

Mayor of London's Draft Water Strategy

Sustainability Appraisal Report - Appendices (Part A)



August 2009

Prepared for the Greater London Authority

by

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ABBREVIATIONS

ABI	Association of British Insurers	LSDC	London Sustainable Development Commission
AQMA	Air Quality Management Area	NO ₂	nitrogen dioxide
BAP	Biodiversity Action Plan	NO _x	nitrogen oxides
BAU	Business as usual	OECD	Organisation for Economic Co-Operation and Development
BAU+10	Future business as usual in 10 years time	ODPM	Office of the Deputy Prime Minister
BME	black and minority ethnic	OFWAT	Office of Water Services
BREEAM	BRE Environmental Assessment Method	PM10	fine particulate matter
CAMS	Catchment Abstraction Management Strategies	PPG	Planning Policy Guidance
CEP	Collingwood Environmental Planning	PPS	Planning Policy Statement
CFMP	Catchment Flood Management Plan	RBD	River Basin District
CREH	Centre for Research into Environment and Health	RBMP	River Basin Management Plan
CCAS	Climate Change Adaptation Strategy	RICs	Royal Institution of Chartered Surveyors
CO ₂	Carbon Dioxide	SA	Sustainability Appraisal
CO ₂ e	Carbon Dioxide Equivalent	SAC	Special Areas of Conservation
CSO	Combined sewer overflow	SEA	Strategic Environmental Assessment
DCLG	Department for Communities and Local Government	SELL	Sustainable Economic Leakage Level
Defra	Department for Environment Food and Rural Affairs	SFRA	Strategic Flood Risk Assessment
EA	Environment Agency	SPA	Special Protection Area
EqIA	Equalities Impact Assessment	SPG	Supplementary Planning Guidance
EC	European Commission	SSSI	Sites of Special Scientific Interest
EDS	Economic Development Strategy	SUDS	Sustainable Drainage Systems
EEC	European Economic Community	TfL	Transport for London
ENDS	Environmental Data Services	TTSG	Thames Tideway Strategy Group
EU	European Union	UK	United Kingdom
FoE	Friends of the Earth	WAF	Water Action Framework
GLA	Greater London Authority	WFD	Water Framework Directive
GOL	Government Office for London	WHO	World Health Organisation
GCSE	General Certificate of Secondary Education	WRMU	Water Resources Management Units
GQA	General Quality Assessment	WS	Water Strategy
HIA	Health Impact Assessment		
HSE	Health and Safety Executive		
IIA	Integrated Impact Assessment		
IPPR	Institute for Public Policy Research		
km	Kilometre		
LDA	London Development Agency		
LHC	London Health Commission		

APPENDICES

APPENDIX 1

SUSTAINABILITY APPRAISAL SCOPING REPORT CONSULTEES

Sustainability Appraisal Scoping Report Consultees

Formal consultation on the Scoping Report ran for five weeks in June – July 2006. The consultees formally consulted on the Scoping Report (including as part of the SEA determination process set out in Regulation 9) as required by the SEA Regulations were:

- Countryside Agency*
- English Heritage*
- English Nature
- Environment Agency*

Other consultees included internal departments within the GLA and members of external organisations. The full list of consultees has been included in the Table below. Those that responded are marked with an asterisk. Details of these comments are included in Appendix 2.

Name	Organisation
David Fell	Chair LSDC GLA sub-group
June Barnes	Chair LSDC
Peter Head	Chair Planning and Development subgroup
Lesley Harding	GLA sub-group
Richard Stephenson	GLA sub-group
Dinah Cox	GLA sub-group
Andrew Judge	Planning and Development sub-group
Paul de Zylva	LSDC Commissioner / Director FoE
Peter Lainson	RADAR
David Hammond*	Countryside Agency
Roger Chapman	Government office for London
Richard Stephenson	TfL (Dir HSE)
Judith Salomon	London First
Peter Eversden	London Forum of Amenity Societies
Robin Stott*	Planning and development sub-group
Penny Bramwell	Planning and Development sub-group
Nigel Bell	GLA sub-group
Shaun McCarthy	GLA sub-group
Peter Massini	English Nature
Nicola Whittle*	Environment Agency
Paul Plant	Regional Public Health group
Alan Byrne	English heritage
Marian Larragy	London Civic Forum
Nannerl Herriott	Regional Public Health Group
Emma Syncott	GLA
Niall Machin	GLA
Ben King	Environment Agency
N. Conway	Forum for the Future

APPENDIX 2

SUMMARY OF CONSULTEES COMMENTS ON THE SUSTAINABILITY APPRAISAL SCOPING REPORT

August 2009

Summary of Consultees Comments on Sustainability Appraisal Scoping Report

The following table summarises the comments and issues raised by the formal consultation on the SA Scoping Report. Please note that the Water Strategy was referred to as the Water Action Framework at the time.

Questions on Scoping Report	Environment Agency ¹	Countryside Agency ²	London Sustainable Development Commission ³
Do you agree with the main sustainability issues identified?	The list of issues identified in Table 3.1 is titled “Key Issues for London”. The ODPM Sustainability Appraisal Guidance requires key sustainability issues to be identified for the plan that is being appraised. The issues identified here are not relevant for the Water Action Framework. Examples of relevant sustainability issues for this plan would include: leakage; the water deficit; flood risk in London; and combined sewer overflows to the River Thames.	The Agency is agreeable to the sustainability issues identified and is pleased to see the inclusion of Access to Nature and Accessibility, especially by transport forms other than private car, along with the inclusion of Biodiversity.	The range of issues (the 14 Sustainability objectives,) the statement of aspirations within the 4 r’s and the use of the ++ significance rating of the impacts make good sense to me, and are to be commended.
Do you know of any key baseline evidence which will help to inform the SA process?	<p>Additional useful facts that demonstrate the current pressures on the water environment in London are provided in the Environment Agency’s document “Planning for a better London” (March 2006). This document also clearly sets out the future challenges and opportunities posed by the additional housing development proposed in London. The baseline information should be expanded to reinforce these current and likely future impacts.</p> <p>Some specific comments relating to the existing baseline information include: Page 33 — it is not clear what is meant by the section on ‘Environmental regulations’. Page 34 — the section on the social impacts of flooding should also refer to wider issues such as the inconvenience/trauma caused when peoples’ homes are flooded, rather than just the potential reduction in the value of property. Figure 3.5 Closure of the Thames Barrier due to Tidal or Fluvial Factors — this graph should be</p>	The countryside Agency has nothing further to add to this section, however, we are aware that Thames Water are in the process of a strategy overview of their entire area, and since you have contact with them in respect of London, it could be worthwhile in identifying what baseline information they are using.	

¹ Comments from Clive Coley, Regional Strategic Manager, Environment Agency Thames Region

² David Hammond, South East Region

³ Robin Stott

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Questions on Scoping Report	Environment Agency ¹	Countryside Agency ²	London Sustainable Development Commission ³
	<p>referred to in the text and explained. Page 39 - Housing — the need for to plan for the provision of environmental infrastructure, i.e. water supply, sewerage, waste, and surface water and flood risk management infrastructure should also be a key consideration. Page 51 — water quality information is included in the water resources section. There is little information on the issues surrounding leakage in this section and no mention of the supply/demand deficit or the impact of future development in London</p> <p>The Environment Agency is due to produce, by the end of July 2006, a set of draft internal Catchment Flood Management Plan (CFMP) policy statements for rivers in London. Although these will not be public documents, we would be happy to share them with the GLA. The information that they will contain will be very relevant to the Water Action Framework as they will set out the likely CFMP policy for each river and the implications for future flood risk management. The CFMP itself is due to be finalised in Autumn 2006.</p>		
<p>Do you agree that the 14 SA objectives cover the breadth of sustainability issues appropriate for London?</p>	<p>The SA objectives should be chosen to be relevant to what the plan can achieve. They need to be specific and measurable so that they can be used to identify and evaluate the effects of the plan.</p> <p>The SA objectives listed in Table 4.1 of the Scoping Report are not specific enough and do not focus on the key sustainability issues relevant to the Water Action Framework. They will not, therefore, be able to be used effectively in the appraisal process.</p> <p>The objectives used for the SA of the Further Alterations to the London Plan are more specific and measurable. They provide a good basis from which to choose and develop a focused set of relevant objectives for the Water Action Framework.</p> <p>The majority of the appraisal criteria provided in the</p>	<p>Whilst the Agency agrees that the objectives listed cover the breadth of appropriate issues for London, we would like to clarify Objective 8 - Vibrancy. This objective proposes an appraisal criterion of "will it provide opportunities for creating and supporting new and dynamic urban spaces?" This is welcome and would be supported by the Agency, providing that this refers to public open/green space provision, rather than more concrete urban spaces.</p>	

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Questions on Scoping Report	Environment Agency ¹	Countryside Agency ²	London Sustainable Development Commission ³
	Scoping Report will be useful to help with the appraisal process and it is suggested that these be retained.		
Other Comments	<p>Section 2 - Links with other Plans and Programmes</p> <p>The Catchment Flood Management Plan (CFMP) policy statements mentioned above should be considered in the review of relevant plans and programmes.</p> <p>As discussed at the Scoping Workshop, the Water Action Framework should consider other relevant plans and programmes from outside London in relation to water resources issues in particular. This is because London gets some its water from the River Lee and the tributaries of the River Thames to the west contribute to flow in the River Thames in London. It is therefore suggested that the Upper Lee Catchment Abstraction Management Strategy (June 2006) is added to the list in Table 2.1. The references to the London and the Thames Corridor Catchment Abstraction Management Strategies should be amended as the final documents were published in April 2006 and June 2004 respectively.</p> <p>The relationship between the plan and the other plans and programmes identified needs to be explained in line with the requirements of the SEA Directive (see comments in Section 6.1 below)</p> <p>Section 4.2 - Developing Indicators for Monitoring</p> <p>We cannot comment effectively on the indicators in Table 4.4 as the likely significant effects of the plan have not yet been identified and the objectives have not been finalised. We will be happy, however, to provide the GLA with any available information for monitoring including biological and chemical water</p>	<p>The Government intends to change the way in which it delivers rural policy. Part of this change will be the establishment of an integrated Agency - Natural England - to be formed in 2006 from English Nature, the Rural Development Service and part of the Countryside Agency. Natural England will have a broad environmental remit set in a sustainable development context. In preparation for the move, the Countryside Agency has focussed its planning activity predominately on those interests relating to landscape, access and recreation. These interests are as important for urban, as well as rural areas, and therefore relevant to these urban documents.</p> <p>After careful consideration of the documents submitted, including the Forum for the Future Workshop report, the Agency considers that they adequately assess the likely significant environmental effects on our interests in London.</p>	<p>The introduction stressing the need to have what is in effect a single integrated impact assessment is great, and the number of documents they have trawled through is commendable. The emphasis on thinking in an integrated social environmental and economic mind set is also commendable and welcome.</p>

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Questions on Scoping Report	Environment Agency ¹	Countryside Agency ²	London Sustainable Development Commission ³
	<p>quality data and flood risk information as required.</p> <p>Section 5 - The Draft SA Framework</p> <p>The proposed SA Framework as set out in Section 5 raises some concerns as follows: Section 5.1 and Table 5.3 — the proposed matrix is overly complicated. Much simpler matrices have been used for previous GLA sustainability appraisals, e.g. for the Early Alteration of the London Plan, while still covering all the requirements of the SEA Directive.</p> <p>Specific comments on the proposed appraisal methodology set out in Section 5.1 include:</p> <ul style="list-style-type: none"> • it is not clear how the measure relating to the percentage change from the current baseline will be calculated for each option, • the measure of reversibility is not the same as an impact being permanent or temporary, and • the high and medium scores for the probability of occurrence are very similar measures. <p>Section 5.2 and Table 5.1 - the idea of adding scores is stated as being neither desirable nor credible. It is still proposed, however, that a significance rating be calculated by adding the scores generated from the impact, magnitude and probability measures and to use a trigger score. The scoring system proposed in Table 5.1 only allocates a negative score for the impact measure. The suggestion that a significant negative impact would be identified if the trigger score is equal to or less than —10 would preclude any significant negative impacts from being identified. The significance rating descriptions of significant, minor and mixed in Table 5.1 are also likely to skew the results of the appraisal.</p>		

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Questions on Scoping Report	Environment Agency ¹	Countryside Agency ²	London Sustainable Development Commission ³
	<p>Section 5.4 and Table 5.2 - it is not clear how the summary results described in the form of symbols and the traffic lights' used in Table 5.2 relate to each other. Using specific numerical scoring to allocate a symbol is dangerous bearing in mind the comments on the scoring system outlined above, the varied nature of the data and the fact that it is likely that much of the assessment will be qualitative rather than quantitative and made using expert judgment.</p> <p>It is suggested that the proposed matrix and scoring system are amended in order to ensure that the Sustainability Appraisal process is simpler than currently proposed, more transparent and results in the accurate allocation of impact significance.</p> <p>Section 6.1 Quality Assurance</p> <p>The checklist in Table 6.1 is useful to ensure that all the tasks in Stage A of the SA process have been covered in the Scoping Report. It should be noted, however, that Appendix A, referred to against the second bullet point and which sets out the international and EC objectives and targets, was not included as part of the Scoping Report that was sent out for consultation. It is also not sufficient for Section 2 of the report to simply identify the related plans and programmes, as bullet point four (and the SEA Directive) requires the relationship between these documents and the plan to be explained.</p>		

APPENDIX 3

TERMS OF REFERENCE OF SA ADVISORY GROUP

Sustainability Appraisal of the GLA's Water Strategy and Climate Change Adaptation Strategy

Sustainability Appraisal Advisory Group Terms of Reference

The Greater London Authority (GLA) is preparing a Water Strategy (WS) and Climate Change Adaptation Strategy (CCAS) for London. In order to be consistent with European Directive 2001/42/EEC and the Mayor's policies the GLA is building strategic environmental appraisal (SEA), sustainability appraisal (SA) and health impact assessment (HIA) into both strategy preparation processes. These processes are being combined into one integrated SA process.

To aid the SA process, the GLA is establishing a SA Advisory Group. It will also act as an independent voice in the process. This will ensure that process is seen to be rigorous and open.

The Advisory Group will:

1. comment on the scope of the appraisals and SA methodology being employed and ensure the requirements of SEA, SA and HIA are integrated;
2. guide, inform and comment on the appraisals at each main stage;
3. attend meetings at which aspects of the appraisals are undertaken;
4. guide on stakeholder involvement as part of the SAs;
5. advise where there are differences of opinion between stakeholders; and
6. ensure that there is consistency between the GLAs SAs, where appropriate, and that lessons from other GLA SAs are incorporated and lessons from these SAs are disseminated.

The working arrangements of the Advisory Group will be:

- A. the Advisory Group will be chaired by the GLA;
- B. the Advisory Group members will be drawn from the Statutory Environment Bodies and key stakeholders, including the London Sustainable Development Commission and the London Health Commission plus the GLA and its functional bodies;
- C. the Advisory Group will meet regularly during the appraisal process (up to four times) and well as engaging in correspondence and commentary on draft SA outputs via email.

CEP
14th December 2006

APPENDIX 4

SUSTAINABILITY APPRAISAL FRAMEWORK

Sustainability Appraisal Framework

Water Strategy Sustainability Appraisal Objectives and Criteria

SA Objective	Appraisal Criteria
People and health	
1. Governance To deliver objectives transparently and effectively over the long-term, focussing on outcomes and informed by good evidence	a) Will it fully account for the implications of policy and practice over the lifetime of its implementation and for future generations? b) Will it pursue a cross-sector partnership approach, where appropriate? c) Will it ensure that all relevant stakeholders are involved in formal and informal decision making? d) Will it provide information that enables individuals and organisations to make informed choices and take responsibility for their actions? e) Will it appraise, monitor and review outcomes effectively?
2. Education and Awareness To maximise the education and awareness levels of the population in order to empower individuals to take responsibility	a) Will it promote respect and responsibility for the wise management of the environment, including the water environment? b) Will it encourage greater awareness amongst individuals of their collective impact and help share knowledge more widely? c) Will it improve educational opportunities and facilities for formal, informal and vocational learning or training, including related to water management (e.g. leakage engineers, water quality specialists, flood risk managers, etc.)? d) Will it encourage behavioural changes by individuals, communities, private companies and the public sector to help achieve sustainable development, including reducing water use?
3. Health and Well Being To maximise the health and well being of the population and reduce inequalities in health	a) Will it improve health, including physical and mental health and social wellbeing? (e.g. water-borne diseases, physical and emotional effects of flooding etc) b) Will it reduce poverty and health inequalities? c) Will it promote healthy lifestyles, including physical activity, sport and recreation associated with the water environment? (e.g. walking adjacent to rivers, canals and other water bodies) d) Will it help to maintain the high quality of drinking water? e) Will it improve wider determinants of health?
4. Equality and Diversity To ensure equitable outcomes for all communities and to celebrate the unique ethnic and cultural diversity of London's citizens as London's key strength	a) Will it reduce poverty and social exclusion, particularly in the most deprived areas and communities? b) Will it promote a culture of equality, fairness and respect for all people and the environment? c) Will it ensure that the provision of essential services and infrastructure, such as water and wastewater services, does not increase social inequalities and poverty? d) Will it increase the affordability of housing?
5. Safety and Security To have a place where everyone feels at ease and is able to enjoy life and to enhance community safety	a) Will it ensure that London's growth does not increase vulnerability to water shortages? b) Will it ensure that appropriate contingency planning is in place to manage emergency events, including extreme weather, water shortages and flooding, and the recovery after such events with particular consideration of vulnerable groups? c) Will it improve public safety, including the safety of rivers, canals and other water bodies? d) Will it reduce the risk of subsidence?
Place	
6. Liveability and Place To create and sustain liveable, mixed use physical and social environments that promote long-term social cohesion, sustainable lifestyles and a sense of place	a) Will it improve the provision and quality of facilities and infrastructure for the enjoyment of the local environment, including the water related environment and open space? b) Will it encourage engagement in community activities, including those associated with local water bodies and features? c) Will it help to make people feel positive about the local area where they live, including any local water bodies and features? d) Will it improve the aesthetics of the local environment, including water bodies and features and their surrounding areas?

SA Objective	Appraisal Criteria
7. Accessibility and Availability To maximise accessibility to key services and amenities and to increase the proportion of journeys made by public transport, walking and cycling	a) Will it encourage a modal shift to more sustainable forms of transport as well as encourage greater efficiency, including through using the waterways? b) Will it enable access to buildings and places and transport systems in the long-term, including in the event of flooding and extreme weather? c) Will it reduce traffic volumes and congestion? d) Will it protect and enhance access to open space and improve the quality of publicly accessible water bodies and surrounding land? e) Will it improve access to services and amenities for those with greatest need / for those whom access presents the greatest challenges?
8. Landscape, Historic and Cultural Environment To enhance and protect the landscape and built and cultural environment, including buildings, townscape and the public realm	a) Will it protect and enhance sites, features and areas of historical, archaeological and cultural interest? b) Will it conserve and enhance landscape and townscape / cityscape character, including historical, archaeological and cultural value / potential and visual amenity? c) Will it protect and enhance open space and the quality of the public realm? d) Will it encourage increased understanding of and engagement with the historic environment?
9. Biodiversity To conserve and enhance natural and semi-natural habitats and wildlife	a) Will it conserve and enhance natural and semi-natural habitats and wildlife, including those that are water dependant? b) Will it increase and enhance the resilience of London's key priority habitats and species, including those that water dependant, in line with the Biodiversity Action Plan's long-term vision and objectives? c) Will it encourage the replacement of valuable aquatic or water related habitats and/or species that have been lost or are in decline (where appropriate under the BAP and/or predicted climate change), or if not appropriate the creation of new habitats? d) Will it encourage the promotion of biodiversity and educational opportunities? e) Will it facilitate access to biodiversity f) Will it encourage the protection and creation of green corridors and green infrastructure, including along river corridors or waterways, and the interconnectivity of habitat corridors?
10. Air Quality To improve both indoor and outdoor air quality	a) Will it improve indoor air quality? b) Will it improve outdoor air quality? c) Will it reduce emissions to air? d) Will it help to achieve national and international standards for air quality, as well as local air quality management targets?
Climate change	
11. Climate Change and Energy 11.1. To mitigate the causes of climate change 11.2. To adapt to the effects of climate change	11.1. <i>To mitigate the causes of climate change:</i> a) Will it reduce energy consumption? b) Will it improve energy efficiency? c) Will it increase the proportion of energy both purchased and generated from renewable sources, including energy used in water related infrastructures and processes (e.g. water treatment works, desalination plants, etc)? d) Will it reduce the need to travel? 11.2. <i>To adapt to the effects of climate change:</i> e) Will it reduce the vulnerability / increase the resilience of communities, infrastructure and buildings to the effects of climate change? (e.g. flooding, extreme weather events, droughts, subsidence etc.) f) Will it ensure that new, refurbished and retrofitted development and infrastructure is located, designed and constructed to withstand the effects of climate change (e.g. flooding, water scarcity) over its design life? g) Will it improve emergency planning for extreme events (see also objective 6 and 12)?
Water management	
12. Water Quality To improve the quality of surface waters and groundwater	a) Will it protect and improve the quality of water bodies to achieve a good ecological status? b) Will it reduce diffuse pollution? c) Will it reduce fly tipping and debris in water bodies and waste in drains? d) Will it reduce pollution from wastewater discharges by providing adequate treatment and/or improving sewerage infrastructure? e) Will it improve the water systems infrastructure e.g. water treatment / sewers

SA Objective	Appraisal Criteria
	and ensure these will be in place before new development?
13. Water Resources To improve the security of supply and to achieve the prudent management and efficient use of water resources	<ul style="list-style-type: none"> a) Will it protect and improve flows in water bodies to achieve 'good ecological status'? b) Will it reduce the abstraction of water from the environment? c) Will it encourage the prudent and efficient use of water? d) Will it promote reuse and recycling of water, for example in the design of housing? e) Will it improve the water supply infrastructure? f) Will it reduce the effects of droughts? g) Will it improve the water systems infrastructure e.g. water supply and ensure these will be in place before new development?
14. Drainage To promote sustainable urban drainage	<ul style="list-style-type: none"> a) Will it support sustainable drainage systems? b) Will it improve the water drainage infrastructure? c) Will it reduce discharges to surface and groundwater?
15. Flood Risk To minimise the risk of flooding	<ul style="list-style-type: none"> a) Will it reduce the risk of flooding from all sources? b) Will it improve awareness of flooding and flood warnings in at risk communities? c) Will it improve the resilience of communities to flood risk, including improving the resilience of properties? (see also objective 8) d) Will it reduce the effects of flooding by providing 'space for water' (e.g. by restoring river corridors)?
Waste management and resource use	
16. Waste Management and Resource Use To minimise the production of waste across all sectors in line with the waste hierarchy and minimise the use of non-renewable materials	<ul style="list-style-type: none"> a) Will it minimise the production of waste? b) Will it promote reuse and recycling of waste? c) Will it promote the disposal of residual waste in a sustainable manner? d) Will it lead to reduced consumption of materials and resources (e.g. consumption of bottled water)?
Economy	
17. Economy To develop the economy in ways which meets society's present and future needs	<ul style="list-style-type: none"> a) Will it improve the resilience of business and the economy to environmental change, including extremes of the water cycle such as droughts and floods? b) Will it help provide employment in the most deprived areas? c) Will it help stimulate regeneration and housing for those in greatest need? d) Will it encourage investment in new technologies, new solutions and research and development to help achieve sustainable development, including those related to water? e) Will it avoid unreasonable costs on business?

APPENDIX 5

EVALUATION OF SUSTAINABILITY EFFECTS AND SIGNIFICANCE CRITERIA

Evaluation of Effects

The June 2006 scoping report contained a methodology for the evaluation of the significant effects of the Water Strategy (then titled Water Action Framework) designed by Forum for the Future. The method multiplied the potential impacts (positive, negative or neutral), the magnitude of these impacts and the probability of occurrence against the Sustainability Objectives. These were then translated into a score ranging from -10 to 18 which was then used to assess the significance of the effect.

There are however, a number of particular problems with the approach which were felt to be potentially misleading. The preferred approach is to use a qualitative 5-point scale supported by clearly laid out pre-determined significance criteria tailor-made for the specific circumstances (See following section). Issues with the tool were also raised by the Environment Agency in their consultation response to the scoping report (see Appendix 2).

The first issue with the SA Tool included in the Scoping report concerns the basis for identifying magnitude of impacts. The Tool suggests that magnitude should take into account the cumulative effect of:-

- The duration of impact (short, medium or long term)
- The number of people affected
- The percentage change from current baseline
- The range of impact (local, regional, national, global)
- Reversibility

However, none of these factors are what would normally be considered to constitute magnitude in environmental or sustainability assessment. Magnitude in environmental assessment is more typically considered to relate to the size of impact, whereas the factors above are all essentially elements that determine the relative significance of that impact. The confusion is further compounded by referring to the cumulative effect of these factors as influencing the magnitude. This perhaps reflects a perspective among the authors that seeks to build on other policy and evaluation approaches rather than those from environmental assessment where magnitude and significance have quite distinct meanings. However, it makes for a confusing and misleading approach to scoring. Cumulative effects are also normally categorised in a rather different way to that described here, e.g. additive, subtractive/neutralising, synergistic, time crowding, space crowding.

The Tool sees significance as a function of Impact x Magnitude x Probability. This incorporates essentially a risk based approach into evaluating significance, whereas more properly risk is a factor that can be considered separately from significance (and indeed is more informative if considered in that way). Inherent within environmental and sustainability assessment is the concept of “likelihood”. The effects to be considered are “likely significant

effects”. So in practice we are only considering those effects that are likely or probable, not those that of very low probability. Probability in significance scoring therefore becomes effectively redundant.

Scoring impacts as positive, negative or neutral and allocating a score to it of 2, -2 or -1 seems an unnecessary effort when positive and negative effects can simply be listed separately (and it is unclear why these are the scores that should be chosen). The scoring system applied (IxMxP) seems to bring no additional benefits than a purely qualitative scoring of ++, +, 0, -, --, typical of a 5-point scoring system. In addition, by multiplying impacts, magnitude and probability a further layer of uncertainty is added since the interactions between I, M and P are not known and likely to be different for each impact category, yet using multiplication implies an understanding of those interactions. However, for mixed effects the scoring system proposed can be more misleading since the Tool's scoring system will always conspire to give you a low significance score, even though mixed effects could have very significant effects depending on the circumstances.

The scoring system is a not uncommon attempt to achieve a rather spurious degree of accuracy, when in reality it can do no such thing. Indeed the Summary Results on the last page relate the scoring system back to a typical five point scale, indicating that the end point is in fact no different. However, the way in which you get to that end point is flawed because of the factors considered under magnitude (when they are really about significance), the misinterpretation of the nature of cumulative effects, and the way in which these factors are combined, all of which may compound errors in the calculations. All of this leads to a reduction in transparency in the way in which effects are assessed. The scoring system adds an unnecessary level of apparently technical complexity where it is not needed and makes it more difficult for non-experts to evaluate the results.

CEP's approach to the evaluation of effects using significance criteria is detailed in the following section.

Significance Criteria

A set of 'generic' significance criteria has been developed to provide guidance to help in scoring the significance of potential effects (see below). These criteria provide a degree of transparency as to the reasoning behind allocating individual scores within the appraisal, such that anyone reading the SA Report should be able to understand the rationale underlying the score, even if they do not entirely agree with the score given.

It is important to recognise that the creation of pre-determined significance criteria is not a substitute for applying expert judgement:

- Completeness will never be possible, nor appropriate. Significance criteria are broad, and provide guidance to arriving at significance judgements rather than offer an accurate scale or series of thresholds. Such thresholds may be possible, but only in specific cases or projects and at small geographical scales, where, for example specific impacts and receptors can be both identified and understood.
- Significance criteria will be case and location specific. Separate criteria need to be developed for each SA.
- Expert judgement and local knowledge will remain a key and fundamental aspect of appraisal and significance scoring. Even when a scale or set of significance criteria have been developed, a series of judgements will still be required to decide the likely level of the effect(s) of a particular policy drawing on the evidence base available.
- Given this, differences of opinion and inconsistency remain possible. In particular the complexity surrounding predicting the effects of implementing a particular policy will remain even where significance criteria are introduced. Indirect, cumulative and long-term effects are still likely to lead to uncertainty, and different appraisers may still assign divergent scores in the same circumstances.

Note that the criteria for a particular significance of effect category (major positive, minor positive, neutral etc) are not meant to be exhaustive. They are intended to provide guidance on the scores assigned during the appraisal, to ensure transparency and consistency of scoring. A score can be assigned without all the criteria within a significance of effect category being met – it would generally be assigned if one or more of the categories are met. They are not intended to be used as checklist, which suggests a level of accuracy in scoring which is simply not possible in most strategic appraisals.

Significance Criteria

Score	Description	General Comments ⁴
Major Positive (++)	<p>A proposal or priority very likely to lead to a significant opportunity / improvement, or a series of long-term improvements, leading to large-scale and permanent benefits to the sustainability objective being appraised.</p> <p>A proposal or policy that will affect positively a large number of people.</p> <p>A major positive effect is also likely to have cumulative and indirect beneficial impact and / or improve conditions outside London.</p>	<p>Major positive scores must be justified with description of the impacts likely to lead to a major beneficial effect.</p> <p>Significant effects are those which either impact a large amount on a specific receptor or group or potentially have smaller impact but on a particularly sensitive or important receptor or group, for instance deprived or vulnerable groups. Significance may also relate to existing targets set locally, regionally or nationally, such as for leakage reduction, water use, etc.</p> <p>An example of a major positive on a Water Resources objective would be a policy, proposal, etc. that made a major contribution to reducing leakage in London.</p> <p>A major positive under Governance could be achieved for instance if long term management of leakage was carried out in partnership between Thames Water, other organisations such as the GLA or Transport for London and community groups, in order to minimise disruption.</p> <p>Another example could be a policy which contributed to achieving a national or international standard or target. A major positive on a Water Quality objective could be a policy that made a significant contribution to achieving 'good status' in all water bodies in London.</p>
Minor Positive (+)	<p>A proposal or policy likely to lead to moderate improvement in both short and long-term, leading to large scale temporary, or medium scale permanent benefits to the objective being appraised.</p> <p>Even where beneficial effects are felt to be temporary, they should not be easily reversible (to detriment of objective) in the long-term.</p> <p>A minor positive effect may halt or reverse historic negative trends.</p>	<p>Minor positive scores should be justified with description of the impacts likely to lead to a beneficial effect.</p> <p>Commentary may be appropriate on how a minor positive could be strengthened and / or any uncertainties and factors which have led to a minor as opposed to major positive effect being recorded.</p> <p>An example of a minor positive on a Water Resources objective would be a policy, proposal etc that achieved some reduction in leakage in London but not enough to bring Thames Water's leakage to their Economic Level.</p> <p>An example of a minor positive on a Water Quality objective would be a proposal or policy that helped achieve an improvement in the water quality of some of London's water bodies.</p>
Neutral (0)	<p>A proposal or policy which is unlikely to have any beneficial or negative impact / effect on the objective being appraised in either the short, or long-term.</p> <p>This may include the continuation of a current trend – thus the condition of an issue may continue to decline / improve, however the appraiser's judgement is that the item is having no effect on the current trend.</p>	<p>Neutral scoring should only be used where it is very likely that the effect will be neither positive, nor negative, or that a positive or negative change is not sufficiently significant to warrant a 'minor' score.</p> <p>Where positive and negative effects are likely to cancel each other out this should be recorded as 'mixed' see below, rather than neutral.</p> <p>A neutral score is not the same as 'uncertain', where an appraiser is not sure if an effect is likely to be positive or negative, or 'mixed', where the appraiser feels that the effects are likely to be both positive and negative (see below for more detail).</p> <p>For instance, the appraisal may conclude that a policy designed to achieve better leakage management is unlikely to have any significant effects on Flood Risk.</p>
Minor Negative (-)	<p>A proposal or policy likely to lead to moderate damage / loss in both short and long-term, leading to large-scale temporary, or medium scale permanent negative impact on the objective.</p> <p>A proposal or policy which may also have limited cumulative and indirect detrimental impact and / or limited degradation of conditions outside the specific policy or</p>	<p>To be scored minor negative, effects should be considered able to be mitigated through policy.</p> <p>Commentary should be provided on how minor negative effects can be mitigated and / or reversed.</p> <p>For instance, a proposal or policy that focused on increasing the availability of water supply and did not include leakage management would obtain a score of minor negative on Water Resources.</p> <p>A policy or proposal that did not contribute to achieving 'good</p>

⁴ Examples of water resources and water quality effects are used here, but these comments should be reflected across the application of the criteria for each objective.

Score	Description	General Comments ⁴
	<p>project area.</p> <p>A minor negative effect may halt or reverse historic positive trends.</p> <p>It is also likely that it will be possible to mitigate or reverse a minor negative effect through policy or project intervention.</p>	<p>status' in London's water bodies would score a minor negative on Water Quality.</p> <p>For instance, a policy to provide free air conditioning units to certain households in order to reduce the effects of climate change, would have a negative score on Climate Change Mitigation as it would contribute to increasing CO₂ emissions.</p>
Major Negative (--)	<p>A proposal or policy likely to lead to significant or severe damage / loss, or a series of long-term negative effects, leading to large-scale and permanent negative impacts on the sustainability objective being appraised.</p> <p>A proposal or policy affecting at least one person very negatively or negatively affecting a large number of people.</p> <p>A proposal or policy which may also have significant cumulative and indirect detrimental impact and / or degrade conditions outside London.</p> <p>A proposal or policy, which is likely to threaten environmental thresholds / capacities in areas already under threat.</p> <p>The detrimental effects of the proposal or policy will be hard to reverse and are unlikely to be easily mitigated through policy or project intervention.</p>	<p>Major negative scoring should be considered where effects are irreversible and difficult to mitigate.</p> <p>Significant effects are those which either impact a large amount on a specific receptor or group or potentially have smaller impact but on a particularly sensitive or important receptor or group.</p> <p>Where effects are uncertain, but there is some probability of a significant negative impact, a precautionary approach to scoring will be applied.</p> <p>Major negative scores should be recorded without taking into account potential for mitigation, since there is no guarantee that any mitigation measures (policies) will be implemented or successful. In all cases where major negative scores are assigned, policy improvement recommendations should be made.</p> <p>A major negative on Water Resources could be a policy or proposal which exacerbates current levels of leakage rather than reduces it.</p> <p>For instance, a proposal or policy that had the potential to affect negatively the quality of drinking water or cause a loss of supply and consequently sanitation problems would receive a double negative.</p>
Mixed (e.g. ++/-, +/- etc.)	<p>The effect is likely to be a combination of beneficial and detrimental effects, particularly where effects are considered on sub-issues, areas or criteria.</p>	<p>Such mixed and effects will be hard to predict, but could be significant in the long-term, or when taken with other effects (cumulative).</p> <p>A mixed effect score may also be combined with an uncertain score (?) where the relative balance of effects, or the nature of the effects remains uncertain.</p> <p>A policy to develop a new water resource, e.g. a reservoir, could have a mixed score on Water Resources as it would contribute to maintain the security of supply but at the same time would increase water abstractions.</p> <p>A policy to develop a new resource could have a mixed score on Climate Change as on one hand it would reduce vulnerability to drought but on the other the construction and operation would cause greenhouse gas emissions.</p>
Uncertain (?)	<p>The effect of a proposal or policy cannot be, or is not known or is too unpredictable to assign a conclusive score. The appraiser is not sure of the effect.</p> <p>Where the effect is genuinely uncertain an uncertain score should be assigned rather than attempt to give a positive, negative or neutral score. Uncertainty should be acknowledged rather than attempt spurious accuracy, which is likely to result in greater divergence amongst different appraisers.</p>	<p>This may be the case where a policy covers a range of issues, or where the manner in which a policy is implemented will have a material impact on the effects it will have.</p> <p>Equally it may be the case that there is insufficient evidence, information or expertise to come to a satisfactory conclusion about whether an effect is likely to be positive or negative.</p> <p>In these circumstances commentary should be provided as to how the policy may be improved / clarified to ensure a positive effect.</p>

APPENDIX 6

REVIEW OF KEY POLICIES, PLANS, PROGRAMMES AND GUIDANCE

Review of Key Policies, Plans, Programmes and Guidance

The table below lists policies, strategies, plans and guidance documents which are relevant to the SA of the draft Water Strategy. The review of plans and programmes (see also Appendix 5) sought to draw out:

- Areas where there is policy overlap between the Water Strategy and other plans or policies;
- Targets, guidelines and parameters set out in other relevant strategies and plans, particularly those at a higher level (e.g. UK Government or EU level);
- Key issues for the Water Strategy and the Sustainability Appraisal to consider.

The review focused on London level policies, strategies, plans and guidance, as well as those at a national which are particularly relevant to the SA of the Water Strategy or are relatively recent and therefore may not yet be reflected in London level policies, strategies, plans and guidance. No European Directives or other international documents have been reviewed as any targets and legislation they contain should have already been included in National and London plans and programmes.

Policies, Plans, Programmes, Strategy or Guidance	Relevance to the Water Strategy and its Sustainability Appraisal
Government	
Department for Environment, Food and Rural Affairs (Defra) (2008) <i>Future Water – The Governments Water Strategy for England</i>	Relationship with Water Strategy Launched in February 2008, the Strategy sets out the national policy framework for water resources and quality. It covers water quality, supply, demand management and efficiency and climate change adaptation and mitigation, with the aim of reducing demand and improving water quality. The vision of the Strategy is that by 2030 Defra will have; <ul style="list-style-type: none"> • improved the quality of our water environment and the ecology which it supports, and continued to provide high levels of drinking water quality from our taps; • sustainably managed risks from flooding and coastal erosion, with greater understanding and more effective management of surface water; • ensured a sustainable use of water resources, and implemented fair, affordable and cost reflective water charges; • cut greenhouse gas emissions; and • embedded continuous adaptation to climate change and other pressures across the water industry and water users. The Strategy describes a range of actions that will help to deliver the above vision <ul style="list-style-type: none"> • Any policies or proposals in the Mayor's Water Strategy should conform with policies contained in the national strategy. Influence on SA The Strategy provides the national policy context for measures in the Water Strategy designed to reduce consumption, improve water quality and promote climate change adaptation and mitigation. Includes information related to the current situation, and likely future pressures, for each of water demand, water supply, water quality in the natural environment, surface water drainage, river and coastal flooding, greenhouse gas emissions, charging for water and the regulatory framework, competition and innovation. Context topics: All
Defra (2009) <i>Draft Flood and Water Management Bill (Consultation Draft)</i>	Relationship with Water Strategy The draft Bill is being prepared in response to the Pitt Review (2007) and the EU Floods Directive. It was published for consultation on the 21 st April 2009 until the 24 th July 2009. The draft Bill is designed to respond to the challenges of predicted climate change and population increase – an increase in water demand and more frequent extreme weather events, more widespread water stress, increased risk of drought, more water quality problems and a greater risk of flooding. The draft Bill will; <ul style="list-style-type: none"> • “deliver improved security, service and sustainability for people and their communities

Policies, Plans, Programmes, Strategy or Guidance	Relevance to the Water Strategy and its Sustainability Appraisal
	<ul style="list-style-type: none"> • <i>it will be clear who is responsible for managing flood risk</i> • <i>protect essential water supplies</i> • <i>modernise the law for managing flood risk and reservoir safety</i> • <i>encourage more sustainable forms of drainage</i> • <i>enable water companies to control more non-essential uses of water during droughts</i> • <i>make it easier to resolve misconnections to sewers."</i> <p>The draft Bill should simplify, and improve the effectiveness of, managing the risk of flood and coastal erosion, improve the sustainability of water resources and protect against potential droughts. The result should be a healthier environment and better services and protection to water consumers.</p> <p>Influence on SA</p> <p>The draft Bill will make clear who is responsible for managing all sources of flood risk. The SA will draw on the draft Bill to ensure that the responsibilities for flood risk management as defined in the Water Strategy reflect the draft Bill.</p> <p>Context topics: 4. Water management.</p>
HM Government (2008) <i>The Planning Act</i>	<p>Relationship with Water Strategy</p> <p>The Act introduces a new system for decision making in relation to nationally significant infrastructure planning, for example nuclear power stations, with additional reforms to the town and country planning system. Decisions will be based on National Policy Statements. It also provides for a Community Infrastructure Levy on new developments to support key infrastructure delivery.</p> <p>Relevant key areas covered by the Planning Act include:</p> <ul style="list-style-type: none"> • There will be a new Community Infrastructure Levy on developments to finance infrastructure. The aim is to raise money from developers to pay for facilities needed as a consequence of new developments, such as schools, hospitals and sewage plants. <p>Influence on SA</p> <p>Limited influence on the SA, but the Community Infrastructure Levy may be a useful tool in assisting London boroughs to deliver infrastructure required to reduce flood risk, such as SUDS.</p> <p>Context topics: 4. Water management.</p>
Defra (2007) <i>The Water Supply (Water Quality) Regulations 2000 and (Amendment) Regulations 2007</i>	<p>Relationship with Water Strategy</p> <p>Provides regulatory framework for and responsibilities of water suppliers and local authorities in relation to the supply, treatment. Defines "water supply zones" (an area with maximum population of 100,000 people), requirements for "wholesomeness" of water supplies, and monitoring of supply quality.</p> <ul style="list-style-type: none"> • Policy and action included in the Water Strategy will need to ensure that the water supply regulation requirements are met – however the responsibility for this will be with water suppliers and local authorities. <p>Influence on SA</p> <p>Potentially important for the assessment of health impacts, as water quality can have clear health impacts. Provides detailed information on the requirements for water quality in supply and monitoring – SA may wish to draw on this in relation to aspects of the Water Strategy which may influence quality or supply conditions.</p> <p>Context topics: 1. People and health, 4. Water management.</p>
Defra (2003) <i>The Water Environment (Water Framework Directive) (England and Wales) Regulations</i>	<p>Relationship with Water Strategy</p> <p>Sets out the England and Wales regulatory response to the Water Framework Directive (WFD). In particular provides the framework and responsibilities for the Environment Agency and the Secretary of State in relation to river basin management in compliance with the requirements of the WFD. This includes conducting an analysis of water use, identification of water bodies used for abstraction, a register of protected areas, and proposals for monitoring water quality and status. The Agency is also required to establish River Basin Management Plans.</p> <ul style="list-style-type: none"> • Later versions / updates of the Water Strategy should be in compliance with, and reflect / support the priorities of the Thames River Basin District Management Plan, which is due to be published December 2009. • The regulations require the Environment Agency to gather and maintain a large amount of information relating to the abstraction, use and management of water at the "river basin district" scale. It is important that the Water Strategy draws upon the information relevant to London – the Thames River Basin District. <p>Influence on SA</p> <p>Regulations set out responsibilities and roles in relation to meeting the requirements of the WFD and particularly river basin management. As limited work has currently been carried out by the Environment Agency, there is limited relevance to the SA at present.</p> <p>Context topics: 2. Place, 4. Water management, 6. Economy</p>
Defra (2006) <i>River basin planning</i>	<p>Relationship with Water Strategy</p> <p>Provides statutory guidance to the Environment Agency on the practical implementation of the WFD. Thus</p>

Policies, Plans, Programmes, Strategy or Guidance	Relevance to the Water Strategy and its Sustainability Appraisal
<i>guidance</i>	<p>supports and provides detailed guidance for the Agency in meeting its' requirements under the Water Environment (Water Framework Directive) Regulations (reviewed above).</p> <ul style="list-style-type: none"> Water Strategy policies and priorities should support the responsibilities that the Environment Agency has in relation to the WFD, and this document provides a clear outline of these responsibilities. <p>Influence on SA</p> <p>Limited, however the SA can help to advise on areas where conflict or positive interactions may exist between the Water Strategy and the more strategic management of water required by River Basin Management Plans.</p> <p>Context topics: 2. Place, 4. Water management, 6. Economy</p>
Defra (2005) <i>Making space for water. And Taking forward a new Government strategy for flood and coastal erosion risk management in England. First Government response to the autumn 2004 Making space for water consultation exercise</i>	<p>Relationship with Water Strategy</p> <p>Sets out a holistic approach to managing flood and coastal risks in England. Risks should be managed so as to: reduce the threat to people and their property and deliver the greatest environmental, social and economic benefit consistent with the Government's sustainable development principles.</p> <p>Sets out a "wide ranging" programme (including timeline) of actions relating to all aspects of managing flood risk, including issues such as integrated urban drainage management, living with flood risk.</p> <ul style="list-style-type: none"> The Making Space for Water programme and actions should be a key source of direction in terms of policy and priority for the Water Strategy as it sets out the Government's high-level and long term flood risk management vision, aims and actions. <p>Influence on SA</p> <p>The SA should draw on the actions and priorities set out in Making Space for water and ensure that the Water Strategy reflects and supports them.</p> <p>Context topics: 1. People and health, 2. Place, 3. Climate change, 4. Water management</p>
Defra (2007) <i>Consultation on proposed changes to powers to restrict non-essential uses of water, and Defra (2007) Summary of Consultation Responses</i>	<p>Relationship with Water Strategy</p> <p>Seeks views from stakeholders with an interest in the scope of hosepipe bans and drought orders. It is part of a review of the scope of the legislative framework relating to non-essential water uses.</p> <p>Depending on consultation outcomes this review may (among other related matters) lead to proposals for the expansion of the range of "discretionary" uses of water which companies may temporarily restrict or prohibit.</p> <ul style="list-style-type: none"> As this process is at an early consultation phase it has no direct influence on the Water Strategy at present. However later / updated versions of the Water Strategy should reflect and support current Government policy and guidance in relationship to discretionary water use restrictions. Future legislative changes are possible – and the Water Strategy will need to reflect and be aware of this. <p>Influence on SA</p> <p>As above – however limited direct relevance / influence as in an early consultation phase.</p> <p>Context topics: 1. People and health, 3. Climate change, 4. Water management, 6. Economy</p>
Defra (2007) <i>Consultation on water metering in areas of serious water stress, Defra (2007) Government response to consultation on water metering in areas of serious water stress</i>	<p>Relationship with Water Strategy</p> <p>As above, however is seeking views on proposals "to extend opportunities for metering in areas of England subject to serious water stress".</p> <p>Relationship to Water Strategy is as above.</p> <p>Influence on SA</p> <p>As above – however limited direct relevance / influence as in an early consultation phase.</p> <p>Context topics: 1. People and health, 3. Climate change, 4. Water management</p>
Defra (2005) <i>Water charging: reductions for vulnerable groups. Response to consultation</i>	<p>Relationship with Water Strategy</p> <p>Important source of information on issues relating to water charging for vulnerable groups. Sets out Government's proposed revisions to regulations in this regard.</p> <p>Includes "next steps" which include a timetable to get regulation changes before Government in 2005 – it is unclear what progress is.</p> <ul style="list-style-type: none"> The Water Strategy should reflect these issues, and draw on the regulation changes proposed to set out and support any policy and priorities related to charging and vulnerable groups, of which there are large number in London. <p>Influence on SA</p> <p>Useful source of information on issues around water supply, charging and vulnerable groups. Can inform appraisal.</p> <p>Context topics: 1. People and health, 4. Water management</p>

Policies, Plans, Programmes, Strategy or Guidance	Relevance to the Water Strategy and its Sustainability Appraisal
Defra (2005) <i>Drought orders and drought permits</i>	<p>Relationship with Water Strategy</p> <p>Seeks to set out “in a clear and accessible form” information about the process for obtaining drought permits and drought orders.</p> <ul style="list-style-type: none"> Context relevance only. <p>Influence on SA</p> <p>As above.</p> <p>Context topics: 1. People and health, 4. Water management</p>
DCLG (2006) <i>Code for sustainable homes</i> , DCLG (2008) <i>Code for sustainable homes – Technical Guide</i>	<p>Relationship with Water Strategy</p> <p>The Code seeks to provide a single national standard to guide industry in the design and construction of sustainable homes.</p> <p>Includes minimum standards and detailed point scoring system for aspects of sustainable home-building and design, including water use, pollution and surface water run-off</p> <p>The technical guide sets out the requirements for the Code, and the processes for achieving a Code assessment, with the aim of facilitating Code assessment.</p> <ul style="list-style-type: none"> Detailed standards may be too specific for the Water Strategy to consider, however the Strategy can highlight and emphasise the need to build homes to the Code standards in London. <p>Influence on SA</p> <p>The SA should ensure that relevant policy and priorities in the Water Strategy are in line with, and encourage developments which meet or exceed the Code standards in relation to water, pollution and run-off.</p> <p>Context topics: All</p>
DCLG (2006) <i>Planning Policy Statement 25: Development and Flood Risk</i> and CLG (2008) <i>Development and Flood Risk: A Practice Guide Companion to PPS25</i>	<p>Relationship with Water Strategy</p> <p>All PPSs and PPGs will have been taken into account by the Mayor in the London Plan, however as the highest level spatial planning guidance relating to flooding the PPS25 should also be an important source for drafting of the Water Strategy.</p> <p>Aims to ensure flood risk is taken into account at all stages in the planning process, and to avoid inappropriate development in areas of flood risk / deflect development away from the highest risk areas. It adopts a risk management base approach.</p> <ul style="list-style-type: none"> The Water Strategy should refer to and reflect the guidance and policy set down in PPS25. <p>The companion guide describes how to implement PPS25, to incorporate policies that facilitate sustainable development, in particular, taking account of flood risk.</p> <p>Influence on SA</p> <p>The SA, through reference to PPS25 can advise whether the Water Strategy is in line with government policy. In addition the PPS is an important source of information on issues and impacts and will be used as a source document during appraisal.</p> <p>Context topics: 1. People and health, 2. Place, 3. Climate change, 4. Water management, 6. Economy</p>
DCLG (2007) <i>Planning Policy Statement: Planning and Climate Change: Supplement to PPS1</i>	<p>Relationship with Water Strategy</p> <p>This PPS supplement sets out how spatial planning should contribute to reducing emissions and stabilising climate change (mitigation) and how it should take into account the unavoidable consequences (adaptation). It sets out high level planning objectives to be taken into account by all planning authorities in the preparation and delivery of spatial strategies.</p> <p>As a supplementary document to PPS1, it should be read alongside this.</p> <ul style="list-style-type: none"> The Water Strategy should draw upon the guidance and policy set out in this document.. This may be particularly relevant to policy and priorities relevant planning authorities in London. <p>Influence on SA</p> <p>The SA can draw on the issues and direction set out in the PPS as background for the appraisal and for mitigation / enhancement.</p> <p>Context topics: 3. Climate change, 4. Water management</p>
PPG13: Transportation	<p>Relationship with Water Strategy</p> <p>Sets out highest level spatial planning guidance in relation to transport – with the objectives of promoting sustainable transport choices, improving accessibility and reducing the need to travel, especially by car.</p> <p>Encourages the movement of freight by water, which for some areas may offer a realistic opportunity in London. Seeks joint working between Local Authorities and navigation authorities to develop the potential of waterways for recreation and transport.</p> <ul style="list-style-type: none"> The Water Strategy can play a role in supporting and promoting water-based travel, as well as addressing the relationship between transport infrastructure and water issues (especially flooding and drainage). <p>Influence on SA</p> <p>The SA can draw on this PPG to identify issues relating to transport and water, and can advise on the</p>

Policies, Plans, Programmes, Strategy or Guidance	Relevance to the Water Strategy and its Sustainability Appraisal
	<p>relationship between policy and priorities included in the Water Strategy and transportation.</p> <p>Context topics: 2. Place, 6. Economy</p>
<p>PPS 23: Planning and Pollution Control and Annex 1: Pollution Control, Air and Water Quality</p>	<p>Relationship with Water Strategy</p> <p>Sets out the relationship between planning and pollution, and sets out the manner in which planning should prevent, mitigate or minimise pollution risks – to water, land and air.</p> <p>Annex 1 includes more detailed guidance on pollution control legislation, controlling development related water pollution and the relationship between planning, development and water quality.</p> <ul style="list-style-type: none"> The Water Strategy should include reference to this PPS where appropriate, and can draw on the policy and guidance included especially in policy / priorities related to planning, development and its relationship with water quality / pollution. <p>Influence on SA</p> <p>The PPS will be a good source of information on issues and impacts relating to development and water pollution / quality, and thus will support appraisal. The SA can also advise on whether the Water Strategy is broadly in line with policy as set out in the PPS.</p> <p>Context topics: 1. People and health, 4. Water management, 5. Waste and resources</p>
<p>Defra (2004) <i>Review of existing private sewers and drains in England and Wales: Response to consultation</i></p>	<p>Relationship with Water Strategy</p> <p>Sets out consultation responses to the Government's review of existing private sewers and drains. It also presents issues to be addressed and ways forward in relation to the ownership and management of sewers and drains.</p> <p>Following this consultation, in February 2007 the Government announced the decision to transfer existing private sewers and lateral drains in England into the ownership of water and sewerage companies.</p> <ul style="list-style-type: none"> Contextual information in the main. The Water Strategy should reflect this recent legislative change. <p>Influence on SA</p> <p>The consultation report and responses provide useful information on sewerage and drain related issues and problems. This can be used in appraisal to identify issues and impacts.</p> <p>Context topics: 4. Water management, 5. Waste and resources</p>
<p>Defra (2002) <i>Directing the flow: Priorities for future water policy</i></p>	<p>Relationship with Water Strategy</p> <p>Sets out what the Government feels should be the priorities for policy on water in England. Sets out the relationships between water and sustainable development, and the need to recognise this.</p> <p>Some of the direction included in this document has already been realised (such as the WFD regulations - reviewed above).</p> <ul style="list-style-type: none"> The Water Strategy should draw on and reflect the policy priorities and future vision set out in this document. <p>Influence on SA</p> <p>The SA may make use of the large amount of information relating to the sustainable development implications of water policy. The SA may also advise on any policy inconsistency with current Government priorities.</p> <p>Context topics: 3. Climate change, 4. Water management</p>
<p>DCLG (2006) <i>Mandating Water Efficiency in New Buildings - A Consultation</i> and DCLG (2007) <i>Water Efficiency in New Buildings: a joint Defra and DCLG policy statement</i></p>	<p>Relationship with Water Strategy</p> <p>A consultation document (and the response) seeking views on the Government's proposals to make minimum standards of water efficiency performance mandatory in all new homes and new commercial developments. These standards will underpin those set out in the Code for Sustainable Homes.</p> <ul style="list-style-type: none"> The Water Strategy can reflect the proposed efficiency standards in relevant sections / policies. Such standards could be used to set aspirational targets or goals for water efficiency in development in London. <p>Influence on SA</p> <p>The consultation contains a large amount of background "setting the scene" about water resources in development and water efficiency. This will be a useful resource in identifying issues during appraisal. The SA can also advise on whether the Water Strategy reflects the standards and priorities set out.</p> <p>Context topics: 4. Water management, 5. Waste and resources</p>
<p><i>Climate Change Act (2008)</i></p>	<p>Relationship with Water Strategy</p> <p>The Climate Change Act became law on 26th November 2008. It is intended to provide a clear, credible and long-term framework for tackling climate change.</p> <p>The Act includes a series of legally binding targets: Green house gas emission reductions through action in the UK and abroad of at least 80% by 2050, and reductions in CO₂ emissions of at least 26% by 2020, against a 1990 baseline. The 2020 target will be reviewed soon after Royal Assent to reflect the move to all greenhouse gases and the increase in the 2050 target to 80%. The Act also includes provisions to enable the introduction of a domestic emissions trading scheme.</p> <p>Two key aims underpinning the Act:</p> <ul style="list-style-type: none"> to improve carbon management and help the transition towards a low carbon economy in the UK; and

Policies, Plans, Programmes, Strategy or Guidance	Relevance to the Water Strategy and its Sustainability Appraisal
	<ul style="list-style-type: none"> to demonstrate strong UK leadership internationally, signalling that the Government are committed to taking their share of responsibility for reducing global emissions in the context of developing negotiations on a post-2012 global agreement at Copenhagen 2009. <p>It aims to reduce carbon dioxide emissions via the following key provisions:</p> <ul style="list-style-type: none"> Setting legally binding targets Establishing a carbon budgeting system Creation of a Committee on Climate Change Creating enabling powers Reporting requirements <p>Although it does not have a direct influence on the Water Strategy, it is important that the Strategy is developed in line with targets and aims of the Climate Change Act.</p> <p>Influence on SA</p> <p>Context and rationale sections provide a key source of information relevant to the appraisal. The SA can also advise on potential conflicts with the Climate Change Act.</p> <p>Context topics: 3. Climate change</p>
Her Majesty's Government (2005) <i>Securing the future – the UK Government Sustainable Development Strategy</i>	<p>Relationship with Water Strategy</p> <p>Sets the highest-level Government strategic priorities and framework in relation to Sustainable Development.</p> <ul style="list-style-type: none"> Supporting sustainable development is a key role of the Water Strategy, and it should therefore, at the strategic level reflect the priorities and framework set out in the Sustainable Development Strategy. <p>Influence on SA</p> <p>The SA seeks to ensure that the Water Strategy is as supportive of sustainable development as possible. The UK Government Strategy for Sustainable Development is a key document, setting the high-level background for appraisal.</p> <p>The SA will ensure that the Water Strategy is not in conflict with the Sustainable Development Strategy.</p> <p>Context topics: All</p>
ODPM (2005) <i>Diversity and Equality in Planning, a good practice guide</i>	<p>Relationship with Water Strategy</p> <p>Provides very detailed guidance on the consideration of equality and diversity issues in planning. Includes a number of case studies from around the UK and good practice lessons. The guidance is aimed at all involved in planning, particularly at the local authority level.</p> <ul style="list-style-type: none"> The Water Strategy may wish to refer to the good practice guidance included in this guide, particularly in relation to aspects of the Strategy which will influence or be relevant to equality and / or diversity. <p>Influence on SA</p> <p>The SA can use the detailed guidance and background information included as a source for the identification of issues and potential effects. If it is felt that the Water Strategy may be in conflict with suggested good practice, the SA may suggest possible changes.</p> <p>Context topics: 1. People and health</p>
House of Commons: Environment, Food and Rural Affairs Committee (December 2004) <i>Climate change, water security and flooding: Government reply to the Committee's report</i>	<p>Relationship with Water Strategy</p> <p>Issues included are likely to be largely covered in other plans and strategies reviewed above.</p> <p>Influence on SA</p> <p>As above</p> <p>Context topics: 1. People and health, 3 Climate change, 4. Water management</p>
Environment Agency (2008) <i>The Pitt review: learning lessons from the 2007 flood. Final Report</i> , and Defra (2008) <i>The Governments Response to Sir Michael Pitt's Review of the</i>	<p>Relationship with Water Strategy</p> <p>The final Pitt review report represents the findings of an independent review into the UK floods of 2007. The review raised concerns about the quality and availability of flood risk information to both emergency services and the public. The Report contains a total of 92 final recommendations which although strategic in nature, have implications for London (and every city in England and Wales). In its response, the Government states that it "supports changes in response to all of the recommendations in the Review". Where full implementation of any of the recommendations will need further consultation or future legislation, the Government response sets out what will be done to achieve this and what will be done in the meantime to address the concerns behind the recommendation.</p> <p>Among the key recommendations the review calls for:</p> <ul style="list-style-type: none"> Treating flooding as an issue of strategic importance, akin to pandemic flu or terrorism.

Policies, Plans, Programmes, Strategy or Guidance	Relevance to the Water Strategy and its Sustainability Appraisal
<i>Summer 2007 Floods</i>	<ul style="list-style-type: none"> The Environment Agency and Met Office should work together to improve their technical capability to forecast, model and warn. Improving reporting and monitoring during major flood events. Ensuring flood resilience measures are properly funded. Establishing a national level Resilience Forum, to facilitate national level planning for flooding and other emergencies. Establishing stable rather than ad-hoc financial mechanisms to respond to exceptional emergencies. <p>Influence on SA</p> <ul style="list-style-type: none"> The SA can use the background information contained in the report, and the recommendations, as a source for the identification of issues and potential effects. If it is felt that the Water Strategy is in conflict with the principles of the recommendations the SA may suggest possible changes. <p>Context topics: all</p>
<i>DCLG (2007) Homes for the future: more affordable, more sustainable – Housing Green Paper</i>	<p>The Housing Green Paper seeks views on the Government's proposals to increase the supply of housing. There are significant numbers of new homes planned for the London – Stanstead – Cambridge and Thames Gateway areas. These new homes will be supported by infrastructure, be affordable and will reach high efficiency targets related to natural resource use.</p> <ul style="list-style-type: none"> The Water Strategy may wish to refer to plans to improve the water efficiency of new houses and reduce flood risk to new and existing developments. <p>Influence on SA</p> <p>The SA can use the targets related to water use per person (125 litres/person/day) and the background information on planning objectives related to reducing flood risk. The SA can also use the projected housing numbers for new homes in the Greater London area as context related to projected demand for water to 2016.</p> <p>Context topics: 4. Water Management</p>
<i>Foresight (2007) Tackling Obesity: Future Choices</i>	<p>The preparation of this Foresight report involved gathering scientific evidence from across a wide range of disciplines to inform a strategic view of obesity in the UK, both now and over the longer term. The aim of the study was;</p> <p>"to produce a long-term vision of how we can deliver a sustainable response to obesity in the UK over the next 40 years."</p> <p>The report notes that there may be a link between consumption of high calorie food / drinks and obesity.</p> <p>Influence on SA</p> <p>The report is of limited influence to the SA, but may be useful in evaluating proposals related to water consumption and health.</p> <p>Context topics: 1. People and Health</p>
London	
<i>GLA (2008) The Mayor's London Plan: Spatial Development Strategy for Greater London; consolidated with alterations since 2004,</i>	<p>Relationship with Water Strategy</p> <p>The London Plan is the Mayor's key spatial plan for London. The Water Strategy should be in accordance with and support all relevant policies and targets set out in the London Plan</p> <p>Policies of direct relevance (others may also have indirect relevance):</p> <p>4A.1 – Tackling Climate Change</p> <p>4A.2 – Mitigating Climate Change</p> <p>4A.3 – Sustainable design and construction</p> <p>4A.9 – Adaptation to climate change</p> <p>4A.11 – Living Roofs and Walls</p> <p>4A.12 – Flooding</p> <p>4A.13 – Flood risk management</p> <p>4A.14 – Sustainable drainage</p> <p>4A.15 – Rising groundwater</p> <p>4A.16 – Water supplies and resources</p> <p>4A.17 – Water quality</p> <p>4A.18 – Water and sewerage infrastructure</p> <p>4A.21 – Waste strategic policy and targets</p> <p>4B.3 – Enhancing the quality of the public realm</p> <p>Influence on SA</p> <p>The SA will review the Water Strategy for coherence with London plan policies and any targets included. If necessary suggestions for changes to the Water Strategy will be made.</p> <p>Context topics: All</p>
<i>GLA (2009) A New</i>	A New Plan for London contains proposals for a new London Plan, outlining key trends and challenges that

Policies, Plans, Programmes, Strategy or Guidance	Relevance to the Water Strategy and its Sustainability Appraisal
<p><i>Plan for London</i></p>	<p>the Plan will have to address, and the Mayor's overarching strategy and vision of London over the plan period.</p> <p>A New Plan for London is a step on the way to creating an entirely new London Plan, and will look forward to 2031, five years further into the future than the version published in 2008. The New London Plan does not contain any specific revisions, but outlines the Mayor's intentions related to London Plan policy. Due to this strategic nature, there is nothing immediately relevant to the Water Strategy, but changes to the London Plan have the potential to affect the delivery of the policies and proposals of the Water Strategy.</p> <p>In reviewing the London Plan, the Mayor proposes to;</p> <ul style="list-style-type: none"> • Strengthen policies to minimise and manage flood risk in London and its risk to development and infrastructure and provide the basis for a co-ordinated approach by the Mayor, boroughs and other organisations to managing strategic flood risks; • Continue to promote sustainable drainage across London through the use of the established 'drainage hierarchy' and investigate solutions to address existing areas through the Drain London project; • Protect and conserve water supplies and water resources through improved infrastructure and maximum water use targets for new development. The Mayor will also explore the concept of water neutrality; • Support the improved sewerage infrastructure, in particular the principle of the Thames Tideway Sewer; and • Ensure that the water quality of London's water bodies and rivers is protected and improved. <p>Public consultation on a full draft new London Plan is planned for autumn 2009, with a new London Plan intended for publication in the winter of 2011 – 12.</p> <p>Influence on SA</p> <p>The SA may draw on elements of the New Plan for London where it contains information related to the water environment.</p> <p>Context topics: All</p>
<p>GLA (2007) <i>Planning for Equality and Diversity in London. London Plan Draft Supplementary Planning Guidance (SPG)</i></p>	<p>Relationship with Water Strategy</p> <p>Provides greater detail on equality and diversity issues in planning in London.</p> <ul style="list-style-type: none"> • The Water Strategy should refer to this SPG in relation to aspects of the Strategy which are related to or could influence diversity and equality. <p>Influence on SA</p> <p>The SA will refer to the SPG to help identify issues relevant to diversity and equality in London. It may also provide a useful source of London specific baseline information.</p> <p>Context topics: 1. People and health, 6. Economy</p>
<p>GLA (2006) <i>Sustainable Design and Construction: London Plan SPG</i></p>	<p>Relationship with Water Strategy</p> <p>Detailed guidance in support of London Plan policy 4A.3.</p> <p>Provides guidance and establishes Mayor's preferred standards for sustainable design and construction. These relate to all aspects, and in relation to water, the conservation of water resources, the reduction of pollution and flooding.</p> <ul style="list-style-type: none"> • The Water Strategy should refer to or include the standards (and guidance) set out in the SPG where it is seeking to encourage water related design or construction. <p>Influence on SA</p> <p>The SA will use the SPG as a reference source for sustainable design standards in relation to water, and may make recommendations for change where it is felt the Water Strategy could encourage these standards more strongly.</p> <p>Context topics: 2. Place, 3. Climate change, 4. Water management, 5. Waste and resources</p>
<p>London Sustainable Development Commission (2003) <i>A Sustainable Development Framework for London.</i></p>	<p>Relationship with Water Strategy</p> <p>Sets out the sustainable development vision and objectives for London. It is intended to be used to provide the context for policy development and decision making, guide sustainability appraisals and monitor progress towards a more sustainable city.</p> <ul style="list-style-type: none"> • The Water Strategy should be developed in accordance with these high level sustainable development objectives. <p>Influence on SA</p> <p>The SA will refer to the Sustainable Development Framework for London, and the appraisal will keep in mind these high-level objectives.</p> <p>Context topics: All</p>
<p>GLA (2004) <i>The Mayor's Transport Strategy Revision (2004) and Transport</i></p>	<p>Relationship with Water Strategy</p> <p>Sets the policy framework for transport in London. Advocates the development of the River Thames as a transport link.</p> <ul style="list-style-type: none"> • The Water Strategy may need to refer to the transport strategy, particularly where water policies and

Policies, Plans, Programmes, Strategy or Guidance	Relevance to the Water Strategy and its Sustainability Appraisal
<i>Strategy Implementation Targets</i>	<p>priorities may conflict with or support transport goals.</p> <p>Influence on SA</p> <p>The SA may refer to the Transport Strategy as a source of information on transport in London.</p> <p>Context topics: 1. People and health, 2. Place, 6. Economy</p>
GLA (2008) <i>Transport Way to Go!</i>	<p>Transport Way to Go! Is a precursor to the Mayor's new transport strategy, it does not contain explicit policies. The document outlines the Mayor's vision for transport in London, detailing changes in priorities which will be reflected in the new transport strategy. The document refers to "creating a vision for the increased use of the Thames".</p> <ul style="list-style-type: none"> The Water Strategy may need to refer to Transport Way to Go!, particularly where water policies and priorities may conflict with or support transport goals, bearing in mind that it is a precursor to a new transport strategy. <p>Influence on SA</p> <p>The SA may refer to Transport Way to Go! as a source of information on the likely future transport strategy in London.</p> <p>Context topics: 1. People and health, 2. Place, 6. Economy</p>
GLA (2005) <i>Sustaining Success – the Mayor's Economic Development Strategy</i>	<p>Relationship with Water Strategy</p> <p>Managing flood risk and water supply security are important issues in support of a stable, sustainable economy in London. Recognises the importance of the city's waterways and rivers in contributing to London's success – both as transport routes and as a source of value themselves. Supports "the most effective and sustainable way of using resources" – including water.</p> <ul style="list-style-type: none"> The Water Strategy can help support the Economic Development Strategy, by stressing the economic importance of water issues, such as managing flood risks, protecting and enhancing waterways and using water resources more efficiently <p>Influence on SA</p> <p>The SA can advise where there may be potential conflicts between economic and water related objectives, and seek to realise mutual benefits where possible.</p> <p>Context topics: 6. Economy</p>
GLA (2003) <i>The Mayor's Municipal Waste Management Strategy</i>	<p>Relationship with Water Strategy</p> <p>Sets out overarching policy framework related to waste management in London until 2020. Water related waste issues: leachate from landfill, water transportation of waste (Thames).</p> <ul style="list-style-type: none"> The Water Strategy should not conflict with any policy in the Waste Strategy. It should also reflect specific waste related issues – such as transportation of waste on the Thames and leachate of waste to water – causing pollution. <p>Influence on SA</p> <p>The Waste Strategy provides a useful source of baseline information on waste in London. The SA will also seek to ensure that there is no policy conflict between the Waste Strategy and the Water Strategy.</p> <p>Context topics: 5. Waste and resources</p>
GLA (2002) <i>Connecting with London's Nature. The Mayor's Biodiversity Action Plan (BAP)</i>	<p>Relationship with Water Strategy</p> <p>Sets out the Mayor's vision for the future of biodiversity in London, identifying key issues and providing "innovative" solutions.</p> <p>Includes specific policies and proposals (chapter 4) on the Blue Ribbon Network. Rivers, canals, ponds and lakes are all important habitats, and water is to the natural ecosystem.</p> <ul style="list-style-type: none"> The importance of water to habitats and biodiversity and the role of water bodies and rivers / streams as habitats in their own right should be advocated in the Water Strategy, in line with the proposals and policies in the BAP. <p>Influence on SA</p> <p>The SA may draw on the BAP as an important source of background information to the appraisal, and can advise and suggest modifications to the Water Strategy where it is felt there may be conflict between the two, or where a beneficial outcome might be enhanced.</p> <p>Context topics: 1. People and health, 2. Place</p>
GLA (2004) <i>Souder City: the Mayor's Ambient Noise Strategy</i>	<p>Relationship with Water Strategy</p> <p>Sets out a vision, objectives and policies to minimise the adverse impacts of noise on people in London. Chapter 4D specifically addresses noise on rivers and canals and the soundscape of water and waterside locations.</p> <ul style="list-style-type: none"> The Water Strategy should be in accordance with policies relating to noise – either noise from water ways / rivers, or noise generated during water strategy actions advocated in the Water Strategy (such as building new infrastructure etc.) <p>Influence on SA</p> <p>The SA can help ensure that the Water Strategy is in accordance with the noise strategy. Noise is considered as a specific appraisal criteria.</p>

Policies, Plans, Programmes, Strategy or Guidance	Relevance to the Water Strategy and its Sustainability Appraisal
	Context topics: 1. People and health, 2. Place
GLA (2002) <i>Cleaning London's Air; The Mayor's Air Quality Strategy</i> GLA (2004) <i>Green Light to Clean Power. The Mayor's Energy Strategy</i>	Relationship with Water Strategy <ul style="list-style-type: none"> As other key Mayoral environmental strategies, the Water Strategy should ensure that it is supportive of the objectives, policies and priorities set out in these documents. In that the Mayor's Water Strategy together with these other strategies should form a coherent approach to managing and improving the environment of London, it is important that there is consensus between them. Influence on SA <p>The SA can draw background information and data from these strategies and use them to inform the appraisal. In addition by reviewing the Water Strategy with these documents in mind, the SA can advise on any potential conflicts, or opportunities between the strategies.</p> Context topics: 1. People and health, 3. Climate change, 5. Waste and resources, 6. Economy
GLA (2005) <i>Adapting to Climate Change: A Checklist for Development. Guidance on Designing Developments in a Changing Climate</i>	Relationship with Water Strategy <p>Aims to provide guidance to ensure climate change is "factored into" all new development. The Checklist includes guidance on various aspects of adaptation to climate change, including: drainage and water.</p> <ul style="list-style-type: none"> The Water Strategy can cross refer to the checklist in relation to climate change adaptation, water and development. It can also draw upon the guidance where appropriate in relation to water issues and climate change adaptation. Influence on SA <p>The SA can use the checklist as background information on good practice in relation to development which accounts for adaptation to climate change.</p> Context topics: 3. Climate change, 4. Water management, 5. Waste and resources
GLA (2008) <i>The Mayor's Draft Climate Change Adaptation Strategy (CCAS) for London Consultation Draft</i>	Relationship with Water Strategy <p>The Strategy is designed to improve London's resilience to climate change, by identifying the likely consequences of climate change on the capital. The aim of the Strategy is to:</p> <p><i>"protect and enhance the quality of life of Londoners and to promote and facilitate the sustainable development of London by helping London and Londoners prepare for the impacts of climate change and extreme weather"</i></p> <p>To achieve this aim, the strategy identifies the strategic climate impacts likely to affect London, establishing a baseline against which to assess how the risks may change.</p> <ul style="list-style-type: none"> When complete the Adaptation Strategy will be a key "sister" document to the Water Strategy, as many issues will be shared between the two, and coherence between the strategies will be important. Influence on SA <p>The SA team are also completing the SA of the CCAS, and will advise on any potential conflict or opportunities between the two strategies to ensure a consistency of policy approach.</p> Context topics: 3. Climate change
GLA (2007) <i>Action Today to Protect Tomorrow. The Mayor's Climate Change Action Plan</i>	Relationship with Water Strategy <p>Published prior to the Mayor's Adaptation Strategy (above) the Climate Change Action Plan is focussed on mitigation – and has at its core the reduction of emissions of CO₂ from all key sources. It also sets targets for emissions reductions – stabilising emissions at 60% below 1990 levels by 2025.</p> <p>Water is "not explicitly covered" by the Action Plan, however, the supply, heating and purification of water all require energy, and possible plans for desalination of water to supply London would have significant energy use implications (and implied CO₂ emissions). Water heating accounts for 18% of domestic CO₂ emissions.</p> <ul style="list-style-type: none"> Where there are overlaps in policy the Water Strategy should be supportive of the actions and targets set out in the Climate Change Action Plan. It may also be useful to draw upon to the extent appropriate the strategic approach adopted in the Climate Change Action Plan, which aims at a very proactive approach to encouraging involvement in the achievement of strategic goals. Influence on SA <p>The SA can use the Action Plan as a useful source of baseline data in relation to climate change in the London Context. It will also ensure there is general conformity between the plans – and that they support rather than conflict with each other.</p> Context topics: 3. Climate change
London Housing Board (2005) <i>London Housing Strategy 2005 - 2016</i>	Relationship with Water Strategy <p>The London regional housing strategy is the London Housing Board's response to the requirements made of them by the Sustainable Communities Plan (2003). It has been developed to complement the London Plan, both in policy and in time frame. It sets out to</p>

Policies, Plans, Programmes, Strategy or Guidance	Relevance to the Water Strategy and its Sustainability Appraisal
	<p>meet London's housing targets and allocate them in such a way as to provide a balanced housing stock especially for the less well off (affordable housing).</p> <p>The strategy recognises that housing and its occupation has a significant impact on water use, waste water and the water cycle more generally – and in the lifetime of the plans significant amounts of new housing are planned in flood-risk areas.</p> <ul style="list-style-type: none"> It is critical that the Water Strategy reflects and seeks to minimise the adverse effects on London's water supply / use / quality of the housing development projections. The Water Strategy should also provide guidance or policy to seek to make wise choices in relation to the location and type of development in flood-risk areas. <p>Influence on SA</p> <p>The SA will draw on any data and other information on issues and targets relating to housing in London. It will also advise where necessary if the Water Strategy can make a stronger strategic contribution to the sustainability of water issues related to new housing in London (and existing housing).</p> <p>Context topics: 1. People and health, 2. Place, 4. Water management</p>
<p>GLA (2009) <i>The London Housing Strategy, consultation draft</i> and GLA (2008) <i>Housing in London: the evidence base for the London Housing Strategy</i></p>	<p>Relationship with Water Strategy</p> <p>The draft Strategy sets out the Mayor's policies to provide more affordable homes, more family homes, tackling climate change, helping people on low to middle incomes in home ownership and increasing housing choice and mobility. It summarises the overall housing challenge facing London, including demographic trends, shifts to patterns of housing tenure and recent changes in the housing supply. The Strategy may increase the amount of homes in London, increasing water demand as a result.</p> <p>Influence on SA</p> <p>The strategy provides an indication of the projected increase in demand for housing in London. The SA will seek to ensure that proposals included in the Water Strategy reflect projected demand.</p> <p>Context topics: All</p>
<p>GLA (2009) <i>London Housing Design Guide – Consultation draft</i></p>	<p>Relationship with Water Strategy</p> <p>The draft London Housing Guide seeks to set a new benchmark for the design and quality of London's housing. It clarifies, consolidates and sets new minimum standards in a number of key policy areas, including climate change adaptation and mitigation, and requires all homes developed with public funding to be in line with the Guide by 2011. The standards may eventually be incorporated as policy in the new London Plan, and as such would apply to private homes.</p> <p>The aim of the guide is "to encourage development which combines efficiency in land use with the environmental benefits of well-designed, well-managed housing built to higher densities".</p> <p>In relation to climate change mitigation and adaptation the draft guide seeks to ensure "homes are suitable for warmer summers and wetter winters, as well as limiting the extent of future change, are key priorities for London. The guide aims to clarify the London approach to the implementation of the Code for Sustainable Homes in the context of the London Plan".</p> <p>The guide contains numerous policies, several of which are directly relevant to the Water Strategy:</p> <ul style="list-style-type: none"> All homes must achieve minimum level 4 of the Code for Sustainable Homes. All homes should adhere to London Plan policy on sustainable design and construction and make the fullest contribution to the mitigation of and adaptation to climate change. Development proposals must adopt the following Mayor's energy hierarchy; <ul style="list-style-type: none"> using less energy (by incorporating sustainable design measures); supplying energy efficiently (by prioritising decentralised energy generation); and using renewable energy (incorporating the London Plan's presumption of 20% renewable energy) New dwellings should be designed to ensure that 105 litres of water is consumed per person per day as a maximum. Where development in areas at risk of flooding is permitted in accordance with PPS25, new development should incorporate flood resilient design. New development should adhere to standards for surface water run-off as set out in the Code for Sustainable Homes. New development should incorporate space for SUDS, Living Walls and Roofs unless there are demonstrably practical and feasible reasons for not doing so. <p>Influence on SA</p> <p>The draft Guide goes somewhat further than the London Plan (2008) as it requires all new homes to be built to Code for Sustainable Homes level 4, whereas the London Plan (2008) requires new homes to be built to Code level 3. However, other policies in the draft plan merely reiterate policies contained in the London Plan. The SA may use the draft Guide, and policies contained therein, in assessing the WS, especially for policies / proposals related to residential development and domestic energy / water use.</p> <p>Context topics: 3. Climate Change, 4. Water Management</p>

Policies, Plans, Programmes, Strategy or Guidance	Relevance to the Water Strategy and its Sustainability Appraisal
London Assembly (2006), <i>The Blue Ribbon Network, The Heart of London</i>	<p>Relationship with Water Strategy</p> <p>This report presents a review of the effectiveness of the Mayor's policies in relation to the Blue Ribbon Network. A key finding is that the network "needs better coordinated protection, enhancement and management".</p> <ul style="list-style-type: none"> The Blue Ribbon Network is recognised as an "overarching issue" in the current (March 2007) Water Strategy. It is assumed this drew on the results of this review. <p>Influence on SA</p> <p>The SA can use this review as a useful source of baseline data and information on issues and opportunities in relation to the Blue Ribbon Network.</p> <p>Context topics: 2. Place, 6. Economy</p>
GLA (2004) <i>London: Cultural Capital – realising the potential of a world-class city, the Mayor's Culture Strategy</i>	<p>Relationship with Water Strategy</p> <p>London's waterways represent an important cultural and historical asset. Water in the form of lakes, ponds and waterways can also play an important role in attractive public spaces. Water also offers recreation, education and sporting opportunities. The Strategy includes a proposal to "promote the cultural potential of London's green spaces and waterways".</p> <ul style="list-style-type: none"> The Water Strategy should reflect the cultural importance of water and waterways / water bodies. Water in Society is recognised as an "overarching issue" in the current draft Water Strategy (March 2007). <p>Influence on SA</p> <p>The SA can use the Culture Strategy as a source of background information on the cultural value of water in various forms and related issues.</p> <p>Context topics: 1. People and health, 2. Place, 6. Economy</p>
GLA (2008) <i>London Plan SPG: East London Green Grid Network</i>	<p>Relationship with Water Strategy</p> <p>Supports the London Plan policies relating to the Green Grid, which seek to create a network of "interlinked, multi-functional and high quality open spaces that connect with town centres, public transport nodes, the countryside in the urban fringe, the Thames and major employment and residential areas".</p> <p>The Green Grid concept (among many others) includes flood risk management, adaptation to Climate Change and grey water treatment. Public access along watercourses is also promoted.</p> <ul style="list-style-type: none"> The Water Strategy should support and cross-refer to the water related elements of the Green Grid SPG and concept. <p>Influence on SA</p> <p>The SA can advise on whether there are potential conflicts or missed opportunities between the Water Strategy and the Green Grid network.</p> <p>Context topics: 1. People and health, 2. Place, 3. Climate change, 4. Water management</p>
London Health Strategy Health in London. <i>Review of the London Health Strategy and High Level Indicators (2004)</i>	<p>Relationship with Water Strategy</p> <p>The London Health strategy is the result of a coalition of organisations working in health in London, it provides a broad framework for the development of action plans to tackle health, with key priorities of: regeneration, inequalities, BME health and transport.</p> <ul style="list-style-type: none"> The Water in Society sub-section of the current draft (March 2007) Water Strategy includes a section on Health, recognising the important linkages. <p>Influence on SA</p> <p>The SA may wish to draw on indicators and other information on issues related to water and health to help inform the appraisal.</p> <p>Context topics: 1. People and health</p>
GLA (2008) <i>Equality in our Lifetimes – The Mayor's Annual Equalities Report 2007/08</i>	<p>Relationship with Water Strategy</p> <p>The Mayor's Equalities Report reflects on the timeline of equality breakthroughs over the last century and identifies opportunities which must be taken to "build on the strength and dynamism offered by diversity, and allow everybody to develop their potential and achieve equality in our lifetime".</p> <ul style="list-style-type: none"> The Water Strategy can play a role in equality – especially in actions to ensure that the supply of water, and impacts of events such as flooding do not effect certain groups more than others. <p>Influence on SA</p> <p>The SA can draw from the background information and data included in the Mayor's Equality Report. It will also through appraisal seek to advise where the Water Strategy may make a stronger contribution to equality, or where potential conflicts can be avoided.</p> <p>Context topics: 1. People and health</p>
GLA (2006) <i>General Conformity with the London Plan: Principles and</i>	<p>Relationship with Water Strategy</p> <p>Provides information and advice to key stakeholders "on the implementation of the London Plan through the statutory requirement for Local Development Documents to be in general conformity with the London Plan".</p>

Policies, Plans, Programmes, Strategy or Guidance	Relevance to the Water Strategy and its Sustainability Appraisal
<i>Procedures Guidance Note</i>	<ul style="list-style-type: none"> Not consider relevant for the Water Strategy. Influence on SA Limited in context of the Water Strategy. Context topics: All
GLA (2007) <i>Evidence Base: Climate Change in the Further Alterations to the London Plan</i>	Relationship with Water Strategy The Evidence Base sets out the evidence pertinent to the policies in the Further Alterations to the London Plan proposed for inclusion to mitigate against and adapt to climate change. It describes the predicted effects of climate change on London, with a chapter dedicated to flooding. Influence on SA The information related to the predicted impact of climate change sets the context for the Water Strategy, and the SA will seek to ensure that the Strategy provides an adequate response. Context topics: 3. Climate Change 4. Water Management
GLA (2008) <i>Living Well in London: the Mayor's draft Health Inequalities Strategy</i>	Relationship with Water Strategy The Strategy details the Mayor's framework to reduce health inequalities in London. It provides details of the current health inequalities in the city and information on the various indicators used to measure good or poor health. It sets out the Mayors vision to improve health in London. Influence on SA Provides the context to ensure that policies in the Water Strategy do not adversely affect the health of vulnerable groups in London. May be particularly relevant to policies related to water metering. Context topics: All
GLA (2008) <i>Planning for a Better London Consultation, and Mayor's Response,</i>	Relationship with Water Strategy This document outlines the general approach the Mayor will take in his planning functions, the major challenges faced by planning in London and how the planning system might help address them. The document also includes detailed policies for how the Mayor will overcome these challenges, and the changes that will be put in the London plan to accommodate these new policies. The guidance contains numerous key policies that set out how the Mayor will fulfil his planning function, but no specific targets or objectives. <ul style="list-style-type: none"> Not considered relevant for the Water Strategy. Influence on SA Limited in context of the Water Strategy. Context topics: All
Regulators and Public Bodies	
Thames / London	
Environment Agency (2009) <i>Water Resources Strategy for England and Wales</i>	Relationship with Water Strategy The Strategy sets out how the Environment Agency will manage water resources in the future to avoid significant negative impact on the environment and the economy. The vision of the strategy is: <i>"A better place for people and wildlife for present and future generations".</i> The Strategy is framed in terms of the predicted impacts of climate change, and also the projected increase in demand due to population increase. It includes actions to reduce existing pressure on water resources and improve resource management, focusing on measures to reduce demand, improve efficiency (of the water supply network and fixtures / fittings) and allocated water resources more effectively. The strategy also includes measures to promote incentives to reduce demand for water. Influence on SA The Strategy provides the national policy context for the GLA's Water Strategy, and is an indication of the likely future direction that relevant policy will take. The Strategy provides contextual information on current and future pressures on water resources, how water resources can / will be managed to adapt to and mitigate climate change and how water will be valued, which includes introducing a tariff structure for water use. The SA will assess the Water Strategy for consistency with the Water Resources Strategy, and provide comment where there is a divergence. Context topics: 3. Climate Change, 4. Water Management, 6. Cross-Cutting Issues and Policies.
Environment Agency (2009) <i>Thames Region catchment flood management plan</i>	Relationship with Water Strategy The catchment flood management plan identifies where "further work is needed" in relation to: tackling the challenge of climate change and flooding; making space for water and using the natural flood-plain; how planning authorities and regional assemblies can work with the Environment Agency to include flood risk management in strategies and plans. It identifies fluvial flooding from the rivers, surface water and sewer flooding from the drainage system, groundwater flooding and combined tidal and fluvial as sources of flood risk in London. The Plan states that climate change will have a major effect on the extent and frequency of future flooding. In London, the Environment Agency wants to achieve a better balance of attenuation and conveyance to manage flood risk.

Policies, Plans, Programmes, Strategy or Guidance	Relevance to the Water Strategy and its Sustainability Appraisal
	<ul style="list-style-type: none"> • Risk of Flooding in London is included as a chapter in the current draft Water Strategy (May 2009). • If it has not already been done so the Water Strategy should review the area where the Environment Agency has identified that further work is needed, as the Strategy could provide a useful vehicle for addressing some of these in the London area. <p>Influence on SA The SA can use this document as a useful source of information on flooding and climate change risk issues in the Thames catchment area. Through the appraisal it can also suggest where the Water Strategy might make a stronger contribution to addressing climate change and flood risk, if necessary.</p> <p>Context topics: 2. Place, 3. Climate change, 4. Water management</p>
Environment Agency (2007) <i>Drought Plan for Thames region</i>	<p>Relationship with Water Strategy The Thames regional drought plan is divided into an overarching regional plan, and three area plans (North East Area, West Area and South East Area). The plans provide a framework to deal with droughts and sets out a system for monitoring and reporting on drought onset and progress.</p> <ul style="list-style-type: none"> • This is a key document in relation to drought in the Thames region. The Water Strategy should draw upon these drought management plans as they set out drought management structure, the Regional Drought Team and the roles / actions the Team will have in drought events. <p>Influence on SA The SA may wish to refer to the Drought Plans during appraisal to identify issues and responsibilities, and to advise where appropriate where the Water Strategy might be strengthened in relation to drought events.</p> <p>Context topics: 1. People and health, 3. Climate change, 4. Water management</p>
Environment Agency (2004 and annual updates) <i>The Thames Corridor abstraction management strategy (CAMS)</i> And <i>The London CAMS Final Strategy (2006)</i>	<p>Relationship with Water Strategy The CAMS set out a strategic assessment of water abstraction in each area (Thames, London etc.). They identify areas where water is, or is not, available for further abstraction. The CAMS form the basis for the granting of abstraction licenses by the Environment Agency.</p> <ul style="list-style-type: none"> • These are the key documents in relation to the management of water abstractions in the London area. The Water Strategy should cross-refer to them and ensure that policy and priorities are consistent with their conclusions. <p>Influence on SA The SA can refer to these reports as a source of background information and to identify specific areas where water abstraction is a critical issue.</p> <p>Context topics: 3. Climate change, 4. Water management</p>
Environment Agency (2006) <i>Bringing your rivers back to life – A strategy for restoring rivers in North London</i>	<p>Relationship with Water Strategy The North London strategy is a guide document seeking to promote and support the restoration of rivers in North London, due to the social, economic and environmental benefits which river restoration can bring. Specific areas of opportunity identified are: Rivers Brent; Crane; Colne; Roding; Beam; Ingrebourne; Lee and its tributaries.</p> <p>Influence on SA The SA can use these documents as a source of information on issues related to the restoration of rivers and their value as an environmental, social and economic resource.</p> <p>Context topics: 1. People and health, 2. Place</p>
Environment Agency (2002) <i>River restoration: A stepping stone to urban regeneration highlighting the opportunities in south London</i>	
Environment Agency (2001) <i>Water resources for the future: A strategy for Thames Region</i> Currently being updated; consultation	<p>Relationship with Water Strategy One of a suite of Water Resource Strategies produced by the Environment Agency for each of the Regions (8 strategies in all). The Thames Region stretches from the Cotswolds to the East of London. The Strategy sets out the water availability, supply and use situation in the Region as well as mapping out future demand and climate change issues.</p> <ul style="list-style-type: none"> • As a key strategic document in relation to water the Water Strategy should refer to the Thames Region (and national) Environment Agency water resources strategy. <p>Influence on SA The SA can use this strategy as an important source of background information and data in relation to water issues in the Thames Region, to inform the appraisal.</p>

Policies, Plans, Programmes, Strategy or Guidance	Relevance to the Water Strategy and its Sustainability Appraisal
document available:	<p>Context topics: 3. Climate change, 4. Water management</p> <p><i>Note re regional strategies - the consultation document states that they will not produce separate regional strategies, as local information on water resources management will be included in River Basin Management Plans, which are required by the Water Framework Directive (draft RBMPs were published in 2009 – see below).</i></p>
Environment Agency (2009) <i>Water for Life and Livelihoods – A consultation on the Draft River Basin Management Plan Thames River Basin District</i>	<p>Relationship with Water Strategy</p> <p>The River Basin Management Plan for the Thames River Basin District contains detailed information related to the current quality of water bodies in the Thames catchment, and information related to likely future pressures. The plan describes what multiple actors will have to do to improve the water environment over the next 20 years.</p> <p>Influence on SA</p> <p>While providing useful information at the level of the Thames catchment, the Plan's usefulness to the SA is limited due to the lack of London specific information. However, it may be useful background information for the types of measures that will be employed to improve water quality over the long term.</p> <p>Context topics: 3. Climate change, 4. Water management</p>
Thames Estuary 2100 (1999), <i>Management Guidance for the Thames Estuary (Strategy)</i>	<p>Relationship with Water Strategy</p> <p>Identifies key estuarine issues and opportunities, and promotes a series of "principles for action" aimed at achieving more sustainable management practice on the estuary and in terms of its resources. And Action Plan has also been developed.</p> <ul style="list-style-type: none"> Although an older document (1999) the Water Strategy should use the Thames Estuary strategy as a source of information in relation to policy and priorities for the Thames in London. It should also not be in conflict with any principles for action set out in the Thames Estuary strategy. <p>Influence on SA</p> <p>The SA can keep the Thames Estuary work in mind during appraisal and advice if necessary where the Water Strategy can strengthen opportunities or avoid conflict with it's principles and actions.</p> <p>Context topics: 3. Climate change, 4. Water management</p>
Environment Agency (2009) <i>Thames Estuary 2100 – consultation draft</i>	<p>Relationship with Water Strategy</p> <p>The Thames Estuary 2100 (TE2100) consultation draft is a strategic flood risk management plan for London and the Thames estuary through to the end of the century. One of the draft's principal considerations is how tidal flood risk was likely to change in response to future changes in climate and people and property in the floodplain. The plan sets out the recommendations and actions that are needed to manage flood risk through this century.</p> <p>Several of the actions proposed by the Environment Agency in this consultation draft require the GLA be involved as "implementation partners". The specific role of implementation partners is not contained in this strategic plan, however it is worth noting that the actions the GLA will be required to take part in relate to improving defences in the capital and ensuring that new development does not occur in areas prone to flood risk (either now or in the future). In addition, new development should not preclude flood adaptation measures.</p> <p>Influence on SA</p> <p>Although the plan is concerned with flood risk in London, its focus on tidal flooding reduces its relevance and influence on the SA.</p> <p>Context topics: 4. Water Management</p>
Thames Water (2008) <i>Draft Water Resources Management Plan</i>	<p>Relationship with Water Strategy</p> <p>The draft Water Resources Management Plan covers the period 2010 to 2035, and sets out how Thames Water plans to provide water to meet customers' needs, while protecting the environment. Key areas identified in the Plan were the need to maintain security of water supply, wide support for continued investment to achieve further reductions in leakage and support for greater efforts to manage demand through the promotion of water efficiency and metering. The Plan also recognised the potential need for new water resources, as and when existing options have been fully utilised.</p> <p>Influence on SA</p> <p>The Plan provides useful context for the SA, including projected demand in the Thames region (which includes Greater London) based on changes to demographics and influenced by climate change. Also relevant to the SA are the sections detailing measures to reduce demand and improve efficiency.</p> <p>Context topics: All</p>
Three Valleys Water (2009) <i>Revised Draft Water Resource Management Plan 2008</i>	<p>Relationship with Water Strategy</p> <p>The draft Water Resources Plan identifies actions that the company is required to take to ensure that it can supply its customers with the water they need over the next 25 years. A wide range of factors are included in the analysis, including climate change, changes in lifestyle, the condition of rivers and groundwaters and pressures of housing and population changes. Key aims of the strategy are to increase water metering, reduce leakage, improve water efficiency of customers, and to investigate new methods of charging for water.</p>

Policies, Plans, Programmes, Strategy or Guidance	Relevance to the Water Strategy and its Sustainability Appraisal
	<p>Influence on SA See above.</p> <p>Context topics: All</p>
Sutton and East Surrey Water Company (2009) <i>Final Draft Water Resources Management Plan</i>	<p>Relationship with Water Strategy See the Water Resources Management Plans above.</p> <p>Influence on SA See above.</p> <p>Context topics: All</p>
Essex and Suffolk Water Company (2008) <i>Draft Water Resources Management Plan</i>	<p>Relationship with Water Strategy See the Water Resources Management Plans above.</p> <p>Influence on SA See above.</p> <p>Context topics: All</p>
National / other	
Environment Agency (2007) <i>Consultation on Identifying Areas of Water Stress</i>	<p>Relationship with Water Strategy Consultation closed on this document April 2007. A later version is not yet available online. The consultation sought views on the Environment Agency's proposed method of identifying (water company) areas of England that have different levels of water stress. The aim is to focus water saving activities on areas of greatest need.</p> <ul style="list-style-type: none"> The Water Strategy could refer to the need to concentrate water saving efforts in areas of greatest stress, however there is considerable attention given to demand management in the current draft (March 2007). <p>Influence on SA Limited influence on the SA, though may be a useful source of information.</p> <p>Context topics: 3. Climate change, 4. Water management</p>
Environment Agency (2006) <i>The water framework directive (WFD) and planning: Initial advice to planning authorities in England and Wales</i>	<p>Relationship with Water Strategy Provides advice to planners on the WFD, highlighting key elements of the Directive and potential implications for spatial planning.</p> <ul style="list-style-type: none"> The Water Strategy current draft (March 2007) already refers in places to the WFD and how it relates to water management in London. Specific reference to this document as a source of information for local authorities in London should be considered. <p>Influence on SA Limited influence, although a useful source of information on the WFD and spatial planning.</p> <p>Context topics: 3. Climate change, 4. Water management</p>
Environment Agency (2007) <i>Water services infrastructure guide</i>	<p>Relationship with Water Strategy Promotes "sustainable development in the implementation of local water and wastewater services" by identifying the means to develop water services infrastructure in a "timely, sustainable and efficient manner".</p> <ul style="list-style-type: none"> Can provide an important source of information on timely infrastructure provision, which is a critical issue in London. The Water Strategy could refer directly to this guide. <p>Influence on SA Limited influence, however will provide a useful source of background information on issues relating to the provision of water related infrastructure.</p> <p>Context topics: 1. People and health, 4. Water management</p>
Environment Agency (2005) <i>Water company drought plan guidance Version 2.0, 2005</i>	<p>Relationship with Water Strategy Sets out the contents and structure for the 2006/07 submission of statutory water company drought plans.</p> <ul style="list-style-type: none"> Limited direct relationship, however the Water Strategy should include reference to this guidance. <p>Influence on SA Limited influence.</p> <p>Context topics: 3. Climate change, 4. Water management</p>
Environment Agency (2007) <i>Water company drought plans – general recommendations for water companies in England</i>	<p>Relationship with Water Strategy Presents the Environment Agency's general recommendations on water companies' draft drought plans. Recommendations are made for Ministers to direct water companies in England to take action to improve drought plans in seven areas:</p> <ul style="list-style-type: none"> The planned sequence for introducing drought measures. Clarification of bulk supply arrangements. Leakage reduction during droughts.

Policies, Plans, Programmes, Strategy or Guidance	Relevance to the Water Strategy and its Sustainability Appraisal
	<ul style="list-style-type: none"> • Environmental reports at drought permit and drought order sites. • Implementation times for introducing drought measures. • Forecasting the impact of drought. • Avoiding emergency drought orders. <p>Influence on SA Limited influence.</p> <p>Context topics: 3. Climate change, 4. Water management</p>
Environment Agency (2005) <i>The climate is changing: Time to get ready</i>	<p>Relationship with Water Strategy Provides a semi-technical overview of the key climate change background, issues, impacts, responses and future scenarios. Outlines the Environment Agency's role and the actions that others can take to tackle climate change. Is a high level document.</p> <ul style="list-style-type: none"> • This report may provide some useful 'headline' information for the Water Strategy, but has limited direct relevance. <p>Influence on SA As above, may provide useful background data and information on climate change and its impacts, but limited direct influence.</p> <p>Context topics: 3. Climate change</p>
Environment Agency (2004) <i>Maintaining water supply</i>	<p>Relationship with Water Strategy Is a report on the water resources plans submitted by water companies as part of the 2004 review of water company prices. Includes some specific information on individual water companies.</p> <ul style="list-style-type: none"> • Specific information on water companies may be useful as background information in preparation of the Water Strategy, however the report has limited direct influence on the strategy. <p>Influence on SA Limited direct influence, though may contain some useful background information on water supply issues from the perspective of individual water companies.</p> <p>Context topics: 4. Water management</p>
Office of Water Services (2008) <i>Service and delivery – performance of the water companies in England and Wales 2007 – 2008 report</i>	<p>Relationship with Water Strategy Presents a detailed summary and analysis (with data) of water company performance in relation to:</p> <ul style="list-style-type: none"> • The Guaranteed Standards Scheme. • Levels of service indicators. • Consumer issues. • Drinking water quality. • Security of supply. • The last heading, security of supply, also includes details of leakage and efficiency rates of the water companies. The analysis and data within this report could provide very useful background information for the Water Strategy, particularly in relation to the supply, leakage and efficiency of water usage. <p>Influence on SA Could provide a useful source of background data for the SA.</p> <p>Context topics: 4. Water management</p>
Office of Water Services (2009) <i>Relative Efficiency Assessments 2007 – 08, and Supporting Information</i>	<p>Relationship with Water Strategy The first document presents an analysis of "relative efficiency assessment for operating expenditure 2007 – 2008", as well as the unit costs of water and sewerage companies in England and Wales, 2007-2008. The second report presents analysis of water companies' regulated charges for 2007-2008. It also sets out OFWATs' policy on tariff issues.</p> <ul style="list-style-type: none"> • Limited direct relevance to the Water Strategy. Some of the analysis may be useful background.
Office of Water Services (2007) <i>Water and Sewerage Charges: 2007-8 report</i>	<p>Influence on SA Could be used as background information for the SA.</p> <p>Context topics: 4. Water management</p>
Office of Water Services (2009) <i>Future water and sewerage charges 2010 – 15: Draft determinations</i>	<p>Relationship with Water Strategy Ofwat's price determinations (draft proposals) set limits on the prices that water and sewerage companies can charge their customers between 2010 and 2015. Under the proposed prices set by Ofwat, household bills will remain broadly stable until 2015.</p> <p>Influence on SA Provides context for the appraisal of the future business as usual scenario, and enable an understanding of how future water charges are likely to evolve.</p> <p>Context topics: 1. People and health, 4. Water management, 6. Economy</p>

Policies, Plans, Programmes, Strategy or Guidance	Relevance to the Water Strategy and its Sustainability Appraisal
Defra (2008) <i>Review of Household Charging for Sewerage Services, Call for Evidence</i>	<p>Relationship with Water Strategy</p> <p>This call for evidence is to inform a review in England and Wales of charging for household water and sewerage services. The Review will;</p> <ul style="list-style-type: none"> • Examine the current system of charging households for water and sewerage services, and assess the effectiveness and fairness of current and alternative methods of charging, including the issue of affordability; • Consider social, economic and environmental concerns; and • Make recommendations on any actions that should be taken to ensure that England and Wales have sustainable and fair systems of charging in place. This could include changes to current legislation and guidance. <p>The call for evidence is intended to develop a robust body knowledge on which to base the development of options and recommendations to government.</p> <p>Influence on SA</p> <p>Could be used as background information for the SA.</p> <p>Context topics: 5. People and Health</p>
Defra (2007): <i>Conserving biodiversity in a changing climate: guidance on building capacity to adapt</i>	<p>Relationship with Water Strategy</p> <p>The aim of this guidance is to provide a framework of how to reduce the impacts of climate change on biodiversity and how to adapt existing plans and projects in the light of climate change. Two types of action are identified as necessary to cope with the implications of climate change on biodiversity. The first is adaptation, increasing the ability of natural systems to absorb and respond to change, the second is mitigation, controlling and reducing emissions of greenhouse gases. Although not the subject of the guide, it recognises that decisions about land management have the potential to exacerbate or reduce greenhouse gas emissions.</p> <p>Influence on SA</p> <p>May be relevant in relation to policies in the WS that could affect biodiversity.</p> <p>Context topics: 3. Climate change</p>
Defra (2008) <i>Adapting to climate change in England. A framework for Action</i>	<p>Relationship with Water Strategy</p> <p>This document outlines the Adapting to Climate Change Programme's framework for action over the years 2008 – 2011. It provides background information on climate change, making the case for action and detailing the role that Government sees itself playing in this adaptation, including relevant legislation.</p> <p>Influence on SA</p> <p>While potentially offering some background information useful to the SA, much of this information is likely to be provided in more detail by other sources.</p> <p>Context topics: 3. Climate change</p>

APPENDIX 7

INITIAL SUSTAINABILITY APPRAISAL COMMENTARY AND GLA RESPONSES (OCTOBER 2006)

Initial Sustainability Appraisal Commentary and GLA Responses

An initial sustainability appraisal commentary was produced in October 2006⁵. The aim of this output was to provide comments on the sustainability issues, strengths and weaknesses raised by the proposals and management options contained in an early draft of the Water Strategy. The commentary was used by the GLA to review the draft Water Strategy and to prepare the draft version upon which the London Assembly and the functional bodies were consulted and to further develop and refine the proposals and management options.

The following summary table includes the key recommendations from the SA Commentary (October 2006) and the GLA response to those recommendations in subsequent drafts of the Water Strategy.

SA Commentary - main proposed changes	GLA's response
General comments and comments on objectives	
Introduction could set out more clearly the scope of the WS	This has been addressed in later drafts
The implementation of the proposals requires influencing and partnership working on the part of the GLA, which will need to be planned. It would be useful to include an idea of that process within this document.	No change in text. However, the GLA is working on a Water Action Framework which could set out how the proposals and preferred approach to water management can be implemented.
Equally important is how the implementation of the WAF is going to be monitored, e.g. by using appropriate indicators including health indicators.	No change
The relationship between this WAF and other plans, policies, regulation and guidance could also be made much clearer (e.g. London Plan etc)	This has been addressed in later drafts
Role and relationship of the water cycle chapter (chapter 3) could be more explicit.	This chapter was removed from later versions and its contents integrated in other chapters.
Clarification on the coverage of the WS, i.e. what is meant by 'London'	No change
Many of the 'hierarchy' ⁶ items included in the WS should not be hierarchical and are of equal importance.	The hierarchies are now referred to as 'preferred sets of management options' and the accompanying text clarifies that these are not necessarily hierarchical.
Constraints/ goals should be included in proposals whenever possible.	Most proposals in later drafts of the WS (except those which refer to preparing plans, undertaking research, etc) include targets, constraints, standards, etc.
Proposals should be given numbers or codes to aid cross-referencing and citing of proposals.	Proposals have been numbered in later drafts.
Generally objectives may be stronger if stated as desired end points, e.g. the second objective could be worded "to minimise the release of wastewater into the clean water environment".	This was addressed in later drafts.
First objective could perhaps be clearer. The objective is to use water more effectively in order to ensure that there continues to be / is in the long-run sufficient water availability to meet water needs.	This was addressed in later drafts.
The third objective referred to 'protecting from flooding' which does not reflect the current rhetoric of 'managing flood risk' or 'living with floods'.	This was addressed in later drafts.
Comments on specific proposals	
The proposal for Thames Water to prepare a long term plan to reduce leakage should be a time bound proposal.	This was addressed in later drafts.
The proposal on water companies to collect more disaggregated data on water consumption would benefit from some explanation as to what data should be collected and to what purpose.	This was addressed in later drafts: data should be collected on volume of water for different uses in order to be able to target water savings campaigns.
Instead of a proposal to investigate tariff structures it would perhaps be more appropriate to have a proposal to 'pilot' different tariff structures (i.e. for different consumers, e.g. low income, large families).	No change.

⁵ The following version was appraised in the commentary: Mayor of London's Water Action Framework, Third Draft, 19/09/2006. The draft Water Strategy was initially referred to as Water Action Framework.

⁶ The 'hierarchies' have been renamed 'preferred management options' in the latest WS draft.

APPENDIX 8

FINAL SUSTAINABILITY APPRAISAL COMMENTARY AND GLA RESPONSE (JUNE 2009)

Final Sustainability Appraisal Commentary and GLA Responses

A second sustainability appraisal commentary was produced in June 2009 on the emerging draft Water Strategy (draft for public consultation version dated 11/5/09).

The aim of this second commentary was to provide comments and recommendations from the sustainability appraisal perspective on the revised draft Water Strategy. The commentary drew on the findings and recommendations from the SA undertaken on a previous draft Water Strategy dated December 2007, where still relevant, and on a relatively brief review of the new version of the strategy, focussing particularly on changes to the policies and proposals.

Comments were provided on the following:

- The strategy's objectives and principles
- Other general comments on the introductory section
- The policies
- The proposals
- Other comments on the strategy overall

The following summary table includes the key recommendations from the SA Commentary (June 2009) and the GLA response to those recommendations in the final draft of the Water Strategy (July 2009).

SA Commentary- main proposed changes	GLA's response
General comments / overall comments	
Supporting text to Objective 1 introduces the term "water neutrality". This is welcomed from a sustainability perspective. However, whilst it is accepted that the strategy as a whole could be taken to be aiming to assist in moving towards water neutrality, the strategy does not develop it as an explicit goal and the term "water neutrality" is not mentioned again in the strategy If water neutrality is to be a meaningful goal of the strategy, the strategy should: <ul style="list-style-type: none"> • Explicitly define it • Consider what specific actions and policies would be needed to deliver it within a certain timescale. • Include it as a more central theme of the strategy. 	The reference to water neutrality at this point has been deleted (July 2009). We do not feel that we have an adequate technical definition of what "water neutrality" means in relation to London. Waterwise also expressed concern that water neutrality could mean maintaining current demand when we should be seeking a reduction.
It is not entirely clear from the current wording if the intention is to aim to achieve water neutrality in the "longer-term" or introduce water neutrality as a goal in the longer-term, it would be useful if this could be clarified.	
We understand that the GLA has decided to include tidal and river flooding issues in the forthcoming draft Climate Change Adaptation Strategy rather than in the draft Water Strategy (and hence this objective only refers to sewer, groundwater and surface water flooding). However, as the draft Water Strategy aims to promote integrated water management - 'the integration of water management as a whole is central to the success of the Strategy' (paragraph 1.6) - it would seem more logical if the Water Strategy was to cover flooding from all sources including tidal and river flooding.	As it is the intention to publish the Climate Change Adaptation Strategy concurrently with the Water Strategy, the current division of topics has been retained
It would be useful to set out in the strategy how the process of developing and revising the draft Strategy will take place and the period it is intended to cover. For instance, the objectives of the Strategy could be reviewed on a yearly basis and the Strategy revised every five years.	A new section on "Implementation and monitoring" has been added at the end of chapter 1.
It would also be useful to include details on how progress in implementing the Strategy will be monitored and what indicators and targets will be used to measure progress against the delivery of the draft Water Strategy's objectives.	As above.
Explicit reference could be made to how the draft Strategy's preferred approach to water management in London and the proposals it contains will be implemented and the standards	As above.

SA Commentary- main proposed changes	GLA's response
achieved. This could be achieved partly through the development of a water action plan or framework (see comment below), but also through recommendations for revisions to other mayoral strategies and plans, local authority spatial development plans, partnership working and lobbying government, for example.	
If the intention is that this will be only an "influencing" strategy, with actual "action" being elsewhere, it is recommended that it is better to be explicit about this up front so expectation that the strategy will deliver new action is not encouraged.	Noted. Specific responses have been inserted in sections 1 to 4.
The language and "jargon" used in the draft Water Strategy could be simplified and explanation / definition provided for more complex concepts and terms.	As above.
Comments on the objectives / principles and introductory section	
The main text of Objective 1 refers to using water more 'effectively', but perhaps a more appropriate term would be 'efficiently' (or "effectively and efficiently") which implies both reducing waste and making better use of resources.	Revised as recommended
The supporting text to Objective 1 refers to London needing to "use the water that it already has more effectively, reducing demand for water and simultaneously reducing carbon emissions". This statement is supported, but as above this could refer to using water more "effectively and efficiently" as well as mentioning explicitly in this context the need to reduce leakage which is currently not referred to in the support text.	Revised as recommended
The main text of Objective 2 refers to the 'clean water environment' which is slightly misleading, as it could be interpreted that it is acceptable to release wastewater and diffuse pollution into the water environment if it is already polluted or of poor quality. Therefore, the wording of this objective could be improved by deleting the word 'clean'.	Revised as recommended
Objective 3 refers to the threat to 'people and their property' from flooding. In order to be more comprehensive the objective could also refer explicitly to reducing the threat of flooding to businesses and essential infrastructure and services.	Revised as recommended
Objective 3 specifically refers to groundwater flooding, however there is limited coverage of this issue within the draft strategy (see paragraphs 4.22 – 4.27). Groundwater flooding is not, for example, covered specifically within any of the proposals or policies in the draft Strategy. If this is considered a significant issue, consideration should be given to incorporating it within a proposal or policy, but if not it could be deleted from this objective.	We do not think it necessary to delete this mention of groundwater flooding simply because it does not merit a specific proposal. The consultation may lead to a proposal being added, or to some text being deleted or revised.
<i>Delivering practical changes locally</i> It is recommended that GLA check consistency of this principle with the rest of the draft strategy, in relation to support provided for new resource development.	Noted.
<i>Promoting consumer awareness and help consumers avoid unnecessary consumption</i> As with the first objective above, the supporting text of the principle refers to using water more 'effectively', but perhaps a more appropriate term would be 'efficiently' (or "effectively and efficiently") which implies both reducing waste and making better use of resources.	Revised as recommended.
It is recommended that a reference is added to managing water sustainably , and within environmental limits and thresholds.	We do not disagree with the importance of these issues but were trying to avoid a long list. We wanted to keep to three Objectives and three Principles, but responded to the Mayor's concern for the principle of working together.
It is recommended that reference to applying the precautionary principle to water management and in particular to the potential impacts on sustainability be added.	
It is recommended that a reference be added to managing water resources in order to maintain or improve the health and well being of London's population and having regards to equality issues and minimising potential impacts on vulnerable	

SA Commentary- main proposed changes	GLA's response
groups.	
Comments on the policies	
Policy 1 - items 1 and 2, i.e. reducing leakage and improving efficiency, should not be considered sequentially and should happen at the same time.	The first two items are now shown as equal first.
Policy 1 - Works to replace mains and fix leaks should be managed to minimise disruption and in partnership with other organisations, such as Transport for London and the Boroughs, so any disruption can be minimised.	We think that the text in paragraph 3.11 (previously 3.10) covers this adequately, particularly with the new code of conduct.
Policy 1 - If leakage management involves pressure reduction, there are potential impacts on the ill or disabled people and the possibility of contamination due to backflow and these should be fully considered and avoided where possible and if not minimised within acceptable limits (mention is made of the impact on high rise buildings and the fire brigade in paragraph 3.11 – 3.12 but not of these issues).	Revised as recommended.
Policy 1 and 2 - Standards for biological and chemical quality of reclaimed water for human use should be developed and adequate training and monitoring should be provided in order to minimise cross-connections and the risk of health related problems.	We think that the text in paragraph 3.46 (previously 3.44) covers some of this, but text has also been added.
Policy 2 - SUDS should always be designed to fit the characteristics of a development and the local situation and therefore what is appropriate in one place may not be appropriate in another. Therefore items 2 to 4 may not always operate in a hierarchy.	Noted.
Comments on the proposals	
Proposal 1: <ul style="list-style-type: none"> Unclear how in practice partnership working will be co-ordinated / achieved as there is no further detail in the supporting text. This proposal could be more explicitly linked to the new principle included in the strategy on "working together". 	A new paragraph has been added after Proposal 1 referring to the Water Resources Working Group.
Proposal 2: Supporting text in the previous draft (paragraph 3.19 in December 2007 draft) noted the long-term benefits of short term disruption for upgrading infrastructure – notably reduced leaks and bursts meaning reduced need for streetworks in future. This text has been removed from the current (May 2009) draft Water Strategy, but including reference to this issue and how it should be managed would be beneficial.	Text has been added at the end of the paragraph preceding Proposal 2 (paragraph 3.11) to cover this point
Proposal 3: <ul style="list-style-type: none"> Refers to vulnerable low income households rather than vulnerable customers generally. This does not necessarily reflect all dimensions of vulnerability of customers, for example related to health and equality. The new Proposal should be amended accordingly. Reference to the Mayor's retrofit programme and that it should also help many households at risk of water poverty is welcomed, but no details are included on the scale and benefits which could be derived from this programme which could usefully be added. 	<p>The text has been changed to "vulnerable and low income households".</p> <p>The Mayor's retrofit programme, and the mechanism for working with water companies, is still being worked out. However, Table 3.3 provides estimates of potential benefits</p>
Proposal 4: No specific recommendations.	
Proposal 5: <ul style="list-style-type: none"> It is unclear how will be implemented / achieved as there are no further details in the supporting text. This proposal could be more explicitly linked to the new principle included in the strategy on "working together". 	New paragraph referring to the benefits of partnership working added after this proposal.
It is noted that previous proposal 5 (December 2007) has been deleted in latest draft of the strategy, and is not reflected in new supporting text: <i>"The water companies should compile more geographically disaggregated data on water use within London in order to improve understanding of the social factors that influence water use".</i>	This proposal was deleted because we were not convinced that this sort of analysis would produce useful results. It was replaced by the joint GLA/Environment Agency work on the social effects of metering, which has been completed and is referred to in paragraph 6.25.

SA Commentary- main proposed changes	GLA's response
<p>Proposal 6:</p> <ul style="list-style-type: none"> It is unclear how will be implemented / achieved as there are no further details in the supporting text. This proposal could be more explicitly linked to the new principle included in the strategy on "working together". 	<p>Currently implementation is through the London on Tap campaign referred to in the preceding paragraph. There may be other initiatives in the future. This is an example of "working together".</p>
<p>It is noted that previous proposal 6 (December 2007) has now been deleted: <i>"Mayor will work with partners to develop a water action framework to determine the supply and demand measures that can enable London to achieve a sustainable supply-demand balance".</i> Given the relatively strategic nature of the draft Water Strategy, the preparation of a plan / framework is considered by the SA team as essential if the policies and proposals are to be delivered.</p>	<p>New paragraphs on "Implementation and monitoring" have been added at the end of chapter 1. The Mayor's retrofit programme (referred to above), and the mechanism for working with water companies, are still being worked out. The Mayor considers that all new homes should be Code Level 3 by 2010 and Level 6 by 2016. These are areas where the Mayor can act. There is a risk that the "water action framework" would be no more than a wish-list so it has been omitted for the moment, but it is an idea to which we may return.</p>
<p>Proposal 7: Specific thresholds and targets for the re-use of rain / greywater and the management of surface water runoff have been deleted from the draft Water Strategy (these previously featured in proposals 6 and 7, as in December 2007 draft)</p>	<p>The specific requirements have been omitted for the moment because we do not have enough information on the water-energy-greenhouse gas balance to back them up. They may be re-inserted depending on better data and consultation responses.</p>
<p>Proposal 8:</p> <ul style="list-style-type: none"> The wording of new Proposal 8 illustrates well how other proposals where the Mayor will work with others can be made more robust. Here the Mayor will work <u>through</u> the Forum <u>to create</u> a plan. 	<p>The work of the Drain London Forum has progressed since Dec 2007 so the text has been updated.</p>
<p>Proposal 9:</p> <ul style="list-style-type: none"> The proposal would benefit from further details on the mechanism(s) by which it would be delivered. 	<p>The proposals are still being developed so it is not possible to include implementation details.</p>
<p>Proposal 10:</p> <ul style="list-style-type: none"> The proposal would benefit from further details on the mechanism(s) by which it would be delivered. 	<p>More detailed proposals are still to be developed in conjunction with the Mayor's revised Waste Strategy as well as the new Energy and Climate Change Mitigation Strategy.</p>
<p>Proposal 11: Proposal is considered in principle positive from a sustainability perspective, but in practice any positive effects will depend on the implementation detail which is not provided in the current draft strategy.</p>	<p>We need consultation responses to this idea before working up implementation proposals. Also text has been added on the Draft Flood and Water Management Bill in the preceding paragraph</p>
<p>Previous proposals 8 and 10 (December 2007) have been deleted and their content is not retained elsewhere in the plan.</p>	<p>The text has been revised to reflect the provisions of the Draft Flood and Water Management Bill.</p>