

World Heritage Sites

Protected Areas and World Heritage



DORSET AND EAST DEVON COAST UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND

The succession of rocks displayed in the cliffs between Lyme Regis and Swanage is one of the finest marine Jurassic rock sections in the world. With the east Devon coast, they provide an almost continuous sequence of Triassic, Jurassic and Cretaceous rocks which document approximately 185 million years of Earth's history. The important vertebrate and invertebrate, marine and terrestrial fossil sites and geomorphologic features of the coast preserve excellent evidence of life during Mesozoic times and have contributed to the study of the earth sciences for over 200 years.

COUNTRY

United Kingdom of Great Britain and Northern Ireland

NAME

Dorset and East Devon Coast

NATURAL WORLD HERITAGE SERIAL SITE

2001: Inscribed on the World Heritage List under Natural Criterion viii.

STATEMENT OF OUTSTANDING UNIVERSAL VALUE

The UNESCO World Heritage Committee issued the following Statement of Outstanding Universal Value at the time of inscription:

Brief Synthesis

The Dorset and East Devon Coast has an outstanding combination of globally significant geological and geomorphological features. The property comprises eight sections along 155 km of largely undeveloped coast. The property's geology displays approximately 185 million years of the Earth's history, including a number of internationally important fossil localities. The property also contains a range of outstanding examples of coastal geomorphological features, landforms and processes, and is renowned for its contribution to earth science investigations for over 300 years, helping to foster major contributions to many aspects of geology, palaeontology and geomorphology. This coast is considered by geologists and geomorphologists to be one of the most significant teaching and research sites in the world.

Criterion (viii): The coastal exposures along the Dorset and East Devon coast provide an almost continuous sequence of Triassic, Jurassic and Cretaceous rock formations spanning the Mesozoic Era and document approximately 185 million years of Earth's history. The property includes a range of globally significant fossil localities - both vertebrate and invertebrate, marine and terrestrial - which have produced well preserved and diverse evidence of life during Mesozoic times. It also contains textbook exemplars of coastal geomorphological features, landforms and processes. Renowned for its contribution to Earth science investigations for over 300 years, the Dorset and East Devon coast has helped foster major contributions to many aspects of geology, palaeontology and geomorphology and has continuing significance as a high quality teaching, training and research resource for the Earth sciences.

Integrity

The property contains all the key, interdependent elements of geological succession exposed on the coastline. It includes a series of coastal landforms whose processes and evolutionary conditions are little impacted by human activity, and the high rate of erosion and mass movement in the area creates a very dynamic coastline which maintains both rock exposures and geomorphological features, and also the productivity of the coastline for fossil discoveries. The property comprises eight sections in a near-continuous 155 km of coastline with its boundaries defined by natural phenomena: on the seaward side the property extends to the mean low water mark and on the landward side to the cliff top or back of the beach. This is also in general consistent with the boundaries of the nationally and internationally designated areas that protect the property and much of its setting. Due to the high

rate of erosion and mass movement, it is important to periodically monitor the boundaries of the properties to ensure that significant changes to the shoreline are registered.

Protection and Management Requirements

The property has strong legal protection, a clear management framework and the strong involvement of all stakeholders with responsibilities for the property and its setting. A single management plan has been prepared and is coordinated by the Dorset and Devon County Councils. There is no defined buffer zone as the wider setting of the property is well protected through the existing designations and national and local planning policies. In addition to its geological, paleontological and geomorphological significance, the property includes areas of European importance for their habitats and species which are an additional priority for protection and management. The main management issues with respect to the property include: coastal protection schemes and inappropriate management of visitors to an area that has a long history of tourism; and the management of ongoing fossil collection research, acquisition and conservation. The key requirement for the management of this property lies in continued strong and adequately resourced coordination and partnership arrangements focused on the World Heritage property.

INTERNATIONAL DESIGNATIONS

- 1987: Chesil Beach and The Fleet designated a Ramsar Wetland of International Importance (748 ha);
1992: The Exe Estuary designated a Ramsar Wetland of International Importance (2,346 ha).

IUCN MANAGEMENT CATEGORY

East Devon Area of Outstanding Natural Beauty:	V Protected Landscape/Seascape
Dorset Area of Outstanding Natural Beauty:	V Protected Landscape/Seascape
East Devon Heritage Coast:	V Protected Landscape/Seascape
Purbeck Heritage Coast:	V Protected Landscape/Seascape
Axmouth-Lyme Regis Undercliffs National Nature Reserve:	IV Habitat/Species Management Area

BIOGEOGRAPHICAL PROVINCE

British Islands (2.8.5)

GEOGRAPHICAL LOCATION

This serial site runs 155 km along nine sections of the coast of southwest England from Orcombe Rocks near Exmouth in east Devon to Studland Bay in east Dorset, excluding the towns of Budleigh Salterton, Sidmouth, Seaton, Lyme Regis, West Bay, Weymouth and Swanage. The sites run from the top of the inmost cliff-scarp, or from the back of beaches to as far as the mean low tide mark. The whole property lies between 50°36'23"N by 3°23' 03"W and 50°38'24"N by 1°56'21"W.

DATES AND HISTORY OF ESTABLISHMENT

- 1955: Axmouth to Lyme Regis Undercliffs declared a National Nature Reserve;
- 1957: Dorset Area of Outstanding Natural Beauty (AONB) designated as the Dorset Downs, Heaths and Coast Landscape to conserve a landscape of high quality;
- 1963: East Devon AONB designated for the same reason; (AONBs total 87% of the site); All three sites are protected under the 1949 National Parks and Access to the Countryside Act.

The property contains 14 Sites of Special Scientific Interest (SSSI), notified under the 1981 Wildlife and Countryside Act; It also contains or lies within areas designated of international importance for wildlife, either as a Special Area of Conservation (SAC) or a Special Protection Area (SPA) under the European Council Habitats Directive 92/43 or Birds Directive 79409.

At the east and west ends of the property are the Purbeck Heritage and East Devon Heritage Coasts, national, non-statutory designations applied by the Countryside Agency to attractive coastlines.

LAND TENURE

The Coast is in the ownership of some 80 landowners or leaseholders, about 95 out of 155 kilometres being owned by large private estates, public bodies or conservation agencies such as the Clinton Devon Estate, the Weld Estate and Lulworth Estate, the National Trust, the Crown (royal) Estate, East Devon District Council, Dorset County Council and the Ministry of Defence.

The National Trust owns about 35 km of coastline, along the East Devon Coast, the Golden Cap Estate and Burton Beach in west Dorset, parts of the south and east coasts of Purbeck and several smaller sites. The Crown owns almost all the inter-tidal area, the southeastern 4 km of Chesil Beach and c.9 km of the cliffs and undercliffs of the Isle of Portland. The entire 13 km bed of the Fleet Lagoon and 9 km of Chesil Beach are owned by Ilchester Estates, and are managed as Chesil and Fleet Local Nature Reserve. Dorset County Council owns c.3 km of coastline at Durlston Head, Purbeck which is managed as a public country park. East Devon District Council owns 6 km in three holdings near Sidmouth and Budleigh Salterton. The Ministry of Defence (MOD) holds c.5 km of coastline at Lulworth Gunnery Ranges. Portland Port and Hanson Bath and Portland Stone own two commercial sites in northern and northeastern parts of the undercliff and shore on the Isle of Portland.

AREA

Approximately 2,550 ha.

ALTITUDE

From -5m in Fleet lagoon to 208m (190m Golden Cap near Lyme).

PHYSICAL FEATURES

The succession of marine Jurassic rocks in the cliffs between Lyme Regis and Swanage is one of the finest sections of marine Jurassic rocks in the world, justifying its name The Jurassic Coast. They are exposed where the rolling downland landscape of Dorset is abruptly truncated by the sea. To its west lies a succession of even earlier Triassic cliffs. The whole consists of nine stretches of undeveloped coastline from Orcombe Rocks to Chit Rocks at Sidmouth - Sidmouth to Seaton Hole - Axmouth to Monmouth Beach at Lyme Regis - Lyme Regis to West Bay - West Bay-Chesil Beach & the Fleet to Pulpit Rock - Portland Bill to Kings Pier - Portland harbour shore - Bowlease Cove to Peveril Point - and New Swanage to Studland Bay. Five small and two larger coastal towns are excluded from the site. Over eighty percent of the site is coastal cliffs but it includes landslips, undercliffs, bays, beaches and lagoons. Undercliffs are those landscapes of peaks, gullies and slipped blocks formed by cliffside slumps that become densely vegetated. The site's landward boundary runs from the topmost break of a cliff, or from the back of beaches, to as far seaward as the mean low tide mark as defined by the U.K. Ordnance Survey.

For part of the Triassic and most of the Jurassic period, shallow tropical seas covered east Devon and Dorset and marine life flourished. Subsidence and sea level changes created deep-water environments in which desert muds and shales settled, and shallow seas in which sands and lime-rich sediments accumulated. The resulting succession of repeated large-scale cycles of clay, sandstone and limestone correspond to global rises in sea level, flooding a landscape from which large numbers of vertebrate fossils are now exposed in the sea cliffs. They form a dynamic nearly continuous sequence of Triassic, Jurassic and Cretaceous rock exposures from the entire Mesozoic Era of some 185 million years in one of the world's most valuable palaeontological sites. There is an exceptional diversity of other landforms and geomorphological processes, some of them the finest text-book examples of their kind: rock arches and stacks as at Durdle Door and Old Harry Rocks, horseshoe bays, as at Lulworth Cove, raised beaches such as Chesil and the Fleet Lagoon.

The Triassic succession extends about 35 km along the coast from Orcombe Rocks near Exmouth to Seven Rock Point west of Lyme Regis. It is over 1,100m thick, composed of Aylesbeare and Mercia mudstones, Sherwood sandstone, the Penarth group, and the lowest beds of the Lias group, displaying over 50 million years of Earth's history. The long succession of Jurassic rock strata dip gently to the east with the oldest rocks in the west and progressively younger strata outcropping in the east so that the youngest (Cretaceous) rocks occur furthest east. It reveals a complete, classic and well-studied section through the Wessex basin, one of the best Mesozoic-Tertiary intra-plate sedimentary basins in Europe. Two clearly exhibited features of the structural geology of the site are the east-west trending extensional faults of the Abbotsbury-Ridgeway Fault and the Purbeck Fault that have undergone contractional reactivation; and the folds of the Weymouth, Lulworth and Purbeck anticlines that dip north and contain axes parallel and adjacent to the reactivated faults.

The Jurassic-Cretaceous boundary in Dorset is believed to be near the base of the Purbeck group. All stages of the Cretaceous are represented, except for the very youngest rocks. They include thinly bedded limestones and mudstones of the Purbeck group, the Wealdon group, Lower Greensand, Gault clay and Upper Greensand and the Chalk group. Folds and faults buckle and cut through the Jurassic and Cretaceous strata to form spectacular features such as the Lulworth crumple. Dome-

shaped folds and fractures in the rocks have created traps for oil that originated in the thick layers of clay found in both the Lower and Upper Jurassic rocks. Such structures exist beneath Poole Harbour and Poole Bay where they form the Wytch Farm oil field, Britain's largest onshore source of oil.

The site's landslides make its geomorphology of international interest as textbook formations. Much of the site displays well developed examples of unconformity between different strata especially between the Jurassic rocks and the overlying Cretaceous layers which have created conditions for notable landslides and undercliffs where fossils are continually being exposed. The best known are the Bindon Landslip of 1839 between Axmouth and Lyme Regis, Black Ven, East Weares, and Kings Pier. In the spring of 2008 after the wet summer of 2007, Britain's largest landslip for 100 years, 400m long, occurred in the soggy marls of Black Ven between Charmouth and Lyme.

The coast provides one of the best documented examples of beach formation and the evolution of a retreating coastline. Portland Bill has two Pleistocene raised beach deposits. The East Beach is the best example of a raised beach sequence along the Channel coast and its fossil fauna is the most diverse found in any raised beach in Britain. The two largest classic beach sites are at Budleigh Salterton and Chesil Beach. Budleigh Salterton beach is composed of pebbles formed from the erosion of Triassic fluvial sand, gravel and pebble beds. The pebbles are found in beaches stretching along much of the south coast of England and serve as a diagnostic marker of beach evolution in the Channel during the Holocene. Chesil Beach, which stretches from West Bay to Portland, is one of the most studied beaches in the world. It is a linear storm beach of shingle, 28 km long, between 5-15m high and 150-200m wide, famous for the volume, type and precise grading of its pebbles. It is believed to comprise 100 million tonnes ranging in size from sand and pea gravel at Bridport to 5-7.5cm cobbles at Chesilton. Approximately 98.5% of the pebbles are flints and cherts, the remainder are limestones, vein quartz, porphyry, igneous materials and quartzites.

The long barrier of Chesil Beach encloses the Fleet lagoon which is privately owned but is within the World Heritage site. It is 75-900m wide, covers an area of 480 ha with an average depth of 1.5m though up to 5m deep at the narrows and is one of the most important saline lagoons in Europe. Sediments preserved in its waters provide evidence of the late Holocene evolution of the beach, and of past changes in sea level, climate and vegetation. Together Chesil beach and the Fleet are an outstanding example of a barrier beach and lagoon system. It is protected by the global, European and national designations, Ramsar wetland, SPA and SSSI.

Sixty-seven statutory Geological Conservation Review sites considered of national or international importance are included in the property. Twelve fossil sites alone could merit World Heritage status. The Jurassic fossil fauna of the area is some of the most abundant and diverse anywhere in the world. The range of internationally important localities displayed provides excellent evidence of life during Mesozoic times. Key fossil sites are at Lyme Regis, Kimmeridge Bay, the Isle of Portland, the Isle of Purbeck, Furzy Cliff near Weymouth, High Peak, Otter Point, Charmouth and Axmouth.

A great many vertebrate, invertebrate and plant fossils have been discovered, and fossil footprints and tracks in the quarries around Swanage. Discoveries continue to be regularly made as the cliffs erode. The specimen quality is frequently exceptional, with well-articulated skeletons and soft-part preservation of skin and stomach contents. Significant paleontological discoveries unknown elsewhere include *Dimorphodon macronyx*, one of the earliest flying reptiles, and *Scelidosaurus harrisoni* 'the Charmouth Dinosaur'. Important marine reptile fauna include *Temnodontosaurus platyodon*, *Metriacanthosaurus parkeri*, and ichthyosaurs. The Coast has long been famous as a rich source of ammonites such as *Asteroceras obtusum*, *Parkinsonia parkinsoni* and *Titanites anguiformis*, long used to zone the Jurassic epoch. Other invertebrate fossils include gastropods and belemnites. Exceptionally well preserved remains of a late Jurassic fossil forest, estimated to be over 140 million years old and one of the most complete fossil forests of any age, are exposed on the Isle of Portland and the Purbeck coast. Many of the algal rings defining the tree trunks are preserved in situ with soils and pollen, remains which indicate that the trees were up to 10m high and 1m in diameter. Their well-preserved growth rings indicate that the climate of the time was Mediterranean in character.

CLIMATE

The coast experiences a mild temperate Atlantic climate with approximate average January and July temperatures of 7°C to 27°C and an average annual rainfall of 1025mm, measured at Lyme Regis. It is open to the force of southwesterly gales.

VEGETATION

There is a variety of important coastal habitats within the serial site, especially the landslipped cliffs and cliff-top grasslands of west Dorset that support several rare plants. Among these is the rare purple gromwell *Lithospermum purpureocaeruleum* between the River Sid and Seaton Hole, and the coastal ash *Fraxinus excelsior* woodland between Axmouth and Lyme Regis undercliffs. This habitat is one of the best naturally regenerated woodland areas in Britain. Other nationally important species include the early spider orchid *Ophrys sphegodes*, the early gentian *Gentianella anglica*, the Nottingham catchfly *Silene nutans*, and the cabbage *Brassica oleracea* var. *oleracea*. Important coastal species include Portland rock sea lavender *Limonium recurvum portlandicum* and Portland spurge *Euphorbia portlandica*. Chesil Beach supports the most extensive occurrences in the U.K. of the rare sea kale *Crambe maritima*, yellow-horned poppy *Glaucium flavium*, sea pea *Lathyrus japonicus*, sea holly *Eryngium maritimum* and little-robin *Geranium purpureum*. The Fleet, with a salinity gradient from salt to fresh water and little pollution, contains submerged meadows of an extensive mixed population of two species of eelgrass, *Zostera noltii* and *Z. angustifolia*, two species of tasselweed, spiral and beaked, *Ruppia cirrhosa* and *R. maritima* and some 150 species of algae.

FAUNA

The site's coastline is rich in wildlife. The Exe Estuary Special Protected Area and Ramsar Site supports over 20,000 wildfowl in the winter months, including internationally important populations of pied avocet *Recurvirostra avosetta*, dark-bellied brent goose *Branta bernicla bernicla* and the horned grebe *Podiceps auritus*. The Sidmouth to Beer Coast SSSI has the most westerly example of species-rich grassland in England which supports a diverse invertebrate fauna including the nationally scarce rufous grasshopper *Gomphocerippus rufu*. Chesil and the Fleet support fifteen specialist lagoon species, more than any other site in Britain. The Bank is a breeding site for little tern *Sterna albifrons* and ringed plover *Charadrius hiaticula* and an over-wintering site for a variety of waterfowl and wading birds including up to 7,500 wigeon *Anas Penelope* and 1,200 mute swans *Cygnus olor*. The Lulworth skipper butterfly *Thymelicus acteon* was named locally but is a common European coastal species.

The area is identified as a non-statutory Sensitive Marine Area by Natural England. Short-beaked and bottle-nosed dolphins *Delphinus delphis* and *Tursiops truncatus* occur offshore and a semi-resident population of the latter is present off Durlston Head. Lyme Bay Sensitive Marine Area contains a number of reefs that form one of the most easterly English locations for a number of Mediterranean-Atlantic species, such as the pink seafan, *Eunicella verrucos* which is found in high densities along with a very rich epifauna, including a high diversity of sponges, although the reefs where these occur are now being devastated by uncontrolled scallop dredging. The Saw-tooth Ledges are one of only a few sites in Great Britain where the sunset star coral, *Leptopsammia pruvoti*, has been found. Portland Harbour contains numerous mud flats dominated by the fragile sea pen *Virgularia mirabilis*.

CONSERVATION VALUE

The rocks displayed in the cliffs between Lyme Regis and Swanage display one of the world's finest sections of marine Jurassic rocks which, with the east Devon coast, provide an almost continuous sequence of Triassic, Jurassic and Cretaceous rocks documenting approximately 185 million years of geological history. The vertebrate and invertebrate, marine and terrestrial fossil sites and features of the coast preserve evidence of life during Mesozoic times and have contributed to the study of the earth sciences for over 200 years. The Park lies within a WWF Marine Global 200 Ecoregion and contains one and adjoins another Ramsar wetland site.

CULTURAL HERITAGE

The cultural heritage of the area is rich though most of it is peripheral to the site. The Mesolithic people of Portland of 8,000-4,000 BC are believed to have been the first hunter-gathers in the area. Bronze Age inhabitants (2,000-700 BC) along the East Devon and Dorset Coast constructed barrows a little inland and a Bronze Age sword was found in Weymouth harbour. Many still visible Iron Age hill forts (700BC-43AD) were built along the coast: Sidbury Castle near Sidmouth, Hawkesdown Hill at Axmouth, Abbotsbury Castle and Fowers Barrow at Worbarrow Bay. There is also evidence of Roman and Medieval settlements on the coast. The rocks have a long history of quarrying, from the Mesolithic to the present day: Kimmeridge shale was first exploited during the Bronze Age, while marble and stone used throughout the kingdom have been quarried at Beer, Purbeck and Portland since Roman times. Dorset has also been a powerful influence on writers and artists such as Jane Austen, Thomas Hardy, Llewlyn Powys, John Fowles, John Constable and Turner, and on scientists from the time of the first discoveries by Mary Anning in the early 19th century.

LOCAL HUMAN POPULATION

The population of the coastal towns and villages to 15 km inland was estimated in 2008 to be 326,155. 10 inhabitants live permanently on the site, although it has a few seasonally occupied properties, including a number of beach huts at Lyme Regis, West Weares, Church Ope Cove on Portland and holiday chalets at Branscombe Mouth and to the east of Salcombe Regis at Weston Mouth.

VISITORS AND VISITOR FACILITIES

The coasts of Dorset and Devon have long been visited by tourists, first becoming a popular destination during the 18th century and especially during the 19th century for fossil hunting. Today they have a total annual visitation of more than 14 million, with increasing numbers of foreign visitors and off-season weekend holidayers. Day trip visits to the site are more popular than overnight stays. There are no car parks in the sites, but adequate parking, facilities and accommodation exist in the towns and villages close by. There are several well developed and well managed information centres and museums. Access to beaches and cliff-tops is by public rights of way and permissive paths and walking is popular. One major route is the South-West Coastal Path, one of thirteen nationally designated trails. Lyme holds an annual Fossil Festival, there is a Jurassic Coast Arts program and there is an ancient privately owned swannery at Abbotsbury which holds up to 100 breeding pairs. Fossil-hunting apart there are several sea-related sports available: swimming, angling, windsurfing, diving, boating, sailing, canoeing, and rock climbing on the cliffs of Portland.

Public access to the 3,000 ha Ministry of Defence Armour School Gunnery Ranges at Lulworth is limited but there are several way-marked range walks open for over 130 days per year, including most weekends and the main public and school holidays. Other facilities include the Maritime and Coastguard Agency marine search and rescue centre at Portland, and Coastguard teams at Swanage, Kimmeridge, Wyke Regis, Weymouth, Lyme Regis, Sidmouth and Exmouth. There are good transport links from London, and local passenger terminals at the ports of Poole, Weymouth, Portland and Exmouth. There are international airports at Bournemouth and Exeter.

SCIENTIFIC RESEARCH AND FACILITIES

The geology and geomorphology of this coast have known over 200 years of scientific study and the geology of the coast was first mapped during the 1820s. Many early earth science theories were first developed along the Dorset coast, while the fossils, particularly from the Lyme Regis area, provided early clues that fuelled the debate between creationist theology and evolutionary theory. Some divisions of geological time derive their names from locations in Dorset such as the Kimmeridgian stage of the Mesozoic, applied throughout the world to rocks of the same age as those at Kimmeridge. Other such terms are the Portlandian and Purbeckian stages. Some local people have played key roles in the development of geological science, notably Mary Anning who in the 1810-20s discovered and extracted the first complete fossil specimens of marine reptiles, ichthyosaurs and plesiosaurs and the first pterodactyl in Britain from the beaches of Lyme Regis. Anning worked with the leading scientists of the day, including Henry De la Beche, who became the first director of the British Geological Survey of Great Britain, and the Rev. William Buckland who became the first professor of Geology at Oxford University. Other scientists renowned for their knowledge and scientific discoveries in the area include Sir Richard Owen, Baron Georges Cuvier and Sir Everard Home. Fossil specimens from the coast are found throughout the world's museums.

The continually collapsing cliff faces of the coastline around Charmouth are one of the most studied and scientifically rewarding areas in England and the world for studying Jurassic paleontology, stratigraphy and geomorphology, and for collecting Jurassic and Cretaceous fossils. The area has been thoroughly resurveyed by the British Geological Survey since 1995 and a new series of detailed maps was published in 2000 and 2001. There is also an exceptional sub-surface database as a result of onshore and offshore oil exploration since the 1930s. It is therefore important as a training ground for petroleum geologists as the rock succession presents a complete section through an oil basin. Combined with easy access to the site and a wide range of visitor facilities, have made the area is an exceptional teaching and training resource. Over 200,000 residential educational visitors visit the area annually. Thousands of scientific papers have been published on the area and leading-edge graduate and post-doctoral earth science research continues in the site today.

MANAGEMENT

The Dorset and East Devon Coast is protected by a variety of conservation designations, existing land use and management plans. A management plan for the nominated site was prepared, by Dorset and

Devon County Councils, with advice from the World Heritage Centre, with wide public consultation. It states six prime objectives: to conserve the geology and geomorphology of the area; to conserve and enhance if appropriate the quality of its landscape and seascape; to welcome local people and visitors to the site at levels it can sustain; to encourage its safe use by educational groups of all ages; to provide high quality services and educational information on the site; and to ensure that World Heritage is used responsibly to assist in achieving the wider sustainable development objectives within Devon and East Dorset.

Existing management plans for parts of the site include statutory development plans prepared by local authorities, structural plans that provide strategic guidance for development of the counties of Dorset and Devon over the next 10-15 years, local District Council plans for detailed planning at a local level, and mining and waste plans submitted by the County Councils. These plans state the policies that control the extraction, transport and processing of mineral resources on shore and the disposal of waste materials. In 1998 three shoreline management plans established the strategic coastal defence policies for the whole of the nominated site and surrounding coastline. These are the Lyme Bay and South Devon, Portland Bill to Durlston Head, and Poole and Christchurch Bays Shoreline Management Plans. Five local Environment Agency plans have been produced by the Environment Agency to improve the environments of rivers and near-shore areas. Dorset and Devon County Councils have also prepared plans for the clearance of coastal pollution. And oil pollution response plans have been prepared by all District Councils in the nominated area except Purbeck, as have the Weymouth and Portland Harbour authorities, as required under International Law.

Several landowners within the nominated site have implemented management plans. They include the National Trust which has plans to guide the management of its holdings concerning wildlife, education, landscape-interpretation and public access. Plans for Studland and Purbeck were completed in 2000; plans for West Dorset were updated in 2000-2001. All the areas it owns within the site are inalienable and will remain in its hands in perpetuity for the benefit of the public. Dorset and Devon Wildlife Trusts own wildlife reserves at Weston Mouth and the Otter Estuary in Devon and at West Bexington and Kimmeridge in Dorset; all have management plans. Areas owned by the Ministry of Defence also have nature conservation management plans.

The Axmouth to Lyme Regis Undercliffs National Nature Reserve which lies wholly within the World Heritage area has a site management plan prepared in 1998. Practical countryside management in the East Devon AONB is undertaken by the East Devon Heritage Coast Service and District Council staff. Landscape projects include a major footpath and bridleway improvement program, establishing a network of cycle routes, tree planting and hedge laying, heathland management and maintenance work on the coastal National Trail. The Heritage Coast Service promotes countryside stewardship and has established a number of hedgerow and orchard agreements. The Dorset Coast Strategy aims to improve the planning and management of the Coast, as agreed by the Dorset Coast Forum. The South-West Coast Path strategy guides the management, promotion and conservation of the path and the coastal corridor through which it passes. The Jurassic Coast Strategy of 1999 produced as part of the Jurassic Coast Project, identified the priorities for geological conservation, interpretation, education and tourism.

MANAGEMENT CONSTRAINTS

The large number of visitors has resulted in pressures on the site especially during the summer months, though numbers at other times of the year continue to increase annually. Vegetation and path erosion as well as wildlife disturbance are the primary impacts. There is also a need for active visitor management after events such as the Black Ven landslide in 2008 and the wreck of the 62,000-ton container ship MSC Napoli in Lyme Bay in 2007 which was deliberately beached to avoid a catastrophic wreck and oil spill. The public immediately moved in to collect fossils and valuable flotsam. There are also two areas in the site at Portland and Charlton Bay where permissions for mineral extraction have been granted.

STAFF

Many people are employed by the variety of landowners and authorities responsible for the management of lands within the site. Over 40 wardens and rangers are currently employed by Devon and Dorset County Councils, Natural England which oversees privately owned SSSIs, the National Trust, East Devon and Purbeck District Councils, Charmouth Heritage Coast Centre, the Ilchester Estate, the Lulworth Estate and Dorset Wildlife Trust. The full Jurassic Coast World Heritage team consists of a Site Coordinator, an Earth Science Manager and advisor, a Visitor manager, an

Education Coordinator an Arts Coordinator, a Rural Development Authority Program Coordinator and a Marketing and Communications Officer,

BUDGET

Funding for the areas within the site is currently on a partnership basis. An estimated £505,200 (US\$833,000) was provided for employee salaries in 2000. This excluded additional professional staff indirectly involved in management such as planners, tourism officers, local government staff, transport managers, coastal engineers and land agents. For 2008-9 core funding from Dorset County Council was £202,500, from Devon County Council £103,500 and from Natural England, £35,000, totalling £341,000 (US\$670,000). This is supplemented by various shorter term project or annual grants.

LOCAL ADDRESSES

Jurassic Coast Trust. Unity Chambers, 34 High East Street, Dorchester, Dorset, DT1 1HA.

Dorset Coast Forum, C/o Dorset County Council, County Hall, Dorchester, Dorset, DT1 1XJ.

Natural England, Devon Team, Level 2, Renslade House, Bonhay Road, Exeter EX4 3AW.

Natural England, Dorset Team, Slepe Farm, Arne, Wareham. Dorset BH20 5BN.

Dorset County Council, County Hall, Colliton Park, Dorchester, Dorset. DT1 1XJ, UK.

East Devon District Council, Council Offices, Knowle, Sidmouth , Devon EX10 8HL.

East Devon AONB Countryside & Heritage Division, County Engineer and Planning Department, Devon County Council, County Hall, Exeter. Devon. EX2 4QQ

Devon County Council, Environment Directorate, Lucombe House, County Hall, Topsham Road, Exeter, Devon. EX2 4QW, UK.

The National Trust, Headquarters, 36 St Anne's Gate, London. SW1H 9AS.

The Crown Estate, 16 Carlton House Terrace, London SW1Y 5AH.

Charmouth Heritage Coast Centre, Lower Sea Lane, Charmouth, Dorset. DT6 6LL

British Geological Survey, Kingsley Dunham Centre, Keyworth, Nottingham. NG12 5GG.

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The principal source for the above information was the original nomination for World Heritage status. A bibliography of over 70 references is included in the nomination with a provisional bibliography of over 5,000 references was also provided.

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