A Climate for Change on the Manhood Peninsula

espace

European Spatial Planning: Adapting to Climate Events

Adaptation Action Plan

Contents

Foreword

Barely a day passes without climate change appearing somewhere in the national media. It is a global challenge, but it is also a challenge for every locality, organisation and individual. Climate change will affect our everyday lives, at home, at work, and at play. By beginning the process of adaptation now, we can lower the social, environmental and financial costs of rapid change in the future. I am therefore very pleased to present this Adaptation Action Plan for the Manhood Peninsula.

The plan has been developed through a 16-month process of dialogue between local representatives, policy and decision makers, business and individual residents. It contains a wide-ranging set of actions, which together form an integrated framework for adapting to climate change on the peninsula.

Its production originates from the concern of two local residents back in the late 1990s when climate change was not such a household issue. They recognised that the significant land-use pressures on the Manhood Peninsula, a low-lying area of land already suffering from coastal erosion, flooding (coastal and fluvial), housing pressures, poor infrastructure, and supporting areas of environmental sensitivity as well as a climate-sensitive economy including horticulture, tourism and agriculture, were all likely to be exacerbated by climate change impacts. Following an international workshop organised by the two residents in 2001, 'Going Dutch', the Manhood Peninsula Partnership (MPP) was formed to take forward recommendations from the workshop.

The 'Climate for Change' project has taken on the challenge of climate change on the Manhood Peninsula. By learning to plan for change, to minimise the impact on our lives and the lives of the Manhood inhabitants of the future, and essentially to grasp the opportunities that climate change brings, the project set out to develop the way forward to secure a positive future for those living and working on the peninsula. Whilst focussing on developing and delivering an action plan for adaptation, the process itself has also acted as an educational tool, increasing awareness of the challenges and opportunities for the peninsula brought about by climate change.

The MPP wishes to thank all the participants who gave their time and knowledge during the launch, the 5 workshops and the action planning focus groups, and to those who provided further input during the final consultation phase of the process. Thanks are also expressed to the members of FUTERRA who contributed their energy and enthusiasm to the facilitation of the 5 workshops.

The MPP acknowledges the contribution of West Sussex County Council who have coordinated and managed the Climate for Change project on the Manhood Peninsula on behalf of the MPP, and is grateful for the support received from other partners, including Chichester District Council, Chichester Harbour Conservancy, English Nature, The Environment Agency and The National Trust.

Cllr PETER JONES
Chair of the Manhood Peninsula Partnership

Background

1. Scope of the Project

1.1 The work on the Manhood Peninsula is an exciting and innovative approach to local planning for climate change, bringing together local people and decision-makers to recognise the impacts of climate change and the need for adaptation.

Aim:

- to raise awareness within the communities and decision-makers of the area of the impact of climate change, the implications for land use and spatial planning, and the need to adapt

Objectives:

- to set out locally agreed action plans that enable positive local responses to climate change
- to provide a channel for influencing future planning and decision-making to account for the effects of climate change locally

1.2 The 'Climate for Change' project, an initiative of the Manhood Peninsula Partnership, receives funding from the EU and West Sussex County Council, through the County Council's involvement in a larger project (**E**uropean **S**patial **P**lanning: **A**dapting to **C**limate **E**vents - ESPACE), which is developing policy guidelines and recommendations for adapting spatial planning to account for climate change[1].

The ESPACE approach aims to develop guidance that recognises the complexity of need within an area, 'reconciling social and economic development claims with an area's ecological and cultural functions', and the need for climate change responses to be integrated into future planning. The work on the Manhood Peninsula forms a 'demonstration case study' for the ESPACE partnership, focussing on the need to 'develop adaptation strategies through close liaison with the local community and relevant organisations to ensure sustainability, suitability and acceptance'.

2. Overview of the process used in developing the plan

2.1 The project was publicly launched on June 8th 2004, and developed through a public programme of 5 topic specific workshops during the autumn of 2004. The workshop outputs were refined by action planning focus groups in late spring 2005, and, in response to a further public consultation phase in the early autumn of 2005, the action plan was finalised in November 2005.

2.2 The development of the action plan has been an extended process, refining the range of positive ideas for rising to the challenge of climate change locally, and creating a detailed plan for achieving positive integrated adaptation. The content of the plan has emerged from the input of both 'expert professionals' and 'local experts', through a process of dialogue.

The dialogue approach provided the opportunity for direct communication between those who decide and those who are affected by decisions. Creating an environment that allows a two-way exchange of information, knowledge, and ideas fosters understanding between participants, and, by producing outputs that have been formed cooperatively, builds a common purpose.

[1]For further information on the ESPACE project visit www.espace-project.org

Launch SWOT

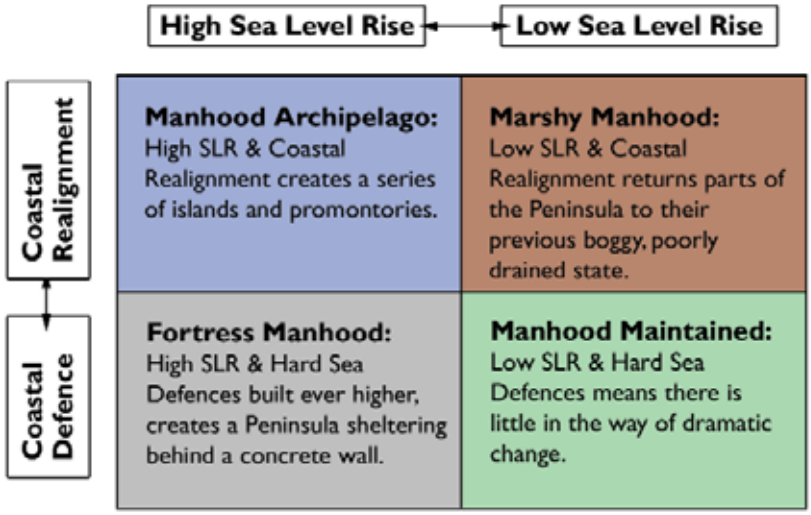
2.3 Baseline information was generated through a workshop based **S**trengths, **W**eaknesses, **O**pportunities and **T**hreats analysis of the Manhood Peninsula, undertaken at the launch event. The issues were then grouped into topic themes. Through this process core topic areas for investigation were identified and the issues provided the local context for developing background papers.

Topic Workshops

2.4 With a crosscutting theme of Water Management, the workshops were Leisure and Recreation; Economy; Built Environment; and Natural Environment, and the final integration workshop was based on Planning and Development issues. The workshops were designed and facilitated in partnership with FUTERRA who "...aimed to recognise participants as more than just sources from which information could be extracted, as key players in the collective solutions to the challenge" (Jan 05). The workshops employed a number of participatory approaches to identify key / priority thematic impacts and explore local visions of successful adaptation from which solutions / options for action emerged.

2.5 The integration workshop ensured a joined up approach to planning and visioning on the Manhood Peninsula, bringing together the outputs of topic workshops and applying them to possible future scenarios.

By drawing out the common issues that applied across the scenarios, flexibility was built into the project at an early stage and the 'core components' of an adaptation strategy for the Manhood Peninsula were identified. A full report and a summary leaflet of the workshop programme are available.



Action Planning

2.6 Themes were identified from the 'core components' and created the framework for action planning. During the spring of 2005, outcomes from the whole workshop programme were drawn together under the action planning themes. In response to feedback from workshop participants, smaller 'focus' groups with both local and technical representation undertook the action planning. Those participating in the action planning sessions were given the brief to turn the visions, options for action, and strategic components identified during the autumn 2004 workshops (the 'what') into action programmes (the 'how'). Each session was broken down into 4 key issues, with key issue 1: Coastal Management[2] and 2: Inland Flood and Drought Management, remaining constant across all the sessions, whilst issues 3 and 4 responded to the theme and content of the Visions, Options and Actions list.

[2]Discussions during the action planning were premised on two key facts; 1) that the consultation document for the South Downs Shoreline Management Plan identifies areas for managed realignment along the Eastern side of the peninsula, specifically from Pagham Harbour to East Beach, and 2) that current national policy favours solutions that allow natural processes to occur. Therefore, although geographical detail was not discussed, there was a need to recognise the very real potential for areas of realignment on the peninsula, especially in light of ongoing climatic change, and begin to plan for future changes. Corresponding project deliverables (P4, L4, and TR3) are intended to be generic in applicability, and implementation is dependant on the outcome of the Selsey Peninsula Strategy Review, and the resultant Coastal Defence Strategy.

2.7 Each action planning session considered the impact of actions identified during previous sessions, highlighted knock-on impacts for consideration by the following action planning sessions, and drew in theme specific outcomes from the autumn 2004 workshop programme. Identified as the core issue requiring priority consideration, the planning began by considering the workshop outcomes relevant to Water Management; this was followed up with sessions on Landscape and Conservation, and Economy. By starting the action planning phase with water management, all subsequent sessions considered the relevant actions arising from this and water issues became embedded in the action planning process. The final session on Planning and Development responded to actions identified during all the previous sessions, as well as workshop outputs, ensuring that outputs from this session considered the multiple spatial claims on the Manhood Peninsula. The Communication and Education action planning session concluded the process. The resulting action plan emerged as a comprehensive document premised on the outcomes of the autumn 2004 workshop programme.

Preparing the Consultation Draft Action Plan

2.8 The action planning phase produced a list of 95 actions, supported by 10 key messages and communication methods. The consultation draft action plan presented those actions in a more coherent format, identifying 6 core action programmes, each made up of a number of 'project deliverables' under which a number of actions were packaged. By drawing together complementary and / or overlapping actions under a common objective, an integrated response to the challenges and opportunities of climate change on the Manhood Peninsula has evolved.

Consultation

2.9 Due to the reduced level of participation during the action planning stage, a consultation phase aimed to gather additional feedback from those who participated in earlier stages of the project, and others who had expressed interest in the development of the project. In addition it intended to identify any gaps in the action programmes, identify external links and ongoing work that relates to actions in the plan, and to undertake a prioritisation of the project deliverables.

Delivery of the plan

3. Implementation

3.1 The action plan sets out the actions and further research required for the Manhood Peninsula to reduce its vulnerability to climate change impacts, and to maximise the opportunities that a changing climate can bring. The plan was developed in response to the visions of project participants of a 'successfully adapted peninsula in 2050'. The resulting action plan has a wide-ranging set of socio-economic and environmental actions that together form an integrated framework for adapting to climate change on the peninsula.

3.2 There is a scientific consensus regarding the causes of climate change and the evidence of change, and a common understanding of the likely global consequences. Whilst there remain uncertainties regarding the detail of future climatic change, current research focuses on reducing these uncertainties and thus our understanding and predictive models are improving all the time. Adaptive responses to the impacts of climate change need to be flexible in order to accommodate continued learning and increasing understanding of climate science and the impacts of change. This plan is therefore considered to be a 'working' document, and a rigorous review and updating process must be incorporated into the management of the plan.

Timescales

3.3 The longer-term focus of the visions (2050) provides the reference for the actions contained in this plan. Action planning focussed on short-medium term actions that ensure that the peninsula is prepared for change, or that influence the local planning authority to ensure that climate change is integrated into spatial development policies. The following timescales were used during the action planning work:

SHORT: Within 1 year
MEDIUM: Between 1 and 5 years
LONG: 5 years plus

Managing the Delivery

3.4 The development of the action plan has been an extended process, refining the range of positive ideas for rising to the challenge of climate change locally, and creating a detailed plan for achieving positive integrated adaptation. The content of the plan has emerged from the input of both 'expert professionals' and 'local experts', and this collaboration has been central to the project to date. It is important that this collaboration is maintained, ensuring that the management of the action programmes is steered by both technical and local experts.

Adapting to climate change will be ongoing, long-term, and actions may be subject to change with emerging knowledge, therefore the management and review of the action programmes needs to be sustainable. Creating 'Implementation Management Teams' for each of the 6 action programmes will enable effective management of the delivery of the action plan. With both local and expert representation on the teams the dialogue that developed through the engagement process will be sustained and will therefore continue to ensure that climate change adaptation on the peninsula is 'relevant, accepted and sustainable'. Initially the ESPACE project coordinator will sustain communication between teams, ensuring that the key principle of integration is maintained, with a view to developing processes for the groups to become self-managing in the future.

Framework of Responsibility

3.5 The MPP will retain overall responsibility for delivering the action plan and will be the authorising body in terms of allocation of any 'centrally' available funding, e.g. ESPACE funds. Each 'Implementation Management Team' (IMT) will report to the MPP through the team lead who will also sit on the MPP (See Diagram 1, Appendix 1).

3.6 Following the initial steer derived from the action plan consultation phase, the IMT will provide a practical, technical and locally appropriate steer for a specific action programme. The IMT will have the authority to further prioritise between actions, making informed choices as to the appropriate action(s) to best achieve the delivery objective. The IMT is responsible for maintaining relationships with external bodies that are involved in delivering actions that correspond to that action programme. The IMT may also develop / extend current actions and /or identify new and appropriate actions or opportunities to meet a project deliverable.

Resources

3.7 This action plan currently has dedicated but limited staff resources. The first task for the management teams is to identify existing resources (human, financial and partnership opportunities) for delivering actions in the plan. Whilst there are some funds / resources available to begin looking at some of the priority areas for action, to deliver the scope of the plan will require work to be undertaken to bring in additional funds. It also requires the MPP organisations to take responsibility for integrating climate change adaptation into their principle areas of influence.

3.8 The MPP is seeking to develop relationships with local groups, projects or organisations to enable elements of the plan to be delivered through existing mechanisms. Local operators can enhance their potential of attracting funding by using the action plan as evidence of local support for integrating climate change adaptation into their particular programme of work. In addition, by demonstrating partnership in local action, endorsement of an application by the MPP can strengthen a funding bid.

Monitoring and Review

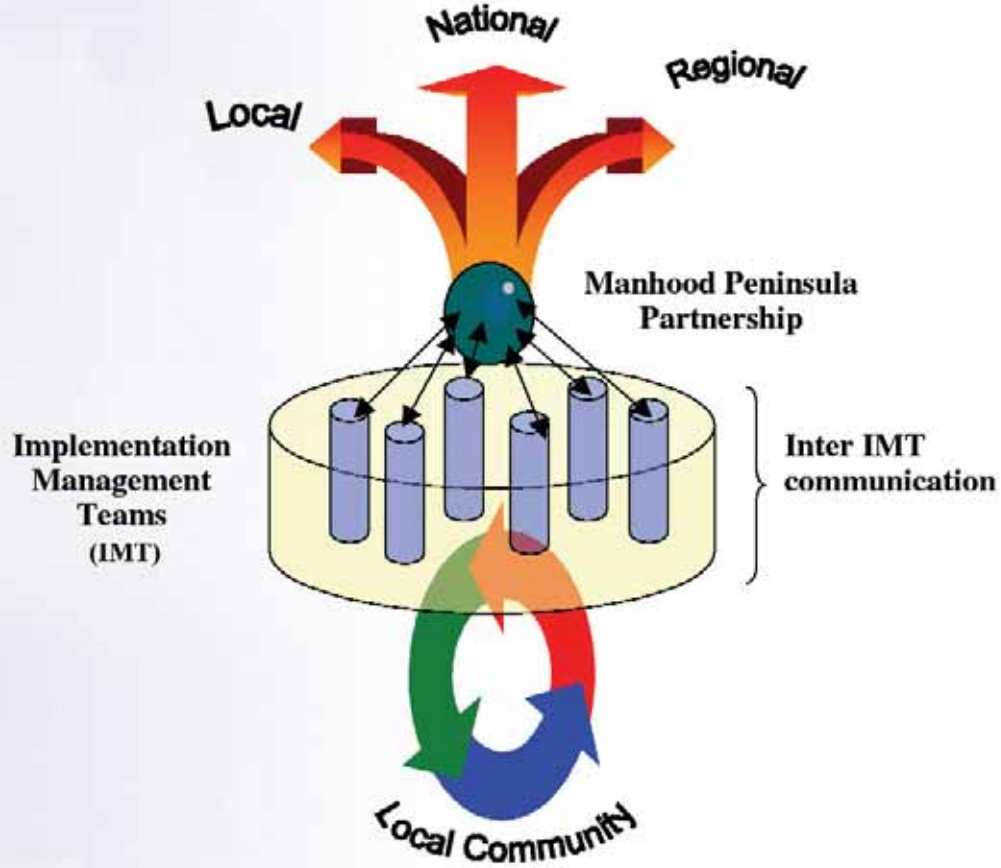
3.9 A public review of the action plan and delivery progress should be conducted by the MPP, with support from the Communication and Awareness IMT every 18 months. This will provide an opportunity to report progress to the public; present an update of climate change science and adaptation practices; and engage the public in an assessment of the current action plan, with a view to re-prioritising, amending and adding emergent actions / deliverables.

3.10 Representatives of the wider community may wish to put themselves forward to sit on IMT's and others may wish to stand down at this stage. This process should be accommodated within the review.

3.11 The first 18-month review will provide an evaluation of the ESPACE project

Appendix 1

Diagram 1: Reporting and Communication



Project outputs / background information

Full SWOT analysis
Grouped SWOT items by topic
Topic background papers
Facilitators report on the workshop programme
Summary report leaflet of the workshop programme
Visions, options and actions papers for action planning focus groups
Templates and notes for action planning
Draft consultation action plan (text only)
Full draft consultation action plan (detailed notes)
Prioritised list of deliverables
Final action plan (detailed notes)

Available on request and on the Manhood Peninsula pages of **www.climateforchange.org.uk**






Part 3 The Action Programmes

The following action plan contains 6 Action Programmes (AP):

AP1: Spatial and Development Planning (P)
AP2: Water Supply and Management (W)
AP3: Landscape and Land Management (L)
AP4: Tourism and Recreation (T&R)
AP5: Energy (E)
AP6: Communication and Awareness (C&A)

Action programmes consist of a number of 'project deliverables' under which are listed complementary and / or overlapping actions that contribute to the achievement of the project deliverable. Each project deliverable was prioritised during the consultation phase of the action plan development, and each action was given an indicative timescale during the focus group sessions (see 3.3).

Each programme is introduced with a brief note linking it back to the outputs of the workshop programme of autumn 2004. The programme is then set out as follows:

	Project Deliverable	Priority
	Action	**Indicative Timescale**

Action Programme 1: Spatial and Development Planning

This programme reflects the understanding of spatial planning policy as a key tool for allowing adaptive action and for optimising the potential of change. It provides a positive framework within which the following programmes can be delivered. It recognises the role of the built environment (including access and transport options) in minimising the financial and human cost of climate change impacts and for reducing non-natural greenhouse gas emissions.

P1:	Integrating climate change adaptation and local plans	1
P1.1	Influence the Local Development Framework (LDF)[1] and Parish Plans to ensure development of the Manhood Peninsula is in line with ESPACE outcomes.	M
P1.2	Organise seminar / presentation of ESPACE work to date and identify links to Parish Plans / Village Design Statements (VDS). Work with parishes to incorporate climate change adaptation into Parish Plans / VDS.	S/M
P1.3	Develop a common 'Manhood' climate change planning statement.	M
P1.4	Develop an Area Action Plan as part of the LDF (an overarching spatial planning document) to incorporate proactive solutions, including Water Management plans, Shoreline Management Plans[2] and existing studies.	L

P2:	Putting water into the Local Development Framework (LDF)	3
P2.1	LDF to reflect the use of water on the Manhood as a multifunctional resource - a positive feature for people and nature.	S
P2.2	Continue to influence responsible authorities to site new development beyond the floodplain (make room for water).	S
P2.3	Educate locally and strategically to ensure acceptance of water as a positive feature of the natural and built environment.	L

P3:	Developing a spatial response to climate change	4
P3.1	Review current land use designations on the peninsula and assess the current and future impact of climate change. Produce information for landowners on land affected by future climate change scenarios.	M
P3.2	Develop a definitive policy for a coastal buffer zone that accounts for future land use change e.g. ongoing changes in coastal alignment. Retain flexibility for maximising the economic value of such a zone by permitting decommissionable infrastructure such as access ramps to beaches.	M

P4:	Preparing for change in coastal management	5
P4.1	Research the legal and insurance implications of developing a planning policy that ensures coastal buildings lost due to flood / storm damage cannot be rebuilt on the coast. Assessment should cover whether such a planning policy could be legally challenged; if it implies that compensatory payments should be made when property is lost; and if it would affect current coastal property owner's insurance packages.	S
P4.2	Undertake a study of options for appropriate rebuilding (not new build) techniques on the coast and in the floodplain.	M
P4.3	Continue to raise awareness among the public about coastal defence options: what they may look like; how they may impact the environment and quality of life; and long term financial implications.	S

P5:	Adapting the built environment	2
P5.1	Review current planning policy regarding roof heights (e.g. visual intrusion) with a view to creating a more flexible policy that allows for building design change.	L
P5.2	Develop planning policy to advocate the inclusion of appropriate[3] sustainable water use devices in new build: these may include rainwater collection points, grey water recycling facilities[4], and on site water storage capacity.	S
P5.3	Encourage the national government to tighten building regulations to promote a shift in housing design towards eco-housing, to include water efficiency regulations.	L
P5.4	Identify and collate current information for developers and the public about the logistics and implications of incorporating "energy star" ratings and eco-design standards into new build.	
P5.5	Assess the support (from the public and developers) for developing an exemplar project that demonstrates eco and climate adapted housing. Invite developers to design locally appropriate eco-homes.	L

P6:	Providing sustainable access options	NEW
P6.1	Support the development of safe and reliable access / exit plans to built-up areas that are vulnerable to increased flood risk and storm damage.	
P6.2	Work with local partners to promote and support transport options that reduce CO2 emissions and provide safe alternatives to car travel on and around the peninsula.	

Action Programme 2: Water Supply and Management (W)

The programme responds directly to the priority of 'sky to sink' water management. It understands the potential for the extremes of wetter winters and dryer summers, considering the need to minimise local water-logging incidences, utilise additional water sources for summer use, increase the efficiency of water use in the built environment, and cope with the impact of potential changes in coastal management.

W1:	Taking an integrated approach to water management	7
W1.1	Develop a 'Water Management' plan for the whole of the Manhood.	M

W2:	Draining, storing and moving water	9
W2.1	Assess the volume of water storage required, and then investigate and identify suitable water storage sites, storage capacity, and potential uses of stored water.	M
W2.2	Assess the geographical and maintenance limitations of Sustainable Urban Drainage Systems (SUDS)[6] , and the use of SUDS as part of environmental enhancement. Encourage best practice implementation.	L
W2.3	Identify ditches and culverts that could act as water retention / storage facilities, and those that can provide drainage in times of flash floods. Consider the potential installation of a sluice gate system.	L
W2.4	Using geological and historic records, identify natural water catchment areas, and assess the feasibility of draining into those areas, possibly through a revitalised ditch drainage system.	L
W2.5	Investigate pumping systems to move water to natural water catchment areas, as a natural gradient is negligible.	S
W2.6	Undertake a feasibility study to assess the potential use of gravel extraction pits for 'emergency irrigation', and / or for emergency flood alleviation.	M
W2.7	Undertake a feasibility study for the development of a saltwater lagoon behind soft coastal defences for use as a water storage area, buffer zone and wildlife habitat.	L

W3:	Research salination issues	26
W3.1	Investigate the major causes and effects of salination on farmland, freshwater, and the environment, including whether water extracted for irrigation could encourage saline intrusion into groundwater. Identify and collate existing research; identify possible methods of managing salinity; assess the cost implications; and undertake a scoping exercise of wider environmental impacts.	M

W4:	Managing water supply and consumption in the built environment	20
W4.1	Liase with the EA[7] to ensure there is a comprehensive local authority understanding of current water supply and demand, wastewater treatment processes and discharge volumes, and future plans for developing the infrastructure capacity and capability.	S
W4.2	Work with Southern Water to assess the potential use of reed beds to treat waste water and increase the capacity of current sewerage systems to cope with the impact of increased surface water volumes.	M
W4.3	1. Collate information on water saving methods, costs, availability, installation (domestic and commercial), and seek grants to retrofit properties. 2. Facilitate community access to equipment for retrofitting houses to store and reuse water. 3. Promote information on water efficient gardening, such as drought resistant planting.	M
W4.4	Research the potential to develop by-laws / planning conditions to encourage developers to incorporate permeable surfaces instead of compact hard standing.	M/L
W4.5	Identify a farmer and / or house owner to implement a pilot project to harvest rainwater from hard surfaces (roofs etc.) for use as stock water (farms) / grey water (home). Monitor water usage against a control farm / home. Use data as evidence to promote rainwater harvesting.	M

W5:	Valuing water	25
W5.1	Work with the Dutch to learn methods for 'valuing water', and approaches to educating the population.	S

Action Programme 3: Landscape and Land Management (L)

Reflecting the common desire to retain the open, rural and attractive environment that currently exists and recognising the dependency of the local economy on the natural environment, the programme addresses the impact of water management, and potential coastal change within a land management context. It recognises the multiple functions of wetlands around the peninsula and seeks to better understand the impacts on local biodiversity, whilst enabling the potential movement of wildlife populations and habitats.

L1:	Maintaining landscape quality	12
L1.1	Encourage incorporation of wider greenspace, landscape and biodiversity issues into the LDF.	M
L1.2	Incorporate locally appropriate shade plants (trees and vines) within the built environment. Include the requirements in landscape / planning conditions.	L
L1.3	Educate planners to require water storage applications (e.g. ponds, reservoirs) to incorporate biodiversity and landscape issues.	L
L1.4	Set up tree nurseries to grow trees that are likely to withstand changing climate conditions.	NEW[8]

L2:	Maximising the water management potential of plants	22
L2.1	Research and identify appropriate vegetation to provide multiple landscape functions including; water retention; floodwater uptake; reduction of soil erosion; provision of shade for people and wildlife; enhancing biodiversity; improving greenspace; resistance to summer drought. Implement a programme of planting and monitoring of species resilience.	M/L
L2.2	Retain and /or replace lost hedgerows and woodlands with species that support the above functions and can withstand the changing climate.	L

L3:	Integrating climate change adaptation through 'best practice' farming[9]	1
L3.1	Work with local organisations to actively promote 'higher level' environmental stewardship schemes (HLS)[10].	L
L3.2	Review the 'Chichester Coastal Plain Sustainable Farming Partnership' project, and assess the potential of extending the programme to incorporate climate change adaptations and include the promotion of the higher level scheme.	M
L3.3	Provide a one-stop shop (leaflets, walks, enterprises advisor, one-to-one visits) for farmers to gain information regarding environmental best practice management, funding opportunities (e.g. HLS) etc.	S

L3.4	Support local farmers by raising public awareness of the potential for crop diversification as a response to rising temperatures, seasonal changes in water availability, and potential salination.	
L3.5	Work with other agencies, landowners and farmers to create on farm water storage areas, and to identify adaptive action in response to water resource issues.	L
L3.6	Educate landowners and riparian owners to understand their maintenance responsibilities and the role of ditches / culverts in alleviating flood waters and support them to implement clearance works where appropriate.	M
L4:	**Preparing for change in coastal management**	**8**
L4.1	Lobby the government to create compensation payments for loss of land / property as a result of change in national coastal management policy.	M
L4.2[11]	Research land uses that could generate alternative income for land owners and the wider community in areas identified for realignment. Research the full economic potential of saltmarsh / mudflats including; plant and food crops; medicinal crops; livestock production; wildlife/tourist attraction; and assess the wider environmental impact of alternative economic practices, especially mono-cropping. Look at European and historical examples.	M
L4.3	Develop relationships with other regions where managed realignment has been implemented to identify best practice adaptation mechanisms, especially in response to changes in soil salinity, biodiversity, and economic impact.	NEW[12]
L4.4	Work with landowners and farmers to identify the support needed to enable possible changes in land use on floodplains, e.g. to grazing marshlands / wetland habitat.	L
L4.5	Create new habitats, such as new nature reserves, to provide suitable coastal buffer zones.	M
L5:	**Monitoring the impact of climate change on wildlife**	**24**
L5.1	Identify key indicator species that allow monitoring of change in distribution in response to salinity, inundation and temperature.	NEW[13]
L5.2	Identify links and corridors between designated wildlife sites to enable species movement as current sites become unsuitable, either in response to salinity, inundation or temperature changes. Consider possible boundary extensions to allow slower moving species to migrate.	M
L5.3	Support initiatives to educate the public about current species / habitats on the peninsula, the potential changes, and the associated land-use implications, with particular regard to the movement and loss of current species and the colonisation of newcomers.	M
L5.4	Work with the Sussex Biodiversity Records Centre (SBRC) to identify existing local wildlife survey groups and the geographical gaps, in order to assist in recruiting local volunteers to monitor local wildlife changes.	L
L5.5	Involve children and community groups in wildlife monitoring.	S/M

Action Programme 4: Tourism and Recreation (T&R)

Tourism was identified as a key climate change related development opportunity for the peninsula. Increased tourism raises concerns regarding the erosion of the current environment and the capability of the current infrastructure to handle demand. This programme responds to the desire for evolving the product for a 'greener', lower impact, longer stay market, and seeks to address the possible impact of potential coastal change on the tourist and leisure economy.

TR1:	Review and promote tourism	18
TR1.1	Review tourism on the Manhood Peninsula, its current infrastructure, access and attractions, with a view to promoting environmentally based tourism.	L
TR1.2	Encourage an integrated approach across the Manhood to promote and develop current and potential tourist attractions, and to balance the impact of tourism across the area.	L
TR1.3	Integrate the tourist potential of the Manhood (a water-based environment) with the existing tourist catchment areas of Chichester, e.g. the Downs, the Solent, and Goodwood.	M
TR1.4	Improve the marketing of the Manhood Peninsula through existing avenues such as the web and booklet information.	L

TR2:	Developing new opportunities and markets	21
TR2.1	Lobby the local authority to create a more flexible planning policy context that encourages out of season tourist attractions e.g. links golf and the improvement / extension of current tourist facilities.	L
TR2.2	Lobby to further develop a policy that encourages the sustainable development of old gravel pits for alternative economic uses i.e. leisure and recreation.	L
TR2.3	Undertake a feasibility study of suitable cycle routes (current and potential) that could be developed for a Manhood network of tourist bikes.	S
TR2.4	Develop a series of guided walk leaflets, especially circular walks, with cultural, historical and environmental information, identifying links to public transport, local accommodation, shops, B and B, restaurants.	M
TR2.5	Develop guidelines for tourism businesses / attractions on the Manhood Peninsula, identifying opportunities and mechanisms for evolving their product to meet the needs of a higher income market, and for achieving 'green accreditation' e.g. booklet / web.	S

TR3:	Preparing for change in coastal management	16
TR3.1	Undertake a survey of 'caravan park' visitors; to understand better the attraction of the Manhood Peninsula and its caravan parks e.g. park based facilities, beach access, and local towns. Identify the core attractions and use the information to influence any potential relocation and infrastructure development of caravan parks.	M
TR3.2	Undertake a survey of 'wildlife/environment' visitors e.g. those to Pagham Harbour / East Head, to assess if proposed changes in coastal management and associated land use options on the peninsula would increase the frequency and / or duration of their stay, and the areas visited. Assess the potential of an increased 'ecological tourist' income.	M
TR3.3	Assess the potential of using soft defence habitat areas to encourage nature / green tourism, such as walkers, and bird watchers.	L

Action Programme 5: Energy (E)

The potential for renewable energy generation on the Manhood Peninsula generated a high degree of support. This programme recognises the opportunity for energy self-sufficiency on the peninsula, through small-scale generation on private and commercial property, and through the potential to harness wind and wave on a larger scale. There is also an emphasis on addressing the challenge of private 'retro-fit' for existing properties, both in terms of planning policy and cost-benefit.

E1:	**Facilitating small scale use of renewable energy generating systems**	**6**
E1.1	Lobby the local authority to encourage small-scale renewable energy generating systems to be installed on existing properties, and for new build. Focus on updating Area of Outstanding Natural Beauty (AONB) policy, conservation area policy and listed buildings policy.	S
E1.2	Review current / developing planning guidelines and provide information to business to promote the installation of local small scale renewable energy generating systems (for commercial use).	M

E2.	**Identifying financial incentives**	**17**
E2.1	Lobby the national government to continue to provide grants for the installation and development of renewable energy systems for residential and community properties.	M
E2.2	Review the potential of designing local financial incentives for householders to encourage the uptake of energy efficient devices.	L

E3:	**Demonstrating current potential and viability**	**15**
E3.1	Access available data on the energy and water use of large scale users, for use as baseline data from which a targeted programme aimed at reducing consumption can be developed.	M
E3.2	Identify a council-owned site for installing energy-saving technology that demonstrates viability and provides the public with accessible information, especially regarding cost / benefit.	M
E3.3	Implement a feasibility study to explore the latent potential of the area to generate green energy through wind, solar, wave and biomass on the Manhood Peninsula. Results that demonstrate the value and / or feasibility of generating clean energy, can be used to influence LDF's, Parish Plans and the County Strategy.	L

E4:	Researching new opportunities	23
E4.1	Work with larger scale commercial enterprises to investigate and identify potential tidal and wave power options and on and off-shore wind farms; locational potential, generation capacity, cost implications. Assess the wider social, environmental and economic impact e.g. marine species, tourism appeal, and shipping routes.	L

Action Programme 6: Communication and Awareness (C&A)

The communication programme has a dual approach, to raise awareness of climate change locally and to promote the work on the Manhood Peninsula. It aims to communicate the vision for the area, with a view to gaining 'first mover' status in terms of adapting to climate change and living with inundation. It plans to channel the project outputs to influence local decision-makers and to continue to increase the understanding of the local population of the opportunities for adapting to climate change locally and individually.

C1:	Roles and responsibilities	14
C1.1	Clarify the roles and powers of parishes, PCF, MPP. Develop a fact sheet / guidance covering 'how are they used, how should they be used'.	S
C1.2	Review support for, and viability of, constituting the MPP.	M

C2:	Advocacy	10
C2.1	Promote the vision of the Manhood and highlight best practices to drive the vision forward.	L
C2.2	MPP responses to the LDF, Shoreline Management Plans (SMP) and Selsey Peninsula Strategy Review (SPSR)[14] should reflect the vision for the Manhood Peninsula in response to climate change.	M
C2.3	MPP to be kept informed of progress of SPSR and the key dates for consultation.	S

C3:	Influencing policy and behaviour			11
	Target Audience	**Key Message**	**Delivery Mechanism**	
C3.1	Policy and Decision makers	Climate change needs to be planned for.	Public lobbying: provide the public with 2 Postcards, (learn from national campaigns FoE, Christian Aid, Trade Justice) 1. to Local Authority with the key message 'I believe that the LDF needs to recognise climate change and incorporate locally relevant adaptations'. Include a tick box list of issues from the action programme e.g. no build below 5m line, installing water efficient devices etc. and 2. a generic one to the Minister of Environment / Office of the Deputy Prime Minister (ODPM).	S/M

C3:	Influencing policy and behaviour continued			
	Target Audience	**Key Message**	**Delivery Mechanism**	
C3.2	Planners and /or renewable energy installation companies	Water can be stored on smaller properties and renewable energy can be incorporated.	District Council seminars. Provide good examples. Organise site visits, identify grants for retrofit, and to compensate additional cost of fitting renewable energy generating systems / water storage areas.	S
C3.3	Business and Home owners	Water and energy efficiency saves money and works.	Link to individual desires and aspirations 'ideal home exhibition' status, possibly through South of England show, local 'homes and gardens' open days. Sponsor one home and one business locally as demonstration, – get supplier buy-in / sponsorship.	S/M
C3.4	Car Owners	Why wait to check your emissions?	Exploit emotion of car user 'but I need my car'. Approach local garages to develop a partnership offering free 'pollution checks' mid year. Generate business / publicity for the garage and potential fees for any retuning required. Trial for 1 year. Link to the 'critical mass' local monitor concept (see C4.1) and sustainable business awards. Launch and promote with radio campaign.	M

C4:	Education and Awareness			19
	Target Audience	**Key Message**	**Delivery Mechanism**	
C4.1	Business	Adapting positively for the economy.	Produce case studies of 'environmental best practice' in local business.	M
C4.2	Tourists and locals	You can make a difference.	Critical mass approach. Develop an annual commitment review, % of actions already undertaken, % commitment, monitor change and therefore impact (e.g. EA's Environment week pledges). Correlate with the reduction in CO2 emissions. Develop a mobile Climate Change exhibition and interactive centre. Go to the people, use supermarkets, household waste recycling centres etc. (extension of 'interactive stalls', see C4.2) Ensure press and publicity to celebrate local action.	S/M

C4:	Education and Awareness			19
	Target Audience	**Key Message**	**Delivery Mechanism**	
C4.3	Manhood Population	Climate change is part of a transitional process, but needs to be managed: 'In our lifetimes'.	1. SUMMER season 2006; Interactive Stalls at village fetes, Bishops tea party, Pagham / Chichester Harbour / National Trust events, 'staffed' by a 'trusted voice' e.g. local resident/ Parish Council rep/orlocal group rep, AND an 'expert' voice, National Trust/ESPACE/ Harbour Conservancy etc: • Develop visuals such as computer models and scenarios (also hold on all MPP and local web pages, and put onto CD Rom for school use). • Build a model of the Manhood Peninsula with a 'push button' flooding of at risk areas (potential to be built by school). • Design a display with flood maps, historic changes over time e.g. East Head and Selsey life boat station. • Write a FAQ sheet regarding planning issues. Illustrate with humour / cartoons and link to 'what you can do' local actions at home. • Produce an 'action at home' fridge magnet. 2. Talks to local groups – WI, rotary club etc, take models for visuals and FAQ handouts 3. Local media - green slot 4. Posters 5. Stamps (use DEFRA funding) 6. Create e-mail contact list / news group 7. Use obligatory mail outs and /or returns, to insert information	S
C4.4	Schools, teachers		Develop curriculum information. Link to science, history, geography, citizenship. Provide teachers packs, opportunities for site visits. Explore the use of theatre. Materials for mobile display could have a permanent base at an 'ECO-CENTRE' (possibly Pagham Harbour).	M

Appendix 2 - Footnotes

AP1

[1]The 'Planning and Compulsory Purchase Act' 2004 requires the Local Planning Authority to produce a Local Development Framework (LDF). The Chichester LDF will guide the future spatial development of the District beyond 2007.
[2]The Shoreline Management Plan is a policy framework, developed from a large-scale assessment of the risks associated with coastal processes. The plan identifies the main issues of concern relating to erosion and flooding risks, and management of these natural processes, to determine the policies for the next 100 years that are technically, economically and environmentally sustainable.
[3]Questions need to be addressed as to which sustainable water use devices are economically viable, acceptable to customers, and do not invoke public health concerns
[4]Grey water is any wastewater that has been used in the home, except water from toilets. Dish, shower, sink, and laundry water comprise 50-80% of residential "waste" water.
[5]NEW project deliverable and actions developed in response to consultation feedback

AP2

[6]SUDS are surface water drainage methods that aim to: reduce the impact of urbanisation on flooding; protect or enhance water quality; be sympathetic to the environmental setting and the needs of the local community; provide a habitat for wildlife in urban watercourses; and, where appropriate, encourage natural groundwater recharge.
[7]The EA collate Water Resources Plans (which cover 25 year periods) from the water companies and have developed a Regional Water Resources Strategy

AP3

[8]L1.4 NEW action included in response to consultation
[9]L3.5 and L3.6 are W3.1 and W3.2 from the draft consultation document. Included in L3 to facilitate delivery
[10]Environmental Stewardship is an agri-environment 'whole farm' scheme. The HLS aims to deliver significant environmental benefits, it's primary objectives are to; conserve wildlife (biodiversity); maintain and enhance landscape quality and character; protect the historic environment and natural resources; promote public access and understanding of the countryside; and natural resource protection. The secondary objectives are: genetic conservation and flood management.
[11]Action planners stressed that any alternative land use function should be clearly defined i.e. saltmarsh production or saltmarsh habitat.
[12]L4.3 NEW action included in response to consultation
[13]L5.1 NEW action included in response to consultation

AP6

[14]The Selsey Peninsula Strategy Review seeks to update the findings of the Pagham to East Head Coastal Defence Strategy in response to national changes in appraisal requirements in relation to flood and coastal defence. The output from this review will be used to inform a public consultation exercise leading to the development of a revised Coastal Defence Strategy.

ESPACE aims to raise awareness of the importance of adapting to climate change and to recommend that it is incorporated within spatial planning mechanisms at local, regional, national and European levels.

For further information on **ESPACE** in West Sussex visit our website:
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