

# Brighton & Hove and Lewes Downs Biosphere Reserve Management Strategy



# 1. SUMMARY

## OVERVIEW

The Brighton & Hove and Lewes Downs Partnership is a cross-sector partnership that has come together to promote a United Nations Educational, Scientific and Cultural Organisation (UNESCO) Biosphere Reserve based on the chalk block between the River Adur and the River Ouse. If the bid for Biosphere Reserve status is successful it will lead to international recognition for the good work already being carried out in the area in protecting and enhancing the environment. Looking forward, it will improve partnership working, particularly across local authority boundaries, raise standards and help tackle problems that are currently overlooked.

### What is a UNESCO Biosphere Reserve?

Biosphere Reserves are areas internationally recognised under the 'Man and the Biosphere' Programme of UNESCO as "sites of excellence" to explore and demonstrate conservation and sustainable development in practice.

The 621 sites across 117 countries bestowed with this global accreditation collectively form the World Network of Biosphere Reserves. The UK has six sites, three of which - North Devon (England), Dyfi (Wales), and Galloway & Southern Ayrshire (Scotland) – lead the way in linking the conservation of their local environment to sustainable socio-economic development opportunities.

Despite their name, Biosphere Reserves are not statutory designations nor restrictive areas that preserve nature in splendid isolation (and certainly are not artificial glass domes), but instead are living, working places for people and the rest of nature.

### How do Biosphere Reserves work?

Biosphere Reserves have three functions:

- Conservation – of landscapes, ecosystems, species and genetic variation (biodiversity)
- Development – of our society and economy in culturally and ecologically sustainable ways
- Knowledge – facilitation of public awareness, environmental education, collaboration, academic research and monitoring to develop innovative approaches to conservation and development

Biosphere Reserves are split into three zones to deliver these functions:

- Core Area – statutory nature conservation sites (international and national designations – SAC/SSSI) whose effective protection and management is the overriding focus
- Buffer Zone – land and sea that surrounds, links up and "shields" the Core Area(s) with management that is compatible with nature conservation
- Transition Area – mainly urban areas and the sea where sustainable management and lifestyles are promoted and pursued

### What are the benefits of becoming a Biosphere Reserve?

The potential advantages of achieving Biosphere Reserve status include:

- Improved quality of life by creating a healthier environment – helping nature to help ourselves
- Strengthening the economy by making the area a more attractive place to visit
- Heightened profile of attaining a world-class accolade, enabling increased marketing and funding opportunities
- Opportunities to attract and create new enterprises and jobs in environmental and low-carbon industries
- Improved partnership working, helping to break down barriers and raise environmental quality
- Creation of an integrated framework for conservation and development policy and practice, linking up existing initiatives across different sectors and locations, and driving best practice in environmental management, development planning and stakeholder participation
- Help find long term funding for effective short-term projects which are delivering Biosphere objectives and which otherwise would risk being lost
- Foster a stronger sense of community awareness, identity and pride in the local environment through public engagement and environmental education
- Enabling applied research and monitoring by local academic institutions to address conservation and development challenges
- Collaboration and knowledge transfer through the international Biosphere network

### How could the Biosphere make a real difference to local people's lives?

- Improve drinking water quality, by managing the land so that polluting chemicals do not contaminate the chalk aquifer. This would remove the need for expensive artificial “end-of-pipe” treatments which increase our water bills
- Clothe more buildings with living green walls and roofs which help to insulate them, sustain wildlife and capture storm water to reduce flash flooding which is linked to climate change
- Increase the number of warmer and more efficient homes, lowering climate change impacts and fuel bills in an era of ever-increasing energy costs
- Improve air quality so that people live longer
- Add to the colour and diversity of urban green spaces by encouraging wild flowers to grow, thereby sustaining pollinating insects and other wildlife
- Bring the countryside into the heart of urban areas through creating and restoring diverse chalk grasslands that are connected to the wider downland, and which are grazed by sheep that provide a local food source
- Increase awareness of natural spaces close to homes for healthy exercise, family time and relaxation
- Encourage more people to become active outdoors - walking, cycling, horse-riding and swimming – and take part in “green gyms”, all of which improve mental and physical health and well-being, help fight obesity and reduce expensive NHS treatment costs later in life

- Rediscover past cultural connections to the downland and coast which were based on the area's natural assets
- Open up publicly-owned downland to greater environmental and social benefits through more targeted conservation measures and managed access
- Support farmers with appropriate rural diversification schemes to boost their income, and promote more recreational opportunities such as campsites for visitors
- Create new job opportunities by increasing the desirability of living in, working in and visiting our towns and cities through a healthier urban environment with more trees and wildlife. This would encourage more (eco-)tourists to spend longer here and in the surrounding downs and coast
- Attract environmental industries to the area, creating both jobs and prosperity
- Support local sustainable fisheries which boost the local economy, reduce food miles and help to improve the marine environment and sea life
- Support initiatives which help connect local food producers with their markets and which develop the infrastructure to support this
- Reduce pollution from homes, gardens and urban areas which negatively impacts the cleanliness and quality of sea water
- Use less water individually so that there is enough for our needs and for the natural environment, especially with increasing drought impacts from climate change
- Add value to local produce from the Biosphere area as a desirable and sustainable source of goods and services

### **Biosphere Partnership**

The Brighton & Hove and Lewes Downs Biosphere Partnership comprises more than 30 public (national statutory and local authorities), educational, community, voluntary and private sector bodies, including all five local authorities, the South Downs National Park Authority (SDNPA) and the Sussex Inshore Fisheries and Conservation Authority (IFCA). Also working with local town and parish councils throughout the area, the Partnership's is seeking to broaden its representation to include business, landowners/farmers and more.

Other stakeholders have been involved in a number of working groups (land management, coastal & marine) and specific workshops through which they have been able to provide inputs to the Biosphere proposal. The plans have been extensively promoted at a series of 85 public events during 2012 which have reached out to an estimated 10,000 people, 1,400 of whom have registered their support and become a 'Friend of the Biosphere' to date. The formal public consultation programme in early 2013 additionally engaged with local people through participation in a series of seventy events and meetings, resulting in almost 1,800 individual consultation responses (94% of which supported the Biosphere proposal).

## Our Aim & Objectives

Our aim is:

**To create a world-class environment, that is economically successful and enjoyed by all – forever.**

Our objectives are:

1. Nature Conservation

Improve important local wildlife habitats and species (biodiversity), and precious environmental resources such as water, through better downland and floodplain management, improved urban spaces and new marine conservation initiatives.

2. Sustainable Socio-Economic Development

Take positive action to reduce energy and water use, and waste generation; encourage sustainable transport and local food production; and develop new social and economic opportunities such as outdoor health, eco-tourism and low carbon industries.

3. Knowledge, Learning and Awareness

Increase awareness and knowledge of our environment by working with local universities, schools and colleges, and the public to actively engage people in the use, appreciation, conservation and management of their local area.

## The proposed Brighton & Hove and Lewes Downs Biosphere Reserve

The proposed Biosphere Reserve (see map) covers 389 square kilometres or 150 square miles (or 38,921 hectares / 96,175 acres), just bigger than the nearby Isle of Wight.. Three-quarters of this area is land and one-quarter is sea. It comprises three distinct but inter-related environments:

- Rural environment of part of the South Downs (National Park), extending from the River Adur in the west to the River Ouse in the east
- Urban environments of Brighton & Hove, Lewes, Newhaven, Peacehaven and Telscombe, Southwick, Shoreham and Shoreham Beach
- Coastal and marine environment of the English Channel, running from Shoreham Harbour in the west to Newhaven Harbour in the east, and extending out into inshore waters to the sub-tidal chalk outcrops that lie up to 2 nautical miles offshore

These rural, urban and coastal/marine environments sustain many of the daily needs of the c. 385,000 people who live here (as well as up to 12 million visitors annually), and those of thousands of species of wildlife too. They provide us with clean water, local food, open space for relaxation, inspiration and a desirable environment for tourists to spend both time and money.

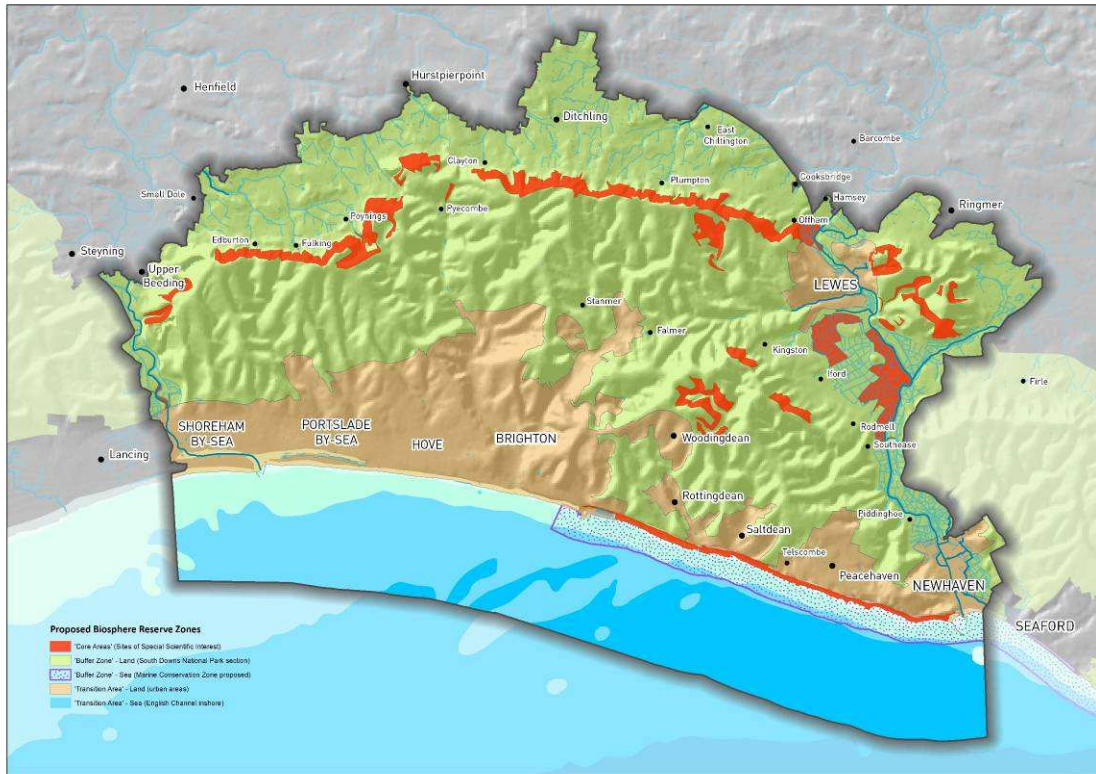
The area has an approximate economic value of £7 billion and has a local economy that is fairly resilient although income levels are below average in the South East. While there are large employers, both public and private, including the two universities, there is a strong independent sector mainly made up of small and medium sized business.

The area contains many important and rare wildlife habitats – from chalk grassland on the South Downs to wetlands in the river valleys and estuaries, and from the networks of urban greenspace to the vegetated shingle beaches, chalk cliffs and coastal reefs. These in turn support almost a thousand locally rare species, of which 180 are national biodiversity conservation priorities.

In the more managed environment on land, food is produced both in the rural and urban environments, mainly meat, grains, fruit and vegetables and honey, although the latter are less commercial and tend to be produced individually in gardens and allotments for personal use.

The sea is also a source of food in the form of fish and other creatures, although these are not farmed as such, purely harvested.

The connections of "green networks" for wildlife and people between town, country and coast are important. The area has a rich heritage and contemporary culture, which has developed from nationally significant early Neolithic settlements right through to the Regency period and modern times as a centre for the arts, culture and digital media.



## Biosphere Zones

### - Core Area:

The 13 internationally/nationally protected nature conservation sites, found almost entirely within the South Downs National Park, form the 'Core Area' of the Biosphere where conservation is the priority, and cover around 1,700 ha, or 5% of the total area. They are distributed as a "string of pearls" in an arc along the northern chalk scarp slope and eastern downland areas, and descend down the river valleys and meet the coastal strip in the east. They comprise all of the nationally designated Sites of Special Scientific Interest (SSSIs) on and around the Brighton and Lewes chalk blocks, including nine biological sites. Two of these are European Special Areas of Conservation (SACs), three are mainly geological sites and one is a mixed (coastal) site. The 10 sites with biological interest are dominated by chalk grassland sites (6), including some woodland/scrub habitats, with two freshwater, one coastal and one estuarine site.

### - Buffer Zone:

The 'Buffer Zone' is made up the remainder of the South Downs National Park (not including Lewes) and the adjacent western end of the Marine Conservation Zone (MCZ) of Beachy Head West recommended for designation in 2013. This is where human activities that are compatible with nature conservation, such as sensitive agriculture and recreation, are promoted. The South Downs National Park is predominantly a landscape designation, where there are stricter planning controls and where sustainable land management is promoted. Likewise, the recommended Marine Conservation Zone should lead to more favourable marine management.

- Transition Area:

Finally, the 'Transition Area' is formed of two parts: the urban settlements of Brighton & Hove, Lewes, Newhaven, Peacehaven, Telscombe, Southwick, Shoreham and Shoreham Beach which lie outside the South Downs National Park (except for Lewes town); and the near-shore English Channel, out to the sub-tidal chalk ledge which lies up to about two nautical miles offshore, but excluding the recommended Marine Conservation Zone. These areas are environments used more intensively by people in which active participation in more sustainable management and lifestyles are encouraged. For example, local food-growing, renewable energy use and sustainable sea fisheries.

A Biosphere Reserve would add to the existing South Downs National Park designation by integrating the large urban coastal settlements and the neighbouring sea into one area. It would help to better integrate the three objectives of nature conservation, sustainable socio-economic development, and knowledge, learning and awareness, through a holistic approach based on partnership working.

Despite their name, Biosphere Reserves are not restrictive protected areas where things are not allowed. Rather, they are places where, by working together, people can create a better life for themselves and the other living things who share the space.

### **The Biosphere Management Strategy**

This strategy sets out the characteristics of the proposed Biosphere area and how a Biosphere Reserve would work for us.

The different aspects of each element are described in terms of their nature, information resources, and current policy and practice. Proposals for our future focus are identified under the Biosphere framework which will reduce deficiencies, address gaps and enable new opportunities to be realised.

The connections that bring together the different environments of town and country, and land and sea, are the focus of the next chapter of this strategy on Linkages (Chapter 2). Each of the three environments of Rural (3), Urban (4) and Coastal/Marine (5) areas is then individually considered in its own chapter, and in each area the two main Biosphere functions of nature conservation and sustainable socio-economic development are addressed. The cross-cutting topic (the third and final Biosphere function) of Knowledge, Learning & Awareness is the subject of the final chapter (6).

A summary table that details each of the main elements/issues covered by this strategy is included below, set out according to the three Biosphere objectives (plus overall "linkages"). This discusses the general principles for improvement as well as the proposed focus for the Biosphere Project to "add value" to improvement efforts.

Lastly there is a glossary of acronyms used throughout the strategy chapters given at the end of this Introduction chapter.



Management Strategy Summary

ELEMENTS / ISSUES (Chapter / page reference)	PRINCIPLES	BIOSPHERE ADDED VALUE
<i>What is important here?</i>	<i>What is needed?</i>	<i>What will we do?</i>
<b>1. Nature Conservation</b>	Improved condition of key Local Biodiversity Action Plan (LBAP) habitats and species in our area	Support implementation of LBAPs for the most valuable and distinctive wildlife elements
Key Habitats	Bigger - Better - More - Joined-up semi-natural habitats for wildlife	Help to implement the national 'Lawton' recommendations through sensitive habitat management, restoration and creation works
Rural: Chalk Grassland, Farmland, Woodland, Freshwater (C3)	Better management for nature, integrated with productive uses	Support Nature Improvement Area (NIA) chalk downland measures, targeted agri-environment farming approaches, sustainable (wood)land management, and more natural wetland features (floodplains and downs)
Urban: green spaces (e.g. parks) & features (e.g. street trees) (C4)	Increased natural value for wildlife, linked to benefits for town-dwellers (e.g. 'wild play')	Encourage more eco-friendly urban green elements (including gardens and buildings) and people's understanding and adoption of them (e.g. plants for pollinators)
Coastal/Marine: vegetated shingle beaches, chalk cliffs & reefs (C5)	Effective conservation and recovery of marine habitat condition	Support seabed mapping and new coastal and marine conservation approaches through stakeholder dialogue e.g. marine protected areas (MCZ and marine Sites of Nature Conservation Importance (SNCIs)), and Marine Plan
Key Species Groups: Birds, Butterflies/Bees, Plants, Others (C3; C4; C5)	Effective conservation of healthy local populations of key species for conservation and services	Support targeted sympathetic management for individual groups/species, including farmland birds, downland butterflies, bees (pollinators) and Elm trees
Geology: chalk downs and cliffs (principally) (C3; C5)	Continued low-level conservation, and heightened public understanding and appreciation	Support public interpretation of the geology of our area on specific sites (SSSIs / Local Geological Sites (LGSs)) and the general landscape



ELEMENTS / ISSUES (Chapter reference)	PRINCIPLES	BIOSPHERE ADDED VALUE
<i>What is important here?</i>	<i>What is needed?</i>	<i>What will we do?</i>
<b>2. Sustainable Socio-Economic Development</b>	Reduce the 'ecological footprint' of our lifestyles through positive behavioural change	Encourage organisations (incl. Biosphere Partners) and individuals to take positive action (across principles of 'OPL')
1. Carbon / Energy (C4)	Make buildings more energy efficient and generate more renewable energy	Promote energy conservation measures to public to reduce their fuel bills and climate change impacts? Promote renewable energy generation opportunities
2. Waste / Sustainable Materials (C4)	Reduce waste, reuse as possible, recycle and recover (energy); use sustainable products (with low embodied energy)	Work with community bodies and public to reduce waste generation, increase recycling rates and compost food waste
3. Sustainable Transport (urban & rural) (C4)	Reduce the need to travel and encourage low carbon modes of transport to reduce emissions; improve sustainable access to the countryside	Promote active and low carbon travel to urban populations for its multiple benefits; work to better link sustainable access to countryside
4. Local and Sustainable Food (rural, urban & marine) (C3; C4; C5)	Choose more low impact diets; reduce food waste; connect rural producers to markets; ensure marine fisheries are sustainable	Integrate and promote healthy local growing and eating; support rural infrastructure/product-branding; support work to achieve Marine Stewardship Council (MSC) fisheries certification and encourage local consumption
5. Sustainable Water (urban demand) (C4)	Use water more efficiently in buildings and in the products we buy	Work with the public and water companies to seek to balance water demand with local available supply
6. Culture and Community (incl. Heritage) (urban, rural & marine) (C4; C3; C5)	Nurturing a culture of sustainability, community and a sense of place which builds on local cultural heritage	Encourage a sense of place and identity by working with organisations (heritage and arts) and the public to connect with their local environment (including running sustainable events/venues)
7. Local Economy (incl. Equity) (urban, rural & marine) (C4; C3; C5)	More sustainable economic development, better linked to our local environment and communities	Develop 'eco-tourism' opportunities for visitors (and residents) to sustainably appreciate the natural environment (urban greenspace, downland, coastal/marine areas); support appropriate rural diversification; encourage new development which is sustainable (e.g. environmental industries); support fair trade
8. Health and Wellbeing/Happiness (incl. Recreation & Access) (urban, rural & marine) (C4; C3; C5)	Active balanced lifestyles to promote good health and well being	Promote sustainable outdoor recreation that brings health and other benefits through greater contact with nature

<b>ELEMENTS / ISSUES (Chapter / page reference)</b>	<b>PRINCIPLES</b>	<b>BIOSPHERE ADDED VALUE</b>
<i>What is important here?</i>	<i>What is needed?</i>	<i>What will we do?</i>
<b>3. Knowledge, Learning &amp; Awareness</b>		
Research & Monitoring		
Research (in Physical, Living, and Socio-economic Environments) (C6)	Adequate focused research information on our local area which can directly inform and support its sustainable management, use and enhancement	Work with local higher education bodies and others to help to direct more applied academic research on the local environment
Environmental Monitoring (C6)	Sufficient baseline information and targeted monitoring to be able to interpret and ideally attribute environmental changes occurring over time	Help to develop more comprehensive and standardised approaches in our local area
Environmental Education		
Schools (C6)	Children and young people to develop a natural passion to be active and explore their local environment	Support formal environmental education provision in schools (including use of school grounds, local greenspace and the beach) through various local initiatives (e.g. Brighton & Hove Environmental Education (BHee) programme, Eco-Schools, Forest/Beach Schools)
Universities & Colleges (C6)	Maintenance and development of courses which have an environmental and local area focus; integration of environmental messages within mainstream curriculum	Work with local Higher and Further Education bodies on their course provision and curriculum content?
Environmental Education Centres (C6)	Good local facilities for informal environmental learning for all to interpret and engage with the local environment	Work with existing and develop new environmental education facilities and programmes that focus on the local environment (e.g. Lifelong Learning Programme, BNC, i360)
Public Awareness & Engagement	Broad public understanding, enjoyment, support and engagement to re-connect people with their local environment, and incentivise more environmentally-friendly lifestyles of residents and visitors	Facilitate a progressive 'learning journey' approach, from awareness and knowledge to 'bio-empathy' and active engagement
Nature conservation (C6)	Public understanding and appreciation of the natural environment, its needs and links to our lives	Engage people to understand and responsibly use their local natural environment through access, interpretation, events, education, volunteering and a stake in local management decisions
Environmental sustainability (C6)	Public understanding of the environmental impacts of our lifestyles and how we can make a positive difference to our world	Engage people to understand and improve the environmental impacts of our lifestyles, through interpretation, events, education, volunteering and a stake in local management decisions
Professional Training (vocational) (in environment-related topics) (C6)	A strong local skills base for the future to study, teach, manage and communicate about the environment	Work with and promote local vocational training providers on their course provision, curriculum content and potential students

ELEMENTS / ISSUES (Chapter / page reference)	PRINCIPLES	BIOSPHERE ADDED VALUE
<i>What is important here?</i>	<i>What is needed?</i>	<i>What will we do?</i>
<b>4. An Interconnected Natural Environment</b>	Integrated approaches to sustainably manage the downs, towns and coast environments	Work in partnership with a shared vision of environmental improvements to benefit nature and people
Town & Country		
Landscape Connections (C2)	Improved connections for people and wildlife to move between green spaces and habitats	Develop and improve green networks of ecological corridors
Water Resources - Ground Water (C2)	Improved groundwater aquifers (quality and quantity) for drinking water supply	Help to deliver improvement objectives for the Adur and Ouse catchment by working with rural and urban land managers and householders
Water Resources - Surface Water (C2)	Better water quality in the Adur and Ouse rivers and estuaries by reduced pollution run-off from the land	Work with rural and urban land managers and householders to reduce 'diffuse' sources of contamination
Freshwater Flood Risk Management (C2)	Sustainable, more natural measures to reduce flood risk (increasing with climate change)	Promote development of Sustainable Drainage Systems (SuDS) in urban greenspace, rivers reconnected to their floodplains, and soft coastal defences (where possible).
Land & Sea		
(Bathing) Water Quality (C2)	Sustained improved quality along our beaches for people and nature (to meet new EU standards)	Help to inform and engage the public around beach water quality and their role in improving it
Coastal Flood & Erosion Risk Management (C2)	Protect urban areas and built infrastructure through as many natural processes as possible	Promote integration of benefits for the natural environment and environmental sustainability in Flood and Coastal Erosion Risk Management (FCERM) strategies and engineered defence schemes?
Overall Approaches		
"Ecosystem Services" (C2)	An optimised balance of benefits for nature and people provided by healthy environments	Assess the services provided by local ecosystems and promote their integration in decision-makers' policy, sustainable rural land management (including new incentives e.g. PES), and public understanding
Climate Change – adaptation (C2)	Increased resilience of our environment and communities to unavoidable impacts	Support practical adaptation measures and preparedness to cope with extremes of drought and flooding, temperature, weather events, and rising sea levels
Climate Change – mitigation (C2)	Reduced emissions of greenhouse gases from energy use and land use impacts	Work with organisations and individuals to reduce energy consumption, use more eco-friendly energy sources, and avoid damaging emissions from (wet)land (and "green" buildings)
"Green Infrastructure" (C2)	Multiple use and benefits to nature and society from well-functioning green networks	Encourage a multi-functional approach to landscape design and management (especially in urban greenspace and new developments)

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