

Mr. Sadiq Khan
Mayor of London
City Hall
The Queens Walk
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Our ref: LAD/03/18/04

Date: 1 March 2018

By Email:
londonplan@london.gov.uk

Dear Mr. Khan

Environment Agency response to the Mayor's draft London Plan

The Environment Agency welcomes the opportunity to respond to the public consultation on your draft London Plan. We, Natural England, and Forestry Commission, as Defra's arm's length bodies, collectively have a statutory role or interest in many of the Plan's themes. We have worked together to review the draft Plan where we have complimentary interests, and this is reflected in our organisation's responses.

Our vision is to create great places for living that bring communities together and improve physical and mental wellbeing. To do that, and increase certainty and pace to house building, we look for opportunities to shape strategic plans for growth, including Local Plans. I am really pleased to see that our vision is very close to your aspirations for good growth.

The Environment Agency has a key role in delivering and enabling infrastructure which helps to protect people and the environment. We are a delivery body, and regulator on a range of flood and coastal erosion risk, environmental, and energy infrastructure; the competent body for the Water Framework Directive; and an advisor on climate change resilience and spatial planning.

We are pleased to see that many of the environmental policies of the current London Plan have been strengthened and we welcome your ambition in the draft Plan and your draft Environment Strategy. Your updated London Plan provides the opportunity to ensure new homes are resilient, and improve the environment for existing and future generations. Impacts of climate change are already being seen with the country experiencing more extreme weather patterns. It is vital that planning decisions are made in the context of these impacts, in addition to reduced natural resources and limited environmental capacity, and that decision-makers look to the benefits of maintaining and improving a healthy environment and managing flood risk. We are pleased to see many of these key themes reflected in your draft London Plan.

The government's Environment Plan, ([A Green Future: Our 25 Year Plan to Improve the Environment](#)) published in January 2018, sets out the government's aims to improve the environment, within a generation. We are pleased to see that many of the draft London Plan's spatial policies will support the government's 25 year Plan, and the objectives for the environment within your draft London Environment Strategy. Nonetheless, with the recent publication of the government's plan, we suggest that there is scope to review the draft London Plan, to ensure delivery of national environmental objectives.

London's predicted, unprecedented growth, and your draft London Plan's proposals to meet this challenge, will bring opportunities and risks for the delivery of the Plan's environmental objectives and infrastructure. The Plan creates an opportunity to underline the central importance of the environment to London's future, and to deliver your Vision for London to be the greenest of world cities. However, there are tensions between your environmental ambition and the delivery of the housing targets. We consider that they are mutually dependent, both needing to be delivered to achieve great places for people to live, work and thrive.

We are keen to continue to work with your officers, partners and the London Boroughs, to ensure new development is environmentally sustainable and to plan for future infrastructure to support the needs of London's growing population.

Our main points in response to the draft London Plan are set out below. Our detailed comments on the Plan's policies and content are included in Appendix A. Our detailed response to the Regional Flood Risk Assessment is attached as Appendix B. Our response to the associated Integrated Impact Assessment is attached as Appendix C. Please also refer to our previous responses to your draft Transport Strategy, and to your draft Environment Strategy.

Summary of our response

Flood Risk Management:

We particularly welcome your support for the Thames Estuary 2100 plan (TE2100), which sets out how tidal flood risk will be managed in the Thames Estuary to the end of the century. It is a leading example of embedding climate change adaptation into the heart of major projects and plans. We are happy to offer practical support to your officers and other partner organisations, where our expertise in flood risk and adaptation may be helpful. We also welcome your recognition of the importance to London of co-operation on the issue of safeguarding sites for a potential new Thames Barrier.

We also welcome policy support for:

- The imperative for sustainable drainage, achieving greenfield run-off rates, and support for boroughs' Surface Water Management Plans.
- Riverside Strategies, and Joint Thames Strategies;
- The Thames River Basin Management Plan, associated Catchment Plans, and a catchment approach.

We consider there is a need to further develop the Regional Flood Risk Assessment (RFRA) to evidence the Plan, and we will continue to support that with data and advice. Notably, there is a need to develop the application of the Sequential Test for the designated growth areas, given the Plan's reliance on delivering ambitious housing targets in these locations. We would also like to see a more detailed assessment of the impacts of climate change in the RFRA. Please refer to our appended detailed comments on the RFRA.

Waste and circular economy:

We welcome your aspirations for London to be a zero waste city, the Plan's ambitions for reducing waste and moving material up the waste hierarchy and your focus on a future circular economy for London. We welcome your policies to safeguard waste sites, the provision of new waste sites and to push innovative technology to support a circular economy.

The transition to a zero waste city is long and complex and we are pleased that you continue to lead this now and into the future. As you have identified in your draft Environment Strategy, to achieve a 'zero waste' future will require a range of changes, including a cultural shift. In the mean time you will need to continue to work with the local authorities inside and outside of London to find the best options for waste management. There are many significant challenges

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to achieving this, namely the scale of the growth expected, high land and labour costs, impact of waste facilities on neighbouring houses and businesses, market conditions, the waste capacity gap, recycling rates and the number of major construction projects in London.

Due to recent regulatory changes, there are issues surrounding the management, recycling, and disposal of excavated materials from major infrastructure projects, such as from HS2 and Crossrail 2. We believe that there is a role you could assume in working with local authorities, to identify suitable sites for use and disposal of these materials.

We are working closely with your officers and Regional Technical Advisory Boards and would like to continue this relationship, to ensure we have the best available data and are interpreting that data correctly. We have worked hard with both your officers, and Regional Technical Advisory Boards, to provide up-to-date evidence that can be used to underpin your proposed policies and targets.

We want to continue to work with your officers in development of your policies and evidence in relation to waste planning. We want to ensure that, for the wider South East of England, plans are in place to manage waste sustainably, going forward. This requires leadership from you and partnership working from all those involved.

Green infrastructure and natural environment:

We welcome the high profile given by the Plan to green infrastructure and the natural environment, reflecting the importance that you place on the value of London's green assets, as set out in your Vision and in various recent strategies. The Plan's policies reflect your draft Environment Strategy and will contribute to the delivery of the Government's 25 year Environment Plan, to achieve 'net environmental gain', and embed a natural capital approach. We suggest you review the Plan's policies against the Environment Plan to ensure consistency. For example, we would like you to consider adopting a 'net environmental gain' approach for London, for the Greater London Authority and wider bodies, and encourage those involved in London's development via your High Level Infrastructure Group, to adopt a similar approach.

We strongly support your commitments to make London at least 50 per cent green by 2050, and the policy proposals linked to this. There is increased risk of potential policy tension between 'greening' London and the borough's new homes targets, particularly in the third of boroughs which rely heavily on small sites to meet housing delivery. We believe there is more you can do to support the boroughs in achieving these ambitions.

The natural capital accounting approach, which you have begun, will help you in achieving this ambition. It will also allow for strategic planning, and place making to achieve the 50 per cent ambition. It will enable any unavoidable losses of green infrastructure to be off-set and compensated, to help achieve true 'net environmental gain'.

We welcome the move by a number of key organisations and projects to commit to taking a 'natural capital' or 'net gain in biodiversity' approach. It is good to see you taking a lead with work by Transport for London and Crossrail 2.

Water infrastructure:

We very much welcome the policy imperative for improving water infrastructure and efficiency of use.

In regard to water supply and treatment, the current Asset Management Planning, round 6 (AMP6), is underway and the water companies have published their draft plans in relation to this. These plans are predicated on development targets which pre-date those in the draft

London Plan. We will continue to work with your officer's and the water companies to ensure alignment between the spatial and water planning processes.

The identification of growth corridors and the clustering of Opportunity Areas for growth, encourages a strategic approach to be taken to identifying integrated solutions to environmental infrastructure delivery. There are more opportunities to advocate an integrated water management approach in the Plan to ensure that benefits are realised across all water issues, such as water quality, quantity and flood risk.

Waterways:

We welcome recognition of the strategic role of the capital's waterways, and measures for their protection. We particularly welcome policy advocacy of river restoration and naturalisation, for opening culverts, for expansion of the Thames Path, and the call for collaboration on the use and enjoyment of the capital's waterways. Our above comments on flood risk management also apply.

Contaminated land and remediation:

Land quality and remediation of contamination is a missing policy area within the draft Plan and was also missing in your draft Environment Strategy. The current London Plan addresses land contamination (Policy 5.21). The new draft London Plan is an opportunity to improve upon this policy and clarify expectations for a strategic approach to tackling contamination, particularly given the proposed 'clustering' of Opportunity Areas for growth. We strongly recommend you include a policy on contaminated land and remediation in your Plan.

Air quality:

We recognise the imperative to improve London's poor air quality and welcome all measures outlined in the Plan which support the government's 25 year Environment Plan. The 'Healthy Streets' approach to transport will contribute to environmental gains and improvements in Londoners' health, and will support the objectives of your Transport and Environment Strategies.

Design:

We welcome the Plan's emphasis on a design-led approach to 'optimising' housing density. This is an essential counterpoint to 'growth' and in contributing to better places for people to live, work and thrive, whilst reducing London's environmental footprint. We suggest that there are many policies throughout the Plan which impact upon the objective for delivering good design, not just those identified in Chapter 3. There is further scope for improving the linkages and references within the Plan to other policies which impact on design, drawing together expectations of the design of buildings, the places they create, and the environmental infrastructure that will support your Vision for 'good growth'.

Energy and climate resilience:

We note your aims for climate change mitigation and support your aim for London to be a zero carbon city. We consider that your policies for the natural environment and for climate adaptation elsewhere in the Plan will contribute to meeting your objectives for reducing emissions, reducing heat risks, and tackling fuel poverty.

Funding the London Plan:

We fully support the Plan's focus on sustainable infrastructure delivery. We identify in our detailed response appended policies and text which we consider should be further strengthened, and we make recommendations for amendments where we consider it adds clarity and supports the Plan's delivery.

We welcome the work that you have been driving forward with infrastructure planning in London. We will continue to support you in this work through the Infrastructure High Level Group, and with your Infrastructure Coordination Unit. There is a need to develop the work to ensure it captures the funding needed for environmental infrastructure, particularly flood risk management infrastructure, which will be needed to maintain current levels of protection into the future and give the confidence for future growth in these areas. We will remain engaged in helping your officers and other planning decision-makers, to identify environmental capacity and environmental infrastructure requirements.

Whilst we welcome the Plan's extra clarity on infrastructure funding, compared with the current London Plan, we recommend that priority given to environmental infrastructure is considered further.

Plan implementation and monitoring:

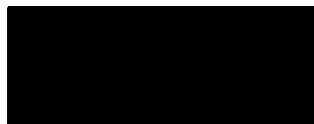
We suggest that it would assist the Plan's delivery to develop a London Plan 'Implementation Plan'. This could detail interim targets / key indicators of performance against your objectives for the different sectors, given the reliance on partnership and collaboration for Plan implementation.

It would further support the Plan's delivery to re-visit the Key Performance Indicators. We are happy to advise further on what the key environmental indicators might be.

This concludes the main points of our response, and I now invite you to review our detailed comments and recommendations in the appendices to this letter. Thank you again for the opportunity to respond to the draft Plan. My teams and I would be happy to discuss any of the points raised in this letter with you.

I look forward to working together with you in the future, turning the ambitions within this Plan into a healthier, safer and more resilient future environment for communities and businesses in London.

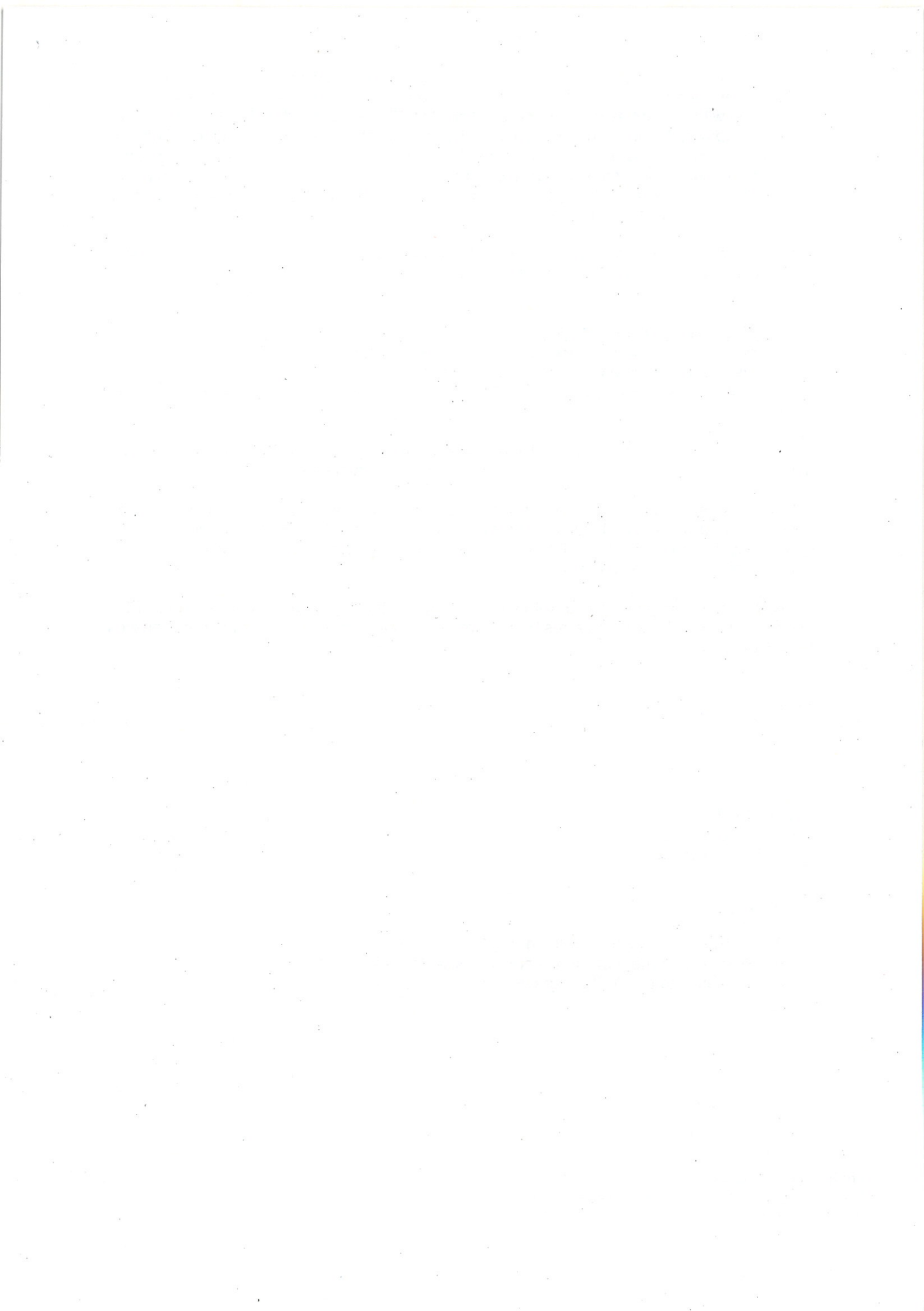
Yours sincerely



Simon Moody
Area Director London
Environment Agency

Appendices:

- A. Our detailed response to the draft London Plan
- B. Response to the draft Regional Flood Risk Assessment
- C. Response to the draft Integrated Impact Assessment



Appendix A. Environment Agency response to the consultation draft London Plan 2017

London Plan ref. Chapter/ Para. / Page	EA response: Comments Our detailed comments on individual policies and text	EA Response: Recommendations Our recommendations for changes to the Plan
Ch.1 Planning London's Future Key points on this Chapter	<p>We welcome this chapter's policies, whilst we recommend changes that we feel would strengthen the London Plan ('the Plan'), and improve policy integration across the Plan. We fully support the ambition to plan for 'good growth' to improve the health and quality of life of Londoners, and the Plan's recognition that the health of Londoners is largely determined by the environment in which they live.</p> <p>We note the Mayor's objective to create high density, mixed use places. Growth will create opportunities for investment in the environment and in environmental infrastructure, in both the major development locations and on the smaller sites.</p> <p>At the same time, London's growth has the potential to place additional strain on the environment, and on environmental infrastructure, in the capital and wider South East. Better planning for environmental infrastructure requirements is essential.</p> <p>We fully support the Mayor's aims for a more efficient and resilient London. In delivering those aims, the Mayor should consider the London Plan's contribution to delivering the Government's published 25 year plan for the environment (A Green Future: Our 25 Year Plan to Improve the Environment), January 2018.</p>	

London Plan ref. Chapter/ Para. / Page	EA response: Comments Our detailed comments on individual policies and text	EA Response: Recommendations Our recommendations for changes to the Plan
<p>Policy GG1 Building strong and inclusive communities, Page 13</p> <p>Para 1.2.6 Page15</p> <p>Policy GG2 Making the best use of land Point D Page15</p>	<p>We welcome the policy principles. A healthy natural environment, and consideration of resilience to future climate change will: support increased active participation and social integration; enable people to move around in safety and comfort; provide opportunities for social interaction; and enable buildings and spaces to remain adaptable to communities' needs.</p> <p>We welcome the reference to the Mayor's Good Growth by Design programme. Achieving high quality development is essential to achieving sustainable development and to delivering 'good growth'. We therefore fully support the Mayor's commitment to protecting and improving the capital's environment, including delivering 50 per cent 'green cover' across London.</p> <p>We note the Mayor's intention to create high density, mixed use places, and particularly welcome the following;</p> <ul style="list-style-type: none"> • D. The policy commitment to protect London's open spaces and to promote the creation of new green infrastructure and urban greening. This is essential to the health of all Londoners, to London's vibrancy, and to the principles behind a natural capital approach. • E. The emphasis on sustainable methods of travel. We consider that this will improve air quality, Londoners health and their appreciation of the natural environment. • F. Maximising opportunities to use infrastructure assets for more than one purpose. 	<p>GG2. Consider the scope for further emphasising in explanatory text, the contribution of integrated design and infrastructure solutions throughout the Plan to meet the Plan's objectives, and to contribute to the places where Londoners want to live, work, and can thrive.</p>

London Plan ref. Chapter/ Para. / Page	EA response: Comments Our detailed comments on individual policies and text	EA Response: Recommendations Our recommendations for changes to the Plan
<p>Policy GG3 Creating a healthy city, Page 17</p> <p>Policy GG4 Delivering the homes London needs Page 19</p>	<p>Integrated solutions to design and infrastructure needs, such as integrated water management, will support Plan objectives for cost and carbon effectiveness. We would therefore welcome a greater emphasis in the Plan on the opportunities that ‘multi- functionality’ and integrated solutions will bring.</p> <p>We welcome policy point E. acknowledging the link between improved health, access to green space and the provision of green infrastructure</p> <p>We note the Mayor’s aim to increase the delivery of homes for all Londoners. This is a challenge that has the potential to place additional strain on London’s environment, and on environmental infrastructure. Nonetheless, a healthy environment is integral to providing places where Londoners want to live, work, and can thrive. We therefore look forward to working together with the Mayor to ensure that opportunities to protect and improve the environment, and to mitigate any risks, are taken in delivering new homes on both major developments, and on small sites.</p> <p>We note policy point D. and the reliance on the contribution of small sites to provide new homes. Less attention is perhaps given in the Plan to funding infrastructure delivery and to the policy requirements for small sites than to the major development locations. Our later comments in regard to the proportion of boroughs which will rely significantly on small sites to meet their housing targets, are relevant to this point.</p>	

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<p>Policy GG5 Growing a good economy Page 21</p> <p>Para. 1.5.3, Page 22</p> <p>Policy GG6 Increasing efficiency and resilience Page 23</p>	<p>We note the Mayor's aims to enhance London's competitiveness, and ensure economic success. We consider that London's natural assets make a significant contribution to the capital's international and national attractiveness to business, and to its economy. This is recognised in the Mayor's draft Environment, and Economic Development Strategies, and the Mayor's aim to introduce a Natural Capital approach. The extra detail in those strategies, linking the economic ambition in Policy GG5 with GG6, and the Plan's objectives for efficiency and resilience, would help support other policy areas in the Plan.</p> <p>The phrase, '<i>protecting against flood risk</i>' is misleading, in that it implies flood risk can be reduced to zero.</p> <p>We fully support the Mayor's aims for a more efficient and resilient London. We particularly welcome Policy points B and D, and the reference at paragraph 1.5.3 that, developments must plan for a more integrated approach to water management, whilst protecting against flood risk. However, we consider that the approach, and a requirement for stakeholder collaboration on delivering it - where there are opportunities to do so - needs to be embedded more strongly within the Plan's subsequent policies.</p>	<p>GG5. It provide mutual support for other policies (e.g. GG6) to add explanatory text referencing the value of London's environment and green infrastructure, and to adopting an integrated approach to environmental infrastructure provision, to a healthy economy. We also recommend referencing the Mayor's draft Environment and Economic Development Strategies</p> <p>Alter to, 'minimising', or 'mitigating' flood risk, as they are more appropriate terms.</p> <p>GG6. It would support this and other policy areas, and the London Environment Strategy, to add to the explanatory text the following:</p> <ul style="list-style-type: none"> • At paragraph 1.5.2 acknowledge 'water efficiency' as having a role in energy savings, and in achieving the target for zero carbon by 2050. • At paragraph 1.5.5, highlight the role of green infrastructure in securing a zero carbon city, and in improving London's

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<p>Para. 2.0.2, page 27</p> <p>Policy SD1 Opportunity Areas Pages 28-9</p>	<p>same profile in the Key Diagram, nor in the subsequent text in this chapter. We accept that it is not possible to map all environmental, social and economic factors on the Key Diagram. Nonetheless, there are environmental determinants of growth potential, for example the flood risk profile, which require appropriate recognition and mapping later in the Plan. These factors could be recognised in the text and diagrams for individual Opportunity Area sections, and linked to topic-specific policies. Our comments below refer.</p> <p>We welcome the reference at paragraph.2.0.2 to the vital part that London’s parks, rivers and open spaces have in the quality of life for Londoners.</p> <p>We welcome policy point A.1) b), in reference to infrastructure delivery. We will continue to work with the Mayor, as part of the infrastructure High Level Group, and with the Mayor’s Infrastructure Co-ordination Unit, to ensure that environmental infrastructure requirement are fully recognised in supporting London’s growth.</p>	<p>SD1:</p> <ul style="list-style-type: none"> Amend the policy and its explanatory text to promote the Mayor’s aims for ‘integrated solutions’ in delivering utilities and other infrastructure for the Opportunity Areas. This would support, and should link’ to subsequent design and sustainable infrastructure policy areas, e.g. Para.9.5.12, calling for the consideration of Integrated Water Management Strategies. It would further support the Mayor’s Environment Strategy. We suggest that Policy point A.3), would read more positively if it also refers to the

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<p>Supporting London's Growth, page 32 on</p> <p>Page 47, Para 2.1.52</p> <p>Policy SD2, Collaboration in the Wider South East Page 57</p>	<p>We consider that the environment is not fully represented in the text pertaining to individual Opportunity Areas, and that it would help ensure 'good growth' to identify both environmental risks and opportunities within the text, including the opportunities for the consideration of a strategic approach to environmental infrastructure provision. For example, we note that the Regional Flood Risk Assessment which supports the Plan, identifies for each Opportunity Area where there are actions that contribute to the delivery of the Thames Estuary 2100 Plan, and where an integrated water management study may be appropriate.</p> <p>Reinforcing our above comments, we welcome that the text for Thamesmead and Abbey Wood Opportunity Area identifies water and flood risk management infrastructure is needed to support growth.</p> <p>We fully welcome this policy, since we consider that collaboration will help to secure multiple cross-boundary benefits. We particularly welcome the reference at policy point E. to strategic concerns regarding: climate change (including water management and flood risk); improvements to the environment (including air quality) and waste management (including circular economies). It would support the Plan to set out where agreement with the wider South East has made progress.</p>	<p>'generation of opportunities', in addition to 'tackling barriers'.</p> <p>Explanatory text, page 32 on. We recommend that environmental risks <i>and</i> opportunities are included within the text for the Opportunity Areas, such as, assessing the potential for integrated water management solutions, and to manage flood risk. We can offer our help with this. Please also refer to our response to the draft Regional Flood Risk Assessment.</p> <p>Ensure the text for individual Opportunity Areas consistently acknowledges the environmental infrastructure needs of growth.</p> <p>SD2. We recommend adding a specific reference to 'green infrastructure' within the policy text to support the policies in Chapter.8. Please refer also to our comments on Chapter 11: Funding the London Plan.</p>

London Plan ref. Chapter/ Para. / Page	EA response: Comments Our detailed comments on individual policies and text	EA Response: Recommendations Our recommendations for changes to the Plan
<p>Para.2.4.4, Page 68</p> <p>Policy SD4, The Central Activities Zone (CAZ), Pages 66 -7</p> <p>Para.2.4.7, Page 69</p> <p>Para 2.4.16, Page 74</p> <p>Policy SD10 Strategic and local regeneration Page 93</p>	<p>Collaboration is happening between water companies serving London and the south east as part of their established Water Resources in the South East group. We would expect mechanisms for collaboration on other environmental infrastructure requirements to be identified through the Mayor's infrastructure planning processes.</p> <p>We note the Mayor's proposals, and welcome the inclusion (in paragraph 2.4.4 n.) of '<i>...the use and enjoyment of the River Thames</i>', as one of the strategic functions of the CAZ.</p> <p>We welcome reference to the need to sustain and enhance the distinct environment and heritage of the CAZ, and at para.2.4.8 acknowledgment of the need to tackle poor air quality.</p> <p>The River Thames runs through the CAZ. It is an iconic, multi-functional river and land corridor, and we suggest that it is acknowledged in those terms in explanatory text.</p> <p>We welcome the reference to surface water flood risk to the CAZ, but it should also reference tidal flood risk.</p> <p>We welcome policy point B., and its requirement that development plans and proposals contribute to regeneration by tackling - amongst other matters - environmental barriers. This supports our recommendation above, that environmental risks <i>and</i> opportunities for the Opportunity Areas be identified within this Chapter's text.</p>	<p>Para. 2.4.7. Please refer to the '<i>... River Thames corridor...</i>'</p> <p>Para.2.4.16. Alter to include reference to surface <i>and tidal</i> flood risk'.</p>

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<p>Ch.3: Design Page 98 on</p> <p>Key points on this Chapter</p>	<p>We welcome the Plan’s emphasis on good design, noting that this provides the <i>essential</i> context for optimising housing density. To help achieve ‘good growth’ further assessment will be needed by decision-makers to locally determine ‘optimal’ density.</p> <p>We recommend changes to clarify what is meant by policy aims for ‘<i>high</i>’ sustainability, and that an evaluation of an area’s capacity for growth must include coverage of water issues.</p> <p>We welcome the policy objectives for the public realm. Notwithstanding that the Plan is read as a whole, we suggest that there is further scope for this chapter’s policies to better integrate with, and cross-reference to, other policies across the Plan which will equally influence the design of both buildings and the places they create, e.g. Chapter 8 on green infrastructure and the natural environment, Chapter 9 on water management, flood risk management and sustainable drainage, and ‘Chapter 10’s ‘Healthy Streets’ approach.</p> <p>Again, we suggest that the design policies could explicitly support policy GG6 above on the need for integrated solutions to infrastructure provision, and particularly support Chapter 9 in terms of integrated water management (that is, water supply, wastewater treatment and flood risk management), and water sensitive urban design.</p>	

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<p>Policy D1, London’s form and characteristics Pages 98-9</p> <p>Para. 3.1.4, Page 100</p> <p>Policy D2, Delivering good design Page 103</p>	<p>We welcome Policy D1 requirements for development plans and proposals to; provide conveniently located green and open spaces; facilitate active travel; prevent and mitigate poor air quality; minimise negative impacts on the environment; aim for high sustainability standards; and, maximise urban greening.</p> <p>We support subsequent references to; designing out exposure to poor air quality (paragraph 3.1.3); maximising urban greening (paragraph 3.1.4); storage space for the collection of wastes and recyclables (paragraph 3.1.8); and minimising the use of new materials / reference to ‘London’s circular economy route map’ (paragraph 3.1.11).</p> <p>We fully support the emphasis on ‘<i>Maximising urban greening</i>’</p> <p>We welcome the emphasis on delivering good design. We suggest that this policy section might address the government’s 25 year Environment Plan (page 34 of that plan refers), to set out the Mayor’s expectations that boroughs could work in partnership to explore and pilot ways in which design can contribute to environmental improvements, leading to better places in which to live and work, and reduce environmental footprint.</p> <p>We note and welcome the point A requirements in regards to green infrastructure, water bodies and hydrology. We suggest that this policy section cross-refers to relevant policies in the Plan which will</p>	<p>D1:</p> <ul style="list-style-type: none"> • D1, point 3), define in text what is meant by ‘aim for <i>high</i> sustainability standards’ by cross-referencing subsequent policies’ objectives, and those targets set out in other Mayoral strategies. Alternatively indicate where it is proposed that later Supplementary Planning Guidance will clarify the Mayor’s expectations. This will avoid ambiguity and planning delays. • D1, point 5). Whilst the general point is welcome, the requirement to address the management of surface water, should be amended to apply to <i>all</i> forms of flooding. <p>Para. 3.1.4. Expand this text to draw out that connectivity between urban greenspaces will deliver multiple benefits, thus enhancing the value of London’s natural capital.</p> <ul style="list-style-type: none"> • D2, point A. the reference to ‘<i>Initial evaluation</i>’ of an area’s capacity for growth

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<p>Para 3.4.11, Page 113</p> <p>Policy D6, Optimising housing density, Page 117</p>	<p>combine to influence the delivery of sustainable design. Notwithstanding that the Plan is read as a whole, this will demonstrate better policy integration across the Plan, and provide mutual policy support to deliver ‘good growth’ and sustainable design. The Plan’s IIA, (section 9.2.2) refers, wherein we agree with the consultants recommendations – see our Appendix C.</p> <p>It would be useful in listing ‘<i>qualitative aspects</i>’ of design, to ask that development considers safe evacuation routes for properties within planning flood risk zones (flooding is considered at paragraph 3.8.9 but only for tall buildings and at paragraph 3.9.5 for basements). This would ensure developments’ design supports flood risk management policies.</p> <p>We note the policy imperative to develop housing at the ‘optimum’ density. We are pleased to see that this is placed in the <i>essential</i> context of needing to result from a design-led approach, taking into account environmental infrastructure capacity. We will continue to work with the Mayor and others to help identify this capacity. To ensure development meets all the challenges of ‘good growth’, it will be necessary to develop the evidence base, for example,</p>	<p>should include coverage of further water issues, that is, wastewater treatment capacity, the evaluation of flood risk, and sustainable water management options. This would support policies in Chapters 8, 9 and 10.</p> <ul style="list-style-type: none"> • Consider referencing in text the government’s 25 year Environment Plan in regards to borough’s working in partnership to explore and pilot ways in which design can contribute to environmental improvements <p>Para 3.4.11. Please add a bullet point to state, <i>‘Development in flood risk areas is designed to allow for safe means of evacuation in the event of flood’.</i></p> <p>D6. We consider that the explanatory text could be added to, to set this policy in context with other policy requirements in Chapters 8, 9 and 10. This would clarify and help integrate those parts of the Plan which will contribute to the design-led approach to optimising density.</p>

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<p>Para, 3.6.5, Page 120</p> <p>Policy D7, Public Realm Page 122-3</p>	<p>around the impacts of new homes on waste generation and treatment capacity, to help define what density is optimal.</p> <p>We welcome the reference to the ‘Healthy Streets’ approach. There is an opportunity here to link the requirement for development to support site connectivity and modal shift, to the policies in Chapters 8 and 9. This would ensure that connectivity, ‘greening’ and sustainable drainage are jointly considered.</p> <p>We support this policy, particularly the following points: B. Maximising the contribution of the public realm for ‘active’ travel H. The incorporation of green infrastructure to support rainwater management through sustainable drainage, reduce exposure to air pollution, manage heat and, increase biodiversity. L. Ensure that on-street parking is not dominant and that there is space for green infrastructure M. Ensure the provision and management of free drinking water.</p> <p>We suggest that adding a reference to the role of the public realm in supporting an integrated approach to water management would also be helpful in delivering policy objectives for securing London’s water future, in implementing the sustainable drainage hierarchy, and in building resilience to climatic changes.</p>	<p>Para, 3.6.5. Amend, to include support for ‘Healthy Streets’ and the design-led approach, by setting out that site connectivity and opportunities for modal shift should be considered alongside the provision of green infrastructure and sustainable drainage systems.</p> <ul style="list-style-type: none"> • Add to the policy explanatory text, to advocate an ‘integrated water management’ approach, drawing out the synergies between this, and the delivery of new and improved public realm’. This would support the delivery of multi-functional benefits, enhance natural capital, and support a range of policies in Chapters 8 and 9. Our comments on Chapter 9 below refer. • We suggest adding an element within the explanatory text to support Policy point. H, drawing out the opportunities to utilise the public realm to integrate water management, particularly in major development locations.

<p>London Plan ref. Chapter/ Para. / Page</p>	<p>EA response: Comments Our detailed comments on individual policies and text</p>	<p>EA Response: Recommendations Our recommendations for changes to the Plan</p>
<p>Policy D8, Tall Buildings Pages 126-8</p> <p>Para 3.8.8, Page 130-1</p> <p>Para 3.9.5, Page 132</p> <p>Policy D10, Safety, security and resilience to emergency Pages 132-3</p> <p>Para 3.10.2, Page 133</p>	<p>We welcome Point C. f) requiring that tall buildings near the River Thames, particularly in the Thames Policy area, should not contribute to a canyon effect along the river. We agree, but suggest that it is also a matter of protecting the contribution of the waterways to London's vibrancy, including ensuring that public access to the river frontage is maintained.</p> <p>At paragraph 3.8.8, we support reference to the requirement for buildings in proximity to water bodies supporting notable bird species.</p> <p>The current wording states: <i>'Where there is a known risk of flooding, boroughs <u>may</u> consider restricting the use of basements for non-habitable uses.'</i> We consider that this wording should be strengthened to emphasise the expectation that boroughs restrict the use of basements in areas at risk of flooding.</p> <p>We support the policy, and recommend amendments to highlight the roles of the London Resilience Forum, and the Environment Agency.</p> <p>We welcome the policy message that new developments should be constructed with resilience at their heart. However, designing out flood risk is currently underplayed in comparison to fire safety.</p>	<p>D8. Add to point C. f), to the effect that, buildings near the Thames should maintain public access to the river frontage.</p> <p>Para 3.9.5. Please change 'may' to 'should' in this sentence.</p> <p>D10:</p> <ul style="list-style-type: none"> • Please refer to the London Resilience Forum, and flooding as a hazard • Please refer to the Environment Agency as one of the bodies who boroughs should work with. <p>Para 3.10.2. Embolden 'designing out the effects of flooding' in support of Chapter 9.</p>

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Policy D12, Agent of Change Page 136-7	<p>We broadly welcome the principle behind this policy. We note that it applies explicitly to noise, whilst also noting the policy point C. refers to '<i>other potential nuisances</i>'. We presume this reference may seek to encompass nuisances arising from dust, odour, and emissions, but this is not clear or explicit in policy or supporting text. We consider that it should be.</p> <p>This is an issue, notably for boroughs where there are high targets for new homes, to be co-located with regulated operations, and with industrial and other uses. In such circumstances, there is a prospect of closer proximity between otherwise usually incompatible uses, resulting in harm which cannot be mitigated through careful design. This may compromise the operating conditions of existing regulated sites, and / or have unacceptably adverse impacts upon the quality of life of new residents and occupiers. We can provide examples of such instances as required.</p>	<p>We recommend reviewing the policy, and supporting text so that it provides equal weight to a range of potential nuisances, and makes these clear.</p> <p>We consider it is also essential to acknowledge in the supporting text, that there will be instances where it will not be possible, despite careful development design, to mitigate harmful impacts. Boroughs will need to assess this on a case by case basis.</p>

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Policy H2, Small sites Pages 152-3	<p>We welcome the requirement at Policy H2, point B, that boroughs prepare area-wide design codes for ‘small’ housing developments. We would expect it to be made very clear, when the Mayor sets out his design principles (Para.4.2.6), that these should cover matters including those noted in paragraph 4.2.9, and as set out elsewhere in the Plan, for green infrastructure and natural environment, sustainable infrastructure, and for ‘Healthy Streets’.</p> <p>At Policy H2 point E, we note the presumption in favour of development on small sites, and that in the absence of a design code, the presumption means approval unless it can be demonstrated that the development would give rise to unacceptable harm. We consider that it may take time for all boroughs to devise local design codes, and to apply these through local plans. Whilst acknowledging the Mayor’s intention to adopt design guidance for new homes, this may leave a policy ‘gap’, meaning small sites would be vulnerable to development proposals which did not demonstrate ‘good design’ principles as provided in the Plan.</p> <p>Additionally, the list of matters addressed in point E. could be expanded. It does not for example address levels of harm that may result from loss of open space, or increased flood risk. We suggest that it would be helpful for the Plan to identify a ‘default’ position, applying good design principles identified by the Mayor, until such time as local planning authorities can adopt their own codes.</p>	<p>H2:</p> <ul style="list-style-type: none"> • Add to Policy H.2, point E to ensure the matters considered, in addition to biodiversity, also include: loss of accessible green space; surface water flood risk; and exposure to poor air quality. • In explanatory text, cross-refer to the policy objectives in Chapters 3, 8 and 9, for public realm, net biodiversity gain, Urban Greening Factor, improving air quality, achieving Greenfield run-off rates for surface water etc. • Add to the text, identifying which policy areas the Mayor expects his design principles to address. This would add clarity to Policy H2.B, and support Policies D1 and 2.

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Para. 4.2.9, Page 99	<p>We welcome the text at Paragraph 4.2.9, that for small sites: loss of biodiversity or green space should be mitigated; landscaping that enables Sustainable urban Drainage systems (SuDs) is to be included; provision for street trees made; and rainwater attenuation features incorporated, to achieve Greenfield run-off rates. We would expect to see these elements of good design reflected in Chapter 3.</p> <p>Nonetheless, there are some boroughs which will rely significantly on small sites to meet their housing targets, but which may also have, for example, an existing deficit of access to natural green space. Whilst small sites will make an important contribution to housing delivery, they often contribute to boroughs' stock of locally accessible open space, and it may be difficult to balance their loss.</p> <p>In such locations, the Plan might identify the expectation that boroughs should closely review, through their Strategic Housing Land Availability Assessments, the availability and access to green space in their assessment of housing sites' potential. We suggest that, in a similar way to the Plan's SHLAA having made a % reduction in sites' development potential based on an assessment of flood risk, an allowance could also be introduced for accessible natural green space. Borough's green space strategies may also address this.</p> <p>Please also see our comment under Chapter11, 'Enabling Infrastructure' to small sites and the funding complexities.</p>	<ul style="list-style-type: none"> • Para.4.2.9. Add to the text, with the Mayor indicating that the matters addressed were expected to be factored in to the development process from the earliest stages of land acquisition and development design, and in plan preparation. This would support other policy areas, notably in Chapters 3, 8 and 9.

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<p>Ch.5: Social Infrastructure Page 201 On</p> <p>Page 202, Para.5.1.1</p> <p>Page, Para 5.7.4</p>	<p>We welcome the recognition in this chapter of the contribution of local green and open space to stimulating play and recreation, and thus to social well-being.</p> <p>We welcome the cross reference with Chapter 8 regarding how green infrastructure in all its forms is viewed as a “<i>key component</i>”, supporting the delivery of social infrastructure and social inclusion.</p> <p>We welcome reference to the Mayor’s encouragement to boroughs to take into account his aims for green infrastructure and the natural environment.</p>	<p>Para. 5.7.4. It may be useful in support of social inclusivity and reduction in health inequalities, to reinforce the need for borough cross-boundary collaboration on green space provision, access to it, and connectivity. We also, suggest referencing the role of the proposed Green Space Commission outlined in the Mayor’s draft Environment Strategy.</p>

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<p>Ch.6: Economy Page 224 on</p> <p>Policy E4, Land for industry... etc. Page 232</p> <p>Policy E7, Intensification... of land for industry, logistics and services... Pages 246-9</p>	<p>We are pleased to note at policy sections A. 3. and 4), a requirement that there is sufficient supply of land and premises for secondary materials and waste management, and for utilities infrastructure.</p> <p>Similarly we would support policy point D., <i>'the retention and provision of additional industrial capacity should be prioritised in locations that...2) provide capacity for...waste management'</i>,</p> <p>We welcome the reference, at policy point E.4) e), to appropriate design mitigation being considered for air quality issues, where industrial and residential uses are proposed together.</p>	<p>E4. Clarify, in policy explanation that new industrial uses should not result in the displacement of waste management capacity, nor in the need for additional operational restrictions on waste operations. This may compromise the Mayor's policy targets and aims for waste management in Chapter 9.</p> <p>E7. The policy explanatory text could set out the expectation that such mitigation be assessed and identified at planning application stage, to speed up consideration and development delivery.</p>
<p>Ch.7: Heritage and Culture Page 268 on</p>	<p>We welcome the recognition that the Mayor attaches to the capital's heritage assets and historic environment, including its waterways, and their value to the vibrancy and success of the capital. We welcome Figure 7.3, highlighting the location of London's waterways and historic parks and gardens. London's river and canal corridors are assets which help define the historic landscape and character of the capital. We defer to Historic England's detailed response.</p>	<p>There is scope for the text to recognise the historic landscape value of London's river corridors, and to address the riverside settings of assets of historic value. This would reinforce the objectives of this chapter, and those of chapters 8 and 9.</p>

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<p>Ch.8: Green Infrastructure and Natural Environment Page 302</p> <p>Key points on this Chapter</p>	<p>We welcome the high profile given to these inter-linked topics, reflecting the importance that the Mayor places on the value of London's green assets as set out in his Vision, and in recent draft Mayoral Strategies, notably his Environment Strategy.</p> <p>The Plan's policies should support the aims and actions of the Government's 25 year Environment Plan. Therefore, we strongly support the Mayor's commitments to make London at least 50 per cent green by 2050, and the policy proposals linked to this objective, particularly:</p> <ul style="list-style-type: none"> • Proposals to develop an 'Urban Greening Factor', and the clarification around how this would work; • Support for proposals which create new and improved habitats resulting in positive gains for biodiversity; • Support for a Natural Capital Account for London. <p>If delivered, we consider these have potential to support the Government's 25 Year Environment Plan's focus on natural capital as key to underpinning economic growth, and its intention that new development should result in 'net environmental gain'.</p>	

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<p>Policy G1 Green Infrastructure Page 302</p> <p>Para – 8.1.2, Page 302</p> <p>Para. 8.1.3,. Page 302</p>	<p>We will continue to work with the Mayor and others to provide advice and data to ensure opportunities to create and protect green infrastructure are identified. However, we have concerns that meeting the Plan objectives for the natural environment will be challenging in relation to the imperative for growth, particularly in locations where there is limited access to natural green space.</p> <p>We are largely supportive of policies in this chapter whilst recommending amendments to strengthen some policies, for example, to emphasise the importance of river corridors as key strategic green infrastructure. We also direct your attention also to the responses of Natural England and of the Forestry Commission regarding this chapter.</p> <p>We support this policy, and its’ explanatory text, subject to the recommendations below. It recognises the intrinsic economic and social value of London’s natural environment and the capital’s ‘network’ of green assets.</p> <p>We welcome the references to the Forestry Commission’s i-tree Assessment, and to the natural Capital Account for London’s Public Parks.</p> <p>We strongly support the Mayor’s commitments to make London at least 50 per cent green by 2050, and to update existing</p>	<p>G1:</p> <ul style="list-style-type: none"> • We suggest that the Mayor declares an intention to adopt best practise on environmental ‘net gain’, and that this is referred to in explanatory text. • Refer to Natural England’s response on Policy G1 and to biodiversity ‘net gain’.

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	<p>Supplementary Planning Guidance on the All London Green Grid. However, we have some concerns that the realisation of this target may be challenging for some ‘growth’ locations to respond to, notably in areas where there are significantly increased targets for the delivery of new homes.</p> <p>We will continue to work in partnership with the Mayor and other organisations to provide information and advice to ensure that development meets the Mayor’s objectives for ‘good growth’.</p> <p>The Plan, as it evolves should support delivery of the Mayor’s Environment and Transport strategies in regard to a natural capital, ‘net gain’, and ‘healthy streets’, and align itself with the government’s 25 Year Environment Plan. We refer also to Natural England’s detailed response regarding Policy G1 on the need for cross-boundary collaboration on delivering green infrastructure associated with the growth corridors, the need for biodiversity net gain, and the need for funding for green infrastructure maintenance and management.</p> <p>It would be useful for the explanatory text to highlight the intention of the Mayor to adopt best practice principles on environmental ‘net gain’. We draw attention to the work by CIRIA / CIEEM / IEMA on biodiversity net gain best practice principles that might inform the development of Supplementary Planning Guidance on green infrastructure, and support the delivery of Policy G6 below.</p>	

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<p>Policy G3 Metropolitan Open Land (MOL) Page 304</p> <p>Policy G4 local green and open spaces Page 305</p> <p>Para. 8.4.2, Page, 306</p> <p>Table 8.1, Page 307-8 Public open space categorisation</p> <p>Policy G5 Urban greening Page 308</p>	<p>We support this policy, and the reference at paragraph 8.3.3 to enhanced access to MOL, and its role in habitat creation and flood storage. Natural England’s response also refers.</p> <p>We support this policy, including the requirement for development plans and Opportunity Area Frameworks to plan for policy objectives in green infrastructure strategies. We suggest greater weight is attached to assessing accessibility to green space. Natural England’s response also refers.</p> <p>We welcome the call for boroughs to undertake assessments to inform their green infrastructure strategies, but recommend amendments. We recognise that boroughs’ capacity to undertake green infrastructure strategies will vary. We suggest that further Plan encouragement for boroughs to work together on preparing joint strategies, would help to spread the resource burden, and enable better consideration of strategic infrastructure.</p> <p>We welcome the table, but highlight that playing fields are not included as a category. These provide an important contribution to the capital’s stock of open space.</p> <p>We strongly support this policy, including the requirement for Boroughs to develop an Urban Greening Factor (UGF), (Table 8.2). We consider that it will bring multi-functional benefits, improving</p>	<p>Para. 8.4.2. Add to text, that <i>‘boroughs should consider the opportunities and benefits from co-operation on preparing joint strategies, across administrative boundaries, to deliver strategic green infrastructure interventions’</i>. This may have synergies with boroughs’ assessments of sustainable transport links, and flood management.</p> <p>G5. Given that the Plan places emphasis on the contribution of small sites (1-25 units) to</p>

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<p>Paras.8.5.3 - 4 Page 309</p>	<p>London's resilience, such as reduced flooding events. It will in our view, provide further certainty for developers, which can be accounted for from the earliest stages of land acquisition and development design.</p> <p>We note that it is the intention to apply the UGF to major development proposals initially, until such time as boroughs develop their own models. Whilst welcoming the introduction of a UGF, in our view this could leave a policy 'gap' in regards to non-major sites (our comments above on Policy H2 refer). We consider that it would aid Plan delivery, to identify and apply a 'default' approach at London Plan level to 'greening' smaller development sites, until boroughs are able to develop their own work.</p> <p>We also welcome the inclusion of the explanation of the UGF at Para 8.5.4, which provides further clarity for development plans and developers. Policy G5 will also support the Mayor's draft Environment and Economic Development Strategies, which recognise the role of natural capital in supporting environmental and economic resilience. This approach has the potential to support approaches to natural capital and net environmental gain as set out in the Government's 25 year Environment Plan. Within the 25 year Plan, natural capital evaluation will be developed as a tool to support economic growth and development.</p> <p>It may be helpful to add encouragement in explanatory text for neighbouring boroughs to work collaboratively on developing joint green space strategies. This may be particularly useful for those</p>	<p>housing delivery, we recommend that the policy and text should identify:</p> <ul style="list-style-type: none"> • Default expectations for urban greening on smaller sites until such time as boroughs develop and adopt their own models of delivery. This will ensure that smaller sites continue to offer a contribution to 'greening' London, and to the Mayor's policy targets. • Encourage boroughs to collaborate strategically to identify joint approaches to urban greening, particularly in locations which rely heavily on the contribution of small sites to meet housing targets. • Review the policy and text against key objectives of the Government's 25 year Environment Plan, referencing net environmental gain and a natural capital approach.

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<p>Table 8.2, Page 310 Urban Greening Factors</p> <p>Policy G6 Biodiversity and access to nature Page 311</p>	<p>boroughs which rely heavily on small sites to meet the Plan’s housing targets, and for those where delivering strategic green infrastructure is needed to support growth. Natural England’s response also refers.</p> <p>Currently ‘rivers and streams’ are not identified in the table under surface cover type. Consequently their restoration, and de-culverting as supported elsewhere in the Plan’s waterways policies, and by the Mayor’s draft Environment Strategy, is likely to be under-valued in development plans and proposals</p> <p>We support this policy, notably point E’s support for proposals which create new and improved habitats that result in positive gains for biodiversity.</p> <p>It may be confusing to use the umbrella term ‘SINCs’ for all protected sites. It would be better for the policy to use the term ‘Local designated sites’ (which include ‘Local Wildlife Sites’ and ‘Local Geological Sites’) for sites which are not internationally or nationally protected. Note: Defra encourages the use of the term ‘Local Wildlife and Local Geological Sites’.</p> <p>We suggest that the policy explanatory text should place more emphasis on reconnecting lost linkages, and improving connectivity between nature conservation sites through the identification and creation of strategic corridors, inside London, and between London and the wider South East. Rivers and their surroundings provide valuable strategic ecological corridors.</p>	<p>Table 8.2. Please add in in ‘..., including river and stream restoration.’ under the category for ‘Wetland and open water created on site’.</p> <p>G6: Clarify the meaning of Sites of Importance for Nature Conservation at para 8.6.1, page 312 as follows:</p> <p>Important sites for nature conservation comprise:</p> <ol style="list-style-type: none"> 1. European sites (i.e. Special Protection Areas, Special Areas of Conservations (actual or candidate) and Ramsar sites) 2. National sites (i.e. National Nature Reserves, Sites of Special Scientific Interest) and: <p>Locally designated:</p>

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Policy G6 <i>continued</i>	<p>Natural England's detailed response refers in regards to 'net biodiversity gain'. We support the view that there is further scope for the Plan to guide that development results in a net gain in biodiversity, as would be consistent with the 25 Year Environment Plan, and its intention for 'environmental net gain'. Our reference under Policy G1 above to the CIRIA / CIEEM / IEMA guidance also refers.</p>	<ol style="list-style-type: none"> 3. Sites of Metropolitan Importance – strategically-important conservation sites for London 4. Sites of Borough Importance – sites which support habitats or species of value at the borough level 5. Sites of Local Importance – sites which are important for the provision of access to nature at the neighbourhood level. <ul style="list-style-type: none"> • We suggest, add to the policy and text to further support 'net biodiversity gain'. Refer to Natural England's response. • Under paragraph 8.6.2, we recommend adding to the last sentence to emphasise the imperative for development plans and proposals to consider opportunities for restoring and creating linkages between sites of nature conservation importance, and for preventing habitat fragmentation. • Under Paragraph 8.6.2, add. 'Rivers and waterways have an important strategic role as strategic ecological

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Policy G7 Trees and woodlands Page 313	<p>We welcome this policy, and the identification of tree valuation methodologies, which will support a Natural Capital Account for London.</p> <p>We suggest that policy delivery would be helped by requiring boroughs, in development plans and in green infrastructure strategies, to identify suitable locations for the regeneration of woodland, and measures for woodland management. Please refer to the Forestry Commission's and Natural England's response.</p> <p>We consider that it would be useful to insert a new section, similar to that for trees and woodlands, covering 'River protection and restoration'. This would provide higher policy recognition of the importance of London's rivers habitats and wildlife, than currently provided in the waterways policies of Chapter 9.</p> <p>A new policy section could identify the role of buffer zones alongside water courses, and emphasise the importance of the role they play for connectivity (people and wildlife movement). River restoration offers the opportunity to provide multiple benefits, which should be addressed in development plans and proposals. Given the linearity of river corridors, fostering cross-boundary collaboration between London boroughs, and with local authorities</p>	<p><i>corridors. Boroughs should seek opportunities to collaborate on identifying opportunities to protect and enhance this function</i>'.</p> <p>G7:</p> <ul style="list-style-type: none"> • We recommend the insertion of a new section, similar to that for trees and woodlands, covering 'River protection and restoration'. • At policy point B.2) we suggest adding to the text to read '<i>identify opportunities for tree planting, and for woodland regeneration in strategic locations.</i>' Subsequent text could refer to boroughs green infrastructure strategies as a mechanism for identifying and delivering those opportunities.

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<p>Policy G8 Food Growing Page 315</p> <p>Policy G9 Geodiversity Page 316</p>	<p>in the wider south east.is a key consideration for development plans and proposals. Consequently, a new section could support a range of policies in Chapter 9, including Policy SI17, and Policies GG3, GG6, and SD2.</p> <p>We welcome this policy, which will improve Londoners health, and the value people attach to the natural environment.</p> <p>We welcome this policy. Refer to Natural England’s response.</p>	

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<p>Ch.9: Sustainable Infrastructure Page 320 on</p> <p>Key points on this Chapter</p>	<p>We largely support the policy ambitions in this Chapter, and its focus on <i>sustainable</i> infrastructure delivery. We make recommendations for strengthening some policies. Given the scale of planned growth, we have some concerns and queries around policy deliverability and the evidence base, notably regarding circular economy and waste management, water infrastructure, and flood management.</p> <p>We welcome:</p> <ul style="list-style-type: none"> • The policy imperative to improve London’s poor air quality; • The Mayor’s zero carbon target by 2050; • The imperative for improving water infrastructure and efficiency of water use. • The advocacy of circular economy principles, increased recycling, and London’s waste self-sufficiency. • Policy support for flood risk management, notably the Mayor’s support for the Thames Estuary 2100 Plan, and options around a new Thames Barrier. • The imperative for development to deliver sustainable drainage, achieving Greenfield run-off rates, and supporting boroughs’ Surface Water Management Plans. • Support for Riverside Strategies, and Joint Thames Strategies; 	

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<i>Key points on Chapter 9 continued</i>	<ul style="list-style-type: none"> • Support for the objectives of the Thames River Basin Management Plan, and associated Catchment Plans • Support for energy strategies, and for green infrastructure in mitigating energy needs and reducing urban heat effects; • Recognition of the strategic role of the capital's waterways, and measures for their protection. We particularly welcome policy advocacy of river restoration and naturalisation. <p>We would like to see further work and discussion in the following areas of the Plan, with the objectives and targets within the Mayor's draft Environment Strategy in mind:</p> <ul style="list-style-type: none"> • Water infrastructure – the planned housing targets are not currently accounted for in the current draft water companies plans (Asset Management Planning round 6); • We would like to see stronger policy and advocacy of an approach to integrated water management embraced throughout the Plan; • Circular economy and waste - We consider that the delivery of targets and policy objectives are heavily challenged by the size and location of planned housing, and that this policy area's evidence needs further development; • Land contamination – It is essential to include policy and text on land contamination and its remediation in the Plan. • Flood management – the draft Regional Flood Risk Assessment requires development. Our separate detailed appendices advising on the RFRA also refers. 	

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<p>Policy SI1 Improving air quality Pages 320-1</p> <p>Para.9.1.6, Page 322</p> <p>Para. 9.1.10, Page 324</p>	<p>We support this policy, subject to the amendments below, and will work with the GLA to implement the policy where relevant to our statutory role. We especially welcome further integration of air quality within the planning process.</p> <p>Delivery will be dependent upon planning authorities having resources and capability to make assessments. To strengthen the policy, and to add clarity to it, we suggest the following amendments:</p> <p>We support this paragraph. Some sources are often missed in assessments e.g. back-up generators used by facilities such as data centres. These can have significant impacts on local air quality when on-line. We note these are mentioned in paragraph 9.6.5, but their potential air quality impacts are not.</p> <p>We support the important principle in this policy. It is critical that where improvements in air quality have been achieved the “headroom” created between the improved local ambient levels and legal limits is not filled by emissions from new developments especially large schemes.</p>	<p>SI1:</p> <ul style="list-style-type: none"> • Point 1) b). Define in explanatory text the meaning of “legal limits”. • Point 1) d). Define “unacceptable” risks. • Point 2). Strengthen as suggested below, as simply <i>minimising increased exposure</i> is not well defined • Point 3). We support this, but suggest that all large developments, including those for Opportunity Areas, are required to be supported by a full air quality assessment. This will prevent piecemeal development causing adverse impacts from incremental but cumulative increases in emissions. We support the <i>air quality positive</i> objective.

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<p>Policy SI2 Minimising greenhouse gas emissions Pages 324-5</p> <p>Policy SI3 Energy Infrastructure Page 329-30</p> <p>Policy SI4 managing heat networks Page 334</p>	<p>We support this policy and the Mayor's zero carbon target by 2050. There are embedded carbon implications for energy use in water supply and treatment. Therefore there is a link to be made between this policy, and the requirements of Policy SI5.</p> <p>It would assist policy deliver if there were interim, stepped targets for greenhouse gas emissions given the long-term nature of the Plan's carbon reduction target.</p> <p>We support this policy, notably, the requirement for energy masterplans' for large-scale development locations to: identify opportunities to utilise energy from waste; and, to identify possible heating and cooling network routes.</p> <p>We support the policy's positive commitment to heat networks. The use of waste heat networks, including those at district-level, are widespread in many northern European countries, often as a municipally owned public utility.</p> <p>We welcome the policy requirement at point B.2) for major development's energy strategies to provide green walls and roofs.</p>	<p>SI2:</p> <ul style="list-style-type: none"> • Add to the policy explanatory text, to reflect that the Mayor's requirements for water efficiency will also reduce energy use, and contribute to the delivery of the Mayor's zero carbon target. • The role of integrated solutions to water management, given that both water supply and wastewater treatment are carbon intensive, should also be promoted as contributing to policy delivery. <p>SI3. Please use explanatory text to cross-reference to Policy SI1, to ensure that the air quality impacts of energy centres and heating networks are minimised.</p> <p>SI4:</p> <ul style="list-style-type: none"> • Add to the policy wording at Policy point B. 2), requiring major development proposals to contribute to green space and features on and off-site to mitigate their energy needs and manage heat risks.

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SI5 Water Infrastructure Pages 336-7	<p>However we recommend strengthening that point to address the role and management of spaces between buildings as well as buildings themselves in mitigating heat gain, and increasing resilience to climate change.</p> <p>Managing heat risks is also essential to protect green infrastructure assets, such as open spaces and urban trees, and designated habitats, and in reducing water usage. Consequently there is scope to improve the policy explanation, justifying the policy and supporting other Plan policies in Chapters 8 and 9.</p> <p>We support this policy, subject to our comments below, particularly:</p> <ul style="list-style-type: none"> • The requirement for development proposals to meet the Building Regulations higher Optional Requirement for water consumption. This is essential to help manage London’s increasing water-supply demand deficit, given the expectations of the timely delivery of new homes and jobs. • The requirement for development plans to promote the protection and improvement of the water environment in line with the Thames River Basin Management Plan and associated Catchment Plans, whilst we suggest that is strengthened as below. • The requirement for development proposals to ensure adequate wastewater infrastructure capacity is provided, and that misconnections between foul and surface water networks are eliminated. 	<ul style="list-style-type: none"> • Add to the explanatory text, to justify the policy by reference to the broader policies in the Plan <p>SI5:</p> <ul style="list-style-type: none"> • Evidence must be made available in regard to water infrastructure to support the Plan’s proposals. We recommend that further discussion takes place with the water companies and ourselves, to ensure that the process for planning London’s future water supply and infrastructure needs are aligned with the spatial planning process. • We recommend adding to explanatory text, to clarify the responsibilities of borough’s development plans to have regard to water quality. This would support Policy Point D. We suggest adding text under paragraph 9.5.8 to read:

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<p>Para 9.5.4, Page 337</p>	<p>Recent dry weather events in 2010/11 and 2016/17 have shown that London needs to ensure that it has a resilient suite of water supply options. London remains in a position of increasing water demand-supply deficit.</p> <p>The work for supporting water supply and wastewater services is currently advancing in tandem with the water companies, to inform the Asset Management Planning round 6 (AMP 6). At paragraph 9.5.4, we note that four strategic water supply options are listed. We recommend the need for further discussions with water companies serving London, regarding their planning for water under AMP6, in regards to whether these options remain within current draft Water Resources Management Plans (WRMPs).</p> <p>The water supply options detailed in the draft WRMPs are predicated on expectations of build-out rates for homes which pre-date the housing targets now set out in the draft Plan, at Chapter 4, Table 4.1. Further work and re-modelling is likely to be required, and agreement reached, to evidence the security of future water supply across the London water resources zone.</p> <p>Likewise, in regard to wastewater treatment infrastructure planning, there is a need to ensure that the objective for achieving ‘good’ status for London’s water bodies, as required under the Water Framework Directive and in the Thames River Basin Management Plan, is not prevented by new / improved sewage treatment works’ capacity adversely impacting on receiving waterbodies.</p>	<p><i>‘Borough’s development plans are expected to be supported by evidence which demonstrates that the development planned for:</i></p> <p><i>a) Will not compromise the Thames River Basin Management Plan objective of achieving ‘Good’ status, or cause deterioration in water quality, and;</i></p> <p><i>b) Will be supported by adequate and timely provision of water infrastructure.</i></p> <ul style="list-style-type: none"> • We strongly recommend increasing the policy imperative for integrated water management strategies for the Opportunity Areas and other major growth locations. We suggest including, within the ‘blue box’ of Policy SI5, a requirement for <i>development plans and proposals to demonstrate that they have considered the opportunities for integrated solutions to water-related constraints and the provision of water infrastructure within major development locations.</i> Where identified, development plans should require an

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<p>Para. 9.5.2-3 Page 337</p>	<p>We would expect the evidence to provide reassurance that at local (Borough) level, the proposed growth can be accommodated without causing a detrimental impact on the water environment and/or a deterioration in water quality. Consequently, we welcome policy Point D, subject to our recommendation below.</p> <p>We expect water companies (supplying and treating water in London) to have taken account of the Plan's housing delivery figures and other planned growth in their draft plans under AMP 6. We will need to review this revised work as it becomes available to inform our views on the Plan's deliverability.</p> <p>We welcome the policy's explanatory text, but note that there is no reference to meeting water supply needs from sustainable, localised, sources of supply. Policy SI13 rightly places 'rainwater harvesting' at the top of the sustainable drainage hierarchy, and therefore there is scope to further integrate the objectives of these policies.</p> <p>We welcome the Mayor's commitment to water leakage reduction, which supports the water leakage targets set by Ofwat. Customers expect water companies to work hard to fix leaks and bring down levels of leakage. The government looks to London's water companies to honour the commitment they have made to their customers and set out a clear and ambitious plan to reduce leakage.</p>	<p>integrated and collaborative approach from developers.</p> <ul style="list-style-type: none"> • An integrated water management approach should be supported, and synergies identified, within other policy areas of the Plan, identified in our comments. • Add to explanatory text, emphasising the need for development to consider options for water supplies from sustainable sources, and to support integrated water management options, to achieve multiple benefits.

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Para.9.5.12, Page, 339, Integrated Water management strategies	<p>We are pleased to note the Paragraph 9.5.12 reference to Integrated Water Management Strategies needing to be considered in '<i>major development locations</i>'. An integrated approach to infrastructure delivery is a core objective of 'good growth' (Policy GG6), and of the Mayor's Environment Strategy. This approach has been relied upon in the planning of growth in several Opportunity Areas, such as Old Oak and Park Royal, and Old Kent Road.</p> <p>Nonetheless, we consider that the Plan's simple reference in explanatory text only, to '<i>integrated water management strategies should be considered</i>', with little broader support in policy, is not enough to gain policy traction. Integrated solutions to water management will make an essential contribution to reducing embedded carbon, reducing development costs, and to meeting the Mayor's objectives for increasing London's efficiency and resilience, and minimising greenhouse gas emissions . It will also support the delivery of policies on flood risk management (Policy SI12), sustainable drainage (Policy SI13), on 'greening London' (Chapter 8), the 'Healthy' Streets' approach to transport (Chapter 10), and the design – led approach to optimising housing provision (Chapters 3 and 4).</p> <p>Policy SI12 Flood Risk Management, refers to the Regional Flood Risk Assessment (RFRA). We welcome that the RFRA highlights those Opportunity Areas for growth where it is considered that there may be opportunities to consider an integrated water management approach.</p>	Para.9.5.12. Note above recommendations under Policy SI5.

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<p><i>Integrated Water management strategies, continued</i></p> <p>Policy SI7 Reducing waste and supporting the circular economy Page 344</p>	<p>Consequently, we consider that the Plan should increase the policy imperative for integrated water management solutions, and embed that approach within relevant policy areas of the Plan, such as: Policy SD1, Opportunity Areas; Policy D7 Public Realm; Policy G1 Green Infrastructure; Policy SI12 Flood risk management; and Policy SI13 Sustainable drainage. This would contribute to carbon efficient and good design, resilience to climate impacts, and efficient growth.</p> <p>We welcome this policy’s ambition and the circular economy principles. In light of the current recycling rates and the expected growth delivering this target will be challenging and will require a number of different approaches.</p> <p>We have the following comments on the targets identified in SI7:</p> <p>A.4a). The Plan proposes to increase the municipal waste recycling target from 60% to 65% from the previous London Plan. Overall waste arising has risen by around 22%. The evidence base for the Further Alterations to the London Plan (FALP) in 2015, identified a gap of between 1.8 and 4.1 million tonnes of treatment capacity in order to meet the current targets. The tonnage of materials recovered in London has dropped in recent years, and there has been little evidence of major increases in recycling capacity being delivered in the short or medium term. Given these factors, we consider the</p>	<p>SI7:</p> <ul style="list-style-type: none"> • Review the evidence and mechanisms for increasing the delivery of waste treatment capacity within the industry and wider stakeholders. We are happy to continue to contribute advice and data. Policy ambitions may need adjusted as the evidence evolves. • Clarify the Plan’s definition of ‘recycling’. It may be beneficial to have separate targets for construction and demolition wastes and excavated materials. • It would be beneficial for Circular Economy statements to identify the disposal routes for materials that cannot be reused/recycled and to identify the

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<i>S17 continued</i>	<p>delivery of this target using existing approaches will be very challenging.</p> <p>A.4b). The definition of meeting recycling targets for construction, demolition and excavated waste should be reviewed in light of the stricter interpretation of the definition of ‘disposal’ which encompasses many operations which have previously been defined as ‘recovery’. This results from the Methley Quarry judgement (<i>Tarmac Aggregates Ltd, R (on the application of) v The Secretary of State for Environment, Food and Rural Affairs & Anor</i> [2015] EWCA Civ 1149). In particular this will impact on the large scale tonnages of excavated materials from major construction projects such as HS2 and the proposed Crossrail 2. These materials have previously been used for the purpose of habitat creation schemes such as at Wallasea Island, which now fall under the landfill regulations.</p> <p>Although this changes the permitting regime under which these materials would be managed, it does not prevent them from continuing be processed for beneficial uses. We are aware that this is a policy area which the GLA is continuing to develop, in liaison with stakeholders including the Environment Agency. We will continue to support the Mayor’s team in their development of the waste policies, and the supporting evidence behind them. We would welcome a dedicated approach to these materials, and closer working with the authorities in the wider South East on this particular waste stream to identify suitable sites to deposit them.</p>	<p>most sustainable transport option for the movement of waste materials</p> <ul style="list-style-type: none"> • It would support the Plan to adopt a comprehensive waste strategy and site waste management plans to encompass all of these issues in major new developments. • Add a cross-reference to a policy on land contamination and remediation to support policy point B.1 above.

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Policy SI8 Waste Capacity and net waste self-sufficiency Page 347	<p>B. 1). The recycling and /or recovery of all construction and demolition waste is unfeasible. Some materials will need disposal due to toxicity, such as asbestos, etc. This is particularly the case for the development of former industrial areas, many of which are incorporated within identified Opportunity Areas for growth. We would suggest that there is a need for an overall strategy for contaminated land issues in London (<i>our comments below on this missing policy area refer</i>), as these have the potential to slow the rate of proposed development considerably. We do, however, support the aim of recycling and recovering a high proportion of this waste stream.</p> <p>The evidence base for waste, particularly the GLA's Task 1¹ and Task 2² reports, should be updated using the feedback from Environment Agency officers and other stakeholders, provided to the GLA in the Summer/Autumn of 2017</p> <p>We welcome the continuation of the current London Plan's general principle to aim for net waste self-sufficiency for waste where practicable. However, in our view, the ambition for self-sufficiency by 2026 is very challenging as a result of current delivery rates, and the difficulties in delivering waste facilities in London due to factors such as the high cost of land and labour.</p>	<p>SI8: Further and updated assessment is recommended in regards to the following:</p> <ul style="list-style-type: none"> • During your transition to a zero waste city you will need to work with the local authorities outside of

¹ https://www.london.gov.uk/sites/default/files/forecasts_for_household_and_commercial_industrial_waste_report_1_-_gla_waste_arisings_model.pdf

² https://www.london.gov.uk/sites/default/files/task_2_-_cdew_and_haz_waste_forecasts.pdf

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<p><i>S18 continued</i></p>	<p>We particularly welcome:</p> <ul style="list-style-type: none"> • Point A.2) – existing waste management sites should be safeguarded and your reference to Policy S19. • Point A.4) – new waste sites should be provided where required. <p>Whilst we are supportive of Policy S18’s aims, policy delivery relies upon boroughs where new waste sites are generally not being volunteered. These boroughs have been identified for both major development, and for increased waste apportionments. See points on Table 9.3 below.</p> <p>In relation to construction, demolition and excavated materials there will be challenges in delivering your aspiration to minimise export to landfill. Please refer to our comments on Policy S17 A.4b above.</p> <p>We have the following comments on the targets identified in S18:</p> <p>Point A. 1). The GLA’s modelling for the Further Alterations to the London Plan 2015 indicated that there was a treatment gap of around 1.8 million tonnes to enable achievement of net-self-sufficiency in waste by 2026 and 4.1 million tonnes at the end of the plan period, 2041. Based on current delivery rates and difficulties in developing waste capacity in London, we consider this gap to be very challenging to close.</p>	<p>London to find the best options for waste management. There will need to be cultural change to achieve a circular economy. This transition will be long and complex, and we are pleased that you continue to lead this now and into the future.</p> <ul style="list-style-type: none"> • Revision of the Task 2 report to take into consideration recent regulatory changes and to assess the tonnages that may be exported from London, especially for excavated materials. • An assessment would be beneficial of the effect of development targets upon the function of the existing waste infrastructure, and the scope for optimisation / development. <p>In relation to S18’s bullet points:</p> <ul style="list-style-type: none"> • A.3). We suggest clarifying the meaning of ‘<i>optimised</i>’ in explanatory text, in relation to waste management capacity.

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<p>Table 9.3, Page 351,</p>	<p>It would assist collaboration with stakeholders in the wider South East if the projections for waste exports (Table 9.3) were re-assessed with a series of scenarios for delivering waste capacity which safeguarded capacity outside London. This is particularly relevant, given that the London Plan waste projections impact on the waste plans being developed in the wider South East area.</p> <p>A. 3). It is not clear what is meant by the term ‘optimised’. The text implies an increase in capacity. Current operational and community feedback tells us that increasing the throughput of a waste facility can result in serious compliance issues, for example, through increased emissions of noise, dust and odours and traffic congestion. There can also be a higher risk of fires due to the increased storage of flammable materials. We currently see the impact on adjacent businesses and communities from waste sites and this is likely to increase due to intensification of development.</p> <p>Our comments here are linked to those on Policy SI18. There are currently boroughs where historically, waste sites have been focussed, which we note also have high targets for housing delivery in the Plan. Our experience in recent years is that locating housing developments within close proximity to waste</p>	<ul style="list-style-type: none"> • A.4). Implies that there is potential to deliver further capacity on new sites. This needs further assessment to confirm that this can be realised. • B.2). We note that the proposed waste apportionment (Table 9.2) is moving apportionment away from areas, such as west London, that have the most waste capacity. We recommend that this be re-considered as this may inhibit policy delivery. • B.3).a) Refers to ‘<i>maximising</i>’ the capacity of existing waste sites. This appears at variance with the ‘<i>optimising</i>’ approach at Point A. 3) and should be clarified. To support point B.3), it is suggested that the reference to ‘<i>maximising</i>’ site capacity be altered to “...<i>with a view to ensuring site capacity is not under-utilised.</i>”

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<i>SI18, continued</i>	<p>facilities can lead to a reduction in capacity, arising from an increase in complaints of nuisances from residents and businesses. These are often mitigated by reducing the permitted throughput of the site, particularly where enclosure of a site may not be practicable. The high value of land can also encourage the redevelopment of waste sites for other uses</p> <p>It should be noted that the optimisation of facilities may require considerable investment in waste separation and treatment technologies, and in equipment for the abatement / containment of emissions.</p> <p>B.2) The latest waste apportionments data, when compared to the data in Further Alterations to the London Plan, shows that there has been an overall increase of around 22% in the waste apportioned and that there is a greater emphasis being placed on many outer suburban authorities.</p> <p>Of particular note is the West London Waste Plan (WLWP) area. This has an overall increase in waste apportioned of around 62% compared with the current London Plan. The area's housing target has also been increased. A considerable amount of additional land will need to be found for waste management facilities, for example, this would equate to some 10 and 15 Hectares of industrial land needing to be safeguarded within the WLWP area.</p>	

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<p>Para. 9.8.11, Page 353</p>	<p>Other areas such as the South London Waste Partnership and East London Waste Disposal Authority areas also show significant increases in both housing and waste apportionment targets. Our work with Waste Planning Authorities and the former Regional Technical Advisory Boards (RTABs) on waste has highlighted the difficulties in finding suitable sites for waste management throughout the wider South East, and particularly in London.</p> <p>B. 3). We have concerns about the <i>phrase ‘maximising their capacity’</i>, particularly with respect to transfer stations, which can be problematic from a nuisance / regulatory compliance point of view. See also above comments on ‘optimisation’.</p> <p>D.4). We support the need to control emissions from sites by full enclosure. We regard ‘enclosure’ as proven best practice. However, it is not applicable in all cases, and the policy will need considered implementation. We look forward to working with the GLA to apply the policy where the site and local circumstances require it.</p> <p>At Para. 9.8.11, we note and support the continuation of the carbon intensity floor approach. This should encourage greater adoption of heat networks and utilisation of potential energy resources.</p> <p>We query that the current definition of ‘<i>apportioned</i>’ waste includes energy from waste and the production of fuels from waste, as well as recycling activities. There is a risk that sites used for operations</p>	

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<p>Policy SI9 Safeguarded waste sites Page 355</p> <p>Policy SI10 Aggregates Page 356</p>	<p>such as recycling and reuse could be exchanged for sites that engage in energy from waste and fuel production. This would be counter to the principles of the waste hierarchy and the Waste Framework Directive.</p> <p>We welcome points in regards to the safeguarding current waste management sites (Point A), and of no loss of capacity without compensatory provision (Point C). At Point C., we suggest that the term <i>'maximum achievable throughput'</i> is open to an interpretation that could lead to an over-estimation of capacity. Consequently, we recommend the policy amendments below.</p> <p>We note the policy. The target for construction, demolition and excavation waste at Point A.4), does not appear to account for recent changes to the waste regulations in regards to the deposit of wastes to land. We suggest that the GLA clarify their definition of <i>'recycled'</i> waste in relation to excavated materials, particularly those materials from major construction projects.</p> <p>Regards Point B, we note that the Plan relies heavily on Boroughs in the West of London, including Hounslow and Hillingdon (as part of the West London Waste Authority area). Those Boroughs are</p>	<p>SI9:</p> <ul style="list-style-type: none"> Define the term <i>'appropriate'</i> in SI9 C so that <i>'compensatory provision'</i> is on a like-for-like basis, based upon the waste hierarchy. Define the term <i>'capacity'</i> in SI9 C. This should be based on 4 year average rather than <i>'maximum achievable throughput'</i>. Alternatively, an assumption of tonnage per hectare could be used. <p>SI10:</p> <ul style="list-style-type: none"> Add to Point D. a further point, requiring development plans to: <i>'3) ensure the protection of environmental water quality, and safeguard public water abstractions'</i> Recommend that you review your definition of <i>'recycled'</i> waste.

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SI12 Flood Risk Management Page 359	<p>subject to major projects, such as the enabling works for HS2, and potentially a 3rd runway at Heathrow), in addition to expected increases in housing and other growth, proposed by the Plan.</p> <p>New sites for aggregates are generally difficult to identify, and development pressures in the London area may inhibit this further.</p> <p>We welcome Point D. related to site aftercare and restoration. Nonetheless the extraction of aggregates and other minerals may have adverse impacts on the water table, and upon public water abstractions. We therefore suggest that Point D is strengthened as below to safeguard London's water supplies, and support the delivery of the Thames River Basin Management Plan and associated Catchment Plans' actions.</p> <p>We strongly support the policy, subject to amendments. We welcome the explanatory text (page 360 on), at the following paragraphs:</p> <ul style="list-style-type: none"> • Para.9.12.1 – supporting cross-boundary co-operation between Lead Local Flood Authorities. • Para.9.12.2 - our Thames Estuary 2100 Plan which will help London adopt an 'adaptive pathways' approach to managing future tidal flood risk; • Para 9.12.3 - a new Thames Barrier; • Para 9.12.4 - a 'Riverside Strategies' (para 9.12.3) to coordinate improvements to flood risk management in the vicinity of the river; 	<p>SI12:</p> <ul style="list-style-type: none"> • Strengthen policy Point F. The policy wording, '<i>Where possible...</i>' places insufficient imperative for development proposals to be set back from flood defences. We recommend alternative wording to read, '<i>Unless exceptional circumstances are demonstrated for not doing so, development proposals should be set back from flood defences to allow for foreseeable future maintenance and upgrades,</i>

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<p><i>SI12 continued</i></p>	<ul style="list-style-type: none"> • Para.9.12.5 - the Thames River Basin Management Plan's Flood Risk Management Plan, as part of a collaborative and integrated approach to catchment planning. • Para 9.12.6 – making buildings (and utilities) resilient to the consequences of flooding • Para.9.12.7 – support for setting buildings back from flood defences to ensure future management and upgrading is cost-effective and sustainable. <p>We have advised on the development of the draft Regional Flood Risk Assessment (RFRA 2017), and are largely supportive of this. However, we consider that the draft RFRA can be improved, and refer you to our separately appended comments. These comments notwithstanding, the draft RFRA needs to more clearly set out the rationale used in the application of the Sequential Test to assessing flood risk (<i>National Planning Policy Framework, paragraphs 100-104</i>).</p> <p>Section 1.3 of the draft RFRA addresses the application of the Sequential Test. Paragraph 18 of that section highlights that the strategic approach followed was to reduce, by a varying percentage, via the Strategic Housing Land Availability Assessment (SHLAA) process, the potential housing capacity of sites dependent upon an evaluation of the level of flood risk. Paragraph 19 says that in major growth locations and town centres, the expectation is that boroughs will need to apply the Sequential Test in more detail when allocating uses.</p>	<p><i>and employing natural flood management methods to increase flood storage, and to create recreational areas and habitat.'</i></p> <ul style="list-style-type: none"> • Add a new paragraph to explanatory text to read: <i>'Measures to address flood risk, should be integral to development proposals and considered early in the design process. This will ensure they provide adequate protection, do not compromise good design, do not shift vulnerabilities elsewhere, and are cost-effective.'</i> • Review the explanation of the application of the flood risk sequential approach, and consider our appended detailed advice on the RFRA. Work to develop the RFRA is recommended.

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<i>SI12 continued</i>	<p>In our view, the rationale used in applying the Opportunity Area-specific % reductions used should be clearly set out. Further, we recommend adding text to the RFRA's subsequent text on the Opportunity Areas, to demonstrate how the Sequential Test has been applied within the growth areas, including any information provided by the Local Authorities following their consultation. Currently there is an element of uncertainty in the evidence on flood risk, particularly in the Opportunity Areas, where housing numbers are set by the Plan. If subsequent application of the Sequential Test by boroughs shows that the new homes targets in the Plan cannot be accommodated within areas at lowest flood risk, then consideration would need to be given to accommodating development in areas of higher flood risk. If assessment shows that the development cannot be safely accommodated, some boroughs may fail to accommodate their housing targets. We are happy to advise further on the draft RFRA as it evolves, and in the meanwhile our appended detailed advice on the RFRA refers.</p> <p>Note that the Environment Agency would object to the approval of planning permission should proposed development restrict the future upgrading of flood defences.</p> <p>It is important to design out flood risk from the earliest stages of development design. Consequently we recommend that an additional point is added to explanatory text, which is similar to that included at paragraph 3.10.3 related to crime.</p>	

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	<p>We consider that it would support the London Sustainable Drainage Action Plan, and its emphasis on retrofitting, to have that directly supported within Policy S112.</p> <p>We recommend that the explanatory text references Chapter 3, 8 and 9's policies. Notably, the Plan's expectation that the consideration of good design, green infrastructure, and integrated water management solutions, will assist in identifying opportunities for development to move up the Plan's sustainable drainage hierarchy.</p>	<p><i>use efficiency, improves river water quality, and enhances biodiversity, amenity and recreation.'</i></p> <ul style="list-style-type: none"> • We suggest supporting retrofitting, by inserting an additional bullet point E to read, <i>'Development proposals should demonstrate that they have considered the potential of retrofitting solutions to achieving greenfield run-off rates wherever practicable'</i> • We recommend reinforcing the sustainable drainage hierarchy by adding the text in italics below to the end of paragraph 9.13.3, 1st sentence on Page 363 which reads, 'This should include suitable pollution prevention measures, <i>ideally by using soft engineering and green infrastructure'</i>.' • We suggest cross-referral to relevant policy objectives elsewhere in the Plan related to good design, public realm, 'greening', and to the requirement for

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<p>Policy SI14 Waterways – strategic role Page 363 Page 365</p>	<p>We support Policy SI14. Co-ordination and alignment between marine and terrestrial planning both inside and outside London will contribute to delivery of our Thames Estuary 2100 Plan, and to the identification of options for a new Thames Barrier.</p> <p>We strongly support the following text which will encourage a more strategic and collaborative approach:</p> <ul style="list-style-type: none"> • Paragraph 9.14.2 - Recognition that London’s waterways are multi-functional assets • Paragraph 9.14.3 – The establishment of the Thames London Waterways Forum • Paragraph 9.14.4 – The renewed emphasis on establishing Thames Policy Areas • Paragraph 9.14.6 –We welcome reference to the preparation of Joint Thames Strategies, subject to the recommendation below. See also notes above under Policy SI12 on the need for clarity of function between Joint Thames Strategies and strategies and Riverside Strategies. 	<p>integrated solutions to water management.</p> <p>SI14:</p> <ul style="list-style-type: none"> • Amend paragraph 9.14.2. The last sentence implies that Riverside Strategies are widely available, but they are not yet. Change to ‘Many of these functions will also be supported by boroughs’ local Riverside strategies...’etc. Also reference the ‘greening’ policies of Chapter 8 as supporting Policy SI14. • Amend para. 9.14.6. We recommend that a new point is added reading, <i>the cumulative impacts of river crossings and other structures at ‘catchment’ scale</i>’. • Amend para. 9.14.6. We also recommend amending points regarding environmental improvements and / or ecological importance to <i>include ‘ecological enhancement’</i>. These may for example cover, ease of fish and eel passage, and river restoration opportunities

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Policy SI15 Water transport Page 368	<p>We welcome the safeguarding of wharves for water-bourne freight. Wharves will be an increasingly important component of London’s ability to handle and sustainably transport aggregates and materials from construction, given the number of on-going, nationally significant infrastructure projects in London, and the Plan’s designation of riverside Opportunity Areas for growth.</p> <p>In regard to policy Point C., the transport of freight by may have adverse environmental impacts, such as, the need to dredge rivers deeper to accommodate larger vessels and more frequent trips. This policy could potentially make it more difficult to meet Thames River Basin Management Plan aims for ‘good’ status. We therefore suggest qualifying Point C as below.</p> <p>The policy seems to be addressing the River Thames in particular, but it should explicitly address the tributaries to the Thames.</p> <p>Within Policy point E. we note the reference to term ‘viable’ Our concern is that waste freight movements are subject to high market volatility. We suggest that the viability of wharves should also be related to the ease of access, and technical handling potential. We note at the time of writing that various evidence documents have not yet been uploaded to the GLA website:</p> <ul style="list-style-type: none"> • Safeguarded Wharves Review – consultation draft (to follow) • Strategic Environmental Appraisal of the Safeguarded Wharves Review, WSP Consultants (to follow) 	SI15: <ul style="list-style-type: none"> • Amend Point C, adding, ‘...<i>should be supported, subject to a Water Framework assessment to ensure there is no deterioration of status of a waterbody.</i>’ • Clarify in explanatory text that the policy applies to London’s ‘blue ribbon network’ , including tributaries of the Thames

<p>London Plan ref. Chapter/ Para. / Page</p>	<p>EA response: Comments Our detailed comments on individual policies and text</p>	<p>EA Response: Recommendations Our recommendations for changes to the Plan</p>
<p>Policy SI16 Waterways – use and enjoyment Page 371</p> <p>Policy SI17 Protecting London’s waterways Page 373</p>	<ul style="list-style-type: none"> • Forecasting London’s Freight Demand and Wharf Capacity on the Thames 2015-41, Ocean Shipping Consultants (to follow) <p>We support policy point H, with reference to the improvement and expansion of the Thames Path, and the need for collaboration with partners including the Environment Agency. The policy will promote connectivity along the Thames Path route with the wider area.</p> <p>We welcome Policy SI17, particularly Point A, that development proposals that facilitate river restoration, opening culverts and naturalising river channels etc. should be supported, and those that impound and constrain waterways should be refused. This will have multiple benefits. Nonetheless, we recommend strengthening this policy to support opportunities to:</p> <ul style="list-style-type: none"> • Improve water quality, thus meeting Thames River Basin Management objectives, and • Enable net gain for riparian and terrestrial habit gains in and associated with river corridors, and buffer zones. • De-culvert rivers, and restore them to a more natural state. <p>In Point A, the term ‘<i>if appropriate</i>’, weakens the policy, and is not present in Policies SI15 and SI16. Consequently there is a potential policy bias towards use and enjoyment, and on water transport over river restoration. There are unlikely to be circumstances where it would be inappropriate to consider the matters listed.</p>	<p>SI17: Please strengthen policy, Point A:</p> <ul style="list-style-type: none"> • Alter 1st sentence to read: ‘...protect the foreshore, increase heritage value, protect and improve riparian and terrestrial habit, and improve water quality should be supported.’, and delete ‘...where appropriate...’ from the end of this 1st sentence. There are unlikely to be circumstances where it would be inappropriate to consider these matters. • Add a sentence to the end of point A, related to culverting to read: ‘Where culverting is required, development proposals should demonstrate that there is no net increase in

<p>London Plan ref. Chapter/ Para. / Page</p>	<p>EA response: Comments Our detailed comments on individual policies and text</p>	<p>EA Response: Recommendations Our recommendations for changes to the Plan</p>
<p><i>SI17 continued</i></p>	<p>Clarity in explanatory text is required around the term '<i>constrain</i>' waterways used in Point A. If the meaning is, replacing natural banks with concrete, then we encourage a reversal of this trend, through the setting back flood defences and reinforcements, leaving room for water. We suggest that that could be set out in the explanatory text, which would also support Policy SI12.</p> <p>We consider that Policy SI17 should support and cross reference to the river catchment approach, and it's potential to support growth. This helps support: Policy SI5, and its objective to protect and improve water quality in line with the Thames River Basin Management Plan, and Catchment Plans; Policy SI12, and its objectives for riverside strategies; and to the objectives of Policy SI14, and the strategic role of waterways. Further the policy, aiming to facilitate river restoration, has a role in implementing the objectives of policies in Chapter 8, notably regarding Policy G4, (Local green and open space), Policy G5 (Urban greening), and Policy G6 (Biodiversity and access to nature) .</p> <p>In support of a river catchment approach, we strongly suggest that the explanatory text highlights London's other river corridors, such as for the rivers Crane, Lea, Wandle, Ravensbourne and Brent. To help raise the profile of the capital's wider river network, we suggest a river network map is included in the Plan.</p>	<p><i>impoundment of the waterway on site.'</i></p> <ul style="list-style-type: none"> • Define, and clarify in explanatory text the meaning of '<i>constrain</i>' waterways in Point A, 2nd sentence. • Amend point E. As on-shore power is not always practical at all sites we suggest amending the text to read: '<i>On-shore power at water transport facilities should be provided where possible at wharves and residential moorings to help reduce air pollution</i>'. • Add a policy point, requiring boroughs, in preparing development plans, to identify any parts of the river network where river restoration, including biodiversity improvements, will be sought <p>We also recommend:</p> <ul style="list-style-type: none"> • Review the policy against the current London Plan's range of 'Blue Ribbon Network' policies, notably Policy 7.28 and text, which we consider is stronger

London Plan ref. Chapter/ Para. / Page	EA response: Comments Our detailed comments on individual policies and text	EA Response: Recommendations Our recommendations for changes to the Plan
Additional Policy Area – Contaminated Land and remediation	<p>It is our firm view that land quality and remediation of contamination is a missing policy area within the draft Plan. The current London Plan addresses land contamination (Policy 5.21). The draft London Plan is an opportunity to improve upon that policy, and clarify expectations for a strategic approach to tackling contamination, particularly given the proposed ‘clustering’ of Opportunity Areas for growth.</p> <p>Many of the Mayor’s Opportunity Areas (and major growth locations), rely heavily on the development of brownfield land, some of which is contaminated, impacting on water bodies, groundwater, and potentially surface water.</p> <p>The draft Plan’s Integrated Impact Assessment (IIA) addresses Geology and Soils. At IIA, Section 5.20, p.24 Geology and Soils,</p>	<p>in terms of delivering action on restoring and protecting the river network.</p> <ul style="list-style-type: none"> • Add to explanatory text to identify the role of Policy SI17 in implementing policies elsewhere in Chapters 8 and 9. • We recommend the addition of a map in the Plan, identifying London’s river network, to add clarity to the Policy, and provide a higher profile to rivers other than the Thames. <p>We strongly recommend that the new Plan includes a policy and text on land contamination and remediation. The Plan should identify and promote a strategic approach for London, and for development plans and proposals to follow in tackling contamination, particularly given its focus on brownfield locations for accommodating major new growth.</p> <p>This would contribute to bringing brownfield land back into beneficial use, and ensure that the development of brownfield land results in</p>

London Plan ref. Chapter/ Para. / Page	EA response: Comments Our detailed comments on individual policies and text	EA Response: Recommendations Our recommendations for changes to the Plan
<p><i>Contaminated Land continued</i></p>	<p>there is recognition that some areas in London have high levels of contamination, and that this is particularly an issue for some of London's larger brownfield sites which require development.</p> <p>At IIA, page 28, a key issue is '<i>Remediation of contaminated land</i>'. We agree. At IIA, page 33, we note that relevant assessment questions include: <i>restoration of degraded soil?</i> and '<i>minimise the risk of health impacts through contamination</i>'.</p> <p>There was discussion in the IIA Scoping Report around the opportunities to focus on prevention and remediation of soil and contamination, and to adopt a co-ordinated approach to bring derelict land, with high abnormal costs, back into use (IIA Scoping Report, Section 5.22, p.137 on). However this discussion does not appear to have been followed through in the IIA itself.</p> <p>The benefits of dealing with contamination strategically are evident in the London Legacy site's development. A Global Remediation Strategy (GRS) was developed and implemented for the regeneration of the 250ha Olympic Park. The GRS established the framework by which Site Specific Remediation Strategies (SSRS) were determined for each Olympic Park construction zone. Implementing this framework enabled sustainable soil and groundwater remediation techniques to be planned and delivered, and enabled more than 90 % of one million cubic metres of contaminated soil to be cleaned and reused on site.</p>	<p>the reduction of significant harm to human health and the environment.</p> <p>We are happy to advise further on policy wording and approach as required.</p>

London Plan ref. Chapter/ Para. / Page	EA response: Comments Our detailed comments on individual policies and text	EA Response: Recommendations Our recommendations for changes to the Plan
<i>Contaminated Land continued</i>	<p>Brownfield land within major growth locations may have a combination of problems, including contamination that can be addressed more economically and sustainably with a strategic approach. GRS for large multiple development sites can help strategically address land contamination issues at the planning stage and help deliver sustainable results on a strategic scale.</p> <p>Remediating contamination, and consequently improving soil and groundwater quality would aid the delivery of Plan objectives for improving health, greening London, supporting biodiversity gain, and would contribute to the feasibility of sustainable drainage systems in locations where it otherwise would be unfeasible.</p> <p>We draw attention to the Old Oak and Park Royal Mayoral Development Corporation's revised Local Plan 2017, Policy EU13 which promotes a strategic approach in supporting development which effectively tackles contamination across the 3 boroughs which comprise the Old Oak and Park Royal Opportunity Areas.</p> <p>Consequently, we consider that the draft Plan must take the lead in promoting a strategic approach to tackling soil contamination and remediation, and contributing to the prevention of contamination to water bodies, groundwater and surface water, based on current best practise and guidance. We would expect revisions to the IIA to address the key issues and questions it correctly raises.</p>	

London Plan ref. Chapter/ Para. / Page	EA response: Comments Our detailed comments on individual policies and text	EA Response: Recommendations Our recommendations for changes to the Plan
<p>Page 404, Para 10.2.4</p> <p>Page 404, Para.10.2.5</p> <p>Policy T3 Transport capacity, connectivity and safeguarding Page 406</p> <p>Table 10.1 Pages 407-10</p>	<p>compliment objectives to enhance access to green space for communities poorly served by such resource (as indicated by the Accessible Natural Green Space Standards). There is scope in explanatory text to further set out the role of the 'Healthy Streets' approach in achieving multiple policy benefits</p> <p>Under para 10.2.4, the strong message regarding 'positive changes to the character and use of the city's streets.', should be reinforced by referencing the role that green infrastructure has in supporting ease of access and dispersal from transport hubs. This could be linked to Chapter 3 and Chapter 8.</p> <p>We welcome reference to the Mayor working in partnership to... <i>'plan the capital at the network level'</i>, which will support the consideration of strategic green infrastructure, and sustainable drainage with transport development.</p> <p>We welcome policy point B.3), but recommend an amendment to support policies elsewhere in the Plan which promote sustainable access and connectivity.</p> <p>In regards to the indicative list of transport schemes, we would support any measures, within our remit to do so, to reduce emissions and improve the capital's poor air quality.</p>	<p>The policy aims would be strengthened through cross-referral in explanatory text to design and 'greening' policy aims in Chapters 3, 8 and 9.</p> <p>T3: Add to policy point 3) 'safeguarding and improving access to the Walk London Network...'</p>

London Plan ref. Chapter/ Para. / Page	EA response: Comments Our detailed comments on individual policies and text	EA Response: Recommendations Our recommendations for changes to the Plan
<p>Policy T4 Assessing and mitigating transport impacts Page 412</p> <p>Policy T5 Cycling Page 414</p> <p>Policy T6 Parking Page 420</p> <p>Policy T7 Freight and servicing Page 430</p>	<p>We welcome initiatives to increase sustainable modes of transport, and encourage cross referral to policies for design, greening and sustainable drainage in Chapters 3, 8 and 9. We welcome the need for transport assessments to support the ‘Healthy Streets’ approach at policy point B.</p> <p>We welcome Policy T5, notably Policy point A. 1) which supports the delivery of a London-wide cycling network. The policy aims could be strengthened through cross-referral in explanatory text to design and ‘greening’ policy aims in Chapters 3 and 8.</p> <p>The policy aims would be strengthened through cross-referral in explanatory text to design and ‘greening’ policy aims in Chapters 3 and 8.</p> <p>We welcome the requirement for Opportunity Area Planning Frameworks and other area-based plans to include freight and servicing strategies. This supports the Mayor’s draft Transport Strategy objective to transfer freight from London’s roads. If effectively delivered, freight consolidation opportunities will contribute to reduction in emissions, and to meeting the Mayor’s zero carbon targets, thus building resilience to climate change.</p>	<p>T5: Add to Policy point A. 1). A. After, ‘...<i>improved infrastructure</i>’...’including green infrastructure.’ This would support Healthy Streets objectives, ‘greening’ policies in Chapter 8 and the sustainable drainage hierarchy in Chapter 9.</p> <p>T6: Cross-referral in explanatory text to design and ‘greening’ policy objectives in Chapters 3 and 8.</p> <p>T7: The policy aims would be strengthened through cross-referral to the objectives of Policies SI14-16.</p>

London Plan ref. Chapter/ Para. / Page	EA response: Comments Our detailed comments on individual policies and text	EA Response: Recommendations Our recommendations for changes to the Plan
<p>Policy T8 Aviation Page 433</p> <p>Policy T9 Funding transport infrastructure through planning Page 438</p>	<p>We note the Mayor’s policy, and text on the expansion of Heathrow airport. We would expect all airports to adopt the approach identified at point T8 C). We anticipate that the Secretary of State’s views will be relevant regarding policy alignment with the draft National Planning Statement on Aviation.</p> <p>We welcome the inclusion, at policy point B, of a requirement for boroughs to identify improvements to the public realm and the necessary funding.</p> <p>We are aware that Transport for London are proposing to establish a biodiversity baseline on all of their assets. The purpose is to embed net gain into all of their projects (this will be monitored and recorded), and we welcome that approach.</p> <p>Crossrail 2 are developing Green Infrastructure principles and adopting net gain, as are Network Rail, and Highways England. We are working collaboratively with TfL and Network Rail on Crossrail 2 to ensure that the environmental opportunities can be realised.</p>	<p>T9: Identify within the explanatory text that transport infrastructure schemes should deliver multiple benefits, such as the delivery and protection of green infrastructure, a net positive impact on biodiversity, and enable sustainable drainage. This would support policies in Chapters 3, 8 and 9, in addition to the objectives of the Mayor’s Transport and Environment strategies.</p>

London Plan ref. Chapter/ Para. / Page	EA response: Comments Our detailed comments on individual policies and text	EA Response: Recommendations Our recommendations for changes to the Plan
<p>Enabling infrastructure Page 448 on</p>	<p>delivering the Plans objectives the places people want to live in and can thrive.</p> <p>Environmental infrastructure such as that for tidal, river and surface water flooding, providing treatment for wastewater, and for waste treatment, and to provide green space is essential to enabling sustainable and timely growth, and to delivering the Mayor's Environment Strategy.</p> <p>We suggest that it would assist the Plan's delivery to develop a London Plan 'Implementation Plan'. This may detail interim targets / key indicators of performance against your objectives for the different sectors, given the reliance on partnership and collaboration for Plan implementation.</p> <p>We have concerns with how some of the figures for flood risk, water management, Green Infrastructure, and waste capacity have been derived and represented within the <i>London's strategic infrastructure requirements</i> report. We look forward to continuing to work with you and your consultants, ARUP, on resolving these issues to ensure all decisions are underpinned by a sound and complete evidence base</p> <p>There is currently no reference to flood risk management infrastructure under this heading. It is not clear that this is covered under 'Utilities' at page 450, para 11.1.41 – 43.</p>	<ul style="list-style-type: none"> • Add to policy point D. to refer to planning and funding of environmental infrastructure as a priority. • We recommend that the Mayor's Strategic Infrastructure Investment Programme should be used as a reference point, and that borough's priorities are linked to this. This may include prioritising environmental infrastructure, such as improved flood defences, where this would enable sustainable growth. • We recommend that consideration be given to developing a London Plan 'Implementation Plan' <p>Enabling Infrastructure:</p>

London Plan ref. Chapter/ Para. / Page	EA response: Comments Our detailed comments on individual policies and text	EA Response: Recommendations Our recommendations for changes to the Plan
	<p>We welcome the sections on ‘Utilities’, (page 450), ‘Green Infrastructure’ (pages 451-2), and on Waste and Circular Economy’ (page 453).</p> <p>In regards to the new homes targets, we note that in 11 boroughs, over 50% of new homes delivery is expected to be on ‘small sites’ of under 0.25 hectares in size. This may result in more complex and piecemeal funding of strategic and local environmental infrastructure through Community Infrastructure Levy, and through planning agreements.</p> <p>Given the current Policy DF1 priority on funding for affordable housing delivery and public transport, the enabling of environmental infrastructure requires early assessment by boroughs to support plan-making, through inclusion in Development Infrastructure Funding studies. It also calls for boroughs to work together on joint studies where this would enable effective timing and funding of strategic environmental infrastructure and the consideration of integrated solutions. It would also help to avoid planning delays, with debate over viability.</p>	<ul style="list-style-type: none"> • Add under ‘Enabling Infrastructure’ a new sub-heading and text covering ‘flood risk management’. Under this heading, the Mayor could signal his intention to use the London Plan and his influence, particularly in the Opportunity Areas for growth and in Housing Zones, to require development plans and their evidence bases to highlight locations where flood defences need to be raised / improved and built, and to investigate opportunities to deliver flood defence investment through development. This would support the implementation of the Thames Estuary 2100 Plan, and the boroughs’ Surface Water Management Plans. • Add to the sub-heading on ‘Green Infrastructure’ at paragraph 11.1.45 on, referring also to: the Defra 25 year plan in regards to Natural Capital underpinning economic growth, and how it supports the Mayors’ Economic Development Strategy; and, to the Mayor’s Natural Capital Report of green spaces, which will inform further work in

London Plan ref. Chapter/ Para. / Page	EA response: Comments Our detailed comments on individual policies and text	EA Response: Recommendations Our recommendations for changes to the Plan
Ch.12: Monitoring	<p>We consider that the list of Key Performance Indicators and Measures at Table 12.1 is currently incomplete. In our view these should, for example, include indicators linked to the Mayor's targets covering 'greening' London, to biodiversity net gain, to the reduction in flood risk, and to waste. We would support the work by the Mayor in developing these indicators, and by providing data to enable monitoring.</p>	<p>developing London's Natural Capital approach.</p> <ul style="list-style-type: none"> • Add explanatory text in support of Policy SD2, encouraging Local Authorities to co-operate with each other across administrative boundaries on producing joint Development Infrastructure Funding studies (DIFs) to evidence development plans where joint investment would enable effective and timely delivery of strategic infrastructure. <p>Review the range of Key Performance Indicators. We can advise on this if requested.</p>

Appendix B. Environment Agency response to the draft Regional Flood Risk Appraisal (RFRA)

RFRA ref. Chapter / Page	EA response: Comments Our detailed comments	EA Response: Recommendations Our recommendations for changes
<p>Key points</p>	<p><u>Application of the Sequential Test</u> We suggest that further clarification is needed regarding the application of the Sequential and Exceptions tests. RFRA Paragraph 18 addresses the use of the Strategic Housing Land Availability Assessment, saying that the Local Authorities were able to influence the probability percentages using their surface water mapping. We recommend that this be clarified further. For example: How many Local Authorities replied? How did Local Authority responses impact upon overall housing numbers? How were the site capacity percentage reductions derived? Our detailed response to the draft London Plan (our Appendix A) also refers.</p> <p><u>Clarity of mapping</u> It should be made very clear on the map of multiple sources (Map 1) that this takes into account flood defences.</p> <p><u>Recommendations should link to the draft London Plan</u> Recommendation 1 and 2 should be linked to London Plan, Policy SI12. This is consistent with Recommendation 3 which is linked to Policy SI13.</p> <p><u>Thames Flood Risk Management Plan</u> The Catchment Flood Management Plan (CFMP) is mentioned throughout the document. It would be more appropriate to reference the Thames Flood Risk Management Plan (FRMP) instead. The FRMP is a statutory document, and was published more recently than the CFMP, which is not statutory. Many of the measures for managing flood risk have been incorporated into the FRMP from the CFMP.</p>	<p>See specific chapter sections for recommendations.</p>

RFRA ref. Chapter / Page	EA response: Comments Our detailed comments	EA Response: Recommendations Our recommendations for changes
	<p><u>Climate Change</u> Although some work has been done to show potential impacts of climate change, this should be stronger throughout the whole document.</p>	

RFRA ref. Chapter / Page	EA response: Comments Our detailed comments	EA Response: Recommendations Our recommendations for changes
<p>Executive Summary</p> <p>Page 4</p> <p>Page 4</p>	<p>P4 Paragraph 3: Terminology of flood risk should be defined here, i.e. what does 'high risk' of flooding mean?</p> <p>P4 Reword the paragraph starting: <i>"The highest percentages in terms of the number of strategic infrastructure assets in high flood risk areas apply to utility sites (44 per cent of 587 sites), hospitals (43 per cent of 191 sites), and waste sites (34 per cent of 312 sites)..."</i></p>	<p>Clarify terminology to remove ambiguity.</p> <p>Suggested rewording: <i>"The types of strategic infrastructure with the highest percentages of assets in high flood risk areas are utility sites (44 per cent of 587 sites), hospitals (43 per cent of 191 sites) and waste sites (34 per cent of 312 sites). These percentages are expected to be an over-estimate due to the flood model defining buildings as 'at risk' even if only a small proportion of the building is shown within the flood outline. This means that further analysis is required to determine whether flooding would actually enter buildings or leave the structure unable to operate. Other infrastructure assets such as transport routes and stations, emergency services and schools have lower proportions of buildings and assets at high flood risk"</i></p>

RFRA ref. Chapter / Page	EA response: Comments Our detailed comments	EA Response: Recommendations Our recommendations for changes
<p>Ch.1 Introduction</p> <p>Page 6</p>	<p>P6 Paragraph 7. Reword the paragraph starting: <i>'The Thames Estuary 2100 Plan (TE 2100) was published by the Environment Agency and endorsed by Government in November 2012....'</i></p>	<p>Suggest amend to: <i>'The Thames Estuary 2100 Plan (TE 2100) was developed by the Environment Agency and was approved by Defra in 2012. It provides strategic direction for managing flood risk in the Thames Estuary to the end of the century, and includes requirements to maintain and raise some tidal defences. TE 2100 is an adaptive plan, which considers different long-term options for managing tidal flood risk depending upon changes in several factors that determine the risk, including sea-level rise. These changes are reported on an interim basis (5 yearly) and full basis (10 yearly). The Environment Agency published an interim review in 2016, which found changes are broadly taking place in line with the TE 2100 Plan's predictions⁵. The TE 2100 Plan introduces the concept of Riverside Strategies to improve flood risk management in the vicinity of the river, create better access to and along the riverside, and improve the</i></p>

RFRA ref. Chapter / Page	EA response: Comments Our detailed comments	EA Response: Recommendations Our recommendations for changes
Page 6	P6 Paragraph 10. We suggest adding to the text to clarify the RFRA's approach to climate change.	<p><i>riverside environment. These will be collaborative documents and the GLA will support their production.'</i></p> <p>Suggest add at end of paragraph '<i>It is expected that a more detailed assessment of climate change is completed by developers at the start of development planning.'</i></p>
Page 7	P7 Paragraph 13. We would like to see the inclusion of a message to encourage consideration of flood risk from early in the planning process, so that space for sustainable drainage techniques are incorporated in development design and in plans.	<p>Add wording, such as: '<i>developers should consider flood risk from the earliest stages in development design and planning, so that space to implement sustainable drainage techniques is incorporated, and their future maintenance and management is considered'</i>.</p>
Page 9	<p>P9 Paragraph 18, the rationale used in applying the Opportunity Area-specific percentage reductions used should be clearly set out. Further, we recommend adding text to the Opportunity Areas discussion subsequently in the RFRA, to demonstrate how the Sequential Test has been applied within the growth areas, including any information provided by the Local Authorities following their consultation.</p> <p>Currently there is an element of uncertainty in the evidence on flood risk, particularly in the Opportunity Areas, where housing numbers are set by the Plan. If subsequent application of the Sequential Test by boroughs shows that</p>	

RFRA ref. Chapter / Page	EA response: Comments Our detailed comments	EA Response: Recommendations Our recommendations for changes
<p>Page 9</p> <p>Ch.2 Overview of Flood Risk to London</p> <p>Page 10</p>	<p>the new homes targets in the Plan cannot be accommodated within areas at lowest flood risk, then consideration would need to be given to accommodating development in areas of higher flood risk. If assessment shows that the development cannot be safely accommodated, some boroughs may fail to accommodate their housing targets. We are happy to advise further on the draft RFRA as it evolves.</p> <p>P9 Paragraph 20. Exceptions Test description could be made clearer</p> <p>Tidal Flood Risk Page 10, paragraph 30. Please correct ‘easterly winds’ to ‘northerly winds’ and reword the sentence: <i>‘These occur when a combination of high tide, easterly winds and a weather system depression over the North Sea can cause the tide levels to increase significantly above the normal tidal range.’</i></p>	<p>Suggested rewording: <i>‘An exception test needs to show that the sustainability benefits of the development to the community outweigh the flood risk. It also needs to show that the development will be safe for its lifetime taking into account the vulnerability of its users and that it won’t increase flood risk elsewhere.’</i></p> <p>Page 10, paragraph 30, suggest reword to: <i>‘The highest of these occur when a combination of high tide, northerly winds and a weather system depression over the North Sea cause tide levels to increase significantly above the normal tidal range.’</i></p>

RFRA ref. Chapter / Page	EA response: Comments Our detailed comments	EA Response: Recommendations Our recommendations for changes
Page 11	P11, Paragraph 31. Please amend to reflect that embankments have not all been raised by 2 metres.	<p>Page 10, paragraph 30. Recommend omitting <i>'Previous incidents of this type of flood risk date back to 1236.'</i> Or amending to <i>'Records of incidents of this type of flood risk date back to at least 1236.'</i></p> <p>Page 11 paragraph 31 – please amend to add wording underlined below: <i>'There are also around 400 smaller barriers and movable flood gates downstream of the Thames Barrier and over 300 km of river walls and embankments stretching into Essex and Kent that have been raised by <u>up to 2 metres</u> to give additional protection from storm surges.'</i></p>
Page 11	P11 Paragraph 32. The existing Thames Barrier site is one of the potential barrier options for the future so please change the final sentence.	Suggest reword to: <i>'Potential sites <u>may</u> be needed in Kent and Essex requiring close partnership working with the relevant local authorities.'</i>
Page 14	P14 Paragraph 41. It states <i>'the Environment Agency's TE2100 plan'</i> . Although the plan was written by the Environment Agency it is a partnership effort to deliver, it is not owned by the Environment Agency.	P14 paragraph 41 please just refer to <i>'the Thames Estuary 2100 plan.'</i>
Page 14	P14 Paragraphs 42 – 47. Note that these 4 broad areas were only used in the early conceptual options, and are not used to define areas for actions in the final Thames Estuary 2100 Plan. Please can you delete these paragraphs	Suggested rewording / replacement paragraphs:

RFRA ref. Chapter / Page	EA response: Comments Our detailed comments	EA Response: Recommendations Our recommendations for changes
<p><i>P14 Paragraphs 42 – 47 continued</i></p>	<p>and refer to the Thames Estuary 2100 Action Zones instead (see page 50 onwards in the Thames Estuary 2100 Plan).</p>	<p><i>'41. The Environment Agency and its partners are working together on the implementation of these actions¹⁹. The Thames Estuary 2100 Plan divides the estuary into 23 policy units, which describe the type of flood risk management approach applicable in each area. These policy units are grouped into eight local action zones, which require a similar type and range of actions, and an estuary-wide zone. The following Action Zones fall within London:</i></p> <p><i>42. Action zone 0 – estuary-wide (Teddington to Shoeburyness on the Essex coast, and Sheerness on the Kent coast): Actions here include setting back developments from flood defences to enable river walls to be modified, raised and maintained in a more sustainable, environmentally acceptable and cost effective way.</i></p>

RFRA ref. Chapter / Page	EA response: Comments Our detailed comments	EA Response: Recommendations Our recommendations for changes
<p>P14 Paragraphs 42 – 47 continued</p>		<p>43. Action zone 1 – west London (Richmond, Twickenham, Barnes & Kew and Hammersmith): Actions here include developing alternative responses to managing fluvial risk to reduce reliance on the Thames Barrier, such as flood resilience measures (e.g. flood gates) or potentially safeguarding land for future flood storage on the fluvial tributaries.</p> <p>44. Action zone 2 – central London (Wandsworth to Deptford and London City): Actions here include maintaining, repairing and rebuilding flood defences, and raising river walls by 2065 to keep up with climate change and reduce flood risk further.</p> <p>45. Action zone 3 – east London (Greenwich, Isle of Dogs & Lea Valley and Royal Docks): Actions here include maintaining, repairing and rebuilding flood defences, and raising river walls by 2065 to keep up with climate change and reduce flood risk further.</p> <p>46. Action zone 4 – east London downstream of Thames Barrier (Barking & Dagenham, Rainham Marshes and Thamesmead):</p>

RFRA ref. Chapter / Page	EA response: Comments Our detailed comments	EA Response: Recommendations Our recommendations for changes
Page 15	P15 Paragraph 48. Please change <i>'In general the flood defences have been built to a very high standard and therefore these areas share high levels of flood protection'</i>	<p><i>Actions here include maintaining, repairing and rebuilding flood defences, and raising river walls and embankments by 2040 to keep up with climate change and keep flood risk at current levels.</i></p> <p><i>47. Action zones 5 to 8 are outside London, but options sited here could protect London, e.g. creation of flood storage areas</i></p> <p>Page 15 Paragraph 48: Change to: <i>In general the flood defences have been built to a very high standard; however, in some locations additional flood management measures will be required.'</i></p>
Page 16	P16 Recommendation 1. Suggest link this to the London Plan policies.	<p>Suggested rewording to: <i>'The London boroughs should address relevant tidal flood risk mitigation measures set out in the Thames Estuary 2100 Plan in their Local Plans, as supported by policy S112 in the London Plan. They include setting back development and defences from the banks of watercourses, raising defences, and creating flood storage.</i></p> <p><i>The development of Riverside Strategies should be led by Local Councils to support</i></p>

RFRA ref. Chapter / Page	EA response: Comments Our detailed comments	EA Response: Recommendations Our recommendations for changes
Page 16	<p>Fluvial flood risk P16 paragraph 51 Although it is acceptable to include the Catchment Flood Management Plan (CFMP) paragraphs, the greater focus should be on the Thames Flood Risk Management Plan (FRMP). The FRMP was published more recently, since the introduction of partnership funding and therefore may contain different options and recommendations to the CFMP. It is a statutory document and so carries more weight than the CFMP.</p>	<p><i>the delivery of the Thames Estuary 2100 Plan.'</i></p> <p>We recommend that the catchment paragraphs from the FRMP should be included within the RFRA, either alongside those from the CFMP, or more preferably, in place of them. We would be happy to advise further if more information is required.</p>
Page 17	<p>P17 paragraph 57. <i>'Fluvial flooding has been more frequent than tidal flooding meaning that many areas of floodplain have been left un-developed, often forming parks within the wider urban setting, which should be protected.'</i> Is there evidence of this, for example was the Lee Valley Regional Park formed because of the flood risk there? The wording <i>'many areas'</i> and <i>'often forming parks'</i> risks minimises the flood risk issues, as it implies most flooding occurs in parkland.</p>	<p>Suggested rewording to: <i>'areas where the flood plain remains as parkland and/or undeveloped land, should be protected. For example Lee Valley Regional Park.'</i></p> <p>We recommend adding wording to explain that climate change is expected to increase flooding in these locations.</p>
Page 21	<p>P21 Paragraph 82. Beverley Brook. Update and expand text as suggested.</p>	<p>P21 Paragraph 82. We suggest adding following sentence as follows: <i>"Some localised flooding has occurred on this river, in particular, in the areas around New Malden. Many parts of the floodplain remain as open space, notably through Richmond Park, although the Raynes Park area is identified as having an extensive floodplain. This coincides with the</i></p>

RFRA ref. Chapter / Page	EA response: Comments Our detailed comments	EA Response: Recommendations Our recommendations for changes
Page 21	P21 Paragraph 84 River Wandle . Update and expand text as suggested.	<p><i>confluence of two tributaries and the river passing underneath several major road and railway structures.”</i></p> <p>P21 Paragraph 84. We suggest adding the following information about Caterham Bourne:</p> <p><i>Caterham Bourne – Boroughs affected: Croydon, Tandridge. This is an ephemeral which has experienced flooding from combined sources (groundwater, fluvial and surface water) in the past. The downstream area of this river is culverted, largely under existing development, and is identified as having a floodplain associated with the valley. The upstream area of the river is general more open with floodplains associated with key transport routes. The Environment Agency and the London Borough of Croydon are currently investigating an integrated flood management scheme for this river.</i></p>
Page 22	P22 Paragraph 93. Fluvial River Thames . There are always risks with projects and therefore we would suggest changing the wording of the sentence: ‘ <i>Between 2020 and 2025 the Environment Agency will build a new flood channel alongside the River Thames...</i> ’	We suggest amendment to: ‘ <i>Between 2020 and 2025 the Environment Agency <u>plans</u> to build a new flood channel alongside the River Thames...</i> ’

RFRA ref. Chapter / Page	EA response: Comments Our detailed comments	EA Response: Recommendations Our recommendations for changes
Page 23	<p>P23 Paragraph 98 The Likely Impact of Climate Change Note that the Environment Agency released updated climate change allowances in April 2016 to be used by developers and Risk Management Authorities. Only a high level assessment of climate change has been completed in the RFRA, focused on Opportunity Areas. It is therefore essential to encourage others to carry out a more detailed assessment.</p>	<p>Paragraph 98 reword to add: <i>‘Developers and Risk Management Authorities must use the updated climate change allowances when considering flood risk and methods to reduce risk for the lifetime of their development.’</i> Guidance is available here: https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances</p>
Page 23	<p>P23 Paragraph 99. Although the CFMPs provide some recommendations for reducing flood risk, including the added risk from climate change, the climate change allowances used in 2008 are likely to be an underestimate now. The CFMP was also published prior to the partnership funding concept being introduced, so that any scheme that would not be fully government funded could not be progressed. This may have limited some of the CFMP’s recommendations. The recommendations in the CFMPs are likely to remain a helpful starting point, but are now outdated by the Thames Flood Risk Management Plan (FRMP), March 2016. The Thames FRMP is also a statutory document. It should be noted that even the climate change data used in the Thames FRMP is unlikely to consider the full potential impacts of the new climate change allowances.</p>	<p>Amend text to encourage users to undertake more detailed climate change analysis of their sites, and not be limited by suggestions in the CFMP.</p>
Page 23	<p>P23 Recommendation 2- Fluvial Flood Risk We suggest linking this recommendation with the London Plan’s Policy SI12. This would be consistent with the way the RFRA links to Policy SI13 at Recommendation 3.</p>	<p>We recommend adding to the final sentence <i>‘in line with policy SI12 of the London Plan.’</i></p>

RFRA ref. Chapter / Page	EA response: Comments Our detailed comments	EA Response: Recommendations Our recommendations for changes
Page 25	P25 Paragraph 108. Amend.	Amend. Please note the correct name of the mapping is 'Flood Map for Surface Water'
Page 26	P26 Paragraph 116 There were updated climate change allowances for peak rainfall intensity also released in 2016. Please use this as an opportunity to ensure they are used. https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances	We recommend adding: ' <i>The climate change allowances for peak rainfall intensity are available and should be used by developers and RMAs in their planning.</i> '
Page 27	<p>P27 Paragraph 125. New development will increase the pressure on services, including the sewers and water usage. These could be planned for in an integrated way, in combination with water supply, and flood management using integrated water management strategies (IWMS) early in the planning process. We suggest promoting the use of IWMS here.</p> <p><i>Nb. There are two Paragraph 144's in the draft RFRA at pages 31 / 32</i></p>	<p>We suggest promoting integrated water management strategies here, to support other references in the RFRA.</p> <p><i>Check / renumber?</i></p>

RFRA ref. Chapter / Page	EA response: Comments Our detailed comments	EA Response: Recommendations Our recommendations for changes
<p>Ch.3: Spatial Implications of Flood Risk</p> <p>Page 32</p> <p>Page 32</p> <p>Page 32</p> <p>Page 33</p> <p>Page 33</p>	<p>P32 Paragraph 141. This paragraph may be misleading as it implies there are only two extents of flood risk; small areas along tributaries, and large areas of tidal flooding.</p> <p>P32. We suggest inserting a paragraph after 142 to promote usage of climate change allowances. This is really important as the RFRA has used the 1 in 1000 year outline in place of more detailed climate change outlines, with the understanding that London boroughs will be doing their own, more detailed analysis.</p> <p>P32 Paragraph 143. Amend for clarity</p> <p>P33 Paragraph 146. It would be beneficial to include the information about Local Flood Risk Management Strategies earlier in the RFRA. This would fit well with the <i>'information available'</i> sections for fluvial, tidal and surface water risk, or into the wider policy background, as part of the Flood and Water Management Act 2010.</p> <p>P33 Paragraph 153. Please alter the final sentence as this approach may not be an overestimate in all areas.</p>	<p>We suggest removing the second sentence from this paragraph, starting: <i>'For some this is limited to small areas...'</i></p> <p>A new paragraph to be inserted after para. 142 reading: <i>'As SFRA's are updated, London boroughs should ensure that SFRA's represent the most up to date climate change allowances.'</i> https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances</p> <p>We suggest inclusion of <i>'there may also be a combination of different sources of flooding.'</i></p> <p>Review, and consider including information about Local Flood Risk Management Strategies earlier in the RFRA.</p> <p>We suggest rewording to: <i>'This approach was agreed with the Environment Agency, in</i></p>

RFRA ref. Chapter / Page	EA response: Comments Our detailed comments	EA Response: Recommendations Our recommendations for changes
Page 33	<p>P 33 Paragraph 154. Whilst we welcome the reference to Integrated Water Management Strategies, as worded we consider this provides insufficient imperative for this approach. We suggest increasing the imperative for this approach in revised wording. We recommend that this should align with the wording in the draft London Plan.</p>	<p><i>lieu of more detailed London-wide modelling, that takes into account the updated climate change allowances.'</i></p> <p>We suggest altering the wording to. <i>'Integrated Water Management Strategies should be considered written for Opportunity Areas, where an integrated approach to the management of risk and water related infrastructure is required, or would enable strategic infrastructure to be planned for more effectively.'</i></p>
Page 34	<p>P34 Table 1. Flood Risk in Opportunity Areas. This table includes 'current flood risk characteristics' and 'potential flood risk mitigation measures'. However, in planning for these growth areas, future flood risk characteristics will also need to be considered. It is not clear if the potential impacts of climate change have been considered here, other than with tidal flood risk.</p>	<p>Strengthen to include, potential impacts of climate change for all sources of flooding.</p> <p>Please add the following in regards to Surbiton Stream. <i>P 40. Kingston / New Malden Current flood risk characteristics: Mainly Flood Zone <u>1</u> with some significant areas of Flood Zones 2 and 3, notably around Kingston Town centre and along the Hogsmill and Surbiton Stream. Some areas have significant surface water flood risks, mainly to the north of Kingston Town centre, north of New Malden and south of Surbiton.</i></p>

RFRA ref. Chapter / Page	EA response: Comments Our detailed comments	EA Response: Recommendations Our recommendations for changes
Page 47	P47 Paragraph 161. Please alter wording to make the requirement for Sustainable Drainage stronger.	<p>The 1st sentence is not required, suggest deleting. There are significant areas of surface water risk, especially in the Victoria and Westminster areas.</p> <p>We suggest shortening the 2nd sentence to <i>'There is increasing evidence of Sustainable Drainage techniques being implemented in high density CAZ locations to achieve significant reductions in rainwater discharge rates.'</i></p>
Page 53	P53 Paragraph 177. Please clarify the meaning of this paragraph. Amend to clarify	We suggest the following wording: <i>'Further analysis of the flood risk to these sites should be completed as the mapping work used for this analysis is less detailed and may overestimate the flood risk in some areas.'</i>
Page 53	P53 Paragraph 179. Remove the words <i>'in particular'</i> from the penultimate sentence as it implies there is also protection from other sources of flooding.	Remove the words 'in particular' from the penultimate last sentence
Page 54	P54 Paragraph 181: Remove <i>'in particular'</i> . See comment above on paragraph 179.	Remove <i>'in particular'</i> .
Page 54	P54 Recommendation 9 – This suggests these emergency service providers should only make plans for flooding, rather than also consider solutions to flood risk.	We suggest adding: <i>'Emergency services should also consider and implement solutions to reduce flood risk to their sites,</i>

RFRA ref. Chapter / Page	EA response: Comments Our detailed comments	EA Response: Recommendations Our recommendations for changes
Page 55	P55 Recommendation 10 – We offer a similar comment as to that for Recommendation 9 above	<p><i>longer term, including by implementation of sustainable drainage, flood protection or other measures.'</i></p> <p>Please add encouragement for education authorities to consider and implement solutions to reduce flood risk to their sites.</p>
Page 57 Ch.4: Conclusions & Look Ahead	P57 Paragraph 198. The approach described was agreed in lieu of more detailed London-wide modelling. Therefore it should be acknowledged that more detailed analysis should be completed.	<p><i>Alter wording from 'this is a precautionary approach' to 'This approach was agreed in lieu of more detailed London-wide modelling and so it is recognised that further, more detailed analysis should be completed.'</i></p>
Page 58 Appendices: 3. Flood Risk Maps	P58 Paragraph 200. Flood risk is likely to increase in the future given the effects of climate change. We suggest minor rewording to make this clearer.	<p>Suggest amending to read '...how it is likely to change and increase in the future'.</p>
Map 1	<p>Map 1: flooding from multiple sources</p> <p>It should be made clear that this map is showing the flood risk from multiple sources, <u>taking into account flood defences</u>.</p>	<p>Please include in bold: '<i>High (1 in 30 year) and medium (1 in 100 year) risk of river, tidal and surface water flooding combined, taking into account flood defences (basis for other maps in this RFRA)</i>'</p>



Appendix C.

Environment Agency response to the draft Integrated Impact Assessment of the draft London Plan

Thank you for the opportunity to comment on the draft Integrated Impact Assessment (IIA) Report, November 2017 of the Mayor's draft London Plan (the Plan). Overall we support the approach taken in assessing the Plan, but would like to offer further comments to assist the process.

Please also refer to our response of March 2017 to the IIA Scoping Report for the Plan.

General Comments

We welcome that the IIA Report has largely addressed our previous comments regarding the Strategic Environment Assessment (SEA) Directive requirements.

In our view, we consider that further assessment of the cross-boundary impacts between London and the wider South East would be appropriate. Within the IIA, Appendix C – 'Context Review', there is limited evidence that the plans and programmes of counties and local authorities surrounding London have been accounted for. These may affect the assessment of the cumulative impacts of the Plan's policies. However, we do appreciate reference to the Thames River Basin Management Plan and associated plans, and to the Thames Estuary 2100 Plan which cover a wider area in regards to water quality, and to flood risk management.

We largely accept the findings of the Integrated Impact Assessment (IIA) in regards to individual policies in the Plan, subject to our comments below. In the main, our interests relate to the Sustainability Appraisal (SA) and Strategic Environmental Assessment (SEA) elements of the IIA.

Chapter 2, Section 2.4 Appraisal of Strategic options

The 'Preferred' strategic options identified are naturally 'London-centric'. However, we would suggest that the preferred options should be explicit in how they have encompassed the synergistic issues between London and the wider South East region. This would help evidence the statement at Chapter 3, paragraph 3.3.1 (see our comments below) that the assessment includes any areas affected by the Plan beyond London's boundaries.

Chapter 3, IIA Methodology and approach

We welcome the recognition of London in the context of the wider South East, whilst suggesting that the plans, policies and programmes of authorities in the wider area be reviewed to better enable cross-boundary and cumulative impacts to be assessed

further. This might cover consideration of the strategic impacts of London's growth, in regards to issues such as waste, green infrastructure, biodiversity, flood risk management, and climate resilience.

In planning for water, note that the water companies will take a strategic approach to the city-region under the current Price Review 19 (PR19) process. Their tactical plans under this process (Asset Management Plans, round 6 (AMP6)), are being drafted to cover the period 2019-2024.

We suggest that the text be expanded under '*Geographic scope*', to clarify why that scope has been chosen. Some of London's waste is, for example, transferred beyond the wider south east to the Midlands and to Avonmouth.

Chapter 4, Review of relevant plans, programmes, strategies and objectives

Table 9, Relevant plans and programmes that inform the IIA process

Water resources and quality

Page 16. We welcome reference to the Thames River Basin Management Plan (RBMP), which covers environmental challenges across administrative boundaries. Nonetheless, please note, an updated RBMP was published in 2016. Please alter references to that document as the latest source of data on waterbodies' status and relevant actions.

Flood risk

Page 16. We welcome reference to the Thames Catchment Management Plan, and to the Thames Estuary 2100 Plan. However, please note that the Thames Catchment Management Plan 2009 is a non-statutory Plan. Please reference the '[Thames River Basin District Flood Risk Management Plan](#)', published in 2016, as the relevant statutory plan.

Chapter 5, Baseline information

Page 22, *Section 5.16 – 'Water resource and quality'*. We suggest that Table 11, which records the quality of waterbodies in London, is checked against the Thames RBMP 2016.

Page 24, *Section 5.20 – 'Geology and Soils'*. We agree with the baseline recorded, which recognises that some areas in London have high levels of contamination, and that this is particularly relevant for some of London's larger brownfield sites which require development.

Page 25, *Section 5.21- 'Material and waste'*. We suggest that you review the figures used. They are from 2012 and are now out of date. For example, the overall waste arising is now around some 16 million tonnes a year. The figure for the amount of exported waste, due in the main to the increase in construction, demolition and excavation waste, has increased to the order of 12-13 million tonnes.

Chapter 6, Key sustainability issues

Table 14: Key sustainability issues in London

Page 27. Under 'Water Resources and Quality', 'Key Issues', we recommend adding a reference to groundwater, thus; '*Need to improve the quality of water in London's waterbodies **and groundwater***'. Groundwaters are also covered by the Thames RBMP and make a critical contribution to London's water supply and to environmental water quality.

Page 28. We welcome that under 'Geology and soils', a key issue identified is '*Remediation of contaminated land*'. We address this elsewhere in our comments.

Chapter 7, IIA Framework

Table 16: The IIA Framework – objectives and key guideline questions

Page 33. 'Geology and soils'. We welcome that relevant assessment questions are identified in regards to: *restoration of degraded soil*, and, to '*minimise the risk of health impacts through contamination*'.

There was discussion in the IIA Scoping Report (at Section 5.22, p.137 on), in regards to the opportunities for the London Plan to focus on prevention and remediation of soil and contamination, and to adopt a co-ordinated approach to bring derelict land with high abnormal costs back into use. However, within the IIA itself, this discussion does not appear to have been followed through. We would expect to see assessment against the key issues and questions which the IIA identifies, leading to IIA recommendations for the draft London Plan, and to a GLA response to those recommendations.

Chapter 8, Appraisal of strategic options

Page 45, Section 8.2.1, and Table 23. GG2: '*Sustainable Intensification*'. We note the IIA's recommendations in regards to the Plan's 'preferred' strategic option of sustainable intensification, to accommodate growth. We agree with the conclusion, that the overall impacts on flood risks and associated management from high density development and optimised land use, remains uncertain (and potentially negative). We would expect to see a GLA response to this, with reference perhaps made to the draft Regional Flood Risk Assessment.

Page 89 on, Section 8.6.5, and Table 45. GG6 '*Increasing efficiency and improving resilience*'. In regards to the preferred option we note the IIA recommendations, that this option considers retrofitting existing buildings to build climate resilience. We would expect to see a GLA response to this, and suggest that retrofitting both energy and water efficiency measures could be facilitated by new development, and be supported by London Plan policy, as part of the Mayor's broader strategy.

Chapter 9, Assessment of the London Plan policies

We largely accept the findings of the Integrated Impact Assessment (IIA), where our interests relate to the Sustainability Appraisal (SA) and Strategic Environmental Assessment (SEA) elements of the assessment. However, we do have the following comments on some policy areas within our remit:

Page 111 on, *Section 9.2.1, D1 'London's form and characteristics'*. The IIA's recommendations reinforce the need to have the policy make the linkages to other relevant policy areas in the Plan. This recognises that there are many policy areas throughout the plan which collectively will influence the *sustainable* design of buildings and places. We also note the recommendation regarding the promotion of sustainable construction.

We consider that the GLA response should be reviewed. The solution in our view, if having a defined policy on sustainable design and construction is not accepted, is to emphasise *sustainable* design and construction by cross-referencing relevant policies throughout the Plan, and for the GLA to commit to an intention to update current London Plan supplementary planning guidance on sustainable design and construction.

Page 113 on, *Section 9.2.2, D2 'Delivering good design'*. We note the IIA's recommendations in regards to there being little reference to sustainable design. Our comments above on Section 9.2.1 refer.

Page 123 on, *Section 9.2.7, D7 'Public realm'*. We note the IIA's recommendations in regards to more information on the actions to be taken to support climate resilience. We agree, and suggest that the GLA consider drawing out in the Plan, the links and mutual support between public realm and other relevant policies.

Page 231 on, *Section 9.7.5, G5 'Urban greening'*. We note the IIA's recommendations in regards to including more detail in the policy on the Urban Greening Factor, and the GLA's positive response to this. In our view this is the correct approach.

Page 233 on, *Section 9.7.6, G6 'Biodiversity and access to nature'*. We agree with the GLA's response to the IIA recommendations, but suggest that further consideration be given to the policy's ability to deliver biodiversity net gain. Natural England's response refers to this.

Page 239 on, *Section 9.7.9, G9 'Geodiversity'*. We note the 'neutral' and 'unknown' effects assessed against IIA Objective 22 (*to conserve London's geo-diversity and protect soils from development and over intensive use*). In the circumstances, we suggest that the GLA responds by revising Policy G9, to support borough's local plans.

Page 249 on, *Section 9.8.5, S15 'Water infrastructure'*. We note the IIA recommendations in regards to tributary pollution as a significant threat, and it being unclear in the policy how it will be reduced. We have some concerns about the GLA response, namely that this is a maintenance / management issue, and therefore an appropriate one for the Environment Agency and the Thames RBMP to address.

Our concern is that we consider that the GLA's response does not recognise that river pollution can result from a broad range of causes including from: reduced flows; storm run-off; inadequate / overloaded waste treatment facilities; and the construction and operation of large scale new development. We believe that the adoption, within the policy, of an integrated water management approach to water supply, wastewater treatment, and flood risk management, would be an appropriate response to help mitigate for the risks identified.

We note the IIA recommendations that further information is provided on opportunities for retrofitting existing developments with water efficiency measures. We note the GLA's response, but consider that there is further scope for addressing 'retrofitting' water efficiencies, in association with Policy GG6. It may be helpful for the GLA to respond that it would add explanatory text to support Policy SI5, cross-referencing to the Environment Strategy, and that they would consider updating Supplementary Planning Guidance to provide more detail on 'retrofitting' water efficiencies.

Page 253 on, *Section 9.8.7, S17 'Reducing Waste and supporting the circular economy'*. We note the IIA recommendations that more information is provided on a number of issues. Given the number of 'unknown' impacts of Policy SI7 recorded in Table 127, it may be helpful for the GLA to indicate that they would consider developing Supplementary Planning Guidance, to provide details on the implementation of this Policy.

Page 255 on, *Section 9.8.8, S18 'Waste capacity and net waste self-sufficiency'*. As above, given the number of 'unknown' impacts of Policy SI8 recorded in Table 128, it may be helpful for the GLA to indicate that they would consider developing Supplementary Planning Guidance, to provide more details on how the Mayor would expect this policy to be addressed.

Page 257 on, *Section 9.8.9, S19 'Safeguarded waste sites'*. The IIA recommends that further information be provided on how the safeguarding and re-provision of waste capacity could be strategically located, to support growth locations. We note that the GLA's response is to adjust the policy supporting text and to rely upon borough's local plans, to address the matter. We note the number of 'unknown' and 'neutral' impacts of Policy SI9, recorded in Table 129.

We consider this response needs to evolve. As highlighted in our main response to the Plan, there are tensions in some boroughs between the housing targets identified for them, and their waste apportionments. We therefore suggest that the opportunity may exist for the GLA to consider a strategic approach to waste provision for the Opportunity Area 'clusters', particularly where these cross a number of borough boundaries.

Page 263 on, *Section 9.8.12, S112 'Flood risk management'*. The IIA recommends that further information is provided on how additional space for water management and filtration will be incorporated into new developments. Whilst we accept the GLA's response, that a combination of policies will address these matters, we consider that it presents a further opportunity for the GLA to support an integrated water management approach within the Plan, to mitigate the impacts of development.

Page 267 on, *Section 9.8.14, S114 'Waterways – strategic role'*. We note the number of 'unknown' and 'neutral' effects against IIA objectives recorded in Table 134. We therefore ask whether there are changes to the policy to be recommended which might produce a more positive assessment.

Page 303, *Section 9.10.1 DF1 'Delivery of the Plan and planning obligations'*. We note the IIA's initial appraisal and recommendations at Section 9.10.2. In our view, the appraisal does not fully address environmental impacts. We believe very strongly that this policy should include in its priorities, 'environmental infrastructure', such as for flood risk management, in identifying funding priorities for planning applicants and decision-makers. We suggest that the IIA should assess whether Policy DF1 would support the IIA's environmental objectives.

We would be happy to provide further clarification of our comments, information and advice on the IIA, as it forms an important part of our overall response to the Plan.