The Mayor of London's Draft Water Strategy

# Sustainability Appraisal Report Non-Technical Summary



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### **Contents**

The Non Technical Summary includes the following sections:

1.	Contents of the Water Strategy	2
	Background to the Strategy	
	Objectives and Principles of the Draft Strategy	
	Contents of the Strategy	
2.	The Sustainability Appraisal Approach	5
	Overview of the approach adopted	
	Sustainability appraisal stages and tasks	
	The Sustainability Context	
	Background	8
	Policy context	8
	The current and likely future situation	8
	Key problems and opportunities identified	11
	Likely situation in the future	11
4.	Appraisal of the Draft Water Strategy	13
	Introduction	13
	Appraisal of alternatives	13
	Draft Strategy objectives and principles	
	Appraisal of policies	.15
	Appraisal of Proposals	.16
5.	Overall Effects of the Draft Water Strategy	17
	Introduction	17
	Summary of potential overall effects of the draft Strategy	17
	Summary of potential cumulative effects	18
	Recommendations for mitigation and enhancement	18
	Difference that the Sustainability Appraisal has made	19
6.	Implementation and Next Steps	20
	Implementation and monitoring	
	Next steps	

This report is a Non-Technical Summary of the Sustainability Appraisal Report of the Mayor of London's draft Water Strategy. It sets out an overview of the sustainability appraisal process and its findings. It is intended for the general reader, and although it can be read as a stand-alone document, it is not intended to be a fully comprehensive account of what occurred, or the recommendations made, but a précis of the key elements. It only provides a summary of the appraisal process; more detailed information is available in the main Sustainability Appraisal Report. The non-technical summary also provides details on how to comment on the Sustainability Appraisal Report during the public consultation period on the draft Water Strategy.

The Sustainability Appraisal Report incorporates the requirements for an Environmental Report under the Environmental Assessment of Plans and Programmes Regulations 2004 No. 1633 which implements the requirements of the European Directive 2001/42/EC, known as the SEA Directive. The preparation of a non-technical summary is a requirement of these regulations.

# 1. Contents of the Water Strategy

### **Background to the Strategy**

The draft Water Strategy aims to consider all aspects of water management and how they interact. It intends to complement the plans and strategies of other organisations, including the Government's Water Strategy for England, but also seeks to influence their future development.

The draft Strategy, whilst being led by the Mayor, has been prepared in consultation with the water industry and regulatory organisations. Its purpose is to promote improved water management – both in terms of the water we want (such as drinking water) and the water we don't want (such as sewage and floodwater in the wrong place) - over the next ten years.

The Water Strategy is also intended to be an influencing document and its contents will be delivered by a partnership of organisations which includes the Greater London Authority, the London Boroughs, water companies and regulators.

# **Objectives and Principles of the Draft Strategy**

The draft Water Strategy has the following overall objectives:

- To use the water London already has more effectively and efficiently
- 2. To minimise the release of wastewater and diffuse pollution into the water environment
- To reduce the threat to people and their property, businesses and essential infrastructure from sewer, groundwater and surface water flooding and to mitigate its effects.

The draft Water Strategy adopts the following principles:

Delivering practical changes locally

- Maintaining London's infrastructure for future generations
- Promoting consumer awareness and help consumers to avoid unnecessary consumption
- · Working together.

### **Contents of the Strategy**

The draft Water Strategy is structured around the following topics:

- Pressure on water resources
- Managing water use
- Managing rainwater
- Disposal of wastewater in London
- · Paying for water services.

The draft Water Strategy includes three policies covering water use, drainage and disposal of wastewater (see Table 1). Each policy is made up of several elements. In some polices these elements are mutually exclusive and operate as a hierarchy whereas in others some could be implemented together. Generally the Mayor's preferred approach is represented by the elements at the top of each list and those at the bottom are the least preferred approach.

The draft Water Strategy also includes 12 proposals intended to generate action to support the achievement of the policies and the objectives of the draft Water Strategy (see Table 2). Most of the proposals are intended to be achieved in partnership with other organisations as the Mayor has limited powers and duties for water management.

# Table 1: Policies included in the draft Water Strategy

#### Policy 1: Water use in London

The Mayor believes that we should apply the following hierarchy for managing water supply and demand in London:

- 1=. Reduce the loss of water through better leakage management
- 1=. Improve the **efficiency** of water use in residential, commercial and public buildings (both new and existing)
- 3. Use **reclaimed** water for non-potable uses (rainwater harvesting and grey water recycling)
- 4. Develop, as necessary, those water **resources** that have the least climate change and environmental impact.

#### Policy 2: Drainage in London

The Mayor proposes the following hierarchy for the drainage of rainwater:

- 1. Store rainwater for use later
- 2. Use porous surfaces to let rainwater to **soak** into the ground where soil conditions allow
- 3. Slow the runoff by directing rainwater into **ponds** or open water features for gradual release to a watercourse
- Slow the runoff by directing rainwater into tanks or sealed water features for gradual release to a watercourse
- 5. Discharge rainwater direct to a **watercourse**
- 6. Discharge rainwater to a surface water drain
- Discharge rainwater to the combined sewer, as a last resort.

#### Policy 3: Disposal of wastewater in London

The Mayor proposes the following hierarchy for the disposal of wastewater:

- 1. Discharge wastewater to a foul sewer
- Discharge wastewater to the combined sewer, as a last resort.

This is the ideal hierarchy but it is recognised in many areas there is limited choice

The proposals cover issues such as the management of London's water resources, leakage reduction, installing water meters in all properties in London, promoting more water efficient development, raising awareness of the benefits of water efficiency in the home etc.

In some cases, the proposals reflect standards already contained in legislation, other policies or guidance. However, in many cases the proposals go beyond what is required in existing legislation etc. or what is already planned by water companies.

# Table 2: Proposals in the draft Water Strategy

#### Pressure on water resources

 The Mayor will work with the water companies, the Environment Agency and other partners in seeking the effective management of London's existing and future water resources to meet the needs of the growing population whilst protecting the natural environment.

#### Managing water use

- Thames Water should, through its Water Resources Management Plan, aim to achieve the best UK industry standard for leakage by 2035, in order to bring London in line with the best standards of world cities.
- 3. The Mayor will work with water companies and other partners to support the rapid introduction of water metering throughout London. The Mayor considers that all houses in London should have meters installed by 2015, and all blocks of flats by 2020. All new flats in London should have an individually metered water supply. Tariff arrangements should encourage the efficient use of water but protect vulnerable and low-income households.
- The Mayor believes that, where possible, all new homes should meet the highest level of the Code for Sustainable Homes for water consumption.
- 5. The Mayor has announced a commitment to improve the energy efficiency of London homes. This strategy highlights the need for existing homes to become more water efficient. Improving energy and water efficiency at the same time is both sensible and the least cost way of helping Londoners to control their energy and water bills as well as to reduce their greenhouse gas emissions
- 6. The Mayor will work with the water companies, the Environment Agency, and other partners in joint programmes to raise awareness of the benefits of water efficiency, including the possible savings that they can achieve through their water and energy bills.
- 7. The Mayor will work with the water companies and other partners to raise awareness of the high quality of London's tap water, the contribution of bottled water to climate change, and the benefits of drinking water to health and well-being. He will also encourage restaurants, bars and hotels across London to serve tap water to customers.

#### Managing rainwater

8. The Mayor will encourage green roofs, rainwater harvesting, grey water recycling and sustainable drainage through planning policies in his new London Plan.

9. The Mayor will work with partners through the Drain London Forum to create a strategic-level surface water management plan for London by 2012. This plan will assist Boroughs in producing their Surface Water Management Plans, will prioritise strategic actions and enable a regional submission for government funding to manage surface water flood risks in London.

#### Disposal of wastewater in London

- 10. The Mayor will work with Thames Water and other partners to support the construction of the **Thames and Lee Tunnels**, in a cost-effective way and minimising disruption, as a means of greatly reducing storm discharges from the combined sewer system and improving the quality of the water in the River Thames.
- 11. The Royal Institution of Chartered Surveyors should consider including a survey of **sewer misconnections** as part of the surveys at the time of sale of a property.
- 12. The Mayor will work with Thames Water and other partners to identify ways in which the management of sewage can provide renewable energy and reduce emissions of greenhouse gases. The Mayor encourages Thames Water and other partners to identify opportunities to use **new technologies** to contribute towards the Mayor's targets for decentralised energy, particularly through the production of biogas, and greenhouse gas emissions reduction.

#### Paying for water services

No proposals

# 2. The Sustainability Appraisal Approach

# Overview of the approach adopted

The draft Water Strategy was assessed for its potential impact on sustainability – wider environmental, economic and social effects – using a process known as Sustainability Appraisal.

The approach undertaken during the Sustainability Appraisal followed Government guidance, but was adapted to suit the particular situation of the draft Water Strategy. To meet the requirements of the Greater London Authority, Health **Impact** а and Strategic Assessment Environmental Assessment were integrated into the Sustainability Appraisal process.

The Mayor is also required to consider the impacts of any of his strategies on equality of opportunity. This is taken into account through an Equalities Impact Assessment. In this case, the Equalities Impact Assessment is being undertaken in-house by the Greater London Authority and not integrated into the Sustainability Appraisal.

The Greater London Authority now usually undertakes Integrated Impact Assessments as part of developing mayoral strategies which integrate all the above forms of assessment into one, but as the Strategy and its appraisal were initiated before this practice became established it is being referred to as a Sustainability Appraisal (which incorporates Health Impact Assessment and Strategic Environmental Assessment).

The Greater London Authority commissioned Collingwood Environmental Planning, association with Centre for Research in Environment and Health, in August 2006 to undertake the Sustainability Appraisal of the The earlier scoping draft Water Strategy. stage of the appraisal was undertaken inhouse by the Greater London Authority, which concluded with the preparation and consultation on a scoping report. The main appraisal has been undertaken alongside the developing strategy.

# Sustainability appraisal stages and tasks

The Sustainability Appraisal of the draft Water Strategy was undertaken in five main stages:

- Setting the context and objectives, establishing the baseline and deciding the scope
- Developing and refining options and assessing effects
- 3. Preparing the Sustainability Appraisal Report
- Consultation on the draft Strategy and Sustainability Appraisal Report
- 5. Monitoring implementation of the Strategy

So far, the Sustainability Appraisal has reached the end of the third stage.

One of the first tasks undertaken as part of the appraisal was to analyse and describe the current and likely future environmental, social and economic situation in London, where relevant to the scope and potential effects of the draft Water Strategy. This, combined with a review of other relevant policies, plans and programmes, assisted in the identification of sustainability issues faced by London, and existing objectives and targets set at national or regional levels. A summary of this context information is included in Section 3, below. The issues and targets identified fed into the appraisal process.

#### **Sustainability Appraisal objectives**

The Sustainability Appraisal objectives sought to address all aspects of a healthy environment, society and economy. They were developed through initial discussions at a scoping workshop, with key statutory stakeholders, the London Health Commission and the London Sustainable Development Commission, and consultation with interested parties. The objectives provided a structure to describe, assess and compare the potential

sustainability effects of the draft Strategy. The final Sustainability Appraisal framework was made up of 17 Sustainability Appraisal objectives which were structured into six broad topics (see Table 3) and included Sustainability Appraisal criteria or questions under each objective to help appraise them.

#### **Table 3: Sustainability Appraisal Objectives**

#### **SA Objectives**

#### People and health

#### 1. Governance

To deliver objectives transparently and effectively over the long-term, focussing on outcomes and informed by good evidence

#### 2. Education and Awareness

To maximise the education and awareness levels of the population in order to empower individuals to take responsibility

#### 3. Health and Well Being

To maximise the health and well being of the population and reduce inequalities in 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

#### 5. Safety and Security

To have a place where everyone feels at ease and is able to enjoy life and to enhance community safety

#### 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

#### 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

**8.** Landscape, Historic and Cultural Environment To enhance and protect the landscape and built and cultural environment, including buildings, townscape and the public realm

#### 9. Biodiversity

To conserve and enhance natural and semi-natural habitats and wildlife

#### 10. Air Quality

To improve both indoor and outdoor air quality

#### **Climate Change**

#### 11. Climate Change

11i) To mitigate the causes of climate change 11ii) To adapt to the effects of climate change

#### Water management

#### 12. Water Quality

To improve the quality of surface waters and groundwater

#### 13. Water Resources

To improve the security of supply and to achieve the prudent management and efficient use of water resources

#### SA Objectives

#### 14. Drainage

To promote sustainable urban drainage

#### 15. Flood Risk

To minimise the risk of flooding

#### **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

#### Economy

#### 17. Economy

To develop the economy in ways which meets society's present and future needs

#### The appraisal of the draft Strategy

To help promote positive sustainability outcomes, there was a continuous exchange of advice and comment between the appraisal process and the Greater London Authority team who were preparing the draft Strategy.

The Sustainability Appraisal adopted a variety of approaches to consider the sustainability implications of different elements of the draft Strategy. This included reviewing and providing commentaries at key stages. The Sustainability Appraisal also assessed the overall and cumulative effects of the draft Strategy.

Network or causal chain analysis, was also used as a mechanism for tracing the links between elements of the draft Strategy and likely effects, and for identifying cause and effect pathways. This was undertaken with input from a stakeholder workshop focussing on health issues. The causal chains were also useful in identifying potential cumulative effects of the different parts of the draft Strategy on sensitive receptors (such as the elderly or other vulnerable people).

The Sustainability Appraisal considered alternatives including what would be likely to happen in ten years time without implementing the Water Strategy, which was useful in assessing whether the draft Strategy will make a significant difference to the sustainability of London. Other alternatives considered included an earlier draft of the Strategy and the version to be published for public consultation. The Sustainability Appraisal also considered the sustainability effects of each of

the policies individually and as part of a package of measures.

Potentially significant adverse and positive effects, were identified during the appraisal, and recommendations were made to mitigate these effects where appropriate. The types of enhancement and mitigation identified included:

- Changes to wording of specific proposals or policies, e.g. to strengthen the requirements or to make them clearer
- Recommendations for where the implementation of certain proposals or policies would benefit from being carried out together
- Providing more detail on how a proposal, standard or policy will be implemented or extending the scope of the Strategy

 Having particular regard to vulnerable groups or other sensitive receptors.

#### **Sustainability Appraisal Report**

The Sustainability Appraisal Report sets out the findings of the appraisal process and provides information on the sustainability implications of implementing the draft Strategy. It is one of the key outputs from the appraisal process and must be made available for consultation at the same time as a draft plan, in this case the proposed draft Water Strategy. It is also required that a non-technical summary of the report is produced, which is this report.

### 3. The Sustainability Context

### **Background**

This section presents a summary of the background information relating to London's environmental, social and economic context used in the Sustainability Appraisal of the draft Water Strategy. This provided background information and the evidence base to support the appraisal process.

The information was structured into six broad topics, by grouping the 17 Sustainability Appraisal objectives (see Section 2), together with a section on cross-cutting issues. These topics were specifically selected for the purposes of the Sustainability Appraisal of the draft Water Strategy, as they provide a simplified structure for presenting the relevant contextual information. The information collated was selected to inform the appraisal of the potential sustainability effects of the draft Water Strategy and therefore some topics contained more information than others.

In addition, key potential future trends over the intended ten year timescale of the Water Strategy were identified, based on existing trends and knowledge of policy or regulation changes proposed in relation to specific issues.

The topics, and how they relate to the Sustainability Appraisal objectives, are set out in Table 4.

#### Table 4: Coverage of sustainability topics

#### **People and Health**

- Governance
- · Education and Awareness
- Health and Well Being
- Equality and Diversity
- Safety and Security

#### Place and quality of surroundings

- Liveability and Place
- · Accessibility and Availability
- Landscape, Historic and Cultural Environment
- Biodiversity
- Air Quality

#### **Climate Change**

Climate Change

#### Water management

- Water Quality
- Water Resources
- Drainage
- Flood Risk

#### **Waste and Resources**

Waste Management and Resource Use

#### **Economy**

Economy

#### **Cross-cutting**

### **Policy context**

In order to help appraise the draft Water Strategy against the Sustainability Appraisal objectives it was also important to understand the policy context. A review of relevant policies, plans and programmes related to the sustainability topics (in Table 4) undertaken. which also helped the identification of key sustainability issues under each topic.

The review focused on London level policies, plans and programmes, as well as those at a national level which are particularly relevant to the appraisal of the Water Strategy. Key messages from the review were integrated into the description of the current and likely future situation in the main Sustainability Appraisal Report, a summary of which is included below.

# The current and likely future situation

#### **People and Health**

The health of Londoners has improved in recent years and is likely to continue improving. However, there are considerable inequalities in many aspects of life in London, affecting particular groups and areas more than others, inequalities which are likely to persist and could increase<sup>1</sup>. Over the longer

<sup>&</sup>lt;sup>1</sup> London Health Commission, 2007, Health in London Looking back looking forward report: 2006/07 review of trends, progress and opportunities

term, the health of Londoners may be affected by the impacts of a changing climate on the frequency and severity of floods, which are expected to increase in the capital<sup>2</sup>. This could have a disproportionate effect on vulnerable groups. In addition, plans to improve water efficiency in London over the coming years by increasing the use of water meters<sup>3</sup> could adversely impact on low-income households if average bills may increased.

#### **Place**

London has extensive natural amenities, including parklands, canals and rivers and private green space such as gardens. Development in London has put pressure on London's natural environment<sup>4</sup>, reducing water quality, biodiversity and air quality, although water quality has improved in recent years<sup>5</sup>. Climate change is projected to increase pressure on London's environment in the long term<sup>6</sup>, which could have negative effects on the health of Londoners<sup>7</sup>. In addition, noise disturbance is an issue in London which is likely to increase over time due to projected increases in overall population and population density.

#### Climate change

London is responsible for 8% of all UK greenhouse gas emissions. The amount of energy consumed per person has risen significantly in recent years<sup>8</sup> and the population is projected to increase by almost 7% to 2026<sup>9</sup>. Based on existing trends London's overall greenhouse gas emissions may continue to rise, even if emissions per person fall.

Climate change is predicted to lead to significant challenges for London, both in terms of direct impacts on infrastructure and

services, and in terms of the indirect effect it will have on factors such as the availability of water, and extreme weather events and flooding<sup>10</sup>. Climate change is also likely to increase the average temperature and frequency of heat waves. There are numerous Government plans and programmes providing detailed context and emerging priorities for the national policy approach to climate change and water issues<sup>11</sup>, which seek to reduce the amount of greenhouse gas emissions produced, and adapt to the predicted impacts of climate change.

#### Water management

The pressure on London's water resources is increasing. During a dry year there is an estimated shortfall of 200 million litres a day, which is expected to increase over the longer term<sup>12</sup>. Climate change and an increasing population are expected to add to pressure on water supply and water resources. Although the biological and chemical quality of London's water resources has improved, they were still (in 2004) the worst of any region in England<sup>13</sup>. The implementation of the European Union's Water Framework Directive is likely to lead to improvements in the water quality of London's waterways.

A significant proportion of the capital's water supply network dates from the Victorian era and leakage results in a considerable amount of water being lost on a daily basis. Water companies in London are working towards agreed leakage targets to reduce the amount of leakage from the network, and have a duty to promote water efficiency. Thames Water has plans to raise the level of metering in London to 77% within 15 years<sup>14</sup> which could potentially have an adverse economic effect on vulnerable groups if household water costs

<sup>&</sup>lt;sup>2</sup> Defra (2008) Future Water – The Government's Water

Strategy for England
<sup>3</sup> Thames Water (2009) Draft Water Resources
Management Plan – Statement of Response

<sup>&</sup>lt;sup>4</sup> Greater London Authority (2007)\_ Greener London – The Mayor's State of the Environment Report for London <sup>5</sup> Ihid

<sup>&</sup>lt;sup>6</sup> UKCIP (2009) Key Findings for London http://ukclimateprojections.defra.gov.uk/content/view/2148/ 528/

<sup>&</sup>lt;sup>7</sup> Air quality, urban heat island

<sup>&</sup>lt;sup>8</sup> Greater London Authority, 2004, A Green Light to Clean

Power – the Mayor's Energy Strategy.

<sup>9</sup> Greater London Authority (2008) The London Plan, (consolidated with alternations since 2004)

<sup>&</sup>lt;sup>10</sup> UKCIP (2009) Key Findings for London

HM Government (2008) Climate Change Act, Defra (2005) Making Space for Water, Defra (2008) Future Water – The Governments Water Strategy for England
 Environment Agency (2006) 'Planning for a better

London'

13 Defra (n.d.) e-Digest Statistics about: Inland Water

Quality http://www.defra.gov.uk/environment/statistics/inlwater/kf/index.htm Accessed: 21/08/09

<sup>&</sup>lt;sup>14</sup> Thames Water (2009) Draft Water Resources Management Plan – Statement of Response

rise. An appropriate tariff structure could reduce these impacts.

Much of London's rainwater drainage system also dates from Victorian times, and was built to carry both sewage and rainwater. Changing rainfall patterns and an increase in impermeable surfaces has resulted in increasing pressure on existing drains<sup>15</sup>. This can lead to sewage overflows to the Thames and also to local surface water flooding<sup>16</sup>.

Flooding in London can occur from one of several sources or a combination of sources: tidal flooding, river flooding, localised or surface water flooding, groundwater and sewer flooding<sup>17</sup>. Flooding can have negative impacts on human health, wellbeing and infrastructure. Climate change is predicted to increase the risk of flooding in London<sup>18</sup>.

#### **Waste and Resources**

London has high rates of waste generation and a lack of facilities to deal with it. This means that the capital has severe difficulties in meeting European and UK targets for reducing and recycling waste. London currently sends the majority of its municipal waste to landfill and plans to increase the amount disposed of by incineration<sup>19</sup>. The projected increase in London's population, is likely to increase the overall amount of waste produced which could pose a risk of contamination to London's water resources.

Treating waste water and sewage produces sewage sludge, the production of which is likely to increase with the projected increase in the population of London. The Mayor's Waste Strategy seeks to encourage the development of anaerobic digestion plants which could turn

sewage sludge into a material suitable for agricultural and horticultural use<sup>20</sup>.

#### **Economy**

London has, despite the current recession, a thriving economy. However, the city's residents do not benefit equally from the success of the economy. London has the highest rate of child poverty in Great Britain and only 71% of its working age population is in employment<sup>21</sup> (although this figure may now be lower due to the recession). features of the London economy include a concentration of relatively high skill jobs, meaning those with low qualifications face higher risks of exclusion than elsewhere, and that the high levels of earnings mean that housing costs are very high, especially for those on low incomes<sup>22</sup>.

London's waterways and water bodies make a contribution to the city's economic success, providing opportunities for tourism, leisure, recreation and transport of people and freight. Flood risks are likely to increase due to further development in areas at risk of flooding and due to climate change impacts. This is likely to increase the negative economic costs associated with flooding, disrupting businesses, transport, supply routes and also impacting on the physical and mental well-being of those affected.

#### **Cross-cutting**

The population of London is projected to increase by 6.6% to 2026, and to meet this growth the London Plan includes a target of 30,500 new homes per year<sup>23</sup>. This population increase will also need the associated public and social infrastructure, transport, education, health-care, green spaces etc, and will place increasing demand on London's resources, including water.

strategic plan'

London Assembly Environment Committee (2005)
 'Crazy paving. The environmental importance of London's front gardens'
 Ibid

See Draft Regional Flood Risk Appraisal (June 2007)
 Chapter 2 'Overview of flood risk to London' Available:
 London Resilience (2007) 'London flood resilience

<sup>&</sup>lt;sup>19</sup> Greater London Authority (2003) Rethinking Rubbish in London – The Mayor's Municipal Waste Management Strategy

Greater London Authority (2003) Rethinking Rubbish in London – The Mayor's Municipal Waste Management Strategy
 Mayor's economic development strategy

<sup>&</sup>lt;sup>22</sup> Greater London Authority (2005) Sustaining Success, the London Economic Development Strategy
<sup>23</sup> Greater London Authority (2008) The London Plan,

<sup>&</sup>lt;sup>23</sup> Greater London Authority (2008) The London Plan (consolidated with alternations since 2004)

Climate change is another cross-cutting issue that will affect all aspects of life in London, and may impact particularly on water related issues such as flooding and the reliability of supply.

# Key problems and opportunities identified

Drawing on the review of other policies, plans and programmes and the baseline data, the key sustainability problems and opportunities for the Sustainability Appraisal and the Water Strategy to consider were identified. This report focuses on summarising the main problems (see Table 5).

#### Table 5: Key sustainability problems

#### People and health

- The complex administrative structure and legislation controlling the supply and management of water and potential overlaps and relationships of the Water Strategy with other plans and strategies.
- Potential negative effects of water related issues such as flooding, water scarcity and water quality. These can impact particularly on certain deprived and other vulnerable groups.
- Growing percentage of economically vulnerable households who spend more than 3% of disposable income on water and sewerage bills.
- Lack of public awareness regarding the appropriate response to extreme water related events (floods, droughts), as well as day to day water use and efficiency.

#### Place and quality of surroundings

- Water related infrastructure developments might cause disruption, both to movement (roadworks), and in terms of noise.
- Poor integration between water transport and other modes.
- Loss of water bodies to development and through pollution and lack of maintenance and neglect e.g. of canals.

#### Climate Change

- The implications of increased population, economic growth and development in London could cause an increase in energy use and emissions.
- More frequent droughts, floods and extreme weather events.
- Energy use and carbon dioxide emission implications of water supply options, such as desalination, or pumping.

#### Water management

 London's water deficit in dry years and over abstraction of existing water resources which

- has knock-on effects on the water environment. Potential social and environmental effects of developing new resources.
- London's increasing population and decaying water infrastructure including leaky pipes and drainage and sewerage systems unable to cope.
- Higher levels of leakage, challenges and barriers of fixing leaks (e.g. disruption caused) and issues associated with potential reduction in water pressure to reduce leakage.
- Rising per person water use, exacerbated by increase in single person households and lack of incentives and understanding to change behaviours.
- Poor (but improving) biological and chemical quality of London's water bodies. Diffuse and aesthetic pollution caused by sewer misconnections and combined sewer overflows and effects on biodiversity and amenity value of watercourses.
- Risk of flooding from all sources and potential impacts on health, well being, infrastructure.
- The effects of climate change and increasing population in all the above.

#### **Waste Management and Resource Use**

 London's high rates of waste production and a lack of facilities to deal with waste mean that the capital has severe difficulties in meeting European and UK targets for reducing and recycling waste.

#### **Economy**

- Deprivation, unemployment and economic inequality are all important issues in London. These are likely to be exacerbated, especially over the first few years of the Strategy timeframe, by the effects of the ongoing economic downturn in the UK and globally.
- Flooding and water shortages can have significant economic consequences by disrupting businesses, transport, supply routes etc.

#### **Cross-cutting**

 The rise in population will increase the pressure on water resources and drainage and sewage infrastructure. There will also be an increase in the numbers of people living in flood risk areas. These will also be exacerbated by Climate Change.

# Likely situation in the future

Drawing on the analysis of the sustainability context, predictions were made about the likely situation in the future in the absence of the draft Water Strategy, over its intended ten year timeframe. The findings are summarised in Table 6.

Table 6: Summary of likely future situation

Key trends	How the current baseline
Decade and beauti	may change
People and health	Overell beeith in Black to
Positive change in	Overall health is likely to
some of the	improve. Existing health and
determinants of	other inequalities likely to
poor health.	continue, and could worsen.
London's rivers	Improved health and quality
become more	of life likely due to more
attractive and easier to access.	people enjoying rivers for exercise and relaxation.
Increased use of	Less road traffic would mean
rivers for transport.	better air quality and less
ilvers for transport.	noise and congestion.
More homes and	Better management of water,
flats have water	but if water bills rise this
meters.	could have a negative impact
motors.	on vulnerable and low-
	income households.
More floods and	More people and property
more areas at risk	affected by flooding, with
of flooding due to	greatest impact those more
climate change and	vulnerable and on low
development.	incomes, who are less able
·	to respond.
Place and quality of	surroundings
Overall population	May lead to more noise and
to increase and	air pollution due to more car
become denser in	journeys and people living in
some areas.	closer proximity to one
	another.
London's rivers	Areas near London's rivers
become more	likely to become popular
attractive and	places to live, work and relax.
easier to access.	Now dovolopment will put
More construction to meet housing	New development will put pressure on green areas,
and employment	parks, open spaces and play
targets for London.	areas.
Climate Change	areas.
Warmer drier	More droughts leading to less
summers.	water supply and negative
	impacts on river flows and
	the water environment.
Warmer wetter	Increased risk of flooding.
winters.	Fewer people may die in
	winter due to the cold.
More frequent and	Increased risk of flooding,
severe storms and	disruption and damage to
rainfall.	property and infrastructure.
	Increased risk of combined
	sewer overflows.
Rising sea levels	Risk to tidal flooding affecting
and more frequent	large areas of London.
and significant tidal	Damage and disruption to
surges.	infrastructure and property.
Implementation of	Such initiatives may reduce
the Climate	energy use and carbon
Change Act and,	dioxide emissions per
for example,	person. However, overall energy consumption and
London Climate	

Key trends	How the current baseline
Change Ctrate	may change
Change Strategy.	emissions may rise due to population and economic
	growth.
Water Management	giowan
Implementation of	Should lead to improvements
improved water	of water quality in London's
regulations.	rivers.
Introduction of	May reduce usage of water
measures to	per person. However, overall
encourage water	water demand may rise, due
use efficiency.	to population growth.
Development of new water	May help reduce London's water deficit by increasing
resources (e.g.	supply.
desalination plant).	Supply.
Replacement and	Reduced leakage and thus
repairs to water	water lost during supply,
supply	which is likely to help reduce
infrastructure.	London's water deficit.
Effects of a	See Climate Change topic for
changing climate.	more detail.
Waste and resource Waste and	
recycling targets.	Increase in recycling and composting levels.
Initiatives to	However, overall waste may
change behaviour.	rise as population increases.
Economy	<u> </u>
London to continue	Existing economic
to have a strong	inequalities likely to continue
and dynamic	and perhaps increase over
economy	time.
Current economic downturn to	Likely to make economic inequalities worse and
continue for at least	reduce investment.
two years.	reduce investment.
Increased levels of	Pressure on land likely to
housing and other	lead to development in areas
built development.	at risk of flooding.
Climate change	Potential significant negative
impacts, especially	economic and social effects,
increased risk of floods.	disrupting transport networks and other infrastructure.
Cross-cutting	and other illiastructure.
Population	Relates to all topics.
increases.	Significant effects on all
	aspects of water use,
	management and disposal.
Increased levels of	More development in areas
housing and other	at risk of flooding. More
built development.	pressure on water resources
	and more run-off and
Climate change	sewage. Will affect all aspects of life in
effects	London, and may impact
	particularly on water related
	uses such as flooding and
	the reliability of supply.

# 4. Appraisal of the Draft Water Strategy

#### Introduction

The Sustainability Appraisal assessed various elements of the draft Water Strategy, including the policies and proposals as well as the draft Strategy overall. In addition, broad alternatives to the draft Strategy were also considered. The findings of these assessments are summarised in this and the following section.

### **Appraisal of alternatives**

The Sustainability Appraisal considered broad alternatives to the Mayor's draft Water Strategy to provide an indication of whether it is likely to make a significant difference to the sustainability of water management in London. The alternatives considered included a "business as usual" scenario which predicted what the situation would be like in ten years time without the implementation of a Water Strategy. In addition, an earlier version of the draft Water Strategy was considered as an alternative to the current draft as it presented some different proposals.

A comparison of the potential sustainability effects of these alternatives against the Sustainability Appraisal objectives is provided in a summary matrix. This is divided by the themes the draft Water Strategy, i.e. water resources, drainage and wastewater, see Table 7 below.

The appraisal categorised the significance of the effects using a simple 5-point scale: major positive effect (++), minor positive effect (+), neutral effect (0), minor negative effect (-) and major negative effect (--). In addition, where the effects were uncertain (?) or mixed (e.g. +/-) these categories were also used.

The appraisal of the effects of the predicted situation in ten years' time without the implementation of a Water Strategy highlighted a number of potentially negative effects on sustainability, particularly under drainage and wastewater disposal (see Table 7 below). In some areas the sustainability effects are predicted to improve (i.e. get more positive / less negative), but in others the sustainability effects are predicted to worsen (i.e. get more negative / less positive) which reflects both trends predicted and where policy interventions and other initiatives are expected to address certain issues (and in other areas where they are not). Overall, however, the sustainability effects are predicted to improve for many Sustainability Appraisal objectives between the current situation and the predicted situation in ten years.

The previous version of the draft Water Strategy (December 2007) was predicted to improve most of the effects predicted against almost all objectives compared with the current situation and the predicted situation in ten years. In particular improvements were predicted in relation to education and awareness, water resources and drainage.

The overall effects predicted for the current draft Water Strategy are included in Table 7 for comparison, but the results are discussed in more detail in Section 5 below.

Table 7: Comparison of the appraisal of the draft Water Strategy and the future situation under Business as Usual

	Sustainability Objectives																
Water management theme and Scenario	1. Governance	2. Education and Awareness	3. Health and Well-being	4. Equality and Diversity	5. Safety and Security	6. Liveability and Place	7. Accessibility and Availability	8. Landscape, Historic and Cultural Environment	9. Biodiversity	10. Air Quality	11. Climate Change <sup>24</sup>	12. Water Quality	13. Water Resources	14. Drainage	15. Flood Risk	16. Waste Management and Resource Use	17. Economy
WATER RESOURCES																	
Water Resources (current situation)	0		+	+	+?	0	0	0	1	0	-	,	-	0	0	0	+
Water Resources (situation in 10 years with no strategy)	0/+	+?	+	-?	+	0/+	0	0	-/+	-	-/+	,	+	0	0	-	-/+
Previous draft Water Strategy (Dec 2007)	+	++	+/-?	-?	+/-?	+?	0	0	+/++	0	+	+	++	0	0	0/-?	+/
Draft Water Strategy (Aug 2009)	+	+	+/-?	+/-	+?	+?	0	0	+	0	+	+	++	0	0	0	+/-
DRAINAGE			•														
Drainage (current situation)	-	-	-	-	-	-	0/-	0/-	-	0	-	-	0		-	0	-
Drainage (situation in 10 years with no strategy)	0/+	+?	-	-	+?	-/+	-/+	-/+	-/+	0	-/+	-	+	-?	-/+	-	-/+
Previous draft Water Strategy (Dec 2007)	+	0	+?	-3	+?	+?	0	0	+	0	+?	+?	+?	++	+	0	+?
Draft Water Strategy (Aug 2009)	+	0	+/-?	-5	+?	+?	0	0	+	0	+?	+?	+?	+	+	0	+?
WASTEWATER																	
Wastewater (current situation)	0	-	-	-	-	-	0/-	0/-		0	0/-?		0/-	-	-	0	-
Wastewater (situation in 10 years with no strategy)	0/+	+?	-/+	1	+?	-/+?	-/+	-/+	-/++	1	-/+	-/+?	0	-?	-/+	-	-/+
Previous draft Water Strategy (Dec 2007)	+	0	+?	-?	+?	+?	0	0	+	0	+?	+?	+?	++	+	0	+?
Draft Water Strategy (Aug 2009)	+	0	+/-?	-;	+?	+/-?	0	0	+?	0	0/+	+?	0	0	+?	0	0
Key: Major positive:  H	positiv	e: +	Neutra	al: 0 I	Minor r	negativ	e: <mark>-</mark> 1	Major r	negativ	e: <mark></mark>	Uncert	ain:? I	Mixed:	<mark>-/+</mark>			

 $^{\rm 24}$  Objective split between (8i) mitigation and (8ii) adaptation to Climate Change

# **Draft Strategy objectives** and principles

The objectives of the draft Strategy and the Sustainability Appraisal objectives were tested against one another to help identify any conflicts and synergies between them. The results showed that they were generally compatible, with no significant potential conflicts identified. The appraisal therefore only recommended some limited changes to the wording of the Strategy's objectives.

Generally the principles were considered positive from a sustainability perspective, although some comments and potential additions which would strengthen the principles were proposed.

### **Appraisal of policies**

This section summarises the key findings of the detailed appraisal of the draft Water Strategy policies. The three policies covered water use. drainage and disposal of wastewater respectively (see Table 1). Note that each of the three policies is made up of several "elements" (four, seven and two in number respectively). In some polices these elements operate as a hierarchy whereas in others some of the items could implemented together. However, generally the Mayor's preferred approach is represented by the elements at the top of each list and those at the bottom are the least preferred approach. appraisal considered the potential sustainability effects of each of the elements.

A summary matrix illustrating the appraisal of the policies is shown as Table 8 below.

Table 8: Summary matrix of the appraisal of the Policies

Sustainability Objectives																	
Water Strategy Policies	1. Governance	2. Education and Awareness	3. Health and Well-being	4. Equality and Diversity	5. Safety and Security	6. Liveability and Place	7. Accessibility and Availability	8. Landscape, Historic and Cultural Environment	9. Biodiversity	10. Air Quality	11. Climate Change <sup>25</sup>	12. Water Quality	13. Water Resources	14. Drainage	15. Flood Risk	16. Waste Management and Resource Use	17. Economy
POLICY 1: WATER USE IN LONDON																	
=1: leakage	+?	+	0/-	-/+	+/?	0/-	0	0	+/0	0	+	+?	+/ ++	0	0	-	-/+
=1: efficiency	+?	+	+	-	+/0	+	0	0	+/ ++	0	+	+	+/ ++	0	0/-	0	+
3: reclaimed water	0	+/-	-/+	-/0	+/0	+/-	0	0	+	0	+/-	+?	+	+/++	+?	0	+
4: new resources	?	-?	-/+	-/+	+	-/+	-/+	-/+?	-?	0/-?	?	-?	+/-?	0	0?	-	+/-
POLICY 2: DRAINAG	E IN L	ONDO	N														
1: store rainwater	0	0	0/+?	-?	+?	0/+?	0	0	+	?	-/+/0?	+	+	++/+	+	0	+?
2: soak	0	0	0/+?	-?	0/+?	0/+?	0	0	+	0	0/+?	+	+	++/+	+	0	+?
3: ponds	0	0	<mark>0/+/-?</mark>	-?	0/-?	0/+?	0	0/+?	+/++	0	0/+	+	+	++/+	+	0	+?
4: tanks	0	0	0/+?	-	0/+?	0/+/-?	0	0	0/+	0	0/+	+?	+	+	+	0	+?
5: watercourses	0	0	0/+?	0	0/-?	0/-	0	0	-/0	0	-	-	-	-	-	0	-?
6: drain	0	0	-	-	0/-?	0/-	0	0	-/0	0	-	-/	-	-		0	-
7: sewer	0	0	-	-	-	-	0	0	-	?	-		-	-		0	-
POLICY 3: DISPOSA	L OF V	/ASTE	WATER	IN LO	NDON												
1: foul sewer	0	0	0/-?	-?	0/-?	0/-?	0	0/-?	+/-?	0	0	+/-?	0	0	+/-	0	+/-?
2: combined sewer	0	0	-/	-	-	-/	0	-	-	0	0/-	-	0	0	-	0	1
Key: Major positive:	++ N	linor p	ositive:	+ N	eutral:	0 Min	or neg	ative:	Majo	or nega	itive:	Unce	rtain:?	Mixed	l: <mark>-/+</mark>		

Note: see Table 1 for details of these policies

<sup>&</sup>lt;sup>25</sup> Objective split between (8i) mitigation and (8ii) adaptation to Climate Change

Table 8 highlights the general better performance of elements at the top of the policies. This is to be expected if the policies are built on to promote sustainability.

### **Appraisal of Proposals**

Overall the proposals included in the draft Water Strategy (see Table 2) were predicted to have a positive effect on sustainability, but it was concluded that this was likely to be of minor significance and that many of the proposals will have limited direct effects as the majority tend to be enabling type actions which reflect the Mayor's limited responsibilities for water management. Table 9 illustrates that the majority of the effects are expected to be positive, with only a small number of potential minor negative effects.

Only one effect of major significance was predicted, which was the positive effect on water resources which could arise from the introduction of universal metering by 2015 (proposal 3). The significance and certainty attributed to the effects of this proposal are in large part due to the fact that it contains specific recommendations together with a timeframe over which the outcome is expected. This differs from the majority of other proposals which set out high-level aspirations with limited detail of how and by when outcomes are expected to be delivered and change achieved.

Table 9: Summary matrix of the appraisal of the draft Water Strategy Proposals

	Sustainability Objectives																
Proposals	1. Governance	2. Education and Awareness	3. Health and Well-being	4. Equality and Diversity	5. Safety and Security	6. Liveability and Place	7. Accessibility and Availability	8. Landscape, Historic and Cultural Environment	9. Biodiversity	10. Air Quality	11. Climate Change <sup>26</sup>	12. Water Quality	13. Water Resources	14. Drainage	15. Flood Risk	16. Waste Management and Resource Use	17. Economy
1: management	+	0	+	0	0	0	0	0	+	0	0	+	+	0	0	0	+
2: leakage	0	+	0/-	0/-	0	0	0	0	0/+	0	+	+?	+	0	0	0/-	+/-
3: metering	+	+	0/-	+/-	+	0	0	0	+	0	+	+	++	0	0	0	+/-
4: Code	0	+	0	+/-	+	0	0	0	+	0	+	+	+	+	+	+	+/-
5 / 6: water efficiency <sup>27</sup>	+	+	0	0/+	0/+	0	0	0	0	0	0/+	0/+	+	0	0	0	0
7: tap water	0	+	0/+	0	0	0	0	0	0	0	0/+	0	0	0	0	0/+	0
8: rainwater	0	0	0/-	0/-	0	0	0	0	0/+	0	0/+	0/+	0/+	+	+	0	0
9: Drain London Forum	+	0	0/+	0	0	0	0	0	0	0	0/+	0/+	0	+	+	0	0/+
10: Thames & Lee Tunnels	+	0	+/-	0	0	0/+	0	0	+	0	0/+	+	0	0	+	+/-	0
11: misconnections	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12: new technologies	+	0	0	0	0	0	0	0	0	0	+	0	0	0	0	0	0
Key: Major positive: H Mir	-	sitive:	+ Ne	eutral:	0 Mir	or neg	ative:	- Ma	jor neg	jative:	Un	certain	:? Mix	ked: <mark>-/-</mark>	-	I	

Note: see Table 2 for details of these proposals

<sup>&</sup>lt;sup>26</sup> Objective split between (8i) mitigation and (8ii) adaptation to Climate Change

<sup>&</sup>lt;sup>27</sup> Proposal 5 and proposal 6 have been appraised together as they both seek to promote and raise awareness of water efficiency.

# 5. Overall Effects of the Draft Water Strategy

#### Introduction

This section provides a summary of the most significant potential effects, both positive and negative, which were predicted to arise from the implementation of the draft Strategy taken as a whole.

The Sustainability Appraisal also considered the effects of the draft Water Strategy in combination with other plans and strategies. The potential effects that were identified and considered to be most significant are also summarised below.

# Summary of potential overall effects of the draft Strategy

Overall the draft Water Strategy was predicted to have mostly positive or neutral effects on the Sustainability Appraisal objectives. However, the significance of most of these effects is likely to be relatively minor and / or uncertain. This is due to a number of factors, including:

- Action undertaken by other organisations or as part of other plans and strategies is required, and thus direct effects cannot be identified with certainty
- Limited details on implementation included with the majority of the proposals, such as specific timescales, thresholds or targets
- The policies and proposals mainly only applying to new development which only constitutes a small proportion of the housing stock in London.

However, many of the potential effects identified could become more significant in the long-term and cumulatively as those policies and proposals intended to help prepare for other actions and encourage partnership initiatives in the current draft Water Strategy assist in delivering more direct and specific actions in the future.

A summary matrix illustrating the appraisal of the draft Water Strategy overall by theme, i.e. water resources, drainage and wastewater, is included in Table 10 below.

Overall the key potential positive effects identified included:

- A major positive effect on water resources, especially in the long-term through reduced demand for water, leakage management, and water efficiency (especially in homes)
- A positive effect on the administration of water management through partnership working and cooperation between organisations
- A positive effect on people's awareness of their water consumption which could potentially lead to behaviour change and reduced household water use
- A reduction in the risk of surface and sewer flooding, especially in the long-term
- A positive effect on the security of water supply in London
- A positive impact on the water environment by improving quality and making better use of existing resources which could in turn improve water related wildlife and habitats.

Overall the key potential negative effects identified included:

- The potential costs of implementing many of the policies and proposals which could initially in particular impact low income households, although this could be potentially avoided if appropriate tariff levels are set. In the long-term these measures could protect some households from water poverty through increased efficiency
- The high cost that would be involved in achieving metering of all houses by 2015, and all blocks of flats by 2020, could have a negative economic impact. However, it could also create employment and protect water resources for the future.

# Summary of potential cumulative effects

There are different types of cumulative effects, but of particular concern for this Sustainability Appraisal were firstly; the total effects of different proposals and policies in the draft Water Strategy on a single 'receptor' (this could be a certain group within the population or people living in a particular area, the water environment or flora and fauna, for example); and secondly; the cumulative effects of the Mayor's draft Strategy in combination with other plans and strategies.

Although the draft Water Strategy is predicted to have predominately positive or neutral effects on sustainability, some potentially effects on negative cumulative certain vulnerable groups and low income households were identified. Of these, the potential additional cost arising from different aspects of the draft Water Strategy on the water rates and the affordability of housing was predicted to be the most significant potential cumulative negative effect. could potentially be partly mitigated through appropriate tariff levels for water rates.

The appraisal of the draft Water Strategy in particular identified potentially **positive cumulative effects on different aspects of the water environment** – such as water quality, water resources, biodiversity, reducing flood risk etc – arising from different policies and proposals. This is not unexpected given that this is the main objective of the draft Water Strategy.

The draft Water Strategy is intended to influence and complement other organisations' plans and strategies. Therefore the effects of the draft Water Strategy are likely to be 'in combination' or cumulative with the influence, outcomes and actions included in these other water related plans, strategies and organisational activities. Other key policies, plans and legislative requirements closely linked to the Water Strategy, include the Flood and Water Management Bill, Thames River Basin District Management Plan, Code for

Sustainable Homes and Building Regulations, Thames and London Catchment Abstraction Management Strategies, Thames Catchment Flood Management Plan, Thames Estuary 2100 Flood Risk Plan, Water Resources Management Plans for each water company serving London and Ofwat's proposals for the price limits for the water companies for the period 2010 to 2015.

# Recommendations for mitigation and enhancement

The Sustainability Appraisal made various recommendations for enhancing potential effects of the draft Strategy and mitigating potential negative effects. Specific mitigation and enhancement measures, many of which are in the form of recommendations for amendments and additions to the current draft Water Strategy, were identified in relation to the objectives, principles, policies and proposals.

The following general comments summarise the overall improvements to the draft Strategy that were identified:

- The inclusion of text stating that the implementation of certain proposals or policies would benefit from being carried out together
- The inclusion of details on the particular needs of vulnerable groups or other sensitive receptors
- The inclusion of tidal and fluvial flooding issues in the draft Water Strategy, not just the forthcoming draft Climate Change Adaptation Strategy, to help promote integrated water management and reflect current and short-term flood risk which is not only caused by climate change
- Promotion of the concept of water neutrality in future urban and land use planning policies in London
- The preparation of a Water Action Framework with details on how the Water Strategy will be implemented
- The inclusion of further 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 Water Strategy's objectives and details on how frequently the Strategy will be reviewed.

## Difference that the Sustainability Appraisal has made

The Sustainability Appraisal has made various recommendations for changes during the various iteration of the draft Strategy. This has

resulted in changes to elements of the draft Water Strategy, including the overall structure, the Strategy's objectives, policies and proposals. However, the Greater London Authority has not been able to take on board all the Sustainability Appraisal's recommendations. This is partly because of the Greater London Authority's desire to prioritise certain activities in the first version of the Strategy.

Table 10: Summary matrix of the appraisal of the draft Water Strategy overall by theme

							Sus	tainab	ility O	bjecti	ves						
Water Strategy Theme	1. Governance	2. Education and Awareness	3. Health and Well-being	4. Equality and Diversity	5. Safety and Security	6. Liveability and Place	7. Accessibility and Availability	8. Landscape, Historic and Cultural Environment	9. Biodiversity	10. Air Quality	11. Climate Change <sup>28</sup>	12. Water Quality	13. Water Resources	14. Drainage	15. Hood Risk	16. Waste Management and Resource Use	17. Economy
Water Resources	+	+	+/-?	+/-	+?	+?	0	0	+	0	+	+	++	0	0	0	+/-
Drainage	+	0	+/-?	-?	+?	+?	0	0	+	0	+?	+?	+?	+	+	0	+?
Wastewater	+	0	+/-?	-?	+?	+/-?	0	0	+?	0	0/+	+?	0	0	+?	0	0
Key: Major posi	tive: 🛨	+ Min	or posi	tive: +	Neu	tral: 0	Minor	negativ	/e: <mark>-</mark>	Major r	negativ	e: 💶	Uncert	ain:? N	/lixed:	<mark>-/+</mark>	

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<sup>&</sup>lt;sup>28</sup> Objective split between (8i) mitigation and (8ii) adaptation to Climate Change

# 6. Implementation and Next Steps

# Implementation and monitoring

Monitoring the significant sustainability effects of implementing the Water Strategy is an important part of the Sustainability Appraisal process. It will be used to monitor performance of the Water Strategy against the Sustainability Appraisal objectives. Where unacceptable effects are identified through monitoring this should lead to the appropriate action to resolve it by the Mayor of London or other organisations.

Key indicators proposed to monitor the draft Strategy include:

- relevant indicators included in the London State of the Environment Report 2007, such as the number of properties flooded from sewers per annum, average water consumption per person / household, percentage of rivers in London where the chemical and biological quality is classed as good or very good, number of pollution incidents having a significant impact on water
- other relevant indicators monitored by the Greater London Authority, such as the number of housing development completions
- indicators monitored by other organisations, including the Environment Agency, such as fish kills ,and water companies and Ofwat, such as level of leakage and proportion of existing properties on water meters.

However, in many cases, the data is not London specific, e.g. the information on levels of leakage of Thames Water is provided at the water company region level. The lack of London specific data for monitoring the effects of the draft Strategy has been found to be one of the key gaps. In addition, some potential gaps in the indicators available to monitor the effects of the draft Strategy were identified, including:

- Percentage of income spent on water and sewerage in London / percentage of households spending more than 3% of disposable income on water and sewerage bills
- Water use in new residential developments and within different areas in London and by different groups of the population
- Household awareness of water consumption
- Amount of water reclaimed for non-potable sources in new development
- Proportion of new development / volume discharging to combined or separate sewers
- Number / proportion of new residential development schemes incorporating sustainable drainage systems
- Number of people suffering illness / number of deaths caused by flooding and by wastewater
- New habitats created / improved habitats through flood schemes and sustainable drainage systems
- Number of misconnections identified and solved.

In addition, an indicator(s) to monitor tariff arrangements and financial effects on different sections of the London community is likely to be needed.

### **Next steps**

The key next steps and outputs from the draft Water Strategy and sustainability appraisal processes are as follows:

- Publication of the draft Water Strategy, and Sustainability Appraisal Report, including this non-technical summary (28 August 2009), followed by three months of public consultation to enable representations to be made
- Amendments to the consultation version of the Water Strategy in light of consultation responses received

- Appraisal of any significant changes, leading to either revisions to the Sustainability Appraisal Report, or if changes are minor a supplementary note to the Sustainability Appraisal Report
- Adoption of the final version of the Water Strategy by the Mayor (likely to be in 2010)
- Post Adoption Statement prepared by the Mayor of London to notify the public that
- the Water Strategy has been adopted. This will include information on the main issues raised during consultation on the strategy and sustainability appraisal and how these were taken into account in developing the final strategy, details on monitoring and other information required as part of the sustainability appraisal
- Ongoing monitoring and review.

# How to Comment on the Sustainability Appraisal Report

Public consultation on the draft Water Strategy and the Sustainability Appraisal Report runs from **28 August 2009** for **three months**.

All the comments must be received by 5pm on Friday 27 November 2009.

Comments can be provided by:

Post: Draft London Water Strategy

Post point 19 City Hall

The Queens Walk

London SE1 2AA

Email: water@london.gov.uk

Web: <a href="https://www.london.gov.uk/mayor/environment/water">www.london.gov.uk/mayor/environment/water</a> where copies of this SA Report

and a Non-Technical Summary of the SA Report can be downloaded along

with the Draft Water Strategy.

When you comment please include:

- Your full name
- Full postal address
- · Your email address
- Where possible, the pages, section titles and paragraph numbers (and/or appendix numbers) of the Sustainability Appraisal Report your comments / concerns relate to; and
- Any suggested detailed amendments to the Sustainability Appraisal Report to reflect your comments / concerns and any amendments to the preferred options you think should be made as a result.