to the Mayor using his influence to encourage behaviour change in third parties, a lesser level of significance has been applied, since although it has been assumed that impacts will occur as a result of the proposal, it is less certain how much action can be attributed to the draft LES for consultation and on what scale the changes would occur. In addition, it is noted that some proposals in the draft LES for consultation relate to activities and processes, rather than defined 'on-the-ground' outcomes. For example, proposals to investigate an existing problem may contribute to a better understanding of a problem which can inform future proposals, but does not in itself solve the problem.
- 3.4.8.3 The consideration of these aspects of the proposals in the draft LES for consultation has informed the judgement on how significantly the strategy is likely to affect each IIA objective. Figure 3.3 illustrates the degree of significance applied to the different types of proposal by the IIA team when reviewing the proposals. A record of the rationale behind the level of significance attributed to each effect assessed is provided in the assessment matrices. The assessment criteria used to characterise the main effects of the Policy Areas on each IIA objective are set out in Table 3.3.

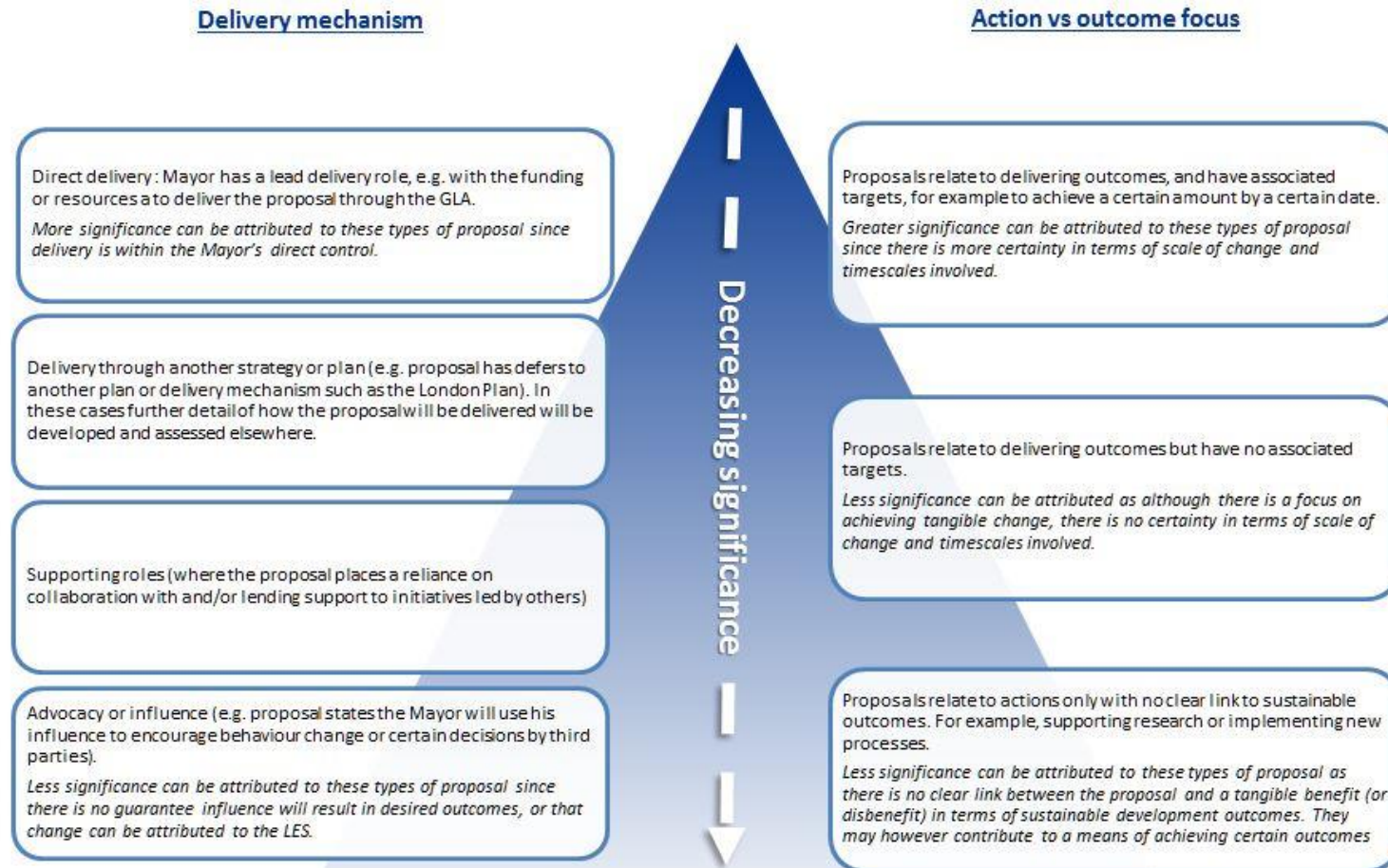


Figure 3.3 Consideration of Significance

Table 3.3 Assessment Criteria

Scale of effect		Definition
++	Major positive effect	Contributes greatly towards achieving the IIA objective/Significant Effect
+	Minor positive effect	Contributes to achieving the IIA objective
0	Neutral or no effect	Does not impact upon the achievement of the IIA objective
-	Minor negative effect	Conflicts with the IIA objective
--	Major negative effect	Greatly hinders or prevents the achievement of the IIA objective/Significant Effect
?	Uncertain	Can have positive or negative effects but the level of information available at a time of assessment does not allow to make a clear judgement
	Not Applicable	No relationship between this policy area and the IIA objective

3.5 Assumptions and Uncertainties

- 3.5.1.1 IIA is a strategic level assessment by nature and is based on broad assumptions and judgements; therefore some uncertainty over the assessment may exist. Qualitative rather than quantitative assessments need to be made and there will be some degree of subjectivity which is typical of the IIA process. The assessment has been undertaken by independent consultants with specialist knowledge across a range of sustainability topics.
- 3.5.1.2 The draft LES for consultation has generally made reference to a collective set of measures (policies and proposals) within a Policy Area, rather than specific details of individual schemes. As a result, an assumption about the predicted effects has been made based on the nature of the collective measures. The assessment has assumed that all proposals listed in the LES under each Policy Area will be implemented. However, the IIA has noted that in many cases, achievement of the objectives and policies within the Policy Areas will be dependent upon third parties and other plans and programmes.
- 3.5.1.3 The IIA has been applied to each Policy Area in the draft LES for consultation. However in some cases, similar proposals are included across the Policy Areas so the IIA process has tried to identify and avoid potential double-counting of the same effect in the assessment of the combined Policy Areas.

4. IIA Objectives, Baseline and Context

4.1 Strategic Sustainability and Environmental Protection Context

4.1.1 Policy, Plan and Programme Review

4.1.1.1 A review of relevant policies, plans and programmes (PPP) was undertaken by the GLA at the scoping stage, and included in the scoping report. Appendix A sets out the results of this review, and key considerations for the development of the draft LES for consultation and IIA, arising from the review.

4.2 Baseline Context

4.2.1 Baseline Information

4.2.1.1 The 'baseline' refers to the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the LES. The presentation of the baseline should comprise existing information on the relevant environmental and sustainability context of the area that the LES would cover (i.e. Greater London), as well as a prediction of how that context would develop over time in the absence of the LES by observing current trends.

4.2.1.2 The GLA developed the preliminary baseline context during the scoping stage, using a variety of information sources. This provided the basis for identifying strategy specific issues to inform the IIA framework (IIA objectives and guide questions) developed by the GLA as the basis for the assessment. The understanding of the baseline also provides the basis for developing strategy proposals and monitoring indicators.

4.2.1.3 The topic areas considered in the baseline reflect in part the requirements to cover certain issues through the SEA, (as set out in the SEA Regulations), but also issues that the GLA determined were relevant to the other types of assessment during scoping. Table 4.1 presents the topic areas considered by the GLA against the SEA topics and the other types of assessment as relevant.

Table 4.1: Sustainability Baseline Topics against SEA Regulations Topics and Other IIA Areas

Topic	SEA Regulations Topic	Other Relevant Assessment Areas
Air quality	Air	HIA; AEI
Climate change adaptation	Climatic factors; material assets; human health; interrelationships between issues	EqIA; HIA; AEI
Climate change mitigation	Climatic factors	HIA; AEI
Energy use and supply	Climatic factors; material assets;	EqIA; AEI; HIA
Flood risk	Human health	EqIA; AEI
Geology and soils	Soil; human health	HIA; AEI
Materials and waste	Material assets; interrelationships between issues	EqIA; HIA
Noise and vibration	-	EqIA; HIA
Water resources and quality	Water; biodiversity; flora and fauna; human health; interrelationships between issues	AEI

Topic	SEA Regulations Topic	Other Relevant Assessment Areas
Natural Capital and Natural Environment	Biodiversity; flora and fauna; landscape; interrelationships between issues	EqIA; HIA; AEI; CSIA
Historic environment	Cultural heritage, including architectural and archaeological heritage	EqIA; AEI
Equality and inclusion	Human health	EqIA
Social integration	Population; human health	EqIA
Health and health inequalities	Human health	EqIA; HIA
Accessibility	Population	EqIA
Housing supply, quality, choice and affordability	Population	EqIA; HIA; AEI
Crime, safety and security	-	HIA; CSIA
Design	Material assets	CSIA
Economic competitiveness and employment	-	EqIA; HIA; AEI
Education and skills	-	EqIA; AEI
Connectivity	-	EqIA; HIA; AEI
Infrastructure	Material assets	EqIA; AEI
Culture	Cultural heritage, including architectural and archaeological heritage	-
Sustainable land use	Soil; material assets; landscape; interrelationships between issues	EqIA; AEI

4.2.2 Summary of Key Baseline Issues

4.2.2.1 Appendix B sets out the baseline based on the information provided by GLA in the IIA Scoping Report. Consideration of the baseline context has informed the following summary of the key environmental issues for London (as reported in the Scoping Report).

Table 4.2 Summary of Baseline Issues and Trends

Topic	Key Issues	General trends
Air Quality	<ul style="list-style-type: none"> High levels of NO_x, PM₁₀ and PM_{2.5} emissions from road transport. Little to no predicted reduction in PM₁₀ and PM_{2.5} emissions from road transport between 2013 and 2030. High levels of NO_x, PM₁₀ and PM_{2.5} emissions from road transport. London is not compliant with legal limit values for NO₂. Large population numbers are exposed to NO₂ 	It is possible that London will continue to be non-compliant with legal limits with higher levels of exposure to pollutants.

Topic	Key Issues	General trends
	<p>levels above the EU limit value.</p> <ul style="list-style-type: none"> • Exposure to poor air quality is unequal across London and some people and boroughs are more exposed to poor air quality than others. • Pollution hotspots in the city are around schools, exposing children to dangerously polluted air • Need for cleaner walking routes to school and work with local councils to reduce congestion around schools as a means of protecting children. • Need to make cycling an easier and safer choice for more Londoners • Deliver the electric charging infrastructure 	
Climate Change Adaptation	<ul style="list-style-type: none"> • Impacts of climate change and extreme weather events such as flood risk, drought and heat risk on London’s infrastructure including transport, homes, public buildings, businesses and the livelihood of Londoners. • Increased Urban Heat Island effect. • Changing demographics such as an ageing population and more under five year olds increasing the number of potentially ‘at risk’ people. • Building characteristics cause a larger variation in temperature exposure (and therefore risk) than the Urban Heat Island (UHI) effect (research by University College London). • Impacts of climate change will not be equal or fair; and are likely to increase existing inequalities. 	<p>The resilience of London’s built and natural environment could be adversely impacted by flooding, increased temperatures and drought.</p>
Climate Change Mitigation	<ul style="list-style-type: none"> • Transport will continue to contribute significantly to CO₂ emissions unless decarbonised, with aviation set to continue to grow. • London is no longer a global leader in terms of transitioning towards a low carbon circular economy. 	<p>The effects of climate change will not be experienced equally among London’s population and are likely to increase existing inequalities.</p>
Energy Use and Supply	<ul style="list-style-type: none"> • Relatively high and ineffective use of fossil fuels (inside and outside of London) contributing towards London’s emissions. • Insufficient low carbon energy supply - increased demand for energy and the services it provides likely as London continues to grow and develop, this must be low carbon to meet GHG emission targets. • Significant numbers of Londoners in fuel poverty. • Energy-inefficient building stock & transport – we need to increase the energy efficiency of homes, workplaces and transport to reduce demand. • Unutilised local energy resources – e.g. we do 	<p>The gap between supply and demand for energy is likely to increase.</p>

Topic	Key Issues	General trends
	<ul style="list-style-type: none"> not capture existing energy sources such as waste heat. • The need to manage peak electricity demand now and in the future to ensure a secure and affordable electricity supply through demand side response (DSR) and smart energy systems. • Need to promote the roll out of smart meters 	
Flood risk	<ul style="list-style-type: none"> • Risk of flooding to property and people from river, surface water, tidal, sewer, ground water and reservoir. 	<p>There will be no strategic direction for managing all forms of flood risk across London. The responsibility for flood risk is held by different organisations depending on the nature of the risk.</p>
Geology and Soils	<ul style="list-style-type: none"> • Some soils in London have high levels of contamination from substances such as heavy metals, lead, solvents and other hazardous hydrocarbons. 	<p>Geology and soils will continue to be protected through the planning regime and through legislation on contaminated land.</p>
Materials and Waste	<ul style="list-style-type: none"> • Insufficient waste infrastructure in London. • The need for more housing and transport infrastructure is Increasing pressure on existing sites to manage waste. • Wasteful economy and increasing disposal costs. • Threat to River Wharf waste sites from development. • Low municipal waste recycling rate and inconsistent recycling service provision. • High levels of resource consumption and environmental impact of work production. 	<p>This issue may not be properly addressed and London’s recycling targets will not be met. Costs of waste disposal will increase and London will restrict its ability to transition to a circular economy.</p>
Noise and Vibration	<ul style="list-style-type: none"> • Parts of the population are exposed to roadside and railway noise that exceeds the threshold. • Increasing noise levels from night time economy, freight movement and deliveries associated with mixed use development. • Lack of quiet and tranquil places for relaxation and enjoyment. • Link to physical and mental health. 	<p>London’s population will be exposed to increasing levels of noise.</p>
Water resources and quality	<ul style="list-style-type: none"> • Need to reduce per capita water consumption. • Need to plan for and deliver additional new water resources. • Need to improve the quality of water in London’s waterbodies. • Need to improve the physical form of London’s waterbodies. 	<p>Without additional measures to balance supply and demand, the gap between supply and demand for water is likely to increase.</p>
Natural Capital and Natural Environment	<ul style="list-style-type: none"> • Loss of biodiversity and reduced ecological resilience as a result of increased pressure for development and intensification of existing development. 	<p>Increased growth and congestion will continue air pollution hence causing indirect negative effects on air and water quality leading to</p>

Topic	Key Issues	General trends
	<ul style="list-style-type: none"> • Decrease in Areas of Deficiency in Access to Nature and increased recreational pressure on existing habitats and green spaces. • Impact of climate change and threat of new pests and diseases. • A new approach to planning and designing the network of parks, rivers, natural habitats, green roofs and street trees to create a green infrastructure that provides a range of benefits to improve the liveability and ecological resilience of the urban environment. • Need to embark on a major tree- planting programme across London, in partnership with businesses and the public sector, with a particular focus on schools and colleges. • Seek to protect open spaces 	<p>deterioration of natural and built environment</p> <p>There could be potential loss/deterioration on quality of natural green spaces and habitats with consequences for biodiversity</p>
Historic Environment	<ul style="list-style-type: none"> • Heritage assets are at risk from inappropriate development, incompatible uses and activities and pollution (noise, visual air). 	<p>Trends appear to be relatively stable, based on recent monitoring.</p>
Equality and Inclusion	<ul style="list-style-type: none"> • Londoners are living with complex health needs for longer periods. • Londoners are not consistently enabled to lead healthy lifestyles. • There are widening social inequalities. 	<p>Social inequalities in terms of access to a good environment, are likely to persist or increase without targeted interventions.</p>
Social Integration	<ul style="list-style-type: none"> • Some Londoners continue to face real or perceived barriers to using public transport. • Increasing aging and diverse population. • High levels of poverty in some parts of London, with rates of child poverty continuing to exceed national levels. • Capacity of social infrastructure to meet diverse needs of population. • Population churn and impact on community cohesion. 	<p>High cost of housing (to buy and to rent) in London and shortage of affordable housing, combined with increasing levels of income inequality, will continue to place pressure on integration and cohesion.</p>
Health and Health Inequalities	<ul style="list-style-type: none"> • Increasing health inequalities across the population. • Increasing obesity levels across the population. • Low levels of physical activity. • Differentials in life expectancy and healthy life expectancy across London. • Differentials in health determinants of different people. • Review provision of bus services to London's hospitals. • Need to promote healthy life styles. 	<p>Health inequalities relating to environmental determinants are likely to increase, particularly with climate change, without targeted interventions.</p>
Accessibility	<ul style="list-style-type: none"> • Although there has been a decrease in Areas of Deficiency in Access to Nature there are parts of 	

Topic	Key Issues	General trends
	<p>the city where local people lack access to green space and the natural environment.</p> <ul style="list-style-type: none"> • Increased recreational pressure on existing habitats and green spaces. • People living in almost half of London do not have sufficient access to district or local parks • These areas tend to be where development is densest, or in areas of deprivation. 	<p>With the population of London set to grow there is likely to be significant additional pressure on London’s existing green spaces and natural environment.</p> <p>This is likely to have an adverse impact on both people and wildlife unless new approaches to the design and management of existing green space are adopted, and new ways of providing additional greening are found in order to ensure London remains a city in which parks, trees, gardens and natural spaces provide a functional green infrastructure are part of the fabric of the urban environment.</p> <p>The public funding allocated to managing green spaces is being reduced which could result in the decline in the quality of parks and green spaces.</p>
<p>Housing supply, quality, choice and affordability</p>	<ul style="list-style-type: none"> • Undersupply of homes which meet the needs of Londoners (size, type, tenure). • High level of approvals, low level of completions. • Increasing costs of housing relative to wages. • Implications from major Government reforms to housing legislation and policy. • Need to have more home for social rent. • Need to build more homes for first- time buyers. • Need to invest more in new homes for Londoners. • Need to keep rents down in London. • Need to help young Londoners facing homelessness. • Improve planning and design policies to offer older Londoners more choice. • Lack of affordable housing. 	<p>The challenges to meet housing demand whilst protecting London’s environment are likely to increase and fuel poverty is likely to increase.</p>
<p>Crime, Safety & Security</p>	<ul style="list-style-type: none"> • Perceptions of safety. • Fear of crime creating barrier to activities leading to increased social isolation. • High number of violent assaults and sexual offences on the transport network. • Vulnerability of different groups of people at greater risk of crime. 	<p>The creation of poorly-accessible or badly-designed green spaces and public realm, which do not improve perceptions of their safety could become more common.</p>
<p>Design</p>	<ul style="list-style-type: none"> • Poor quality public realm in some parts of London which can discourage active travel. • Deficiencies in open spaces in some parts of the 	<p>The challenges to create attractive, mixed use neighbourhoods that promote and enhance a sense of</p>

Topic	Key Issues	General trends
	city. <ul style="list-style-type: none"> • Risk of poor design, lack of legible neighbourhoods and sense of place. • Need to work with communities, boroughs and the private sector to improve our public spaces and create more liveable streets and spaces. 	place and distinctiveness and reduce need to travel by motorised transport may be overlooked.
Economic competitiveness, employment, education and skills	<ul style="list-style-type: none"> • Maintaining London’s natural capital • Population growth and unemployment 	In the absence of the LES, the opportunities to grow London’s economy in a sustainable way as well as promoting the low carbon circular economy are less likely to materialise and it will compromise London’s ability to achieve becoming a zero carbon city.
Connectivity	<ul style="list-style-type: none"> • Deficiencies in access to open space. • Poor connectivity to green infrastructure in some parts of London. 	Future trends are uncertain but pressure on land use may contribute to fragmentation of access to open space.
Infrastructure	<ul style="list-style-type: none"> • Changing global economy. • London’s Productivity. • Increased pressure on London’s infrastructure as a result of growth and increased economic activity. • Lack of high speed and efficient connectivity (digital) across all parts of London. • Need to prevent the loss of business space 	Digital isolation could become a greater problem.
Culture	<ul style="list-style-type: none"> • Promoting sustainability in London’s cultural venues 	Sustainability’ in London’s cultural venues may not be prioritised.
Sustainable Land use	<ul style="list-style-type: none"> • Inability for London to accommodate required growth within its boundaries. • Unsustainable patterns of development within and across London’s boundaries. • Higher density development. • Competing pressures for land impacts on ability to provide social, physical and environmental infrastructure. • Non-efficient use of land. • Integration of land use and transport. • Spatial impact and consequential development pressures resulting from decision on London’s future airport capacity. 	The challenges to make the best and most efficient use of land to support sustainable development may be overlooked.

4.3 IIA Framework for Assessment

4.3.1 Sustainability Issues Covered by Each Assessment Type

4.3.1.1 Table 4.3 sets out the topic areas covered by the types of assessment to which the GLA has attributed relevance. IIA objectives were formulated for each of the sustainability topic areas set out below. The GLA then developed and consulted on a series of guide questions for each relevant assessment type, to assess whether the draft LES for consultation contributed or worked against the IIA objective.

Table 4.3: Sustainability Baseline Topics and IIA Areas

Topic	Integrated Impact Assessment				
	SEA	EqIA	HIA	AEI	CSIA
Air quality	X		X	X	
Climate change adaptation	X	X	X	X	
Climate change mitigation	X		X	X	
Energy use and supply	X	X	X	X	
Flood risk	X	X		X	
Geology and soils	X		X	X	
Materials and waste	X	X	X		
Noise and vibration		X	X		
Water resources and quality	X			X	
Natural capital and natural environment	X	X	X	X	X
Historic environment	X	X		X	
Equality and inclusion	X	X			
Social integration		X			
Health and health inequalities	X	X	X		
Accessibility	X	X	X		
Housing supply, quality, choice and affordability	X	X	X	X	
Crime, safety and security	X		X		X
Design	X				X
Economic competitiveness and employment		X	X	X	
Education and skills		X		X	
Connectivity	X	X	X	X	
Infrastructure		X		X	
Culture	X				
Sustainable land use	X	X		X	

4.4 IIA Objectives

4.4.1.1 Through the scoping process, the GLA proposed that the full suite of IIA objectives should be used to assess the consultation draft LES. The IIA objectives are set out below in Table 4.4. A number of guide questions were also developed during the scoping stage to inform the assessment. Some of these guide questions were subsequently revised, following the preliminary assessment of working draft LES 2 (refer to section 3.1.3), to further focus the assessment on issues pertinent to the scope of the draft LES for consultation.

4.4.1.2 Table 4.4 presents the assessment objectives and final guide questions used to assess draft LES for consultation.

Table 4.4 IIA Objectives and associated Guide Questions

Topic	IIA Objective	Guide Questions
Air quality	1. To reduce emissions and concentrations of harmful atmospheric pollutants, particularly in areas of poorest air quality and reduce exposure	SEA <ul style="list-style-type: none"> Will it help to reduce emissions of priority pollutants (e.g. PM, NO_x, NO₂)? Will it help to achieve national and international standards for air quality?
		HIA <ul style="list-style-type: none"> Will it reduce the number of people exposed to poor air quality or reduce levels of exposure, particularly for and 'at risk' groups?
		EQIA <ul style="list-style-type: none"> Will it improve air quality around areas which may have high concentrations of equality groups who may be disproportionately affected by poor air quality (including around schools, outdoor play areas, care homes, hospitals and deprived areas)?
		AEI <ul style="list-style-type: none"> How will it support the creation of new technologies and businesses to tackle poor air quality?
Climate change adaptation	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	SEA <ul style="list-style-type: none"> Does it include measures to protect London from the climate change impacts of key concern to London: heat; drought; and surface water flood risk?
		EQIA <ul style="list-style-type: none"> How does it address the risks of climate change that will fall disproportionately on some equality groups (i.e. older/younger Londoners in accommodation more susceptible to risks of heat exposure or flood risk)? How will it reduce Londoners' bills and protect low income groups from disproportionate costs?
		AEI <ul style="list-style-type: none"> How will it lead to London's economy becoming more resilient to impacts of climate change and extreme weather events – in particular in relation to infrastructure? How will it support economic resilience through promoting a flexible supply chain and resilience of services and resources?

Topic	IIA Objective	Guide Questions
		<ul style="list-style-type: none"> How will it support integration of adaptation measures into infrastructure design without incurring excessive costs to businesses or compromising economic growth? <p>HIA</p> <ul style="list-style-type: none"> How will it reduce health and well-being impacts associated with extreme weather events (e.g. heat, drought, flood)? How will it reduce health inequalities and impacts on 'at risk' groups? How will it protect access to services during severe weather events? How will it increase the resilience of people most 'at risk' from severe weather events, helping them to recover?
Climate Change Mitigation	3.To help tackle climate change through reducing greenhouse gas emissions and moving towards a zero carbon London by 2050	<p>SEA</p> <ul style="list-style-type: none"> How will it help reduce emissions of greenhouse gases (including from transport), and help London meet its emission targets? <p>EqIA</p> <ul style="list-style-type: none"> Does it include measures that will disproportionately or differentially affect protected equality groups? <p>HIA</p> <ul style="list-style-type: none"> How will it reduce health inequalities and impacts on more 'at risk' groups or communities? How will it contribute to improving the health of people living and working in London? <p>AEI</p> <ul style="list-style-type: none"> How will it facilitate investment in green technologies, equipment and infrastructure that reduce greenhouse gas emissions? How will it promote the transition to a low-carbon economy?
Energy Use and Supply	4. To manage and reduce demand for energy, achieve greater energy efficiency, utilise new and existing energy sources effectively, and ensure a resilient smart and affordable energy system	<p>SEA</p> <ul style="list-style-type: none"> Will it reduce the demand and need for energy, whilst not leading to overheating? Will it promote and improve energy efficiency in transport, homes, schools, hospitals and other public buildings? Will it increase the proportion of energy both purchased and generated from renewable and sustainable sources? Will it encourage uptake of green/cleaner fuels and renewable energy provision across all transport providers and private cars? Will it provide infrastructure to make a better use of renewable energy sources? <p>EQIA</p> <ul style="list-style-type: none"> Will it contribute to the provision of a smart and affordable energy system for all including equality groups?

Topic	IIA Objective	Guide Questions
		<p>HIA</p> <ul style="list-style-type: none"> • Will it reduce health inequalities and impacts of fuel poverty on low income communities and at risk groups? <p>AEI</p> <ul style="list-style-type: none"> • How will it ensure energy costs for business are competitive? • How will it deliver ‘energy security’ for London? • How will it support the development of low energy intensive sectors of the economy? • How will it promote the transition to a low carbon economy?
Flood Risk	5. To manage the risk of flooding from all sources and improve the resilience of people, property and infrastructure to flooding	<p>SEA</p> <ul style="list-style-type: none"> • How will it help to manage flood risk and reduce the amount of the built environment which is at high risk of flooding? • How will it promote sustainable urban drainage? • How will it reduce discharges to sewers and flood-prone rivers? <p>EQIA</p> <ul style="list-style-type: none"> • How will it help to protect and improve resilience for communities in flood risk areas, particularly those communities or groups ‘at risk’? <p>AEI</p> <ul style="list-style-type: none"> • How will it reduce the economic impacts of flooding on Londoners including businesses? • How it will ensure cost of flood management is proportionate to the risks?
Geology and Soils	6. To conserve London’s geodiversity and protect soils from development and over intensive use	<p>SEA</p> <ul style="list-style-type: none"> • How will it promote the use and remediation of brownfield or contaminated land? • How will it improve soil quality? • How will it prevent further loss of soils and sealing of surfaces? • How will it compromise the conservation of important geological sites? <p>HIA</p> <ul style="list-style-type: none"> • Will it minimise the risk of health impacts from contaminated land? <p>AEI</p> <ul style="list-style-type: none"> • How will it minimise development impact on soil and biodiversity while supporting economic growth?
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	<p>SEA</p> <ul style="list-style-type: none"> • How will it help minimise the production of waste? • How will it help minimise resource use? • How will it promote reuse, recycling and use of recycled materials in all construction and operational practices (for example, in the design of housing etc.)?

Topic	IIA Objective	Guide Questions
	reuse and recycling rates	<ul style="list-style-type: none"> • How will it help to promote a market for reused, refurbished, remanufactured and recycled products? • How will it promote sustainable waste management through implementation of the waste hierarchy? • How will it promote the principles of circular economy when aiming for waste reduction, reuse, re-manufacturing and recycling? <p>EQIA</p> <ul style="list-style-type: none"> • How will it promote access to secure, reliable recycling facilities for all Londoners irrespective of the borough or type of property that they live in? • How will it minimise negative impacts of waste processing and disposal on ‘at risk’ groups and communities? <p>AEI</p> <ul style="list-style-type: none"> • How will it provide opportunities for businesses to benefit from the circular economy? • How will it maximise use of innovative waste management techniques including smart technology? • How will it facilitate sustainable waste transport, reducing CO2 and air quality impact? • How will it support London’s businesses develop innovate ways to recycle and re-use waste products?
Noise & Vibration	8. To minimise noise and vibration levels and disruption to people and communities across London and reduce inequalities in exposure	<p>EQIA</p> <ul style="list-style-type: none"> • How will it improve access to quiet and tranquil places for all? • How will it reduce inequalities in exposure to ambient noise? <p>HIA</p> <ul style="list-style-type: none"> • How will it reduce night time noise in residential areas? • How will it reduce the number of people exposed to high levels of noise with the potential to cause annoyance, sleep disturbance or physiological effects? • How will it protect people with greater sensitivity to impacts of noise pollution, including equalities groups? <p>AEI</p> <ul style="list-style-type: none"> • How will it ensure London’s growing night time economy can continue to function in a more sensitive way?
Water resources and quality	9. To protect and enhance London’s water bodies by ensuring that London has a sustainable water supply, drainage and sewerage system	<p>SEA</p> <ul style="list-style-type: none"> • How will it improve the quality of waterbodies? • How will it improve London’s water supply/demand balance? • How will it reduce abstraction from surface and ground water sources? <p>EQIA</p> <ul style="list-style-type: none"> • How will it improve and increase water efficiency in homes, schools, hospitals and other public buildings? • How will it reduce levels of water poverty in London?

Topic	IIA Objective	Guide Questions
		<p>AEI</p> <ul style="list-style-type: none"> How will it impact on the economic and efficient delivery of water and removal of sewerage for London's businesses? How will it support the development of new and innovative technologies to improve sustainability in the water sector?
<p>Natural Capital and Natural Environment</p>	<p>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</p>	<p>SEA</p> <ul style="list-style-type: none"> How will it enhance the potential for the green space network to provide ecosystem services? How will it protect and improve the quality and extent of sites of importance for nature conservation and help restore wildlife habitats? How will it protect and enhance the biodiversity of the region's waterbodies to achieve a good ecological status? How will it increase the planting of trees and installation of green roofs, green walls and soft landscaping in the public realm? <p>EQIA</p> <ul style="list-style-type: none"> Will it bring nature closer and more accessible to people, particularly in most deprived parts of the city? Will it improve access to green space and the natural environment for some equality groups (e.g. those with physical disabilities)? <p>HIA</p> <ul style="list-style-type: none"> Will it create better access to green space to enhance mental and physical health benefits? Will it result in a greener public realm that can enhance mental health benefits? Will it promote, educate and raise awareness of the health and well-being benefits of natural capital and the natural environment? <p>AEI</p> <ul style="list-style-type: none"> How will it capitalise on the economic value of London's natural capital? <p>CSIA</p> <ul style="list-style-type: none"> Will it ensure that green spaces are designed and developed to improve perceptions of safety and security?
<p>Historic Environment</p>	<p>11. To conserve and enhance the existing historic environment, including sites, features, landscapes and areas of historical, architectural, archaeological and cultural value in relation to their significance and their settings</p>	<p>SEA</p> <ul style="list-style-type: none"> Will it protect and enhance sites, features and areas of historical, archaeological and cultural value/potential? Will it improve the wider historic environment and sense of place? Will it protect and enhance the historic environment? Will it protect and enhance valued/important historic environment and streetscape settings through inclusive design and management?

Topic	IIA Objective	Guide Questions
		<p>EQIA</p> <ul style="list-style-type: none"> How will it promote improved accessibility for all within existing historic / cultural/ archaeological environments and their landscapes through inclusive design and management?
<p>Equality and Inclusion</p>	<p>12. To make London a fair and inclusive city where every person is able to participate, reducing inequality and disadvantage and addressing the diverse needs of the population</p>	<p>SEA</p> <ul style="list-style-type: none"> How will it enable deficiencies of access to open space to be positively addressed?
		<p>EQIA</p> <ul style="list-style-type: none"> How will it promote an inclusive and sustainable design and construction approach ensuring a barrier free environment for all, especially people with physical disabilities?
<p>Social Integration</p>	<p>13. To ensure London has socially integrated communities which are strong, resilient and free of prejudice</p>	<p>EQIA</p> <ul style="list-style-type: none"> Will it encourage improved design, construction and management of the built environment, open space and green spaces to create inclusive public realm?
		<p>AEI</p> <ul style="list-style-type: none"> How will it demonstrate and promote the economic/commercial benefits of social integration especially to housing providers?
<p>Health and Health Inequalities</p>	<p>14. To improve the mental and physical health and wellbeing of Londoners and to reduce health inequalities across the city and between communities</p>	<p>SEA</p> <ul style="list-style-type: none"> Will it improve connectivity to key services by promoting active modes of transport, thereby helping to reduce emissions from road transport?
		<p>EQIA</p> <ul style="list-style-type: none"> Will it encourage modal shift, especially for those groups who own a car, or for older people who are less likely to walk or cycle? Will it encourage all groups to travel actively where possible?
		<p>HIA</p> <ul style="list-style-type: none"> Will it improve differentials in life expectancy and healthy life expectancy across London? Will it increase levels of physical activity, especially amongst groups which are more inactive?
<p>Accessibility</p>	<p>15. To maximise accessibility for all in and around London.</p>	<p>EQIA</p> <ul style="list-style-type: none"> Will it improve links between areas, neighbourhoods and communities?
		<p>HIA</p> <ul style="list-style-type: none"> Will it improve access to health services and facilities?
<p>Housing supply, quality, choice and affordability</p>	<p>16. To provide a quantum, type, quality and tenure of housing (including specialist and affordable provision) to better meet demographic change and household</p>	<p>SEA</p> <ul style="list-style-type: none"> Will it encourage development of recommended density, standard, size and mix? Will it increase use of sustainable design and construction principles? Will it improve insulation and energy efficiency in housing to reduce fuel poverty and ill-health

Topic	IIA Objective	Guide Questions
	demand	<p>particularly for deprived communities and at risk groups?</p> <ul style="list-style-type: none"> • Will it result in better quality settings for housing that improves London’s public realm and green infrastructure? • Will it increase the number of sustainably-designed affordable homes available in London? <p>EQIA</p> <ul style="list-style-type: none"> • Will it increase supply of affordable housing and specialist and supported housing to meet the needs of particular groups (e.g. elderly, disabled, families with young children)? <p>HIA</p> <ul style="list-style-type: none"> • Will it provide housing that ensures a good standard of living and promotes a healthy lifestyle, taking into consideration exposure to potential environmental hazards? <p>AEI</p> <ul style="list-style-type: none"> • How will it ensure the delivery of the right type and number of homes to meet London’s economic needs?
Crime, Safety and Security	17. To contribute to safety and security and the perceptions of safety	<p>EQIA</p> <ul style="list-style-type: none"> • Will it promote the design and management of the built environment and public realm that reduces actual and perceived levels of crime? <p>HIA</p> <ul style="list-style-type: none"> • Will it promote the design and management of green spaces that helps to reduce crime and anti-social behaviour? <p>CSIA</p> <ul style="list-style-type: none"> • Will it contribute to safety and security and the perceptions of safety that all Londoners hold?
Design	18. To create attractive, mixed use neighbourhoods ensuring new buildings and spaces are appropriately designed that promote and enhance existing sense of place and distinctiveness, reducing the need to travel by motorized transport	<p>EQIA</p> <ul style="list-style-type: none"> • Will it help to make people feel positive about the area they live in and promote social integration. • Will it improve the legibility within and ease of use of the built environment for people with sensory or cognitive impairments? <p>SEA</p> <ul style="list-style-type: none"> • Will it protect and enhance the character, integrity and livability of key streetscapes and townscapes, including removing barriers to use? • Will it improve the use of the urban public realm by improving its attractiveness and access? <p>AEI</p> <ul style="list-style-type: none"> • How will it ensure that design is used to maximise the economic value of places and neighbourhoods? <p>CSIA</p> <ul style="list-style-type: none"> • Will it ensure that urban spaces are designed and developed to improve perceptions of safety and security?
Economic	19. To maintain and	EQIA

Topic	IIA Objective	Guide Questions
competitiveness and employment	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	<ul style="list-style-type: none"> Will it improve access to employment opportunities, particularly for disadvantaged groups and people living in deprived areas? <p>HIA</p> <ul style="list-style-type: none"> Will it help to create healthy, productive workplaces? <p>AEI</p> <ul style="list-style-type: none"> How will it support and maintain sustainable businesses and sectors in London including access to skills and finance? How it will showcase London as a global sustainable city? How will it promote sustainable growth in the transition to a low-carbon economy? How does it support research and development of new sustainable economic activities? How does it support the transition to a smart, circular, clean tech, and resource efficient economy? How does it support SMEs become more sustainable? How does it increase the number of jobs in a low-carbon economy at all skill levels?
Education and skills	20. To ensure the education and skills provision meets the needs of London’s existing and future labour market and improves life chances for all	<p>EQIA</p> <ul style="list-style-type: none"> Will it promote and create careers and jobs in the environmental sector for groups disadvantaged or under-represented in the labour market? <p>AEI</p> <ul style="list-style-type: none"> How does it deliver the skills required by a low-carbon economy? How will it promote wider awareness of careers in the Circular Economy / low-carbon economy sectors?
Connectivity	21. To enhance and improve connectivity for all to and from and within and around London and increase the proportion of journeys made by sustainable and active transport modes	<p>SEA</p> <ul style="list-style-type: none"> Will it reduce congestion on roads across all parts of London? Will it contribute to the sustainable use of waterways for passenger and freight transport? <p>EQIA</p> <ul style="list-style-type: none"> Will it maintain or improve connectivity for all Londoners, including the mobility impaired, through sustainable transport modes? <p>HIA</p> <ul style="list-style-type: none"> Will it encourage active travel? <p>AEI</p> <ul style="list-style-type: none"> How will it reduce the need for people to travel by less sustainable modes while still improving access to services, jobs, leisure and amenities?
Infrastructure	22. To ensure that provision of environmental, social and physical infrastructure is managed and delivered to	<p>AEI</p> <ul style="list-style-type: none"> How does it deliver the infrastructure required to support London’s economic growth in a sustainable and affordable manner?

Topic	IIA Objective	Guide Questions
	meet population and demographic change in line with sustainable development and to support economic competitiveness	<ul style="list-style-type: none"> How does it reduce the need for new infrastructure by either reducing demand or making better use of existing assets?
Culture	23.To safeguard and enhance the Capital’s rich cultural offer, infrastructure, heritage, natural environment and talent to benefit all Londoners while delivering new activities that strengthen London’s global position	<p>EQIA</p> <ul style="list-style-type: none"> How will it support a strong, diverse and resilient economy, providing opportunities for all? <p>SEA</p> <ul style="list-style-type: none"> How will it promote sustainability in London’s cultural venues?
Sustainable Land Use	24. To make the best and most efficient use of land so as to support sustainable patterns and forms of development	<p>SEA</p> <ul style="list-style-type: none"> Will it facilitate integrated urban solutions to problems such as congestion, waste, resource use and demographic changes? Will it sustain and enhance the positive contribution made by built heritage to the City’s environment? <p>EQIA</p> <ul style="list-style-type: none"> Will it promote regeneration which provides benefits for existing deprived communities? <p>AEI</p> <ul style="list-style-type: none"> How will it ensure that land is allocated to the most economically beneficial use in a sustainable manner?

5. Assessment of the Reasonable Alternatives Considered

5.1 Evolution of the Draft LES for Consultation and Influence of the IIA

5.1.1 Strategic Options and Policy Alternatives

- 5.1.1.1 In its 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 5.1 sets out the initial Policy Areas that were considered and the alternative approaches put forward for each Policy Area as it stood on 3 March 2017 (refer back to Table 3.1 for stages of the draft LES for consultation development against the IIA process).
- 5.1.1.2 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, EqlA and CSIA and to put forward recommendations to the GLA. The key recommendations made by the IIA high level assessment are included in Table 5.1.
- 5.1.1.3 The GLA considered the recommendations put forward following the High Level Assessment for each Policy Area. Table 5.1 provides a summary of options, Jacobs' recommendations and the associated GLA responses.
- 5.1.1.4 Following consideration of the recommendations on the High Level Assessment of Strategic Options, the GLA developed an initial draft of the LES ('Working Draft LES 1').

Table 5.1 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 draft LES for consultation
<p>1. Air Quality</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"> 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. To ensure that Options 1 and 4 are more explicitly targeting the worst polluted areas of London. Those groups most ‘at risk’ to harmful emissions (such as school children and cyclists) should be protected. A measure to introduce new PM_{2.5} target for London could reduce this priority pollutant and have positive effect on human health. 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. 	<p>The GLA has considered aspects from all four options in terms of policy approach. This was recognised as the most effective approach for addressing human health impacts. It also agreed to include targets for some of the pollutants identified in the IIA recommendations. The GLA agreed that it would 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>2. Natural Environment and Green Infrastructure</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"> Targeting air pollution hotspots or ‘at risk’ groups; Choice of species to maximise environmental benefits of air quality reduction, shading, flood prevention; 	<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</p>
	<p>Option 2: Develop policies and proposals that promote the concept of green infrastructure and the greening of the urban environment, alongside</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 draft LES for consultation
	<p>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"> • Creating green corridors for pedestrians to prevent funnelling of pedestrians along major roads. • Considerations of crime and disorder reduction and public safety are integrated into the policies, business planning and delivery of Options 1 and 2. • The wording of Option 2 should include safety and security in the policy. • 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. • To ensure that Option 2 is implemented for those most 'at risk' to air pollution, noise, heat and flood risk. • Option 2 could be enhanced through a broad-based use of ecosystem services approaches across London authorities. 	<p>appropriate level of detail for a Mayoral Strategy.</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 'at risk' groups.</p> <p>The GLA considered that the use of an ecosystems services approach was fundamental to the LES and would be reflected within it.</p>
<p>3. Adapting to Climate Change</p>	<p>Option 1: Reactive approach to managing climate risks and impacts:</p> <ul style="list-style-type: none"> • 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 Londoners know who is responsible and where to get help. 	<ul style="list-style-type: none"> • Both Options would need to ensure they target 'at risk' 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. • Crime and disorder reduction and public safety should be integrated into the policies, planning and delivery of both Options. • Option 2 has benefits in promoting the Low 	<p>It noted the comment on option 2 benefits regarding LCEGS sector businesses.</p> <p>The GLA has included both options 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 draft LES for consultation
	<ul style="list-style-type: none"> 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. 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. 	<p>Carbon & Environmental Goods (LCEGS) sector businesses in London and developing a more resilient economy.</p>	
	<p>Option 2: Proactive approach to managing climate risks and impacts:</p> <ul style="list-style-type: none"> 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. 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 Londoners with ways of keep them and their homes cool during extreme heat events. 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 		

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 draft LES for consultation
	devices.		
4. Climate Change Mitigation and Energy	<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 has 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. 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>	<ul style="list-style-type: none"> • 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. • 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. 	<p>The GLA confirmed that both options assumed electrification of transport, but Option 1 relies on centralised decarbonisation of the grid. 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>
5. Ambient Noise	<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</p>	<p>To use both Options in the LES as jointly they would provide greater amount of sustainability benefits.</p>	<p>The GLA has included both options 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 draft LES for consultation
	design, green infrastructure and improving biodiversity		
6. Waste	<p>Option 1: Improvements in traditional waste management via the linear (take, make, dispose) economy through:</p> <ul style="list-style-type: none"> • Increased levels of recycling for domestic and commercial properties • Reduction of the proportion of waste sent to landfill • Increased and efficient Anaerobic Digestion (AD) of waste through Combined Heat and Power schemes (CHP). <p>Option 2: Taking a resource efficiency approach through a shift to a circular economy through:</p> <ul style="list-style-type: none"> • Increasing the proportion of waste converted to high value products • Increasing the levels of reuse and remanufacturing across London • Promoting and supporting SMEs and careers within the Circular Economy. 	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.	The GLA has included both options in the LES.

6. Significant Likely Effects of the Draft LES for Consultation

6.1 Introduction

- 6.1.1.1 This chapter of the IIA Report presents the assessment of the draft LES for consultation by Policy Area. The assessment began with an assessment of the compatibility between the LES objectives developed for the Policy Area and the IIA objectives. It then provides a summary of the IIA results by Policy Area.
- 6.1.1.2 It should be noted that not all of the assessment types (SEA, EqIA, HIA, AEI, CSIA) were assessed against every IIA objective. For example, the CSIA was only assessed in relation to IIA objectives 10, 17 and 18. For this reason, many of the squares in the summary assessment matrices in this chapter are presented as grey in colour (i.e. no assessment was made for that assessment in relation to that objective).

6.2 Compatibility Assessment

- 6.2.1.1 Each Policy Area of the draft LES for consultation is organised around specific objectives (refer to summaries of Policy Area contents below in sections 6.3-6.9). These objectives were tested for their compatibility with the IIA objectives. The results of the compatibility assessment are presented in Appendix D.
- 6.2.1.2 The objectives within all Policy Areas were found to be compatible or neutral with the IIA objectives.

6.3 Assessment of the 'Green Infrastructure' Policy Area

6.3.1 Summary of Policy Area Content

- 6.3.1.1 The stated aim of this Policy Area is **"London is a National Park City where more than half of its area is green; where the natural environment is protected and the network of green infrastructure is managed to benefit all Londoners."**
- 6.3.1.2 The Policy Area as presented in the draft LES for consultation is organised around the following three objectives:
- Making more than half of London's area green by 2050.
 - Conserving and enhancing wildlife and natural habitats
 - Value London's natural capital as an economic asset and support greater investment in green infrastructure
- 6.3.1.3 The draft LES for consultation seeks to 'reframe why it is important to protect, conserve and improve London's green spaces and natural environment. In particular, the Policy Area recognises the following concepts:
- **Natural capital:** the economic benefits to people provided by the services the environment provides for free; services such as cleaner air, cleaner water, better health, pollination of crops, contact with nature and attractive landscapes.
 - **Green infrastructure:** the network of green spaces (as well as features such as street trees and green roofs) that is planned, designed and managed to enhance the benefits provided by London's natural capital, including:
 - > promoting healthier living;
 - > lessening the impacts of climate change;
 - > improving air quality and water quality;
 - > encouraging walking and cycling;

- > storing carbon; and
- > enhancing biodiversity and ecological resilience.
- **National Park City:** According to the draft LES for consultation, identifying London as a National Park City will signify that London’s green infrastructure has a special quality because of its urban setting. It can be managed to benefit people, nature and the economy of the city on which we all depend.

6.3.2 Summary IIA for the Policy Area for Green Infrastructure

6.3.2.1 The summary of assessment results is set out in Table 6.1.

Table 6.1 IIA Assessment Results for the Policy Area for Green Infrastructure

Green Infrastructure		IIA Assessment Results				
IIA Objectives		SEA	EqIA	HIA	AEI	CSIA
1	Air Quality: To reduce emissions and concentrations of harmful atmospheric pollutants, particularly in areas of poorest air quality and reduce exposure.	+	+	+	+	
2	Climate change adaptation: 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.	+	0	+	+	
3	Climate change mitigation: To help tackle climate change through reducing greenhouse gas emissions and moving towards a zero carbon London by 2050.	+	0	+	0	
4	Energy use and supply: To manage and reduce demand for energy, achieve greater energy efficiency, utilise new and existing energy sources effectively, and ensure a resilient smart and affordable energy system.	+	0	0	0	
5	Flood risk: To manage the risk of flooding from all sources and improve the resilience of people, property and infrastructure to flooding.	+	+		+	
6	Geology and soils: To conserve London’s geodiversity and protect soils from development and over intensive use.	+		0	0	
7	Materials and waste: 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.	0	0		0	
8	Noise and vibration: To minimise noise and vibration levels and disruption to people and communities across London and reduce inequalities in exposure.		0	0	0	
9	Water resources and quality: To protect and enhance London’s waterbodies by ensuring that London has a sustainable water supply, drainage and sewerage system.	+	0		+	
10	Natural capital and natural environment: 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.	++	?	+	+	0

Green Infrastructure		IIA Assessment Results				
IIA Objectives		SEA	EqIA	HIA	AEI	CSIA
11	Historic environment: To conserve and enhance the existing historic environment, including sites, features, landscapes and areas of historical, architectural, archaeological and cultural value in relation to their significance and their settings.	0	0			
12	Equality and inclusion: To make London a fair and inclusive city where every person is able to participate, reducing inequality and disadvantage and addressing the diverse needs of the population.	+	0			
13	Social integration: To ensure London has socially integrated communities which are strong, resilient and free of prejudice.		+		0	
14	Health and health inequalities: To improve the mental and physical health and wellbeing of Londoners and to reduce health inequalities across the city and between communities.	+	+	+		
15	Accessibility: To maximise accessibility for all in and around London.		0	+		
16	Housing supply, quality, choice and affordability: To provide a quantum, type, quality and tenure of housing (including specialist and affordable provision) to better meet demographic change and household demand.	?	0	0	+	
17	Crime, safety and security: To contribute to safety and security and the perceptions of safety.		0	0		0
18	Design: To create attractive, mixed use neighbourhoods, ensuring new buildings and spaces are appropriately designed that promote and enhance a sense of place and distinctiveness, reducing the need to travel by motorised transport.	+	0		+	+
19	Economic competitiveness and employment: 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.		0	0	+	
20	Education and skills: To ensure the education and skills provision meets the needs of London's existing and future labour market and improves life chances for all.		0		0	
21	Connectivity: To enhance and improve connectivity for all to and from and within and around London and increase the proportion of journeys made by sustainable and active transport modes.	0	0	0	0	
22	Infrastructure: 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.		0		+	
23	Culture: To safeguard and enhance the Capital's rich cultural offer, infrastructure, heritage, natural environment and talent to benefit all Londoners while delivering new activities that strengthen London's global position	+				

Green Infrastructure		IIA Assessment Results				
IIA Objectives		SEA	EqIA	HIA	AEI	CSIA
24	Sustainable land use: To make the best and most efficient use of land so as to support sustainable patterns and forms of development.	++	0		0	

6.3.3 SEA Results

- 6.3.3.1 Major positive effects have been identified against IIA objectives 10 (natural capital) and 24 (sustainable land use). The major positive effect against IIA objective 10 is to some extent to be expected since it covers the very issues that the Policy Area seeks to address. However, it was noted that the Policy Area had a strong focus on outcomes, coupled with targets. For example the objective to make more than 50% of London’s area green by 2050 and the proposal to accelerate the installation of green roofs, green walls and sustainable urban drainage.
- 6.3.3.2 The SEA identified that there would be a minor positive effect against most of the IIA objectives (11 out of the 17 IIA objectives relevant to the SEA). This was because many of the proposals related to influence or would only partly address the issues raised in the guide questions in the Policy Area assessment matrix.
- 6.3.3.3 Neutral effects were identified where there was no clear link between the proposals within the Policy Area and the IIA objective being assessed.
- 6.3.3.4 An uncertain effect has been identified in relation to IIA objective 16 which relates to housing supply, quality, choice and affordability. Although it was considered that the Policy Area would improve insulation and energy efficiency in housing where green roofs and walls are implemented and the settings for housing and public realm would be enhanced by proposals to increase green infrastructure, the density, standard, size and mix of housing, as well as the affordability of housing are matters to be addressed in the London Plan. It is not clear to what extent the LES proposals to enhance the environmental performance of housing may affect the ability to achieve the other housing objectives. This issue should be addressed through the ongoing review of the London Plan.
- 6.3.3.5 No negative effects were identified in relation to the SEA.

6.3.4 EqIA Results

- 6.3.4.1 The EqIA identified that the most of the proposals would have neutral effects in relation to equality aspects.
- 6.3.4.2 Minor positive effects were identified against:
 - IIA objective 1 (air quality) as a result of the inclusion of specific measures to map and better understand hotspots (i.e. coincidence of poor air quality, shortage of green cover and sensitive receptors/communities) as well as the opportunity to use improved spatial mapping to target appropriate green infrastructure at particular locations.
 - IIA objective 5 (flood risk), since the proposals seek to provide green infrastructure to the benefit of all Londoners, which would mean that ‘at risk’ communities are also likely to benefit from improved drainage.
 - IIA objective 13 (social integration) as a result of the proposal for the Mayor will work with boroughs, civic society organisations and community groups to support more community involvement in the improvement and management of London’s amenity green spaces; and

- IIA objective 14 (health and health inequalities) due to the inclusion in the strategy of a proposal to introduce measures re-prioritise streetspace in accordance with movement and space priorities, which could be beneficial to groups without access to a car, older people, or children requiring areas to play. These functional areas would be identified using the proposed new 'green-ness matrix' identified in the draft LES for consultation.

6.3.4.3 One uncertain effect was identified in relation to objective 10 in that although the draft LES for consultation includes many measures to address areas short of green infrastructure and to increase the overall provision, it does not include reference to the non-physical barriers / obstacles to green space (e.g. concerns about safety and security; lack of facilities) which may prevent some groups from using London's public parks and open spaces.

6.3.4.4 No negative effects were identified for the EqIA in relation to the Policy Area for Green Infrastructure.

6.3.5 HIA Results

6.3.5.1 Minor positive effects were identified against five of the IIA objectives. The focus on increasing green infrastructure was seen as being beneficial for health issues associated with climate change adaptation, as well as encouraging physical activity. It was recognised that green infrastructure provides multifaceted benefits to human health.

6.3.5.2 No negative or uncertain effects were identified for the Policy Area for Green Infrastructure in relation to the HIA.

6.3.6 AEI Results

6.3.6.1 Minor positive AEI effects were identified in relation to issues including the recognition in the draft LES for consultation of the value of natural capital and the cost effectiveness of using green infrastructure to manage a range of different issues from air quality to sustainable drainage and recreation. It was considered that the draft LES for consultation provides opportunity for more holistic valuation in investment decisions, although the degree to which sustainable economic outcomes would be realised could not be determined.

6.3.7 CSIA Results

6.3.7.1 The draft LES for consultation acknowledges that CSIA outcomes (i.e. safety and security measures) will primarily be delivered through the revised London Plan which will promote and encourage design for personal safety and security. The Policy Area for Green Infrastructure has been assessed as having a minor positive impact on Community Safety.

6.4 Assessment of the 'Air Quality' Policy Area

6.4.1 Summary of Policy Area Content

6.4.1.1 The stated aim of this Policy Area is **"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."**

6.4.1.2 The Policy Area as presented in the draft LES for consultation is organised around the following three objectives:

- Support London and its communities, particularly the most vulnerable and those in priority locations, to help empower people to reduce their exposure to poor air quality.
- Achieve legal compliance with UK and EU limits as soon as possible, including by mobilising action by the London boroughs, Government and other partners.

- Establish and achieve new, tighter air quality targets for a cleaner London by transitioning to a zero emission London by 2050, meeting all World Health Organisation health-based guidelines

6.4.1.3 The draft LES for consultation identifies particulate matter (PM₁₀ and PM_{2.5}), black carbon (PM_{2.5} and smaller) and nitrogen dioxide (NO₂) as the main air pollutants of concern in London. London is currently in breach of legal limits for NO₂. The Policy Area considers proposals to address air pollution from a range of sources (transport, construction activities, river transport, aviation, domestic and industrial emissions) and where levels are in breach of legal limits, to bring about compliance in the shortest and most effective manner possible.

6.4.2 Summary IIA for the Air Quality Policy Area

6.4.2.1 The summary of assessment results is set out in Table 6.2.

Table 6.2 IIA Assessment Results for the Air Quality Policy Area

Air Quality		IIA Assessment Results				
IIA Objectives		SEA	EqIA	HIA	AEI	CSIA
1	Air Quality: To reduce emissions and concentrations of harmful atmospheric pollutants, particularly in areas of poorest air quality and reduce exposure.	++	++	++	+	
2	Climate change adaptation: 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.	0	0	0	0	
3	Climate change mitigation: To help tackle climate change through reducing greenhouse gas emissions and moving towards a zero carbon London by 2050.	+	+	+	++	
4	Energy use and supply: To manage and reduce demand for energy, achieve greater energy efficiency, utilise new and existing energy sources effectively, and ensure a resilient smart and affordable energy system.	++	0	0	+	
5	Flood risk: To manage the risk of flooding from all sources and improve the resilience of people, property and infrastructure to flooding.	0	0		0	
6	Geology and soils: To conserve London's geodiversity and protect soils from development and over intensive use.	0		0		
7	Materials and waste: 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.	0	0		0	
8	Noise and vibration: To minimise noise and vibration levels and disruption to people and communities across London and reduce inequalities in exposure.		+	+	0	
9	Water resources and quality: To protect and enhance London's waterbodies by ensuring that London has a sustainable water supply, drainage and sewerage system.	+	0		0	
10	Natural capital and natural environment: 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.	+	+	+	0	0

Air Quality		IIA Assessment Results				
IIA Objectives		SEA	EqIA	HIA	AEI	CSIA
11	Historic environment: To conserve and enhance the existing historic environment, including sites, features, landscapes and areas of historical, architectural, archaeological and cultural value in relation to their significance and their settings.	+	0			
12	Equality and inclusion: To make London a fair and inclusive city where every person is able to participate, reducing inequality and disadvantage and addressing the diverse needs of the population.	0	+			
13	Social integration: To ensure London has socially integrated communities which are strong, resilient and free of prejudice.		0		0	
14	Health and health inequalities: To improve the mental and physical health and wellbeing of Londoners and to reduce health inequalities across the city and between communities.	+	+	+		
15	Accessibility: To maximise accessibility for all in and around London.		+	+		
16	Housing supply, quality, choice and affordability: To provide a quantum, type, quality and tenure of housing (including specialist and affordable provision) to better meet demographic change and household demand.	+	0	0	0	
17	Crime, safety and security: To contribute to safety and security and the perceptions of safety.		0	0		0
18	Design: To create attractive, mixed use neighbourhoods, ensuring new buildings and spaces are appropriately designed that promote and enhance a sense of place and distinctiveness, reducing the need to travel by motorised transport.	+	0		0	0
19	Economic competitiveness and employment: 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.		0	0	+	
20	Education and skills: To ensure the education and skills provision meets the needs of London's existing and future labour market and improves life chances for all.		0		0	
21	Connectivity: To enhance and improve connectivity for all to and from and within and around London and increase the proportion of journeys made by sustainable and active transport modes.	+	+	+	+	
22	Infrastructure: 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.		0		0	
23	Culture: To safeguard and enhance the Capital's rich cultural offer, infrastructure, heritage, natural environment and talent to benefit all Londoners while delivering new activities that strengthen London's global position	0				

Air Quality		IIA Assessment Results				
		SEA	EqIA	HIA	AEI	CSIA
IIA Objectives						
24	Sustainable land use: To make the best and most efficient use of land so as to support sustainable patterns and forms of development.	0	0		0	

6.4.3 SEA Results

- 6.4.3.1 Major positive effects have been identified against IIA objectives 1 (air quality) and 4 (energy use and supply).
- 6.4.3.2 The draft LES for consultation provides a clear strategic approach to delivering better air quality to meet European limit value requirements as soon as effectively possible, and is targeted at reducing emissions arising from transport and non-transport activities. The Policy Area puts forward a range of proposals to achieve ambitious air quality objectives. These include the commitment to phase out fossil fuels in the bus fleet, and phasing out diesel in the taxi fleet, and the introduction of the London Ultra Low Emission Zone (ULEZ) standards and charges by 2019⁶, seventeen months earlier than planned. As such many of the proposals relate to tangible outcomes which are likely to affect a change from the baseline. Although dependent on third parties to deliver some of the proposals, it is considered that the Policy Area includes proposals which go beyond legal compliance, and on this basis it is assessed that there would be a major positive effect on the IIA objective for air quality.
- 6.4.3.3 The assessment against IIA objective 4 (energy use and supply) identified that the Policy Area was supported by several outcome orientated measures such as measures to phase out fossil fuels and support modal shift and to diesel (Euro 6 standard) and shift to ULEVs in public transport by 2019, which would encourage uptake of cleaner fuels. There are also proposals to roll out charging infrastructure for electric vehicles, and providing hydrogen refuelling stations, which in turn would encourage more use of these cleaner emission vehicles. For these reasons a major positive effect has been identified against this objective.
- 6.4.3.4 No negative effects were identified in relation to the SEA.

6.4.4 EqIA Results

- 6.4.4.1 One major positive effect was identified against IIA objective 1. It was considered that the proposals for the GLA to audit exposure especially around schools to provide local authorities with evidence-based interventions to reduce school children’s exposure to poor air quality would help to target a group which is most susceptible to air pollution. The draft LES for consultation also includes proposals to protect all Londoners, specifically identifying that information can be improved to protect the most vulnerable: children, older people, and those with pre-existing health conditions.
- 6.4.4.2 IIA objective 3 (climate change mitigation) includes proposals to decarbonise the transport networks which would have a disproportionately beneficial effect on disadvantaged communities and protected groups, who may be more likely to live and spend time in the most polluted areas (including BAME, elderly and young people and people with pre-existing cardiovascular and respiratory conditions).
- 6.4.4.3 The EqIA identified minor positive effects on seven IIA objectives. Many of these related to effects arising from the promotion of modal shift, which is judged to be beneficial for accessibility, tranquillity

⁶ This proposal was the subject of a 3 month public and stakeholder consultation that ended in June 2017. Further consultations are likely to start in Autumn 2017 on proposals to expand the ULEZ to Greater London (heavy vehicles only) by 2020 and to Inner London (all vehicles currently covered) by 2021

and access to green space with the potential to disproportionately benefit those on low incomes, the elderly and young people.

6.4.4.4 One uncertain effect on equality has been identified. The draft LES for consultation promotes technology as a means of raising awareness of incidences of high pollution. Such measures may exclude those groups who may not have access to the technology or lack digital skills. This may particularly affect people on low incomes, the elderly and people with learning difficulties.

6.4.4.5 No negative effects were identified.

6.4.5 HIA Results

6.4.5.1 The HIA of this Policy Area has identified a major positive effect in that the proposals to provide an evidence base to inform targeted interventions around schools would help address a key air quality related health inequality – that children are more at risk from air pollution than the general population. The geographic focus of the proposal would help to address issues of exposure to air pollution. It is also noted that the draft LES for consultation also includes a proposal to improve the information service to protect and empower Londoners, especially those most ‘at risk’, to reduce their exposure to poor air quality, especially during high and very high pollution episodes, and implementing emergency measures where appropriate.

6.4.6 Minor positive effects have been identified against six IIA objectives. These relate to the benefits on human health arising from the indirect effects of the proposal to promote modal shift. These include reduced ambient noise levels, opportunities for increased physical activity, and enhanced access to green space.

6.4.7 No negative effects were identified for the Air Quality Policy Area in relation to the HIA.

6.4.8 AEI Results

6.4.9 The AEI recognised there are several measures that would help to promote the transition to a low-carbon economy, and would help to facilitate investment in technologies, equipment and infrastructure which reduce greenhouse gas emissions. Proposals such as setting up a ‘Green Machines’ initiative to promote best practice would also encourage innovation. This is reported as a major positive effect against IIA objective 3 (climate change mitigation).

6.4.10 Although the Policy Area is focused on achieving air quality improvements, the number and range of measures would have associated positive effects on reducing carbon emissions. This coupled with the inclusion of specific targets in the strategy should facilitate a major positive impact on the growth of the low carbon economy over the medium to long term.

6.4.11 Minor positive effects were identified against a range of objectives as it was considered that the proposals in the Policy Area would support the creation of new technologies, but this could have an associated short-term cost to some businesses. The Policy Area would indirectly support development of low energy sectors of the economy, sustainable growth and skills in the low-carbon economy.

6.4.12 CSIA Results

6.4.12.1 The IIA has not identified any proposals within the Policy Area which may have implications for Community Safety.

6.5 Assessment of the ‘Ambient Noise’ Policy Area

6.5.1 Summary of Policy Area Content

6.5.1.1 The Policy Area identifies that the Mayor has a duty to tackle the main, long-term, predictable sources of noise across London, relating to noise from transport, fixed industrial sources and any other sources the Mayor may consider appropriate. Responsibility for the policing and management of noise falls to the Local Authorities and independent organisations.

6.5.1.2 The stated aim of this Policy Area is **“Improve the quality of life of Londoners by reducing the number of people adversely affected by noise and promoting more quiet spaces.”**

6.5.1.3 The Policy Area as presented in the draft LES for consultation is organised around two objectives:

- Reducing the adverse impacts of noise by targeting locations with the highest noise pollution from transport
- Protect and improve the acoustic environment of London

6.5.2 Summary IIA for the Ambient Noise Policy Area

6.5.2.1 The summary of assessment results is set out in Table 6.3.

Table 6.3 IIA Assessment Results for the Ambient Noise Policy Area

Ambient Noise		IIA Assessment Results				
IIA Objectives		SEA	EqIA	HIA	AEI	CSIA
1	Air Quality: To reduce emissions and concentrations of harmful atmospheric pollutants, particularly in areas of poorest air quality and reduce exposure.	+	+	+	+	
2	Climate change adaptation: 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.	0	0	0	0	
3	Climate change mitigation: To help tackle climate change through reducing greenhouse gas emissions and moving towards a zero carbon London by 2050.	+	0	0	+	
4	Energy use and supply: To manage and reduce demand for energy, achieve greater energy efficiency, utilise new and existing energy sources effectively, and ensure a resilient smart and affordable energy system.	+	0	0	0	
5	Flood risk: To manage the risk of flooding from all sources and improve the resilience of people, property and infrastructure to flooding.	0	0		0	
6	Geology and soils: To conserve London's geodiversity and protect soils from development and over intensive use.	0		0	0	
7	Materials and waste: 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.	0	0		0	

Ambient Noise		IIA Assessment Results				
IIA Objectives		SEA	EqIA	HIA	AEI	CSIA
8	Noise and vibration: To minimise noise and vibration levels and disruption to people and communities across London and reduce inequalities in exposure.		+	+	+	
9	Water resources and quality: To protect and enhance London's waterbodies by ensuring that London has a sustainable water supply, drainage and sewerage system.	0	0		0	
10	Natural capital and natural environment: 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.	+	+	+	0	0
11	Historic environment: To conserve and enhance the existing historic environment, including sites, features, landscapes and areas of historical, architectural, archaeological and cultural value in relation to their significance and their settings.	+	0			
12	Equality and inclusion: To make London a fair and inclusive city where every person is able to participate, reducing inequality and disadvantage and addressing the diverse needs of the population.	0	0			
13	Social integration: To ensure London has socially integrated communities which are strong, resilient and free of prejudice.		0		0	
14	Health and health inequalities: To improve the mental and physical health and wellbeing of Londoners and to reduce health inequalities across the city and between communities.	0	+	+		
15	Accessibility: To maximise accessibility for all in and around London.		0	0		
16	Housing supply, quality, choice and affordability: To provide a quantum, type, quality and tenure of housing (including specialist and affordable provision) to better meet demographic change and household demand.	+	0	0	+	
17	Crime, safety and security: To contribute to safety and security and the perceptions of safety.		0	0		+
18	Design: To create attractive, mixed use neighbourhoods, ensuring new buildings and spaces are appropriately designed that promote and enhance a sense of place and distinctiveness, reducing the need to travel by motorised transport.	+	0		+	0
19	Economic competitiveness and employment: 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.		0	0	0	
20	Education and skills: To ensure the education and skills provision meets the needs of London's existing and future labour market and improves life chances for all.		0		0	

Ambient Noise		IIA Assessment Results				
IIA Objectives		SEA	EqIA	HIA	AEI	CSIA
21	Connectivity: To enhance and improve connectivity for all to and from and within and around London and increase the proportion of journeys made by sustainable and active transport modes.	0	0	+	+	
22	Infrastructure: 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.		0		0	
23	Culture: To safeguard and enhance the Capital's rich cultural offer, infrastructure, heritage, natural environment and talent to benefit all Londoners while delivering new activities that strengthen London's global position	+				
24	Sustainable land use: To make the best and most efficient use of land so as to support sustainable patterns and forms of development.	?	0		0	

6.5.3 SEA Results

6.5.4 No major positive effects were identified for this Policy Area. Minor positive effects were identified in relation to the proposal to encourage the use of Ultra Low Emission Vehicles (ULEVs) to be delivered through the draft Mayor’s Transport Strategy. The use of ULEVs would contribute to fewer air pollutants, greenhouse gas emissions, cleaner fuel uptake, as well as reduced noise. Reduced traffic noise would be beneficial to objectives for historic environment (improving the setting) and liveability of streetscapes.

6.5.5 Proposals included in this Policy Area are considered to have positive effects on natural capital. These include a proposal to maintain quiet, tranquil spaces (which would place further value on protecting the network of sites of importance for nature conservation), as well as proposals to promote good acoustic design, (as green roofs and walls have significant sound proofing properties, whilst being of benefit to urban biodiversity). Proposals to support sustainable design and acoustic insulation should positively contribute towards IIA objective relating to housing supply, quality, choice and affordability.

6.5.6 The performance of the Policy Area against the remaining IIA objectives relevant to the SEA was assessed as neutral as they would have no discernible impacts.

6.5.7 No negative effects were identified in relation to the SEA.

6.5.8 EqIA Results

6.5.8.1 The EqIA has identified minor positive effects in relation to noise and natural capital for all communities as a result the proposals to improve access to tranquil areas. Minor positive effects have also been identified, for the young, the disabled, the elderly and people on low incomes, as a result of measures to promote modal shift and healthy streets, which will be delivered primarily through the Mayor’s Transport Strategy.

6.5.8.2 The performance of the Policy Area against the remaining IIA objectives relevant to EqIA was assessed as neutral.

6.5.8.3 No negative effects were identified.

6.5.9 HIA Results

- 6.5.9.1 Positive health effects associated with this Policy Area have been identified as a result of all measures proposed in the draft LES for consultation, many of which will be delivered through the revised Mayor's Transport Strategy.
- 6.5.9.2 The performance of the Policy Area against the remaining IIA objectives relevant to the HIA was assessed as neutral.
- 6.5.9.3 No negative effects were identified for the Ambient Noise Policy Area in relation to the HIA.

6.5.10 AEI Results

- 6.5.11 Positive economic and business opportunities have been identified as a consequence of the proposals to support the take up of ULEVs and the support for investment in green technologies. The extension of the night tube and rail should also benefit London's night time economy.
- 6.5.12 The remaining effects have been identified as neutral.

6.5.13 CSIA Results

- 6.5.13.1 The proposal to improve safety for cyclists and pedestrians will have a positive impact on Londoners' perception of safety.
- 6.5.13.2 The two other identified CSIA effects in this Policy Area have been assessed as neutral.

6.6 Assessment of the 'Adapting to Climate Change' Policy Area

6.6.1 Summary of Policy Area Content

- 6.6.1.1 The stated aim of the Adapting to Climate Change Policy Area in the draft LES for consultation is that **"London and Londoners are resilient to severe weather and longer-term climate change impacts. This will include flooding, heat risk and drought"**.
- 6.6.1.2 The Policy Area has been developed around the following objectives:
- Understand and manage the risks and impacts of severe weather and future climate change in London on critical infrastructure, public services, buildings and people
 - Reduce risks and impacts of flooding in London on people and property and improve water quality in London's rivers and waterways
 - London's people, infrastructure and public services are better prepared for and more resilient to extreme heat events

6.6.2 Summary IIA for the Adapting to Climate Change Policy Area

6.6.2.1 The summary of assessment results is set out in Table 6.4.

Table 6.4 IIA Assessment Results for the Adapting to Climate Change Policy Area

Adapting to Climate Change		IIA Assessment Results				
IIA Objectives		SEA	EqIA	HIA	AEI	CSIA
1	Air Quality: To reduce emissions and concentrations of harmful atmospheric pollutants, particularly in areas of poorest air quality and reduce exposure.	0	0	0	0	
2	Climate change adaptation: 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.	+	+	+	+	
3	Climate change mitigation: To help tackle climate change through reducing greenhouse gas emissions and moving towards a zero carbon London by 2050.	0	0	0	+	
4	Energy use and supply: To manage and reduce demand for energy, achieve greater energy efficiency, utilise new and existing energy sources effectively, and ensure a resilient smart and affordable energy system.	0	0	0	+	
5	Flood risk: To manage the risk of flooding from all sources and improve the resilience of people, property and infrastructure to flooding.	++	+		++	
6	Geology and soils: To conserve London's geodiversity and protect soils from development and over intensive use.	0		0	0	
7	Materials and waste: 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.	0	0		0	
8	Noise and vibration: To minimise noise and vibration levels and disruption to people and communities across London and reduce inequalities in exposure.		0	0	0	
9	Water resources and quality: To protect and enhance London's waterbodies by ensuring that London has a sustainable water supply, drainage and sewerage system.	+	0		+	
10	Natural capital and natural environment: 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.	+	+	+	0	0
11	Historic environment: To conserve and enhance the existing historic environment, including sites, features, landscapes and areas of historical, architectural, archaeological and cultural value in relation to their significance and their settings.	?	0			
12	Equality and inclusion: To make London a fair and inclusive city where every person is able to participate, reducing inequality and disadvantage and addressing the diverse needs of the population.	0	0			

Adapting to Climate Change		IIA Assessment Results				
IIA Objectives		SEA	EqIA	HIA	AEI	CSIA
13	Social integration: To ensure London has socially integrated communities which are strong, resilient and free of prejudice.		+		0	
14	Health and health inequalities: To improve the mental and physical health and wellbeing of Londoners and to reduce health inequalities across the city and between communities.	0	0	+		
15	Accessibility: To maximise accessibility for all in and around London.		0	0		
16	Housing supply, quality, choice and affordability: To provide a quantum, type, quality and tenure of housing (including specialist and affordable provision) to better meet demographic change and household demand.	+	0	+	++	
17	Crime, safety and security: To contribute to safety and security and the perceptions of safety.		0	0		+
18	Design: To create attractive, mixed use neighbourhoods, ensuring new buildings and spaces are appropriately designed that promote and enhance a sense of place and distinctiveness, reducing the need to travel by motorised transport.	0	0		0	0
19	Economic competitiveness and employment: 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.		0	0	+	
20	Education and skills: To ensure the education and skills provision meets the needs of London's existing and future labour market and improves life chances for all.		0		0	
21	Connectivity: To enhance and improve connectivity for all to and from and within and around London and increase the proportion of journeys made by sustainable and active transport modes.	0	0	0	0	
22	Infrastructure: 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.		0		+	
23	Culture: To safeguard and enhance the Capital's rich cultural offer, infrastructure, heritage, natural environment and talent to benefit all Londoners while delivering new activities that strengthen London's global position	0				
24	Sustainable land use: To make the best and most efficient use of land so as to support sustainable patterns and forms of development.	+	0		0	

6.6.3 SEA Results

- 6.6.3.1 The Policy Area includes proposals to address all forms of flood risk (including surface water flooding, tidal, fluvial, and the sewer network). Although many of the proposals require action from third parties (for example the flood management authorities) and safeguarding land through other plans, it is considered that the draft LES for consultation recognises the opportunity the Mayor has in facilitating a cross-sectoral approach. The scope and scale of the proposals (which includes consideration of landscape scale SuDS) led to the judgement that a major positive effect against the IIA flood risk objective would occur if all measures were implemented.
- 6.6.3.2 Minor positive effects have been identified against five IIA objectives as follows:
- IIA Objective 2 (Climate change adaptation) - the Policy Area acknowledges that the Mayor has a role in facilitating multi-sectoral involvement in adapting to climate change, but there are few direct actions and targeted outcomes.
 - IIA Objectives 9 (water resources) and 10 (natural capital) are likely to give rise to positive effects due to the inclusion of proposals for SuDS, including retrofitted solutions, which would benefit water quality and biodiversity (should green SuDS be progressed).
 - IIA objective 16 (housing supply, quality etc.) - the proposal to continue the policy in the London Plan of a cooling hierarchy should benefit housing quality in terms of settings and insulation (taking into account the likelihood of more passive cooling and green infrastructure being used for its benefits in regulating temperatures).
 - IIA objective 24 (Sustainable land use) - the Policy Area recognises the opportunities for multifunctional environments and water management benefits that can be delivered through new development.
- 6.6.3.3 An uncertain effect has been identified against IIA objective 11 (historic environment) on the basis that although flood alleviation measures could help protect historic assets, unsympathetic designs of hard engineered solutions could also affect the settings and character of historic and architectural assets. As the draft strategy provides no indication of appropriate design solutions (or references to where these are promoted in other Mayoral strategies), it is not clear whether the overall effect would be positive or negative.
- 6.6.3.4 No negative effects have been identified.

6.6.4 EqlA Results

- 6.6.4.1 No major positive effects have been identified. Minor positive have been identified against IIA objectives 2 (climate change adaptation), 5 (flood risk), 10 (natural capital), 13 (social integration) and 14 (health and health inequalities). Given the disproportionate representation of disadvantaged communities in areas of high flood risk it is considered that these communities could disproportionately benefit from the London-wide measures to address heat risk and flood risk. Furthermore, the promotion and support for green sustainable drainage systems (SuDS) should help to bring nature closer and more accessible to these communities. Proposals including support for the 'cooling hierarchy' (delivered through the London Plan) and prioritising improvements (e.g. providing shading as part of healthy streets approach) are likely to disproportionately benefit the elderly, pregnant women and small children.
- 6.6.4.2 The remaining effects have been identified as neutral.

6.6.5 HIA Results

- 6.6.5.1 Minor positive effects have been identified on health as a result of the beneficial effects on mental health arising from the support for green infrastructure (including green SuDS) and measures to establish a baseline and monitor flooding and heat risk on the most 'at risk' (therefore allowing opportunities to address health inequalities through policy adaptations in future). The siting of new development away from flood risk areas and the proposals in relation to heat risk management in new development through the implementation of Mayoral planning policies (as set out in the London Plan) will have positive effects on housing quality and therefore human health over the medium to long term.

6.6.5.2 Remaining IIA objectives covered by the HIA were assessed as neutral.

6.6.6 AEI Results

6.6.6.1 Major positive effects were assessed for IIA objective 5 (flood risk) and 16 (housing supply, quality etc.). The Policy Area has been identified as having a major positive effect on economic aspects of IIA objective 5 through the level of detail, wide reach and identified timescale of proposals. These include: investigation of how the current partnership funding model could be applied to managing flood risk; provision of data on growth projections, housing numbers and future infrastructure projects to support strategic flood risk management; supporting business case improvements to enable the proportionate investment in flood risk management. The measures to improve housing design standards in relation to resilience to climatic events have been identified as having a major positive effect on IIA objective 16.

6.6.6.2 Minor positive effects have been identified against the economic aspects of IIA objectives 2 (climate change adaptation), 3 (climate change mitigation), 4 (energy use and supply), 9 (water resources and quality), 19 (connectivity) and 22 (infrastructure). These positive effects related to the indirect impacts that the proposals were likely to have in terms of developing sustainable technology, skills and the market for sustainable goods and services.

6.6.6.3 The remaining IIA objectives covered by the AEI have been identified as neutral. No negative effects have been identified for this Policy Area in relation to the AEI.

6.6.7 CSIA Results

6.6.7.1 The CSIA recorded a minor positive effect against IIA objective 17 (safety and security) and was neutral against the other two relevant objectives. The Policy Area aims to safeguard Londoners from the impact of climate change by improving the resilience of infrastructure and public services.

6.6.7.2 Consideration has been given to safe access and evacuation by linking public safety to emergency planning through the proposals for the Mayor to work with the functional bodies such as TfL and the London Fire and Emergency Planning Authority, Public Health England and the London Resilience Forum.

6.7 Assessment of the 'Waste' Policy Area

6.7.1 Summary of Policy Area Content

6.7.1.1 The stated aim of the Policy Area is **"London will be a zero waste city. By 2026 no biodegradable or recyclable waste will be sent to landfill and by 2030 65 per cent of London's municipal waste will be recycled."**

6.7.1.2 The Policy Area as presented in the draft LES for consultation is organised around the following objectives:

- Drive resource efficiency to significantly reduce waste, focusing on food waste and single use packaging waste
- Maximise recycling rates.
- Reduce the environmental impact of waste activities
- Maximise local waste sites and ensure London has sufficient infrastructure to manage all the waste it produces

6.7.2 Summary IIA for the Waste Policy Area

6.7.2.1 The summary of assessment results is set out in Table 6.5.

Table 6.5 IIA Assessment Results for the Waste Policy Area

Waste		IIA Assessment Results				
IIA Objectives		SEA	EqIA	HIA	AEI	CSIA
1	Air Quality: To reduce emissions and concentrations of harmful atmospheric pollutants, particularly in areas of poorest air quality and reduce exposure.	+	+	+	+	
2	Climate change adaptation: 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.	0	0	0	0	
3	Climate change mitigation: To help tackle climate change through reducing greenhouse gas emissions and moving towards a zero carbon London by 2050.	++	0	0	++	
4	Energy use and supply: To manage and reduce demand for energy, achieve greater energy efficiency, utilise new and existing energy sources effectively, and ensure a resilient smart and affordable energy system.	0	0	0	+	
5	Flood risk: To manage the risk of flooding from all sources and improve the resilience of people, property and infrastructure to flooding.	0	0		0	
6	Geology and soils: To conserve London's geodiversity and protect soils from development and over intensive use.	0		0	0	
7	Materials and waste: 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.	++	0		++	
8	Noise and vibration: To minimise noise and vibration levels and disruption to people and communities across London and reduce inequalities in exposure.		0	0	0	
9	Water resources and quality: To protect and enhance London's waterbodies by ensuring that London has a sustainable water supply, drainage and sewerage system.	?	0		0	
10	Natural capital and natural environment: 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.	0	0	0	0	0
11	Historic environment: To conserve and enhance the existing historic environment, including sites, features, landscapes and areas of historical, architectural, archaeological and cultural value in relation to their significance and their settings.	+	0			
12	Equality and inclusion: To make London a fair and inclusive city where every person is able to participate, reducing inequality and disadvantage and addressing the diverse needs of the population.	0	0			

Waste		IIA Assessment Results				
IIA Objectives		SEA	EqIA	HIA	AEI	CSIA
13	Social integration: To ensure London has socially integrated communities which are strong, resilient and free of prejudice.		0		0	
14	Health and health inequalities: To improve the mental and physical health and wellbeing of Londoners and to reduce health inequalities across the city and between communities.	0	0	0		
15	Accessibility: To maximise accessibility for all in and around London.		0	0		
16	Housing supply, quality, choice and affordability: To provide a quantum, type, quality and tenure of housing (including specialist and affordable provision) to better meet demographic change and household demand.	0	0	0	0	
17	Crime, safety and security: To contribute to safety and security and the perceptions of safety.		0	0		+
18	Design: To create attractive, mixed use neighbourhoods, ensuring new buildings and spaces are appropriately designed that promote and enhance a sense of place and distinctiveness, reducing the need to travel by motorised transport.	+	0		0	0
19	Economic competitiveness and employment: 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.		0	0	+	
20	Education and skills: To ensure the education and skills provision meets the needs of London's existing and future labour market and improves life chances for all.		0		+	
21	Connectivity: To enhance and improve connectivity for all to and from and within and around London and increase the proportion of journeys made by sustainable and active transport modes.	+	0	0	0	
22	Infrastructure: 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.		+		+	
23	Culture: To safeguard and enhance the Capital's rich cultural offer, infrastructure, heritage, natural environment and talent to benefit all Londoners while delivering new activities that strengthen London's global position	0				
24	Sustainable land use: To make the best and most efficient use of land so as to support sustainable patterns and forms of development.	0	0		+	

6.7.3 SEA Results

- 6.7.3.1 Major positive effects were identified against IIA objectives 3 (climate change mitigation) and 7 (materials and waste). These positive effects related to the targets to reduce waste by certain timeframes. Achievement of these targets would lead to a reduction in greenhouse gas emissions as well as reduce waste and achieve high recycling rates.
- 6.7.3.2 Minor positive effects were also identified against IIA objectives 1 (air quality), 11 (historic environment), 18 (design) and 21 (connectivity). The proposals to reduce amount of waste transported by road and increase proportion transported by rail or water, as well the proposal to consolidate local authority commercial waste services, were seen as positive for air quality. An associated reduction in PM emissions was also judged to be beneficial to historic buildings, whilst the reduction in traffic would support IIA objective 21 through reduced congestion. The proposals to work with government to implement the Litter Strategy to address fly tipping; and reduce use of single use packaging was seen as beneficial in terms of improving the public realm (beneficial to objective 21).
- 6.7.3.3 An uncertain effect was assessed against IIA objective 9 as it was identified that one of the targeted overall outcomes for the Courtauld Commitment 2025 (for which the Mayor proposes to become a key engagement partner) is a reduction in impact associated with water use in the supply chain. Therefore there is a possibility that this commitment would lead to a reduction in water use but it is uncertain.
- 6.7.3.4 The performance of the Policy Area against the remaining IIA objectives was assessed as neutral.
- 6.7.3.5 No negative effects were identified in relation to the SEA.

6.7.4 EqIA Results

- 6.7.4.1 Minor positive effects were identified against IIA objectives 1 (air quality), and 22 (infrastructure) on the basis that the provision in the proposals would benefit all Londoners.
- 6.7.4.2 The performance of the Policy Area against the remaining IIA objectives was assessed as neutral since the Policy Area did not cover issues of relevance to those IIA objectives for the EqIA.

6.7.5 HIA Results

- 6.7.5.1 The HIA only identified one minor positive effect; the contribution of the Policy Area to the other IIA objectives was assessed as neutral. The minor positive effect was identified for IIA objective 1 on the basis that the reduction of road vehicles transporting waste would be beneficial in terms of reducing pollutants.
- 6.7.5.2 No negative or uncertain effects were identified for the Waste Policy Area in relation to the HIA.

6.7.6 AEI Results

- 6.7.6.1 The AEI identified major positive effects on IIA objectives 3 (climate change mitigation), 7 (waste and materials), 22 (infrastructure) and 24 (sustainable land use). The assessment recognised the direct nature of the Policy Area on addressing greenhouse gas emissions (and specifically carbon), and the breadth of measures which would influence a reduction in emissions, and an investment in new technologies related to this. Proposals to target a reduction in single use packaging was judged to incentivise the use of reusable cups, and it was considered the Policy Area was focused on optimising the capacity and use of existing waste management facilities.

6.7.6.2 Minor positive effects were assessed for IIA objective 1 (air quality), 4 (energy use and supply), 19 (connectivity) and 20 (education and skills). It was considered that the proposals and policies in this Policy Area would affect a shift to a low carbon economy and provide a direction for London’s waste and resources management which has the potential to increase the number of jobs and business opportunities within the sector, and improve efficiency and optimise the value of the waste materials to businesses. It is anticipated that London’s successful transition to a circular economy could create an estimated 12,000 additional jobs, the majority of which being low and medium skilled jobs in the reuse and recycling sector.

6.7.6.3 The Policy Area performance against the remaining IIA objectives was assessed as neutral.

6.7.6.4 No negative effects were recorded.

6.7.7 CSIA Results

6.7.7.1 The CSIA recorded minor positive effects against IIA objective 17 (safety and security). This related to the policy for Mayor to work with key business stakeholders to make sure commercial waste is being collected safely and in the right way. The proposal to work with various business improvement districts and stakeholders promoting the use of the Chartered Institute of Waste Management (CIWM) ‘Right waste, Right place’. These measures were seen as likely to tackle environmental crimes such as fly tipping and unlawful discharge of waste.

6.7.7.2 The other effects against the remaining IIA objectives covered by the CSIA were assessed as neutral.

6.8 Assessment of the ‘Climate Change Mitigation and Energy’ Policy Area

6.8.1 Summary of Policy Area Content

6.8.1.1 The stated aim of the Policy Area is “**London will be a zero carbon city by 2050, with energy efficient buildings, clean transport and clean energy.**”

6.8.1.2 The Policy Area as presented in the draft LES for consultation is organised around the following three objectives:

- Reduce emissions of London’s homes and workplaces while protecting the most vulnerable by tackling fuel poverty
- Develop clean and smart, integrated energy systems utilising local and renewable energy resources

A zero carbon transport network by 2050 Summary IIA for the Climate Change Mitigation and Energy Policy Area

6.8.1.3 The summary of assessment results is set out in 6.6.

Table 6.6 IIA Assessment Results for the Climate Change Mitigation and Energy Policy Area

Climate Change Mitigation and Energy		IIA Assessment Results				
IIA Objectives		SEA	EqIA	HIA	AEI	CSIA
1	Air Quality: To reduce emissions and concentrations of harmful atmospheric pollutants, particularly in areas of poorest air quality and reduce exposure.	+	+	+	+	

Climate Change Mitigation and Energy		IIA Assessment Results				
IIA Objectives		SEA	EqIA	HIA	AEI	CSIA
2	Climate change adaptation: 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.	?	+	0	0	
3	Climate change mitigation: To help tackle climate change through reducing greenhouse gas emissions and moving towards a zero carbon London by 2050.	++	+	+	++	
4	Energy use and supply: To manage and reduce demand for energy, achieve greater energy efficiency, utilise new and existing energy sources effectively, and ensure a resilient smart and affordable energy system.	++	+	+	+	
5	Flood risk: To manage the risk of flooding from all sources and improve the resilience of people, property and infrastructure to flooding.	0	0		0	
6	Geology and soils: To conserve London's geodiversity and protect soils from development and over intensive use.	0		0	0	
7	Materials and waste: 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.	0	0		0	
8	Noise and vibration: To minimise noise and vibration levels and disruption to people and communities across London and reduce inequalities in exposure.		0	0	0	
9	Water resources and quality: To protect and enhance London's waterbodies by ensuring that London has a sustainable water supply, drainage and sewerage system.	+	0		0	
10	Natural capital and natural environment: 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.	0	0	0	0	0
11	Historic environment: To conserve and enhance the existing historic environment, including sites, features, landscapes and areas of historical, architectural, archaeological and cultural value in relation to their significance and their settings.	+	0			
12	Equality and inclusion: To make London a fair and inclusive city where every person is able to participate, reducing inequality and disadvantage and addressing the diverse needs of the population.	0	+			
13	Social integration: To ensure London has socially integrated communities which are strong, resilient and free of prejudice.		+		0	
14	Health and health inequalities: To improve the mental and physical health and wellbeing of Londoners and to reduce health inequalities across the city and between communities.	?	+	+		
15	Accessibility: To maximise accessibility for all in and around London.		0	0		

Climate Change Mitigation and Energy		IIA Assessment Results				
IIA Objectives		SEA	EqIA	HIA	AEI	CSIA
16	Housing supply, quality, choice and affordability: To provide a quantum, type, quality and tenure of housing (including specialist and affordable provision) to better meet demographic change and household demand.	+	0	0	++	
17	Crime, safety and security: To contribute to safety and security and the perceptions of safety.		0	0		0
18	Design: To create attractive, mixed use neighbourhoods, ensuring new buildings and spaces are appropriately designed that promote and enhance a sense of place and distinctiveness, reducing the need to travel by motorised transport.	0	0		0	0
19	Economic competitiveness and employment: 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.		0	0	++	
20	Education and skills: To ensure the education and skills provision meets the needs of London's existing and future labour market and improves life chances for all.		0		0	
21	Connectivity: To enhance and improve connectivity for all to and from and within and around London and increase the proportion of journeys made by sustainable and active transport modes.	+	+	+	+	
22	Infrastructure: 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.		0		++	
23	Culture: To safeguard and enhance the Capital's rich cultural offer, infrastructure, heritage, natural environment and talent to benefit all Londoners while delivering new activities that strengthen London's global position	+				
24	Sustainable land use: To make the best and most efficient use of land so as to support sustainable patterns and forms of development.	0	0		0	

6.8.2 SEA Results

6.8.2.1 Major positive effects were identified against IIA objectives 3 (climate change mitigation) and 4 (energy use and supply). It was considered that the Policy Area contains objectives, policies and proposals that will directly contribute to a reduction in greenhouse gas emissions over the short, medium and long term. The range of proposals set out to reduce energy demand through a variety of means (retrofitting of measures to reduce energy demand in houses and government buildings; links to policies in the draft Mayor's Transport Strategy for changing vehicle fleets to low or zero emission vehicles; and decentralised energy sources led to the assessment score for IIA objective 4.

6.8.2.2 Minor positive effects were identified against IIA objectives 1 (air quality), 9 (water resources and quality), 16 (housing supply, quality etc.), 21 (connectivity), 11 (historic environment) and 23 (culture). Air quality was assessed as benefiting from the proposals to reduce energy and use low emission vehicles, while the reduction in transport emissions was assessed as indirectly benefiting water

quality. Improvements to efficiency in building design would benefit the objectives for housing and culture, whilst the reduction in transport and emissions was seen to be beneficial in terms of reducing congestion as well as protecting heritage.

6.8.2.3 Uncertain effects were identified against objective 14 since the Policy Area itself did not contain detail about how it would encourage modal shift. However it should be noted that this is addressed elsewhere in the draft LES for consultation and via the Mayor's Transport Strategy.

6.8.2.4 The Policy Area performance against the remaining IIA objectives was assessed as neutral as the proposals were not relevant to addressing the other sustainability issues covered by the SEA.

6.8.3 EqIA Results

6.8.3.1 A combination of minor positive and neutral effects were identified by the EqIA. The benefits largely related to proposals for modal shift which were seen as beneficial to all groups of people, such as through improving health through reduced emissions, or providing more accessible spaces. Benefits will also be obtained as a result of the Mayor's commitment to address fuel poverty and his support for decentralised and community based energy systems, which will facilitate more resilient communities.

6.8.4 HIA Results

6.8.4.1 Minor positive effects were identified for IIA objectives 1 (air quality), 3 (climate change mitigation), 4 (energy use and supply), 14 (health and health inequalities), and 21 (connectivity). Positive effects were assessed against these objectives from the multiple benefits to human health from reduced transport emissions and active travel.

6.8.4.2 The Policy Area performance against the remaining IIA objectives was assessed as neutral.

6.8.5 AEI Results

6.8.5.1 The AEI identified major positive effects against IIA objective 3 (climate change mitigation), 16 (housing supply, quality etc.), 19 (economic competitiveness and employment), and 22 (infrastructure). These positive effects related to the proposals for cleaner, greener energy sources and more energy efficient infrastructure which was seen as benefiting investment and development of green technology, maintaining economic competitiveness and job creation.

6.8.5.2 Minor positive effects were identified against IIA objectives 4 (energy use and supply) and 21 (connectivity). The Policy Area was considered to have a direct positive impact on reducing demand for energy, achieving greater energy efficiency, and using new and existing energy sources effectively, but the scale of economic benefit likely to be realised through improved energy security and competitive energy costs was considered less certain. The Policy Area includes a number of specific measures and targets relating to improving the sustainability of transport modes which would be used by those accessing services, jobs, leisure and amenities.

6.8.5.3 The Policy Area performance against other IIA objectives was assessed as neutral against the remaining IIA objectives relating to AEI.

6.8.6 CSIA Results

6.8.6.1 The Policy Area was assessed as neutral against all three IIA objectives covered by the CSIA.

6.9 Assessment of the ‘Water’ Policy Area

6.9.1 Summary of Policy Area Content

6.9.1.1 As noted earlier in this report the draft LES for consultation does not include a separated ‘Water’ Policy Area, as this has been incorporated into ‘Adapting to climate change’. This integration of these two previously separate Policy Areas has not led to a material change in the content of the strategy and so the standalone assessment for the ‘Water’ Policy Area undertaken remains valid.

6.9.1.2 The assessment was undertaken in relation to the policies, proposals and measures that are now presented under the following objective in the draft LES for consultation:

- Ensuring efficient, secure, resilient and affordable water supplies for Londoners.

6.9.2 Summary IIA for the Water Policy Area

6.9.2.1 The summary of assessment results is set out in Table 6..

Table 6.7 IIA Assessment Results for the Water Policy Area

Water		IIA Assessment Results				
		SEA	EqIA	HIA	AEI	CSIA
1	Air Quality: To reduce emissions and concentrations of harmful atmospheric pollutants, particularly in areas of poorest air quality and reduce exposure.	0	0	0	0	
2	Climate change adaptation: 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.	+	+	0	+	
3	Climate change mitigation: To help tackle climate change through reducing greenhouse gas emissions and moving towards a zero carbon London by 2050.	0	0	0	0	
4	Energy use and supply: To manage and reduce demand for energy, achieve greater energy efficiency, utilise new and existing energy sources effectively, and ensure a resilient smart and affordable energy system.	+	0	0	0	
5	Flood risk: To manage the risk of flooding from all sources and improve the resilience of people, property and infrastructure to flooding.	+	0		0	
6	Geology and soils: To conserve London’s geodiversity and protect soils from development and over intensive use.	0		0	0	
7	Materials and waste: 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.	0	0		0	

Water		IIA Assessment Results				
IIA Objectives		SEA	EqIA	HIA	AEI	CSIA
8	Noise and vibration: To minimise noise and vibration levels and disruption to people and communities across London and reduce inequalities in exposure.		0	0	0	
9	Water resources and quality: To protect and enhance London's waterbodies by ensuring that London has a sustainable water supply, drainage and sewerage system.	+	?		+	
10	Natural capital and natural environment: 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.	?	0	0	0	0
11	Historic environment: To conserve and enhance the existing historic environment, including sites, features, landscapes and areas of historical, architectural, archaeological and cultural value in relation to their significance and their settings.	?	0			
12	Equality and inclusion: To make London a fair and inclusive city where every person is able to participate, reducing inequality and disadvantage and addressing the diverse needs of the population.	0	0			
13	Social integration: To ensure London has socially integrated communities which are strong, resilient and free of prejudice.		0		0	
14	Health and health inequalities: To improve the mental and physical health and wellbeing of Londoners and to reduce health inequalities across the city and between communities.	0	0	0		
15	Accessibility: To maximise accessibility for all in and around London.		0	0		
16	Housing supply, quality, choice and affordability: To provide a quantum, type, quality and tenure of housing (including specialist and affordable provision) to better meet demographic change and household demand.	0	0	0	+	
17	Crime, safety and security: To contribute to safety and security and the perceptions of safety.		0	0		0
18	Design: To create attractive, mixed use neighbourhoods, ensuring new buildings and spaces are appropriately designed that promote and enhance a sense of place and distinctiveness, reducing the need to travel by motorised transport.	0	0		0	0
19	Economic competitiveness and employment: 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.		0	0	0	
20	Education and skills: To ensure the education and skills provision meets the needs of London's existing and future labour market and improves life chances for all.		0		0	

Water		IIA Assessment Results				
IIA Objectives		SEA	EqIA	HIA	AEI	CSIA
21	Connectivity: To enhance and improve connectivity for all to and from and within and around London and increase the proportion of journeys made by sustainable and active transport modes.	?	0	0	0	
22	Infrastructure: 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.		0		++	
23	Culture: To safeguard and enhance the Capital's rich cultural offer, infrastructure, heritage, natural environment and talent to benefit all Londoners while delivering new activities that strengthen London's global position	0				
24	Sustainable land use: To make the best and most efficient use of land so as to support sustainable patterns and forms of development.	0	0		0	

6.9.3 SEA Results

- 6.9.3.1 No major positive effects were identified. Minor positive effects were identified against IIA objectives 2 (climate change adaptation), 4 (energy use and supply), 5 (flood risk), and 9 (water resources and quality). The Policy Area takes account of the increased pressure on water resources, and the increased likelihood of drought and includes a policy that the Mayor will plan for the appropriate level of new water resources infrastructure for London. This will require the Mayor supporting water companies, particularly Thames Water, where their research identifies options to provide a more resilient water supply.
- 6.9.3.2 The Policy Area also includes proposals to help manage demand such as supporting the water companies in rolling out increased use of smart meters as well as including an additional policy in the London Plan to encourage developer to achieve a standard of water consumption which exceeds the building regulations standard. The Policy Area would help to reduce energy demand and improve energy efficiency in homes through the proposal to increase public awareness that reducing household hot water consumption would lead to an associated reduction in household energy bills. The Policy Area includes a proposal to ensure London's water companies further reduce leakage rates and set out measures to ensure a decrease in the risk of major water mains bursts. Major water bursts have on occasion been the cause of major property flooding in London.
- 6.9.3.3 Uncertain effects were identified against IIA objectives 10 (natural capital), 11 (historic environment) and 21 (connectivity). For example it was recognised that the creation of new reservoirs could benefit biodiversity, but that would depend upon the type of reservoir. Also, reductions in groundwater and surface water abstraction could also benefit biodiversity, but it would depend whether the water sources were hydraulically linked to natural habitats under stress. A reduction in burst water mains could be of benefit to the protection of the historic environment, depending on locations. Addressing leaks in water infrastructure could disrupt other infrastructure such as roads but it is uncertain whether this would be noticeable over the baseline conditions.
- 6.9.3.4 The remaining effects were identified as neutral.

6.9.4 EqlA Results

- 6.9.4.1 The EqlA identified a minor positive effect against IIA objective 2 (climate change adaptation) on the basis that the policy area includes proposals that will help ensure efficient reliable, secure and affordable water supplies for all Londoners. This will be achieved by ensuring that current resources are conserved through water efficiency programmes and new water resource options (e.g. new reservoir and effluent reuse) are developed to ensure sufficient supply during dry seasons and extreme weather events.
- 6.9.4.2 An uncertain effect was identified against IIA objective 9 (water resources and quality). Support for water metering and increasing the delivery of water saving measures will improve water efficiency. Water meters should help address water poverty for most low income households. However, it is likely to have an adverse effect on those low income households who have higher essential use requirements, such as large families with children and disabled people with certain medical conditions.
- 6.9.4.3 The performance of this Policy Area against the remaining IIA objectives was assessed as neutral due to not including measures specifically relevant to the EqlA issues.

6.9.5 HIA Results

- 6.9.5.1 The HIA recorded a minor positive effect against IIA objective 2 (climate change adaptation). It was considered that the Policy Area would contribute to security and resilience of water supply.
- 6.9.5.2 The performance of this Policy Area against the remaining IIA objectives was assessed as neutral.

6.9.6 AEI Results

- 6.9.6.1 The AEI identified the effect of Policy Area on IIA objective 22 (infrastructure) as major positive. This was due to the Policy Area specifically addressing the efficient, reliable, secure and affordable water supply for Londoners, with policies and proposals focused on:
- decreasing overall consumption through use of appropriate demand management measures and public awareness initiatives (including further roll out of metering)
 - addressing leakage such as through network distribution optimisation and updating London's ageing mains network
 - target a reduction in domestic hot water consumption through energy efficiency programmes
 - supporting plans for a new strategic water resource to serve London and putting the policy and support in place to enable delivery of this if identified as required
- 6.9.6.2 Minor positive effects were identified on IIA objectives 2 (climate change adaptation), 9 (water resources and quality), and 16 (housing supply, quality etc.). This related to proposals to ensure resilience of water supply, address issues of supply and demand, and ensure new development is water efficient.
- 6.9.6.3 The performance of this Policy Area against the remaining IIA objectives was assessed as neutral in relation to the issues covered by the AEI.

6.9.7 CSIA Results

- 6.9.7.1 The Policy Area was assessed as neutral against all three IIA objectives covered by the CSIA.

6.10 Assessment of the ‘Transition to a Low Carbon Circular Economy’ Policy Area

6.10.1 Summary of Policy Area Content

6.10.2 The Policy Area as presented in the draft LES for consultation is organised around one objective: Enabling the transition to a low carbon circular economy

6.10.3 Summary IIA for the Transition to a Low Carbon Circular Economy Policy Area

6.10.3.1 The summary of assessment results is set out in 6.8.

Table 6.8 IIA Assessment Results for the Transition to a Low Carbon Circular Economy Policy Area

Transition to a Low Carbon Circular Economy		IIA Assessment Results				
IIA Objectives		SEA	EqIA	HIA	AEI	CSIA
1	Air Quality: To reduce emissions and concentrations of harmful atmospheric pollutants, particularly in areas of poorest air quality and reduce exposure.	+	0	0	+	
2	Climate change adaptation: 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.	0	0	0	0	
3	Climate change mitigation: To help tackle climate change through reducing greenhouse gas emissions and moving towards a zero carbon London by 2050.	+	?	0	++	
4	Energy use and supply: To manage and reduce demand for energy, achieve greater energy efficiency, utilise new and existing energy sources effectively, and ensure a resilient smart and affordable energy system.	+	0	0	++	
5	Flood risk: To manage the risk of flooding from all sources and improve the resilience of people, property and infrastructure to flooding.	0	0		0	
6	Geology and soils: To conserve London’s geodiversity and protect soils from development and over intensive use.	0		0	0	
7	Materials and waste: 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.	+	0		++	
8	Noise and vibration: To minimise noise and vibration levels and disruption to people and communities across London and reduce inequalities in exposure.		0	0	0	
9	Water resources and quality: To protect and enhance London’s waterbodies by ensuring that London has a sustainable water supply, drainage and sewerage system.	0	0		+	
10	Natural capital and natural environment: 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.	0	0	0	0	0

Transition to a Low Carbon Circular Economy		IIA Assessment Results				
IIA Objectives		SEA	EqIA	HIA	AEI	CSIA
11	Historic environment: To conserve and enhance the existing historic environment, including sites, features, landscapes and areas of historical, architectural, archaeological and cultural value in relation to their significance and their settings.	0	0			
12	Equality and inclusion: To make London a fair and inclusive city where every person is able to participate, reducing inequality and disadvantage and addressing the diverse needs of the population.	0	0			
13	Social integration: To ensure London has socially integrated communities which are strong, resilient and free of prejudice.		0		0	
14	Health and health inequalities: To improve the mental and physical health and wellbeing of Londoners and to reduce health inequalities across the city and between communities.	0	0	0		
15	Accessibility: To maximise accessibility for all in and around London.		?	0		
16	Housing supply, quality, choice and affordability: To provide a quantum, type, quality and tenure of housing (including specialist and affordable provision) to better meet demographic change and household demand.	0	0	0	0	
17	Crime, safety and security: To contribute to safety and security and the perceptions of safety.		0	0		0
18	Design: To create attractive, mixed use neighbourhoods, ensuring new buildings and spaces are appropriately designed that promote and enhance a sense of place and distinctiveness, reducing the need to travel by motorised transport.	0	0		0	0
19	Economic competitiveness and employment: 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.		?	0	++	
20	Education and skills: To ensure the education and skills provision meets the needs of London's existing and future labour market and improves life chances for all.		?		+	
21	Connectivity: To enhance and improve connectivity for all to and from and within and around London and increase the proportion of journeys made by sustainable and active transport modes.	0	0	0	0	
22	Infrastructure: 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.		0		0	
23	Culture: To safeguard and enhance the Capital's rich cultural offer, infrastructure, heritage, natural environment and talent to benefit all Londoners while delivering new activities that strengthen London's global position	0				

Transition to a Low Carbon Circular Economy		IIA Assessment Results				
IIA Objectives		SEA	EqIA	HIA	AEI	CSIA
24	Sustainable land use: To make the best and most efficient use of land so as to support sustainable patterns and forms of development.	0	0		0	

6.10.4 SEA Results

6.10.4.1 No major positive effects were identified. Minor positive effects were identified against IIA objectives 1 (air quality), 3 (climate change mitigation), 4 (energy use and supply) and 7 (materials and waste). It is considered that the achievement of targets for air quality and greenhouse gas emissions will require investment in, and advancement of, low carbon technologies, which this Policy Area would help work towards. The proposal to divest the London Pension Fund Authority of its remaining investments in fossil fuel industries. By steering away investment in fossil fuels, there is potential to increase the share of energy purchased and generated from renewable sources. The focus on the circular economy would support the objective to reduce waste and keep materials at their highest value.

6.10.4.2 The Policy Area includes proposals for the Mayor to “support the growth of a cleantech cluster in London”, and to “explore approaches that support innovative businesses to create solutions to London’s environmental challenges”. Whilst these proposals would not necessarily lead to overall reductions in greenhouse gas emissions, the achievement of the targets will require innovation and support for emerging businesses in this field. Therefore, it is assessed that the Policy Area will contribute to opportunities to improve technology and therefore a minor positive effect is assessed. This effect will take place in the longer term due to the timescales involved in investment and innovation.

6.10.4.3 No uncertain or negative effects were identified for the SEA.

6.10.4.4 The remaining effects were assessed as neutral.

6.10.5 EqIA Results

6.10.5.1 The EqIA identified uncertain effects on equality were identified in relation to whether the Policy Area could support IIA objectives 3 (climate change mitigation), 15 (accessibility); 19 (economic competitiveness and employment) and 20 (education and skills). This uncertainty related to similar aspects of the Policy Area. It was considered that whilst the Policy Area includes measures for encouraging skills, identifying finance for start-up businesses, innovation and investment. There is nothing specifically within the draft LES for consultation to address the barriers that disadvantaged groups may face to accessing opportunities for finance, education, skills and employment. Therefore, without targeted intervention, these measures may not be accessible to all Londoners. It is considered that this issue could be addressed with the correct approach to implementation.

6.10.5.2 The performance of this Policy Area against the remaining IIA objectives was assessed as neutral due to not including measures specifically relevant to the EqIA issues.

6.10.6 HIA Results

6.10.6.1 The Policy Area was assessed as generally neutral towards HIA related objectives. There was nothing within it of specific relevance to addressing health, wellbeing or health inequalities.

6.10.7 AEI Results

6.10.7.1 The Policy Area was assessed as having major positive effects on IIA objectives 1 (air quality), 3 (climate change mitigation), 4 (energy use and supply) and 7 (materials and waste), and 19 (economic competitiveness and employment). The positive contribution of the Policy Area to these objectives were all related to similar reasons, i.e. the range of proposals that set out potential funding streams, procurement approaches, supporting and promoting innovation, and start-up businesses in relation to the low carbon circular economy.

6.10.7.2 The Policy Area was considered to have a minor contribution to IIA objective 9 (water resources and quality) and 20 (education and skills). This was because it provides the opportunities to support new and innovative technologies in the water sector as well as providing links to programmes to promote skills and education in the low carbon economy.

6.10.7.3 The performance of this Policy Area against the remaining IIA objectives was assessed as neutral due to not including measures specifically relevant to the AEI issues.

6.10.8 CSIA Results

6.10.8.1 The Policy Area was assessed as neutral against all three IIA objectives covered by the CSIA.

6.11 Strategy Wide Assessment

6.11.1.1 Each of the Policy Areas has been assessed against the IIA objectives. The next section considers the effect of the whole strategy on each of the IIA objectives to identify which sustainability objectives are strongly supported through the draft LES for consultation and which ones are more weakly supported.

Table 6.9 Assessment of Strategy Wide Effects

(Key: GI = Green Infrastructure; AQ = Air Quality; AN = Ambient Noise; ACC = Adapting to Climate Change; W = Waste; CCM&E = Climate Change Mitigation and Energy; TLCCE = Transition to a Low Carbon Circular Economy)

IIA Objectives		Policy Area Assessment Results								Strategy Wide Assessment Result	
		GI	AQ	AN	ACC	W	CCM&E	TLCCE	Interpretation of Results	Strategy Assessment	
1	Air Quality: To reduce emissions and concentrations of harmful atmospheric pollutants, particularly in areas of poorest air quality and reduce exposure.	SEA	+	++	+	0	+	+	+	The draft LES for consultation supports the delivery of the air quality IIA objective, with positive effects being assessed across several Policy Areas. The draft LES for consultation sets out a clear strategic vision to tackle air quality through a wide range of proposals and a clear exposition of the role of other Mayoral strategies in delivering improved air quality, for example the promotion of low or zero emission vehicles, or support for modal shift. A major positive effect has therefore been assessed as many of the Policy Areas indirectly contribute to improvements in air quality, and the Air Quality Policy Area itself is ambitious. Effects are likely to occur in the medium to long term as new technology and measures are implemented over time.	++
		EqIA	+	++	+	0	+	+	0		
		HIA	+	++	+	0	+	+	0		
		AEI	+	+	+	0	+	+	+		
		CSIA									
2	Climate change adaptation: 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.	SEA	+	0	0	+	0	?	0	The draft LES for consultation had several positive effects and includes proposals that are deemed to address 'at risk' groups, who would be disproportionately affected by climate change. Therefore an overall minor positive effect has been identified, which is likely to be felt in the medium to long term as adaptation measures take effect.	+
		EqIA	0	0	0	+	0	+	0		
		HIA	+	0	0	+	0	0	0		
		AEI	+	0	0	+	0	0	0		

IIA Objectives		Policy Area Assessment Results								Strategy Wide Assessment Result	
		GI	AQ	AN	ACC	W	CCM&E	TLCCE	Interpretation of Results	Strategy Assessment	
		CSIA									
3	Climate change mitigation: To help tackle climate change through reducing greenhouse gas emissions and moving towards a zero carbon London by 2050.	SEA	+	+	+	0	++	++	+	The draft LES for consultation supports the climate change mitigation objective, with a number of major positive impacts identified. The positive impacts related to a range of different policies and proposals across Policy Areas (addressing air quality through implementation of low carbon vehicles and green infrastructure, targets to reduce waste and push materials up the waste hierarchy, retrofitting of measures to reduce energy demand), which will all support a shift to a low carbon economy. The impacts have also been identified as contributing positively in the short, medium and long term. An overall major positive has been identified as a result.	++
		EqIA	0	++	0	0	0	+	?		
		HIA	+	+	0	0	0	+	0		
		AEI	0	++	+	+	++	++	++		
		CSIA									
4	Energy use and supply: To manage and reduce demand for energy, achieve greater energy efficiency, utilise new and existing energy sources effectively, and ensure a resilient smart and affordable energy system.	SEA	+	++	+	0	0	++	+	The draft LES for consultation generally supports the energy management objective, with some positive impacts identified across all policy areas. There are major positive impacts associated with Policy Areas for Air Quality and Climate Change Mitigation and Energy, in both cases reflecting a variety of measures contributing to the objectives (including measures to phase out fossil fuels and support modal shift; and retrofitting of measures to reduce energy demand and decentralised energy sources), many of which are outcome orientated. The draft LES for consultation cross-references to the draft Mayor's Fuel Poverty Action Plan. The overall balance of the assessment has been assessed as minor positive.	+
		EqIA	0	0	0	0	0	+	0		
		HIA	0	0	0	0	0	+	0		
		AEI	0	+	0	+	+	+	++		
		CSIA									

IIA Objectives		Policy Area Assessment Results								Strategy Wide Assessment Result	
		GI	AQ	AN	ACC	W	CCM&E	TLCCE	Interpretation of Results	Strategy Assessment	
5	Flood risk: To manage the risk of flooding from all sources and improve the resilience of people, property and infrastructure to flooding.	SEA	+	0	0	++	0	0	0	The draft LES for consultation supports the objective to manage the risk of flooding, with positive impacts assessed across three of the Policy areas, and no negative effects identified. Policy Area 4 contains objectives and proposals specifically focused on Adapting to Climate Change and minimising the impact of flooding. These are enhanced by the associated benefits of improved green infrastructure proposals in the Green Infrastructure Policy Area. As the measures within the Adapting to Climate Change Policy Area are varied and include both specific and outcome-orientated proposals, and other Policy Areas either support this or do not negatively impact, the overall assessment is considered to be major positive. Effects are anticipated to be medium to long term.	++
		EqIA	+	0	0	+	0	0	0		
		HIA									
		AEI	+	0	0	++	0	0	0		
		CSIA									
6	Geology and soils: To conserve London's geodiversity and protect soils from development and over intensive use.	SEA	+	0	0	0	0	0	0	Overall, the draft LES for consultation does not directly provide a positive contribution to this objective. Although the Policy Area focused on increasing and improving green infrastructure could have a positive impact on conserving geodiversity, there are no specific proposals included specifically relating to this. As there are no negative impacts assessed across the strategy, a neutral impact has been identified.	0
		EqIA									
		HIA	0	0	0	0	0	0	0		
		AEI	0	0	0	0	0	0	0		
		CSIA									
7	Materials and waste: 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.	SEA	0	0	0	0	++	0	+	The Waste Policy Area directly addresses the effective management of waste and resources, while the Transition to a Low Carbon Circular Economy also positively addresses the objective. The range of measures directly addressing the objective, including a number of outcome-oriented proposals, has resulted in major positive effects being assessed as would be expected. The policy areas relating to air quality, noise, green infrastructure, and climate change mitigation, would not be expected to directly address the objective. As no negative impacts have been assessed in these areas, a major positive is assessed overall to be realised in the medium to long term.	++
		EqIA	0	0	0	0	+	0	0		
		HIA									
		AEI	0	0	0	0	++	0	++		
		CSIA									
8	Noise and vibration: To	SEA								The draft LES for consultation has been assessed as likely to have some	+

IIA Objectives		Policy Area Assessment Results								Strategy Wide Assessment Result	
		GI	AQ	AN	ACC	W	CCM&E	TLCCE	Interpretation of Results	Strategy Assessment	
	minimise noise and vibration levels and disruption to people and communities across London and reduce inequalities in exposure..	EqIA	0	+	+	0	0	0	0	positive effects on the noise objective, as a result of policies and proposals contained in the Air Quality and Ambient Noise Policy Areas, which focuses specifically on noise mitigation. The positive effects associated with the air quality policies relate largely to increased use of ultra-low emission vehicles and incentivising modal shifts for travel. The Air Quality Policy Area contains number of measures are proposed which are largely related to delivery via other plans or via influence through developing guidance. It would not be expected that other policy areas would contribute directly to this objective. The overall impact is considered to be minor positive to occur in the medium to long term.	
		HIA	0	+	+	0	0	0	0		
		AEI	0	0	+	0	0	0	0		
		CSIA									
9	Water resources and quality: To protect and enhance London's waterbodies by ensuring that London has a sustainable water supply, drainage and sewerage system.	SEA	+	+	0	+	?	+	0	The draft LES for consultation supports the achievement of this objective with some positive effects being seen across all Policy Areas with the exception of the Ambient Noise Policy Area , which would not be expected to directly affect this objective. The Adapting the Climate Change Policy Area directly addresses the supply of water to London. The delivery of the proposals in this Policy Area are largely reliant on the actions of partner organisations. For the other policy areas, the effects are primarily linked to policies relating to sustainable drainage. These tend to be indirect impacts. The effect overall is assessed as minor positive, which would occur in the medium to long term.	+
		EqIA	0	0	0	+	0	0	0		
		HIA									
		AEI	+	0	0	+	0	0	+		
		CSIA									
10	Natural capital and natural environment: To protect, connect and enhance London's natural capital (including important habitats, species and landscapes) and the services and benefits it	SEA	++	+	+	+	0	0	0	The draft LES for consultation supports the achievement of this objective with positive effects identified across all Policy Areas except for Waste, which would not be expected to contribute directly to this objective and Water, where some uncertainty of the effect of a future (potential) water supply was identified. The Green Infrastructure Policy Area focuses on the increase and improvement of green infrastructure and natural capital and would therefore be expected to contribute positively to this objective. A major positive effect	++
		EqIA	?	+	+	+	0	0	0		
		HIA	+	+	+	+	0	0	0		

IIA Objectives		Policy Area Assessment Results								Strategy Wide Assessment Result	
		GI	AQ	AN	ACC	W	CCM&E	TLCCE	Interpretation of Results	Strategy Assessment	
	provides, delivering a net positive outcome for biodiversity.	AEI	+	0	0	0	0	0	0	was assessed in the SEA as a result of the outcomes-orientated measures and specific targets in place to increase green infrastructure. Given the range of measures, an overall major positive effect has been identified. It is considered this would occur in the medium to long term.	
	CSIA	0	0	0	0	0	0	0	0		
11	Historic environment: To conserve and enhance the existing historic environment, including sites, features, landscapes and areas of historical, architectural, archaeological and cultural value in relation to their significance and their settings.	SEA	0	+	+	?	+	+	0	The SEA recorded minor positive effects on the historic environment primarily due to the draft LES for consultation' proposals for addressing air pollutants (notably PM and NO2) and improving the public realm through increased green infrastructure and reduced traffic volumes and traffic noise. This was anticipated to benefit the historic environment through reduced soiling of facades and improved settings. Some uncertainty relates to the possibility that measures which could protect the historic environment (such as improved flood defences or likelihood of burst water mains) could equally adversely affect settings (in the case of insensitively designed hard defences) or not coincide with locations of historical assets (i.e. uncertainty over whether there are historic assets at risk from burst mains).	+
		EqIA	0	0	0	0	0	0	0		
		HIA									
		AEI									
		CSIA									
12	Equality and inclusion: To make London a fair and inclusive city where every person is able to participate, reducing inequality and disadvantage and addressing the diverse needs of the population.	SEA	+	0	0	0	0	0	0	Some positive effects have been identified due to the Policy Area for Green Infrastructure aiming at improving access to green space for everyone. In addition, the Air Quality Policy Area focuses on reducing inequalities in exposure to harmful air emissions, as well as Energy and Climate Change Mitigation Policy Area focus on alleviating fuel poverty, therefore the overall effect of the strategy is assessed as minor positive.	+
		EqIA	0	+	0	0	0	+	0		
		HIA									
		AEI									
		CSIA									
13	Social integration: To ensure London has socially integrated communities which are strong, resilient	SEA								Although the draft LES for consultation does not directly provide a positive contribution to this objective, the EqIA identifies a minor positive effect in relation to the Policy Area for Green Infrastructure which reflects the proposal that the Mayor will work with others to support more community involvement in	+
		EqIA	+	0	0	+	0	+	0		
		HIA									

IIA Objectives		Policy Area Assessment Results								Strategy Wide Assessment Result	
		GI	AQ	AN	ACC	W	CCM&E	TLCCE	Interpretation of Results	Strategy Assessment	
	and free of prejudice.	AEI	0	0	0	0	0	0	0	the improvement and management of green spaces. In addition, Policy Area for Green Infrastructure aims to improve access to green space for everyone. The Policy Areas for Adapting to Climate Change will have benefits for London's communities as a result of policies and measures which address flood risk and urban heat exposure. In addition, proposals for decentralized community based energy projects will also support this objective. Therefore contributing to a positive effect in this area.	
		CSIA									
14	Health and health inequalities: To improve the mental and physical health and wellbeing of Londoners and to reduce health inequalities across the city and between communities.	SEA	+	+	0	0	0	?	0	The draft LES for consultation appears to have a positive effect on this objective, focused largely on Policy Areas on Green Infrastructure, Air Quality, Ambient Noise and Adapting to Climate Change, which would be expected to contribute more directly to health and wellbeing. The other Policy Areas were not assessed to have a positive impact but this would also be expected. The effect of the strategy is assessed as being minor positive as a result and likely to occur in the medium to long term.	+
		EqIA	+	+	+	+	0	+	0		
		HIA	+	+	+	+	0	+	0		
		AEI									
		CSIA									
15	Accessibility: To maximise accessibility for all in and around London.	SEA								Some positive effect has been identified due to policies aiming to improve access to green space for everyone, including the maintenance improving of tranquil spaces. Time spent in open green spaces is beneficial for physical and mental health. The proposals to encourage a modal shift to walking and cycling through the implementation of the Healthy Streets approach will promote more active lifestyles with consequent health benefits.	+
		EqIA	0	0	0	0	0	0	?		
		HIA	+	+	0	0	0	0	0		
		AEI									
		CSIA									
16	Housing supply, quality, choice and affordability:	SEA	?	+	+	+	0	+	0	This IIA objective, which is from the GLA's IIA framework to be applied (but appropriately scoped) across Mayoral strategies, is arguably only partially	+

IIA Objectives		Policy Area Assessment Results								Strategy Wide Assessment Result	
		GI	AQ	AN	ACC	W	CCM&E	TLCCE	Interpretation of Results	Strategy Assessment	
	To provide a quantum, type, quality and tenure of housing (including specialist and affordable provision) to better meet demographic change and household demand.	EqIA	0	0	0	0	0	0	0	relevant to the role of the LES, which is not to supply housing. The EqIA assessed that the draft LES for consultation did not target low income groups for housing when Adapting to Climate Change, however the draft LES for consultation, when looked at across the Policy Areas did include a diverse range of proposals to address various sustainable design improvements (to be implemented via the London Plan) which is more within the scope of the draft LES for consultation than housing provision <i>per se</i> . Therefore an overall minor positive effect is identified regarding the influence of good, sustainable design and streetscapes.	
		HIA	0	0	0	+	0	0	0		
		AEI	+	0	+	++	0	++	0		
		CSIA									
17	Crime, safety and security: To contribute to safety and security and the perceptions of safety.	SEA								The draft LES for consultation has been assessed to have some positive effect on this objective. The CSIA identified positive effects in all Policy Areas except Policy Areas for Air Quality, Energy and Climate Change Mitigation, which would not be expected to contribute directly to this objective. The positive effects relate to the indirect impacts of improving access to green spaces, improving perception of safety through noise mitigation, links to emergency planning and addressing flytipping and perceptions of safety through creating nicer environments. As such the overall effect of the strategy on this objective is assessed as minor positive. It is important to acknowledge that, while measures seek to improve safety and security for all, inequalities or those groups disproportionately affected are not specifically addressed.	+
		EqIA	0	0	0	0	0	0	0		
		HIA	0	0	0	0	0	0	0		
		AEI									
		CSIA	+	0	+	+	+	0	0		
18	Design: To create attractive, mixed use neighbourhoods, ensuring new buildings and spaces are appropriately designed that promote and enhance a sense of place and distinctiveness, reducing	SEA	+	+	+	0	+	0	0	The draft LES for consultation has been assessed to have some positive effects on this objective, particularly as a result of the proposals in Policy Areas for Green Infrastructure and Ambient Noise. The proposals to increase the amount and quality of accessible green space across London will have associated positive effects on creating a more attractive place to live and work. Further policies relating to shift in transport modes to encourage cycling and walking and improving the street scene by addressing littering and fly	+
		EqIA	0	0	0	0	0	0	0		
		HIA									
		AEI	+	0	+	0	0	0	0		

IIA Objectives		Policy Area Assessment Results								Strategy Wide Assessment Result	
		GI	AQ	AN	ACC	W	CCM&E	TLCCE	Interpretation of Results	Strategy Assessment	
	the need to travel by motorised transport.	CSIA	+	0	0	0	0	0	0	tipping will also have a positive effect. Other Policy Areas do not impact negatively. The overall effect of the strategy has been assessed as minor positive.	
19	Economic competitiveness and employment: 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.	SEA								The draft LES for consultation has a positive effect on this objective, of the. A major positive effect was assessed in relation to the Policy Area for Climate Change Mitigation and Energy, which reflects the effect of proposals for cleaner, greener energy sources and more energy efficient infrastructure which was seen as benefiting investment and development of green technology, maintaining economic competitiveness and job creation. The lack of positive effect assessed in the EqIA could indicate that proposals do not specifically address provision of improved connectivity, growth and opportunity to groups who may be economically disadvantaged. As the assessment of effects is largely related to secondary benefits of proposals to supporting a strong, connected city with infrastructure to deliver growth, the overall effect of the strategy has been assessed as minor positive.	+
		EqIA	0	0	0	0	0	0	?		
		HIA	0	0	0	0	0	0	0		
		AEI	+	+	0	+	+	++	++		
		CSIA									
20	Education and skills: To ensure the education and skills provision meets the needs of London's existing and future labour market and improves life chances for all.	SEA								Overall, the draft LES for consultation does not directly provide a positive contribution to this objective. It is important to acknowledge that the Policy Area for Waste has been assessed as having a minor positive effect on this objective as the proposals identified potential for an estimated 12,000 additional jobs in the reuse and recycling sector from a shift towards a circular economy. As the timeframe for delivering this potential effect is uncertain and no specific targets or incentives directly link to its achievement in practice, the effect of the strategy overall is assessed as neutral.	0
		EqIA	0	0	0	0	0	0	?		
		HIA									
		AEI	0	0	0	0	+	0	+		
		CSIA									
21	Connectivity: To enhance and improve connectivity for all to and from and within and around London and	SEA	0	+	0	0	+	+	0	The draft LES for consultation has a general positive effect on this objective, across a number of the Policy Areas. The positive effects largely relate to the suite of policies and proposals relating to ultra-low emission vehicles and encouraging a modal shift for travel (including optimising transport via	+
		EqIA	0	+	0	0	0	+	0		
		HIA	0	+	+	0	0	+	0		

IIA Objectives		Policy Area Assessment Results								Strategy Wide Assessment Result		
		GI	AQ	AN	ACC	W	CCM&E	TLCCE	Interpretation of Results	Strategy Assessment		
	increase the proportion of journeys made by sustainable and active transport modes.	AEI	0	+	+	0	0	+	0	waterways), several of which involve working with partners and encouraging a shift through support to other initiatives. The strategy effect overall is assessed as minor positive.		
		CSIA										
22	Infrastructure: 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.	SEA								The draft LES for consultation has a positive effect on this objective, including major positive effects in relation to Policy Areas for Waste, Energy and Climate Change Mitigation, and Water. This largely relates to proposals within these Policy Areas which promote the optimised use of existing infrastructure as well as specific proposals for additional infrastructure to meet an identified need. This will help to ensure the best use of infrastructure and growth in infrastructure to support economic growth through sustainable development. Minor positive impacts are also assessed in relation to enhanced green infrastructure and energy infrastructure.	++	
		EqIA	0	0	0	0	+	0	0			
		HIA										
		AEI	+	0	0	++	++	++	0			
		CSIA										
23	Culture: To safeguard and enhance the Capital's rich cultural offer, infrastructure, heritage, natural environment and talent to benefit all Londoners while delivering new activities that strengthen London's global position.	SEA	+	0	+	0	0	+	0	The draft LES for consultation has been assessed to have some positive effect on this objective. However there is limited evidence within the draft LES for consultation Policy Areas to link the pursuit of environmental improvements with the city's culture, heritage and talent and therefore, the overriding assessment is that the draft LES for consultation is generally neutral against this objective.	0	
		EqIA										
		HIA										
		AEI										
		CSIA										
24	Sustainable land use: To make the best and most efficient use of land so as to support sustainable patterns	SEA	++	0	?	+	0	0	0	Although the policies in the draft LES for consultation do not all contribute directly to this objective, some major positive effects were assessed in relation to Policy Areas for Green Infrastructure and Waste. This related to the range of proposals to improve the amount and quality of green infrastructure, and to	+	
		EqIA	0	0	0	0	0	0	0			

IIA Objectives		Policy Area Assessment Results							Strategy Wide Assessment Result	
		GI	AQ	AN	ACC	W	CCM&E	TLCCE	Interpretation of Results	Strategy Assessment
and forms of development..	HIA								ensure this is valued properly within decisions, including about land use. The proposals to optimise existing waste management facilities and focus new infrastructure on more sustainable waste management facilities, with specific measures and targets in place, also provides a significant beneficial effect on sustainability objectives . Further positive effects are assessed in relation to facilitating integrated urban solutions when addressing resilience of the overall effect across the strategy is assessed as minor positive. This effect would occur in the medium to long term.	
	AEI	0	0	0	0	++	0	0		
	CSIA									

6.12 Cumulative Effects

- 6.12.1.1 In addition to the cross-strategy effects assessed above, the IIA process has considered cumulative effects with the other Mayoral strategies under development. The SEA Regulations 2004 require that the assessment of effects on sustainability include secondary and cumulative effects where practicable.
- 6.12.1.2 The assessment of cumulative effects assists in the identification of the total direct and indirect effect on receptors. Often, effects may result from the accumulation of multiple small and often indirect effects rather than few large obvious ones.
- 6.12.1.3 Table 6.16 below sets out the predicted significant cumulative impacts from the wider strategic delivery across the Draft London Environment Strategy (2017), Draft Mayor's Transport Strategy 3 and the current London Plan (March 2016). It outlines those receptors that could potentially experience significant cumulative effects based on current knowledge and methods of assessment. The IIA assessment of cumulative effects has not taken into account other Mayoral strategies which are due to be revised in the near future.
- 6.12.1.4 There are also expected to be positive cumulative effects from the wider strategic delivery of proposals to improve air quality across the different strategies, with the LES specifically including short-term proposals to tackle hot-spots of pollution near to schools, hospitals and other sensitive receptors, which together with measures proposed in the Consultation Draft Mayor's Transport Strategy 3 are likely to offer greater sustainability benefits for human health and health inequalities.
- 6.12.1.5 There is expected to be significant cumulative effects from the promotion and incentivisation elements of the draft LES for consultation, where people will be encouraged to choose more sustainable travel modes – to live and travel smarter. When combined with improved transport services and clearer sources of information on which to make these choices in real time, significant cumulative effects are anticipated.
- 6.12.1.6 There are likely to be positive cumulative effects on the reduction of the air pollution and CO₂ emissions, enhancing the natural environment through achieving a net biodiversity gain, promotion of the renewable energy sources, and the delivery of the affordable housing in London.

Table 6.16 Summary of Mayoral Strategy Cumulative Effects

IIA Objectives	draft LES for consultation	Draft Mayor’s Transport Strategy	London Plan 2016	Significance of cumulative effects
<p>Environmental IIA Objectives</p>	<p>The draft LES for consultation sets out policies and proposals to address the full range of air quality issues including reducing emissions from transport, reducing emissions from homes, business and industry and increasing awareness of air quality issues.</p> <p>The draft LES for consultation will have a significant positive effect on the environmental IIA objectives through proposals to establish a Green Space Commission; develop investment programmes for green infrastructure; develop and publish a natural capital accounting framework; develop a business case methodology for investing in green infrastructure; restore ecological connectivity; providing programmes and support for the acceleration of installation of green infrastructure; and, maintaining and expanding London’s urban forest.</p>	<p>There are anticipated to be a number of positive effects against the environmental IIA objectives arising from the Draft Mayor’s Transport Strategy 3 reduced congestion as a result of road pricing policies, is forecast to lead to fewer cars on the roads thus reducing harmful air pollution which negatively affects human health and environment.</p> <p>Also, there could be positive effects on noise levels, particularly for receptors in close proximity to main roads.</p> <p>Policies and proposals are likely to lead to reduction in car use and shift toward more sustainable modes of transport and thus reduce CO₂ emissions and the reliance on petrol and diesel products -fossil fuels - with consequential benefits for air quality.</p> <p>The measures in the Draft Mayor’s Transport Strategy to improve green infrastructure are also likely to contribute to the achievement of national and international standards for air quality which will have positive</p>	<p>Policy on noise from aircraft is set out by the London Plan. The transport, spatial and design policies of the London Plan 2016 will be implemented in order to reduce and manage noise to improve health and quality of life.</p> <p>London Plan 2016 supports the creation of new open space in London to ensure satisfactory levels of local provision to address areas of deficiency.</p>	<p>There is anticipated to be a positive cumulative effect as the strategies are likely to support and complement each other, contributing towards the environmental IIA Objectives.</p>

IIA Objectives	draft LES for consultation	Draft Mayor's Transport Strategy	London Plan 2016	Significance of cumulative effects
		<p>effects on the environment and sites sensitive to effects of nitrogen deposition and acidification. Enhanced vegetation can reduce air pollutants and reduce particulate pollution by absorbing and filtering particular matter.</p> <p>The Draft Mayor's Transport Strategy includes a range of proposals such as re-use of access heat on the tube network, extensive tree planting and the shift to a more energy efficient modes of travel which will support the delivery of energy and climate change IIA objectives.</p>		
Economic IIA Objectives	<p>While there are clear long term economic benefits from improving the environment there are also costs. Compliance with environmental legislation and standards can present additional short term costs to businesses.</p>	<p>The Draft Mayor's Transport Strategy will enable economic growth by enabling employment and housing growth by improving both the capacity and connectivity of London's public transport network. Proposals and policies included in the strategy provide a significant enhancement to capacity of the public transport network which in turns facilities a very significant increase in residential land commercial development. Crossrail 2 alone aims to facilitate the delivery of around 200,000 homes In addition, extension of Overground (to Barking Riverside) and Bakerloo line (to</p>	<p>Chapter 4 – London's Response to Climate Change is specifically focussed on contributing towards improvements in the economy. In combination with measures in Chapter 5 to adapt to, and mitigate climate change, as well as secure energy supplies there is likely to be a positive contribution towards the economic IIA Objectives. The drive to improve outer London's competitiveness with surrounding area and</p>	<p>There is anticipated to be a positive cumulative effect as the strategies are likely to support and complement each other, contributing towards the economic IIA Objectives.</p>

IIA Objectives	draft LES for consultation	Draft Mayor's Transport Strategy	London Plan 2016	Significance of cumulative effects
		<p>Lewisham) will support the delivery of 10,800 and 25,000 new homes respectively and 80,000 new homes will be supported by Tube upgrades.</p> <p>While there are clear economic benefits from improving air quality and safety in the city there are also costs to businesses and consumers. The implementation of low emission zones, more control over timing of deliveries and servicing activities and the planned new Direct Vision Standard will have a significant cost to some business sectors (and particularly SMEs in those sectors) due to the need to replace or retrofit vehicles.</p>	<p>regenerate its deprived areas is also likely to contribute positively. The pressures arising from economic development (such as the pressure on land) are anticipated to be mitigated by policies that contribute positively to the environmental IIA Objectives.</p>	
<p>Social IIA Objectives</p>	<p>There anticipated to be a number of positive effects against the social IIA objectives arising from the LES, through ensuring that green infrastructure assets respond to the needs of local communities and provided in close proximity to people's homes are then well maintained to have a positive role in public health and wellbeing.</p>	<p>There anticipated to be a number of positive effects against the social IIA objectives arising from the Draft Mayor's Transport Strategy to improve the mental and physical health and wellbeing of Londoners and to reduce health inequalities across the City and between communities. A shift to 81.3% sustainable mode share would result in significant improvements to health due to the increase in physical activity for people, the decreased level of air pollutants and noise caused by road transport, and the</p>	<p>There anticipated to be a number of positive effects against the social IIA objectives arising from the London Plan 2016, in particular from policies in Chapters 2, 3 and 6. The focus on increased housing provision and the focus on regenerating deprived areas will be beneficial. Furthermore, the greater emphasis on outer London in specific policies is likely to contribute positively. The</p>	<p>There is anticipated to be a positive cumulative effect as the strategies are likely to support and complement each other, contributing towards the social IIA Objectives.</p>

IIA Objectives	draft LES for consultation	Draft Mayor’s Transport Strategy	London Plan 2016	Significance of cumulative effects
		<p>decreased level of injuries and deaths caused by road collisions. It would also reduce community severance (the ‘barrier effect’ of busy roads) that deters active travel and reduces access to goods such as employment, education, shops, services, and social networks, all of which are important for good mental and physical health.</p> <p>Providing attractive places for physical activity will lead to the following health benefits: reduced obesity (with associated health problems), preventing associated chronic diseases, such as heart disease, high blood pressure, stroke, Type II diabetes, arthritis, and certain kinds of cancer.</p>	<p>pressures arising from social growth (such as increased pressure on land and demand for resources) are anticipated to be mitigated by other policies within the London Plan 2016.</p>	

7. Recommendations

7.1 Introduction

- 7.1.1.1 The IIA Report has reported the effects considered likely effects on the IIA in relation to:
- a Policy Area by Policy Area basis;
 - a Strategy-Wide basis (i.e. looking across all the Policy Areas); and
 - a cumulative basis with other Mayoral strategies under development.
- 7.1.1.2 Throughout the IIA process, the IIA team, through undertaking the assessment, has identified a number of recommendations for mitigation and enhancement. These have been provided to the GLA and where the GLA has considered appropriate, have been incorporated into the emerging draft LES (refer to Appendix C Iterations Register).
- 7.1.1.3 The recommendations set out below in Table 7.1 are the key residual recommendations identified through the IIA of the draft LES for consultation. These all relate identified areas where recognition of economic opportunities could be enhanced in the final LES. These will be considered by the GLA alongside consultation responses received during the consultation on the Draft LES when preparing the final version of the LES.

Table 7.1 Key Recommendations from IIA

Ref.	Recommendation	Policy Area (if applicable)	IIA Topics Benefited	IIA Assessment Area Benefited	Mitigation or Enhancement
1	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.	Policy Area: Transition to a low carbon circular economy	Education and skills Equality and Inclusion Social integration	AEI, EqIA	Enhancement
2	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 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).	Policy Area: Climate Change Mitigation and Energy	Education and skills ; and, Economic competitiveness and employment	AEI	Enhancement
3	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).	Policy Area: Water	Water	AEI	Enhancement

7.2 Recommended Monitoring Measures

7.2.1 Monitoring Requirements

- 7.2.1.1 The SEA Regulations state that monitoring must be undertaken on 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.
- 7.2.1.2 The draft LES for consultation includes several proposals for monitoring to better understand existing trends and to inform more targeted interventions. It also includes proposals to improve existing monitoring (for example in relation to biodiversity). Furthermore, the GLA and TfL already undertake extensive monitoring of a number of issues.
- 7.2.1.3 A framework for monitoring will be developed in agreement with the GLA and set out in the forthcoming Post Adoption IIA Statement. This will involve a review of the monitoring already undertaken, and that which has been proposed in the consultation draft LES, so that any monitoring indicators which would be useful for informing the understanding of the likely significant environmental effects of the LES can be included and any monitoring gaps identified.

8. Conclusions

- 8.1.1.1 The draft LES for consultation, as a whole, is anticipated to have likely significant effects in relation to the objectives set out in Table 8.1. All the significant effects were considered to be positive. These are the aspects of the environment or sustainable development, that are considered to be supported by policies with outcome orientated, targeted proposals.
- 8.1.1.2 Minor positive effects were assessed across 12 of the IIA objectives. It is considered that the draft LES for consultation would support these sustainability objectives 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.
- 8.1.1.3 There were no negative effects identified for any individual Policy Areas or across the draft LES for consultation as a whole.

Table 8.1 Significant Effects on 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

9. Next Steps

9.1 Strategy Consultation

- 9.1.1.1 This IIA Report is open for a consultation period alongside the draft LES for consultation. Upon completion of this period, the consultation responses will be collated and analysed. The findings will be used in the preparation of, and where appropriate revision of, the final LES. The way in which consultation responses have been addressed in finalising the LES will be set out in the IIA Post Adoption Statement.

9.2 The IIA Post Adoption Statement

- 9.2.1.1 It is a requirement under the SEA Regulations that a Post Adoption Statement is produced and published after the final version of the LES is approved by the Mayor. The purpose of this statement is to demonstrate how the SEA, or in this case the IIA, has served to influence the drafting of the LES.
- 9.2.1.2 The IIA Statement will be produced after the findings of the consultation period have been taken into account and the final LES is published. The IIA Statement will meet all the requirements of an SEA Post Adoption Statement but will additionally seek to reflect the wider scope of the assessment in respect of its coverage of sustainability.

9.3 Timeline

- 9.3.1.1 The 14 week consultation period on the draft LES for consultation and this IIA Report is due to commence in August 2017. The review of consultation feedback is therefore due to be undertaken in winter 2017.

9.4 Comments and Feedback

- 9.4.1.1 Any comments relating to the findings of the IIA presented in this report, or the draft LES for consultation, would be welcomed.

- 9.4.1.2 **Any comments relating to the findings of the IIA presented in this report please email to environment@london.gov.uk or send written comments to:**

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