

 <p>United Nations Educational, Scientific and Cultural Organization</p>  <p>Man and the Biosphere Programme</p>	<p align="center">BIOSPHERE RESERVE NOMINATION FORM</p> <p align="center">[2013]</p> <p align="center">PART I (Final Draft)</p>
<p align="center">INTRODUCTION</p> <p>Biosphere reserves are areas of terrestrial and coastal/marine ecosystems, or a combination thereof, which are internationally recognized within the framework of UNESCO's Programme on Man and the Biosphere (MAB) They are established to promote and demonstrate a balanced relationship between humans and the biosphere. Biosphere reserves are designated by the International Coordinating Council of the MAB Programme at the request of the State concerned. Individual biosphere reserves remain under the sovereign jurisdiction of the State where they are situated. Collectively, all biosphere reserves form a World Network in which participation by States is voluntary.</p> <p>The World Network is governed by the Statutory Framework adopted by the UNESCO General Conference in 1995 which presents the definition, objectives, criteria and the designation procedure for biosphere reserves. The actions recommended for the implementation of biosphere reserves are set out in the "Seville Strategy" and were further developed in the Madrid Action Plan (2008-2013). These documents should be used as basic references for the completion of this nomination form.</p> <p>The information presented on this nomination form will be used in a number of ways by UNESCO:</p> <p>(a) for examination of the site by the International Advisory Committee for Biosphere Reserves and by the Bureau of the MAB International Coordinating Council;</p> <p>(b) for use in a world-wide accessible information system, notably the UNESCO-MABnet and publications, facilitating communications and interaction amongst persons interested in biosphere reserves throughout the world.</p> <p>The nomination form consists of three parts:</p> <p>Part one is a summary indicating how the nominated area responds to the functions and criteria for biosphere reserves set out in the Statutory Framework, and presents the signatures of endorsements for the nomination from the authorities concerned. Part two is more descriptive and detailed, referring to the human, physical and biological characteristics as well as to the institutional aspects. Part three consists of two annexes: the first annex will be used to update the Directory of Biosphere Reserves on the MABnet, once the site has been approved as a biosphere reserve. The second annex will be used to provide promotional and communication materials of the biosphere reserve. Tables, illustrations and maps as appropriate throughout the nomination form are welcomed.</p> <p>The form should be completed in English, French or Spanish. Two copies should be sent to the Secretariat, as follows:</p> <ol style="list-style-type: none"> 1. The original hard copy, with the original signatures, letters of endorsement, zonation map and supporting documents. This should be sent to the Secretariat through the Official UNESCO channels, i.e. via the National Commission for UNESCO and/or the Permanent Delegation to UNESCO. 2. An electronic version (on diskette, CD, etc.) of the nomination forms and of maps (especially the zonation map). This can be sent directly to the MAB Secretariat: <p>UNESCO Division of Ecological and Earth Sciences 1, rue Miollis F-75352 Paris Cedex 15, France Tel: ++33 1 45 68 41 51 Fax: ++33 1 45 68 58 04 Email: mab@unesco.org http://www.unesco.org/mab</p>	

PART I : SUMMARY

Introduction

We propose that the Brighton & Hove and Lewes Downs becomes a UNESCO Biosphere Reserve as an international best-practice area that brings people and nature closer together and aspires to be “world class by nature”. Our aim is “to create a world-class environment, that is economically successful and enjoyed by all – forever”.

We seek to use the proposed Biosphere status to better care for, manage, and enjoy our special local environment of countryside, coast and urban areas. Indeed our Biosphere proposal stands out because of the closely entwined nature of these three environments within a discrete and relatively small geographic unit, and the integrated approach that we are pursuing to their conservation and management.

The rural, urban and coastal/marine areas that make up our local environment sustain many of the daily needs of the *almost 400,000* people that live here through the “ecosystem services” that they provide. These services range from water supply to local food, natural waste treatment, fresh air and open space for relaxation and inspiration. Our environment acts as a magnet for around 12 million visitors annually, and is key to the sustainable economic development of the area. Such a large human population and visitor numbers create significant pressures on our natural environment however, which is home to thousands of other species here, emphasising the need for a balance to be struck between our needs and sustainability of the wider environment.

There are a variety of important and rare wildlife habitats in our area, from chalk grassland on the downs to wetlands in the river valleys and estuaries, and from the networks of urban greenspace to the vegetated shingle beaches and chalk cliffs and reefs of the coast. These habitats support almost a thousand locally rare species, of which about 180 are national biodiversity conservation priorities. The connections of ‘green networks’ for wildlife and people between town, country and coast are significant, from the fingers of National Park downland that extend in to Brighton & Hove, itself host to the National Elm collection, to the chalk cliffs walkway along the coast. Our area has a rich human heritage that is closely linked to the natural environment, which has developed from nationally significant early Neolithic settlements and was traditionally based on fishing and farming. Our area then came to prominence in the Regency period (late 18th century) as a royal coastal resort with health giving properties. In modern times it is now internationally renowned as a centre for contemporary culture, arts and digital media.

Our proposed new Biosphere Reserve is composed of a natural geographic unit in ecological and cultural terms, centred on the South Downs chalk block between the River Adur at Shoreham in the west and the River Ouse at Newhaven in the east. It covers an area of 389 square kilometres (150 square miles) or 38,921 hectares (96,175 acres), just bigger than the nearby Isle of Wight. Three-quarters of the area is on land and one-quarter is the sea.

The proposed “Core Area” is made up of 13 existing national Sites of Special Scientific Interest (SSSIs), two of which are chalk downland European Special Areas of Conservation (SACs), that cover about 4.5% of the proposed Biosphere Reserve. The surrounding rural “Buffer Zone” of the South Downs National Park makes up the principal land area for inclusion, with a marine Buffer Zone represented by the statutory recommended Marine Conservation Zone (rMCZ) of Beachy Head West along the coast. The “Transition Areas” on land are composed of the city of Brighton

& Hove, together with the smaller urban settlements of Lewes, Newhaven, Peacehaven, Telscombe, Shoreham, Shoreham Beach, and Southwick. The near-shore English Channel sea (out to approximately 2 nautical miles offshore) makes up the marine Transition Area.

A designated international Biosphere Reserve will complement the existing South Downs National Park by including the large urban coastal settlements and their people directly in the whole area's conservation and development, as well as making an explicit connection to the adjoining sea.

Biosphere status will help us to better integrate the three objectives of nature conservation, sustainable socio-economic development, and logistic support (or knowledge, learning and awareness) through a holistic approach based on strengthening further the partnership working and diversity of local initiatives in our area.

Our area has a strong and rich heritage of partnership working across the public and voluntary sectors and civic engagement in measures to improve the environment and pursue sustainable development. This can be traced back at least in part to the former body of the Brighton Corporation having the foresight and vision to buy downland areas one hundred years ago to protect groundwater supplies and prevent uncontrolled development. Indeed our area today is known nationally for its focus on environmental issues by local authorities, decision-makers and the interest of its people, with many actively engaged through volunteering and community groups.

The Brighton & Hove and Lewes Downs Biosphere Partnership continues to grow to now include more than thirty public, educational, community, voluntary and private sector organisations. We see Biosphere status as an opportunity to raise our natural profile, attract new grant funding and stimulate fresh economic opportunities (for example 'eco-tourism'), and support local action.

Biosphere status will be used to engender a stronger sense of community engagement and pride in the local environment, through more environmental education, hands-on experience and practical volunteering opportunities. We will also encourage further links between local learning institutions and environmental managers, as well as through the new connections to international Biosphere networks, to further the knowledge needed to address our conservation and development challenges. Our Biosphere Partnership is working to realise these potential benefits by seeking "win-win" solutions for people and nature for a better more environmentally-friendly life as a new Biosphere Reserve.

Our proposal helps to implement a number of the targets of the UNESCO MAB Madrid Action Plan 2008-13, in particular through our:

- Extensive local communication and public engagement work (Target 6: Communication strategies integrated);
- Innovative work to further sustainable development (Target 8: Linkages with sustainable development initiatives)
- Broad and inclusive partnership process (Target 10: Participatory processes);
- Green Network / Infrastructure mapping and enhancements programme (Target 14: Cooperative conservation and development strategies);
- Substantial applied research activity through the two universities and other learning institutions present (Target 16: Site-based policy-relevant research programmes);
- Local studies and action underway on ecosystem services (Target 19: Research programmes on ecosystem services and management)

- Developing relationships with local research bodies to support management and improvement actions (Target 20: applied research programmes linked to management)
- Inclusion of significant urban areas that are closely linked to their surrounding environment (Target 23: mechanism to address urban issues in a regional context);
- Progress made in securing funding internally and externally e.g. major grant from the national 'Nature Improvement Area' programme (Target 25: Improved financial mechanisms);
- Developing work with the private sector including water supply, public transport and tourism bodies (Target 27: Increased private sector involvement)

1. PROPOSED NAME OF THE BIOSPHERE RESERVE:

[It is advisable to use a locally accepted geographic, descriptive or symbolic name which allows people to identify themselves with the site concerned (e.g. Rio Platano Biosphere Reserve, Bookmark Biosphere Reserve). Except in unusual circumstances, biosphere reserves should not be named after existing national parks or similar administrative areas.]

Brighton & Hove and Lewes Downs Biosphere

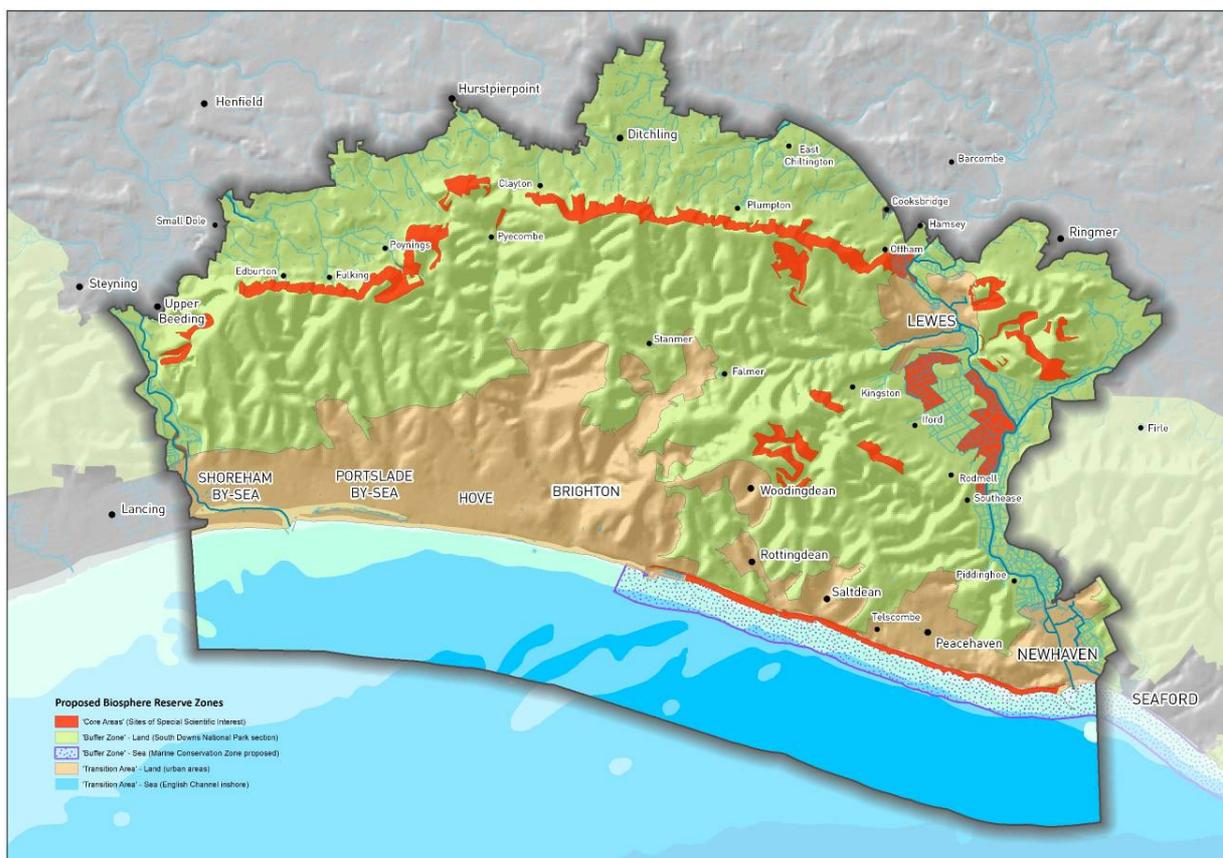
2. NAME OF THE COUNTRY:

England, United Kingdom

Location Maps



UK Biosphere Reserves and Zones, incl. proposed Brighton & Hove and Lewes Downs Biosphere



Proposed Brighton & Hove and Lewes Downs Biosphere Reserve

3. FULFILLMENT OF THE THREE FUNCTIONS OF BIOSPHERE RESERVES

[Article 3 of the Statutory Framework presents the three functions of conservation, development and logistic support. Explain in general terms how the area fulfills these functions.]

3.1 "Conservation - contribute to the conservation of landscapes, ecosystems, species and genetic variation".

(Stress the importance of the site for conservation of biological and cultural diversity at the regional or global scales.)

Three distinct but inter-related environments make up our proposed Biosphere Reserve area:

- Rural environment of part of the South Downs National Park, centred on the chalk block between the River Adur in the west to the River Ouse in the east;
- Coastal and marine environment of the English Channel, running from Shoreham Harbour in the west to Newhaven Harbour in the east and extending out to the subtidal chalk outcrops that lie up to c. 2 nautical miles offshore;
- Urban environments of Brighton & Hove, Lewes, Newhaven, Peacehaven and Telscombe, and Shoreham, Shoreham Beach and Southwick, home to *almost 400,000* people

Our region boasts a number of notable natural assets including:

- internationally important rare chalk downland (including 2 European SAC sites), coastal cliffs and subtidal reefs;
- chalk grassland of the South Downs National Park (the UK's newest and most populated national park) that extends from the surrounding downland right in to the heart of the city and towns, connecting to urban greenspace networks
- the UK's National Elm Collection in Brighton & Hove, the principal place in the country where such mature elm trees still survive following Dutch Elm Disease in the 1970s thanks to our geography and an active control zone in operation, and the largest and most diverse collection of elm trees anywhere in the world;
- night-time roosts of thousands of starlings on Brighton's piers, and large numbers of herring gulls (the symbol of the local football team) which though locally prevalent are a globally threatened species;
- the largest and most remarkable of all chalk dry valleys in Britain at Devil's Dyke as an outstanding feature of periglacial chalk geomorphology;
- the best and most extensive exposure of the *Offaster pilula* geological zone in England at 'Brighton to Newhaven Cliffs' SSSI, with an ancient "raised beach" and cliffs that comprise one of the most extensive sections of ice age geology visible in Northern Europe, spanning a period of a quarter of a million years;
- one of the most complex and well-dated early Neolithic human settlements in Britain at the "causewayed camp" at Whitehawk in Brighton, with evidence of the lives of the earliest farming communities.

The range of landscapes, ecosystems, species and genetic diversity in our area are summarised below.

Landscapes

The principal landscapes of our proposed area are:

- Brighton Chalk Block – stretching between the River Adur and River Ouse, it is part of the Natural England National Character Area of the South Downs that extends from east to west across Sussex and in to Hampshire. Together with the adjoining block of the Lewes Downs, it makes up the principal terrestrial landscape of our area and is characterised by mostly open "whale-backed" windswept downland based upon a chalk geology of >100-million year old Cretaceous deposits. The expansive landscape of the South Downs is characterised by vast, open, and exposed areas dominated by large agricultural fields, with limited woodland and scrub areas.

- River Valleys – the Adur and Ouse represent two of the four major rivers of the South Downs. They flow from the High Weald and Low Weald (and Lower Greensand) national character areas southwards into the sea and have carved out the chalk blocks into discrete landscape units over geological time. These two tidal rivers meander through wide flat floodplains, enclosed by steep-sided chalk slopes, to form distinctive U-shaped valleys leading down to estuaries on the coast. The river valleys are characterised by meandering river channels, although these have been straightened and embanked by levees along much of their lengths, with networks of drainage ditches dissecting the largely pastoral floodplain.

- Coastal Plain – a narrow flatter (urbanised) coastal plain lies in the west running from central Brighton to the estuary of the River Adur at Shoreham (and beyond).

- Coast and inshore marine – coastal chalk cliffs extend from Brighton Marina eastwards to the estuary of the River Ouse at Newhaven (and beyond to Beachy Head near Eastbourne). The moderately exposed sea of the English Channel has a relatively flat and gently shelving seabed down to shallow depths of less than 15 metres. The inshore marine environment here is made up of a chalk reef of eroded gullies in the east, and a subtidal ledge of discontinuous chalk outcrops extending offshore westwards following the line of the 10m depth contour. The benthic environment is composed principally of extensive sand wave fields which in places are broken by exposed bedrock and mixed sediments of lag gravel deposits.

Ecosystems, Species, & Genetic variation

The main habitat types found in our local area, together with their associated species, are summarised below (according to the three Biosphere environments that they occur in).

Whilst there are no globally or nationally endemic species found in the proposed Biosphere area, there are around 180 species defined as a national conservation priority (including 32 that are legally protected) and almost one thousand considered locally rare.

Important local genetic varieties of species furthermore include unique elm tree varieties and cultivars as well as wild apple tree varieties found in Brighton & Hove. The domesticated breeds of South Downs sheep and rare Sussex cattle, that graze the downland and river valleys respectively, are also distinctive.

Rural environment:

- Farmland

Though mostly comprised of intensive arable cultivation and extensive agriculturally improved livestock-grazed grassland, the South Downs here also supports important examples of lowland chalk grassland.

This habitat has the greatest botanical diversity in the UK and contains many beautiful and rare invertebrates and other animals. Characteristic species include the round-headed rampion and early spider orchid plants, wart-biter cricket and Adonis blue butterfly insects, and birds such as skylarks. Much chalk grassland has been lost over the past sixty years due to both agricultural intensification and abandonment of marginal land, leaving remaining linear fragments mostly within the protected areas of the northern scarp steep downland slope.

The surrounding matrix of more intensive agricultural land is a mixture of arable and pastoral farmland. It includes widespread application of agri-environment scheme options for the characteristic wildlife present, notably farmland bird species such as the corn bunting, skylark and yellowhammer, as well as brown hares and rare arable annual 'weeds'.

- Deciduous woodland (and scrub)

Woodlands are generally relatively small and sporadic on the Downs in our area, consisting of farm plantations as well as recent secondary woodland and chalk scrub. More substantial ancient woodlands exist mainly on the north side of the Downs, as well as historic estate parkland. Ancient woodlands typically support the highest diversity of native flora and fauna in the UK, including many ancient woodland indicator plant species (such as the iconic spring carpets of bluebells) and animals such as White Admiral butterflies, dormice and various bat species.

- Freshwater wetland

The two river valleys both contain limited areas of remnant wetland habitats, including floodplain grassland and grazing marsh, fen, extensive field ditch systems and small reed beds. Offham Marshes SSSI is notable for supporting one of the best natural wet “carr” woodlands fed by chalk streams in the UK. Wetland species interest includes large numbers of wintering and breeding birds such as lapwing, redshank and snipe, migrant warblers (Reed, Sedge and Cetti’s), amphibian species including great-crested newts, and plants such as Greater Water-parsnip?

Although the chalk downs generally lack surface water, they do support some of the best-known examples in the UK of “near-natural” headwater chalk streams at their bases, emerging from the north scarp slope spring lines. Many of these streams provide breeding gravels for rare sea trout in the winter. There are also a series of historic manmade “dew ponds” for livestock-watering, which serve as islands of fluctuating aquatic habitat in a landscape of free-draining chalk for cryptic species such as the fairy shrimp.

Coastal and marine environment:

- Coast

The protected cliffs from Brighton Marina to Newhaven include substantial linear areas of chalk grassland on their tops with rare coastal species such as Strawberry Clover. The cliffs provide nesting niches for birds, including fulmars and a remnant colony of kittiwakes. To the west patches of the internationally rare habitat of vegetated shingle occur, with plants such as the rare sea knotgrass, although most of the coastline here is developed and intensively regulated and managed.

- Intertidal zone

A wave-cut chalk platform runs east from Brighton to Newhaven within the nationally protected Site of Special Scientific Interest (SSSI) here, with a series of parallel gullies and ridges with rocky tide pools supporting characteristic species such as sea anemones, blue mussel and native oyster beds. To the west the intertidal area is made up of Brighton & Hove's and Shoreham's shingle beaches. Brighton Marina represents a very sheltered lagoon environment that supports a diversity of species more typical of deeper water habitats, including protected short-snouted seahorses. The underwater footing structures of Brighton's two piers additionally provide hard substrates for locally uncommon species associated with rocky coasts.

- River estuaries

The Adur (a SSSI) and Ouse rivers contain a variety of substrates but have been considerably modified and constricted with hard edges by man. The Adur estuary does however include fringing saltmarsh vegetation, a very rare habitat along the coastline of the county of Sussex, with plants such as glasswort and small but increasing amounts of the introduced cord-grass. Furthermore their mudflats are important for wading birds, including ringed plover, redshank and dunlin in the lower Adur. The estuaries also provide rich feeding grounds for fish and crabs as well as being important juvenile marine fish nurseries. At the seaward end of the Adur, the Shoreham outer harbour area is a haven for a host of marine flora and fauna and supports small numbers of wintering purple sandpipers.

- Subtidal zone

The subtidal chalk reef of the recommended Marine Conservation Zone (rMCZ) of 'Beachy Head West' runs parallel to the SSSI from Brighton to Newhaven and beyond. It includes notable species such as long- and short-snouted seahorses, blue mussel and native oyster beds, mobile eel populations, and sea squirts. There is also a discontinuous chalk ledge to the west off Brighton, which gives rise to a unique series of low underwater north-facing chalk cliffs. These include local marine wildlife sites (mSNCl) that support a dense hydroid-bryozoan animal "turf". Other seabed habitats include a series of large sandwaves in the shallow waters to the east, lying offshore of the foot of the chalk block, giving the seabed an undulating profile which forms the seasonal spawning grounds for many fish species such as the fascinating and economically important black bream. Biological records are held for more than three hundred marine sample sites and species in this area.

- Open coast

The English Channel here is seasonally visited by cetacean species (porpoises and dolphins mainly), although their abundance has apparently declined. A wide variety of seabirds feed and nest in the area - especially gulls, auks, gannets and kittiwakes whereas rarer species such as terns, sea ducks, grebes and fulmar are also present. The seas support a wide diversity of fish species, many seasonal in their occurrence, including undulate ray, black bream, twaite and allis shad, Atlantic salmon and sea trout, and sharks including porbeagle and basking shark.

Urban environment:

- Urban green spaces

The urban areas of Brighton & Hove, Lewes town and the coastal settlements of Newhaven, Peacehaven and Telscombe, and Shoreham generally contain extensive networks of greenspace. These include public parks and other open spaces such as housing estates and school grounds, allotments, cemeteries and previously developed "brownfield" sites as well as numerous private gardens. Urban greenspace in Brighton & Hove and Lewes town especially is relatively well-

connected to the rural countryside on their margins, and several publicly accessible urban fringe sites such as East Brighton park and Landport Bottom respectively contain important chalk grassland. Brighton & Hove's urban greenspace covers about 575 hectares as part of its mapped "Green Network", including a number of designated Local Nature Reserves (LNRs). Lewes District includes a number of LNRs also on its urban fringes, including at Lewes Railway Land LNR and Castle Hill, Newhaven. A broad range of local wildlife sites (Sites of Nature Conservation Importance, SNCIs) have been additionally identified for planning protection in our area. With regard to species, research by the University of Sussex demonstrates the importance of urban greenspace and vegetation in Brighton and Lewes as a nectar source for honey bees, a critically important pollinator of domestic and agricultural plants that has been suffering grave declines.

- Urban green features

Natural vegetation is also found in the streets and houses of the built environment in the form of trees in civic spaces and streets, and the growing numbers of vegetated buildings (green roofs and walls) being developed. There are some 12,000 individual street trees in Brighton & Hove, including part of the National Collection of Elms (made up of some 19,000 trees across the city, including parks and open spaces), the only place in Britain where such a diversity can be found. The two largest known English Elm trees in the world are located in the city's Preston Park. The White-letter Hairstreak butterfly is particularly associated with Brighton's unique National Elm Collection of street and park trees.

Brighton & Hove has a number of well-established examples of "green buildings" and they are also part of many new developments. One of the largest and oldest green walls in existence is found along the seafront of Madeira Drive, which extends for over a kilometre in length and is more than ten metres high. The 'One Brighton' housing development near Brighton Station has rooftop allotments, as well as solar photovoltaic panels on a 'brown roof', a biomass boiler, and is essentially car-free with substantial cycle facilities. In Lewes the Linklater Pavilion has a sedum roof, as well as photovoltaic cells, a ground source heat pump and its own water supply. Brighton & Hove is renowned for its large populations of starlings (a threatened species), that roost on the city's piers and breed in the roof spaces of houses. Our urban areas also host migrant swifts (declining in number), majestic peregrine falcons (recovering in number) and ravens by Lewes (probably breeding), as well as the iconic Herring Gull (locally ubiquitous, yet globally threatened).

3.2 "Development - foster economic and human development which is socio-culturally and ecologically sustainable".

(Indicate current activities and the potential of the proposed biosphere reserve in fulfilling the objective of fostering sustainable economic and socio-cultural development, including by securing flows of ecosystem services from the biosphere reserve.)

Our proposed Biosphere Reserve area is home to *almost 400,000* people. It is nationally and internationally renowned for its arts and culture, distinctive settlements, independent mindset, and its links to the surrounding iconic English landscape of downland and white chalk cliffs. Because of its innate qualities and its proximity to London (55 miles by road or less than one hour away by train) our area is a magnet for tourists, welcoming up to 12 million visitors per year.

- Historic/cultural background

There is evidence of settlements in the area since Neolithic times, with Newhaven and Lewes established as Anglo Saxon settlements in the 5th and 6th centuries and Brighton's predecessor fishing village of Brighthelmston appearing in the Domesday Book of 1086.

Brighton supported the largest fishing fleet in the region until the 1700s, with fish carried over the Downs to Lewes on the historic Juggs Road, whilst on land the economy was based on mixed farming of sheep and corn. Brighton became famous as a health and then tourist resort in the late eighteenth century, thanks to Dr Richard Russell who extolled the health giving properties of sea water and air, when the renowned Brighton Pavilion was built by the prince regent George IV. Another famous local doctor was Gideon Mantell who became an expert on local fossils and dinosaur bones and founded the Sussex Scientific Institution in Brighton in the 1830s. The urban development of Brighton from Regency and Victorian times with the arrival of the railways has bestowed a legacy of great architecture. One of the first public electric railways in the world was created in 1883 by Magnus Volk along the seafront of Kemptown and still operates today. The Victorians built a railway to the Downs at Devil's Dyke, attracting more than one million visitors each year which helped to raise popular awareness of their importance. Indeed the former Brighton Corporation purchased much downland in the early 20th Century to protect its water supply and undeveloped nature, with the mayor Sir Herbert Carden being a key figure in this.

Lewes became an important town in Norman times and contains the remains of Lewes Castle and a medieval priory, part of a rich and varied architectural heritage that includes over 500 listed buildings. It was the site of a famous battle in 1264 (the 2nd Baron's war) which led to the defeat of royalist forces by Simon de Montford, who for a short while became the "uncrowned King of England". To this day Lewes is nationally renowned for the burning of protestant martyrs and the attempt by Guy Fawkes to destroy the national Houses of Parliament, giving rise to its famous Bonfire Night. Lewes was also home of the radical author Thomas Paine from 1768–1774 before he emigrated to the US and inspired the American declaration of Independence with his pamphlet 'Common Sense'. Newhaven is known for its port harbour and Palmerston fort, the largest defense work ever built in Sussex. The settlements of Peacehaven (the southernmost point of the Greenwich meridian line in Britain) and Telscombe were created in the early 20th century. + ADC Shoreham as well as St Anne Wells Gardens (Hove) had connections with the development of early cinema, with Brighton a popular location for making films in modern times.

The close association between sites of both archaeological/historical and ecological interest in our area presents a good opportunity for public understanding and engagement, with a partnership formed to take this forward as a combined approach.

- Current socio-economic activities

Brighton & Hove has continued to evolve from being a seaside resort to a service sector economy, and was recognised with city status in 2001. Today it has a population of 273,000 people, including a significant proportion of young people and gay people. It is especially known as a contemporary centre for arts and culture, as demonstrated by Brighton Festival (the largest in the UK after Edinburgh) and associated Fringe Festival (the second largest in the world). It plays a lead role regionally in "creative entrepreneurship" and is a centre of financial industries, digital companies and, increasingly, environmental technologies. It has two internationally renowned universities, hosting around 35,000 students, as well as numerous language schools and other learning institutions. It has a reputation for progressive social and environmental activism, and there is a strong and long-standing public interest in the environment, underpinned by a wide range of civil society groups concerned with their local environment.

Lewes town has also been a magnet for innovative and progressive people, and as the county town of East Sussex is home to a number of public authorities and serves as a rail and bus gateway to the

South Downs National Park (of which it is part). Lewes town hosts an annual internationally renowned bonfire celebration run by a number of historic societies. Newhaven is currently entering exciting times as a key economic regeneration area, which is intended to strengthen employment opportunities, including the development of a new university technical college. Planned port improvements will further bolster this important link to mainland Europe for ferry passengers and freight, as well as supporting the local fishing fleet. + ADC Shoreham

Socio-economic challenges exist for our area however. Brighton & Hove in particular is constrained in its size and future growth through its geography, being sandwiched between the sea and the protected South Downs National Park. Some of Brighton & Hove's areas have been identified as facing high levels of disadvantage, with 12% within the ten per cent most deprived local areas in England and two in the most deprived one per cent. This is manifested in marked differences in physical and mental health and life expectancy between neighbourhoods. The four Lewes District urban settlements generally have low levels of deprivation, but there are low-income pockets in three of the settlements.

The local economy and population of the proposed Biosphere area are heavily reliant on the productivity and quality of the natural environment. Visitor tourism is a particularly important economic sector, receiving as many as 12 million visitors each year. Brighton & Hove receives some 8.5 million visitors per annum, as one of the most popular UK cities for tourists after London. They contribute over £732 million to the local economy and the industry employs approximately 14% of the city's workforce (through some 17,500 jobs).

Lewes District is also an important visitor destination, with 3.1 million visitors each year over the whole area who make a combined spend of £155m, supporting 2,300 jobs. Local residents additionally make up a significant proportion of recreational activity and expenditure, including outdoor activities in the rich summer programme of events in parks and on the Downs and coast.

The tourism industry in the area remains largely buoyant despite difficult economic conditions in recent years. Tourism creates pressure on the local environment, including water consumption, vehicle traffic and visitor activity tending to concentrate on core routes and a limited set of "honey pot" areas such as the central seafront and a few well-known South Downs sites. Brighton & Hove City Council (BHCC) is developing an eco-tourism strategy, and launched a 'Green Brighton Guide' for visitors in 2012.

Other economic activities based upon the local environment include harvesting and extraction of primary resources, especially through farming and commercial sea fishing. The majority of the rural environment is farmed. BHCC owns 4150 ha of downland estate, which was bought up in the early 20th Century to protect the city's water supply, preserve green areas and provide recreational opportunities. The land is worth approximately £38.5 million and supports more than 75 full time jobs through by tenanted to farmers. Other rural land use includes some native forestry and country sports (hunting/shooting) activity.

On the coast, the ports of Newhaven, Shoreham and Brighton Marina harbour a fleet of more than forty registered commercial fishing vessels, mostly smaller inshore boats which fish using a variety of mainly static fishing methods and typically land their catch fresh daily. Much of the catch goes to local and regional (including London) markets and restaurants, with the remainder going to mainland Europe where there is high demand. Recreational fishing of both the sea and rivers is a

significant leisure sector, with sea-fishing boats operating out of all three ports and private angling also taking place from the shore.

- Sustainable development potential

There is already a good track record of pursuing more sustainable development in our area, with significant plans to improve further in future. The two main local authorities of Brighton & Hove City Council (BHCC) and Lewes District Council (LDC) were early signatories to the 10:10 Campaign to cut carbon dioxide emissions. Brighton & Hove was the only UK city to be placed in the top three most sustainable cities in each of Forum for the Future's 'National Sustainable Cities Index' assessments. Brighton & Hove City Council was the first in the country to implement an environmental management system that also met the requirements of the new British Standard for Sustainable Events (BS 8901). Lewes District Council has held EMAS accreditation since 1999 and the International Standard ISO 14001 in environmental management since 2002. East Sussex County Council (ESCC) adopted a wide-ranging and ambitious Environment Strategy in 2011. The South Downs Management Plan by SDNPA will include a sustainability appraisal of all the policies contained within it. + ADC / WSCC

BHCC has adopted the 'One Planet' approach of BioRegional and WWF as its practical framework for furthering sustainable development of both its own operations and partnership working across the city. It was confirmed as the world's first approved 'One Planet City' in 2013, based upon its adopted three-year Sustainability Action Plan to implement measures for each of the ten 'One Planet Living' principles of sustainable development: zero carbon, zero waste, sustainable transport, local and sustainable food, sustainable materials, sustainable water, land use and wildlife, equity and local economy, culture and community, and health and happiness. LDC meanwhile is promoting its 'Smarter Living' programme to reduce the ecological footprint of the district and help people to adapt to climate change impacts.

Two economic environmental growth areas are identified in BHCC's Economic Strategy (2013-18) which aims towards becoming a low-carbon economy and links to 'One Planet Economy' aims, as well as the current Brighton City Deal initiative to become a nationally recognised 'Eco tech' hub for the region. One proposed environmental growth area is the environmental technologies sector, including construction sector retrofit of energy efficiency measures as well as renewable energy generation. The second is evolution of the tourism offer to visitors focussed on local food and eco-tourism, with links to the proposed Biosphere Reserve including through more sustainable access and appreciation of the South Downs, coast/sea, and urban greenspace.

- Ecosystem Services flows/inputs

The human population of our area are highly dependent on the local provision of ecosystem services, although they may not necessarily be aware of this, with the key service being water supply from the chalk groundwater aquifer which provides 100% of our daily needs to survive. Other services include watershed protection (e.g. from flooding) and provision of local food and outdoor health and recreation.

A number of initiatives in the proposed Biosphere area are presently working to develop and apply the concept of ecosystems services locally to value what the natural environment provides to human well-being here, as a means to better conserve and integrate it in socio-economic policy application. The 'South Downs Way Ahead' Nature Improvement Area (NIA) project has a particular focus on chalk grassland habitats and chalk aquifer groundwater quality, and a pilot project by the Lewes & Ouse Valley Eco-nomics (L&OVE) group is working with local stakeholders

to identify, map and value the services of greatest significance in our area and raise awareness of our links to them.

Natural England's work to characterise the South Downs 'National Character Area' has identified a number of important services here:

1. Provisioning services –

- food provision (cereals and lamb)
- water availability from the Brighton Groundwater Management Unit (under pressure)

2. Regulating services –

- climate - carbon sequestration by increasing organic matter inputs and by reducing the frequency / area of cultivation
- soil erosion - similar links to climate measures above
- freshwater flooding - increasing natural water storage and infiltration on the Downs and managing run-off
- coastal flooding/erosion – mitigation through natural processes and habitats as possible

3. Cultural services –

- recreational opportunity - important on the South Downs for the health and wellbeing of the wider population in the South East region
- less tangible values – including provision of a sense of place, history, and inspiration to local people
- tranquillity and dark night skies
- biodiversity - especially the internationally important lowland chalk grassland
- geodiversity - especially the coastal chalk cliffs

3.3 "Logistic support - support for demonstration projects, environmental education and training, research and monitoring related to local, regional, national and global issues of conservation and sustainable development".

(Please indicate current or planned activities.)

Current Activities:

A wide variety of activity related to environmental education, research and training, and public engagement is already taking place in our proposed Biosphere Reserve area. There is a strong foundation in place for such activity, given the presence of two major universities and around a hundred local schools and further education colleges (and a number of environmental education centres and special projects), set against the background of a high degree of public interest in their local environment.

- Environmental education

Environmental education in various guises is provided through the primary and secondary school curriculum to tens of thousands of school children in the area. The Brighton & Hove Environmental Education (BHee) programme (2011-14) is being delivered for BHCC by the NGOs of Sussex Wildlife Trust (SWT) and Resource Futures through pupil workshops, teacher training, dedicated materials and support. Other partnerships operate in Lewes between voluntary environmental organisations (such as the Railway Land Wildlife Trust) and individual schools. More widely across the whole National Park, SDNPA is developing the 'Our South Downs' educational programme to reach out with an outdoor learning curriculum to the more than half a million children in the 700+ schools that are located within or close to its boundary. +ESCC/WSCC?

Many schools in the Biosphere area have been awarded 'Eco School' status at varying levels, with some being real pioneers of sustainable practices and diversification of their school grounds. There is also a range of extra-curricular initiatives such as SWT's 'Forest Schools' local programme, 'Wild Beach' pilot project (involving SWT and Sussex IFCA), and greening of school grounds for biodiversity by the Lewes Wildlife Project.

At further and higher education levels there are many students taking specialist environmental courses. The University of Brighton runs thirteen undergraduate degree courses and ten Masters courses with a core environmental focus, whilst the University of Sussex offers three and one such courses respectively. The land-based Plumpton College meanwhile runs a variety of more vocational courses focussed on countryside management at the levels of both Higher Education (FDSc – 4 courses) and Further Education (BTEC Levels 2 & 3 – 5 courses).

For both children and adults alike there are a number of specialist local environmental education centres that provide learning resources and activities to a range of different groups. The Linklater Pavilion community environmental change study centre is a recent dedicated facility in Lewes, whilst the Dorothy Stringer Environmental Centre, Brighton Peace and Environment Centre and Booth Museum of Natural History are all active in Brighton.

- Research and training

Academic and applied research and monitoring in our proposed Biosphere area is led by the two local universities of Brighton and Sussex, who together have almost 40,000 students and staff, and have both been rated within the top three greenest universities in the UK. A very wide range of research is carried out, a proportion of which focuses specifically on the local environment, with other active institutions including Plumpton College, local colleges, secondary schools, statutory and charitable bodies, and many knowledgeable local societies and individuals. Areas of research include for example developing greener technologies in sectors such as transport and energy; ecological research on diverse local habitats (especially chalk grassland), key species (including honey bees), and monitoring of designated sites; and social science research on subjects such as tourism and leisure, outdoors health, access and human relationships with nature.

A broad range of applied and vocational training is available locally to people concerned with our environment, including: practical short courses for adults run by Plumpton College; more technical courses by the two Universities; teacher training in environmental education delivery; public courses such as those of the Sussex Wildlife Trust (who run over a hundred nature courses annually); and internal staff training of Biosphere partner organisations. All students at Plumpton College receive practical work experience, whilst all UoB students (& UoS?) have the option of carrying out volunteer placements to gain professional experience.

- Public engagement

An impressive array of environmental engagement activities on nature conservation and sustainable development take place for local people in the area, delivered by a mixture of public, charitable and community groups. A great range of group meetings and public events take place throughout the year, backed up by a significant proportion of regular volunteers (part of the almost 20,000 volunteer positions in Brighton & Hove alone that contribute some £100 million of work annually). Nature conservation work, for example, is undertaken by around fifty local Friends groups across the area, actively supported by the council ranger services of BHCC and LDC.

Both residents and visitors receive environmental information through a wide range of media including websites such as the Green Brighton Guide, site-based interpretation panels, public exhibitions including at local museums, at cultural events including the Brighton Festival and Fringe, and through a multitude of both printed and online information materials. The numerous topics covered range from wildlife surveys to environmental sustainability including climate change action and local food-growing, to initiatives on outdoors health such as “green gyms”, disability action, environmental arts, archaeology and heritage.

Future Activities:

As part of our wider process for developing a future action plan derived from our management strategy (see section 4.7c), the higher education partners will work further with the Biosphere Partnership to address the specific research questions identified to be able to allow us to better understand and monitor our Biosphere area. This will involve developing a Research Plan for the Biosphere that sets out the baseline situation and determines the research that will be required to complement the monitoring activities under broad subject areas to enable us to evaluate our positive impacts over time. These areas will span our three principal objectives and could make use of national or local ecosystem services frameworks for example as an organising structure. The principal mechanism to address applied issues will be through university student projects, both postgraduate and undergraduate, with links made to wider spatial areas as possible including the World Network of Biosphere Reserves.

A broad spectrum of plans and proposals already exists for the future across the three components of “logistic support” set out above. Key initiatives that are being progressed or are planned include the examples below.

- Environmental education – proposal for a £5m development of a new flagship ‘Big Nature Centre’ on the Surrenden campus to expand educational and community environmental learning and teaching capacity for Brighton & Hove and beyond; University of Brighton involvement in development of the Newhaven ‘CleanTech’ University Technical College (for 14-19 year olds) specialising in marine and environmental engineering to support the regional growth of marine and environmental industries through engagement with business and community partners; and an increased focus by Plumpton College on leisure tourism including outdoor education through a new degree programme.

- Research and training – research questions will be identified with the universities to direct student investigations that can help to support sustainable management of the area. The University of Brighton will further expand its environmental research associated with clean energy, waste management, bio-contamination treatment/monitoring, ecological diversity of different environments, and social science research into tourism, outdoors health, land access and engagement with nature to inform and support the Biosphere project through its regional research impact. Specific examples include work with Shoreham Port to address marine erosion, novel tidal energy development, and ‘Connected Communities’ research. It will also lead the ‘Green Growth Platform’ for Sussex in 2014-19 to stimulate growth of environmental sectors companies, provide support to improve their performance and stimulate public and business demand. The Community University Partnership Programme (CUPP) will be a principal mechanism to provide university support for wider research and training projects for the Biosphere through provision of specialist workshop, student volunteers and academic support. + UoS? There is scope for each of the higher education institutions to develop more specific short training courses for adult learners to meet

identified needs and interests in the local area, with Plumpton College specialising in practical subjects.

- Public engagement - a partnership of organisations including SDNPA, BHCC and University College London are developing a proposed major funding bid to engage local people with their environment through an integrated approach to interpreting and managing our cultural and natural heritage; and BHCC and SDNPA are working together on a proposed major funding bid to restore Stanmer Park by Brighton and make it a high-quality visitor gateway to the national park.

4. CRITERIA FOR DESIGNATION AS A BIOSPHERE RESERVE

[Article 4 of the Statutory Framework presents 7 general criteria for an area to be qualified for designation as a biosphere reserve which are given in order below.]

4.1. "Encompass a mosaic of ecological systems representative of major biogeographic region(s), including a gradation of human interventions". (The term "major biogeographic region" is not strictly defined but it would be useful to refer to the Udvardy classification system (http://www.unep-wcmc.org/udvardys-biogeographical-provinces-1975_745.html)).

The proposed Brighton & Hove and Lewes Downs Biosphere Reserve is located in biogeographic terms within the temperate broad-leaf forests biome of the British Islands province of the Palearctic realm (based on the Udvardy 1975 classification system). It includes all of the principal characteristic habitats and land uses that represent this part of the South Downs and coastal area of Sussex. Our proposal is holistic in nature by including all three of the main environments that occur in and around the unit of the Brighton chalk block, namely rural downland and countryside, coastal and marine areas, and major urban settlements.

As such a significant gradation of human modification is included within the principal habitats represented, in the following approximate order (from relatively natural through to entirely anthropogenic in origin and existence):

- Coastal chalk cliffs (SSSI) – most of the eastern part is in a relatively natural state, whereas the western end is protected by concrete sea defences and includes engineered support
- Subtidal chalk reef (rMCZ) – protected from mobile fishing by trawlers, so subject to static fishing and recreational disturbance only
- Freshwater wetland habitats – these include a diversity of micro-habitats from relatively natural chalk streams, carr and fen through to regularly managed ditches and artificial dew ponds
- Shingle beaches – rare vegetated shingle is present as a few fragments only, most beach areas being intensively used, managed by beach cleaning and/or regulated by recharge and groynes
- Deciduous woodland – ancient woodland areas were historically managed by traditional silviculture systems, which have partly lapsed in modern times, whereas recent secondary woodland and scrub is often unmanaged
- River estuaries – mostly artificially constrained by flood embankments and built structures
- Chalk grassland – created by and dependent on low-intensity grazing by livestock (sheep)
- Intensively farmed crops and grassland – subject to very regular management to maximise its productivity for food production
- Urban greenspace – most types such as public parks have been derived from grassland and designed for their civic purpose, and are subject to regular management such as “gang-mowing”
- Built environment – wholly artificial in nature and substrate, but can include natural elements such as green roofs and walls

4.2 "Be of significance for biological diversity conservation".

(This should refer not only to the numbers of endemic or rare species, but may also refer to species on the IUCN Red List or CITES appendices, at the local, regional or global levels, and also to species of global importance, rare habitat types or habitats with unique land use practices (for example traditional grazing or artisanal fishing) favouring the conservation of biological diversity).

About 180 species (*update*) that are defined as a national conservation priority under the UK Biodiversity Action Plan (BAP) have been recorded in our proposed area, although none are globally or nationally endemic species. The Brighton & Hove Local BAP (2013) lists 115 UK BAP species in need of conservation action locally, of which 18 are highlighted for individual specific action. Furthermore there are almost one thousand species recorded that are considered to be locally rare, according to the Rare Species Inventory (RSI) for Sussex that is run by the Sussex Biodiversity Record Centre (SBRC). There are 32 legally protected species recorded from the Biosphere area also. (+ IUCN/CITES)

Examples of significant species for nature conservation (UK BAP and B&H LBAP) that are well-represented/recorded in our area include:

Mammals – Hedgehog *Erinaceus europaeus*, Brown Hare *Lepus europaeus*, Hazel Dormouse *Muscardinus avellanarius*, Bottle-Nosed Dolphin *Tursiops truncatus*

Birds – Skylark *Alauda arvensis subsp. arvensis*, Linnet *Carduelis cannabina*, Corn Bunting *Emberiza calandra subsp. calandra*, Yellowhammer *Emberiza citronella*, Grey Partridge *Perdix perdix*, Lapwing *Vanellus vanellus*, Starling *Sturnus vulgaris subsp. vulgaris*

Herptiles - Slow-worm *Anguis fragilis*, Common Toad *Bufo bufo*, Grass Snake *Natrix natrix*, Adder *Vipera berus*, Common Lizard *Zootoca vivipara*, Great Crested Newt *Triturus cristatus*

Fish (freshwater & marine) - Bullhead *Cottus gobio*, Lamprey *Lampreta sp.*, Short-snouted and Long-snouted seahorses *Hippocampus hippocampus* and *H. guttulatus*, Sea Trout *Salmo trutta*, and European Eels *Anguilla anguilla*

Butterflies - Small Heath *Coenonympha pamphilus*, Wall Lasiommata *megea*, Dingy Skipper *Erynnis tages subsp. tages*, Grizzled Skipper *Pyrgus malvae*, and Small Blue *Cupido minimus*

Other insects - Chalk Carpet moth *Scotopteryx bipunctaria*, Stag Beetle *Lucanus cervus*, Brown-banded Carder Bee *Bombus humilis*

Other invertebrates – marine molluscs (shellfish) – Native Oysters *Ostrea edulis*

Plants - Red-Star Thistle *Centaurea calcitrapa*, Burnt Orchis *ustulata* and Musk *Herminium monorchis* orchids, White Helleborine *Cephalanthera damasonium*

Some species are representative of rare habitat types or unique land use practices also, such as:

- the Wart-biter Cricket *Decticus verrucivorus*, present only at the two SAC chalk grassland sites, as both have uncommon south-facing aspects
- species especially dependent on traditional grazing regimes of chalk grassland e.g. Adonis Blue *Lysandra bellargus* butterfly
- the White Helleborine *Cephalanthera damasonium* which depends on the maintenance of open woodland glades on chalk soils
- species of chalk streams
- the ephemeral Fairy Shrimp *Chirocephalus diaphanous*, a resident of dew ponds (man-made water bodies with prehistoric origins), many of which were created on the South Downs in Victorian times for livestock to drink from due to the absence of any surface water here
- a small breeding colony of Kittiwake *Rissa tridactyla* seabirds on the steep chalk cliff faces
- freshwater invertebrates such as the Great Silver Diving Beetle *Hydrophilus piceus* in wetland grazing marsh ditches

- subtidal chalk which hosts species including ross coral, sea squirts, piddocks and boring worms
- the rare vegetated shingle habitat supports rare species such as the Toadflax Brocade moth *Calophasia lunula*

(In the offshore marine area there is a very important commercial fishery – that principally targets sole, plaice, cod, lobsters, crab and shellfish – with Shoreham Port being a major lander and exporter of fish.)

The most important habitats are principally associated with chalk (on land and under the sea) and/or rare freshwater ecosystems. The most significant terrestrial habitat for conservation is undoubtedly the internationally rare chalk grassland, which is globally restricted to north-west Europe with the UK (especially southern England, including the South Downs) believed to contain about half of the world distribution of this highly diverse habitat. Most of the remaining species-rich chalk grassland in our area lies within a national Site of Special Scientific Interest (SSSI) designated to protect them, the main distribution of which is along the northern scarp slope of the South Downs. Some valuable south-facing areas occur in the two European Special Areas of Conservation (SACs) however.

With regard to the freshwater habitats around the Downs, there are (*inter-*)nationally important chalk streams that emerge from the northern scarp slope as well as remnant floodplain habitats in two SSSIs by Lewes town with important fen and carr woodland, and wet grassland and ditches, that support populations of rare plants, invertebrates, amphibians and birds.

The chalk features of coastal and marine environments are notable habitats for biodiversity conservation, comprising:

- the SSSI chalk cliffs and intertidal platform from Brighton to Newhaven
- the adjacent subtidal chalk reef of Beachy Head West rMCZ, containing one of the best regional examples of subtidal chalk platform and gullies with associated littoral chalk communities
- and the discontinuous chalk ledge which extends westwards out to sea along a chain of local marine SNCIs.

Coastal exposures of chalk are internationally rare, with the southern and eastern coasts of England hosting more than half of the European resource. The most extensive areas of sublittoral chalk in Britain occur in Kent and Sussex furthermore, making them nationally important for this habitat type. Indeed Sussex is the only location on the British Isles where chalk strata appear as offshore, linear vertical “cliffs” underwater, making these exposures of at least national importance. The small fragments of coastal vegetated shingle beach, an internationally rare habitat, are also a significant habitat resource.

4.3 "Provide an opportunity to explore and demonstrate approaches to sustainable development on a regional scale".

(Describe in general terms the potential of the area to serve as a site of excellence for promoting the sustainable development of its region (or "eco-region").

Our proposed Biosphere area has both a good pedigree and strong ambitions to further more sustainable development at this geographic scale and serve as a potential beacon of good practice up to regional and national levels or even beyond.

Both of the main local authorities involved (BHCC & LDC, +ADC?) have been progressing sustainability initiatives for the past twenty years or more, which has been recognised in the form of national awards: Brighton & Hove was the only UK city to be placed in the top three most sustainable cities in each of Forum for the Future's 'National Sustainable Cities Index' recent assessments. Lewes has received a number of 'Green Apple' awards for Environmental performance (Environmental Management, Energy Efficiency projects) across the authority at regional and national level and the Advantage Business Award for working in partnership on Climate Change issues in the sector. It has also held EMAS accreditation since 1999.

Brighton & Hove has recently been independently accredited by BioRegional as the world's first 'One Planet City' for the plans of the council and its partners in the city to enable local people to live well within a fairer share of the earth's resources (using just one planet's worth of resources rather than the current 3½). The practical three-year Sustainability Action Plan (2013-16) includes both short term actions and longer term ambitions for the council and the city as whole to improve local quality of life, reduce impacts on the environment, save money and make the area more resilient. Detailed improvement measures are set out under each of the ten 'One Planet Living' principles of the sustainable development framework, covering: zero carbon, zero waste, sustainable transport, local and sustainable food, sustainable materials, sustainable water, land use and wildlife, local economy, culture and community, and health and happiness. It is hoped that this work will serve as a practical example of progressing sustainability worldwide through the One Planet global network which is now used in fifty countries around the world.

LDC meanwhile is promoting its 'Smarter Living' programme developed by its Local Sustainability Team for promoting and enabling pro-environmental behaviour. It's a "bottom-up" approach that works with discrete communities who are empowered to select activities/actions they prefer to reduce their community's impact on People, Place and Prosperity. Several measures are used to monitor success including greenhouse gas emissions and ecological footprint. LDC also has an environmental programme that is split into 7 headline areas that cover all of the significant environmental impacts of the council's operations, with environmental policy principles that inform a corresponding environmental improvement programme. The seven areas cover Pollution Prevention and Control, Transport, Procurement, Sustainable Development, Energy and Water, Biodiversity, and Waste & Recycling.

Sussex IFCA has conducted an innovative assessment of all inshore marine fisheries in this area against the Marine Stewardship Council (MSC) sustainability criteria to identify strategies for improving their management in the future. + ADC, SDNPA, ESCC/WSCC?

The Biosphere initiative offers great scope to join up and multiply the sustainability work of individual bodies to better address some of the challenges of our area on a wider more natural scale. For example, we are keen to take a common proactive approach to improving the sustainability of our water resources, potentially working between water companies and the public to raise awareness of the issues and possible solutions of water quality and quantity. Similarly, scope exist for a more co-ordinated approach to promoting access to local food (linking producers and consumers) and to the outdoors for healthy recreation and active travel options.

4.4 "Have an appropriate size to serve the three functions of biosphere reserves"

(This refers more particularly to

(a) the surface area required to meet the long term conservation objectives of the core area(s) and the buffer zone(s) and

(b) the availability of areas suitable for working with local communities in testing and demonstrating sustainable uses of natural resources).

Appropriate Size:

- Core Areas

The total Core Area of SSSIs covers around 1700 hectares. All of the SSSI core areas are located within the designated South Downs National Park area furthermore, although only partially so in the case of the two coastal/estuarine sites. The principal conservation objective of all designated SSSIs is to maintain or restore the habitats, species and other biological/geological features for which they were originally notified to meet the national agreed ('PSA') target standards of "favourable conservation status", or at least "unfavourable recovering" status. In August 2012 half (51%) of all the SSSI land in our area was classified by Natural England's statutory condition monitoring system as being favourable, and nearly all the remainder (48%) as unfavourable recovering, leaving just 1% as "unfavourable no change" or "declining". Based on this assessment of status and trends, it is clear that the sites' conservation objectives are being met and hence we consider that the prospects for their long-term conservation are good and that their size is adequate in general (although the effects of climate change especially are likely to challenge this).

The six chalk grassland sites cover 1089 ha in area, distributed semi-contiguously mainly along the northern steep scarp slope of the South Downs. Their collective size subject to a statutory protection regime and near-universal positive management is believed to be sufficient to conserve their nature interest in to the longer term. This assessment is based upon the assumptions that extraneous impacts are adequately controlled or mitigated, and that their strict protection is effectively integrated with wider landscape-scale conservation measures in the surrounding buffer zone of the national park.

The other protected areas' semi-natural habitats (wetland and coastal cliff/estuary) complement this core focus on chalk grassland, but their sites are generally probably not large enough in their own right to conserve their wider ecosystems (hence the need for landscape-scale measures through the rural and coastal/marine buffer zone areas).

- Buffer Zones

The terrestrial buffer zone is centred on the Brighton Chalk Block part of the South Downs National Park that lies between the Adur and Ouse rivers and covers an area of x ha. This area constitutes a discrete natural unit for the purpose of nature conservation, as part of the overall objectives of the draft SDNP management plan (*details*). Hence this entire landscape unit is considered to be of sufficient size for effective conservation in the long term, given the focus on landscape-scale action through measures such as targeted agri-environment schemes.

The marine buffer zone area comprises the western half of the Beachy Head West rMCZ, covering the linear subtidal chalk reef that extends offshore out to 0.5 miles from the mean high water mark (or c. 0.25 nautical miles from the lowest astronomical tide). The western half of the rMCZ total area of 2358 ha is included within the Biosphere area, hence approximately 1200 ha lies within this zone. The draft conservation objectives of this MCZ are to "maintain" all of the notified features with the exception of the littoral chalk communities with the objective being to "recover" this by avoiding recreational anchoring upon it. Regarding the question of adequate size, this part of the MCZ on its own is probably not large enough to ensure the long-term conservation of all of its features, hence it needs to be considered as an integral part of the whole site and in tandem with other non-MCZ subtidal chalk features such as the marine SNCIs to the west.

Availability of areas for demonstrating sustainable uses:

Opportunities for furthering the sustainable use of natural resources take place in the Buffer Zones and the Transition Areas (both terrestrial and marine for each area) of the proposed Biosphere Reserve. There are many individual suitable locations and appropriate types of activities that could be explored here, taking the following four examples to illustrate each environment of the two Biosphere zones:

Land – promotion of more sustainable “eco-tourism” activity by visitors to South Downs attractions in the local area of the SDNP/Biosphere buffer zone; encouragement of local food-growing by individuals and communities in the urban areas of Brighton & Hove and Lewes.

Marine – proposed voluntary approach to work with the recreational boating community to avoid anchoring on the chalk reef of the MCZ/Biosphere buffer zone; a pilot project and campaign to encourage local consumption of fish harvested from the wider sea of the transition area.

4.5 Through appropriate zonation:

"(a) a legally constituted core area or areas devoted to long term protection, according to the conservation objectives of the biosphere reserve, and of sufficient size to meet these objectives" ? (Describe the core area(s) briefly, indicating their legal status, their size, the main conservation objectives).

The Core Areas are distributed as a “string of pearls” in an arc along the northern chalk scarp slope and eastern downland areas that then descends down the river valleys and estuaries and joins the coastal strip of chalk cliffs in the east. They comprise all of the nationally designated SSSIs on and around the Brighton and Lewes chalk blocks, numbering thirteen in total which include:

- 9 biological sites, including 2 European SACs
- 3 geological sites (small-sized inland chalk quarries)
- 1 mixed biological/ geological site (coastal cliffs)

The ten sites with biological interest are dominated by 6 chalk grassland sites, with the other sites comprising 2 freshwater, 1 coastal and 1 estuarine site. The majority of the two coastal and estuarine core area sites are situated directly next to urban transition areas, with relatively small parts only adjoining the rural SDNP buffer zone area as per the classic Biosphere zonation scheme.

Designation as SAC and SSSI affords the highest available protection for nature conservation. Special Areas of Conservation are designated under the EC Habitats Directive (Council Directive 92/43/EEC of 21st May 1992). In the UK the Directive has been transposed into national laws in England, Scotland and Wales by means of the Conservation (Natural Habitats, & c.) Regulations 1994 (as amended), known as “the Habitats Regulations”. SSSIs are designated under the Wildlife & Countryside Act 1981 (as amended).

The six chalk grassland SSSIs cover 1089 ha in area and have been designated to conserve their characteristic habitats of south-east England chalk grassland, as well as chalk scrub and woodland (including juniper), and rare species assemblages, including: higher plants (especially orchids), invertebrates (especially butterflies and moths, as well as a grasshopper) and breeding downland birds, as well as some related geological features. The two SACs have been designated as part of the Natura 2000 network of international sites to conserve their semi-natural dry grasslands and scrubland “facies” on calcareous substrates (important orchid sites), and the population of early gentian also in the case of Castle Hill SAC.

Condition assessments by Natural England show that 99% of the chalk grassland area meets the national (PSA) target with a majority (55%) classed as “favourable” conservation status and 44% as “unfavourable recovering” status. Much of their land cover is in conservation ownership and management furthermore (by NT, NE, and SWT), with much additional private land also in Higher Level Stewardship (HLS) schemes to deliver targeted nature conservation measures.

The two freshwater SSSIs are designated to protect a wide diversity of invertebrates and host nationally important winter bird populations at Lewes Brooks (as a RSPB reserve) and to conserve the unusually large amphibian populations and scarce insects present at Offham Marshes freshwater alluvial grazing marsh. The former SSSI is all “unfavourable recovering” status and the latter is roughly 2:1 “favourable” to “unfavourable recovering” status. The coastal Brighton to Newhaven Cliffs SSSI (all “favourable” conservation status) exists to conserve rare plants and a locally important colony of breeding seabirds and diverse community of beetles, in addition to its main geological interest. The Adur Estuary SSSI (also all “favourable” conservation status) was designated to conserve the only significant area of saltmarsh in central Sussex with its unusual estuarine plant communities and large area of intertidal mudflats of importance to wading birds.

The four geological SSSI sites (all “favourable” conservation status) are designated to conserve their different chalk exposures and in some cases fossil interest. They include the single most important section in the Cenomanian Chalk Marl and Grey Chalk in western Europe (Southerham Grey Pit); sections of the Lower Chalk and Middle Chalk with abundant fossil fishes (at Southerham Machine Bottom Pit); and Middle and Upper Chalk including the Lewes Member (Southerham Works Pit). Brighton to Newhaven Cliffs SSSI has the best and most extensive exposure of the *Offaster pilula* zone in England, and is a nationally important reference section for the upper Cretaceous period.

"(b) a buffer zone or zones clearly identified and surrounding or contiguous to the core area or areas, where only activities compatible with the conservation objectives can take place..."
(Describe briefly the buffer zones(s), their legal status, their size, and the activities which are ongoing and planned there).

Our Buffer Zones are split between the terrestrial environment of the South Downs National Park (SDNP) sub-area that lies between the Adur and Ouse rivers centred on the Brighton Chalk Block, and the adjacent western part of the Beachy Head West recommended Marine Conservation Zone.

The designated SDNP area of the proposed Biosphere Reserve buffer zone covers the entire Brighton Chalk Block and some surrounding areas and covers an area of x ha. This rural area is mostly used for mixed agriculture (both arable and pastoral), as well as groundwater supply and extensive recreation, with more limited woodland management, game management, small settlements, roads, and telecommunications installations. Future activities (based upon the draft SDNP management plan) are foreseen to continue the existing uses and increase agri-environment management, eco-tourism, sustainable outdoor recreation and access, and potentially small-scale renewable energy generation also. Potential future pressures on the SDNP rural area include: changes in agricultural practice, driven by global food markets and increasingly by climate change; water quality and quantity (including potential over-abstraction); increased recreational pressure (including commercial mass dog-walking); transport infrastructure developments (roads, ports, railways) and increasing traffic levels; and the expansion of built development, including renewable energy infrastructure (wind turbines, offshore wind farm cabling, and solar fields).

The Beachy Head West recommended Marine Conservation Zone runs along the eastern chalk SSSI coastline out to 0.25 nm distance and is a new type of Marine Protected Area where nature conservation together with sustainable management is the focus. It will be confirmed by the Government (DEFRA) by the end of 2013 at the latest. The proposed Biosphere Reserve buffer zone covers an area of 1200 ha. Current use and management is principally for local inshore commercial fisheries, as well as some activity by recreational anglers and sailors. If and when the area is designated as a MCZ, the impact of activities here will be considered against its conservation objectives. The draft conservation objectives include a voluntary measure to additionally restrict boat anchoring alongside the existing exclusion of bottom-trawling (under a sea fisheries byelaw).

DRAFT

"(c) an outer transition area where sustainable resource management practices are promoted and developed"

(The Seville Strategy gave increased emphasis to the transition area since this is the area where the key issues on environment and development of a given region are to be addressed. Describe briefly the transition area(s), the types of questions to be addressed there in the near and the longer terms. The Madrid Action Plan states that the outer boundary should be defined through stakeholder consultation).

Our proposed Transition Areas are twofold:

1. Urban built-up areas – including the city of Brighton & Hove, running along the coast through Telscombe and Peacehaven to Newhaven in the east and Shoreham and Shoreham Beach in the west, all of which lie outside of the South Downs National Park, as well as Lewes town which is inside the SDNP. The urban areas extend over x ha of mostly built-up land use, principally made up of buildings (residential, commercial, industrial and public) and other built infrastructure but including an extensive network of urban greenspace and fringing countryside sites. A resident population of around a third of a million people live there, significantly supplemented by up to 12 million visitors annually. The settlements are relatively affluent but contain significant pockets of social deprivation. The economy is highly developed and dominated by the service sector, including significant tourism, with locally important financial, insurance, digital and local government sectors and relatively localised industrial activity including ports, waste processing and recycling, and other environmental technologies.

Both contemporary and future issues which we anticipate that the proposed Biosphere can contribute to include the following examples:

- more natural composition and management of urban greenspace
- promotion of “green infrastructure” in the urban environment to deliver multiple functions and benefits
- further urban “greening”, including further green roofs, walls and buildings
- encouraging more environmentally-friendly lifestyles, including water and energy use, active travel, through BHCC’s ‘One Planet’ and LDC’s ‘Smarter Living’ programmes (+ ADC?)
- seeking to better reconcile conflicts between new built development and nature conservation
- facilitating opportunities for much increased “bio-literacy” of local people, in terms of understanding and engagement with their local natural environment

2. Marine environment (excluding the MCZ buffer zone area) – this extends along a length of 25 kilometres (16 miles) of coastline out to 2 nautical miles offshore roughly between Shoreham Harbour and Newhaven Harbour. The marine transition area covers a total area of x ha of shallow inshore waters. It includes two locally-identified designated non-statutory marine SNCLs (South West Rocks and Looe Gate) and a further two locally important but not yet designated sites (Ship Rock and Marina Reef) that mark the discontinuous subtidal chalk ledge that extends westwards offshore from Brighton. Other representative intertidal and subtidal habitats included in the area are shingle beaches, sand waves on the seabed and mixed sediment (sand and gravel) habitats. The main use of the marine environment is for commercial fisheries, which are generally small-scale in nature and use a variety of both “static” (pots and traps) and higher-impact “mobile” fishing methods (e.g. trammel nets, drift nets, and limited trawls). Other uses include for recreation (such as sea-angling, boating and diving) and tourism (mostly beach-based), as well as for sewage disposal through an upgraded long sea outfall pipe offshore from Peacehaven.

(d) Please provide some additional information about the interaction between the three areas.

The three proposed Biosphere zones are intimately connected in our area given its compact size and close dependency of human populations on nature through the diverse interactions of our three environments of town, countryside and coast/sea. The biodiversity present in the Core Areas is mostly not confined to these individual sites but interacts ecologically with the surrounding Buffer Zones in both the terrestrial and marine environments. Urban transition areas are physically connected to the rural SDNP buffer zone through “green networks” that support multiple uses including wildlife conservation and recreation by people. Indeed a major objective of our Biosphere proposal is to better connect urban-dwellers with the natural environment on their doorsteps and beyond, in tandem with increased ecological connectivity (of chalk grassland in particular) by bringing the countryside into the heart of our towns. Water is *the* key element that joins urban and rural environments in our area, given the dependence of most of the local population on the groundwater aquifer of the Brighton Chalk Block for their daily survival and continued wellbeing and sustainable growth. This necessitates a catchment scale approach to the management of water resources, as well as to address the threat of freshwater flooding through both rural and urban land use and management.

Similarly the land and sea are closely linked through “diffuse pollution” from the runoff/discharge of nutrients and disposal of sewage, and through flooding and erosion of the coastline. One of the key issues for the marine environment resulting from inputs from the land is nutrient enrichment (mainly nitrogen and phosphorus from wastewater effluents and agriculture), causing locally poor bathing water quality, environmental impacts and presenting a threat to the vitally important tourist trade. A focus for our proposed Biosphere Reserve is thus to address nutrient enrichment from both rural and urban sources by influencing land use (e.g. through agri-environment schemes) and householders’ behaviour (e.g. through public education and outreach programmes).

4.6 "Organizational arrangements should be provided for the involvement and participation of a suitable range of inter alia public authorities, local communities and private interests in the design and the carrying out of the functions of a biosphere reserve."

4.6.1 Describe arrangements in place or foreseen.

(describe involvement of public and/or private stakeholders in support of the activities of the biosphere reserve in core, buffer and transition areas (such as agreements, protocols, letters of intent, protected area(s) plans)).

Our proposed area has a diverse and active community of organisations with responsibilities or interests in the local environment and a history of working co-operatively, from which we have sought to involve representatives in our young partnership. The Brighton & Hove and Lewes Downs Biosphere Partnership meets 3-4 times per year, and is made up of a mixture of 31 public (both national statutory and local authorities), private, educational and voluntary bodies represented by officers of key organisations on the Partnership Board. This body helps to steer project development and delivery and to share and co-operate on their different organisational agendas, and is composed of organisations who it is proposed will be elected from the ‘wider partnership’ on an annual basis.

An Executive Group meets more regularly to oversee and direct project development, and be accountable for partnership and project governance, implementation and finances. A Delivery Group is proposed to develop and deliver detailed project implementation. Working groups have come together as needed to develop thematic content and priorities of the management strategy across the different Biosphere zones and environments. An agreed terms of reference (*appendix*) exists that sets out partnership governance structure, roles and composition.

The partnership includes all of the area's local authorities (with communication also maintained with the two county councils of West and East Sussex), including the South Downs National Park Authority (SDNPA) and the Sussex Inshore Fisheries and Conservation Authority (IFCA). A number of the main voluntary conservation and community bodies that are active locally are involved, as well as the two higher education institutions and representation from local schools. The partnership comprises the following 31 organisations:

Local Authorities – BHCC (lead/host partner); other District Council partners - LDC, MSDC, HDC, ADC; Town councils (LDC area) of Lewes, Newhaven, Peacehaven and Telscombe; Parish councils (LDC area) of Hamsey, East Chiltington and Ditchling (& Collaborating County Councils - WSCC, ESCC)
 Other 'local authority' partners – SDNPA, Sussex IFCA
 National statutory environment bodies – NE, EA
 Voluntary bodies (national/local) – SWT, NT, RSPB, FoE (B&H), CVSF (B&H), Lewes Railway Land Wildlife Trust, South Downs Society, Brighton Peace & Environment Centre, Brighton & Hove Allotment Federation
 Education bodies – University of Brighton, University of Sussex, Plumpton College, Dorothy Stringer High School
 Private sector bodies – Brighton & Hove Bus Company, Jury's Inn hotel

coastal & marine, and knowledge & learning) and specific workshops and meetings through which they have been able to provide inputs to our Biosphere proposal. Our project has been extensively promoted in general terms to the public during 2012 at a series of around 80 public events which reached out to an estimated 8000 people, 1000 of whom registered their support and contact details for communications as a "Friend of the Biosphere". During four months of early 2013 we have proactively advertised and engaged people (both the local public and relevant stakeholder organisations) on our plans under the proposed Biosphere Reserve through a range of means including a travelling "roadshow" of some 70 geographic and thematic events, presentations at meetings and information stands, in addition to general local press publicity and digital promotion (including web, email and social media).

4.6.2 Have any cultural and social impact assessments been conducted, or similar tools and guidelines been used?

(e.g. Convention on Biological Diversity (CBD)'s Akwé: Kon guidelines; Free, Prior, and Informed Consent guidelines, Biocultural Community Protocols, etc.). (UNESCO's Programme on Man and the Biosphere (MAB) encourages biosphere reserves to consider and respect indigenous and customary rights through programmes or tools, in accordance with the United Nations Declaration on the Rights of Indigenous Peoples http://www.un.org/esa/socdev/unpfii/documents/DRIPS_en.pdf when relevant and appropriate.).

An Equality Impact Assessment (EqIA) using BHCC's policy and standard framework has been produced that covers our formal public consultation exercise in early 2013 (*appendix?*), covering statutory categories such as gender, age, disability, race and religion. As a result proactive engagement has taken place of local forums that represent age and disability, in addition to different geographical and sectoral interests in the area. Analysis of the c. 1800 public responses has been carried out including assessment of our equalities coverage. A further EqIA will be produced that addresses implementation of the Biosphere once this is confirmed/operational in 2014.

We aim to actively address social inequalities to accessing, understanding and benefiting from the local environment through our Biosphere initiative – for example through local events programmes and projects such as food-growing and habitat creation.

4.7 Mechanisms for implementation

Does the proposed biosphere reserve have:

"(a) mechanisms to manage human use and activities in the buffer zone or zones" ?

Management of the proposed Core Areas will continue to be according to the controls and objectives of the statutory nature conservation designations (SSSI and SAC) which are overseen by Natural England on behalf of the UK Government department of DEFRA.

The terrestrial Buffer Zone is presently covered by the former South Downs AONB management plan, which will soon be replaced by the South Downs National Park Management Plan (NPMP). This will be the subject of formal consultation during summer 2013 prior to being finalised by the end of this year and then adopted from March 2014 for a rolling 5-year period. The NPMP seeks long-term outcomes according to three key objectives: a thriving, living landscape; people connected with places; and towards a sustainable future. A series of thematic and sectoral policies have been developed under these areas, with a more detailed delivery framework to be developed to implement these by working in partnership across all relevant organisations in the area. In parallel with the draft management plan, the SDNPA is developing a planning policy through the emerging National Park Local Plan which is foreseen to be adopted in 2017 and set out a framework through to 2035.

The marine Buffer Zone of (part of) Beachy Head West rMCZ when confirmed will be subject to finalisation of its conservation objectives by Natural England and then an examination of potential management measures by Sussex IFCA of the impact of present activities against these. The draft conservation objectives are to maintain current notifiable features with an additional measure to recover the reef through voluntary restriction of recreational boat anchoring on it. This is in addition to the current sea fisheries byelaw that excludes commercial fishing using mobile bottom-trawling gear.

"(b) a management policy or plan for the area as a biosphere reserve" ?

If yes, describe. If not, state how such a plan or policy will be developed, and the timeframe. (If the proposed area coincides with one or more existing protected natural area(s), describe how the management plan of the proposed biosphere reserve will be complementary to the management plan of the protected area(s).)

A Brighton & Hove and Lewes Downs Biosphere Reserve Management Strategy has been developed to cover the five-year period 2014-19 (*appendix*), from which a detailed action plan(s) will be developed to set out practical implementation priorities according to the distinct objectives, geographical environments and Biosphere zones, and key organisations and sectors.

The management strategy describes the elements of our area and work in terms of their nature, information resources, and current policy and practice. The six chapters of the strategy are concerned with: an Introduction, Linkages (connections between different environments), the Rural, Urban, and Coastal/Marine environments, and Knowledge, Learning & Awareness. In each of the geographic environments the two main Biosphere functions of nature conservation and sustainable development are addressed, with the third Biosphere function of logistic support being the focus of the final chapter.

Proposals for the future are identified for each featured element that will reduce deficiencies, address gaps and enable new opportunities to be realised. A summary table is included which sets out the general principles for improvement for each element and the proposed specific focus for the Biosphere Project to “add value” to improvement efforts.

Indeed we are strongly focussed on how the proposed Biosphere can add value to the wide and extensive spectrum of existing work and organisations. The potential exists for our Biosphere initiative to act as a network “hub” to better link individual partner working on themes of common interest (e.g. tourism and recreation), as well as the local public to opportunities to practically engage (e.g. access, volunteering, groups). Such a role could potentially extend to facilitating dialogue between different interests, and/or disbursing third party funding according to an agreed framework of priorities such as our management strategy.

"(c) a designated authority or mechanism to implement this policy or plan" ?

No new organisation is planned to be established or deemed necessary or desirable at present to implement the proposed Biosphere management strategy. Instead our approach is to work through the Biosphere Partnership of existing bodies in our area that is spread across different sectors and communities. The lead partner for this is Brighton & Hove City Council (BHCC). The Brighton & Hove and Lewes Downs Biosphere Reserve project will thus be steered by our Partnership Board, with oversight and accountability by the smaller Executive Group.

Implementation of the management strategy in practice will be co-ordinated by a Delivery Group (with thematic Working Groups as needed) based upon an overall detailed Action Plan. The action plan will be developed from our high-level strategic management strategy after our formal submission to UNESCO (in September 2013), to create a detailed framework to progress practical project activities for which external grant funding bids will be made.

It is envisaged that key partners will develop their own organisational action plans for implementation, derived from the overall Biosphere action plan e.g. BHCC aim to produce a new green space plan to cover these elements.

Implementation will principally be carried out through existing mechanisms – including Local Development Frameworks, organisational/departmental work plans, and landscape/key site management plans – to effect practical changes on the ground. In addition we will identify planned projects by partner organisations and others locally that are aligned to our Biosphere objectives and can be co-promoted as such. Lastly we will seek to carry out some new implementation activities (subject to securing additional external grant funding) directly by our project staff and/or by disbursing and managing grant funding to local bodies (both partners and other groups).

Examples of some of the key existing mechanisms to use for Biosphere implementation include:
 Local Authorities – Local Development Frameworks, Sustainable Community Strategies, departmental work plans/strategies (e.g. Environment, Sustainability)
 National Park (SDNPA) – Management Plan & Delivery Plan, Local Plan, ‘South Downs Way Ahead’ Nature Improvement Area programme
 Marine environment (Sussex IFCA) – Strategy, Annual Plans, Strategic Research Plans (annual)
 Protected Areas (NE, NGOs) – site management plans, SSSI objectives, corporate initiatives e.g. LCA framework

Others – organisational work plans/strategies, sectoral/partnership plans e.g. Adur & Ouse Catchment Management Plan (led by the Environment Agency)

“(d) programmes for research, monitoring, education and training”?

If yes, describe. If not, describe what is planned.

Our proposed programmes in this area are covered in the ‘Knowledge, Learning & Awareness’ chapter of the Brighton & Hove and Lewes Downs Biosphere Reserve Management Strategy (2014-19).

Increasing our understanding through research, monitoring and professional training will help improve and conserve the proposed Biosphere area for future generations of local residents. Our Biosphere project aims to support individuals to take a progressive learning journey from awareness and knowledge to active engagement in the environment by:

- (i) Encouraging broad public understanding, enjoyment, support & engagement - greater awareness by the general public of the local environment, and their relationship to it, is fundamental to realise our aim to re-connect people to their surrounds and turn growing interest into tangible positive action.
- (ii) Promoting environmental education and interpretation to encourage positive behavioural change – we will encourage more local schools to take part in environmental initiatives such as ‘Eco-School’ status and build capacity themselves to deliver environmental education. Further opportunities exist by using dedicated environmental education centres to expand educational and community environmental learning and teaching capacity, and use the coastal environment in particular as a new learning centre.
- (iii) Supporting environmental research and monitoring which leads to greater understanding and local application – we will promote greater partnership working to encourage applied local research studies and implement more comprehensive standardised monitoring approaches.
- (iv) Facilitating professional training for a strong skills base to conserve, manage and enhance our environment – we wish to promote support and training for professionals (in different sectors), students and volunteers (as a key community resource).

5. ENDORSEMENTS

(If a large number of Authorities are involved, please enclose the **additional endorsement letters as a separate Annex**)

5.1 Signed by the authority/authorities in charge of the management of the core area(s):

Natural England

Full name and title: _____

Date: _____

Address, email, phone number: _____

Full name and title: _____

Date: _____

Address, email, phone number: _____

5.2 Signed by the authority/authorities in charge of the management of the buffer zone(s):

SDNPA

IFCA (+MMO/NE for MCZ?)

Full name and title: _____

Date: _____

Address, email, phone number: _____

Full name and title: _____

Date: _____

Address, email, phone number: _____

5.3 Signed as appropriate by the National (or State or Provincial) administration responsible for the management of the core area(s) and the buffer zone(s): *N/A? / DEFRA-NE*

Full name and title: _____

Date: _____

Address, email, phone number: _____

Full name and title: _____

Date: _____

Address, email, phone number: _____

Full name and title: _____

Date: _____

Address, email, phone number: _____

5.4 Signed by the authority/authorities, elected local government recognized authority or spokesperson representative of the communities located in the transition area(s).

BHCC

LDC

ADC

(+ NGO reps? – B&H CVSF, RLWT?)

Full name and title: _____

Date: _____

Address, email, phone number: _____

Full name and title: _____

Date: _____

Address, email, phone number: _____

Full name and title: _____

Date: _____

Address, email, phone number: _____

5.5 Signed on behalf of the MAB National Committee or focal point:

UK MAB

Full name and title: _____

Date: _____

Address, email, phone number: _____