

Sustainable Natural Resource Management

1. Context

- 1.1 We live and work in one of the most beautiful regions in England with a strong economy and healthy environment. The quality and variety of the environment is one of the region's defining characteristics. This is reflected by the large proportion of the South East recognised to be of international and national importance in terms of nature conservation and landscape value. The environment is also a major economic asset, estimated to contribute around £8 billion to the region's economy¹.
- 1.2 We must ensure the quality of the environment is maintained and enhanced for future generations while enabling continued sustainable growth and development.
- 1.3 Sustainable natural resource management is a key theme of the Plan. This means ensuring greater efficiency in our use of natural resources, the reduction of pollution and waste, and ensuring that features of importance are protected and enhanced, including wildlife and landscapes. This is reflected in the cross-cutting policies of the Plan (CC2, CC3, CC4) and set out in detail in this section.
- 1.4 One of the most significant external threats to our current way of life and future development is climate change. It is predicted that the region is likely to experience some of the most severe effects of a changing climate in the UK, with hotter and drier summers, warmer and wetter winters, and increased possibility of severe weather.
- 1.5 Climate change is a cross-cutting theme in the Plan (Policy CC2) and has been addressed in all policy areas and through Strategic Environmental Assessment (SEA).
- 1.6 Due to the potential significance of the impacts of climate change on the region, the Regional Assembly is a partner in the European Spatial Planning Adaptation to Climate Events project (ESPACE) that is addressing integration of climate change adaptation measures into spatial planning with partners in the Netherlands, Germany and Belgium.
- 1.7 Mitigation of climate change, through reducing emissions of greenhouse gases, is also addressed through a number of policies, particularly those for energy efficiency and renewable energy, waste management and transport.

¹ SEEDA (2002) *The Environmental Economy of South East England*.

2. The Region's Key Environmental Challenges



- 2.1 The following issues are of particular significance for the region:
- 2.2 **Water resources, river water and ground water quality management** – Water resources face increasing demand arising from existing and new development, exacerbated by changes to the climate and rainfall patterns. Ensuring that new development has adequate supply and is water efficient is therefore a key challenge for the region. This encompasses a twin-track approach of increased demand management and development of new sources of supply, together with the protection of river water quality and groundwater. Over 70% of the region's public water supply comes from groundwater and so protection of aquifers from over-abstraction and pollution is of particular importance.
- 2.3 The quality of rivers and of groundwater is affected by discharge of wastewater effluent from housing, business and industry and diffuse urban and agricultural pollution. A growing population will place extra demands on sewerage and waste water treatment infrastructure and waters receiving effluent. Water quality standards are also getting tighter, in part to meet requirements of the European Habitats Directive and Water Framework Directive. Ensuring that water quality is maintained and improved, while accommodating new housing and economic development, is also a key challenge for the region.
- 2.4 **Flood risk management** – Development in flood plains, changing patterns of rainfall, extreme weather, storms and rising sea levels accelerated by climate change, will increase the probability and incidence of flooding of property and land. Development can increase the area of impermeable land and intensive agriculture can increase runoff, both of which can exacerbate the probability and impact of flooding. Avoiding an increase in flood risk, protecting people and property and better management of this risk, through adaptation in the location and design of new development and land use, is increasingly important in a changing climate.
- 2.5 **Biodiversity** – The region supports a rich diversity of wildlife habitats and species. As well as having intrinsic importance, biodiversity contributes to the quality of the environment and to quality of life. The region has many sites recognised to be of national and international importance, in addition to many more of local importance and value to communities, including urban wildlife sites and corridors where wildlife has flourished. Continued protection of important wildlife assets needs to be accompanied by better management, the reduction in fragmentation and, where possible, the expansion of habitats.
- 2.6 **Coastal management** – Our extensive coastline is a distinctive regional feature and an important environmental, economic and recreational resource.

Climate change and sea level rise will lead to further changes. Much better links between coastal engineering through Shoreline Management Plans (SMPs) and the land use planning system are essential to ensure that hazards are avoided such as erosion, instability and flooding. There may also be opportunities for imaginative management options to enable more natural operation of coastal processes, to reduce erosion and flood risk, and improve the landscape and benefit wildlife.

- 2.7 **Air quality** – Air quality has improved over recent decades. However there are locations with poor air quality in the region, largely due to emissions from transport, trans-boundary pollution and high ozone levels. In such areas action needs to be taken to address the problems. Spatial planning can also help to address the causes of poor air quality through influencing movement, mode and management of transport. Planning can also help guide the location of development away from areas of poor air quality. The transport policies of the Plan propose measures that address poor air quality and contribute to delivery of Air Quality Management Area plans.
- 2.8 **Noise** – Spatial planning can help to guide development away from areas where noise may impact on quality of life, or mitigate the effects of noisy developments and activities.
- 2.9 **Sustainable Construction** – A key cross cutting theme running through the Plan is the promotion of more sustainable and resource efficient construction and developments (Policy CC4).
- 2.10 **Energy** – In order to be more sustainable, reduce greenhouse gas emissions, and improve security and diversity of supply, we must improve energy efficiency and increase the amount of energy obtained from renewable sources. New development, while only representing a small proportion of overall stock, presents an opportunity to integrate higher standards of energy efficiency and renewable energy technologies, with the benefits extending throughout the life of the buildings. Development of new conventional generation capacity and distribution infrastructure is also likely to be required over the plan period as older plant is decommissioned.
- 2.11 **Waste** – One of the most pressing issues facing the region is the need to become much more efficient in the way we use resources, reducing waste and managing waste in a sustainable way. We need to dramatically turn around current patterns of management and start to minimize the amount of waste sent to landfill through diversion to other methods including re-use, recycling and composting, and using waste in energy generation. This will require a significant and sustained shift in behaviour and a rapid increase in waste management capacity.
- 2.12 **Minerals** - The maintenance of a healthy economy requires an adequate supply of minerals and related products to support housing and commercial development and key infrastructure projects. These requirements must be balanced with environmental protection from impacts arising from extraction, processing and transport. In addition, we need to make more efficient use of

material resources including increasing recycling and re-use of construction and demolition waste and use of secondary aggregates.

2.13 These key these are commented on here in more detail as a backcloth and justification for the policies and proposals.

3. Sustainable Water Resources and Water Quality Management

3.1 The South East is one of the driest parts of the country and experiences high levels of water demand. In some areas the existing balance of supply to demand is very sensitive, with demand close to exceeding currently available sustainable supply. The ecological quality of some streams, rivers and wetlands is being adversely affected as a result.

3.2 River quality in the South East has improved significantly over the last decade, but some rivers and wetlands are experiencing environmental damage due to over-abstraction, diffuse pollution and effluent discharges. The region also has the highest dependence on groundwater for public supply in the country. These valuable resources, particularly in vulnerable aquifers, need to be protected from pollution and from land uses with a high risk of pollution.

3.3 Water resources may benefit from increasing river flows and groundwater recharge from higher winter rainfall, but drier, hotter summers may reduce available resources resulting in greater need for water storage, water transfers, demand management and new sources of supply. Climate change will also impact on the capacity of rivers to dilute treated sewage effluent as a result of reduced river levels in the summer months.

3.4 The region's ability to accommodate the anticipated levels of growth is reliant on the sustainable and timely provision and treatment of:

- Water resources
- Water treatment
- Water distribution systems
- Sewerage systems
- Waste water treatment works

3.5 Water supply and river water quality issues are increasing in significance in land use planning considerations, as local planning authorities and other agencies need to ensure their policies are consistent with the European Water Framework Directive, notably through catchment and River Basin Management Plans. The requirements of the EU Habitats Directive also need to be taken into account, and environmental demands considered alongside social and economic factors. Local planning authorities and other affected agencies also have new duties to conserve water under the 2003 Water Act.

3.6 Water resources and water quality have been taken into account in development of the spatial options and also in the Sustainability Appraisal of the Plan. Assessment of water resource availability of water resources takes account of water company plans and options for new resource development,

climate change, and abstraction reduction to meet environmental requirements. Water quality assessments take account of water quality, physical capacity and ecological considerations and have identified a small number of specific areas where water quality issues may present constraints to further development. Further studies are being undertaken of these areas.

- 3.7 A twin-track approach to water management is required. Firstly demand management needs to be increased (including increased water efficiency, leakage management and the increased use of metering) . Secondly sustainable new water resources and wastewater treatment infrastructure need to be planned and provided in step with the development they serve. New development must also have substantially increased levels of water efficiency.
- 3.8 Implementation of necessary water, sewerage and wastewater infrastructure is a complex matter, involving a large number of landowners, local authorities, agencies and developers. The lead times for new reservoirs and sewage treatment infrastructure can be substantial. Early engagement of local authorities, the Environment Agency, Office of Water Services (OFWAT), developers and water companies in the planning process is therefore imperative.
- 3.9 Water efficiency, sustainable water supply and river water quality protection and enhancement will be achieved by:
- i) Promoting improved water efficiency in new development through water saving fixtures and fittings and behavioural change of inhabitants. Rainwater harvesting and grey-water systems should also be considered. Best practice standards will be expected to be incorporated in new development.
 - ii) Timely provision of water supply, sewerage and wastewater treatment infrastructure by the water and sewerage companies working with the Environment Agency, to address deficits and support growth and achievement of reduced leakage levels.
 - iii) Ensuring development and land use does not pose an unacceptable risk to the quality of vulnerable surface and ground waters. Diffuse urban and agricultural pollution can be reduced through the appropriate use of sustainable drainage techniques and agricultural land management practices. Groundwater and sensitive water bodies must be protected through the application of relevant pollution prevention measures and the restriction of high risk uses in vulnerable locations
 - iv) Heighten the awareness of business and the public of the impacts that their consumption and use of water has on the environment, and the vital roles they have to play in achieving more sustainable water management.

See Map NRM1 - Source Protection Zones (New).

POLICY NRM1:

SUSTAINABLE WATER RESOURCES, GROUNDWATER AND RIVER WATER QUALITY MANAGEMENT

Water supply, ground water and river water quality will be maintained and enhanced through avoiding adverse effects of development on the water environment. A twin-track approach of water efficiency demand management and water resource development will be pursued, and together with development of sewerage and waste water treatment infrastructure.

In preparing Local Development Documents, and determining planning applications,

local authorities must:

- i ensure compatibility with River Basin Management Plans and take account of other plans and strategies including statutory water and sewerage company asset management plans, the Environment Agency's Regional Water Resources Strategy, Catchment Abstraction Management Strategies, groundwater vulnerability maps and groundwater source protection zone maps
- ii ensure that the rate and location of development does not lead to unacceptable deterioration of water quality and is in step broadly accords with the current and planned provision of adequate capacity of existing water supply, sewage sewerage and waste water treatment infrastructure capacity and discharge systems, particularly in connection with major new development
- iii require development to incorporate measures to enhance achieve very high levels of water efficiency reflecting current best practice including BREEAM "very good" and increasingly "excellent" standards and, where appropriate, and sustainable drainage solutions where these are consistent with protection of groundwater quality
- iv work with water and sewerage companies and the Environment Agency and water companies to identify infrastructure needs, and allocate areas and safeguard these for and permit necessary infrastructure development
- v encourage agricultural winter water storage reservoirs and other sustainable farming practices which reduce summer abstraction, diffuse pollution and runoff, increase flood storage capacity and benefit wildlife and recreation
- vi not permit development that presents a risk to pollution or where satisfactory pollution prevention measures are not provided in areas of high groundwater vulnerability (as identified by in consultation with the Environment Agency), only permit development that presents a significant risk of pollution where there are no alternative locations and where satisfactory pollution prevention measures and safeguards are provided.

4. Strategic Water Resources Development

- 4.1 A small number of strategic new water reservoirs are likely to be required in the region over the lifetime of the Plan, and are already included as options in

statutory water company plans. Some Reservoir schemes have gained support for initial stages of design and planning from OFWAT, including the Upper Thames Reservoir, in Oxfordshire.

- 4.2 They will require a long lead time to go through planning, assessment, funding and construction phases before they become operational. Some resources are of intra regional and inter-regional significance, providing water resources across the South East and to adjacent regions, notably London and South West England.
- 4.3 Major strategic schemes have been identified in Policy NRM2 reflecting those identified in water company plans and included in regional modelling of water supply-demand balance. Not all schemes listed as options will necessarily come forward but safeguarding of sites in local development documents is required so as not to foreclose these options, and ensure that planning for these schemes is facilitated. In addition to these major schemes smaller-scale water resource developments will also be required.

**POLICY NRM2:
STRATEGIC WATER RESOURCES DEVELOPMENT**

There is a demonstrable need for new water resource schemes over the period of the Plan to cater for water supply needs of current and future development and the protection of the environment.

Strategic new water resource options likely to be required to be operational over the Plan period include:

<u>i</u>	<u>Upper Thames Reservoir</u>	<u>by 20/19/20</u>
<u>ii</u>	<u>Enlargement of Bewl reservoir</u>	<u>by 20/14/15</u>
<u>iii</u>	<u>Broad Oak reservoir</u>	<u>by 20/19/20</u>
<u>iv</u>	<u>Clay Hill reservoir</u>	<u>by 20/14/15</u>
<u>v</u>	<u>Havant Thicket reservoir</u>	<u>by 20/20/21</u>

Local authorities should work with the water companies and Environment Agency in assisting in the timely delivery of schemes, agreeing need, location and timing for the development of new strategic water resources, particularly reservoirs. Local Development Documents should should allocate and safeguard land sites identified for reservoir development from other uses.

Additional resource schemes, including enlargement of Darwell reservoir, a strategic option in north west Sussex, together with bulk water transfers, effluent re-use and desalination may also be required.

In developing policy and considering applications for strategic-new water resource developments schemes, consideration should be given to:

- i need at local, sub-regional, regional, and inter-regional scales
- ii presence of alternative options and environmental impact
- iii potential to deliver additional social and environmental benefits.

5. Sustainable Flood Risk Management – Making Space for Water

- 5.1 The South East has a particularly wide ranging flood risk management challenge with an extensive area at risk of flooding, due to coastal, tidal, fluvial, groundwater and surface run-off flood risk. Flood risk may be viewed as a combination of probability and impact or/consequences.
- 5.2 Both probability and impact may be mitigated through different responses including location, design and provision of higher standards of flood defence. Climate change is likely to increase the probability of flooding due to sea level rise, increased storminess, rapid run-off and increased winter precipitation.
- 5.3 New approaches are needed to locate and design development to adapt to climate change to reduce flood risk and impact, to mitigate its effect on flooding, and make it more resilient to flooding while enabling safe access in times of flood. Such measures include raised floor levels and electrical sockets, one-way valves on sewerage, use of water resistant materials and designing for non habitable uses on ground floors.
- 5.4 In addition, we must plan to make more space for water through better management of land for water storage and flood protection. We can learn from others on the measures that need to be taken. In the Netherlands, for example, the national policy document on spatial planning includes high-level policies of ‘go with the flow’, ‘making space for water’, and a ‘water test’ for the impact of spatial plans and development on water quality and resources. Where negative effects on the hydrological system are predicted, alternative policy or compensation and mitigation measures are required. These set the Dutch framework and principles for integrating water considerations into spatial plans, including improving water retention within developments and increasing water storage, so that increased area of impermeable surfaces is offset, and safeguarding of land in spatial plans specifically for water storage.
- 5.5 Over 208,000 properties in the South East have been identified as being within Zone 3 of the recently published Flood Zone map (Map NRM2 illustrates the zones of flooding probability as defined in Planning Policy Guidance Note 25: Development and Flood Risk) and therefore are at risk of fluvial and tidal flooding. The Environment Agency has also produced a flood map that takes account of the presence and standard of flood defences in these flood zones. This will be used to inform flood risk assessments and local development decisions.

See Map NRM1 (unchanged but re-numbered as NRM2)

- 5.6 PPG25 recommends a precautionary sequential approach to allocation and permitting of sites for development, avoiding areas of highest risk (zone 3) where possible. However, a degree of flexibility will be needed to consider the relative severity of flood risk and, in some instances, accepting the need to live with some level of flood risk, designing development to reduce the risk and minimize the impact of flooding.

5.7 The probability and impacts of flooding can be reduced through:

- i) Applying the sequential test set out in PPG25 by guiding development away from areas at high risk of flooding (including known areas of groundwater emergence) unless (a) there is no alternative suitable site outside identified floodplains and flood risk areas or that (b) other sustainable development objectives take precedence. Development in undeveloped and undefended flood plains should be avoided so as to maintain their function and contribution to flood storage and biodiversity.
- ii) Ensuring that an appropriate Strategic Flood Risk Assessment (SFRA) is carried out for developments or plan allocations in flood zones 2 and 3. This includes those areas benefiting from defences of an appropriate standard. The SFRA identifies the relative probability and consequence of flooding, the level of risk and appropriate types of development. It should also consider whether the risk can be managed through incorporation of appropriate flood risk reduction and resilience measures, through layout and design, and not increasing the risk of flooding elsewhere. The assessment must also address impacts of climate change and the policies of Catchment Flood Management Plans (CFMP) or Shoreline Management Plans (SMP), and avoid foreclosing options for realignment and management of defences to reinstate natural floodplains. Further guidance on flood resilience is available from sources including the association of British Insurers².
- iii) Ensuring development does not worsen flooding in its surroundings, through use of appropriate sustainable drainage systems (SuDS) to help reduce the likelihood of flooding and pollution by controlling surface water run off. Where possible multiple benefits, including for recreation and wildlife, should be delivered. In considering SuDS solutions, the need to protect ground water quality must be taken into account, especially where infiltration techniques are proposed. Proposals must include an agreement on the future management, maintenance and replacement of these structures.
- iv) Encouraging positive flood risk management by changing farming and forestry land management practices This is especially important where it would directly contribute to the delivery of CFMP objectives, enhance biodiversity and amenity, or mitigate the impact of urban development on the water environment.

5.8 CFMPs aim to achieve the most effective management of fluvial flood risk (probability and/or consequence), against a background of increasing flood probability. CFMPs for the region will be produced by the Environment Agency by 2007 and will include long-term policies. They will provide broad policies and provide prioritised actions which take a whole river catchment approach to flood risk management and in due course should be reflected in Local

² www.abi.org.uk

Development Documents. This will include areas where flood risk is likely to increase and needs to be taken into account, and where opportunities for new approaches to flood management, for example the creation of water storage capacity, can be implemented. Figure NRM1 illustrates how CFMPs will sit within the land-use planning framework (see figure NRM1).

- 5.9 A range of SuDS techniques may be applicable to different situations. These include incorporation of water retention and storage structures into new development schemes and use of permeable surfaces. Further guidance is available from the National SuDS Working Group. In addition, opportunities should be sought to increase water storage capacity in flood plains using managed flooding through realignment of defences and removal of drainage, especially where this helps to reduce flood risk up or downstream and improves landscape and benefits wildlife.

POLICY NRM3: SUSTAINABLE FLOOD RISK MANAGEMENT

The sequential approach to development in flood risk areas set out in PPG25 will be followed. Inappropriate development should not be allocated or permitted in zones 2 and 3 of the floodplain (Map NRM2-4) or areas with a history of groundwater flooding, or where it would increase flood risk elsewhere, unless there is over-riding need and absence of suitable alternatives.

Where development is proposed for parts of zones 2 and 3, local authorities (in the case of plan allocations) and developers (in the case of specific proposals) in conjunction with with advice from the Environment Agency should undertake a Strategic Flood Risk Assessment (SFRA) of these areas to identify provide a comprehensive understanding of the flood risk and options for managing that risk in a cost effective manner, the probability and impact of flooding on development, This should have regard to climate change and identify appropriate types of development and suitable means of mitigation and adaptation measures in scheme design and layout.

Existing flood defences will be protected from development. Where development is permitted in appropriately defended floodplains it must be designed to be resilient to flooding (to minimise potential damage) and to allow for the future maintenance, realignment or management of the defences to be undertaken.

In the development preparation of policies, plans and strategies, local authorities, Local Development Documents and considering planning applications, local authorities in conjunction with the Environment Agency, should also:

- i take account of River Basin Management Plans, Catchment Flood Management Plans and Shoreline Management Plans in developing Local Development Documents and other strategies. Where locationally specific flood risk and land management options such as

- flood storage, managed realignment and set back from coastal defences are identified, land should be safeguarded for these purposes and appropriate land management practices should be encouraged
- ii require incorporation and management of Sustainable Drainage Systems (SuDS) and other water retention and flood storage measures in developments to minimise direct surface run-off, unless there are practical or environmental reasons for not doing so;
 - iii take account of increased sewage effluent flows on fluvial flood risk.

Box on Sustainable Drainage Systems

- Permeable surfaces – allowing infiltration of rainwater into the underlying construction or soil
- Filter drains/strips – linear features which store and conduct water but may also permit infiltration
- Swales – shallow vegetated channels constructed to conduct or store rainwater, often from roads/paved areas, possibly also allowing infiltration
- Basins, ponds and wetlands – providing storage for surface water run off and infiltration. These may be designed to be dry at some points of the year
- Soakaways – below ground structures designed to promote the infiltration of surface water to ground
- Infiltration trenches – linear structures, usually filled with granular material designed to promote the passage of surface water to ground. These techniques may not be appropriate in certain areas due to the vulnerability of groundwater
- Rainwater re-use – the harvesting/collection of rainwater from roofs and hard standing for non-potable uses. Unlike greywater, rainwater may not require treatment to allow it to be stored
- Green roofs – planted roof areas where the vegetated area provides a degree of retention and treatment of water and promotes evapotranspiration.

See Figure NRM1 (unchanged)

6. Conservation and Improvement of Biodiversity

- 6.1 The region has in excess of 700 land based and in-river SSSIs, over half of which are considered to be in favourable condition to maintain their wildlife importance. Many of these sites are also recognised as being of international importance and afforded protection under the EC Birds and Habitats Directives and the Ramsar Convention.
- 6.2 A high quality environment including rich and varied wildlife is essential to the prosperity of the region and the quality of life of those who live and work in it. Healthy ecosystems and access to greenspace and networks contribute to quality of life.
- 6.3 There have been major losses of habitats and species populations in the region over recent decades. Wildlife interest has been lost due to inappropriate

management, agricultural practice, development and fragmentation. In spite of this, the region still supports a high proportion of the UK total for a range of habitats and many important species. It is therefore essential that these important assets are protected and those that are in poor ecological condition are enhanced.

6.4 The impacts of climate change will result in both further threats and opportunities. Many species and their habitats will need to be able to move if they are to survive and therefore need robust and well connected wildlife habitats. Further fragmentation of habitats will limit even more the ability of species to move and respond to the impacts of climate change.

6.5 **Conserving Biodiversity** – Biodiversity protection and enhancement in the region will be achieved by:

- i) conserving and enhancing the extent and quality of designated conservation sites, especially those afforded the highest levels of protection under international and national legislation. (The locations of these sites are illustrated in map NRM3).
- ii) conserving and enhancing the diversity and distribution of habitats and species, as designated sites only represent the best examples of their kind.
- iii) recognising the importance of green networks and open green space within urban and suburban areas and taking steps to protect and enhance the provision of these.
- iv) recognising the particular nature of urban wildlife (including those on previously developed land). These may be of local importance for wildlife and for the provision quality green-spaces.

6.6 **Improving Biodiversity** – Opportunities for biodiversity and habitat enhancements at a range of scales need to be identified and realised. The South East Biodiversity Forum (SEEBF) has identified regional biodiversity targets that set out the contribution the region can make towards national targets in the UK Biodiversity Action Plan. These focus on habitats for which the region is particularly important and for which there are significant opportunities. These are set out in Figure NRM2.

See Figure NRM2 (revised) as in draft but with following amendments:

Habitats grouping

Calcareous grassland

Ancient and native Woodland

Neutral grassland

Area of Strategic Opportunity

Cranborne Chase AONB

Mole Gap to Reigate Escarpment

Windsor Forest

Upper Thames Tributaries

Amend targets for woodland:
2010 - 30,350
2026 – 111,300

Footnotes associated with Figure NRM2^{3, 4, 5, 6, 7}

[See MAP NRM2 \(revised and re-numbered as NRM3\)](#)

6.7 Planning has an important and positive role to play in protecting and enhancing the region's biodiversity, and helping natural systems to adapt to climate change impacts. Local authorities, government agencies and other organisations should work together to achieve biodiversity targets by:

- i) identifying areas of opportunity for biodiversity improvement in Local Development Documents, community strategies and other strategies affecting land-use and management including Shoreline Management Plans, Catchment Flood Management Plans, the Regional Forestry Framework
- ii) putting in place long-term management policies and monitoring procedures
- iii) ensuring that opportunities for biodiversity improvement are sought and realized as part of development schemes, including regeneration and development of previously developed land, and that where possible these contribute to creation and enhancement of green corridors and networks⁸
- iv) pursuing joint projects on areas that cross administrative boundaries, particularly where this enables a more strategic approach to restoration of habitats and reconnection of fragmented sites
- v) Identifying and securing measures to help implement biodiversity improvement including for example developer contributions and targeting of agri-environment schemes.

6.8 Areas of strategic opportunity for biodiversity improvement have been identified (Map NRM4). These are broad indicative areas of greatest regional-scale potential for enhancement, restoration and re-creation of given habitats.

³ Action for Biodiversity in the South East (1999) South East Biodiversity Forum (SEEBF). Figures for Berkshire area unavailable

⁴ "Improvement" includes enhancement, restoration, creation, and re-creation, as defined in SEEBF rationale paper (August 2004)

⁵ 2010 targets built up from recommendations by Local Biodiversity Action Plan partnerships based on best available information

⁶ Aspirational targets are based on doubling 2010 targets. There is currently insufficient data for more accurate targets

⁷ Total provided by Forestry Commission. See SEEBF rationale paper August 2004.

⁸ see www.englishnature.org.uk/pubs/publication/pdf/tcpabiodiversityguide.pdf

Their identification was informed by assessments of existing habitats, the nature and location of designated sites (including international sites, SSSIs, county wildlife sites) and underlying geology and topography.)

- 6.9 These areas do not represent the only areas in the region where habitat enhancement will be feasible, and does not preclude habitat enhancement and creation where this would meet local targets and other benefits, such as green space in urban areas.
- 6.10 The areas of strategic opportunity for biodiversity improvement in Map NRM4 are based on key habitat types, but within each area the distribution and nature of existing habitats and designated sites must be taken into account. The key strategic habitats comprise:
- i) Lowland heath and acid grassland, where there are major opportunities for restoration and re-creation of habitats on sand and gravel including heathland, acid grassland, acid woodland and bog
 - ii) Chalk downs where there are opportunities to restore, re-create and manage chalk grassland, chalk woodland and species-rich scrub
 - iii) Woodland, where there are concentrations of important woodland habitats which could be restored, enhanced and re-connected and where other key habitats including grassland, wetland and heath could be restored
 - iv) Wetlands (including coastal and floodplain grazing marsh, reedbeds, intertidal mudflats and saltmarsh) where wet grassland, reedbed, fen, open water and wet woodland habitats could be restored and re-created and where coastal realignment could help to re-create intertidal habitats.

See MAP NRM3 [\(unchanged but renumbered as NRM4\)](#)

POLICY NRM4: CONSERVATION AND IMPROVEMENT OF BIODIVERSITY

In the development and implementation of ~~policies~~, plans and strategies, local authorities and other bodies shall ~~seek to avoid~~ a net loss of biodiversity, and actively pursue opportunities to achieve a net gain across the region by:

- i providing the highest level of protection for nationally and internationally designated sites (map NRM2) ~~and helping to meet regional and national biodiversity targets~~
- ii ensuring damage to ~~county wildlife sites and~~ locally important wildlife and geological sites ~~and ancient woodlands and their settings~~ is avoided wherever possible
- iii ensuring that unavoidable damage to wildlife interest is minimised through mitigation, ~~that any damage is compensated for or replaced by compensation wherever possible~~, and that such measures are

monitored

- iv ensuring appropriate access to area of wildlife importance, identifying areas of opportunity for biodiversity improvement (Table 1) and setting targets reflecting those in figure NRM2, and pursuing opportunities for biodiversity improvement, in particular including large-scale habitat restoration, enhancement and re-creation in the areas of strategic opportunity for biodiversity improvement (Map NRM3) should be pursued
- v influencing and applying agri-environment schemes, forestry, flood defence, restoration of mineral extraction sites and other land management practices to deliver biodiversity targets
- vi establishing maintaining and establishing accessible green networks and open green space in urban areas to create habitats of importance to local communities.

7. Woodlands

7.1 The region is the most wooded in England, with almost 275,000 hectares covering around 15% of the land area (the area of woodland having increased over recent years), although coverage varies around the region. This provides many social and environmental benefits for its inhabitants. The management of a substantial proportion of this resource is however inadequate and many woodlands are neglected.

7.2 The Regional Forestry and Woodlands Framework⁹ highlights how trees, woodlands and forestry can contribute to the sustainable development of the region and sets out the steps needed to secure the future of its woodland. This framework is the regional expression of the England Forestry Strategy.

7.3 In order to ensure that woodlands continue to contribute towards the sustainable development of the region and the quality of life, we need to:

- i) protect and enhance the value and character of the region's woodland, promoting appropriate woodland planting in association with major areas of development to restore and improve degraded landscapes
- ii) realise the economic, environmental and social benefits that woodland management and tree planting can provide
- iii) promote higher standards of management of existing woodlands, and seek new markets for woodland produce
- iv) support the implementation of the Regional Forestry and Woodland Framework
- v) manage woodland in light of the impact of climate change.

⁹ Forestry Commission (2004) Seeing the wood for the trees

POLICY NRM5: WOODLANDS

In the development and implementation of ~~policies, plans~~ Local Development Documents and other ~~and~~ strategies, local authorities and other bodies will support the implementation of the Regional Forestry and Woodland Framework, ensuring the value and character of the region's woodland are protected and enhanced. This will be achieved by:

- i protecting ancient woodland ~~and veteran trees~~ from damaging development and land uses
- ii promoting the effective management, and where appropriate, extension and creation of new woodland areas including, in association with areas of major development, where this helps to restore and enhance degraded landscapes, screen noise and pollution, provide ~~community~~ recreational ~~facilities~~ opportunities, helps mitigate climate change, and contribute to floodplain management
- iii replacing woodland unavoidably lost through development with new woodland on at least the same scale
- iv promoting and encouraging the economic use of woodlands and wood resources, including wood fuel as a renewable energy source
- v promoting the growth and procurement of sustainable timber ~~products through application of the forestry stewardship certification scheme~~ products through application of the Forestry Stewardship Council certification scheme.

8. Coastal Management

- 8.1 The extensive coastline of the region is an important environmental, economic and recreational resource. However, it is characterised by a legacy of human intervention. Considerable lengths of the region's coast have been developed with 90 – 95% of its frontage defended against erosion and/or flood risk¹⁰. This represents a considerable investment both in terms of built assets and economic activity. The coast also contains a significant share of the region's designated wildlife sites, possesses nationally designated landscapes and is home to some of the South East's, and the country's, most iconic images.
- 8.2 The financial and cultural investment made in the coast has determined a continued policy of intervention over the last 200 years which attempts to 'hold the line'. Areas of the undeveloped coast have been designated as 'Heritage Coast' reflecting their landscape, cultural and recreational importance. Undeveloped areas of coast are a finite and important resource that should be protected.
- 8.3 Although a vital necessity in some locations, holding the line works against the dynamic nature of coastal processes. This can lead society into an unsustainable policy of coastal defence, ignoring that the coastline has and will

¹⁰ Scoping Study: A Strategic Approach to the Management of the Coast in the South East – WS Atkins May 2001

continue to change and evolve. The impacts of climate change, including increased storminess and frequency of extreme events, combined with a continuing trend of rising sea levels and insufficient sediment supply, render traditional coastal defence practices inappropriate as the sole tool of risk management.

- 8.4 A range of responses, based upon the principle of risk management rather than defence, will be necessary for sustainable coastal management in the future, especially when responding to the impacts of climate change. When considering coastal management, the location of development, opportunities for imaginative management options to reduce erosion and flood risk, benefit to wildlife and improvement of the landscape all need full consideration. Better integration of coastal protection, flood defence and land use planning is required.
- 8.5 As a result, securing the sustainable management of the coastal zone extends beyond matters of coastal defence. The wider context of development pressures facing the coastal environment must be considered.
- 8.6 The land use planning system has acted as the predominant regulatory tool to control development above mean low water, governing a variety of sectoral interests. The nature of the physical and chemical relationships between catchments, coastal waters and the marine environment are also such that impacts of activities seemingly removed from the coastal environment may significantly and adversely affect this valuable resource.
- 8.7 These issues are not unique to the UK and have been the subject of European-wide studies leading to a European Recommendation to all Member States on the promotion of Coastal Zone Management (CZM)¹¹. This has led to a Government commitment to developing a national CZM strategy in line with European requirements by 2006. However, good practice already exists in the region, for example the Solent Forum, the emerging Kent Coastal Forum, Arc Manche, and by national bodies such as Local Government Association's Coastal Special Interest Group¹² and CoastNet, promoting CZM at a sub regional, national and international level.
- 8.8 The objectives of CZM are:
- i) a more naturally functioning coastline which accommodates habitats and species
 - ii) the effective management of risk to life and property from coastal erosion and flooding within the context of rising sea levels and climate change
 - iii) the sustainable growth and regeneration of coastal communities and settlements.

¹¹ EU Recommendation on the Integrated Management of Coastal Zones May 2002

¹² http://www.coastalsig.lga.gov.uk/info_pack.htm

8.9 Much of the South East coast is highly developed and options for management of coastal processes are often constrained by historic patterns of development. However, the planning system must enable, where possible, important environmental features and habitats to respond to environmental change through creating and re-creating habitats threatened by climate change and sea level rise. This is consistent with the review of the National Strategy for Flood and Coastal Erosion Risk Management in England and thinking emerging from the second round of Shoreline Management Plan (SMP) reviews (currently piloted in two SMP frontages in the South East) which will identify options for coastal protection and management, including any opportunities for managed realignment and more natural and sustainable coastal defence options. Policy development (as well as implementation) between coastal groups and coastal planning authorities should be better integrated.

POLICY NRM6: COASTAL ~~ZONE~~ MANAGEMENT

An integrated approach to coastal zone planning and management should be pursued, where the dynamic nature and character of the coast is managed through enhanced collaboration between organisations and across administrative boundaries.

~~In T~~the development and implementation of the policies, plans Local Development Documents and other strategies, ~~of~~ local authorities and other relevant agencies ~~and bodies~~ should:

- i take account of climate change and forecast effects on the costal zone;
- ii promote and establish effective cross-border and cross-sectoral arrangements for this to facilitate an integrated management approach to implement implementation of Shoreline Management Plans, and estuary management plans and costal habitat management plans (ChaMPs)
- iii ensure that development does not prejudice options for the managed realignment, significantly affect sediment inputs and transport, lead to an increase in flood risk or preclude the delivery of sustainable flood risk management solutions in the future
- iv restrict development on the undeveloped coastline unless it specifically requires a rural coastal location and does not adversely affect environmental, cultural and recreational resources
- iv prevent development on unstable land or areas at risk of erosion, as identified in Shoreline Management Plans
- vi realise opportunities for sustainable coastal defences which enhance the region's wildlife, and fisheries, especially where this will contribute to the achievement of regional and national biodiversity targets.

9. Air Quality

- 9.1 The primary driver for national, regional and local air quality management is the protection of human health, although the impact of certain pollutants on wildlife habitats and vegetation is also a concern. Air quality has generally improved over recent years although the region still contains some of the worst air pollution locations in the UK where action is needed. This is therefore an issue of regional significance. Guidance on development control and planning for air quality is provided in advice published by the National Society for Clean Air (NSCA).
- 9.2 Emissions from industrial sources are well regulated and are relatively minor compared to those from motor vehicles and aviation, although the overall background levels of some pollutants are high. Influencing patterns, mode and individual choice of transport (for example through implementation of the Regional Transport Strategy) will be important in achieving further improvements in air quality, as will using trees to trap pollution, particularly in urban areas. Emissions from forecast growth in aviation are a particular concern in this Region.
- 9.3 The Air Quality Strategy (AQS) 2000 for England, Scotland, Wales and Northern Ireland sets out the Government's policies aimed at delivering cleaner air in the UK. Where it is considered one or more of the objectives within the AQS are unlikely to be met, local authorities must declare Air Quality Management Areas (AQMAs) and develop action plans setting out how they intend to improve air quality. As a result 17 local authorities have declared AQMAs and produced draft or final Air Quality Action Plans that have investigated options to reduce emissions. These relate to Nitrogen Dioxide (NO₂) and Particulate Matter (PM₁₀) primarily from road transport, and Sulphur Dioxide at Dover (from ships manoeuvring in the harbour).
- 9.4 Liaison and coordination of air quality activities takes place at a national level, although local authorities also work together in regional pollution groups.
- 9.5 The Regional Transport Strategy and policies of the South East Plan address issues related to transport and air quality, particularly in relation to the identification and location of regionally significant activities in ways which reduce the need to travel and promote public transport.

POLICY NRM7: AIR QUALITY

Local authorities and other relevant bodies should seek an improvement in air quality in their areas so that there is a significant reduction in the number of days of medium and high air pollution by 2026. Local Development Documents and development control can help to achieve improvements in local air quality through:

- i** ensuring consistency with Air Quality Management Plans
- ii** [reducing the environmental impacts of transport and congestion management, and support the use of cleaner transport fuels](#)
- iii** [seek to mitigate](#) the impact of development and reduce exposure

to poor air quality through design, particularly for residential development in areas which already, or are likely to, exceed national air quality objectives

ivii encouraging the use of best practice during construction activities to reduce the levels of dust and other pollutants

~~iv encouraging local energy generating schemes such as combined heat and power, or efficient gas condensing boilers which reduce total energy consumption and emissions.~~

10. Noise

- 10.1 Noise can have a serious effect on the quiet enjoyment of property and places, reducing quality of life. Changes in the economy, including reduction in heavy engineering, have reduced industrial noise Impacts over recent decades. Conversely the growth in road, rail and air traffic has markedly increased noise pollution in urban and rural areas.
- 10.2 Ambient noise and neighbour noise can have significant impacts on quality of life. Planned new residential development must take these factors into account, in accordance with the guidance in PPG24.
- 10.3 For existing dwellings, other statutory instruments (such as the Environmental Protection Act 1990) should be used where necessary to ensure noise annoyance does not become a significant impediment to achieving a good quality of life for all residents in the region. Building Regulations set standards for ensuring resistance to the passage of sound in building fabric.
- 10.4 The European Directive on Environmental Noise aims to avoid, prevent or limit the effects of exposure to environmental noise. It applies to larger cities, major roads, railways and airports. Initially by 2007, noise maps need to be developed for cities with populations over 250,000, roads carrying more than six million vehicles per year, railways with over 60,000 rail passengers per year and airports. Action plans to reduce noise pollution need to be developed by 2008. By 2012, urban areas with over 100,000 inhabitants, all major roads carrying three million vehicles, and railways with over 30,000 passengers per year will also be covered. This will affect a number of the region's cities and towns and transport routes.
- 10.5 Noise is of significance in this region because of the relative intensity and frequency of transport movements, and the region's role as a gateway. The Assembly's role of spatial planning in relation to other controls is relatively limited, but it can influence exposure to environmental noise primarily through design and location of new development, and influencing traffic and its management.

POLICY NRM8: NOISE

Measures to address and reduce noise pollution will be developed at

regional and local level through means such as:

- **Locating new residential and other sensitive development away from existing sources of significant noise or away from planned new sources of noise**
- **[Traffic management and R](#)requiring sound attenuation measures in major transport schemes**
- **Encouraging high levels of sound-proofing and screening as part of sustainable housing design and construction.**

11. Waste Management

11.1 The Assembly's proposed changes to Regional Planning Guidance for Waste (the regional strategy 'No Time to Waste') was subject to extensive public consultation between 2003 and 2004, including Examination in Public (EiP) in October 2004.

11.2 The proposed alterations to RPG9 published in June 2005 by the Government Office for the South East (GOSE) are considered by the Assembly to provide an up to date suite of policies extending to 2026 that, when issued in their final form will be incorporated into the South East Plan for submission to government.

11.3 It is likely that some rationalisation of policies will be possible to reduce the overall number. In addition, findings of research undertaken by the Assembly to improve data following the EiP will be incorporated into the policies.

11.4 Research includes:

- i) Review of hazardous waste generation and management capacity
- ii) Development of a methodology for sub-regional apportionment of London's exported waste
- iii) Development of a methodology for sub-regional apportionment of recycled aggregates
- iv) Updating of data on arisings and waste management capacity
- v) Quantification of material streams and potential markets

[INSERT POLICIES FROM PROPOSED ALTERATIONS TO RPG9 ON WASTE WHEN PUBLISHED BY GOSE]

12. Minerals

12.1 The Assembly's proposed changes to Regional Planning Guidance for Minerals (the regional strategy) have also subject to extensive public consultation between 2003 and 2004, including Examination in Public (EiP) in October 2004. published its report in December 2004.

- 12.2 The proposed alterations to RPG9 published in June 2005 by the Government Office for the South East (GOSE) are considered by the Assembly to provide an up to date suite of policies extending to 2026 that, when issued in their final form will be incorporated into the South East Plan for submission to government.
- 12.3 It is likely that some rationalisation of policies will be possible to reduce the overall number. In addition, findings of research undertaken by the Assembly to improve data following the EiP will be incorporated into the policies. Research includes development of a methodology for sub-regional apportionment (by Minerals Planning Authority and Waste Planning Authority area).

[INSERT POLICIES FROM PROPOSED ALTERATIONS TO RPG9 ON MINERALS WHEN PUBLISHED BY GOSE]

13. Energy Efficiency and Renewable Energy

- 13.1 The Assembly's Proposed Alterations to RPG9 for Energy Efficiency and Renewable Energy (The regional strategy, Harnessing the Elements) were subject to extensive public consultation between 2002 and 2004, including a Public Examination in November 2003. The publication of final changes to RPG9 were published in late 2004 and have been incorporated in the South East Plan with the following slight amendments:

Renewable energy targets have been set for 2020 (Policies EN3 and EN4)

Additional references to renewable-fuelled heating (Policies EN2 and EN3)

Addition of a target for renewable energy generation to meet a proportion of developments' energy demand (Policy EN1).

**POLICY EN1:
DEVELOPMENT DESIGN FOR ENERGY EFFICIENCY AND
RENEWABLE ENERGY**

Local Development Documents ~~may expect~~ should encourage the incorporation of high standards of energy efficiency in all development. This will be achieved through design, layout and orientation. Local authorities should use design briefs and/or supplementary planning documents to promote development design for energy efficiency and renewable energy. Local authorities should also encourage the use of energy efficient materials and technologies, by using all the tools at their disposal. A proactive approach towards the implementation of this policy may involve:

- i encouragement of developers to submit an assessment of a development's energy demand and provide at least 10% of the development's energy demand from renewable sources for housing schemes of over 10 dwellings and commercial schemes of over 1,000m²
- ii attainment of high energy efficiency ratings in all new development,

where appropriate, through the use of best practice guidance such as Building Research Environmental Assessment Method (BREEAM) and the National Home Energy Rating (NHER)

- iii incorporation of renewable energy sources including, in particular, passive solar design, solar water heating, photovoltaics, ground source heat pumps and, in larger scale development, wind and biomass generated energy
- iv active promotion of greater levels of energy efficiency and use of renewable energy sources where opportunities arise by virtue of the scale of new development including the regional growth areas.

Local authorities and other public bodies, as property owners and managers, should seek to maximise energy efficiency and incorporation of renewable energy technologies, when refurbishing their existing stock.

POLICY EN2:

COMBINED HEAT AND POWER

Development plans and other policies should encourage the integration of Combined Heat and Power (CHP), including mini and micro-CHP, in all developments and district heating infrastructure in large scale developments in mixed use. The use of biomass fuel should be investigated and promoted wherever possible. Local authorities, using their wider powers, should promote awareness of the benefits of mini and micro-CHP in the existing build stock.

POLICY EN3:

REGIONAL RENEWABLE ENERGY TARGETS

The following minimum regional targets for electricity generation from renewable sources should be achieved by the development and use of all appropriate resources and technologies:

Timescale	Installed Capacity (MW)	Electricity Generation Capacity (%)
2010	620	5.5
2016	895	8.0
2020	1130	10.0
2026	1750	16.0

The renewable energy resources with the greatest potential for electricity generation are onshore and offshore wind, biomass, and solar. Use of renewable energy sources for heat generation should also be promoted. The renewable energy resources with the greatest potential for heat generation are biomass and solar.

POLICY EN4:

SUB-REGIONAL TARGETS

Development plans should include policies, and development proposals, as far as practicable, should seek to contribute to the achievement of the following regional and indicative sub-regional targets for land-based renewable energy.

Sub Region	2010 target (MW)	2016 target (MW)	2020 target (MW)
Thames Valley & Surrey	140	209	263
East Sussex & West Sussex	57	68	86
Hampshire & Isle of Wight	115	122	154
Kent	111	154	194

POLICY EN5:

LOCATION OF RENEWABLE ENERGY DEVELOPMENT

Development plans should encourage the development of renewable energy in order to achieve the regional and sub-regional targets. Renewable energy development, particularly wind and biomass, should be located and designed to minimise adverse impacts on landscape, wildlife and amenity. Outside of urban areas, priority should be given to development in less sensitive parts of the countryside and coast, including on previously developed land and in major transport corridors.

Within National Parks, Areas of Outstanding Natural Beauty and on Heritage Coasts development should generally be of a small scale or community-based, with location and design informed by landscape character assessments.

POLICY EN6:

DEVELOPMENT CRITERIA

Local authorities through their development plans and decisions should support in principle the development of renewable energy. Development plans should include criteria-based policies that, in addition to general criteria applicable to all development, should consider the following issues:

Local authorities should collaborate and engage with communities, the renewable energy industry and other stakeholders on a sub-regional basis to assist in the achievement of the targets through:

- i undertaking more detailed assessments of local potential
- ii encouraging small scale community based schemes
- iii encouraging development of local supply chains, especially for biomass
- iv raising awareness, ownership and understanding of renewable energy.